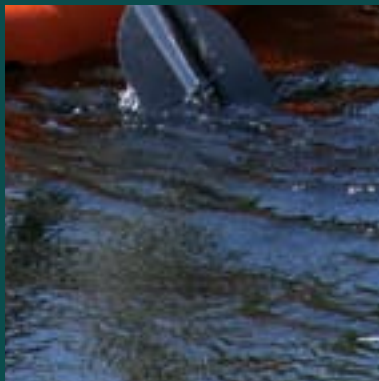
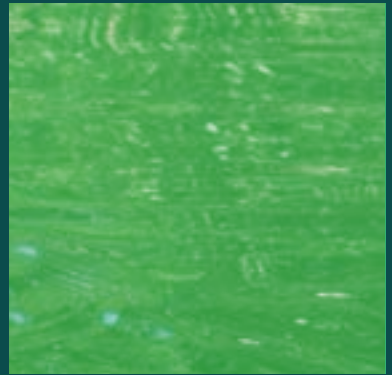
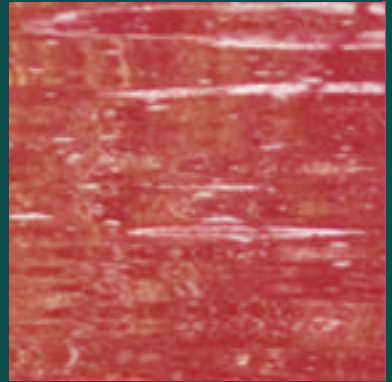




# Strengthening Sustainable Tourism



Strategic Environmental  
Assessment of the Tourism  
Sector in Cambodia





# Strategic Environmental Assessment of the Tourism Sector in Cambodia



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# Acronyms and Abbreviations

|          |   |
|----------|---|
| ACMECS   | Ayeyawady Chaophaya Mekong Economic Cooperation and Strategy    |
| ADB      | Asian Development Bank  |
| ASEAN    | Association of South East Asian Nations                         |
| AusAID   | Australian Agency for International Development                 |
| CATA     | Cambodian Association of Travel Agencies                        |
| CCBEN    | Cambodia Community-based Ecotourism Network                     |
| CDC      | Cambodia Development Council                                    |
| CEP      | Core Environment Program  |
| DANIDA   | Danish Institute for Development Assistance                     |
| DOT      | Department of Tourism   |
| DSIH     | Department of Small Industry and Handicrafts                    |
| EIA      | environmental impact assessment                                 |
| EOC      | Environment Operations Center                                   |
| GDP      | gross domestic product  |
| GEF      | Global Environment Facility                                     |
| GMS      | Greater Mekong Subregion  |
| GTZ      | German Technical Cooperation Agency                             |
| HIV/AIDS | human immunodeficiency virus/acquired immunodeficiency syndrome |
| IFC      | International Finance Corporation                               |
| IUCN     | World Conservation Union  |
| JICA     | Japan International Cooperation Agency                          |
| MAFF     | Ministry of Agriculture, Forests and Fisheries                  |
| MDG      | millennium development goals                                    |
| MIME     | Ministry of Industry, Mines and Energy                          |
| MLMUPC   | Ministry of Land Management, Urban Planning and Construction    |
| MOE      | Ministry of Environment   |
| MOP      | Ministry of Planning  |
| MOT      | Ministry of Tourism   |
| MRC      | Mekong River Commission   |
| MTCO     | Mekong Tourism Coordination Office                              |
| MTDP     | Mekong Tourism Development Project                              |
| NGO      | nongovernmental organization                                    |
| NIS      | National Institute of Statistics                                |
| NSDP     | national strategic development plan                             |
| PATA     | Pacific Area Travel Association                                 |
| PPP      | policies, plans and programmes                                  |
| PRC      | People's Republic of China                                      |
| RGC      | Royal Government of Cambodia                                    |
| SEA      | strategic environmental assessment                              |
| SEDP     | social and economic development plan                            |
| Seila    | socio-economic improvement of local agencies (programme)        |

|        |   |
|--------|---|
| SME    | small and medium enterprises                                |
| SMI    | small and medium industries                                 |
| SNV    | Netherlands Development Organization                        |
| TA     | technical assistance  |
| TAT    | Tourism Authority of Thailand                               |
| TISTR  | Thailand Institute of Scientific and Technological Research |
| TWG    | Tourism Working Group                                       |
| UNDP   | United Nations Development Programme                        |
| UNESCO | United Nations Education and Social Commission              |
| USA    | United States of America                                    |
| WCS    | Wildlife Conservation Society                               |
| WEF    | World Economic Forum  |
| WGE    | Working Group on Environment                                |
| WTO    | World Tourism Organization                                  |
| WWF    | World Wide Fund for Nature                                  |

# Notes

Place names in Cambodia have been transliterated from the Khmer language in a variety of different English spellings in the literature. Standardized spelling has been adopted in this report, drawing on the official website (<http://www.nis.gov.kh>) where applicable, recognizing that alternative approaches exist.

In this document, "\$" means US dollars, unless otherwise indicated.

# Executive Summary



## The context

Tourism is tremendously important for Cambodia. Until the early 1990s, Cambodia was perceived as a dangerous place to travel to, with few tourism attractions, and suffering from the impacts of war. By 2006, visitor numbers had increased to 1.7 million, domestic tourists to 5.3 million, and revenues in excess of \$1.5 billion. Growth rates of 20-30% are now imposing pressures on the most popular destinations, necessitating a broad diversification strategy.

As a result, tourist destinations are being diversified away from Angkor Wat and Preah Vihear into the southern coastal zone and forested northeastern region, with a focus on ecotourism, where environmental protection of the natural resource base becomes increasingly important.

## Strategic environmental assessment and the tourism sector

Strategic environmental assessment (SEA) is an upstream planning tool, new to Cambodia, which has significant potential to mainstream environmental considerations into sectoral planning decisions. Applying this first SEA to the tourism sector, acknowledges the importance of Cambodia's natural resources to underpin future growth in the tourism industry and the need for the key government agencies (Ministry of Environment (MOE), Ministry of Tourism (MOT), Ministry of Agriculture, Forests, and Fisheries (MAFF), and the Cambodia Development Council (CDC)) to cooperate and ensure that environmental quality is maintained in all tourism destinations.

## How this SEA was conducted

To demonstrate the utility and versatility of SEA as a planning tool, several levels of policies, plans and programmes were selected for analysis in a scoping workshop held in Sihanoukville in June 2007. These

included (i) the draft Tourism Law; (ii) the draft national ecotourism policy and strategy; (iii) tourism development plans for the northeast triangle (Mondulkiri, Ratanakiri, Kratie and Stung Treng Provinces); and (iv) the K4 (Krong Kep, Kampot, Kampong Som [Sihanoukville], and Koh Kong provinces) coastal tourism strategy and plans.

As a key objective of the SEA component of the Greater Mekong Subregion (GMS) Core Environment Program (CEP) is to institutionalize SEA in the GMS countries, senior officials and staff of the key government agencies at national and provincial levels undertook a training course on SEA in October 2007, covering tourism sector plans, global and regional tourism trends, global best practice in SEA, causal chain analysis, scenario planning, mitigation measures and management plans using a series of lectures and group exercises.

## What this report covers

Throughout the institutional strengthening work of the CEP, it has been stressed that SEA is more about a systematic process of examining the environmental implications of proposed policies, plans and programmes rather than preparing a specific assessment report. Nevertheless, it is useful to document the findings and expose them to wider review and comment than has been possible under the limited funding available. Hence, this report covers the following areas, corresponding to the chapters in which they are presented:

**Chapter 1:** An assessment of **status and trends** in Cambodia's tourism sector;

**Chapter 2:** The **key tourism policies, plans and programmes** under consideration in Cambodia;

**Chapter 3:** Three **illustrative development scenarios** demonstrating the importance of policy and strategic choices;

**Chapter 4:** Description of **baseline environmental conditions** in Cambodia, focusing on the northeast and southern coastal zone;

**Chapter 5:** **Environmental assessment** of the selected policies, plans and programmes;

**Chapter 6:** **Mitigation and adaptation measures** for the identified impacts;

**Chapter 7:** **Implementation and monitoring** arrangements;

**Chapter 8:** **Stakeholder participation and capacity building needs**; and

**Chapter 9:** **Conclusions and recommendations.**

A summary of the key legislation for the tourism sector and a brief record of the workshops undertaken are provided as annexes included on the attached CD-ROM.

## Key findings and suggestions

This report identified several areas, listed below, in which mitigation measures are needed to counter threats posed by unsustainable tourism development. The key findings and proposals are presented below, as they pertain to each particular area of Cambodia's tourism development.

### Draft Tourism Law

For the draft Tourism Law, the SEA found that the intent to "collaborate and take measures for environmental protection" is embodied in the draft (Article 37), but that specific environmental measures could be strengthened, such as eco-labels (Article 42), protecting the environment (Articles 46 and 48) or added, such as cross-referencing to environmental impact assessment requirements.

Specific improvements proposed include:

- i. Specific reference to an agreement between MOT, MOE, and MAFF on conditions applying to tourism development in or near protected areas;
- ii. The need for environmental standards and criteria, agreed with MOE, to be applied in allocating tourism licenses;
- iii. Defining a "serious potential risk to the environment", again in conjunction with MOE, as the basis for cancellation, suspension, or downgrading of a tourism license, along with subsequent processes to deal with the risk; and

- iv. Providing for an environmental guarantee fund, as part of the tourism license fees, which would provide funding for emergency clean up or rehabilitation of the environment as a result of a tourism-related incident.

### Draft ecotourism policy and national strategy

On the draft ecotourism policy and national strategy, the SEA found that overall it will make a positive contribution to protecting the environment and natural resources in the target areas, with its emphasis on balancing conservation and development, minimizing negative impacts on nature and culture, and respecting environmental laws and regulations. Important provisions include (i) supporting poverty alleviation through ecotourism; (ii) ensuring quality of ecotourism products and services, through standards, capacity building and training; and (iii) encouraging small scale enterprises to participate in the market through appropriate incentives, access to information, and public-private partnerships.

Proposed improvements to the draft ecotourism strategy include:

- i. Basing the proposed national eco-label on an existing globally recognized label, with independent certification;
- ii. Incorporating global ecotourism operators into the strategy so that the smaller community-based operators have international quality benchmarks to compete with; and
- iii. Giving a proposed multi-stakeholder body for ecotourism a mandate to tackle and resolve conflicts with other sectoral activities such as mining and logging.

### Northeastern tourism development

On the proposed tourism developments in northeast Cambodia, a variety of potentially serious environmental impacts were identified, including (i) continuing threats to the rare and endangered Irrawaddy dolphin, a major tourism attraction; (ii) road construction through forests and protected areas; (iii) proposed tourism developments inside protected areas (including trophy hunting); (iv) airport improvement; (v) liquid and solid waste management in sensitive areas; (vi) promotion of free zones for tourism development at border crossing points; and (vii) urban growth in tourism gateway areas, like Sen Monorom and Ban Lung.

Aside from the direct tourism proposals, threats to the long-term sustainability of the ecotourism strategy in the northeast include (i) logging concessions, (ii) mining and mineral exploration, (iii) agricultural encroachment into forest areas, (iv) fishing (especially use of nets, poisons, explosives and electric fishing), (v) hunting and illegal wildlife and plant collection; (vi) hydropower development; and (vii) electricity transmission lines. These threats illustrate the need to involve multiple stakeholders in planning and management of nature based tourism in the northeast of Cambodia.

Mitigation measures proposed include:

- i. Upgrading management of protected areas, including the Ramsar site between Stung Treng and the Lao PDR border;
- ii. Ensuring that part of the revenue stream from ecotourism development is directed towards protected area management;
- iii. Protection of forested corridors between protected areas threatened by relocation of demobilized soldiers;
- iv. Careful route planning, wildlife and plant inventories, environmentally sensitive construction, and detailed EIAs prior to approval of road links, including road upgrading; and
- v. Improved environmental management at border crossings including sanitary landfills for solid waste, safe and treated water supplies, wastewater treatment, and control of trade in toxic or hazardous waste materials and illegal wildlife.

## Airport development

Additional mitigation measures specific to airport development include:

- i. Noise control, especially for surrounding residential areas;
- ii. Control of birds (especially near water bodies or wetlands);
- iii. Bundled aviation fuel tanks and aircraft repair facilities;
- iv. Safe recycling or disposal of bitumen drums (used for tarmac sealing); and
- v. Rehabilitation of quarries or borrow pits for fill material used in runway construction.

## Ecotourism-oriented accommodation

While ecotourism-oriented accommodation is preferable to less-sensitive mass tourism accommodation, all high-use buildings in the tourism industry have potentially adverse environmental impacts. Mitigation measures for eco-lodges should take a life cycle approach, which includes:

- i. Starting with the design of the buildings (aiming at zero net energy use, zero emissions, and 100% recycling of building materials);
- ii. Ensuring that the construction phase has minimal impacts;
- iii. Operating the accommodation in an environmentally sensitive manner; and
- iv. Building into the original design, complete recycling of the building when it is ultimately decommissioned or no longer needed.

## Southern coastal zone

In the southern coastal zone, the proposed master plan for tourism development of the K4 area contains several strategies that have potentially serious impacts on a relatively fragile coastal environment. The key concerns include (i) border tourism development (such as casinos) on both the Thailand and Viet Nam borders; (ii) excessively rapid urban growth without adequate infrastructure or attention to climate change impacts; (iii) excessive development of offshore islands beyond their carrying capacity; (iv) beach resort development with exclusionary, private access to beaches; (v) highway development from Thailand to Viet Nam, with feeder roads to new tourism sites; and (vi) airport development.

In addition to the direct threats to the environment and natural resources from planned tourism developments, accelerated economic development in the coastal zone is likely to have an impact on prime tourism destinations. Oil and gas development offshore, expansion of the container and other shipping ports, mining and forestry proposals, construction of a thermal power plant at Koh Kong (to supply Thailand with electricity) are among the main threats.

Mitigation measures identified for the island ecosystems in the K4 area include:

- i. Defining carrying capacity limits on development, especially water resource constraints;
- ii. Mapping coral reefs and seagrass beds and avoiding tourism infrastructure near these ecosystems;
- iii. Solid waste collection and return to the mainland for disposal and/or recycling;
- iv. Installing composting or other waterless toilets;
- v. Protecting forest cover with a "no tree removal" regulation;
- vi. Limiting use of the smaller islands to day trips only; and
- vii. Imposing strict building codes for those islands where permanent residences or hotels are permitted.

## Mangrove ecosystems

For mangrove ecosystems, the main mitigation measures are:

- i. Banning the clearing of mangroves for shrimp ponds or other uses;
- ii. Replanting mangroves in suitable areas;
- iii. Providing boardwalks for tourist access to the most interesting mangrove areas;
- iv. Providing protected area status for the most valuable mangrove areas; and
- v. Prohibiting commercial capture of juvenile fish and crabs in mangrove areas that serve as nurseries for young aquatic organisms.

## Beach areas

For beach areas, depending on the intensity of use, the main mitigation measures include:

- i. Installation of effective wastewater treatment systems in hotels, restaurants, residences, and public buildings close to the beach;
- ii. Protection of upland water supply sources and strict controls on exploitation of groundwater;
- iii. Litter control and beach grooming;
- iv. Zoning nearshore waters for various uses, so that swimming and power boats, for example, are not using the same areas;
- v. An oil spill contingency plan, stockpiling equipment and chemicals, and training personnel;
- vi. Strict control of vendors, changing rooms and toilets, restaurants and other environmentally damaging activities on the beach, by beach inspectors employed by the local government;
- vii. Preventing linear development by preparing town development plans for all beach areas; and
- viii. Prohibiting private beaches and exclusive access to tourist resorts.

## Inland areas

For inland areas, such as waterfalls, caves, forest areas, wildlife sanctuaries, hill resorts and other attractions, the main mitigation measures are:

- i. Control of construction and maintenance of roads;
- ii. Litter management and solid waste disposal;
- iii. Wastewater treatment and safe water supplies at public toilets;
- iv. Use of rangers and Forest Administration officials to control illegal activities such as hunting, collection of plants and mushrooms, and damaging habitats in protected areas; and
- v. Maintenance of walking trails, interpretive signage, and camping grounds.

## Establishing a national coordination committee on tourism and environment

To assist in the cross-sectoral management of the tourism sector, MOT should take the initiative to establish a national coordination committee on tourism and environment to:

- i. Review the national and provincial tourism plans from an environmental perspective;
- ii. Continue the process of commissioning and reviewing SEAs for tourism policies, plans and programmes;
- iii. Establish rules for revenue generation and disposition from tourism activities in or near protected areas;
- iv. Agree on the terms of reference for EIAs for tourism projects; and
- v. Coordinate monitoring programmes and data collection for feedback into future tourism plans.

## Capacity strengthening

Priority capacity strengthening needs identified by the initial SEA training include:

- i. Hands-on experience in the implementation of SEAs in the tourism sector;
- ii. Increased understanding of the role of scenarios in considering alternative policy and strategic choices;
- iii. Matching tourism attractions with targeted marketing programmes;
- iv. Standards and criteria for ecotourism;
- v. Effective use of EIAs to identify appropriate environmental management programmes;
- vi. Raising revenue from tourism operations that can be used for improved environmental management in key tourism attractions; and
- vii. Conducting monitoring and research that will feed back into future policies, plans and programmes.







# Introduction

## 1.1 Socio-Economic Context

The Asian Development Bank (ADB) is supporting improved environmental management in the Greater Mekong Subregion (GMS) through the Core Environment Program (CEP) being implemented on behalf of the GMS Working Group on Environment (WGE) by the Environment Operations Centre (EOC) in Bangkok. Component 1 of the CEP deals with the introduction of strategic environmental assessment (SEA) into GMS countries to improve the environmental assessment of policies, plans and programmes. As part of Component 1, the following report contains a rapid SEA of the tourism sector in Cambodia with a focus on two prime tourism destinations (i) the northeast (Mondulkiri, Ratanakiri, Kratie and Stung Treng Provinces); and (ii) southwestern coastal zone (Koh Kong, Kampot and Krong Kep Provinces and Sihanoukville Municipality).

The Kingdom of Cambodia has demonstrated remarkable resilience after years of civil conflict and the genocidal policies of the Pol Pot era. The current sources of economic growth in Cambodia are mainly agriculture, garments and the tourism sector. Cambodia's gross domestic product (GDP) grew by an average 6.8% per year from 1999 to 2002, compared with 5.6% per year from 1995 to 1998 (ADB 2005).<sup>1</sup> Since 2002, average growth rates have been higher than 8%, reaching a peak of 13.4% in 2005 (Figure 1). Economic performance in 2007 was expected to be 8.5%, lower than 2006 mainly due to a slow down of the garment sector. The accession

of Viet Nam into the World Trade Organization, ending the special safeguards and restrictions on the People's Republic of China (PRC) by importers of clothing products, and economic recession in the US market reflect growing concern about the future of the Cambodian garment sector and the increasing reliance on the tourism sector to maintain these high levels of economic growth, so essential for poverty alleviation.

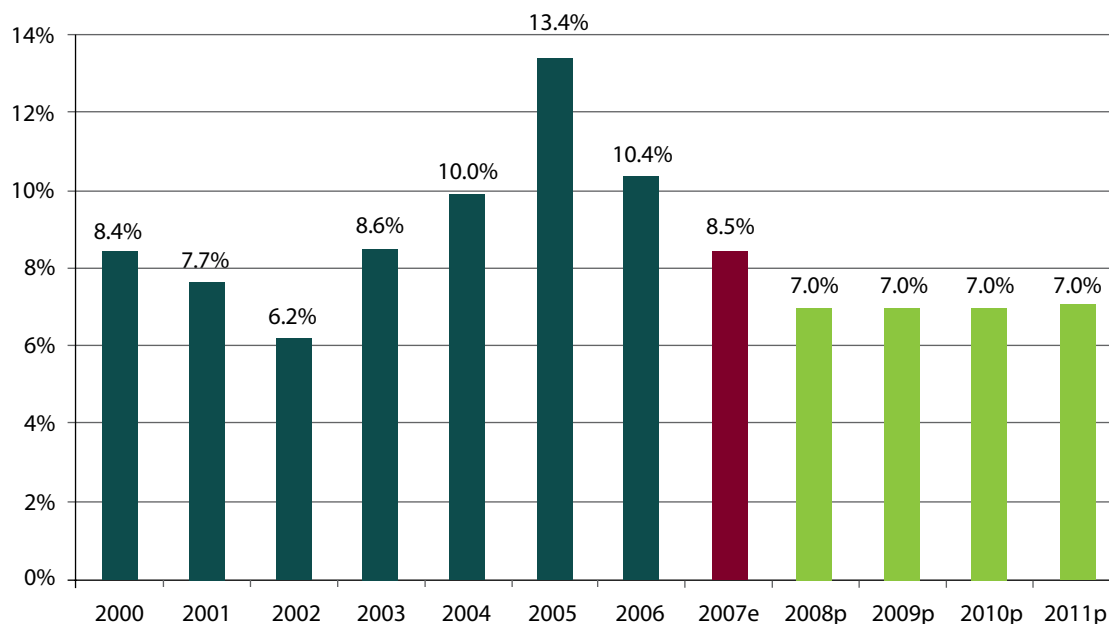
According to the National Institute of Statistics (NIS 2003), the mean monthly income of Cambodian households increased an average 15.6% per year from \$42.32 in 1993/94 to \$100.82 in 1999 (\$1.00 = 4,000 Riels). The monthly income of rural households increased an average 15.7% a year, while the monthly income of other urban households (i.e., other than the capital Phnom Penh) increased an average 11.8%. The potentially higher returns to self employment are fuelling an entrepreneurial surge in Cambodia. For example, the main sources of income for Cambodia's coastal zone are provided in Table 1.

**Table 1: Average Monthly Income in Cambodia's Coastal Zone (1999)**

| Main Source     | Cambodia |       | Coastal Zone |       |
|-----------------|----------|-------|--------------|-------|
|                 | Value \$ | %     | Value \$     | %     |
| Self employment | 60.50    | 60.00 | 62.75        | 63.15 |
| Wage employment | 20.92    | 20.75 | 14.99        | 15.08 |
| Others          | 19.41    | 19.25 | 21.63        | 21.77 |

Source: NIS, 1999

<sup>1</sup> There are no precise data pertaining to GDP by sector and province.

**Figure 1: Real GDP Growth Rate 2000-2011 (% change)**

Source: MEF, 2007.

## 1.2 SEA Scoping Stage

At the screening stage, the EOC and WGE agreed to focus the SEA for the GMS tourism sector on the policies, plans and programmes (PPP) for tourism in Cambodia, on the basis of the very rapid growth in this sector and prospects for tourism to significantly contribute to the economy.

A scoping exercise involving tourism and environment officials, the private sector and nongovernmental organizations (NGO) was undertaken at a workshop held in Sihanoukville in June 2007. The scoping stage involved narrowing the focus of investigation for the two geographic areas, as well as considering which alternatives should be considered. In addition to the draft national tourism law and national tourism development plan, within the four areas identified by the Cambodian Government as priorities for tourism development, it was agreed to focus on the northeast and southern coastal zones.

As SEA involves policies, plans and programmes rather than specific projects, it is expected that more detailed environmental investigation of specific sub-projects, for example under the Mekong Tourism Development Project (MTDP), will take place as needed under existing environmental impact assessment (EIA) requirements. The SEA is not intended, therefore, as a more detailed environmental assessment to follow up the initial environmental examination of the MTDP.

As the draft national tourism law and national tourism development plan have not been formally endorsed by the Government, the SEA provides a good opportunity to raise any environmental concerns that may have been overlooked to date. In addition, the development plans for the northeast and southern coastal zone are still evolving, so the SEA allows specific environmental issues to be identified and appropriate avoidance or mitigation measures built into the plans.



# Tourism Sector in Cambodia

## 2.1 Tourism Sector and the Economy

In the early 1990s, the World Tourism Organization (WTO) found that “Cambodia is still perceived as a dangerous place to travel with a lack of tourist attractions” (Leung et al u/d). In addition “war, economic reform, industrialization, and the development of tourism have imposed undesirable side-effects, if not irreversible damages, to the scenic zones.” Cambodia’s tourism sector has also had strong competition from neighboring countries (Hall and Ringer 2000). Nevertheless, over the past decade, tourism in Cambodia has progressed rapidly, with the World Economic Forum (WEF) ranking Cambodia 96th in the Travel and Tourism Competitiveness Report 2007 (see Figure 2) (WEF 2007).<sup>2</sup>

Cambodia has excellent tourism resources especially in archeological, historical and cultural heritage and natural sites. The Angkor Wat temple complex and the other

temples around Siem Reap are among the world’s most magnificent historical monuments, which attract many tourists from all over the world. The Angkor Wat temple complex was inscribed on the United Nations Education and Social Commission’s (UNESCO) World Heritage List in 1992. Other archeological and historical resources can be found around the capital city of Phnom Penh. Located close to Thailand border, Preah Vihear Temple complex is a famous archeological monument, which can be easily accessed only from Thailand.<sup>3</sup> In addition to Angkor Wat and Preah Vihear, other important tourist attractions in Cambodia include the capital Phnom Penh, Tonle Sap Lake, Sihanoukville, Sambor Prey Kuk (Kampong Thom), and Nokor Bachey (see Figure 3). Marine and natural resources are mostly found in Sihanoukville, Kep, Kampot and Koh Kong along the coastal area facing the Gulf of Thailand. Other attractive natural and ethnic cultural resources are in the areas surrounding the Tonle Sap Lake, along the Mekong River and Cambodia’s natural protected areas.

<sup>2</sup> For comparison, Thailand is ranked 43rd, PRC 73rd, and Viet Nam 87th. Kenya as a major tourism destination in Africa is ranked below Cambodia at 98th.

<sup>3</sup> A steep dirt road is being upgraded to provide access from within Cambodia



Figure 2: Travel and Tourism Competitive Index (WEF 2007)

### Travel & Tourism Competitiveness Index

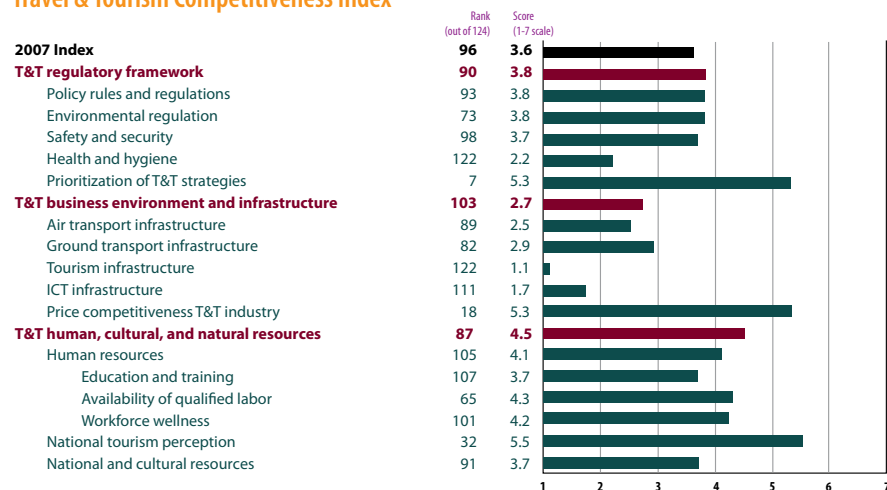
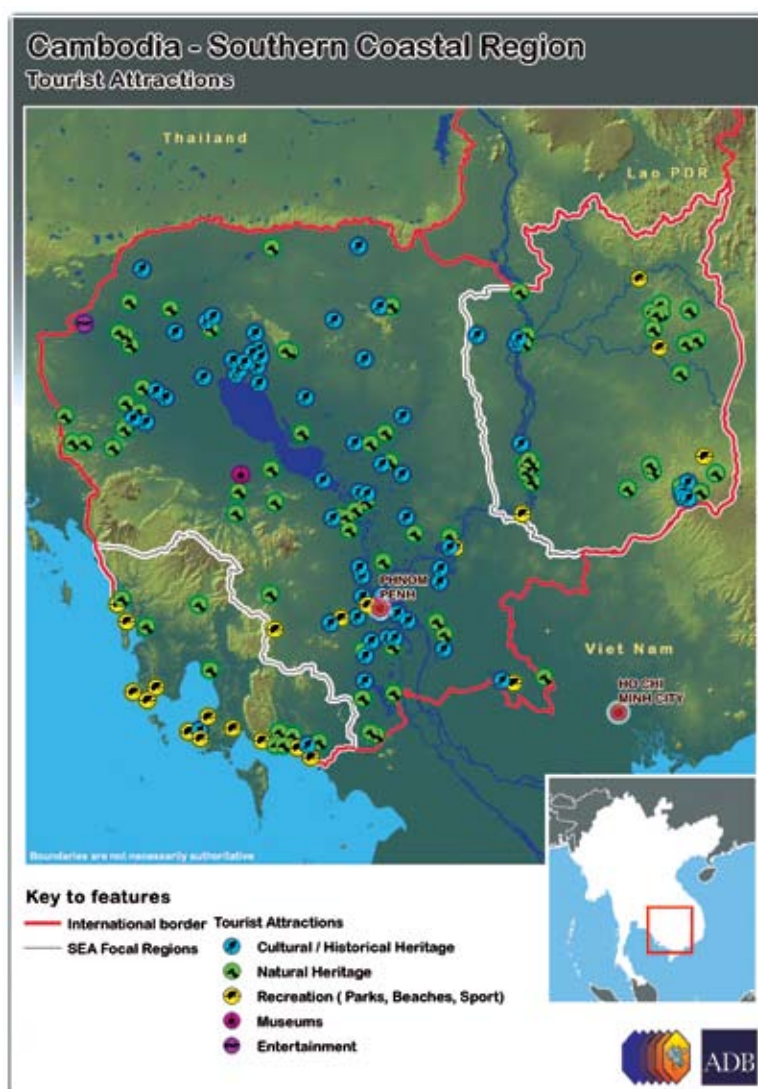


Figure 3: Tourism Attractions in Cambodia



A number of waterfalls are located on customary village land. Some of these have become major tourism attractions and can be viewed as key local tourism assets, especially if they also provide swimming opportunities. Such locations are particularly interesting for domestic Khmer tourists who seem to have a fascination with waterfalls. Often these attractions are located in or near forest areas where the more active international tourists could undertake short guided walks. Frequently, the waterfalls are adjacent to villages that can provide elephant rides and other attractions. As several waterfalls are located in the vicinity of the provincial tourist centres of Sen Monorom and Ban Lung, they form key regional attraction clusters together with the other cultural and ethnic tourism assets mentioned above (Table 2).

The ADB-funded technical assistance (TA) project (TA 6279-REG: GMS Sustainable Tourism) prepared a loan-funded sustainable tourism project in Cambodia, Lao PDR and Viet Nam to implement the GMS Tourism Sector Strategy 2006-2015.<sup>4</sup> The TA identified feasible sub-projects, a grant-funded human resources development component and the need for a small and medium enterprise (SME) forum to enhance tourism investment in the GMS (ADB 2006). The draft final report of the TA indicates that the Asia-Pacific region recorded 156.2 million arrivals in 2005, a global business worth more than \$123 billion annually. In 2005, the GMS attracted over 20 million tourists, or 2.5% of the global total. More significantly, Cambodia, Lao PDR, and Viet Nam have increased tourist numbers rapidly between 1995-2005 (annual rates of increase of 20.5%, 12.4% and 9.9% respectively). Considerable space exists for these

arrival numbers to continue increasing as global tourist arrivals are projected to reach around 1 billion by 2010 (ADB 2006). The GMS Tourism Sector Strategy estimates that tourist arrivals in the GMS will reach 30.6 million by 2010 and 46.1 million by 2015.

In Cambodia, visitor arrivals in 2005 amounted to 1.4 million, staying 6.3 nights on average. In 2006 this increased to over 1.7 million visitors and tourism revenue soared to over \$1.5 billion. In addition, the Ministry of Tourism (MOT) reported 5,278,113 domestic tourists in 2005 out of a total population of 13.3 million. Target arrivals for 2010 are 3.12 million visitors, with 5.5 million projected for 2015. From only 176,617 international tourist arrivals in 1994 to 1,421,615 in 2005, the main attraction has been the Angkor (Siem Reap) heritage sites. The majority of tourist arrivals are by air, with the recent rapid growth in arrivals dating from opening of the Siem Reap International Airport in 1997.

According to data from the MOT, visitor arrivals for the period December 2005 to 2006 increased by 33%. The largest increases were through Siem Reap by air with a 60% increase and through Preah Vihear with a 99% increase (Table 3).<sup>5</sup> The most recent figures for visitor arrivals released by MOT show that the overall rate of increase from 2006 to 2007 has slowed somewhat but is still high at 18.53%. The arrivals to Siem Reap by air in 2007 account for 37.78% of the total arrivals to Cambodia and show an increase of 26.94% over 2006. Overall, Siem Reap accounted for 55.61% of the 2,015,128 visitor arrivals to Cambodia in 2007.

**Table 2: Typical Tourist Attractions and Resources**

| Area   | Attractions    | Natural Resources                  | Potential Uses & Activities   |
|--------|----------------|------------------------------------|---|
| Kampot | Prek Ampil     | Beaches                            | boat trips<br>swimming<br>food and drink service<br>hire of resting areas<br>ancillary services |
|        | Preah Tnol     | Mangrove forest                    | canoeing<br>bird watching   |
| Kep    | Koh Tunsay     | forests<br>corals<br>seagrass beds | homestay<br>guided walks<br>water activities (i.e. snorkeling)                                  |
|        | Thmei Village  | Mangrove forest                    | bird watching<br>mangrove walk<br>fishing<br>seafood  |
|        | Ongkao Village | Beaches                            | swimming<br>food and drink service  |

<sup>4</sup> Cambodia has decided not to borrow for this project.

<sup>5</sup> Up to date tourism data for Cambodia are available at <http://www.mot.gov.kh/> and <http://www.tourismcambodia.com/>.

**Table 2: Typical Tourist Attractions and Resources (Continued)**

| Area               | Attractions                          | Natural Resources  | Potential Uses & Activities  |
|--------------------|--------------------------------------|--|--|
| Ream National Park | Phnom Samathik (Meditation Mountain) | evergreen forest<br>large rock<br>boulders<br>medicinal plants | guided walks<br>relaxing   |
|                    | O Toul Creek                         | creek<br>evergreen forest                                      | guided walks<br>swimming<br>relaxing   |
|                    | Prek Teuk Sap                        | river<br>mangrove forest<br>melaleuca forest                   | canoeing<br>bird watching<br>boat trips  |
|                    | Main Beach                           | birdlife<br>beach<br>evergreen & melaleuca forest              | guided walks<br>swimming<br>relaxing<br>guided walks from river to beach                   |
|                    | Koh Thmei                            | mangrove forest<br>evergreen forest<br>beach<br>hills          | camping<br>swimming<br>walking/hiking  |
|                    | Koh Ses                              | river<br>coral reef<br>beach<br>mangrove & evergreen forest    | swimming<br>snorkeling<br>diving<br>walking/hiking   |
|                    | Koh Kyorng                           | fishing village  | selling products<br>tours around parts of the village<br>fishing using traditional methods |
|                    | Forests                              | evergreen forest<br>hills                                      | Walking/hiking   |
| Koh Kong           | Preak Krasaop Wildlife Sanctuary     | mangrove   | canoeing<br>bird watching/wildlife watching<br>village visits                              |

Source: NCSC, 2007b.

**Table 3: Tourist Arrivals in Cambodia 2006-2007**

| Visitor arrivals          |                  |                  | share (%)     | change (%)    |              |
|---------------------------|------------------|------------------|---------------|---------------|--------------|
|                           | 2006             | 2007             | 2006          | 2007*         | 2007*/06     |
| <b>Via Air</b>            | <b>1,027,064</b> | <b>1,296,513</b> | <b>60.41</b>  | <b>64.34</b>  | <b>26.23</b> |
| Phnom Penh Int'l Airport  | 427,389          | 535,262          | 25.14         | 26.56         | 25.24        |
| Siem Reap Int'l Airport   | 599,675          | 761,251          | 35.27         | 37.78         | 26.94        |
| <b>Via Land and Water</b> | <b>564,286</b>   | <b>576,054</b>   | <b>33.19</b>  | <b>28.59</b>  | <b>2.09</b>  |
| Land                      | 524,501          | 532,366          | 30.85         | 26.42         | 1.50         |
| Boat                      | 39,785           | 43,688           | 2.34          | 2.17          | 9.81         |
| <b>Sub-Total</b>          | <b>1,591,350</b> | <b>1,872,567</b> | <b>93.61</b>  | <b>92.93</b>  | <b>17.67</b> |
| Same-day visitors         | 108,691          | 142,561          | 6.39          | 7.07          | 31.16        |
| <b>Total</b>              | <b>1,700,041</b> | <b>2,015,128</b> | <b>100.00</b> | <b>100.00</b> | <b>18.53</b> |

Percentage share of visitor arrivals at destination from Jan - Dec 2007

| Visitor arrivals                |                  |                  | share (%)     | change (%)    |              |
|---------------------------------|------------------|------------------|---------------|---------------|--------------|
|                                 | 2006             | 2007             | 2006          | 2007*         | 2007*/06     |
| Phnom Penh & Other Destinations | 843,531          | 894,542          | 49.62         | 44.39         | 6.05         |
| Siem Reap Province              | 856,510          | 1,120,586        | 50.38         | 55.61         | 30.83        |
| <b>Total</b>                    | <b>1,700,041</b> | <b>2,015,128</b> | <b>100.00</b> | <b>100.00</b> | <b>18.53</b> |

(Source: Ministry of Tourism, Statistics and Information Department)

The largest foreign market for Cambodia's tourism sector is South Korea, accounting for 16.37% of total foreign tourists. Following Korea is Japan at 8.04% and then the United States of America (USA) (6.83%). The significant influx of tourists from Korea and Japan is causing many businesses to reconsider how to tailor their services and products, with a greater need to serve the tastes and demands of these new and growing Asian markets. The regional markets of ASEAN<sup>6</sup> and Eastern Asia account for 56.65% of visitor arrivals while Europe and the Americas respectively provide 20.38% and 9.66% of the market share.

There is little doubt that tourism is important for the Cambodian economy, contributing \$832 million in direct expenditure, contributing 8-12% of GDP and generating direct employment for about 200,000 employees (and indirect employment of 300,000). The current number of hotel rooms is about 11,500 and MOT has indicated a target of 52,000 rooms by 2010.

Along with the increased visitor arrivals, the Government has focused on development of associated infrastructure such as roads, airports, harbors, clean drinking water supply, electricity, and other services, as well as facilitating cross-border travel such as issuance of entry visas on arrival and exemption of Khmer people living overseas, the use of border passes and facilitation of customs formalities. Applications for entry visas have been simplified particularly with the introduction of Cambodia's e-visa. A key issue for tourism development is an open sky policy (as well as improved linkages facilitating travel overland and by water), which is indispensable to facilitate the movements of intraregional and global travelers.

Although the tourism sector is very strong, its impact on the economy is far from maximized. Cambodia suffers from a relatively high economic leakage of foreign income from tourism, with potential losses estimated at \$370 million in 2003, or 40% of total income.<sup>7</sup> The MOT estimated that more than one fifth of tourism sector revenue in 2006 went abroad due to remittances by foreign companies and consumption of imports such as gasoline and luxury foods.<sup>8</sup> The Netherlands Development Organisation (SNV) is in the process of investigating the impact of tourism spending in Cambodia through a Value Chain Analysis of tourism expenditure. At the time of writing this report, the final report on studies conducted in Kampong Cham, Kratie and Siem Reap was still in preparation. The results of this study will be used to establish baseline data regarding spending, the distribution of benefits and the leakages to the economy.

Due to the ease of setting up foreign-owned/managed businesses in Cambodia and a growing demand for high-end, classic tourism services which require a high level of expertise, experience and investment, many international tourism businesses now account for a significant share of the market in major tourist areas (e.g., Siem Reap), repatriating a large share of the profits coming into the country.

Another issue is the low diversity of tourism attractions and a low average length of stay, estimated at less than one week or 6.3 days per visitor. One reason is that many tourists visit on packaged tours, which are often just 2-3 days in length and are based around the prime destination of Angkor Wat and Siem Reap Province. With a growing number of group tourists each year (35.64% of all tourists in 2005 were on package tours), this trend may be difficult to change without more creative, attractive and logistically efficient services available in other provinces.

Given the potential for tourism to make a major contribution to Cambodia's economy, the Government, external donors and NGOs have supported wide-ranging planning for the sector. The two most notable developments in planning for expansion of the sector are the GMS Tourism Sector Strategy (supported by ADB) and the National Ecotourism Strategy (with support from SNV). ADB Loan No. 1969-CAM (SF) for the MTDP covers (i) upgrading tourism infrastructure; (ii) community-based pro-poor tourism development; and (iii) subregional cooperation.<sup>9</sup>

## 2.2 National Tourism Strategy Plans and Policies

### 2.2.1 Planning Context

Broadly, the MOT follows a four-sided strategy for tourism development (i) Phnom Penh for city tourism and business tourism; (ii) Siem Reap as a cultural tourism destination; (iii) coastal region (mainly centred on Sihanoukville) as a leisure destination; and (iv) northeastern region as an ecotourism destination. While the overall strategy is on the four areas outlined, tourism development has expanded throughout the whole country, contributing to the potential that community-based tourism development has for poverty alleviation. Tourism is one of the most significant economic drivers in Cambodia because wherever tourism reaches there is creation of employment opportunities and income generation. Tourism generally assists the improvement of living standards, helps to

<sup>6</sup> Association of South East Asian Nations

<sup>7</sup> Mingsarn, Kaosa-ard, 2005. Tourism: Blessings for All? Workshop on "Mekong Tourism: Learning Across Borders", Social Research Institute, Chiang Mai University.

<sup>8</sup> <http://www.excursionasia.com/news.html>

<sup>9</sup> The MTDP aims to reduce poverty in the GMS countries, contribute to economic growth, increase employment, and promote the conservation of the natural and cultural heritage. The Project aims to promote sustainable tourism through infrastructure improvements, community and private sector participation, and sub-regional cooperation.

minimize rural-urban migration, links poor communities to markets, fosters domestic product markets and enhances community infrastructure.

Despite the success to date, many tasks remain to be completed for tourism development to conform to the United Nations Millennium Development Goals (MDG) and Cambodia's rectangular strategy (its national development plan). As Cambodia moves progressively towards a market economy, the role of the Government in encouraging a positive climate where the public sector can work with and assist the private sector to gain strength is one of its key priorities in the tourism industry.

A public-private sector partnership involves sharing risks, responsibilities, resources, and rewards. The public sector depends on private investors to provide tourism services directly to visitors and to finance design, construction, and operation of tourism facilities. The private sector requires supportive government frameworks, policies, approvals, incentives and infrastructure development. Typical partnership objectives involve the public and private sectors in:

- i. Product development (e.g. Government may zone a coastal area for resort development while the private sector provides the investment);
- ii. Research and technology development;
- iii. Human resources development (such as through the provision of universities by government, and technical colleges by the private sector); and
- iv. Marketing and sales with agencies such as a national tourism marketing and promotion board where public and private sectors combine.

Under an intraregional cooperative framework with the Republic of Korea, Cambodia jointly organized a 50-day Angkor-Geongju World Culture 2006 in conjunction with the travel and sales exposition of AITEX 2006. This is an excellent example of a public-private sector partnership in Cambodia combining to produce an outcome for mutual benefits. Initiatives such as the Travel Mart launched by the MOT create a "climate of confidence" and this has a rolling effect which in turn results in the creation of new business opportunities and a rapid increase in hotel development and expansion of travel agency and tour operators. Government action to facilitate the tourism industry includes, for example, a hotels classification system to provide quality assurance for travelers and an easing of border restrictions and facilitation of visas to encourage tourism flows.

Based on tourist statistics provided by MOT, more than half of the total international visitors to Cambodia visited Siem Reap (Angkor). With continued growth in tourist numbers, this visitor pressure may threaten the

environment and preservation of the ancient temples in the region. To protect the irreplaceable resources of Angkor and to spread the benefits, Cambodia needs to diversify tourist destinations to other parts of the country. These other potential tourist attractions include the main additional strategic poles of Phnom Penh, coastal areas, and northeastern provinces of Kratie, Mondulhiri, Stung Treng and Ratanakiri.

The Government recognizes the need to prevent negative impacts of tourism through natural resources protection, cultural preservation, transmitted disease prevention, control of human trafficking and drug usage. The owners, operators and others involved in tourism need to be educated about the potential for sustainable tourism, ecotourism, nature-based tourism and health tourism.

The Government has developed tourism infrastructure such as roads, bridges, airports, river and sea harbors, power and water supply and has undertaken a number of ecotourism activities in cooperation with NGOs and international development partners. These include:

- The Great Lake of Tonle Sap (the largest lake in Southeast Asia) biodiversity ecotourism project;
- The MTDP (funded by ADB) which focuses on community-based ecotourism and pro-poor tourism development in the northeast provinces of Cambodia;
- Community-based ecotourism in Cham Bok community in Kampong Speu Province;
- Mekong River Dolphin Conservation and Ecotourism Project funded by the Australian Agency for International Development (AusAID), World Wide Fund for Nature (WWF), and Wildlife Conservation Society (WCS). This project has turned some gillnet fishermen into guide interpreters and farmers of fish, poultry, livestock and vegetables to supply the tourist demand;
- Protected areas and national parks. There are several ecotourism and nature-based tourism projects funded by World Bank, ADB, AusAid, Danish Institute for Development Assistance (DANIDA), World Conservation Union (IUCN), WWF, Wildlife Aid and other international organizations and NGOs. Wildlife conservation projects are vital to turn hunters into community interpretation guides/rangers and along the Mekong River to turn fishermen into tour boat rowers and community interpretation guides; and
- Coastal ecotourism projects including investment projects for some islands and other various projects throughout the country.



## 2.2.2 Tourism Planning in Cambodia

Tourism planning has a comparatively recent history in Cambodia. From 1994-96, the United Nations Development Programme (UNDP) conducted the first national study on tourism development. Previous studies had mainly concentrated on the Angkor Wat and Siem Reap development zone. The UNDP study provided the first comprehensive guide to the Government and the private sector on the sustainable and integrated development of tourism. In particular, the study team recommended several tourism resources for development and specifically included national parks for nature tourism. Priority was given to the four destination regions: Phnom Penh for urban tourism, Siem Reap for historic tourism, Sihanoukville for resort tourism and Ratanakiri for ecotourism.

The UNDP study was followed by two TA projects funded by ADB aimed at strengthening tourism planning (1999-2000) and building capacity in tourism planning (2000-01). The first study proposed a new legal tourism framework, hotel standards, an industry association, and training activities, and led to the development of an excellent tourism web site. The second study emphasized the importance of tourism for economic development and the necessity for careful planning and management, including coordination between ministries as well as the public and the private sector. The authors recommended the following immediate steps (i) restructuring of the MOT; (ii) implementing village based tourism; (iii) developing the handicraft sector; and (iv) a human resource development strategy.

The original UNDP recommendations still provide the main basis for tourism policy and strategy in Cambodia. As the Government has not yet formally adopted a comprehensive tourism master plan, tourism planning is mainly incorporated into the general five year socio-economic development plans. These plans clearly

establish tourism as one of the national priority sectors for development. The MOT is in the process of preparing a new National Tourism Strategy to cover the period 2008-2020, which will be presented to the Cabinet for approval in early 2008.

## 2.2.3 Social and Economic Development Plan (SEDP-II) (2001-2005)

The second five year development plan focuses on three interrelated components of tourism development: market study and research, development of tourism resources, and human resource development. Short-term priorities are coastal resort development, market promotion, construction of tourism offices nationwide, tourism resource research, regional cooperation and the commissioning of a tourism master plan. The medium term goals place a much stronger emphasis on provincial development, which specifically includes ecotourism in Ratanakiri and Mondulakiri Provinces as well as "environmental tourism" along the Mekong River and Tonle Sap Lake. Village tourism and handicraft traditions are other focal areas of the current five-year plan. Specific strategies for tourism development include proposals to improve air transportation and open up additional border crossings with Lao PDR and Viet Nam. For sustainable tourism development, protection and succession of cultural and religious traditions, protection of natural parks, management of temples and archaeological sites, are major issues addressed in SEDP-II. In addition to the preservation and management of tourist attractions and sustainable tourism development, improved infrastructure, utilities, and an effective regulatory framework and marketing are needed.

Cambodia's tourism development potential is recognized in eight areas as shown in Table 4.

**Table 4: Tourism Development Potential from SEDP-II**

| Tourism Development Potential Area                                      | Potential Resource and Type of Tourism Development  |
|---|---|
| Siem Reap and Angkor Archaeological Park Area                           | One of the world's major archaeological sites and tourist attractions for the foreseeable future. It is recognized as a symbol of Cambodia.   |
| North/Northeast Area  | Cultural tourism including village-based accommodation, nature-based tourism, adventure tourism, and river-based tourism.   |
| North Area  | Archaeological and religious interest in built cultural heritage sites, especially at Preah Vihear, nature-based tourism, adventure tourism, and village-based accommodation.   |
| Middle Plains Area  | Nature and river-based tourism on Tonle Sap and the Mekong River, rural exploration, wildlife, fishing, floating villages, and temples and archaeological sites.  |
| Middle Mekong Delta Area  | River-based tourism, rural exploration and wildlife.  |
| Western Coastal Area  | Mountaineering and trekking, wildlife and adventure tourism   |
| Eastern Coastal Area (Sihanoukville, Kampot, Kep and surrounding areas) | Beach holiday resort development, island cruises, and nature-based tourism, especially in Bokor National Park   |
| Phnom Penh and surroundings   | Major tourist attractions in the form of the Royal Palace and Silver Pagoda, the National Museum, the French-influenced built environment, the scenic attractions of the Mekong and Tonle Sap rivers and the Tuol Sleng Museum. |

The tourism development strategies in SEDP-II focus on:

- i. Diversifying into new products and services to cater for the varying demands and interests of international and domestic tourists.
- ii. Ensuring more effective promotion and marketing for both the international and domestic markets.
- iii. Encouraging private sector investment and participation in innovative tourism products as well as special projects and events.
- iv. Increasing the involvement of the local population, especially small entrepreneurs, in the development of district and localized tourism products and services.
- v. Improving and facilitating access into and within the country.
- vi. Providing the requisite infrastructure and amenities at designated tourist sites.
- vii. Focusing on formal as well as on-the-job skills training in order to meet the rising demands for skilled human resources.
- viii. Ensuring that tourism growing is regulated and managed so that it does not undermine the natural, built and cultural assets that attract tourists.

### 2.2.4 National Strategic Development Plan (2006-2010)

The National Strategic Development Plan (NSDP), which supersedes SEDP-II, would be strengthened by extending the understanding of a narrow private sector business-oriented tourism industry to its actual structure as a multi-dimensional system. As a service industry, tourism is systematically dependent upon linkages, so appropriate forms of tourism intervention are able to provide the central socioeconomic activity around which the many other required developments may be introduced. These include diversification of agricultural output, micro-hydropower, literacy, clean water, vocational training, improved road and river transport infrastructure, etc. Because of its intensive network of linkages, tourism has the capacity to assist a number of other sectors to realize, at least in part, their own sectoral objectives.

Tourism has a capacity to contribute to multiple objectives of the NSDP, namely (i) the four generic principles of the Rectangular Strategy (growth, employment, equity and efficiency), (ii) generic objectives such as national economic productivity, poverty alleviation, regional development, decentralization, infrastructure development, and capacity building and human resources development, and (iii) specific sectoral objectives such as agricultural diversification, environmental and cultural conservation, manufacturing, health, transport, and education.

Linking the development of tourism into poverty alleviation is strategically vital, and this may be accomplished by directly targeting communities, rural poor, indigenous minorities, women, and urban unemployed youth. Tourism as a system illuminates the way in which backward and forward linkages could provide opportunities for poorer sections of communities and for intervention in enterprises not always recognized as part of tourism but which are nevertheless tourism dependent in whole or in part for their sustainability and economic viability. Building on these linkages, important initiatives could be extended to include:

- i. Community based tourism ventures in outer provinces and with rural populations, for poverty alleviation;
- ii. Strengthening linkages into the agricultural sector, identifying tourist demand-led requirements for increased production of existing produce and diversification into new crops (vegetables, fruit, herbs, flowers, etc.);
- iii. Assisting the health sector achieve its objectives by ensuring that tourism ventures incorporate sound environmental management regimes, including improved sanitation and sewerage, solid and liquid waste disposal, garbage collection and disposal in landfill sites, assisting community health by the provision of clean water supplies, improved food storage and public food preparation standards, and better nutrition, and also health education through awareness programme for HIV/AIDS, child sex exploitation, etc.;
- iv. Assisting the forestry sector by incorporating conservation and reforestation wherever appropriate in tourism development since tourism utilizes forests in terms of attractions (non-consumptive) and timber for construction and fuel-wood (consumptive);
- v. Assisting the education sector achieve its objectives by providing vocational, technical training and managerial training for tourism enterprises;
- vi. Assisting in information and communications technology development, since tourism is a major user of these facilities; and
- vii. Assisting in industry development and public sector/private sector partnerships since the majority of tourism businesses are SMEs and are therefore significant generators of increased investment and employment opportunities which principally contribute to the poverty alleviation.

The NSDP proposes the following actions for the tourism sector:

- i. Research and manage the Emerald Triangle Tourism Development Project Cambodia, Lao PDR, and Thailand;

- ii. Research and manage the Emerald Triangle Tourism Development Project in Cambodia, Viet Nam, and Lao PDR;
- iii. Observe and work with the GMS sustainable tourism development project;
- iv. Manage the Mekong Discovery Trail - poverty alleviation through tourism development and conservation of the Mekong dolphin and its habitat in Stung Treng and Kratie provinces;
- v. Manage the policy and strategic development of ecotourism in Cambodia;
- vi. Observe and assist with the public investment project for tourism development 2007-2009;
- vii. Participate in the working group under the Cambodia Development Council (CDC) in order to research and assess the requests of the private investment project to develop hotel and tourism resorts and tourism facilitation; and
- viii. Stimulate political support for a tourism development commission.

Implementation goals for 2007 included:

- i. Continue to research and manage the Emerald Triangle Development Project in Cambodia, Lao PDR, and Thailand;
- ii. Continue to research and manage the Emerald Triangle Development Project in Cambodia, Viet Nam, and Lao PDR;
- iii. Pursue Cambodia's response to the GMS sustainable tourism development project;
- iv. Pursue management of policy and strategic planning for ecotourism in Cambodia;
- v. Manage public investment projects for tourism development in 2008-2010; and
- vi. Participate in the CDC working group.

### 2.2.5 National Tourism Policy

The Tourism Plan Cambodia (Basic Policy for Tourism Development), which dates from ADB's first tourism sector TA, states that:

- i. Cambodia is in a favorable position to take advantage of its location in a highly developed regional market that has shown strong tourism growth;
- ii. The country has a significant and internationally recognized cultural heritage. This can be developed as an integral part of the tourist experience, which increasingly encompasses cultural heritage and entertainment including museums, art galleries, and traditional theaters;
- iii. Restoration and preservation of culture, and religions and traditions can be a source of continued spiritual and cultural vitality, and the foundation of cultural tourism;

- iv. For sustainable development of tourism, maintenance of the integrity of culture and religious tradition must be matched by sound management of the natural and built environment, Temples and archaeological sites need to be restored and protected, forests, lakes, and national parks must be conserved, urban landscapes need to be managed, and pollution and other potentially negative environmental impacts need to be addressed; and
- v. Sustainable tourism development requires supportive improvements in infrastructure and utilities. Both the public and private sectors have major roles to play in these areas, and thereby ensuring that tourism potential is realized.

The National Tourism Policy is guided by an overarching vision for tourism in Cambodia.

**Tourism Vision Statement** – This vision is to develop sustainable tourism for the benefit of the nation as a major tool for economic development and poverty alleviation. Tourism shall respect national social and cultural values, and support environmental conservation in way that meets the need of the present without compromising the ability of future generations to meet their own needs. The overall aim is to provide visitors with the highest quality of experience based on uniquely Cambodian values, attractions and sights. In this context the Royal Government of Cambodia undertakes to accord the tourism sector foremost priority for national development. This vision is based on five foundation principles.

#### Principle 1: Fundamental values of sustainable tourism development

– Sustainable tourism development in Cambodia will embrace the five fundamental values established for sustainable development by the United Nations World Commission on Environment and Development (1997), namely (i) to conserve, protect and where appropriate restore historic, cultural and natural resources that are the foundation for tourism, (ii) to promote equity in development, (iii) to improve the quality of life of the host community and respect their needs and values, (iv) to provide a high quality experience for the visitor; and (v) to maintain the quality of all resource to foster long term productivity and development able to be sustained for future generations

#### Principle 2: Effective balance between the economic and conservation of natural and cultural heritage

– A major objective for sustainable tourism development in Cambodia is to achieve an effective balance between economic development and conservation of the cultural and natural heritage. Sustainable tourism development in Cambodia will be designed to maximize economic, social, cultural, and environmental benefits while minimizing adverse impacts.

**Principle 3: Tourism development focus** – Tourism attractions and strategies shall be developed focusing on ancient monuments and important cultural/historical heritage site, festivals and special events, and the abundant natural features with which Cambodia is blessed. In particular, significant effort will be put into diversifying Cambodia's current global image of a single icon, Angkor, by active support of alternative attractions for development, such the Mekong River Dolphin.

**Principle 4: Quality standards** – To ensure the sustainable development of Cambodia's tourism sector according to international best practice, the MOT will introduce a national standards accreditation system such as 'Green Globe'. This cover all tourism business activities (including ecotourism) and include but not be limited to assessment of such operational areas as environmentally sound sewage systems, waste management control, anti-pollution mechanisms, efficient alternative renewable energy, wise water usage, noise abatement, integration into the local economy, provision of training for local people, and support for the development aspirations of local communities.

**Principle 5: Inappropriate forms of tourism** – The Government is resolutely opposed to child sex tourism and other forms of exploitation. The Government will use all of its powers to prevent and/or ban inappropriate forms of tourism, especially those promoting drug use or other banned substances, and activities which may result in the spread of HIV/AIDS.

These foundation principles are underpinned by a set of guiding principles and objectives for tourism in Cambodia.

**Guiding Principle 1: The global-national-local nexus** – Sustainable tourism development will take place in the context of different levels of planning and action for implementation, from the national level downwards to the provincial and the local levels, and outwards to the regional and global levels. This will incorporate both international standard ventures and small scale indigenous and community based tourism enterprises.

**Guiding Principle 2: Planning for tourism** – The MOT will have responsibility for formulating tourism plans at different levels and in different sectors. These include but are not restricted to national five-year or ten-year tourism master plans, regional/provincial tourism development strategies, and sectoral plans such as the national ecotourism plan, a coastal zone plan, agrotourism, sports tourism, and a wildlife tourism plan. The Government will also work closely with the GMS for wider cooperation in tourism planning that is best undertaken at the macro-regional level.

**Guiding Principle 3: Agro-tourism and linkage to agriculture** – In view of the importance of the agricultural sector to the lives of Cambodia's people, especially rural communities and the rural poor, emphasis will be placed on planning for agro-tourism, and for strengthening linkages between tourism and agriculture and agriculture related events.

**Guiding Principle 4: Sports tourism** – The potential of sports tourism offers another opportunity for Cambodia to diversify its tourism product and the Government will support greater efforts to promote this special interest niche market.

**Guiding Principle 5: Community based tourism** – In support villages and indigenous communities particularly in the context of poverty alleviation the Government in partnership with appropriate national bodies and international agencies will provide SMEs with business counseling and planning services related to feasibility of proposals, potential source of finance, marketing and raining. Pro-poor and community-based tourism development projects will be actively supported by the MOT.

## 2.2.6 The National Tourism Development Plan (2001-2005)

The National Tourism Development Plan drafted by MOT outlined the tourism strategy for the planning period 2001–2005. The document, prepared with ADB support, provided important guidelines for the development of tourism in line with the goals of SEDP-II. In its vision statement, MOT strongly emphasizes tourism's role as a sustainable development tool, particularly in the struggle against rural and urban poverty. Accordingly, the key policy goals call on the Government to:

- adopt tourism development strategies designed to reduce poverty;
- ensure equitable distribution of tourism revenue, and,
- meet environmental and cultural conservation objectives.

In terms of product development, the plan draws attention to the immediate potential of village-based tourism to address poverty. With respect to nature-based tourism, the design of a specific tourism strategy for the northeastern provinces is recommended as a priority action. While the Government did not formally adopt the plan, the document nevertheless guides the current policies and strategies of the MOT. Proposals coming from the MOT are sent to the Ministry of Planning (MOP) to be included in the National Socioeconomic Development Plan.

## 2.2.7 Tourism Action Plan (2005-2010)

As the successor to the original tourism development plan, this draft action plan prepared by MOT contains the following strategies:

- i. Resolutely and effectively embarking on the rectangular strategy to augment job opportunities, impartiality and efficiency in Cambodia;
- ii. Resume the implementation of a sound tourism policy and strategic development plan under the guideline of a Cambodia's tourism development in a sustainable manner, which contributes to poverty alleviation;
- iii. Make Cambodia's tourism become a quality tourism with a full qualification in the market competition and become an intraregional prime tourism destination founded on the heritages of culture, history, magnificent nature and decent tradition/custom of the people and enable it to contribute to ASEAN as a single tourism destination;
- iv. Endeavor to attract a 20%-30% steady annual influx of international tourists derived from the sound policy and strategic plan and by 2010, Cambodia shall receive 10 million international visitors as planned; and
- v. Strive to stimulate more movement of domestic visitors (by 2010 there shall be approximately 4 million local tourists) that can contribute to the enhancement of national tourism revenue, to approximately \$1 billion per year, and generate another 360,000 job opportunities.

## 2.2.8 MOT Goals and Implementation Planning (2007-2008)

MOT has committed to the following goals and implementation plans for 2007-2008:

- i. Strongly implement the national tourism policy regarding national and cultural tourism;
- ii. Stimulate support for a national tourism and national ecotourism policy;
- iii. Encourage preparation of master plans, especially to make an effort to finish strategic planning of development in Siem Reap/Angkor, Tourism Master Plan in Phnom Penh, coastal zone, and northeast ecotourism regions;
- iv. Manage the law and regulations on tourism management;
- v. Encourage human resource training and increased public understanding;
- vi. Encourage the pro-poor alleviation policy and implement the one village, one product policy;
- vii. Reinforce moves to increase tourism quality value;
- viii. Campaign for tourism promotion in the main domestic and international markets.
- ix. Stimulate promotion of new local tourism attraction sites;
- x. Generate significant tourism events to attract tourists;
- xi. Facilitate tourist travel and transportation;
- xii. Collaborate to strengthen the security and safety arrangements in tourism destinations;
- xiii. Counter any negative impacts related to tourism; and
- xiv. Strengthen the roles and responsibilities of tourism development management commission.

Further details on some of these elements are as follows:

### (a) Tourism Safety and Security Strengthening

- i. Collaborate with the Ministry of Interior to strengthen tourist police to become more able to undertake their responsibilities (include language training, equipment, and budget) especially at the priority tourism destinations, and to manage extra mobile police stations and volunteer workforces to send information effectively;
- ii. To have an active tourism telephone hotline able to deal with inquiries at the tourism sites; and
- iii. To improve the safety and security system for recording tourist identification and registration of tourists staying at hotels and guest houses.

### (b) Travel Facilitation and International Check-point Travel

- i. Facilitate better tourist travel throughout Cambodia;
- ii. Streamline processes at international check-points;
- iii. Reinforce the visa exemption implementation for Asian passengers (according to the aide memoire of announcement in Vientiane 2004);
- iv. Reinforce effective E-visa implementation; and
- v. Explore possible visa exemptions for main tourism markets.

### (c) Transport Facilitation

Collaborate with stakeholders and related Ministries in order to:

- i. Encourage new airline companies;
- ii. Encourage formation of an Airline Association;
- iii. Encourage Air Service Agreements in the main markets, especially Japan to Cambodia;
- iv. Arrange improved taxi services in the main tourism attraction sites; and
- v. Encourage implementation of the transport policy for Ayeyawady Chaophaya Mekong Economic Cooperation and Strategy (ACMECS) in collaboration with Customs and Excise offices to facilitate different forms of tourist transport from Asian countries.



**(d) Road and Airport Infrastructure**

- i. Continue to improve and build the infrastructure to key tourism destination regions and attraction sites;
- ii. Encourage construction of airports in the northeast tourism regions; and
- iii. Encourage enlargement of Phnom Penh International Airport capacity to allow large wide body (long haul) planes to land.

**(e) Statistics and Tourism Information**

- i. Continue to collect, compile, analyze, and publish tourism statistics reports. Observe tourist arrivals and activities in high and low seasons of 2007 to generate tourism satellite accounts;
- ii. Organize tourism information offices at international check-points and tourism information centres in the main city and provinces; and
- iii. Increase advertising on the internet and update the website to advertise the schedule of tourism events in Cambodia.

**(f) Building Tourism Policy and Tourism Planning**

- i. Reinforce tourism policy formulation;
- ii. Make an effort to finish the Tourism Development Strategic Plan 2006-2010;
- iii. Collaborate with Japan International Cooperation Agency (JICA) to implement the strategic planning project for tourism development in Angkor/Siem Reap region and other areas;
- iv. Collaborate with Thailand Tourism Authority (TAT) in order to continue development of the coastal zone master plan;
- v. Reinforce Master Plan approval in Ratanakiri and Mondulkiri;
- vi. Collaborate with WTO to prepare the Dolphin Trail Region Master Plan;
- vii. Collaborate with SNV on ecotourism development planning and build up the national ecotourism policy;
- viii. Augment collaboration with ADB to manage new tourism development project;
- ix. Collaborate with Ministry of Land Management, Urban Planning and Construction (MLMUPC) to finish historical tourism development master plan for Anlong Veng historical site, encourage building Sdach Kon resort and Chong Khneas;
- x. Reinforce agro-tourism by encouraging communities to grow vegetables, fruit, and livestock for meeting tourism demand to alleviate imports from overseas;
- xi. Collaborate with local authorities, ministries, and stakeholders to build Master Plans and Development Plans in the four priority tourism

regions to manage the city and downtown areas with infrastructure, hygiene, and good arrangements for quality services to makes tourists happy and stay longer;

- xii. Encourage all identified tourism attraction sites to improve management planning and development;
- xiii. Collaborate with stakeholders to determine appropriate land use, divided into conservative areas, development, forbidden and reserved areas;
- xiv. Augment cooperation with development partners to enlarge tourism development project; and
- xv. Encourage planning, building and development of Chong Khneas area in Siem Reap.

**(g) Poverty Alleviation**

- i. Collaborate with local organizations and international organizations to build the strategic policy and strategic planning projects, and enhance the poverty alleviation programme through tourism;
- ii. Encourage improvement in the quality of souvenirs in each tourism region or community;
- iii. Encourage the development of home-stay tourism communities;
- iv. Collaborate to reinforce the tourism development committees in the provinces to strengthen their roles and duties, especially in pro-poor alleviation planning and generating home-stay tourism communities, and in industry management; and
- v. Collaborate to reinforce the Green Chain area development in Angkor/Siem Reap region.

**(h) Negative Impacts of Tourism**

- i. Continue to implement agreements with local and international organizations, in domestic and international arenas, to implement the planning on "Workforce Exploitation and Child Sex Abuse, and Young Women in Tourism"; and
- ii. Collaborate with stakeholders on prevention of human trafficking, education about, and preventing, HIV/AIDS and controlling drug use related to tourism.

**(i) Product Quality Strengthening and Tourism Services**

- i. Strengthen programme implementation in regular collaboration with the private sector and make the cooperation effective and successful in strengthening tourism product quality;
- ii. Collaborate with authorities (City, Province, Ministry) and related stakeholders to strictly manage construction permits and licenses to effectively avoid issuing double licenses;

- iii. Provide support to provincial tourism offices to improve management and development of regional tourism products;
  - iv. Manage and assess the first hotel classification scheme in Phnom Penh, Siem Reap, and Sihanoukville;
  - v. Encourage and support development of the home-stay programme through the provincial tourism offices;
  - vi. Support vocational tourism service training courses to improve the standards of food hygiene quality, drink service, and transport;
  - vii. Support development of the Korean Tourist Guide Training Course to strengthen Korean language skills, and Korean interpretation management;
  - viii. Improvement of signage and facilities in major cities and tourism areas including traffic signboards, tourism signboards, public toilet facilities, parking areas and emergency services; and
  - ix. Issue an official announcement for licensed business persons not to undertake trade with those companies and agents without the proper license.
- (j) Cultural Tourism Event Generation and Tourism Attraction Sites Arrangements**
- i. Organize a Tourism Exhibition (AITEK) for 2007 in Siem Reap attached to cultural tourism events with the aim of becoming an annual international tourism event in Cambodia;
  - ii. Attend and reinforce connection arrangements with Pacific Association of Travel Agents (PATA) Travel Mart;
  - iii. Collaborate with the Ministry of Cultural and Fine Arts, Olympic Commission, related ministries, and authorities to organize tourism events in Phnom Penh and the coastal zone, and generate new tourism events in the Mekong dolphin region;
  - iv. Collaborate with Phnom Penh Municipal Authority, Siem Reap, Sihanoukville and other cities where it is possible to organize activities served by the Apsara Authority, and the resident religious authority in Siem Reap;
  - v. Reinforce organization of the Khmer Handicraft Products Exhibition in Phnom Penh and Siem Reap and collaborate with the appropriate authorities and private companies involved in souvenir sales; and
  - vi. Organize firework exhibitions as well as other events in the 24 provinces during the annual water festival.
- (k) Market Research and Promotion**
- i. Continue market research in support of strategic planning and to identify new target market opportunities and to support promotional efforts;
  - ii. Form a Cambodia Market Research and Promotion Council;
  - iii. Strongly promote the new attractive tourism destinations, especially Phnom Penh tourism, coastal zone, and northeast tourism regions;
  - iv. Manage the calendar for the main tourism events and seek more support from the Government for these events;
  - v. Manage short term and long term market research and strategic planning to attempt to reform tourist perceptions of Cambodia;
  - vi. Communicate with the private sector and tourist representatives in foreign countries to organize promotional trips, invite journalist networks, tourist executives, and large hotel management. Target ten people per week invited from Japan, Korea, PRC, India, America, Germany, France, England, Australia, and other new target markets;
  - vii. Augment advertising on local and international TV, especially producing new spots on CNN, BBC, Discovery, Geography Channel etc.;
  - viii. Augment production and publishing of magazines, leaflets, and advertising materials in different language to meet the market demand; and
  - ix. Encourage collaboration with the private sector to do market research and promotion.
- (l) Public Understanding, Education and Human Resource Training**
- i. Manage public awareness and education programmes on tourism on radio, television, and other media;
  - ii. Manage human resource training on strategic planning for MOT and other officers to meet the needs of future and current tourism development;
  - iii. Reinforce collaboration with the Ministry of Education to handle the training programmes of institutes, faculties, and private universities, and include tourism awareness programmes in the general education curriculum;
  - iv. Reinforce tourism institutes, tourism vocational or technical schools under the supervision of MOT to strengthen and encourage understanding of tourism services by (a) building a national tourism institute to manage sustainable tourism development strategic planning and augment the capacity of MOT, (b) building a tourism vocational school or tourism technical school. MOT will collaborate with any private school with vocational programmes to reach the tourism industry, and (c) publish information aimed at enhancing tourism understanding; and

- v. Create a tourist guide training programme to meet the market demand.

#### (m) International Cooperation

- i. Reinforce collaboration with WTO, ADB, SNV, German Technical Cooperation Agency (GTZ) and international organizations to strengthen cooperation;
- ii. Pay attention to Cambodia's neighboring countries, especially in collaboration to develop GMS tourism, dolphin tourism management in Kratie and Stung Treng and ecotourism development;
- iii. Pay attention to advertising cooperation, human resource training, infrastructure development, sustainable development, and poverty alleviation;
- iv. Enter into bilateral and multilateral agreements on implementation activities and tourism cooperation;
- v. Continue to encourage cooperation in the Cambodia, Viet Nam, Lao PDR and Emerald Triangle regions; and
- vi. Concentrate on bilateral cooperation with regional countries, France, Korea and others.

### 2.2.9 National Ecotourism Policy and Strategy Framework (draft)

A draft vision for Cambodia's national ecotourism strategy has been prepared by MOT (with assistance of SNV). The vision states that Cambodia "will become a popular and competitive ecotourism destination in Southeast Asia by:

- Managing natural and cultural resources in a sustainable manner;
- Raising conservation awareness and environmental education of both host communities and visitors alike;
- Empowering local communities to participate in and benefit from tourism;
- Cooperating with national and international ecotourism stakeholders;
- Developing high quality tourism products based on its unique natural and cultural features; and
- Providing a high quality and satisfying experience for the visitors."

Proposed policies to promote ecotourism in the three priority areas (Cardamom Mountains, Tonle Sap Lake, and northeastern Cambodia) are to (i) balance conservation and development; (ii) ensure viable, long-term, equitable economic operations; (iii) support poverty alleviation by developing ecotourism; (iv) undertake a sustainable marketing approach, to match ecotourism supply with demand; (v) establish a national coordination body;

(vi) create ecotourism products; (vii) ensure the quality of products and services; (viii) enhance changing local attitudes towards tourism and environmental conservation; (ix) optimize visitor fulfillment by providing a total experience; and (x) enhance and encourage micro-enterprise and SME development in ecotourism.

## 2.3 Tourism Laws and Regulations

The tourism sector is subject to national tourism laws, sub-decrees and circulars as well as specific provincial and district regulations. The relevant national laws and regulations cover:

- Tourist enterprise business registration and operations licensing;
- Cross border procedures applying to foreigners and border residents;
- Compliance to minimum facility and service standards;
- Tour guide licensing;
- Recruitment, remuneration, and separation of labor;
- Land use controls and zoning; and
- Data reporting.

The provincial and district laws and regulations usually concern:

- Land use controls and zoning;
- Building permits and licenses;
- Tourist enterprise business operation licensing;
- Inspection for health, safety and minimum facility and service standards; and
- Data reporting.

A national Tourism Law has been drafted and submitted to the Council of Ministers but it has been sent back to MOT on two occasions for further amendment, particularly to ensure adequate private sector consultation. Among other things the draft law provides for a comprehensive planning system as follows.

**"Article 4** – The MOT shall prepare a National and Regional Tourism Development Plan in the Kingdom of Cambodia with the participation from relevant ministries and institutions, the Apsara Authority, the National Tourism Authority and the private sector for approval by the Royal Government of Cambodia

- (a) The National Tourism Development Plan shall:
  - Identify important policies, strategies and planning for development of tourism sector;
  - Propose measures to ensure the sustainability of national tourism development.



- (b) The Regional Tourism Development Plan shall:
  - Identify strategies for tourism development in each region;
  - Propose measures to ensure the sustainable development and management of tourism sector in each region;
  - Implement the national tourism development plan properly.
- (c) Any construction projects for tourism activities shall be undertaken in accordance with the national or regional tourism development plans and be inspected by the MOT.

The National and Regional Tourism Development Plans in the Kingdom of Cambodia shall be reviewed and revised within a maximum period of every five years."

The main articles of the draft Tourism Law specify (i) the conditions and criteria for owning and operating a business related to tourism; (ii) the professional qualifications and training required for staff operating in the tourism sector; (iii) the roles and functions of MOT in supporting and promoting the tourism sector; (iv) the management of tourism information; (v) creation of new institutions such as a Marketing and Promotion Board; (vi) obligations of stakeholders; (vii) investigations and inspections for quality control; and (viii) sanctions and punishment.

In the absence of a formal Tourism Law, MOT relies heavily on various regulations or sub-decrees and circulars, as follows:

- i. Sub-decrees for arrangement and functions of MOT (5/08/1997);
- ii. Sub-decrees for adjusting roles and duties and formulating of law maker team and ASEAN and International Cooperation Department of MOT (3/05/2000);
- iii. Declaration for provision of tourism licensing to travel agencies and tour operators (2/05/2001);
- iv. Circular of guidelines for travel agencies and tour operators management (2/05/2001);
- v. Declaration for provision of tour guide licenses (2/05/2001);
- vi. Circular of guidelines for tour guide management (2/05/2001);
- vii. Declaration for provision of business licensing to travel agencies and tour operators, sports and leisure tourism (2/05/2001);
- viii. Circular of guideline for business licenses management to travel agencies and tour operators, sport and leisure tourism (2/05/2001);
- ix. Declaration for provision of travel agencies and tourist attractions business licensing (2/05/2001);

- x. Circular of guidelines for managing licensing of travel agencies and tour operators at tourist attractions (2/05/2001);
- xi. Declaration for provision of licensing to all kinds of ground tourist transportation (2/05/2001);
- xii. Circular of guidelines for managing all kinds of ground tourist transportation (2/05/2001);
- xiii. Declaration for provision of tourism licensing to restaurants operation (2/05/2001);
- xiv. Circular of guidelines for managing restaurant operations (2/05/2001);
- xv. Declaration for provision of tourism licensing to bars and discothèques operation (2/05/2001);
- xvi. Circular of guidelines for managing bars and discothèques operation (2/05/2001);
- xvii. Declaration for provision of tourism licensing to karaoke operations (2/05/2001);
- xviii. Circular of guidelines for managing karaoke operations (2/05/2001);
- xix. Declaration for provision of tourism licensing to massage services operation (2/05/2001);
- xx. Circular of guidelines for managing massage services operation (2/05/2001);
- xxi. (xx1) Declaration for provision of tourism licensing to hotels and accommodation operations (2/05/2001);
- xxii. Circular of guidelines for managing tourism licensing of hotels and accommodation operations (2/05/2001);
- xxiii. Declaration for provision of tourism licensing of water transport (7/11/2000); and
- xxiv. Circular of guidelines for managing water transport (7/11/2000).

In relation to environmental management of the tourism industry, the draft Tourism Law provides for creation of an "eco-label" to be awarded to any tourism operator who acts according to the environmental standards of the Ministry of Environment (MOE). All tourism operators are obliged to "respect the interests of tourists as well as the society of the nation and contribute in maintaining the natural resources, shall not pollute or damage the environment, and shall protect and conserve the culture, arts, customs, and traditions of the Khmer people in all of its tourism activities."

In addition to the laws and decrees specifically applying to the tourism sector, other legislation also provides for the promotion and protection of tourism activities. For example the Forestry Act provides for the Ministry of Agriculture, Forests and Fisheries (MAFF) to "propose the RGC to designate as Protection Forest any of the Permanent Forest Reserve, which may qualify as a special valuable ecosystem, an area of scientific, cultural, or tourism value or an area for biodiversity, soil and water (protection)."

## 2.4 Institutions in Cambodia with Tourism-related Responsibilities

### 2.4.1 Ministry of Tourism

Tourism administration in Cambodia is under control of the MOT. MOT is headed by the minister, 5 Secretaries of State, 6 Under-Secretaries of State and 11 Departments, 2 Directors General, 4 Deputy Directors General, Legal Affairs Division and 24 Municipal and Provincial Offices. Major issues for tourism administration at the central government level in Cambodia are as follows:

- i. Limited allocation of government budget for planning, operation and implementation for projects/programmes;
- ii. Slow implementation of projects and programmes;
- iii. Necessary laws and sub-decrees related to tourism are not enacted;
- iv. Limited opportunity for training of government officials and staff;
- v. Limited partnership with the private sector for promotional activities; and
- vi. Discouragement of work for staff due to low salaries.

### 2.4.2 Ministry of the Environment

MOE was established in 1993. MOE has the following duties and responsibilities:

- i. Develop environmental policies in the spirit of sustainable country development and implement the National and Regional Environmental Action Plans in collaboration with other concerned ministries;
- ii. Prepare and implement environmental legal instruments to ensure sustainable development;
- iii. Institute EIAs of all proposed and ongoing projects and activities, both public and private, and prepare proposals on processing procedures as well as to review the EIA process;
- iv. Advise relevant ministries on the conservation, development, and management of natural resources including land, water, air, geology, ecology, mines, energy, oil and gas, stones and sand, gems, timber and non-timber forest products, wildlife, fishes, and fishery resources with sustainability; administer the Natural Protected Area system in collaboration with the concerned ministries following the Royal Decree on the Creation and Designation of Natural Protected Areas of November, 1993 and propose new areas to be included in the system;
- v. Prepare inventories which describe the source, nature, and amount of pollutants such as liquid and solid waste, pollution, hazardous elements, smoke, noise, and vibration and take measures to prevent, reduce, and control the environmental pollution in

- collaboration with concerned ministries;
- vi. Prepare inspection procedures on pollution sources and make a report on such offenses to competent institutions in collaboration with the concerned ministries. Enforce provisional fines and other provisions as stated in Chapter 9 of the Law on Environmental Protection and Natural Resources Management.
- vii. Collect, analyze, and manage environmental data and prepare annual reports on the environmental situation in Cambodia. Provide information concerning its activities and environmental protection, natural resource management, and environmental situation to the public and encourage them to participate in the process;
- viii. Prepare and conduct environmental education programme at all levels, including local communities, in collaboration with concerned ministries, and national and international organizations;
- ix. Initiate and prepare proposals to the Government that fulfill international Agreements, Conventions, and Memoranda of Understanding related to Environmental Protection and to implement such international Conventions, Agreements, and Memoranda of Understandings;
- x. Promote incentives for investment projects which facilitate environmental protection and nature conservation; and
- xi. Cooperate with national and international organizations, non-governmental organizations, local communities, and other countries to ensure environmental protection in the Kingdom of Cambodia.

### 2.4.3 Ministry of Agriculture Forestry and Fisheries

MAFF plays an important role in planning and management of water and related natural resources through its three departments. MAFF has the following duties and responsibilities:

- i. Prepare and implement agricultural development policies to promote the living standard of citizens;
- ii. Participate in the preparation of policies for reform and use of land;
- iii. Instruct and develop plans for agricultural development;
- iv. Coordinate, follow up, and evaluate the policy implementation and agricultural development activities;
- v. Monitor the evolution of natural resources of the agricultural field and facilitate such natural resource business to meet the needs of the Kingdom and maintain ecological equilibrium;
- vi. Define provisions for governing, preserving, and protecting natural resources of the agricultural field and follow up its implementation;

- vii. Conduct assessments and human resources training for participation in agricultural development by promoting the technical understanding and increasing the effective use of such resources;
- viii. Provide advocacy and necessary technical guidance for farmers to promote agricultural production and productivity;
- ix. Define policies and follow up the performance and promote and improve the functioning of vocational agencies and associations dealing with agriculture;
- x. Research and disseminate scientific and economic technologies in all agricultural sectors; and
- xi. Instruct on land development and land quality improvement and proper use of agricultural land, seedlings, breeding, chemical fertilizers, and agricultural chemicals.

#### 2.4.4 Ministry of Water Resources and Meteorology

MoWRAM was created in 1999 as a reflection of the importance that the Government places on water resource matters. Previously, water issues were under the Directorate General of Irrigation, Meteorology and Hydrology in MAFF. In general, the roles and duties of MoWRAM are to conduct and manage the water resources of the Kingdom of Cambodia. Specifically, MoWRAM's role is to:

- i. Define the policies and strategic development of water resources in order to serve the exploitation, development and sustainable conservation at the national and international level consistent with the policy programme of the Government;
- ii. Study and research the potential of available water resources, including surface, underground and atmospheric;
- iii. Prepare the short, medium and long term plans for the exploitation, development and conservation of water resources and meteorology to serve the national economy and living standards of Cambodian people in cities and rural areas
- iv. Manage and supervise all of the direct and indirect exploitations on water resources in a rational manner and to minimize water/flood related disasters;
- v. Draft the water law, including major principles and regulations related to the management of water resources, and monitoring the enforcement of the law;
- vi. Collect, compile and exploit meteorological and hydrological data to serve other sectors of the national society;

- vii. Provide technical support and advise to the private sector, organizations, communities, and all people regarding the improvement and exploitation of water resources;
- viii. Expand and provide new technologies and promote training;
- ix. Strengthen and expand the national and international collaboration on water resources management and meteorology; and
- x. Participate in the implementation of works by the Mekong River Commission (MRC) consistent with the obligations of MoWRAM.

#### 2.4.5 Other Ministries

**Ministry of Industry, Mines and Energy (MIME)** is responsible for water supply to provincial towns through its Directorate of Provincial Water Supply. Single-purpose schemes involving hydropower are also the responsibility of MIME. Allocation of areas of responsibility between MoWRAM and MIME is covered in an agreement concluded in March 1999 but this needs to be re-visited once the new Water Law is passed.

**Ministry of Planning (MOP)** has two main divisions – the General Directorate of Planning, and the National Institute of Statistics. The General Directorate of Planning comprises five departments: general planning, economics, social planning, investment, and international affairs. A major responsibility of the Planning Directorate is the formulation of Socio-Economic Development Plans.

**Ministry of Land Management, Urban Planning and Construction (MLMUPC)** is the agency with primary responsibility for land management, including policy and coordination of land registration and administration, land use planning, geodetic and cadastral surveying, mapping and property valuation. Actual implementation of land registration, administration of land transactions, collection of land taxes and land use planning are carried out by the provincial and municipal offices of MLMUPC.

#### 2.4.6 Private Sector Participation in Tourism

Tourism businesses in Cambodia are entirely private sector enterprises. There are no state-owned tourism businesses. Since the country moved from a planned economy to an open economy in 1993, all tourism related businesses were privatized. Many of the tourism businesses in Cambodia are first generation tourism businesses, with most having opened just recently with owners and managers that have no prior experience or formal training in tourism, a characteristic quite common in the GMS.

There has been a significant growth in private sector tourism businesses over recent years. From 1998-2005, the number of accommodation facilities (hotels and guesthouses) increased by an average annual rate of 16.9% and the number of rooms expanded by 14.5% per year. From 2001-2005 restaurants (formally registered restaurants only) increased from 505 to 719, an increase of 42%. Over the same period, travel agencies grew by an average annual rate of 12% per year from 236 offices in 2001 to 336 offices in 2005.

The private sector interfaces with the Government in tourism development policy by participating in the Tourism Working Group of the Cambodia Business Forum, recently set up by the International Finance Corporation (IFC). This group advises the Government on issues and problems in the tourism sector and makes recommendations on possible solutions. Representatives from the private sector on the Tourism Working Group include the President of the Cambodia Association of Travel Agents (CATA) and a representative from the hotel and restaurant association. Other than this rather new institution, there seems to be little in the way of regular, systematic input of the private sector in tourism development policy.

Pro-poor tourism is a concept that is growing in popularity among many development NGOs, with quite a few development projects developing pro-poor tourism initiatives. Tours promoted by the Cambodia Community-based Ecotourism Network (CCBEN), for example, are all developed and managed in part by development NGOs with only two tour companies participating in the network. A booklet that promotes sustainable tourism in Siem Reap, initiated by the MTD, showcases NGO-sponsored programmes only.

Tourism developments in national parks have been initiated mostly by development agencies, with a focus on setting up institutions to ensure that revenues remain with local communities and conservation agencies, and later including the private sector by promoting and selling these tours to them.

There have been a few examples of tour companies developing tourism in cooperation with communities, but these are far and few between and have not been promoted widely. In general, the private sector participates in community-based tourism by helping to promote NGO-led pro-poor tourism initiatives, with very little active involvement in the actual initiation and process of developing such programmes. One tour company, for example, is developing tour programmes to visit NGOs in order to provide guests with a learning experience about poverty issues and an opportunity to donate to the development agencies.

SMEs play a critical role in Cambodia's tourism sector. One definition of what constitutes a SME has been

proposed by the Small and Medium Enterprise Development Framework as follows:

Micro: Less than 10 employees and less than \$50,000 in assets;  
 Small: Between 11-50 employees and between \$50,000-250,000 in assets;  
 Medium: Between 51-100 employees and between \$250,000-500,000 in assets; and  
 Large: Over 100 employees and over \$500,000 in assets.

According to national statistics, SMEs account for 99% of all private sector enterprises countrywide and employ approximately half of all employees in the private sector. There are no statistics that disaggregate the numbers of tourism business based on employees or capital assets, thus limiting quantitative analysis of SMEs in the tourism sector, but it is assumed that the percentage of total businesses that are SMEs must be quite high.

Many tourism-related business are locally owned and were started with low capital investments. This is especially true for tour companies, micro-transportation providers (taxis, boats), and restaurants, which on average could not have conceivably invested more than \$500,000 in their business or employ more than 100 staff. In the accommodation subsector, the majority of the 684 registered guesthouses are SMEs. Of the 314 registered hotels countrywide, about 67% (209) are in the budget price range of less than \$15/night, implying that many of them probably also SMEs.

The Government supports the promotion of SMEs as an instrument to eradicate poverty. According to the national strategy, the Government will develop SMEs for the purpose of poverty alleviation by improving the enabling environment for SMEs, reducing the red tape for starting up businesses, promoting vocational training, supporting women in business, and helping businesses to receive better access to medium and long-term finance.

The vision for SME development, as set out by the Small and Medium Enterprise Development Framework, is "to create a conducive business environment, which will lead to a competitive SME sector contributing to the creation of quality employment and improve the range of goods and services available to the people of Cambodia" Following this vision are four key objectives which focus on: (i) increasing entry of SMEs into the formal sectors; (ii) implementing governance reforms for SMEs; (iii) developing public and government institutions required for an efficient SME sector; and (iv) creating mechanisms to foster public-private partnerships (PPP). As a side note, the SME Development Framework seems to be focused heavily on industrial sector SMEs (referred to as Small and Medium Industries (SMI), as opposed to SMEs). The government office charged with the main

coordinating responsibility for SME development is focused on assisting SMIs and the small business association is also strictly concerned with representing SMIs (which does not include the tourism sector).

Tourism is identified under the national development strategy as one of the main areas to develop to achieve the national goal of poverty eradication. It states that tourism development must be done in a manner that contributes to poverty reduction and is sustainable. The strategy also states the need to not only increase the volume of tourists but to increase the marginal value of tourism by lengthening tourist stays and increasing spending patterns. National economic policy encourages better private sector participation in tourism development through a marketing and promotions board and through the formation of associations, although these developments still have some way to go.

Foreign investment in tourism is a high government priority. The CDC categorizes tourism as the area that Cambodia most wants to attract foreign investment. Government policy is determined to develop the four priority tourism areas by including the private sector and inviting national and international companies to construct hotels, tourist sites, restaurants and other facilities of an international standard. MOT is in the process of creating management plans for each of the four tourism target areas, which will include strategies to encourage investment by the private sector.

The Cambodia National Tourism Development Plan, although not yet officially approved by the Government, has many elements that imply support for SME development. Tourism is described as a tool to alleviate poverty and distribute benefits from tourism equally among all stakeholders, which would imply a need to support SMEs which can affect a larger number of stakeholders than large businesses. MOT proposes in its plan to create a Cambodia Partnership for SME Tourism Enterprises, which would help startup SMEs by offering micro-finance through management of a micro-credit fund for the tourism sector and providing capacity building programmes to local entrepreneurs.

MOT also proposes to help in the creation of small enterprise tourism services in target, strategic tourism development zones, including tour guide services, bicycle rental, restaurants, guesthouses and small transportation operations. In regards to investment policy, the plan recognizes the need to ensure that investments are made in high quality tourism products that aim to reduce poverty and to encourage investments with community participation. The plan also states an interest in minimizing the leakages from tourism by assisting domestic tourism businesses to participate in and benefit from tourism, which is another good example of its policy to support SMEs, as domestic businesses typically represent the majority of SMEs.

The government agency responsible for working on SME issues is the Department of Small Industry and Handicrafts (DSIH) in the Ministry of Industry, Mines and Energy (MIME). While focused largely on industrial sector businesses, this relatively new office does include a representative from MOT on its committee for reviewing SME-related policies and regulations. With technical support from ADB, the DSIH has been working on a host of issues that will improve the conditions for SMEs across all sectors, including simplified financial statements, simplified tax filing, and development of a credit information system.

The SME sub-committee is reviewing business registration requirements in a move to reduce red tape and remove licensing requirements that yield few benefits to businesses or consumers. Specific to tourism, the sub-committee is recommending that restaurants no longer be required to register with MOT. Such recommendations can be difficult to receive approval, however, as unanimous consensus is needed. DSIH is also working on building an online website to improve dissemination of SME information on laws and regulations, statistics, and businesses, which holds potential for improving access to information for tourism SMEs.

CATA provides representation for its members to voice concerns with the Government and to help promote the services and products of travel agents in Cambodia. Members of CATA are also entitled to receive interest from bonds they are required to deposit for the initial registration of their business. CATA is very active in the Tourism Working Group in providing input to the Government on how to improve the environment for travel agents. On marketing and promotions, it is not clear how well CATA works. At first glance, however, it seems that there remains a lot of potential to improve this service. CATA does not provide training or consultant services to its members.

The Phnom Penh Chamber of Commerce works as an advocate for the business community with the Government, helps to attract foreign investors to Cambodia, provides business training to its members, disseminates market information, and organizes study tours for SMEs.

The SMI Association represents businesses in industrial sectors, including the many small-medium sized garment factories in Cambodia. The SMI Association works with the Government to improve the business environment for SMIs, in addition to promoting the goods produced by its members both domestically and internationally. Unfortunately, tourism sector SMEs are not represented by this organization.

CCBEN operates a tourist information office in a tourist area of Phnom Penh that is open seven days a week with



good information and helpful staff. CCBEN mainly promotes ecotourism products developed by NGOs. Unfortunately, it does not have much partnership with the business community, with only two private businesses as members. This is perhaps a reflection of the current status of tourism in Cambodia, in that it is a young movement with little understanding and participation by the business community.

### 2.4.7 Public-Private Cooperation in Tourism Development Planning

Although the Tourism Working Group of the Cambodia Business Forum has improved private sector participation in tourism development planning and policy making, more regular involvement of the private sector is needed. At the provincial level, private sector participation is quite weak, so provincial tourism committees need to be created and/or strengthened. The existence of two parallel government tourism agencies creates confusion and lack of coordination with the private sector.

Some of the licensing fees assessed on tourism businesses are not clearly defined and are legally questionable. Unofficial fees charged in the provinces discourage businesses from investing in more remote areas. License renewal for tour companies can be a lengthy process, in contrast to the approximately two week interval stipulated by official regulations. Some tour operators without a license unfairly compete with tour companies who pay official fees and wade through the bureaucratic red tape. The deposit of \$5,000 which is required for tour agents, although cheap in comparison with some neighboring countries, is a barrier to entry for low budget, provincial companies. The Ministry of Tourism is the agency responsible for collecting the deposit.

Within this national level context, two focal areas have been chosen by this study for assessment of the environmental impacts associated with tourism development (i) northeastern Cambodia (Monduliri, Stung Treng, Ratanakiri and Kratie Provinces) and (ii) southwestern coastal zone (Koh Kong, Kampot Provinces, Sihanoukville and Kep).

## 2.5 Tourism Plans in Northeast Cambodia

### 2.5.1 Overview

The northeastern area consists of Kratie, Monduliri, Ratanakiri, and Stung Treng provinces, which cover areas of 11,094 km<sup>2</sup>, 14,288 km<sup>2</sup>, 10,782 km<sup>2</sup>, and 11,092 km<sup>2</sup> respectively. The northeastern area borders Lao PDR, Viet

Nam, Kampong Thom, Kampong Cham, and Preah Vihear provinces. The northeastern area is part of the Cambodia-Lao PDR-Viet Nam Development Triangle (Stung Treng and Ratanakiri Provinces in Cambodia, Attapeau and Sekong Provinces in Lao PDR, and Kon Tum, Gia Lai and Dac Lac Provinces in Viet Nam). The area is under-developed although it does have tourism and hydropower potential. These two sectors will be significant contributors to the national and provincial economies, although they are not always compatible. The cooler climate of Ratanakiri and Monduliri combined with a diverse topography is another natural asset of the eastern region. Particularly in southern Monduliri, the scenery of rolling hills and grasslands makes for a very pleasant landscape experience. Small trails that are suitable for hiking and cross country cycling extend throughout this attractive countryside. These tracks are not only great recreation resources but they also provide important links between the other tourism assets mentioned above. Some of these routes could become small tourism circuits in the future. Apart from the pleasant cultural landscape, large tracts of natural vegetation still extend throughout the northeastern provinces.

Currently, logging proposals extend over much of Ratanakiri and Stung Treng as well as southern Kratie Province. Existing concessions also cover large tracts of southwestern, northwestern and mid-eastern Monduliri. From a tourism development point of view, these logging proposals pose a major threat to some of the region's key natural assets. Notwithstanding these general environmental threats, it should be noted that none of the proposed pilot sites for tourism development is located within a logging concession. A key question is what happens to the land once these concession areas are logged out. While large land tracts of the northeastern provinces face the threat of environmental degradation and logging, some parts of the region are classified as protected areas

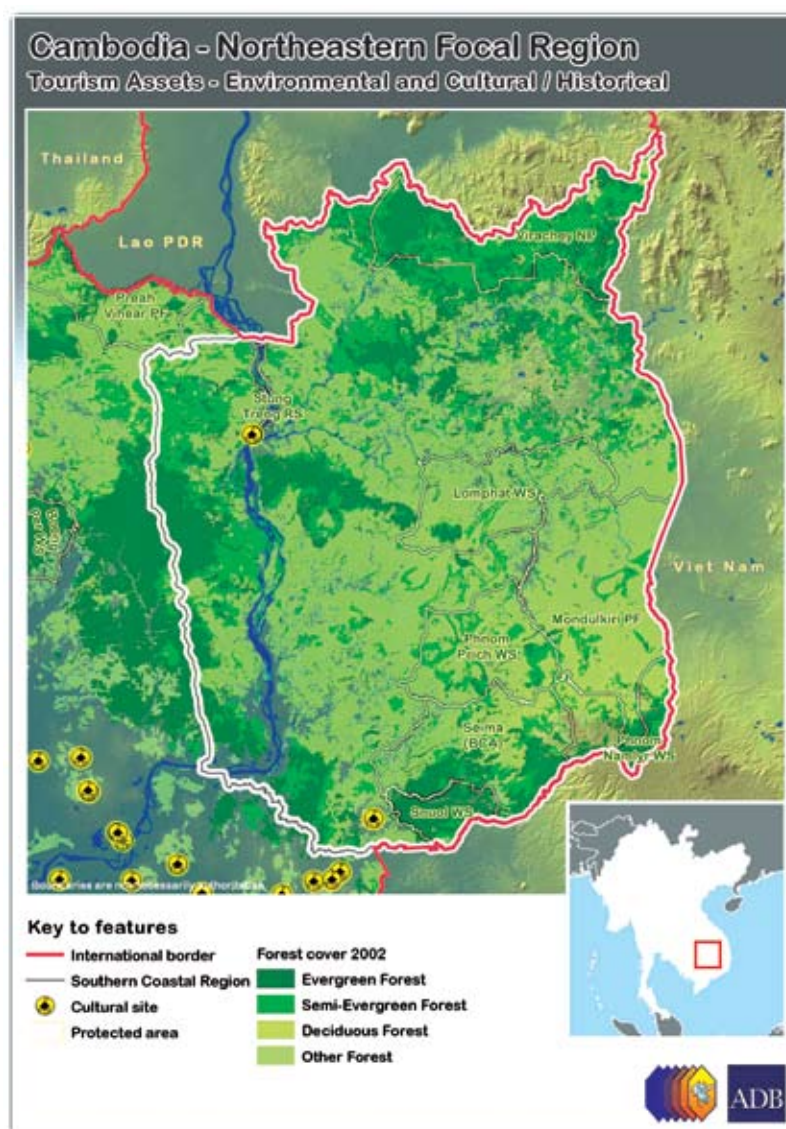
### 2.5.2 Kratie Province

In a recent interview the Director, Department of Tourism (DOT) of Kratie Province, reported that the number of foreign visitors at the main tourist attraction in the province, Kampi Dolphin Pool, was increasing every year (Table 5).

**Table 5: Foreign Visitor Arrivals in Kratie 2002-2006**

| Province | 2002  | 2003  | 2004  | 2005  | 2006   |
|----------|-------|-------|-------|-------|--------|
| Kratie   | 5,439 | 4,000 | 5,600 | 7,912 | 10,844 |

Source: Annual Report on Tourism Statistics 2005, Ministry of Tourism

**Figure 4: Historical and Environmental Assets – Northeast Cambodia**

Domestic visitor numbers in Kratie Province boom during holiday periods but are low at other times. In 2005, there were 75,000 domestic visitors (mostly during Khmer New Year), increasing to an estimated 82,000 in 2006 (based on 10 months data).

Based on a site visit in November 2006, tourism development in Kratie town was increasing slowly. As a result, there are now 6 hotels with 170 rooms, 15 guesthouses with 173 rooms and 23 small-medium scale restaurants. The tourist port at Kampi Pool has 12 tourist boats operating. At the provincial level, there are 6 small hotels and 23 guesthouses, with a total of 393 rooms; 24 restaurants; 23 tour guides; 4 internet cafes; and 57 motor-taxis.

There are 10 main tourist attractions (5 historical and cultural attractions and 5 natural attractions).

#### Historical/Cultural Sites:

- Wat Vihear Sar 100 (Kork temple) : Sambor district
- Phnom Sambok : Kratie district
- Vihear Boran Rakar Kandal : Kratie district
- Phnom Phreah : Chhlong district
- Phnom Sopoik Kaley : Prek Prasop district.

#### Natural Sites:

- Prek Kampi Resort : Kratie district,
- Kampi Dolphin Pool : Kratie district,
- Chhroy Rey : near Kratie town,
- Prek Chrey Merng : Snuol district,
- Prek Koko : Chhlong district.

International tourist arrivals have grown from 7,612 in 2005 to 10,844 in 2006 – a 43% increase. Most of the tourists are from Europe (70%), Asia-Pacific (20%) and America (10%) (Table 6). Domestic tourists, now numbering around 80,000 per year, can be attributed mainly to the upgrading of Route 7. Safety and security have been improved by creating a Tourist Police unit.

**Table 6: Foreign Visitor Arrivals in Kratie by Region, Year 2005-2006**

| Region                      | Number | Percent | Period      |
|-----------------------------|--------|---------|-------------|
| Tourists from Asia-Pacific  | 1,869  | 17.24   | (2005-2006) |
| Tourists from Europe        | 7,727  | 71.26   | (2005-2006) |
| Tourists from America       | 1,045  | 9.64    | (2005-2006) |
| Tourists from other regions | 203    | 1.86    | (2005-2006) |

DOT's role is to (i) design and improve tourist destinations, and protect the environment of those destinations; (ii) target areas not yet developed for tourism; and (iii) liaise with other involved groups like WWF and MAFF. Danida is providing support through the Seila (socio-economic improvement of local agency) programme. ADB's MTDP was to have provided funding for solid waste disposal but it is not yet active. SNV is promoting ecotourism and the WTO has indicated support for development of the Dolphin Discovery Trail.

The main constraints faced by the provincial DOT are the lack of capacity and resources (only 10 staff) and the lack of jurisdiction over other organizations and powerful individuals. The Seila programme only became active in 2007 and DOT has been asked to help identify village level attractions and how to preserve them. Out of 46 districts, 5 districts and 250 villages have been identified.

DOT does not have a current tourism development master plan, but tourism is included under the broader provincial development plan. A Tourism Development Committee was set up in 2006 and meets once per month.

The main natural attraction in Kratie is the Irrawaddy dolphin. The entrance fee to see the dolphins is \$2 per person and boat hire from the community is \$2 in the dry season and \$3 in the wet season. About 60 guards are employed to protect the area, under the Mekong Dolphin Conservation Project, but no attempt has been made to have the area declared as a protected area (unlike the Ramsar site in Stung Treng). A national committee has been established to protect the dolphin and they have tried to stop deaths from entanglement in netting. Fifteen dolphins died in 2006 from unknown causes, but in 2007 the number of deaths seems to have been less.

DOE has good cooperation with the Seila programme (in which 10 provincial departments are involved) and is trying to improve cooperation with DOT.

**Tourism Development Plan for Kratie** – According to the provincial development plan in Kratie Province, the local authority will undertake the following activities:

- i. Install a jetty and access stairs to facilitate tourist access at Kampi Pool;
- ii. Move the floating restaurants at Kampi resort to the river bank or further inland;
- iii. Prepare parking lot, install garbage bins, and toilet for tourists at Kampi pool;
- iv. Identify, improve and provide access to other dolphin pool areas to attract tourists. The provincial authority is to build tourist jetties, provide car parks, install garbage bins and clean toilets, construct roads, and build other tourism infrastructure especially for security and safety and protection for tourists and tourism development project owners;
- v. Improve the landfill, solid waste management and transportation services of solid waste in Kratie town and Kampi pool area because Kratie town has too few trucks for solid waste transport;
- vi. Install roadside lights in town to facilitate bicycle riders or pedestrians at night;
- vii. Construct a wastewater treatment plant in Kratie town;
- viii. Contribute to poverty alleviation by developing appropriate forms of tourism in many small villages along the tourist route, such as lodges, tea houses, refreshment kiosks, small boat scenic tours, bicycle hire, sale of local handicrafts, restaurants, etc;
- ix. Assist in the conservation of the endangered Mekong River Dolphin;
- x. Increase visitor numbers and revenue by extending the average length of stay of international visitors through marketing the dolphin;
- xi. Develop the high-end market wildlife tourism through a limited number of eco-lodges, thus simultaneously making another contribution to poverty alleviation, and quality tourism;
- xii. Monitor and evaluate the environmental implications of all developments over the construction phases and associated infrastructure;
- xiii. Plan environmental management regimes and safeguards for any tourism development in village communities or up-market eco-lodges as an essential component of the concept, contributing to the conservation strategy for the dolphin as well as providing appropriate forms of design construction for the tourism industry;
- xiv. Incorporate traditional architectural forms into buildings wherever possible;



- xv. Develop tourism information and interpretation material for visitors including brochures, signage, possibly local guide booklets for different sections, information boards, and a web site;
- xvi. Provide guide training, covering ecotourism, heritage tourism, cultural tourism and associated skills such as first aid, using specialist inputs; and
- xvii. Promote the experience in the context of adventure tourism that accurately captures the emphasis on dolphin conservation and ecologically sustainable development backed up by cultural tourism and heritage tourism.

### 2.5.3 Stung Treng Province

Stung Treng Province is located in about 481 km from Phnom Penh. The province administration is divided into 5 districts (Stung Treng, Seimpang, Sesan, Thalaborivat and Siembok), 34 communes, and 128 villages. The province covers 12,016 km<sup>2</sup>, which is divided into:

|                 |            |
|-----------------|------------|
| rice field      | 22,643 ha, |
| water area      | 97,094 ha  |
| forestry area   | 928,000 ha |
| plantation area | 9,750 ha.  |

Most visitors to Stung Treng are domestic tourists from Phnom Penh (about 60/40). The main attractions are the Ramsar site (for water birds), the dolphin pools, and the waterfall on the Mekong River (about 58-68 km from Stung Treng). The total number of tourists in 2005/2006 was 29,968, based on hotel/guesthouse data. There are three transportation companies and one (B.U.T.) has a contract with DOT for travel tours. Stung Treng has 5 hotels (112 rooms), 10 guesthouses (134 rooms) and 9 restaurants.

An ecotourism assessment of the Stung Treng Ramsar Site (Situation Analysis, 2006), indicates that foreign visitors to Stung Treng divided their activities as below:

|                  |                 |
|------------------|-----------------|
| Dolphin          | 2,800 tourists  |
| Overnight trek   | 2,185 tourists  |
| Wildlife         | 2,640 tourists  |
| Buy handicrafts  | 1,625 tourists  |
| Wildlife viewing | 2,640 tourists  |
| Homestay         | 1,420 tourists. |
| Village visitors | 2,590 tourists  |
| Canoeing         | 2,235 tourists  |
| Hiking           | 2,590 tourists  |
| Camping          | 1,321 tourists  |
| Boat trip        | 2,590 tourists  |
| Fishing          | 1,179 tourists  |

The main opportunity for developing livelihoods in Stung Treng is through tourism. The Ramsar site has enormous potential which at the moment is little realized. Presently considerable attention is given to the

dolphins on the Cambodia/Lao PDR border, both for their conservation and tourism values. To some extent the dolphins are over-rated as sightings are generally infrequent and at a distance. Other attractions of the river, such as its rapids, flooded forests, bird life, interesting villages, scenery and breaches, are virtually ignored. It is these however, that provide the Ramsar site's real attractions and which need to be developed by the combined effort of NGOs, government, the private sector and villagers.

**Table 7: International Arrivals in Stung Treng 2002-2005**

| Province    | 2002  | 2003  | 2004  | 2005   |
|-------------|-------|-------|-------|--------|
| Stung Treng | 1,278 | 3,660 | 9,011 | 50,910 |

*Source: Annual Report on Tourism Statistics 2005, Ministry of Tourism*

Another major attraction in the province is Virachey National Park, 90 km from Stung Treng. The park covers 3,341 km<sup>2</sup> and there has been extensive planning and operational support from the World Bank Biodiversity Conservation and Protected Area Management Project (BPAMP), which was completed in December 2006. Rangers lead tour groups on a 5 night trek through the park coming out at Mondulkiri. They pay the rangers \$20 per day each and access the park by boat (\$10/day per person in the wet season, using a speedboat, and \$5-7 per day using a normal boat in the dry season).

The key attractions are forests, waterfalls, birds and tigers. The biggest threat is reported to be Lao PDR soldiers on the border, who are accused of shooting tigers and stealing wildlife camera traps. The only NGO that remains engaged is Birdlife International in an area near Seimpang. There are 100 rangers employed in Virachey NP but now that the World Bank project has stopped, their future is uncertain, as their employment is through MOE. Permanent DOE staff in Stung Treng number only 22.

The Ramsar site covers 14,600 ha with the main attractions being water birds, dolphins, flood forests, and about 40 small islands. There are 20 rare bird species out of 50 worldwide, plus 9 dolphins. Ten rangers are in charge of the area and DOE is seeking funds from the World Bank to build three ranger stations. An environmental strategy for the site has been prepared and a local awareness raising campaign is ongoing.

**Tourism Development Plan for Stung Treng** – There is no formal tourism development plan but two areas have priority for development: (i) O'Svay for ecotourism/Ramsar/dolphin pools; and (ii) home-stays at Siembok, about 20 km from Stung Treng. This latter area is also a dolphin pool, with a small island and rapids. The plan is

to provide some small infrastructure, build the SME capacity, and conduct gender planning. Some 12-14 households will be chosen to participate.

The MTDP planned on upgrading the airport infrastructure at Stung Treng and Ratanakiri. Project components include resurfacing and extending the runway, constructing a new taxiway, apron, drainage system, passenger terminal, airport fence, control tower, operations building, car park and access, securing navigation, security and communication equipment and land acquisition and resettlement in Ratanakiri. While the airport was to be upgraded, the allocated \$2 million in loan funds was moved to Siem Reap. It is likely that Ratanakiri airport will now be upgraded before Stung Treng. MTDP is providing community outreach under the pro-poor tourism component, road construction or trails at O'Svay and O Reussey Kandal, and the tourism information system near the new bridge over the Sesan River.

The provincial strategic plan for development prioritizes (i) agriculture development for supplying the province and export markets, (ii) tourism and services improvement, (iii) food and agro-products processing industries, (iv) socio-economic infrastructure investment, and (v) human resources development. Priority projects that have already been studied include:

- A. Construction of loading/unloading facilities
  - A.1: Anlong Ville loading point \$0.52 million
  - A.2: Preah Rumkel loading point \$0.52 million
- B. Improvement of access road
  - B.1: Anlong Ville loading point \$0.13 million
  - A.2: Preah Rumkel loading point \$0.13 million
- C. New road and bridges construction to Sopheap Mith waterfall
  - C.1: Preah Rumkel loading point \$3.26 million
- D. Building construction:
  - D.1: Dolphin observation deck \$0.22 million
  - D.2: Waterfalls observation deck \$0.17 million

Local Authority Plan for Tourism Development of the Ramsar Site – This plan focuses on ecotourism in the Ramsar area including activities such as boat trips, bird watching, forest walks, riverside walks, cycling, camping, home stays, swimming, cultural activities, learning about village life and agriculture, island visits, and visits to waterfalls.

Indicators will be monitored to check the levels of impacts in the communities and those experienced by visitors, including (i) numbers of tourists visiting each commune, (ii) villager attitudes/feelings towards tourists, (iii) activities preferred by tourists, (iv) assessment of tourist satisfaction with the products and services provided, (v) levels of income for participating villagers, (vi) money accruing to the community benefit fund and

how the fund is used, (vii) changes in diet and food intake, (viii) changes in living conditions as a result of benefits from ecotourism e.g. purchase of essential items and services previously unaffordable, and (ix) changes in levels of usage of natural resources.

## 2.5.4 Mondulkiri Province

Mondulkiri DOT has nine staff including a Director and two Chiefs of Office and two Vice-Chiefs of Office and 3 staff. In 2006, DOT was allowed to hire 12 additional contractual staff. DOT is separated into (i) Finance and Administration Office, (ii) Training and Cultural Tourism Development Office, and (iii) Planning and Promotion Tourism Industry Office.

The Planning and Promotion Tourism Industry Office recorded the tourism statistics for Mondulkiri in 2006 as totaling 13,629 tourists including 11,801 local tourists and 1,828 international tourists. The accommodation and restaurants in 2006 comprised 18 guesthouses (with 99 single and 148 double rooms), and two hotels (with 29 single and 35 double rooms) giving a total capacity of 311 rooms, and 17 restaurants.

The Planning and Promotion Office is involved in planning for the strategic tourism development in Mondulkiri for the next 5 years. A project for supporting ethnic and indigenous people tourism products in Mondulkiri received \$99,450 from MOT. Other projects include (i) building guesthouses in the ethnic villages in Mondulkiri (\$99,750) and (ii) developing the Romnea II Waterfall (\$99,450).

In 2006, Mondulkiri DOT, supported by the Seila programme in Mondulkiri, landscaped and managed two waterfall resorts: Bousra Waterfall and Romnea Waterfall II (\$16,686). In early 2006, DOT had achieved 99% of the annual development plan for Bousra Waterfall Resort, including (i) vehicle parking lot; (ii) road repairs; (iii) signboards and litter bins; (iv) dispatching a working group to study experience in Cham Bok Resort, Kampong Speu; (v) training one member of Bousra Waterfall Committee; and (vi) conducting extensive consultation with all stakeholders.

Unfortunately Romnea Waterfall II has not been developed yet due to a land issues that are not yet resolved. In May 2006, a meeting held in the provincial governor's office decided to transfer some of the budget of \$4,086 for developing Romnea Waterfall II to DOE to use in a development project and to protect the environment in Chhrey Thom Waterfall resort located in Dakdam, Ourang District.

At the Monorom Waterfall Resort or King's Palace (Sen Monorom district) Mondulkiri DOT has commenced community consultations and prepared for implementation.

Since 2006, DOT and World Vision have implemented a project on child sex exploitation in tourism and has held multiple workshops involving hundreds of participants.

The Five Swing Bridges Construction Project Plan in Mondulkiri Waterfalls covers (i) Bousra Waterfall in Sen Monorom, Pichrada; (ii) Monorom Waterfall in Chrai Sen Village, Sen Monorom Commune/District; (iii) Leng Bokbrah Waterfall in Sen Monorom, Romnea Commune, Sen Monorom District; (iv) Romnea Waterfall I in Poutro, Sen Monorom Commune, Ourang District; and (v) Romnea Waterfall II in Pou Rang Village, Sen Monorom Commune, Ourang District.

#### Plan for Development of Tourism Services –

Mondulkiri is at the initial stage of its tourism development, which is primarily based on nature/cultural attractions and ecotourism. In the first phase of development (2001-2005), the focus has been on natural beauty and culture and participation of local people in tourism development.

To improve accommodation, Mondulkiri should promote more small hotels and improve existing lodging to create the demand by the targeted tourists. The design of hotels/lodging should follow the following concepts (i) use local material, (ii) low-rise buildings of 2-3 stories, and (iii) based on the local eastern highland cultural style.

To improve food services, construction of restaurants and improvements of existing restaurants are needed. The design concepts should be similar to those above for hotels/lodging.

Tour operators and souvenir shops should establish community organizations to participate in ecotourism business to create new sources of income. In addition, provision of government training programmes for ecotourism businesses is needed.

For other tourism services, the following basic services should be developed on a step-by-step basis:

(i) establishment of a tourism service centre at Sen Monorom; (ii) promoting tourist transportation services such as car and motorcycle rental, local transportation

such as the use of carts, elephants and horses at tourism sites; (iii) provision of basic tourist services including currency exchange, tourist bazaars, and sports equipment; and (iv) avoidance of businesses leading to social problems such as casinos and sex tourism.

#### Tourism Development Plan for Sen Monorom

**Group** – There is a number of tourist attractions in this group, consisting mainly of natural and cultural sites. This group of sites is considered as a provincial tourism centre having nice weather all year round. Sen Monorom will be the main tourism gateway of Mondulkiri Province.

The following tourism services should be promoted

(i) accommodation and restaurants at Sen Monorom; (ii) car rental for traveling to the upland plateau; and (iii) tour operators. Basic facilities should be developed such as (i) tourist transportation; (ii) electricity; (iii) water supply; and (iv) communication systems.

Two tourism routes are planned (i) Ring Route – a one-day trip by foot or motorcycle around Sen Monorom town and nearby scenic viewing spots including Monorom Waterfall; and (ii) Trekking Route (two days, one night) involving traveling by car or motorcycle, a scenic view point at Pinery Park, visiting a highland grass field, trekking and camping at Romnea waterfall or Chhrey Thom waterfall, and an educational and cultural visit to Dakdam tribal village.

### 2.5.5 Ratanakiri Province

Following closure of the airport, international visitors to Ratanakiri in 2006 dropped by 18%. Domestic tourism numbers, however, registered a huge increase (64%) for the same period (Table 8). The causes of the massive upwards trend in domestic visitor numbers are the improved road access to northern provinces, coupled with more effective domestic marketing and promotion and the increasing disposable incomes of a growing Cambodian middle class (World Bank 2006). The reduction in international visitors to Ratanakiri is probably linked to reduced air services, with surveys showing that 40% of visitors arrived by air in 2004/05 (MTDP 2006a).

**Table 8: Analysis of Visitor Numbers to Ratanakiri (MOT 2007)**

| Visitor Type         | 2004      | 2005      | 2006      | % Change 06/05 |
|----------------------|-----------|-----------|-----------|----------------|
| <b>International</b> |           |           |           |                |
| Whole of Cambodia    | 1,055,202 | 1,421,615 | 1,700,004 | 20             |
| Ratanakiri           | 15,085    | 19,348    | 15,857    | -18            |
| <b>Domestic</b>      |           |           |           |                |
| Whole of Cambodia    | 4,338,123 | 5,278,113 | 7,760,508 | 47             |
| Ratanakiri           | 12,265    | 38,867    | 63,801    | 64             |

**Table 9: Hotels and Guesthouses in Ratanakiri**

| Province   | Hotels | Guest Houses | Rooms           | To open in 2007 | Under construction |
|------------|--------|--------------|-----------------|-----------------|--------------------|
| Ratanakiri | 9      | 8            | 251 + 106 = 357 | 3 hotels        | 3 hotels           |

Source: Data supplied by Provincial DOT staff in Ratanakiri.

Upgrading of road and air transport infrastructure is well underway. Resources are also being channeled into upgrading local road networks, especially in Ban Lung town and surrounding villages. Bus and taxi services, and bicycle and motor hire services are rapidly expanding to meet growing demands.

According to DOT staff, average occupancy rates for hotels and guesthouses are running at about 50% over the year, with existing supply unable to meet the exceptional demands of festival visitor numbers. Several hotels are under construction to cope with the increased number of visitors. Yeak Laom Hill Lodge has become the first Green Globe accredited ecotourism accommodation location in Cambodia and is well placed to capture the emerging ecotourism and package tour markets. Most hotels have responded to immediate demands and operate English speaking guided tours to local attractions. Yeak Laom Hilltop Lodge operates local guided tours by ethnic minority community members. Ratanakiri DOT attempted unsuccessfully in 2004 to establish a tour guide accreditation scheme. MTDP and BPAMP have conducted tour guide training workshops involving the public, NGOs and the private sector in Ratanakiri in 2004 and 2006. There are one or two “responsible” or ethical tours (including Intrepid and Explore Asia) operating in the region.

Tourism Development Plan in Ratanakiri - Ban Lung is considered one of the highest potential tourism attractions in Ratanakiri because of its beautiful natural and cultural sites. There are 9 main natural attractions (including Ban Lung town) including Eisey Patamak mountain, Yeak Laom lake, Kachagnh waterfall, Kateng 3 Village, Veal Rumplan Volcano, Prouv Village and Cha Ung waterfall. Tourism development of the Ban Lung group is proposed to be based on ecotourism concepts with Ban Lung as a primary tourism centre.

A loop and ring tourism network with Ban Lung as centre is suggested, designed for serving both international tourists and local tourists from Phnom Penh in the future. The most appropriate duration for the local market is about 2 days during weekends or holidays but about 3-5 days for international tourists. For the tourism loop and ring network, the loop starts from Ban Lung town to Yeak Laom Lake, Charay Village, Veal Rumplan Volcano and returns to Ban Lung. Along this loop, tourists can enjoy scenery of the agricultural way of life in a volcanic area and a scenic view of Eisey Patamak Mountain.

The following tourism services are suggested for the area (i) promotion of investment in standard restaurants and accommodation in Ban Lung town; (ii) enabling touring with elephants; (iii) provision of bicycle and motorcycle renting; and (iv) provision of tourism information centres. Access roads to the tourism sites should be constructed and improved and roads for biking should also be provided.

## 2.6 Tourism in Southwest Cambodia

### 2.6.1 Overview

The southwestern area consists of Kampot, Koh Kong and Krong Kep provinces, and Kampong Som (or Sihanoukville) municipal area (also known as the K4 area), which cover areas of 7,873 km<sup>2</sup>, 11,160 km<sup>2</sup>, 868 km<sup>2</sup>, and 336 km<sup>2</sup> respectively. The southwestern coastal area has a coastline of 435 km, located on the Gulf of Thailand, bordered by Thailand and Viet Nam. Tourism in this area has increasingly improved from year to year.

Projects dealing with aspects of tourism (including ecotourism) in the southern coastal zone include:

- i. Coastal Zone Management Project (being funded by DANIDA);
- ii. Community-based Ecotourism Project in Cham Bok
- iii. Cambodia Community-based Ecotourism Network
- iv. Ecotourism Project for the Central Cardamom Mountains (Conservation International)

**Plans and Projects for the K4 Area** – A Master Plan for Tourism Development in the Coastal Zone of the Kingdom of Cambodia was prepared under an agreement between MOT and TAT, as one way of linking coastal tourism development between the two countries. The Thailand Institute of Scientific and Technological Research (TISTR) were engaged to prepare the master plan, under the general supervision of a multi-agency project committee.

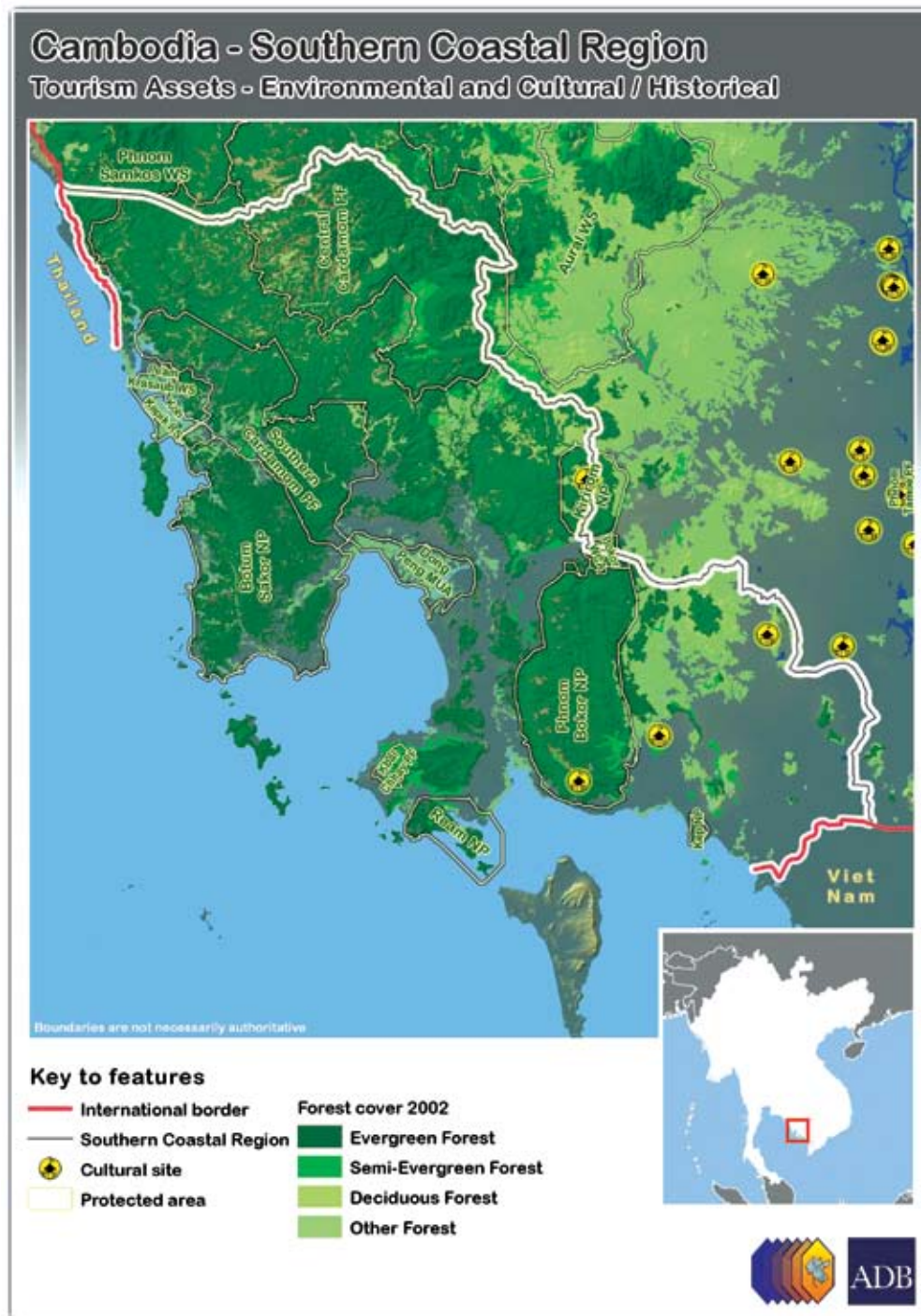
The master plan study includes (i) description of the general condition of the area; (ii) tourism site analysis; (iii) analysis of the tourism market; (iv) infrastructure and services; (v) organizations and legal controls; (vi) analysis of tourism potential; and (vii) the tourism development plan.



Nine plans with 43 projects were proposed and these are detailed in Tables 10 to 17. The plans cover (i) market promotion; (ii) tourism site development; (iii) transportation; (iv) environment and conservation;

(v) village tourism development; (vi) tourism service and security; (vii) administration; (viii) investment promotion; and (ix) coastal tourism cooperation between Thailand, Cambodia and Viet Nam.

**Figure 5: Historical and Environmental Assets – Southwest Cambodia**



**Table 10: Market Promotion Plan for K4 Area**

| Plan/Project   | Objective/Activities   | Implementing Area  | Responsible Agencies              |
|--|--|--|-----------------------------------|
| 1. Project for tourists to stay overnight in the area      | Increase number of tourists and length of stay   | 4 provinces  | DOTs<br>Tourism service companies |
| 2. Project for main destination market                     | Increase linkages to attract specific groups of tourists   | Phnom Penh/Siem Reap<br>Ho Chi Minh City Rayong/<br>Trat/Hua Hin /Cha-am<br>Samui/Phuket/Bangkok | MOT<br>(Cambodia/Thailand)        |
| 3. Project for market cooperation in neighboring countries | Establishment of joint market for specific groups of tourists  | Cambodia/Thailand/Viet<br>Nam/Malaysia/Lao PDR   | Concerned MOTs                    |
| 4. Project for market promotion into main markets          | Increase number of tourists through meetings and seminars. Target groups include Scandinavian, French and eco-tourists | 4 provinces  | MOT (Cambodia)                    |

**Table 11: Plan for Development of K4 Tourism Sites**

| Plan/Project  | Objective/Activities  | Implementing Area  | Responsible Agencies   |
|---|---|--|--|
| 1. Project for border tourism development   | Facilitate visitors with more information and attractive linkage traveling<br>Stimulate socio-economic development  | Coastal border checkpoints of Thailand - Cambodia-Viet Nam | Concerned authority of the 3 countries   |
| 2. Project for development Koh Kong as an eco-tourism destination                           | Install tourism attraction signs<br>Training villagers to participate in tourism development<br>Community development at Peam Krasaop for handling ecotourism   | Peam Krasaop Wildlife Sanctuary at Koh Kong                | Koh Kong Tourism Office  |
| 3. Project for development of Koh Kong town and vicinity to be the tourist attraction place | Development of ecotourism<br>Develop active and passive beach resorts<br>Develop road linkages among beaches<br>Establishment of conservation unit  | Koh Kong town and Vicinity                                 | Koh Kong Tourism Office<br>Koh Kong Provincial Administration<br>Private firms |
| 4. Project for developing Krong Preah Sihanouk to be an international tourist destination   | Training villagers at Samdech Hun Sen beach to let them participate in tourist service<br>Develop Victoria and Hawaii beaches to be the active day and night beaches<br>Develop Independent and Sokha beaches to be passive beaches with the creation of a nice public park<br>Develop the following spots to serve tourists: Local market, Wat Leu, Wat Krom, Independent Square, Victory Monument, and Waterfall by improvement of landscaping, parking, rest rooms and tourism signs<br>Develop Ream National Park to be a natural attraction by improvement of access, tourist signs, and information centre for ecotourism | Krong Preah Sihanouk and vicinity                          | Sihanoukville Tourism Office<br>Concerned agencies                             |

**Table 11: Plan for Development of K4 Tourism Sites (continued)**

| Plan/Project  | Objective/Activities   | Implementing Area                       | Responsible Agencies  |
|---|--|---|---|
| 5. Project for development of Japan Cape/Coconut Cape             | Registration of offshore archipelagoes and developing them for day-trip tourism<br><br>Development as a quiet beach<br>Establish an area for recreation and sports<br>Create ecotourism area<br>Improvement of access road no.48   | Koh Kong Province                       | Koh Kong Tourism Office<br>Koh Kong Provincial Administration<br>Botum Sakor National Park          |
| 6. Project for development of Koh Sdach                           | Improvement of pier<br>Establishment of tourist service centre<br>Beach reclamation and create waste disposal system<br>Develop tourism routes<br>Train villagers to provide accommodation and tour-guide activities<br>Conservation of forest<br>Promotion of luxury lodging/resort   | Koh Sdach of Koh Kong Province          | Koh Kong Tourism Office<br>Koh Kong Provincial Administration<br>Kiri Sakor District Administration |
| 7. Project for development of Koh Rong as "Pearl of Cambodia Sea" | Land settlement for local villagers<br>Declaration of natural conservation area<br>Development of pier and temporary transportation at Koh Sdach and Krong Preah Sihanouk  | Koh Rong archipelago                    | Sihanoukville Tourism Office<br>Krong Preah Sihanouk  |
| 8. Project for development of Bokor Mountain                      | Improvement of landscape and viewpoint area and tourism signs as an historical site<br>Conservation of hill area for recreation with the creation of signs and walking path<br>Development of tourist area to be more convenient i.e., creation of information centre, shops, hotel and tour guide<br>Renovate guesthouse to be use for tourism office<br>Conduct feasibility study to develop a cable car | Bokor Mountain of Kampot Province       | Kampot Tourism Office<br>Bokor National Park Administration<br>Kampot Provincial Administration     |
| 9. Project for improvement of Teuk Chhou Waterfall                | Relocation of service road and provide parking area<br>Provision of agricultural product market<br>Creation of viewpoint area<br>Control land use of shopping area and add some green area<br>Improvement of an island area and construct temporary bridge to the island<br>Installation of tourism signs  | Teuk Chhou Waterfall of Kampot Province | Kampot Tourism Office<br>Kampot Provincial Administration   |

**Table 11: Plan for Development of K4 Tourism Sites (continued)**

| Plan/Project  | Objective/Activities  | Implementing Area                           | Responsible Agencies  |
|---|---|---|---|
| 10. Project for improvement of tourism towns (Koh Kong, Sihanoukville and Kampot) | Provision of tourist information centre<br>Creation of pedestrian road for tourism purpose<br>Establishment of laws and regulation to conserve old town and buildings<br>Construction of town museum<br>Creation of supporting tourism activities such as agro-market public park, zoo and cultural shows | Towns of Koh Kong, Sihanoukville and Kampot | Provincial Tourism Office of Koh Kong, Sihanoukville and Kampot<br>Concerned agencies |

**Table 12: Transportation Development Plan for K4 Area**

| Plan/Project  | Objective/Activities  | Implementing Area                    | Responsible Agencies   |
|---|---|--------------------------------------|--|
| 1. Project for highway development within the tourism network                           | Highway from Viet Nam Border to Kep Town<br>Highway number 48 to Japan Cape<br>Highway from Koh Kong to Sre Ambel   | Provinces of Krong Kep and Koh Kong  | Central Government<br>Ministry of Foreign Affairs<br>Kep Provincial Administration |
| 2. Project for opening airway routes  | Route Koh Kong Sihanoukville<br>Route Siem Reap-Koh Kong-Krong Preah Sihanouk<br>Route linking Thai marine tourism destinations such as Phuket, U-Ta Pao, Samui and Hua Hin<br>Route linking tourism centre of Viet Nam such as Ho Chi Minh City<br>Improvement of Sihanoukville Airport to international airport | Coastal area<br>airway network       | Ministry of Transportation<br>Private companies                                    |
| 3. Project for development of overland route transportation for distribution of tourism | Phnom Penh-Sihanoukville<br>Phnom Penh-Koh Kong<br>Phnom Penh-Kampot<br>Coastal areas-Kep<br>Kampot-Kep<br>Koh Kong-Sihanoukville   | Coastal area<br>Related road network | Ministry of Transportation<br>Private companies                                    |
| 4. Project for touring by car and boat  | Creation of car/boat rental business  | Tourism towns<br>Tourism centres     | Ministry of Transportation<br>Private companies                                    |



**Table 13: Environmental Protection Plan for K4 Area**

| Plan/Project  | Objective/Activities   | Implementing Area   | Responsible Agencies  |
|---|--|---|---|
| 1. Project for waste management                               | Establishment waste management plans for tourism towns and tourist sites by providing landfill waste disposal area | Koh Kong town<br>Koh Sdach<br>Sihanoukville town<br>Kampot town | Ministry of Environment<br>Provincial Administration<br>Offices |
| 2. Project for registration of tourist sites                  | Registering all tourist sites in the coastal area and set up measures to conserve them                             | 4 coastal provinces   | Ministry of Tourism   |
| 3. Project for conservation of natural resources              | Establishment of laws and regulation to declare some areas as conservation areas                                   | Selected coastal area   | Ministry of Tourism<br>Ministry of Environment                  |
| 4. Project for public relations campaign                      | Establish campaign to public involvement in conservation of tourist attraction places                              | All villages located nearby tourist sites                       | Provincial tourism offices                                      |
| 5. Project for identification of conservation area            | Declare some of the coastal and islands that are not the main tourist sites to be the marine national park         | Cambodian coastal area  | Ministry of Environment   |
| 6. Project for establishment of measures to control buildings | All buildings that create wastewater should install "on-site system" of waste water management                     | Tourist attraction places and vicinity                          | Ministry of Environment   |
| 7. Project for establishing measures to control buildings     | Urgent measures to protect mangrove forest and other significant biodiversity areas                                | Coastal area  | Ministry of Agriculture<br>Ministry of Environment              |

**Table 14: Tourism Community Development Plan for K4 Area**

| Plan/Project   | Objective/Activities  | Implementing Area   | Responsible Agencies   |
|--|---|---|--|
| 1. Project for community souvenir products                             | Create jobs and income for local villagers<br>To provide tourists more choice and satisfaction<br>To efficiently mobilize local resources for economic benefits   | In the area of<br>Koh Tunsay,<br>Kep Town,<br>Koh Sdach, Koh Kapik,<br>Peam Krasaop Village   | Provincial Administration<br>Offices<br>NGOs                               |
| 2. Project for introducing eco-tourism management to local communities | Establishment of ecotourism business in the villages<br>Promote community involvement in tourism<br>Let the local community take care their own environment<br>Training and organizing local villagers' organization for the above purposes | In the area of Peam Krasaop Village, Koh Kong, Koh Sdach, Koh Mano, Bokor Mountain, Koh Tunsay, Crab Market Beach<br>Samdech Hun Sen Beach,<br>Ream National Park | Provincial tourism offices<br>Provincial Administration<br>Offices<br>NGOs |
| 3. Project for promotion of small scale enterprises                    | Create employment and income for local villagers  | Major community tourist sites   | Provincial tourism and administration offices                              |

**Table 15: Plan for Facilitating and Providing Security for Visitors to K4 Area**

| Plan/Project                          | Objective/Activities   | Implementing Area   | Responsible Agencies   |
|---------------------------------------|--|---|--|
| 1. Visa Free Zone Project             | Provision of Visa Free Zone in the border towns among Thailand, Cambodia and Viet Nam to increase tourism activities among them  | Trat, Thailand<br>Koh Kong and Kep, Cambodia<br>Hatien, Viet Nam                            | Ministry of Foreign Affairs<br>Provinces of Koh Kong and Krong Kep |
| 2. Border Check-point Opening Project | Develop Cambodia-Viet Nam check-point zone as an international check-point<br>Improvement of immigration formalities to be more convenient for tourists  | Coastal border towns of Viet Nam and Cambodia<br>Sihanoukville<br>Koh Sdach<br>Koh Phu Quoc | Ministry of Foreign Affairs  |
| 3. Tourist Security Project           | Provision of security centre in the tourism towns<br>Provision of tourism police<br>Provision of coastal safe guards at Koh Kong, Sihanoukville and Kampot<br>Establishment of tourism instrument and vehicle standards<br>Provision of campaign and public relations in handling tourist security | In the areas of coastal tourism towns and tourist attraction places                         | Concerned ministries   |

**Table 16: Tourism Management Plan for K4 Area**

| Plan/Project   | Objective/Activities  | Implementing Area   | Responsible Agencies |
|--|---|---|----------------------|
| 1. Project for Improvement of provincial tourism centre and offices    | Improvement of role and responsibility of tourism authority in conservation and development of tourism sites with sufficient budget | Coastal tourism provinces   | Ministry of Tourism  |
| 2. Project for establishment of tourism unit in the main tourism sites | To facilitate visitors<br>Maintenance of tourist sites  | Border, Koh Kong, Koh Rong, Coconut Beach, Teuk Chhou waterfall, Victory-Hawaii beaches, Independent-Sokha beaches, O' Chheuteal beach, Bokor Mountain, Cape Beach, Angkort Touch Beach | Ministry of Tourism  |
| 3. Project for establishment of coastal tourism office                 | To coordinate with Ministry of Tourism and Provincial Tourism Offices of 4 Provinces  | Sihanoukville will be the best location   | Ministry of Tourism  |

**Table 17: Investment Promotion Plan for K4 Area**

| Plan/Project                                  | Objective/Activities   | Implementing Area                                      | Responsible Agencies  |
|---|--|--|---|
| 1. International investment promotion project | To invite foreign investors to invest in tourism business  | Phnom Penh, Sihanoukville and Cambodian Embassies      | Ministry of Foreign Affairs<br>Ministry of Tourism<br>Ministry of Trade |
| 2. Domestic investment promotion plan         | Promote local investors to invest in tourism businesses<br>Dissemination of investment information<br>Provision of technical and financial support | Phnom Penh, Coastal provinces, and Cambodian Embassies | CDC<br>Ministry of Foreign Affairs                                      |
| 3. Plan for revision of investment laws       | To induce new investments<br>Investment trouble shooting<br>Provision of guarantees<br>Establishment of investment centre                          | Phnom Penh and coastal provinces                       | CDC<br>Ministry of Foreign Affairs                                      |

### 2.6.2 Kampot Province

Kampot has a land area of 5,019 km<sup>2</sup> and is divided into 8 districts Angkor Chey, Banteay Meas, Chhouk, Chum Kiri, Dang Tong, Kampong Trach, Kampot, and Kampong Bay. Kampot has a total population of 528,405 with a density less than 200 per km<sup>2</sup>. There are 477 small and medium sized villages.

Kampot Province has three hotels with 117 rooms (24 single rooms and 93 double rooms). There are three tourism business licenses extensions. Kampot also has 19 guesthouses with 239 rooms (44 single and 195 double rooms) and 17 tourism business license extensions. In 2006, there were 17 restaurants and 14 tourism business license extensions, and 34 tourism licenses for tourism development.

In 2006, there were 287,990 domestic tourists compared to 284,228 in 2005, an increase of 1.32%. International tourists, visiting and staying in Kampot, numbered 8,058 compared to 5,146, showing an increase of 56.6%. At the same time, 903 other tourists came by ship from overseas. The main sources of tourists coming to Kampot include England, USA, France, Viet Nam, and Australia.

The DOT notes that Kampot is a priority province for improving livelihoods of the poor. The province has many tourism attractions and improved infrastructure is important in linking up these attractions. DOT's plan includes upgrading the following attractions:

- (i) Teuk Chhou waterfall – road repair, toilets, solid waste incinerator, improved signage and landscaping;
- (ii) Phnom Chhnouk – an ancient temple in a cave; and
- (iii) Kampong Trach caves.

Kampot Province is very supportive of the K4 southwest coastal corridor tourism development. The region has

many mountains, waterfalls, caves, and historical attractions, so the environmental aspects of K4 development are very important.

An international port and special economic zone are planned along with upgrading Route 33 and opening a check point to open the route into Viet Nam. Along Route 48 from Thailand, the three countries are negotiating transit arrangements and tourism developments. Trat Chamber of Commerce (Thailand) assisted by Chulalongkorn University has conducted a study of tourism along this route.

The highest priority economic development plans are in agriculture and industry (rice, salt, freshwater fish), mining (gold, phosphorus, iron) and hydropower. Forest covers about 55% of the province. Water resources are from the Prek Kampong Bay River, with its headwaters in the Bokor National Park.

The traditional French architecture in Kampot city is recognized as a resource and there is a plan to keep and restore the old buildings.

The priority is to develop the domestic tourism market rather than focusing on international tourists. Based on their physical, social and cultural characteristics, tourist attractions in Kampot can be categorized as (i) natural attractions such as forests and waterfalls, (ii) cultural and historical attractions such as ancient city, architectural structure and artworks, and (iii) coastal attractions.

Kampot is the centre of administration and government for all the coastal cities. The city infrastructure and layout are all well established. Historical artifacts displayed in Kampot City Museum provide evidence of the ancient Khmer civilization, which makes this area a major target of tourism development.

**Tourism Plan and Development for Kampot** – The main elements of the tourism plan for Kampot Province are as follows:

- Manage the strategic tourism development for 5 years (2006-2010) and generate development investment schedule over a period of 3 years (2006-2008).
- Participate in meeting and monitoring the provincial strategic development planning over a period of 5 years (2006-2010).
- Provide guidelines for appropriate development of tourism resources and landscape and renovate assets important for domestic and international tourists to visit in Kampot.
- Encourage the establishment of two restaurants in order to generate performance standards and put them on the map for attraction to sites such as Kep Thmey Resort, Prek Ampil.
- Establish criteria and standards regarding litter, make an announcement to reach out to people, and arrange litter bins along roads.
- Establish a training course and hospitality training for those who work for hotels, guesthouses, and restaurants.
- Encourage hotel and guesthouse owners to extend their tourism business licenses.

### 2.6.3 Sihanoukville Municipality

The population of Sihanoukville is 155,690 accounting for 4.2% of the total population of Cambodia. Sihanoukville has a land area of 1,426 km<sup>2</sup>, divided into 3 administrative districts:

- i. Mittakpheap: The population density is 355 people per km<sup>2</sup>;
- ii. Prey Nob: About 8-9 times larger than the other two districts but its population density is only 64-67 people per km<sup>2</sup>; and
- iii. Stung Hav: The population density is 97-355 people per km<sup>2</sup>.

Land use in Sihanoukville can be categorized as follows:

- i. Community land;
- ii. Agriculture – rice fields, orchards, rubber plantation, tapioca plantation, and others. The area of rice fields is about 91 km<sup>2</sup>;
- iii. Grass plain and peat swamp forest;
- iv. Forests - tropical rainforest, mixed deciduous forest, bamboo forest and mangrove forest;
- v. Water resources, reservoirs, shrimp ponds; and
- vi. Sand beaches and clay beaches.

As much as 1,108 km<sup>2</sup> of Sihanoukville is a forest area, including Ream National Park, accounting for 78% of its total area. There are 6 important ecosystems in the area:

islands, mangrove forests, flooded lowlands, seaweeds, river mouth and delta, beaches, and local reefs. Tourist attractions based on these resources include sandy beaches, islands, and national parks, as well as temples, casinos, entertainment places, and public parks. The main beaches suitable for tourism development are:

- i. O'Chheuteal Beach: This sandy beach is named after the stream running from the central part of the area to the ocean at the end of the beach. It is the longest beach in Sihanoukville City. Offshore is a beautiful view of Khteah Island. O'Chheuteal was once a developed tourism site and therefore its road infrastructure and city plan already exist. There are a few hotels available in this area.
- ii. Sokha Beach: This sand beach is located on a bay between the sea and the fresh water resource making it an important ecological system. A four-star hotel has been built in this area.
- iii. Independence Beach: This beautiful beach has its back facing a large fresh water resource making it more like a natural park. The beach used to be a very popular tourism spot and has a city plan for roads and the utility infrastructure system.
- iv. Hawaii Beach: This 1,500 m long white sandy beach is located in the middle of Sihanoukville City. About 1 km offshore, there is an island called Koh Poah which has striking scenery. Therefore, Hawaii beach area is considered as a beautiful scenic attraction.
- v. Victory Beach: The beach extends from Hawaii beach with a rock hill marking a boundary between them. There is a deep sea port to the north and the beach is one kilometer long. There are problems of restaurants and accommodation illegally built on the beach as well as the pollution produced from the deep seaport activity.
- vi. Port Beach: This is a narrow beach located in an area next to the deep seaport. It has a tendency to be used less and less for tourism as the demand for the use of the deep sea port is increasing.
- vii. Samdech Hun Sen Beach: This 3 km long beach is rather narrow with some of the area covered by clay so it is less suitable for tourism. As it is also near the deep seaport, there is a problem of illegal settlement on the beach area.
- viii. Prek Troeng Beach: This beach is located at the northern point of Sihanoukville. Most areas are muddy and covered by mangrove forest and beach forest.
- ix. Koh Poah: This is a small island about 1 km in diameter located off Hawaii Beach. The area is covered by forests except in the northern part which is a sandy bay shore.

Temples in Sihanoukville include: (i) Wat Leu or Wat Chotynieng, an old Buddhist temple located on Sihanoukville Mountain; and (ii) Wat Krom or Wat Utynieng, another old Buddhist temple.

There are several other important and interesting tourist attractions in Sihanoukville such as Independence Square, Port of Sihanoukville, downtown area, Golden Lion Traffic Circle and three casinos.

Tourism in Sihanoukville is increasing with remarkable growth according to its natural potential, especially the attractive beaches and other natural attraction sites. The town authorities are focusing on building the infrastructure and safety and security management. The annual increase in tourist numbers averaged 22%-25% five years ago, but in 2005, 200,749 tourists visited Sihanoukville, an increase of 38.45% over 2004. Domestic tourists were 153,842 and international tourists were 46,908 in 2005. The main international tourists visiting Sihanoukville come from France, PRC, USA, England, and Japan.

Currently, tourist accommodation in Sihanoukville consists of 41 hotels with 1,532 rooms (15 hotels authorized, 20 invalid, and 6 unauthorized) and 87 guesthouses (29 authorized, 21 invalid, and 37 unauthorized) with 1,012 rooms. There are at least 49 restaurants with 685 tables or 3,231 chairs.

The average cost of hotels and other accommodation in Sihanoukville by type is:

|                   |                   |
|-------------------|-------------------|
| Large hotel       | \$50 per night    |
| Medium size hotel | \$20-30 per night |
| Guesthouse        | \$5-10 per night  |

The license revenue from the hotels, guesthouses, and restaurants totaled Riel 7,885,000 (about \$1,950) in 2006.

Around 70% of the tourism market in Sihanoukville comprises domestic tourists who visit and relax in Sihanoukville as a family or with relatives on the weekends. They travel mostly by their own cars to relax at the beach, eat seafood and visit the Kbal Chhay Waterfall. The 30% of international tourists is mostly at a backpacker level and independent tourists coming from Phnom Penh or Koh Kong by bus or speed boat to relax, swim and visit some islands at Ream National Park. Some domestic and international tourists also come to Sihanoukville for official or work purposes.

Taxis are available for transport between provinces and locally. The bus station is located in the market in the city. Most roads are made of lateritic gravel except for the Krong Preah Sihanouk-Phnom Penh route. The main route to Koh Kong is being upgraded with several bridges currently under construction.

Boat transport to Koh Kong is serviced once a day departing at 1.00 pm. There is a deep sea port located on the seashore for transport of goods. There is a plan to develop an area in the port to accommodate large tourist boats as well.

The upgraded airport at Sihanoukville is now receiving flights from Siem Reap three days a week (since January 2007) and there are plans to increase the number of flights, including from Phnom Penh. Rapid growth in transport infrastructure is helping to make Sihanoukville more accessible. There is a train from Phnom Penh although it is very slow and currently unsuitable for passenger purposes. Road N-3 (260 km from Phnom Penh), Road N-4 (230 km from Phnom Penh) and Road N-48 (240 km from Koh Kong) and speedboats connecting Koh Kong and Sihanoukville, are the main connection routes.

Sihanoukville has 22 islands, of which 10 are open for tourists to visit and stay overnight, plus 119.5 km of beaches (of which 7 beaches are of high quality). There is one waterfall and one national park (where eco-tourism is being developed – mangroves, birds, fishing village, dolphins, meditation, fishing, and coral reefs). Other attractions are the Angkor brewery, the large international port, and business opportunities.

Tourism Plan in Sihanoukville - A Tourism Development Committee, chaired by the Governor, involving all relevant departments, was created in January 2007, but it has not met yet. The role of the committee is to (i) prepare a master plan and tourism development strategy; (ii) implement national policy on tourism (emphasis on natural and historical attractions); (iii) assist DOT to develop high quality products and promotion campaigns; (iv) educate the public and raise awareness regarding the benefits of tourism; and (v) conduct surveys and research. The permanent secretary is DOT and all members must join the meetings as required, with a report to the Chair. Sub-committees have been formed by districts within the town and the Deputy Governor is in charge.

Tourism in Sihanoukville is growing very fast but suffers from a lack of management. The strategy for tourism development is based on four elements (i) safety and security; (ii) the national plan to develop tourism; (iii) development of the beach areas; and (iv) building human resources capacity.

Waste management is seen as the responsibility of the municipal government, through private sector contracts. Uncollected solid waste certainly affects the quality of the visitor's experience.

Vendors on the beach are not licensed and do not belong to any association, and hence are easy to evict. They do pay a small fee to the local authorities. Also, there is no local hotel or travel agent association, as all companies are competing for market share. The approval process is essentially through the CDC. The private sector is being encouraged to invest in Sihanoukville. DOT is authorized to provide a tourism license for hotels or guest houses with less than 30 rooms.

## 2.6.4 Koh Kong Province

Koh Kong is the largest coastal province in Cambodia, about 270 km southwest of Phnom Penh, bordering Thailand. Kampot and Sihanoukville border Koh Kong to the southeast. Road repairs and bridge construction have recently improved road connections to neighboring Thailand. Koh Kong Province has 8 districts<sup>10</sup>, 32 communes and 127 villages with a total population of about 133,000. Mangroves and flooded forests make up 50% of the provincial area, while 23 offshore islands make up 4%. The balance of province is hilly and only 1% is suitable for agriculture. The checkpoint with Thailand is in Hat Lek Village, Khlong Yai District of Trat Province.

Along the border on Cambodian side, there is a village called Ban Cham Yiem where the Koh Kong International Resort Club, Cambodia offers a 367 room hotel, casinos, clubs, entertainment, restaurants, souvenir shops and many other services.

The total population of Koh Kong is 132,106. There are four well populated districts, Botum Sakor, Smach Mean Chey, Sre Ambel and Kampong Seila, with population densities from 15-290 per km<sup>2</sup>. The other four districts have a population density less than 15 per km<sup>2</sup>. Koh Kong town is the largest community with a very high population density. The other 127 communities are more like villages. In each village, small communities arise according to the main occupations such as a fishery community or agriculture community. The fishery group is the major community on the coastal area.

Agricultural areas in Koh Kong are mainly used for rice farming, covering about 74 km<sup>2</sup> and producing 9,630 tons of rice per year. Other crops are corn, tapioca, sweet potato and vegetables.

The forest area in Koh Kong is about 11,900 km<sup>2</sup>, accounting for 92% of the total area in the province. Botum Sakor Natural Park covers 1,712 km<sup>2</sup>. The forest types are tropical rainforest, temperate forest and deciduous forest. They provide habitat for a number of wildlife species, with three areas within the province assigned as national parks and wildlife sanctuaries:

- i. Phnom Oral with a land area of 2,537 km<sup>2</sup> covering areas in Koh Kong, Pursat and Kampong Chhnang.
- ii. Peam Krasaop with an area of 237 km<sup>2</sup>; and
- iii. Phnom Samkos with an area of 3,337 km<sup>2</sup>.

Koh Kong also has abundant mangrove forests scattered along the mouth of the rivers. The mangrove forests in the south of Koh Kong town and along the banks of Prek Koh Pao River are still virgin and teeming with birds, mangrove wildlife, shrimp, mollusks, crabs and fish. This

biodiversity of plant and animal creates a balance in natural food chain and help to preserve the coastal ecology of this area.

There are three types of ecosystems in Koh Kong: forest, mangrove forest (in the tidal zone) and marine ecosystem, including all the islands which are important resources for ecotourism. These sites are very rich in natural and cultural resources with a number of potential attractions such as dolphin habitats and fishing villages.

The important physical and natural resources for tourism in Koh Kong include:

- Prek Kaoh Pao and Prek Krasaop
- Peam Krasaop Wildlife Sanctuary
- Beaches
- Dolphin habitats
- Virgin forest areas
- E-91 Waterfall located about 15 km from Koh Kong Town
- Sdach Archipelago of 12 islets

In Koh Kong City, there are 16 hotels, resorts, guesthouses, and other lodging providing 286 rooms with average room rates of Baht 100-500 (\$3-15) per night. There are about 10 restaurants and shops including food and goods stores, and souvenir shops around Koh Kong International Resort Club.

Taxi and van services are available at the city market and at the immigration checkpoint. There are about 10 passenger cars offering package deals. For water transport, there are boats commuting between Koh Kong and Sihanoukville which takes about 4-5 hours. The service is offered once daily at 8.00 am and stops at Koh Sdach (an island) on its way. Four boats are operating on this route and each of them can accommodate 200-250 people at a time. First Travel Co., Ltd. is the only tour operator in Koh Kong. It is a branch office of the mother company in Phnom Penh.

There are 10 decent restaurants (i.e., big space with garden), and about 30 souvenir shops at the tourist sites, especially at Koh Kong Plaza where 25 of them are located.

There are no tourist police in the area because the number of tourists in each site is still very small. Although there are very rare cases of crime, the local police will occasionally check on the area.

A Tourist Information Centre is located at Koh Kong Tourism Office in the City of Koh Kong. The main tourist attractions are:

<sup>10</sup> The districts are (i) Botum Sakor, (ii) Kiri Sahor, (iii) Koh Kong, (iv) Smach Mean Chey, (v) Mondol Seima, (vi) Sre Ambel, (vii) Thmor Bang, and (viii) Kampong Seila.

- i. The Thai-Cambodian Border has Hat Lek District on the Thai side. At present, on the Cambodian side, the area is a popular tourist site filled with shops selling souvenirs and various goods. More than Baht 1 billion investment (\$30 million) has been spent on this area to develop hotels, casinos, and Koh Kong safari park;
- ii. Koh Kong City, where the Provincial Office of Koh Kong is located, is the centre of administration, politics, business and transportation of the province. The city is bound to Thailand on the South and provides accommodation and restaurants. In the city, in addition to the Koh Pao River view, there are a war memorial hall and an Islamic community on the riverside; and
- iii. Khun Phan Chedi, an ancient pagoda, sits on a sandstone barrier in the middle of Koh Pao River.

Most tourists are international tourists arriving via the Thai-Cambodian border. The majority of Thai tourists come for gambling and a few travel further to Sihanoukville. Very few domestic tourists visit the area. Some foreign tourists visit the area so they can get re-entry visas into Thailand.

## 2.6.5 Krong Kep Province

Krong Kep is the smallest province in Cambodia with a land area of approximately 340 km<sup>2</sup>. It is divided into two administrative districts, Damnak Chang'aeu and Krong Kep, with 5 communities and 16 villages. The population density is about 85 people per km<sup>2</sup> and the total population is 28,660, which accounts for 0.3% of the total Cambodian population. The average family size is 5.3 per household. The population profile consists of 46.1%, 50.3%, and 3.6%, respectively, of children (0-14 years), working group (15-64 years old), and senior group (over 65 years) respectively. About 46.9% of the working group is older than 18.

Krong Kep is located in the south of Cambodia (latitude 100 18' North, longitude 1040 28' East). Its southern side is bounded by the Gulf of Thailand with a 25 km long coastline, while the other side adjoins Kampot Province.

Most of Krong Kep is occupied by 30-300 m high mountains with more than 45 degree slopes. These areas are covered by tropical rainforest and deciduous forest. Some of the forests have been destroyed for agriculture use. Areas less than 30 m above sea level are used for growing rice, corn, tapioca and other crops. Since this area has limited water resources, most agricultural activities are carried out only in the rainy season. Along the coastal floodplain there are mangrove forests and salt production fields while coconut farms and beach forests are found in other areas. Fishery is one of the important activities in the coastal area.

In Krong Kep, major production activities are in the agriculture sector. The workforce in agriculture, industry, and service sectors is 82.2%, 2.2%, and 15.6% respectively. There are 12,385 employed workers, among this, 6,342 (51.2%) are female. The unemployment rate is 2.0% with more unemployed people in the city than in the rural area. Employed workers over 7 years account for 54.7% of the total population in the province. The unemployment rate in Koh Kong is higher than the national average, so tourism development should be able to increase the output of the service sector and create more income and employment for local people.

The education profile of the student group (above 7 years old) demonstrates that 54.1% can read and write, 68.0% have not finished compulsory education, 22.5% have finished compulsory education, 6.7% have finished lower than high school level, and only 0.1% have finished a bachelor degree. Only 1.4% of the population in Krong Kep is literate, although the literacy rate is higher in the city than in the rural areas. The proportion of the population without compulsory education is greater than the national average and the number of graduates, who are important for development of the sector, is comparatively small. Therefore, education will be a key element in the success of tourism development in the area.

As for other coastal areas, the main attractions are the province's natural resources. Seawater inundated areas are used for three types of activity: (i) sandy beaches are used for tourism and recreational activities, such as Chhner or beach; (ii) muddy and sandy beaches are habitats for young mangrove forests, with maximum height of 5 m; and (iii) salt production is also found in the area. Rocky sand areas next to the sandy beach are used for recreational and fishery activities.

Although small in size, Krong Kep understands the importance of forests. It has about 50 km<sup>2</sup> preserved as a National Park. This includes forests scattered on the islands such as Koh Tunsay and Koh Pou. Both islands are included in the tourism development plan of Krong Kep. Coastal ecology has been maintained in a natural condition and generally remains unspoiled.

Climate information allows travelers to select the best time to travel without having to worry about rain and harsh weather. The climate profile of Krong Kep over the past 10-15 years is:

|                             |          |
|-----------------------------|----------|
| Maximum temperature         | 35-36° C |
| Average maximum temperature | 30-31° C |
| Average temperature         | 27° C    |
| Average minimum temperature | 23-24° C |
| Minimum temperature         | 14-15° C |



Hottest months are from March to June and the coolest month is in January. Rainfall over the past decade was (i) maximum 3,000 mm; (ii) minimum 1,400 mm; and (iii) average 2,000 mm. Maximum rainfall is in October while there is less rain in December to March. Relative humidity also plays important role in traveling comfort. In Krong Kep, the average humidity is around 80%. According to the climate record, rainfall and relative humidity statistics, the best time to visit is between November and April.

Some areas in Krong Kep do not have enough water to grow any crops, except in the rainy season. Prek Ta Sek River on the west side of the province flows across Kampong Trach and discharges to the sea at a point near the Vietnamese border. Along the delta area, there are mangrove forests, salt farm, and peat swamp forest.

There is no regular bus, taxi or other land transportation to Krong Kep, so it is urgent for the Government to improve these facilities for tourism development. At the moment, commuters to Krong Kep have to travel to Sihanoukville and Kampot. Alternatively, tourists can come by rental boat from Sihanoukville. There is no passenger boat available for the moment, but the existing boat pier is in a reasonable condition that could be developed to a passenger pier. Train transport is available (but not very convenient) from Phnom Penh through Takeo, Kampot and terminating at Sihanoukville. Commuters to Krong Kep need to get off at Damnak Chang'aeu Station and then rent a motorcycle to the beach.

The main tourism attractions in Krong Kep are: (i) sandy beaches; (ii) coral reefs; (iii) local communities and culture; and (iv) local industries e.g. handicrafts, fisheries, and marine aquaculture.

The key tourist attractions along the coastline are:

- i. Wat Phnom Sarseir: for art and cultural tourism;
- ii. Crab Market: a fishing village where marine products are caught and sold. Major catches are crab, shrimp and fish. The area is very popular for marine product traders but the crowded shops produce a lot of garbage and pollute the area's scenery;
- iii. Chhner or beach: it is the only beach that has a lot of tourists visiting especially on weekends. The beach is about 300 m long with a 30-35 degree slope, so it is not a very wide beach. The construction of a new road along the beach line makes the space on the beach even smaller;
- iv. Zoo: in a poor condition with only a few animals to see. There is no direction sign to the zoo even though it is rather close to the beach;
- v. Wat Samot Ransey: for local art and cultural tourism;

- vi. Camping: As accommodation in Krong Kep is very limited, camping on the beach is alternative accommodation for tourists;
- vii. Casinos: Most are already closed with only the empty buildings remaining;
- viii. Angkork Touch beach: a recreational beach located a bit further from other areas. The condition of the road to the beach is in poor condition, so the best way to get there is by boat;
- ix. Koh Tunsay: a 2.2 km<sup>2</sup> island surrounded by forests and sandy beaches. There are a few fishing villages and coconut farms on the island. It is 4 km from the mainland, about half an hour by boat;
- x. Koh Pou: a 1.5 km<sup>2</sup> island with 3-4 neighboring islets similar to Koh Tunsay. It is 3 km away from Koh Tunsay;
- xi. Marine Animal Farming Cooperatives: a group of villagers who work in marine aquaculture along the mangrove forests. The operation is supported by foreign agencies with an emphasis on natural breeding. Buyers come to buy at the site allowing the villagers to earn high income from this business;
- xii. Cham Village: an island village which has unique cultures and traditions quite different from other Cambodians; and
- xiii. Tam Nak: a pavilion where Cambodian kings and the royal family spent their vacations in ancient times.

The three main tourism clusters identified for development are (i) Kep City; (ii) Koh Tunsay archipelago; and (iii) Angkork Touch Beach.

### **Kep City**

- i. Characteristics and components: Kep City is located on a cape. There are sandy beaches, mountains, mangrove forest, beach forest and various scenic view points. Kep City was once a holiday destination for the upper class. There are vacation houses, old pavilions, and casinos built since the colonial time. However, most of the structures were destroyed by war.
- ii. Importance: It is a border province next to Viet Nam. Beside its role in tourism, the city is also important for marine trade. There are natural resources such as beaches, coast, and mountains with forests. At present, there is an attempt to revive the beach and to build high class vacation houses for tourism.
- iii. Infrastructure: The infrastructure is in rather poor condition.
- iv. Current tourism situation: Both international and domestic tourists have begun to spend their holidays here again.
- v. Accessibility: By car from Phnom Penh and convenient routes that connect to Kampot City and Sihanoukville.



- vi. Development policy: It has high priority in the tourism development guideline of Kep Tourism Office.
- vii. Distance: It is located in Kep tourism centre
- viii. Tourism Service: There are accommodation and restaurants for domestic tourists and backpackers.
- ix. Tourism problems and threats:
  - a. The city and its infrastructure are in a very poor condition, and renovation will require major investment,
  - b. Land ownership by previous land owners make it more difficult for development,
  - c. Lack of basic utilities, landscape design, and a tourism resource conservation plan.
- x. Guidelines for further development:
  - a. Revive Kep City from the impact of the war and develop into a coastal and border tourism city;
  - b. Develop other facilities to accommodate tourism and create a link with tourism centres along the coast and from Viet Nam;
  - c. Develop tourist attraction development and Kep Cape conservation plans,
  - d. Collaborate with Viet Nam to encourage border tourism, and promote arrival of tourists from the Mekong Delta in Viet Nam, and tourists from the eastern part of Thailand. Develop Kep City into a Cambodia-Viet Nam island tourism centre.
- v. Accessibility: By tourist boat from Kep City.
- vi. Development policy: The area is included in tourism development plan of Kep City Tourism Office and ranked with high development priority.
- vii. Distance: About 4 km away from the tourism centre in Kep City.
- viii. Tourism Service: None.
- ix. Tourism problems and threats:
  - a. No tourism management, both in terms of tour guide service or community participation in providing facilities necessary for tourism
  - b. No tourist information available
  - c. No conservation of natural resources. The local people burn forests for animal farming and plantations
- x. Guidelines for further development:
  - a. Designate Tunsay Archipelago to be natural conservation, historical conservation and tourism areas, possibly designated as a marine national park.
  - b. Promote Tunsay islet to be used for ecotourism by making the local people understand and participate in tourism management. Seaweed farming should be preserved and encouraged as it is an interesting activity that is hard to find in any other places. Survey for more natural resources such as coral reefs, seaweed, and marine animals in the sea around other islets should be continued. However, since they are only small islets, development should be for sight seeing only with special care paid to conservation of natural resources in the area.
  - c. As the islets are small and the seaweed farm could easily be affected by the environmental impact of tourism, the development guideline should focus on day trip travel.
  - d. Organize tourist boat service with adequate safety standards and a fair price for tourists.

### ***Koh Tunsay Archipelago***

- i. Characteristics and components: The area is an archipelago located along the coastline. It consists of 8 islets scattered on the south of Kep Cape near the Vietnamese border: Koh Svay, Koh Tunsay, Koh Tbel, Koh Pou, Koh Angkrong, Koh Sner, Koh Maxprong, and Koh Kras. Koh Tunsay is the largest with an area of 2.25 km<sup>2</sup>. The islet is very beautiful because the mountain in the middle is surrounded by sandy beaches. At the top of the mountain, beautiful scenery can be seen in panoramic view. The other islets are mainly covered by forests.
- ii. Importance: The area is important for its marine ecology, forest and wildlife resources. Koh Tunsay or Koh Kratai has about 20 households most of whom make a living from harvesting seaweed and fish farming. The forests have been destroyed for agriculture and animal farms. A walkway is constructed around the islet. Tunsay is historically important as it was used as a prison by the French in the colonial time.
- iii. Infrastructure: None.
- iv. Current tourism situation: A few tourists visit the islet for holidays.

### ***Angkort Touch Beach***

- i. Characteristics and components: The area is a 10 km long beach located on the east of Kep City. The beach is extended to Viet Nam with a 100 m high mountain in the middle. Kampong Trach River runs through the beach to the sea providing beautiful scenery and various ecosystems, including the river delta.
- ii. Importance: The area is an extended area from neighboring countries. It is a beautiful attraction and will be developed to accommodate tourists from Viet Nam by Kep City Tourism Office.
- iii. Infrastructure: None.
- iv. Current tourism situation: None.

- v. Accessibility: Transport by road is available but not very convenient as the road is unsealed and made of laterite. It can be accessed by boat from Kep City.
- vi. Development policy: The attraction is included in the development guideline of Kep City Tourism Office and ranked with a high priority for development.
- vii. Distance: It is about 10 km from the tourism centre in Kep City.
- viii. Tourism Service: None.
- ix. Tourism problems and obstacles:
  - a. Lack of tourism infrastructure. A large investment will be required for the development of the area.
  - b. Lack of management control and conservation of natural resources.
  - c. As it is located on the border area, it is necessary to collaborate with the neighboring countries to ensure tourist safety and investor confidence.
- x. Guidelines for further development:
  - a. Develop border tourism activity by collaborating with nearby countries especially in border crossing.
  - b. Set out development milestones. In the first phase, accessibility by both car and boat should be made more convenient. In the long term, Highway No. 17 should be developed and merged with Highway No. 16 behind the beach. This will provide better access to the beach. At the same time, the road system to Viet Nam should be constructed so that tourists from Viet Nam can access the area by car.
  - c. Establish collaboration with Viet Nam to create a tourism link and promote the Viet Nam-Cambodia-Thailand tourism network.



# Alternative Tourism Scenarios

## 3.1 Tourism Development Envelope

The current tourism strategy focuses on diversifying the tourism market into four zones distinguished by different primary functions. Two extreme scenarios could be envisaged for Cambodia as an envelope encompassing the entire range of possibilities (i) strictly controlled ecotourism as the focus of not only the northeastern and southwestern coastal zone, but the entire country; and (ii) a laissez faire or do-nothing scenario for the southwest, northeast, and capital region, with the primary focus for tourism promotion and assistance concentrated on the Siem Reap area alone.

**Pole A:** In 1995, a \$5 billion proposal submitted by the Society for Ecology and Wildlife Preservation in Cambodia was designed to avoid the standard industrialization model of economic development in favor of an alternative model of development focusing on ecotourism and declaring Cambodia as a World National Park (Far East Economic Review, 1995). One extreme alternative, therefore, would be for tourism development in the entire country to focus on ecotourism<sup>11</sup>, while continuing only the current level of cultural and heritage tourism in Siem Reap.

**Pole B:** Another extreme would be to focus the tourism development on the world famous heritage sites in Siem

Reap (as the Angkor Wat location is already the major location for most tourists visiting Cambodia) and Preah Vihear temple complex. Prior to the civil war which started in 1970 Cambodia was one of the hottest tourism destinations in Asia on the basis of the ancient city of Angkor Wat and since the resurgence of tourism in the 1990s this area remains the primary attraction.<sup>12</sup> The advantage of this option, in the medium term, is that Cambodia could concentrate its infrastructure and security arrangements in one area, rather than spreading its limited financial resources across four diverse areas.

In addition, the broader GMS includes an amazing array of cultural heritage sites ranging from archaeological sites such as prehistoric Ban Chiang (Thailand), to historical monuments such as Angkor (Cambodia), Vat Phou (Lao PDR) and Sukhothai (Thailand), fascinating historical towns such as Lijiang (Yunnan), Hoi An (Viet Nam) and Luang Prabang (Lao PDR), and religious masterpieces such as the 1,000 pagodas in Pagan (Myanmar). Thus, by focusing on this aspect, Cambodia could participate in attracting a particular international tourist niche market, train the necessary human resources, attract financing for rehabilitation and maintenance of heritage sites, and control some of the undesirable aspects of international tourism (such as child prostitution). Under this extreme, scarce tourism development resources would be pumped into these cultural sites and the remainder of the country would be left to private sector interest in developing new attractions.

<sup>11</sup> A national ecotourism policy is under development with a significant focus on the northeast.

<sup>12</sup> Angkor Wat was declared as Southeast Asia's first protected area in 1925 (Bugna 2002).

Such extreme polar scenarios, however, are not particularly helpful in the current national situation where some choices have already been made regarding a quadrilateral tourism development strategy. Hence, three more nuanced development scenarios based on alternative growth rates (and strategies needed to achieve them) were used as a basis for consultation.

## 3.2 Three Development Scenarios

Scenarios are used to present the possible outcomes of policies or courses of actions. By presenting hypothetical situations based on projections or extrapolation from the current trends and a known baseline, the various outcomes can be compared. It must be stressed that these scenarios are developed to focus on some key differences stemming from alternative choices; they are not intended to represent the more considered, detailed choices that the Government, especially MOT, will eventually make.

To compare possible outcomes for Cambodia's tourism development, three scenarios representing alternative development strategies and growth rates have been considered. These scenarios range from a "do nothing" high growth approach, through a lower (although by global standards, still high) balanced growth approach, to a tightly controlled ecotourism development strategy with deliberately limited growth. Each of these scenarios has associated environmental and economic impacts that need to be considered. The Government has already outlined a preferred goal for high growth in tourism which will be economically beneficial in the short term. However, how long the growth can be sustained and the attendant impacts that may result need to be considered. These scenarios illustrate the likely consequences of choosing a high growth strategy and allow for a possible change in strategy once the consequences are clearer.

This presentation of scenarios attempts to illustrate the likely outcomes of development strategies, including the events and trends that are outside the control of the Government. These externalities include world economic and tourism trends, safety and security factors, as well as the vagaries of the global and national tourism markets.

### 3.2.1 Scenario 1: Strict Ecotourism Development Focus for All Attractions Outside Siem Reap

In this approach ecotourism is advocated as the sole focus for all core attractions in each of the selected areas outside Siem Reap with the latter being treated as already fully developed for culture and heritage purposes. The northeast and southern coastal areas

would have development of tourism focused on very tightly controlled, low-density facilities aimed at the "ecotourism" market. The focus for development is on small-scale, village-based facilities catering to visitors to Cambodia's nature-based attractions. These facilities would be associated with core natural attractions and would rely on the maintenance of the integrity of these attractions to sustain visitor satisfaction and provide the setting for a range of activities.

The types of development envisaged would be visitor services associated with the core attractions including interpretation and other nature-related activities. The accommodation would be low-density ecolodge-style appropriate to the setting and built following strict guidelines regarding waste management and impacts on the area. The restrictions for developing facilities at the core attractions would be stringent, with strict guidelines, requiring very close supervision and management. Product quality levels would be high.

Where appropriate and feasible, local villages would be involved in the development with the focus on encouraging SMEs and locally owned businesses. Activities associated with the core attractions are an important component of this scenario with treks, river trips, elephant rides, cycling, snorkeling, diving and other outdoor activities serving as important means to lengthen visitor stay and increase spending.

The core ecotourism assets associated with each area would be promoted as offering opportunities for ecotourism. Development of visitor facilities and infrastructure would be focused on these main attractions. The key areas and core assets in each area to serve as the focus for development are as follows:

#### Northeast:

- Kratie: Dolphin Pools
- Stung Treng: Ramsar site, Phanet waterfall and Anlong Cheuteal dolphin pools
- Ratanakiri: Yeak Laom Lake, Virachey National Park, O Sen Le Waterfall
- Mondulakiri: Bousra waterfall, Srepok Forest,

#### Southwest:

- Kampot: Teuk Chu Waterfall, Bokor National Park, Phnom Chhnork Cave
- Kep: Koh Tunsay island, Ang Keng beach, Oukasa forest
- Sihanoukville: Ream national park, Koh Rong, Kbal Chhay rapids
- Koh Kong: Cardamom mountains, Oral Wildlife Sanctuary, Phnom Preah mountain

The focus for ecotourism development in this scenario is to provide access and facilities at each of these attraction areas. In this style of development the impacts from

establishment of tourism facilities would be reduced with stringent requirements and guidelines for establishing infrastructure. The management of the impacts from each facility would be geared for each facility to be self-contained in terms of dealing with waste and other environmental impacts.

The main market targeted for this scenario is small group and individual ecotourists interested in the natural and cultural attractions of the selected areas. Wildlife viewing opportunities form an important part of the overall product offering as does providing well-managed natural settings for recreation and accommodation. The provision of high quality interpretive services and guiding for the attractions and the activities forms an important part of this scenario. In spite of the relatively lower numbers of visitors, with high quality infrastructure and facilities, the visitors are encouraged to stay longer in the destination.

In the northeast, opportunities for viewing dolphins and engaging in treks and river trips are important components for this scenario. The stability and health of the dolphin population is an important consideration as this is one of the core attractions for the area. Access to the national parks and a range of settings for recreation such as treks, river trips and elephant rides is also very important and this will rely on the management capacity of the responsible authorities.

In the southwest, maintenance of the overall quality of the beaches, coral reefs, national parks and islands will be a major consideration for the success of this strategy. Continued loss of mangroves, development of beach areas and illegal logging would seriously affect the quality of the visitor experience.

Development of the urban areas would proceed following existing urban plans and based on the provincial development committee recommendations, but there would be no specific promotion of additional tourists for urban based experiences. Similarly, Siem Reap would be regarded as essentially fully developed and approaching its carrying capacity limits and no major promotion of new facilities or activities would be attempted.

### **3.2.2 Scenario 2: Balance of Ecotourism and Guided Development**

The second scenario provides a balance of development focusing on ecotourism development at the high priority/high potential nature attraction areas and guided development for the other areas.

The aim of this strategy is to develop a range of attractions and settings to cater to a wide range of interests and to provide high quality attractions for the

ecotourism market. The developments at the main attractions are to be based on the ecotourism strategy and following the principles of ecotourism and will be low density, high quality and appropriate to the setting. In the urban areas, development would follow urban plans and adhere to guidelines that ensure the cities provide a livable and functional setting for the inhabitants and an attractive locale for visitors. The urban plans are to be clearly defined documents for all agencies to follow. Cultural and historical tourism would continue to be developed in line with current plans.

At the core attractions, the development focus is on providing visitor facilities including interpretation and information and a range of settings for recreation. The provision of high quality activities with a nature focus will encourage longer stays and higher spending by visitors.

The development of a range of recreational settings also extends to the provision of public access to attractions such as beaches where facilities are established to provide for domestic and general visitor use. Access, waste management and provision of basic services and visitor infrastructure are important tasks of the local councils to ensure that these areas are developed in a holistic manner.

At the core attractions, carrying capacities are determined and visitor numbers monitored to ensure that impacts are within acceptable limits of change. By providing a range of settings, visitors have options to seek the setting that suits the experience they desire. High use zones are provided with levels of infrastructure that can cater to the numbers. Waste management at all sites is a key concern and dealing with this involves integrated solutions among the responsible agencies.

The focus for investment in this scenario is to encourage SMEs at the local level as well as medium to large investment in the urban areas. Management of the core attractions is crucial to the success of this scenario and the responsible agencies would need to be actively involved in the development planning as well as sharing in the benefits from increasing visits.

One target market for this scenario is ecotourists seeking adventure and nature experiences, particularly in northeast Cambodia. These tourists are generally willing to stay longer and would spend more per visit. The focal areas for ecotourism development are the dolphin pools, national parks, and nature attractions of the northeast and the beaches, islands and the national parks of the southwest. The average length of stay for the international tourists is 2-4 nights in the northeast and 2-3 nights in the southwest.

The domestic market is also viewed as an important market and appropriate facilities and access to



attractions are provided to cater to their needs. The focal areas for domestic tourism are the southwest beach areas and the waterfalls and rapids of the northeast. The average length of stay for the domestic market is 1-2 nights with the highest numbers occurring during public holidays and weekends.

### 3.2.3 Scenario 3: Focus on Siem Reap/ Status Quo for Development Outside

In this scenario the focus is on developing Siem Reap as a world class tourism destination and letting the rest of the areas develop on their own according to private sector investment interests, with minimal controls.

This type of development in the study areas would be based on the guidance provided by the local councils and would essentially be focused on the main urban areas as well as the core attractions in each area. In the absence of clear guidelines for planning, the developments would be loosely planned and would follow the individual investors themes and styles, possibly including additional casino development along border areas. The ownership would be local business people with some outside investment coming in for the larger centres or the more significant core attractions.

The core attractions such as the wildlife and nature would still be very important and developments would tend to be focused around these assets. Promotion of the assets would be focused on appealing to a wide range of tourists with the interest of increasing overall numbers to each area. In the northeast, this would result in developments in the vicinity of the dolphin pools and at the main centres serving as gateways to the natural attractions (Ban Lung, Sen Monorom and Stung Treng). The main attractions would require expanded vehicle handling and visitor facilities to cater to the increasing demands.

In the southwest, the beach areas would be the main focus for development with the areas allocated for public access reducing as development demand increases, with developers insisting on exclusive, private beaches. This would result in a concentration of publicly accessible beaches to smaller areas that would be prone to overcrowding and result in high impacts to the beaches. Waterfall areas, rapids and rivers would continue to cater to the predominantly domestic market with development of facilities according to the increasing demand.

In the short to medium term, the developments would appeal to the general tourist and sight-seeing visitor as

well as to domestic visitors. A variety of additional activities would need to be developed to cater to the demands of the visitors at each site and these would be focused in the urban and peri-urban areas. More entertainment outlets (such as karaoke bars and casinos) and recreational areas would need to be developed.

The market for this type of development would be the general interest (predominantly group) tourist and there would be a need to market widely to meet the supply-side development model. Group tours and bus-based holidays would be promoted. The average length of stay for the northeast would likely be in the range of 2-3 nights and for the southwest, 2 nights. This type of market would be more budget conscious and overall spending per person would be relatively low.

Waste management would continue to be a problem at all attractions as well as in the urban areas. Providing adequate collection services and disposal facilities would be an ongoing problem. In the absence of development controls and planning, developments in urban areas would not be coordinated and may detract from the overall attractiveness of the town areas. Core attraction sites would likely be impacted to an extent that tourism would be affected in the medium term. Lacking sufficient waste management regimes, overcrowded public beach areas would eventually be avoided and overloaded waterfall areas would face a similar fate, driving new areas to be opened up.

Impacts from external (to tourism) developments on the upper Mekong River could have an impact on the core attractions such as the dolphins and the flooded forest. Without guidelines and adequate protection for coastal zones and forested areas, these attractions would be over-developed and lose their value as tourism attractions.

## 3.3 Growth Projections for the Three Scenarios

For each of the three development scenarios considered an associated growth scenario has also been considered. The current international and domestic tourist arrival figures used in calculating the projections were obtained from the various provincial tourism offices. These figures are based on arrivals at the various attractions as well as the numbers of visitors staying in hotels. As there is no differentiation between day trip visitors and overnight visitors these figures provide an indication of the overall projected demand. However, because the figures are combined, caution is needed when using these figures to interpret demand for hotel rooms at a particular destination.



### 3.3.1 Scenario 1: Growth of +5% Per Year

With the emphasis on strict ecotourism development, the annual growth for this scenario would stay at around 5%. This is mainly due to the size of the current ecotourism market and the scale of development for all the various facilities. This growth rate is closer to the current world levels but is considerably lower than the current 20% growth rate Cambodia is experiencing. At 5% per year, tourism growth is lower than what Cambodia has experienced in the years leading up to 2006, but still consistent with the current world levels. This is not an unrealistic growth rate as competition from neighboring countries could come into play or there might not be the necessary tourism investment in the areas outside Siem Reap. One benefit of this lower rate of growth is that it would allow local councils more time to establish needed infrastructure and visitor facilities. The projected international visitor numbers according to the different study areas is presented in Figure 6.

Given these growth projections, waste management services as provided by the existing urban infrastructure should be sufficient to manage the attendant environmental impacts at each area. The additional demands placed on the infrastructure are surmountable and should be able to be accommodated in existing urban plans.

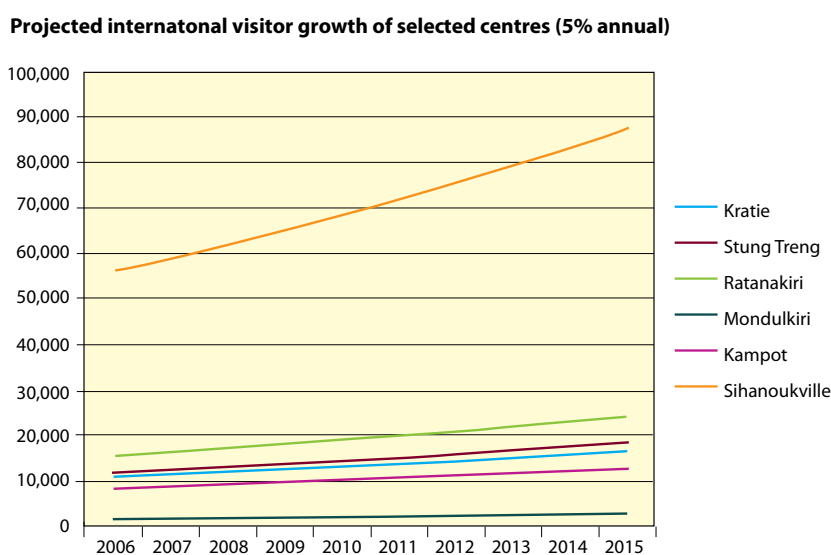
The levels of visitation to the core attractions are generally well within projected carrying capacity limits. However, these numbers may not be sufficient to ensure economic viability. For example, the Virachey National Park requires increases in visitation by at least 50% to cover the salary of the ecotourism liaison officers and increases by at least 100% to provide additional funds to cover the operational costs of park management.<sup>13</sup>

Currently, domestic tourism at all areas constitutes from 33% to 97% of all recorded arrivals. In the case of the higher percentages, many of these records are likely due to large numbers of domestic day trip visitors. According to the WTO definition for tourists<sup>14</sup>, technically these visitors should not be counted in tourism figures. Nonetheless, these relatively large numbers represent an existing demand and result in an impact that local councils must accommodate through provision of appropriate visitor facilities.

Based on the existing MOT domestic visitor numbers, a 5% annual growth projection has been considered (Figure 7). This figure is not unrealistic and given the baseline visitor numbers provides a steady growth that can be accommodated.

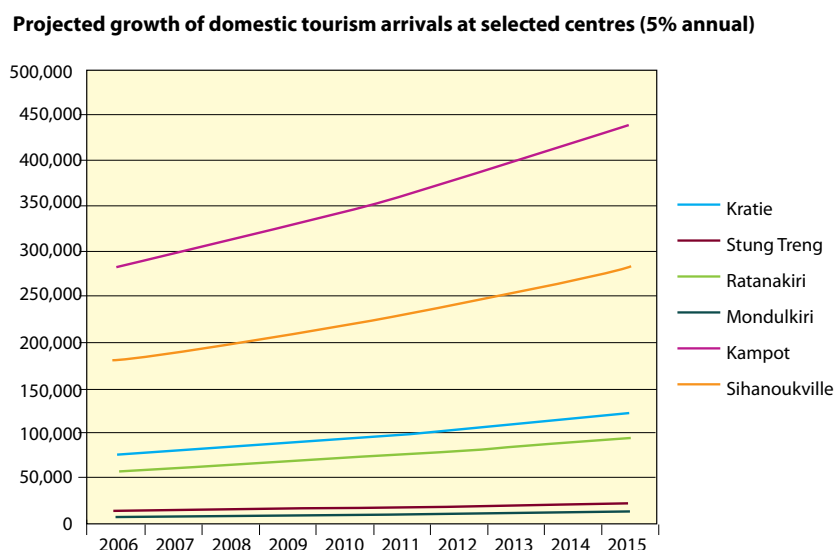
Based on the projected overall growth the economic returns at the attractions would probably be low unless entrance fees can be adjusted upwards for both

**Figure 6: Projected International Arrivals (5% growth)**



<sup>13</sup> SNV, 2006. Report on the Northeast Cambodia Regional Workshop on Ecotourism Strategy Development, Kratie, 2006. Netherlands Development Organisation.

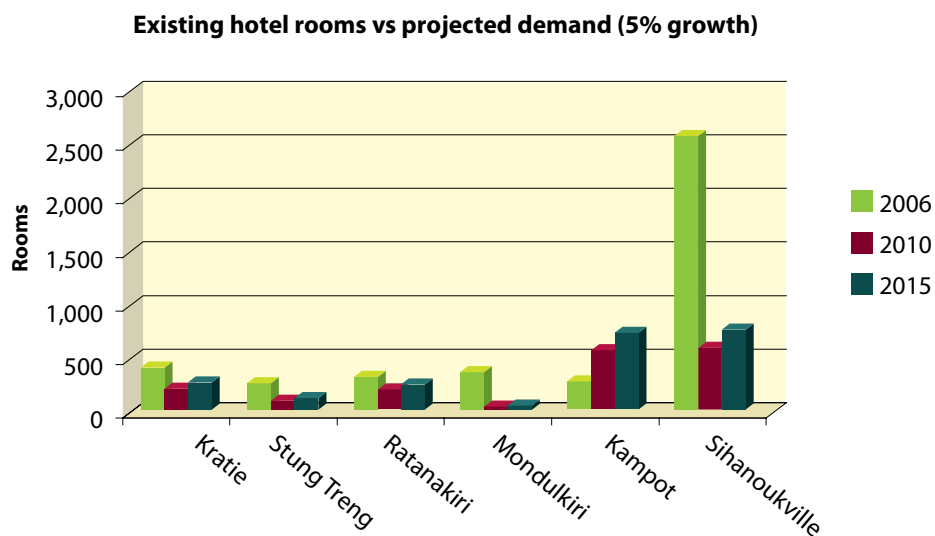
<sup>14</sup> Tourists are anyone traveling away from their normal place of residence for at least one night.

**Figure 7: Projected Domestic Visitors (5% growth)**

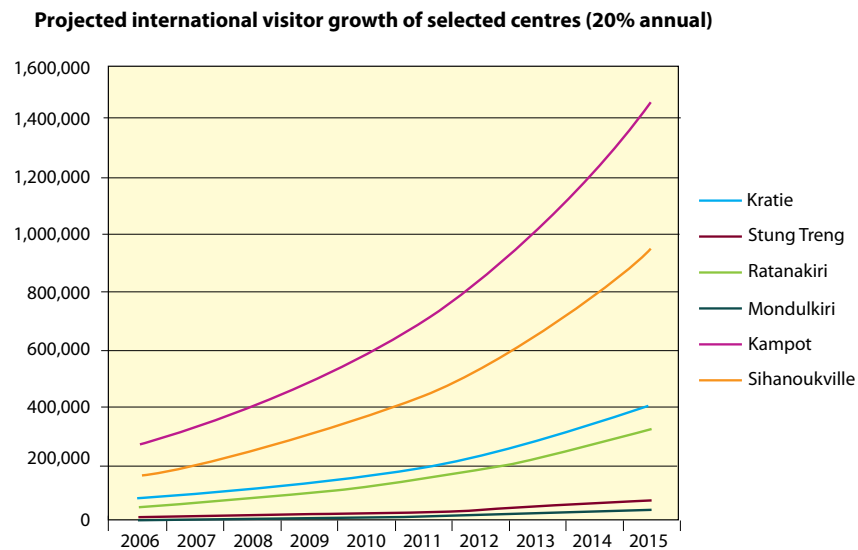
domestic and international visitors. Based on the existing hotel supply, there is currently sufficient room capacity in all locations except for Kampot<sup>15</sup> to cover the projected growth until 2015 (Figure 8). Given the development focus of this scenario, there would probably be a shift from existing urban hotel accommodation to more ecotourism-based accommodation at the core attractions and this may result in some existing hotels and guesthouses losing business. Projected room demand is based on all arrivals (both international and domestic) and assuming a two night stay for international and a one night stay for domestic visitors. The assumption for room occupancy is 70% of international visitors are twin sharing and 90% of domestic visitors are twin sharing.

### 3.3.2 Scenario 2: Growth Rates at 20% Annually

As Scenario 2 proposes a balanced development of both the ecotourism sites as well as the other attractions, a more robust growth rate of 20% is postulated. The Government goals for tourism growth are rates of 20-30% annually to 2015. As this has been the rate of growth over the past 5 years leading up to 2006, this would appear to be achievable. However, compared to world growth rates and rates of growth in the region, this is still quite a high rate.

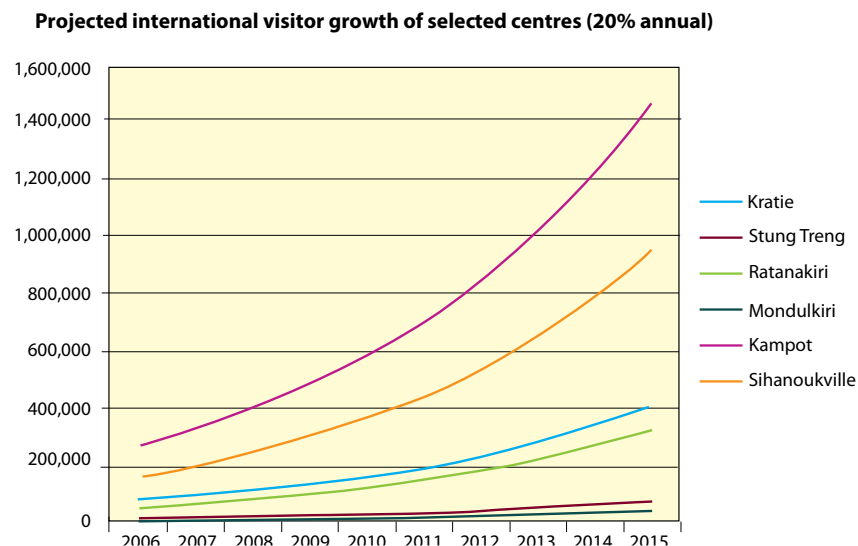
**Figure 8: Accommodation Requirements to 2015 (5% growth)**

<sup>15</sup> The shortfall in rooms needs further investigation as these figures are probably skewed by the large numbers of domestic day trip visitors to the area who do not require a hotel room.

**Figure 9: Projected Growth of International Visitors (20% growth)**

Based on the existing arrivals at the study areas, the 20% projected growth of international arrivals to 2015 is illustrated in Figure 9. The main destination of the increased visitors would be Sihanoukville in the southwest. The other areas and especially the northeast would receive relative increases but because of the low base arrivals, by 2015 the arrivals would only be around 40-70,000 per year at each province. In Mondulkiri, projected levels are still quite low but this would likely change with improved access to Sen Monorom.

Domestic visitors exceed international visitors at all the study sites but as outlined previously many of these are day trip visitors with the bulk of the visits occurring on weekends and public holidays. Projections of growth in domestic tourism can thus be misleading especially if using the projected figures to predict hotel demand. Using a scenario of 20% annual growth for domestic visitors results in large increases at Kampot and Sihanoukville, moderate increases at Kratie and Ratanakiri and slight increases at Stung Treng and Mondulkiri (Figure 10). With improvements in the road access to Mondulkiri, it is conceivable that these figures would increase at a higher rate.

**Figure 10: Projected Domestic Tourism Growth (20% growth)**

While sustaining this growth rate may be optimistic, especially in the medium to long term, it warrants consideration in terms of the potential impacts for the attractions at each area. As the domestic visits tend to occur during public holidays and weekends, the numbers of visitors are concentrated during these periods and can result in higher impacts and demands on visitor facilities. Conversely, the mid-week periods and non-holiday periods give the attractions some “recovery” periods and provide site managers with the time to maintain and repair facilities.

The 20% growth projections for both international and domestic visitors are important to consider in terms of predicting demand for hotel rooms and planning for the infrastructure required to handle these numbers. Based on existing demand and using the same assumptions for hotel occupancy and length of stay<sup>16</sup>, projections for hotel demand have been calculated. The demand for hotel rooms in 2010 and 2015 is illustrated in Figure 11.

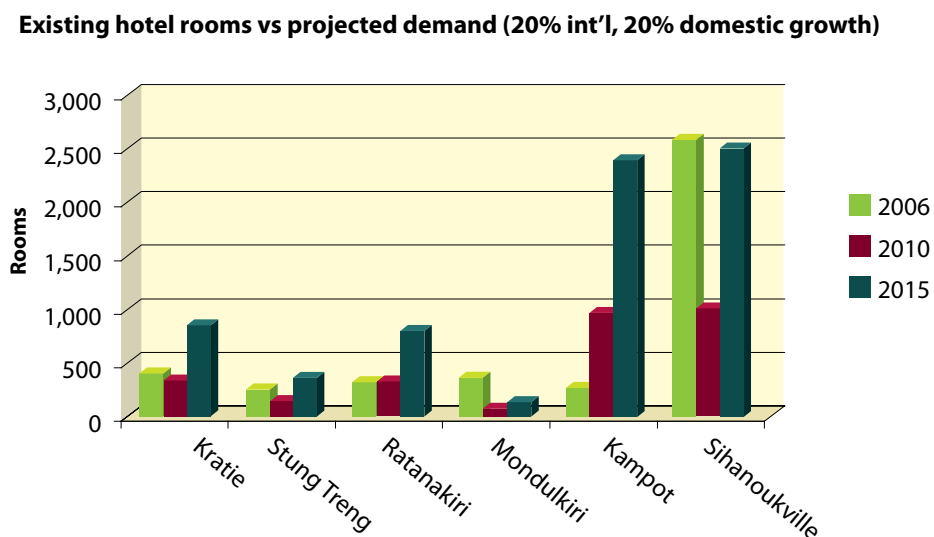
In all cases, except for Kampot, the current number of rooms in each area is sufficient to meet the demand based on 20% annual growth up until 2010. However, only in Mondulkiri and Sihanoukville is the current room supply sufficient to cater to the projected demand in 2015. Thus, in the other areas (Kratie, Stung Treng and Ratanakiri) there would have to be additional accommodation built to meet the projected demand. The implications of these additional rooms are increased stress on existing urban infrastructure and services.

### 3.3.3 Scenario 3: Growth Rates at 30% Annually

Scenario 3 allows development of the tourism industry to proceed unrestricted and essentially unguided. The growth of tourism postulated for this type of development is 30%. Given that current world tourism growth is 4-5% per year and the growth in the Asia-Pacific region is 8% per year, a projected annual rate of 30% is a very high rate of growth. This rate is, however, the upper limit that has been indicated by the Government of Cambodia as a target for tourism growth over the next 10 years. Therefore, it is important to examine the implications of this rate of growth based on the existing numbers of tourists and the existing supply of services.

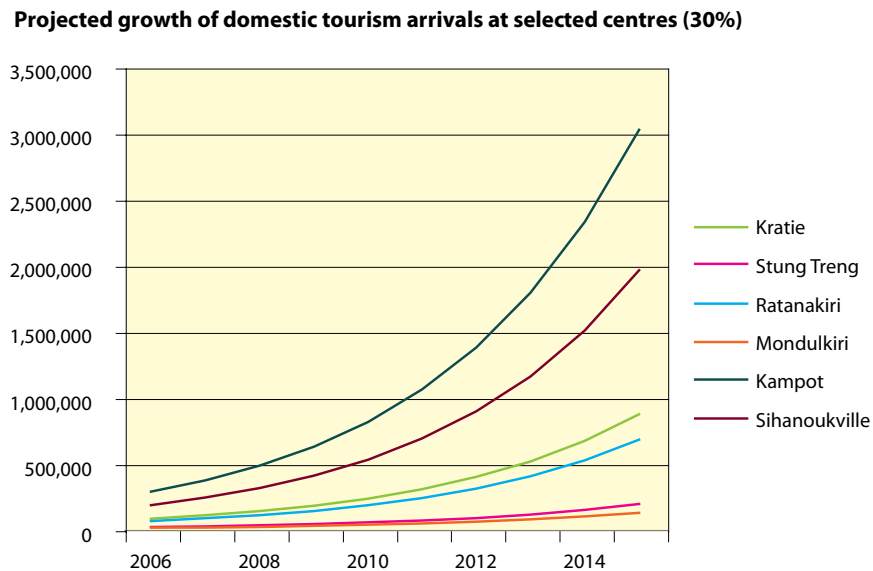
Based on the existing international visitor numbers the 30% projected growth in arrivals to 2015 at the various study sites is illustrated in Figure 12. At this rate of growth, Sihanoukville is poised to receive the largest relative growth reaching close to 600,000 foreign visitors by 2015. With the exception of Mondulkiri, the other areas show relatively moderate growth but still manage to reach levels ranging from 100,000 to 175,000 foreign visitors by 2015. Due to the low starting numbers in Mondulkiri, even with the projected 30% annual growth, visitor numbers would not exceed 20,000 by 2015.

**Figure 11: Existing Hotel Rooms Versus Projected Demand (20% growth)**



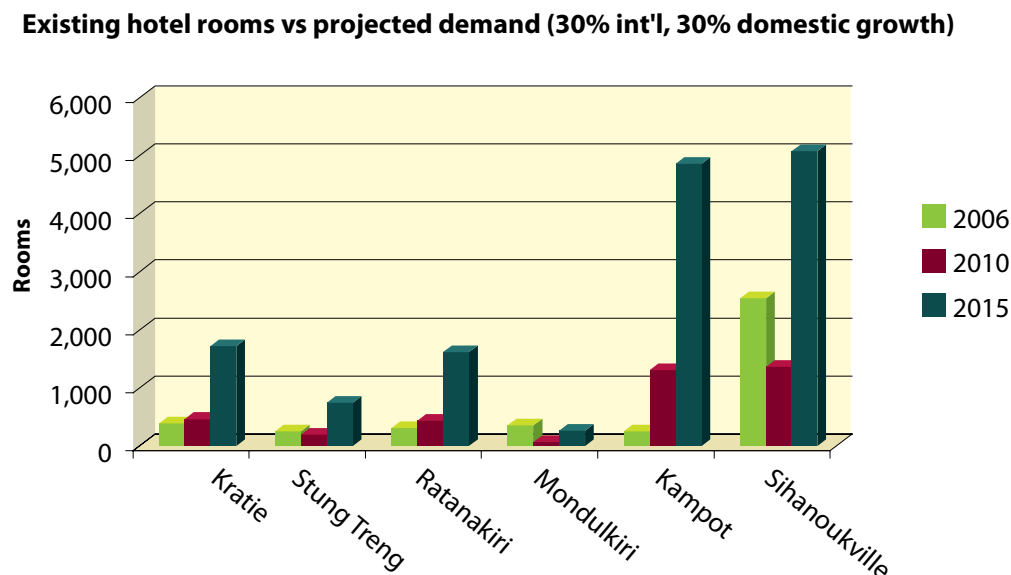
<sup>16</sup> International visitors; 2 nights and 70% twin sharing, and Domestic visitors; 1 night and 90% twin sharing.

<sup>17</sup> As highlighted previously, the demand figures for Kampot are misleading due to the large numbers of day trip visitors.

**Figure 12: Projected Growth of International Arrivals (30% growth)****Figure 13: Domestic Tourism Growth Projection (30% growth)**

The growth of domestic tourism is also viewed as an important component of overall tourism growth. With current domestic visits higher than the international arrivals further growth at the same rate will result in large increases at all attractions. In order to maintain domestic tourism growth rates of 30% per annum, the domestic economy would also have to be growing at a high rate. This type of economic growth may not be feasible, thus projections of 30% per year for domestic travel may be unrealistic. Nonetheless, for the purposes of this scenario Figure 13 illustrates the domestic tourism growth at a rate of 30% per year.

Based on a 30% annual rate of growth, visitation to all the study areas, with the exception of Mondulkiri and Stung Treng, shows substantial increases. The most significant increases in arrivals are to Kampot with just over 3 million visitors per year by 2015 and Sihanoukville with almost 2 million visitors per year for the same period. Domestic arrivals to Kratie and Ratanakiri by 2015 exceed 500,000 visitors per year and in the case of Kratie reach almost 700,000 visitors. The projected number of domestic visitors to Stung Treng in 2015 is just below 200,000, with Mondulkiri receiving just over 125,000.

**Figure 14: Projected Demand for Hotel Rooms Versus Existing Supply (30% growth)**

These levels would place huge demands on the existing infrastructure and visitor services. At areas such as Kampot and Sihanoukville, it is probable that the majority of the domestic arrivals are day trip visitors traveling mainly on week-ends and during public holidays. This concentration of visitors will have a large impact on the attraction and place huge demand on any facilities put in place to handle the resulting waste.

At other areas where the main domestic attractions are waterfalls or rapids, the impacts of these levels of visitors would result in severe degradation unless proactive measures were put in place to disperse the visitor loads.

The implication of this level of tourism growth on the supply of accommodation is quite significant. Based on a rate of 30% growth for both international and domestic tourism there would need to be extensive development to supply the needed rooms by 2015 (Figure 14).

Only in Mondulakiri does the existing (2006) supply of rooms meet the projected 30% annual growth of tourism to 2015. In all other areas there would need to be at least a 50% increase in the number of rooms to meet the 2015 projected demand. Note, however, that the huge shortfall of rooms for the case of Kampot is likely due to the large number of domestic visitors recorded for this area. As the vast majority of these arrivals would be on a day trip excursion to the river or waterfall, most would not require accommodation. Thus, these demand figures probably do not represent the actual demand and to accurately determine domestic demand, more information on the market characteristics is required. Similarly, the relatively large numbers of domestic visitors to Sihanoukville will also skew the projected hotel demand figures upwards and more detailed information for Sihanoukville should be collected.

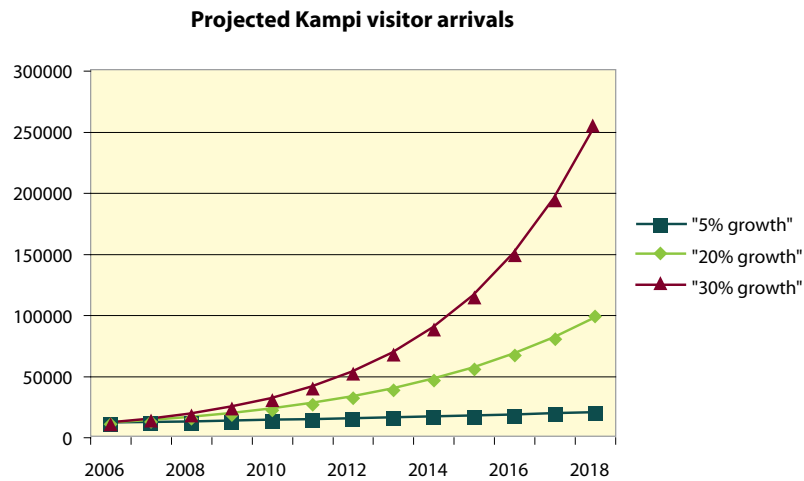
### 3.4 Carrying Capacity – Kampi Dolphin Pool

The concept of a carrying capacity for a tourism attraction is “borrowed” from wildlife studies and suggests a limit beyond which the resources are over-consumed and the attraction deteriorates as a result. In practice, carrying capacities are difficult to set and even more difficult to manage, especially if the demand for a particular tourism product is high and growing. To illustrate the affect of the various growth rates on a proposed carrying capacity, the example of the Kampi dolphin pools at Kratie is used.

Based on the DOT, Kratie statistics and supported by other studies, 2006 saw just over 10,000 visitors to the Kampi dolphin pools. Using the three scenarios for tourism growth the projected annual numbers to the dolphin pools are illustrated in Figure 15. While the 5% growth scenario results in very little increase, the 20% and 30% annual growth scenarios result in large increases by 2018.

The rationale for proposing a carrying capacity for Kampi would be to reduce the danger of overcrowding during visits and eliminate or minimize potential injury or stress to the dolphins. From a visitor perspective, the controls would ensure that there are only a limited number of boats at any one time so that visitors receive the optimal viewing conditions and experience.



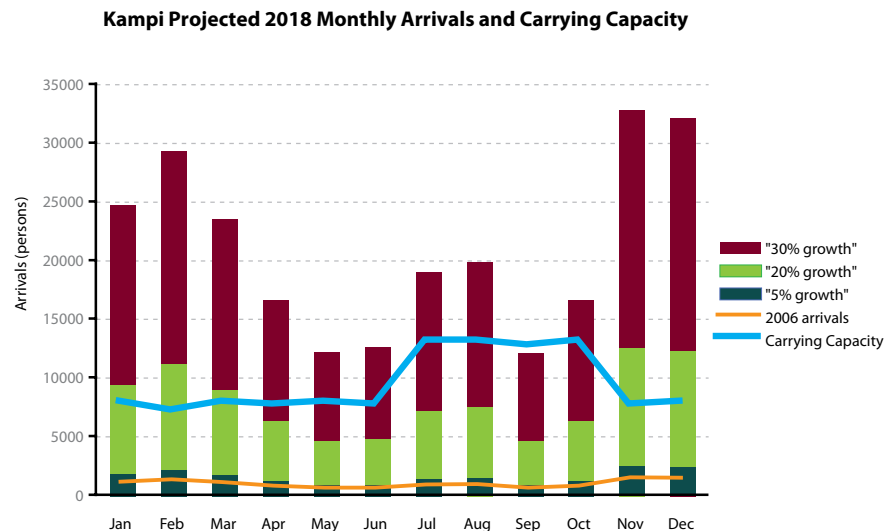
**Figure 15: Projected Visitor Arrivals to the Kampi Dolphin Pool**

Based on discussions with WWF staff based in Kratie regarding acceptable numbers of boats per hour, there would need to be differences in the limits allowed for the wet season and the dry season. During the wet season when the river is in flood, there are more opportunities for the dolphins to move around and an upper limit of 10 tour boats per hour was deemed as acceptable. For the dry season, the number of allowable boats number drops considerably to only 6 boats per hour due to the more confined conditions on the river and the increased potential for crowding of the dolphins. During these low water levels it is also recommended that the tour boats tie up and remain stationary to allow the dolphins to move around unimpeded.

Each boat is currently allowed to carry up to six passengers and the length of the trip is around one hour. Based on the limits of 10 and 6 boats per hour during the different seasons and a capacity of 6 persons per boat, a

carrying capacity scenario was calculated for the Kampi dolphin pool. A further factor was incorporated into the calculations to provide the dolphins with more unimpeded (from tourist viewing) feeding time. This factor is to limit the dolphin visiting to an 8 hour period each day (i.e. 7 viewing slots commencing at 1100 hrs and finishing at 1800 hrs or commencing at 0800 hrs and finishing at 1500 hrs). Given these factors, from 250 to 420 visitors per day could be handled provided the boats observed set guidelines for approaching and viewing the dolphins. This equates to a maximum visit rate of 35 to 60 visitors per hour depending on the season.

To better understand the implication of the carrying capacity limits, the figures for carrying capacity were plotted against the 2006 Kampi arrival figures and tourism growth projections for arrivals in 2018. The monthly variations in visitor numbers were based on the 2006 figures.

**Figure 16: Arrivals to Kampi and Recommended Carrying Capacity limits**

As can be seen from Figure 16, at 5% growth in tourism, the arrival numbers for 2018 fall well within the calculated carrying capacity figures (the bold red line).

However, for the 20% growth scenario the projected demand during the dry season exceeds the proposed carrying capacity limits during five months. These are dry season months that correspond with higher tourism numbers, but given the projected numbers and in the absence of strict controls, additional stress could be placed on the dolphins through the actual viewing activity.

The results for the 30% annual growth scenario show the projected demand for 2018 exceeding the proposed carrying capacity in all months except for one. In this growth scenario, the dolphin pool management would be required to deal with the very large stress of increasing visits.

The above figures were calculated using a boat capacity of 6 visitors per boat. The total numbers of visitors could potentially be increased if boats with larger capacity were used so that more visitors per trip were carried.

A caveat to the use of these figures is that the allowable numbers depend on the ability of all the boat drivers to follow set guidelines for approaching and viewing the dolphins and the ability of the managing agency to enforce the guidelines.

### 3.5 Implications of the Scenarios

#### 3.5.1 Scenario 1: Strict Ecotourism Development Focus for all Attractions Outside Siem Reap

The tourism sector in Cambodia can handle a 5% growth scenario without major capacity constraints (Table 18). External events, like hydropower development on the Mekong River, could damage some of the natural resources on which tourism depends, however. The main constraint on this scenario would be the Government willingness to reject tourism development proposals that are not consistent with an ecotourism strategy. Considerable additional funding generated by the tourism industry activities in protected areas would need to be directed to protected area management and an increase in the number of park managers and guides. As the economic returns of this scenario are potentially low, the business may not develop to a degree where there is sufficient critical mass to be a major economic contributor. Ecosystem services are maintained but will still be under pressure from competing uses.

**Table 18: Implications of 5% Growth Scenario on Tourism Destinations**

| Projected 5% Growth   |  |
|---|--|
| <b>Northeast</b>  |  |
| <ul style="list-style-type: none"> <li>The focus for tourism development is on the core attractions; Kratie dolphin pools, the Ramsar site, Yeak Laom lake, Virachey National Park, Mondulkiri waterfalls with visitor centres to guide the ecotourism delivery.</li> <li>Steady growth in international tourism numbers and while numbers remain relatively low, visitors are willing to spend on better accommodation and other activities.</li> <li>Domestic demand is still seasonal (holidays and week-ends) focused mainly on the Mondulkiri waterfalls, the rapids at Kampi and visiting Ratanakiri.</li> <li>Current management able to handle the increased numbers without significant impact. Limited benefits accrue to local villages associated with the core attractions.</li> <li>External impacts to dolphin pools are a serious concern for the viability of this attraction. Concerns at the other attractions include loss of forest and encroaching farm land as tourism is unable to provide employment.</li> <li>Waste management strategies can control waste at the main attraction sites.</li> <li>Waste management in urban areas continues to be an issue.</li> <li>Generally, the existing accommodation is sufficient to cater to the growth. New ecotourism lodges provide higher value accommodation at the attractions.</li> <li>Increasing visitor numbers provide additional revenue for park management and site managers, although the numbers based on a 5% growth rate do not cover the costs of operation. Limited additional funds going to the villages.</li> <li>Improvements in access stimulate increases in arrivals, although from a relatively low base.</li> <li>Low impacts from tourism but also low economic sustainability for tourism.</li> </ul> |  |

### Projected 5% Growth

#### Southwest

- Low impacts from tourism but also low economic sustainability for tourism.
- The focus for tourism development is on the core attractions:
  - Kampot; Teuk Chu Waterfall, Bokor National Park, Phnom Chhnork Cave
  - Koh Tunsay island, Ang Keng beach, Oukasa forest
  - Ream national park, Koh Rong, Kbal Chhay rapids
  - Cardamom mountains, Oral Wildlife Sanctuary, Phnom Prah mountain
- Steady growth in international tourism numbers and while numbers remain relatively low, visitors are willing to spend on better accommodation and other activities in the Cardamom mountains and well-preserved islands.
- Domestic demand is still seasonal (holidays and week-ends) focused mainly on the Teuk Chu waterfall, Ang Keng beach and the beaches at Sihanoukville.
- Current management able to handle the increased numbers without significant impact. Only limited benefits accrue to local villages associated with the core attractions.
- External impacts to beaches a serious concern for the viability of these attractions. Concerns at the other attractions include loss of forest, poaching and encroaching farm land as tourism is unable to provide employment.
- Waste is a problem, but waste management strategies can control waste at the main attraction sites.
- Waste management in urban areas continues to be an issue.
- Generally, the existing accommodation is sufficient to cater to the growth. New ecotourism lodges provide higher value accommodation at the attractions.
- Increasing visitor numbers provide additional revenue for park management and site managers, although the numbers based on a 5% growth rate do not cover the costs of operation. Limited additional funds going to the villages.
- Improvements in access stimulate increases in arrivals, although from a relatively low base.
- Low impacts from tourism but also low economic sustainability for tourism.

### 3.5.2 Scenario 2: Balance of Ecotourism and Guided Development

A more balanced scenario, which in many ways echoes the current tourism development strategy in Cambodia, begins to run into capacity constraints by 2010-2105

(Table 19). Increasing impacts on natural resource attractions, problems of waste management, and insufficient resources to manage protected areas are the main environmental concerns.

**Table 19: Implications of 20% Growth Scenario on Tourism Destinations**

### Projected 20% Growth

#### Northeast

- Continued rapid growth in international arrivals with focus on ecotourism activities and accommodation at the core attractions.
- Rapid growth in domestic arrivals results in increasing impacts on core attractions, mainly the rapids and waterfalls during peak periods.
- Management of visitor numbers at all site by developing different settings to disperse loads and time of visit. Numbers are generally within carrying capacity limits for the main nature attractions but approaching upper limits.
- External impacts on the core attractions a serious threat in view of robust tourism business and current investments (threats to the dolphins and to the forest and wildlife).
- Increased employment through a number of small businesses and local lodges. Possibility of viable community-based enterprises.
- Waste management at core attractions a key issue due to the increased arrivals. Integration of waste management with urban treatment is required to handle waste.
- Waste management in the urban areas a big issue due to increased demands on the urban infrastructure. Upgraded facilities and resources (human and financial) are required.

### Projected 20% Growth

#### Northeast

- In most cases, accommodation is sufficient for the increased arrivals. Shifts in demand at core attractions to eco-lodges and more specialized high value accommodation.
- Increasing management capacity at the protected areas and core attractions sites is a priority to handle the increased numbers and the management demands.
- Public access to core attractions for domestic tourism is managed through improved visitor facilities to deal with the high usage and the resulting impacts.
- Development of quality public use zones cater to both domestic and international visitors.
- Protected area revenues do not cover costs of operation, but options exist for concession arrangements, longer stays and alternative income generating strategies through activities and sale of services.
- Impacts from tourism have increased, but can be managed and the overall economic benefits have increased.

#### Southwest

- Continued rapid growth in international arrivals with focus on ecotourism activities (forests, trekking, wildlife viewing) and ecotourism accommodation (especially in the Cardamoms and Koh Kong). Also beach and coastal based tourism.
- Rapid growth in domestic arrivals results in increasing impacts on core attractions, (rivers, waterfalls and beaches) especially during peak periods.
- Visitor numbers are managed by developing a variety of settings to disperse loads. Many sites are approaching established carrying capacity limits for the main attractions.
- External impacts from coastal zone alteration and loss of forest and wildlife place a serious threat on the core attractions in view of robust tourism business and current investments.
- Many local employment opportunities available in lodges and small businesses associated with core attractions. Impacts managed through guidelines and licensing.
- Waste management at core attractions a key issue due to the increased arrivals. Integration of waste management with urban treatment is required to handle waste.
- Waste management in the urban areas a large issue due to increased demands on the urban infrastructure. Additional facilities and resources (human and financial) are required.
- In most cases, accommodation is sufficient for the increased arrivals. Shifts in demand at core attractions to eco-lodges and more specialized high value accommodation (some older hotels lose business).
- Increasing management capacity at the protected areas and core attractions sites is required to handle the increased numbers.
- Public access to core attractions (beaches and waterfalls) for domestic tourism provided through planned, improved visitor facilities and services to deal with the high impacts.
- High quality public use zones cater to both domestic and international visitors.
- Protected area revenues do not cover costs of operation, but options exist for longer stays and alternative income generating strategies through activities and sale of services.
- Impacts from tourism have increased, but the economic benefits have also increased.

### 3.5.3 Scenario 3: Focus on Siem Reap/ Status Quo for Development Outside

The very high growth rate represented by Scenario 3 results in significant capacity constraints and damage to the environment (Table 20). Increased stress on natural

attractions, inadequate waste management, need for massive investment in new accommodation, and crowding at popular destinations may eventually reduce the attractiveness of Cambodia as a tourism destination, leading to longer term decline.

**Table 20: Implications of 30% Growth Scenario on Tourism Destinations**

| Projected 30% Growth  |
|---|
| <p><b>Northeast</b></p> <ul style="list-style-type: none"> <li>• Very high growth in international arrivals. Core attractions (especially the dolphin pools, forest resources and waterfalls) face a situation of over-demand.</li> <li>• Very high growth in domestic arrivals places large stress on the core attractions (waterfalls and rapids), especially during public holidays and week-ends.</li> <li>• Numbers at the core attractions exceed carrying capacities (critically during peak periods).</li> <li>• External impacts on the core attractions are an important consideration given the high value of the core products to tourism.</li> <li>• Waste management at the core attractions is a key issue that overwhelms site management capacity to deal with the problem. This problem is particularly acute during public holidays and weekends.</li> <li>• Urban waste management is a big issue as infrastructure is stretched to deal with the increased demands from new hotels and facilities.</li> <li>• There is a shortfall in accommodation requiring new hotels and facilities to be built. Overbuilding places additional stress on urban infrastructure and services. Town planning is placed under stress as the demands to build new accommodation become acute.</li> <li>• Public access to core attractions is limited as concessions are given to developers. This places higher stress on the areas where public is allowed access.</li> <li>• Protected area and attraction site management lack the resources (human and financial) to handle the increased numbers and the management challenges.</li> <li>• Impacts from tourism on the environment have increased dramatically. Some clients are beginning to avoid the core attractions due to the crowds and the overall condition of the attraction.</li> <li>• Potential decreases in numbers as visitors avoid attractions resulting in empty hotels that have been built to meet the growth demands.</li> </ul> <p><b>Southwest</b></p> <ul style="list-style-type: none"> <li>• Very high growth in international arrivals. Core attractions (especially the beaches and forests of Koh Kong; and the beaches of Sihanoukville) experience high demand.</li> <li>• Very high growth in domestic arrivals places large stress on the core attractions (waterfalls and rapids of Kampot and the beaches of Sihanoukville), especially during public holidays and week-ends.</li> <li>• Numbers at the core attractions associated with rivers and waterfalls exceed carrying capacities (critically during peak periods).</li> <li>• The effect of the external impacts on the core attractions is an important consideration given the high value of the core products.</li> <li>• Waste management at the core attractions is a key issue that may overwhelm site management capacity to deal with the problem. This problem is particularly acute during public holidays and weekends.</li> <li>• Urban waste management is a big issue as infrastructure is stretched to deal with the increased demands from new hotels and facilities.</li> <li>• There is a shortfall in accommodation requiring new hotels and facilities to be built. Overbuilding places additional stress on urban infrastructure and services. Town planning is placed under stress as the demands to build new accommodation become acute.</li> <li>• Public access to core attractions such as beaches is limited as concessions are given to developers. This places higher stress on the areas where public is allowed access. Increasing occurrence of unplanned and un-served food and beverage outlets result in more impact and more waste.</li> <li>• Protected areas and attraction site management lack the resources (human and financial) to handle the increased numbers and the management challenges.</li> <li>• Impacts from tourism on the environment have increased dramatically. Some clients are beginning to avoid the core attractions due to the crowds and the overall condition of the attraction.</li> <li>• Potential decreases in numbers as visitors avoid attractions resulting in empty hotels that have been built to meet the growth demands.</li> </ul> |

### 3.6 Summary of Scenarios Analysis

As shown in Table 21, there are some clear trade-offs between the three scenarios. While the balanced Scenario 2 appears to be more attractive from an economic perspective, issues such as economic leakage and skilled labor shortages would need to be dealt with. Environmental issues like waste management and impacts on high use zones would also need additional attention.

The scenario analysis highlights some of the issues to be addressed at the level of the national tourism development strategy. These issues are addressed in further detail by examining the environmental impacts of current proposals for a national tourism law, a national ecotourism strategy, and specific plans for the northeast and southern coastal zone in Section 5. Prior to that analysis, however, the current baseline of environmental conditions needs to be assessed, as it is from this baseline that future changes will occur.

**Table 21: Comparison of scenarios**

|                              | Scenario 1  | Scenario 2   | Scenario 3   |
|------------------------------|---|--|--|
|                              | 5 % annual growth   | 20% annual growth  | 30% annual growth  |
| Environmental sustainability | High  | Moderate   | Low  |
| Economic Sustainability      | Low   | High   | High then decreasing   |
| Benefits of Scenario         | Limited impact due to low growth. Focus on key ecotourism attractions, steady growth allowing adjustment to increases. Some local business opportunities. Ecotourism established as an important niche at core attractions. | Focus on the core ecotourism attractions and developing ecotourism as a niche. Guided development for supporting attractions and infrastructure. Tourism an important economic driver. | High growth and creation of jobs and investment opportunities. Tourism as a major economic driver.   |
| Disadvantages of Scenario    | Many areas remain underdeveloped as focus is on core attractions only. Tourism not a major factor in economic growth.   | Reliance on imported expertise and labor. Economic leakages.   | Overdevelopment and potential oversupply of rooms. Eventual loss of business due to deterioration of attraction quality.                     |
| Major Environmental issues   | Waste disposal in urban areas.<br><br>Waste disposal at core attractions.   | Increased waste at attraction sites and in urban areas   | High impact at attractions. Waste management. Loss of forest and coastal areas to development. Stress to urban setting from overdevelopment. |
| Other factors                | External impacts on core attractions such as the dolphins and the forest resources.   | External impacts on core attractions that may affect the viability of the attraction.  | External land use and development impacts on the core attractions.   |
| Recommendations              | Focus on municipal and site waste management strategies. Develop capacity of local communities near core attraction for ecotourism.   | Develop a range of settings for visitors to disperse loads. Support improvement and integration of waste management services.  | Improvement of waste management and urban planning. Strengthening of the capacity of the attraction site management.                         |





# Baseline Environmental Conditions

## 4.1 Physical Environment

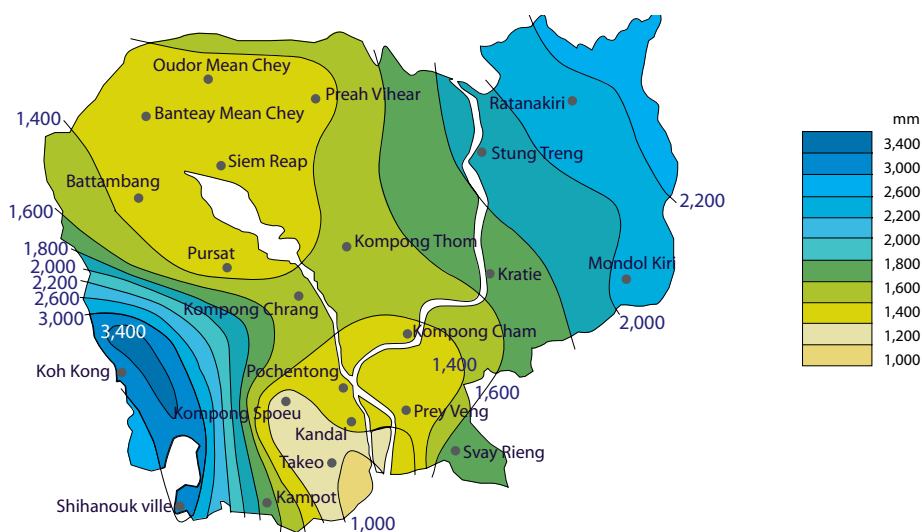
Cambodia covers an area of 181,035 km<sup>2</sup>. Most of the country consists of a low-lying alluvial plain that occupies the central part of the country. To the southeast of the plain lies the delta of the Mekong River. To the east of the plain, ranges of undulating hills separate Cambodia from Viet Nam. To the southwest a mountain range, the Cardamom Mountains, fringes the plain and forms a physical barrier along the country's coast (RGC 2007).

Cambodia has a tropical monsoon climate. December and January are the coolest months, while March and April are the hottest. The country's rainy season extends from May to October. Average annual rainfall is about 1,400 mm on the central plain and increases to as much as 3,800 mm in the mountains and along the coast. The average annual temperature is about 27°C. Annual mean rainfall in the northeastern and southwestern areas is higher than in other areas throughout the country (Figure 16).

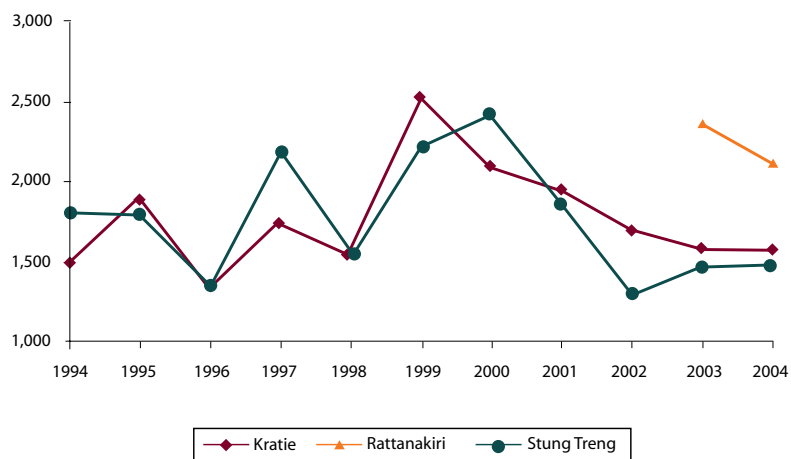
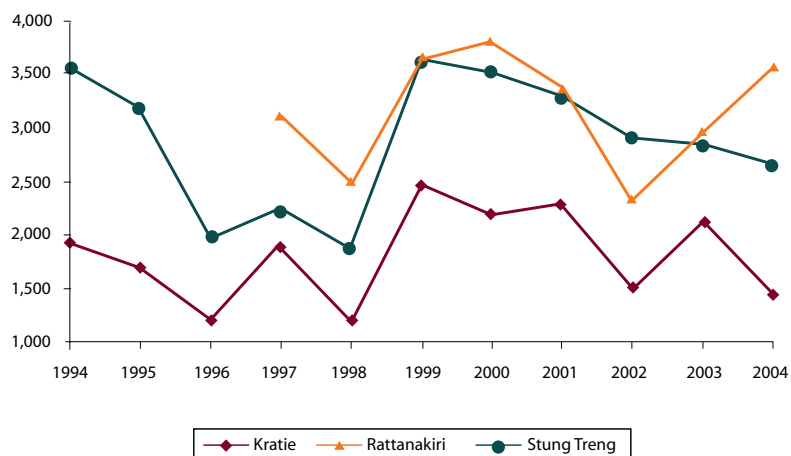
Cambodia is influenced by the tropical monsoons with pronounced wet and dry seasons. According to the Ministry of Tourism (MOT 2007), there are four seasonal variations as follows:

- Cool dry season typically occurring from November to February with an average temperature between 20°C and 28°C;
- Dry hot season occurring from March to May with an average temperature from 30°C to 35°C;
- Rainy season occurring from June to August with an average temperature from 22°C to 30°C; and
- Cool wet season occurring from September to October with an average temperature from 25°C to 30°C.

January is the peak season of tourists visiting Cambodia. It is a cool dry season with suitable temperature throughout the country.

**Figure 17: Mean Rainfall in Cambodia (1984-1998)**

Source: NIS, 2005.

**Figure 18: Mean Annual Rainfall in the Northeast (1994-2004)****Figure 19: Mean Annual Rainfall in the Southwest (1994-2004)**

Total mean annual rainfall is between 1,000 mm and 1,500 mm with the heaviest falls in the southeast of the country. The mean annual rainfall in the southwest part of the country ranges between 2,500 mm and 5,000 mm (NIS, 2003, pp. 5-6). The mean annual rainfalls in the northeastern and southwestern areas are provided in Figures 17 and 18. The relative humidity in the country is high at night throughout the year, usually exceeding 90%. During the daytime in the dry season, humidity decreases to 50%.

km<sup>2</sup> in 2005 and annual population growth of approximately 2.8% for the period of 1998 to 2005. Kratie Province had the largest population in 2005 in comparison to the others provinces. While the total population in the southwestern area was approximately 584,367 with a density of 46 persons per square kilometers in 2005 and annual population growth of approximately 1.3% for the period of 1998 to 2005. Kampot Province had the largest population in 2005 in comparison to the others coastal provinces. The details of population in the two areas are provided in Table 22.

## 4.2 Socio-Economic Conditions

### 4.2.1 Demographics

The total population in the northeastern area was approximately 561,778 with a density of 12 persons per

Population growth rates for the two areas have been increasing steadily since 1998, except for Koh Kong, where the rate has decreased slightly (about -0.05%). Of the four provinces, Kampot has the largest population (approximately 584,367 persons in 2005).

**Table 22: Total Population (2005), Population Density (2005), and Annual Population Growth (1998-2005)**

| Province          | Provincial Area<br>(km <sup>2</sup> ) | Total Population | Population<br>Density       | Population Growth   | 2020      |
|-------------------|---------------------------------------|------------------|-----------------------------|---------------------|-----------|
|                   |                                       | Persons          | Persons per km <sup>2</sup> | Annual %, 1998-2005 |           |
| Northeastern Area |                                       |                  |                             |                     |           |
| Kratie            | 11,094                                | 290,695          | 26                          | 1.49                | 477,000   |
| Mondulhiri        | 14,288                                | 49,612           | 3                           | 7.58                | 72,000    |
| Ratanakiri        | 10,782                                | 125,456          | 12                          | 4.73                | 205,000   |
| Stung Treng       | 11,092                                | 96,015           | 9                           | 2.63                | 169,000   |
| Sub-total         | 47,256                                | 561,778          |                             |                     | 923,000   |
| Southwestern Area |                                       |                  |                             |                     |           |
| Kampot            | 7,873                                 | 584,367          | 74                          | 1.51                | 808,000   |
| Kep               | 336                                   | 34,660           | 103                         | 2.99                | 74,000    |
| Koh Kong          | 11,160                                | 131,663          | 12                          | -0.05               | 354,000   |
| Sihanoukville     | 868                                   | 170,592          | 197                         | 1.37                | 369,000   |
| Sub-total         | 20,237                                | 921,282          |                             |                     | 1,605,000 |

Source: Seila Programme, 2005, and NIS, 1999.

### 4.2.2 Education

The total number of schools in the northeastern and southwestern areas was about 636 and 648 respectively. Kampot has the largest number of schools and students

compared to other provinces in the two areas, followed by Kratie Province (Table 23).

**Table 23: Number of Schools and Students (2004)**

| Province                 | Schools <sup>18</sup> |            | Enrolment, persons |                |
|--------------------------|-----------------------|------------|--------------------|----------------|
|                          | Urban Area            | Rural Area | Male               | Female         |
| <b>Northeastern Area</b> |                       |            |                    |                |
| Kratie                   | 82                    | 195        | 38,641             | 33,945         |
| Monduliri                | 11                    | 63         | 5,337              | 4,288          |
| Ratanakiri               | 19                    | 116        | 12,240             | 8,338          |
| Stung Treng              | 28                    | 122        | 12,789             | 11,198         |
| <b>Sub-total</b>         | <b>140</b>            | <b>496</b> | <b>69,007</b>      | <b>57,769</b>  |
| <b>Southwestern Area</b> |                       |            |                    |                |
| Kampot                   | 23                    | 401        | 91,452             | 76,004         |
| Kep                      | 31                    | 0          | 5,104              | 4,470          |
| Koh Kong                 | 10                    | 99         | 17,024             | 14,617         |
| Sihanoukville            | 84                    | 0          | 25,847             | 21,891         |
| <b>Sub-total</b>         | <b>148</b>            | <b>500</b> | <b>139,427</b>     | <b>116,982</b> |

Source: MOEYS, 2005.

**Table 24: Literate Population in the Northeast and Southwest, 1998**

| Province                 | Population Aged above 7 (persons) |         | Literate Population (persons) |         |
|--------------------------|-----------------------------------|---------|-------------------------------|---------|
|                          | Male                              | Female  | Male                          | Female  |
| <b>Northeastern Area</b> |                                   |         |                               |         |
| Kratie                   | 103,331                           | 107,154 | 69,931                        | 59,540  |
| Monduliri                | 12,380                            | 12,104  | 5,330                         | 2,697   |
| Ratanakiri               | 35,584                            | 37,335  | 11,376                        | 5,724   |
| Stung Treng              | 30,958                            | 32,203  | 17,334                        | 13,249  |
| <b>Southwestern Area</b> |                                   |         |                               |         |
| Kampot                   | 198,211                           | 222,653 | 135,229                       | 114,491 |
| Kep                      | 10,873                            | 11,733  | 6,884                         | 5,348   |
| Koh Kong                 | 53,332                            | 51,016  | 34,817                        | 22,605  |
| Sihanoukville            | 60,998                            | 63,574  | 44,532                        | 35,380  |

Source: NIS, 1999.

The literacy rate in each province is provided in the Table 24. It is highest in Kampot compared to other provinces. The male literacy rate is generally much higher than female literacy rate.

## 4.3 Natural Resources

### 4.3.1 Biodiversity – Flora and Fauna

According to MOE (2004), large herbivorous species have been found in northeastern part of Cambodia, including Kouprey (*Bos sauveli*), Banteng (*Bos javanicus*), Gaur (*Bos gaurus*), Wild Water Buffalo (*Bubalus arnee*), Sambar Deer

(*Cervus unicolor*), Eld's Deer (*Cervus eldii*), Hog Deer (*Axis porcinus*) and Barking Deer (*Muntjac*) (*Tragulus javanicus*). Populations of the predatory Tiger (*Panthera tigris*) and Leopard (*Panthera pardus*) are associated with these species.

Additionally, extensive intact natural habitats still exists to support a rich bird life. More than 530 bird species have been recorded for the country, and it is likely that the total number of species is even higher. Because of the richness in wetland areas, populations of a number of globally threatened water bird species still exist in Cambodia.

Recent surveys from northeastern Cambodia have rediscovered the giant ibis (*P. gigantean*), white-shouldered ibis (*Pseudibis davisoni*), and the masked finfoot (*Heliopais personata*). Sarus crane (*Grus antigone*) have been observed to breed in far northeastern Cambodia.

No precise assessment has been made with regard to the flora in Cambodia. Of between 12,000 and 15,000 species recorded for Lao PDR, Cambodia, and Viet Nam, 1,254 useful plant species from Cambodia were described, of which 29 were endemic for Cambodia (MOE, 2004).

### 4.3.2 Forest Cover

Since the early 1970s, Cambodia's forest cover has decreased from over 70% of the total land area to 30-35% with accelerated decline occurring from 1992 (McAndrew et al., 2003) due to illegal exploitation at that time. Deforestation and conversion of forest lands to agriculture played an important role. Logging spread into protected areas. For instance, a biodiversity survey (2000) of Cardamom Mountains, considered the richest biodiversity area in the country, confirmed that logging was taking place inside the protected areas (MOE and UNEP, 2006).

**Table 25: Forest Cover in the Northeastern and Southwestern Areas**

| Province                 | Evergreen Forest, % |       |       | Deciduous Forest, % |       |       | Other Forests, % |       |       |
|--------------------------|---------------------|-------|-------|---------------------|-------|-------|------------------|-------|-------|
|                          | 02/03               | 96/97 | 92/93 | 02/03               | 96/97 | 92/93 | 02/03            | 96/97 | 92/93 |
| <b>Northeastern Area</b> |                     |       |       |                     |       |       |                  |       |       |
| Kratie                   | 34.0                | 35.1  | 35.2  | 42.7                | 39.6  | 39.9  | 4.6              | 0.8   | 0.8   |
| Mondulhiri               | 24.8                | 24.6  | 24.9  | 63.9                | 57.5  | 57.7  | 4.0              | 0.3   | 0.3   |
| Ratanakiri               | 40.9                | 48.3  | 49.7  | 37.2                | 31.3  | 31.6  | 6.9              | 4.0   | 4.5   |
| Stung Treng              | 48.3                | 48.6  | 48.9  | 38.3                | 38.6  | 39.3  | 3.7              | 0.6   | 0.6   |
| <b>Southwestern Area</b> |                     |       |       |                     |       |       |                  |       |       |
| Kampot                   | 31.1                | 29.7  | 29.6  | 16.4                | 14.4  | 15.1  | 3.0              | 3.8   | 4.6   |
| Kep                      | 10.8                | -     | -     | -                   | -     | -     | 18.7             | -     | -     |
| Koh Kong                 | 70.0                | 77.3  | 78.6  | 2.5                 | 1.7   | 1.8   | 11.9             | 7.5   | 8.7   |
| Sihanoukville            | 51.5                | 45.8  | 47.2  | -                   | 0.0   | 0.0   | 6.3              | 11.8  | 11.9  |

Source: FA, 2002 & 2004.

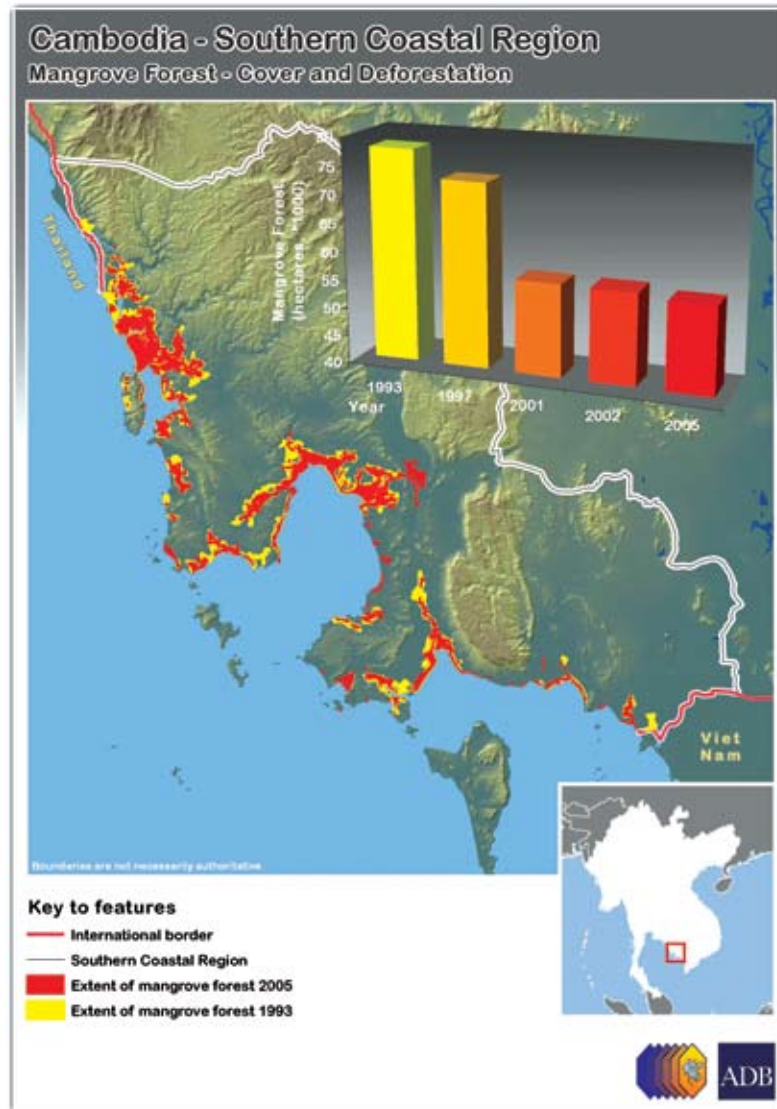
From 1993–1997, there was a significant change in the forest cover of the northeastern provinces. As can be seen from Table 25, the forest cover in Kratie, Mondulhiri, Ratanakiri, and Stung Treng decreased significantly. According to the Forest Administration (FA, 2002 & 2004), the evergreen forests in the two areas have decreased between 1992/93 and 2002/2003. The forest cover in Ratanakiri decreased significantly (-2.66%) during 1992/93 and 1996/97 compared to other provinces in the northeastern area.

During 1993–2003, the forest cover in Koh Kong province was destroyed compared to the other provinces in the coastal area. The deciduous forest cover in Sihanoukville cannot be assessed as the data for 2002/03 were missing.

In conclusion, the evergreen and deciduous forest cover in the northeastern and southwestern area decreased during 1993–1997. The decreases differed from one province to another. However, the category of “other forests” cover has increased in most provinces of the two areas, except for Sihanoukville.

### 4.3.3 Mangroves

According to NCSC (2007a), a significant reduction in the mangrove distribution occurred in Smach Meancheay, Kiri Sakor, Botum Sakor, Prey Nob, and Kampong Trach districts in the period from 1997 to 2002. In the period from 2002 to 2005, a smaller decline occurred in Mondul Seima and Koh Kong districts (Figure 19).

**Figure 20: Change in Mangrove Distribution from 1993 to 2005**

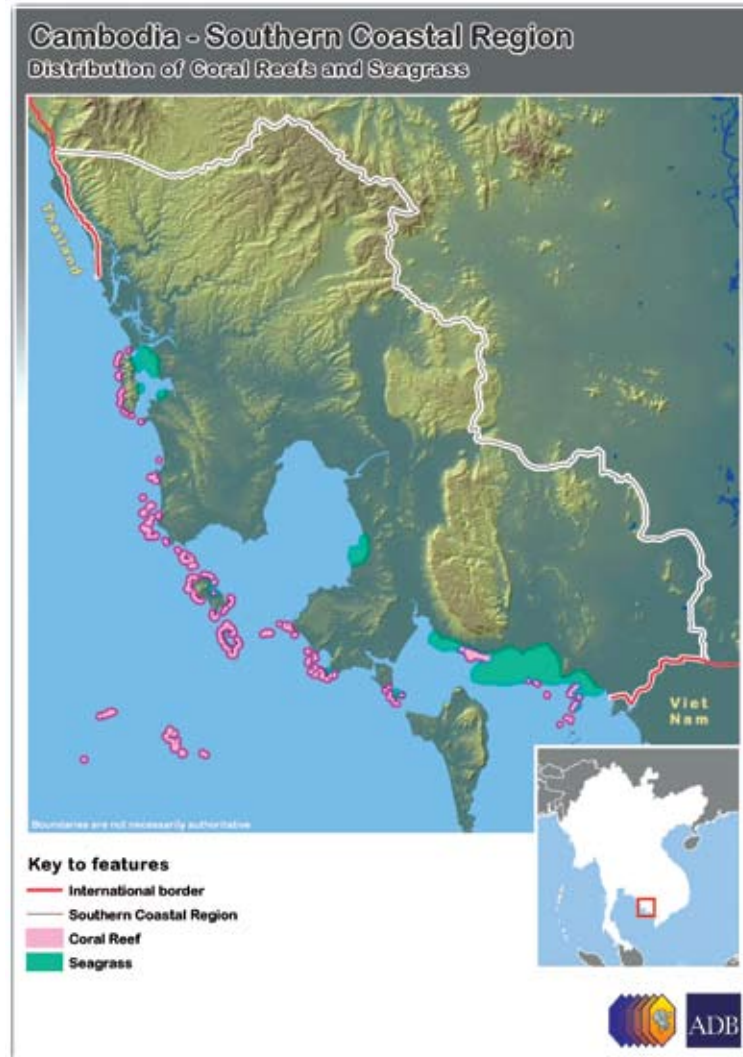
Source: NCSC, 2007a.

#### 4.3.4 Seagrass

Seagrass in Cambodia can be divided into two types: (i) extensive seagrass meadows along the mainland; and (ii) paths of seagrass interlinked with coral reefs around islands. Seagrass beds are vulnerable to impacts from two main sources: degradation of water quality and destructive fishing practices such as push nets and trawling in the seagrass beds. Changes in water quality that affect seagrasses are increasing due to siltation from logging, increasing use of fertilizer and pesticides in the coastal agricultural areas and discharge of domestic and industrial wastewater (NCSC, 2007a).

Seagrass occurs in sheltered estuaries in Cambodia, in the area between the Vietnamese island of Phu Quoc and the Kampot Bay in Cambodia. Seagrass species include *Enhalus acoroides*, *Cymodocea seradata*, *Syringodium isoetifolium*, and *Halodule pinifolia* (MOE, 1998). The greatest area of seagrass has been found in Kampot province (Figure 22). No data or information is available regarding the changes in seabed grass distribution in the coastal provinces.



**Figure 21: Seagrass and Coral Reefs Distribution in Coastal Waters**

Source: NCSC, 2007a.

#### 4.3.5 Coral Reefs

According to the NCSC (2007a), coral reefs were reported from almost all areas around islands off the coast of Cambodia (Figure 23). Little is known about the distribution, composition or health of these. The main continuing threats to coral reef habitats are over-fishing, use of dynamite, other illegal fishing practices, harvest of coral reefs for trade, and degradation of water quality.

#### 4.3.6 Protected Areas

A Royal Decree on "The Protected Natural Areas" was issued on 1 November 1993, which empowered the Government to lead, manage, plan and develop a national protected area system, including protection of environment, land, forests, wetlands and coastal zone. There are now 23 protected areas, covering an area of 3,273,200 hectares (18% of Cambodia's total area) as shown in Table 26 and Figure 24. Up to 2002, the FA has defined an additional 1,346,225 ha (7.5% of the country's total area) as protected forest areas. In 2003, there was a slight amendment to the protected area, reducing the surface area from 3,273,200 ha to 3,194,471 ha (17.64% of the total area). The total natural protected area is now at 25.14% of the total area of the country (MOE, 2005).

There are currently two major institutions responsible for the planning and implementation of the national system of protected areas in Cambodia, including (i) Department for Nature Conservation and Protection (DNCP) of the MOE; and (ii) FA within the Ministry of Agriculture, Forestry and Fisheries (MAFF).

In 2003, the DNCP had 97 staff working in the 5 main offices at the national level. Another 525 staff members were deployed in 59 protected areas units or one staff for more than 6,000 hectares. The number of staff assigned to each protected area ranged from 7 to 35 staff

depending on the need and remoteness of the protected area. Some protected area units have set up an efficient organizational structure, including sections for administration, patrolling and enforcement, environmental and tourism education. The provincial and municipal departments of environment are under the direct control of MOE and are responsible for implementing environmental policy, preventing violations in protected areas and preparing proposals for the creation of new protected areas and extension of existing areas in cooperation with relevant departments (ICEM, 2003).

**Table 26: Protected Areas in Cambodia**

| Name                             | Area (ha) | Province                              | Some Unique Characteristics   |
|----------------------------------|-----------|---------------------------------------|---|
| <b>National Parks (NP)</b>       |           |                                       |   |
| Kirirom NP                       | 35,000    | Koh Kong and Kampong Speu             | High elevation pine forest with large mammals including elephants.  |
| Bokor NP                         | 140,000   | Kampot                                | High elevation Sphagnum bogs, Podocarpus forest with large mammals including tigers, elephant, and Sun Bear.  |
| Kep NP                           | 5,000     | Kampot                                | Secondary lowland evergreen forest.   |
| Ream NP                          | 21,000    | Kampong Sam                           | Secondary lowland evergreen forest with some mangrove forest plus two islands.  |
| Botum Sakor NP                   | 171,250   | Koh Kong                              | Lowland evergreen forest heavily degraded by illegal logging, mangrove forest, and the only coastal Dacrydium/Podocarpus swamp forest in Cambodia.  |
| Virachey NP                      | 332,500   | Stung Treng, Ratanakiri               | A high altitude forest in northeast Cambodia. An important habitat for several threatened species, including tiger, elephant, and douc langur.  |
| Koulen NP                        | 37,500    | Siem Reap                             | Located in catchment area of Siem Reap stream. It is an important historic area.  |
| <b>Wildlife Sanctuaries (WS)</b> |           |                                       |   |
| Oral WS                          | 253,750   | Koh Kong, Pursat, Kampong Chhnang     | High mountain (1,743 m) in Cambodia with a wide diversity of vegetation ranging from dry <i>Dipterocarpus/Podocarpus</i> forest to medium altitude evergreen forest.  |
| Peam Krasaop WS                  | 23,750    | Koh Kong                              | Most important mangrove forests in Cambodia and possibly the most extensive within the Gulf of Thailand.  |
| Phnom Samkos WS                  | 333,750   | Koh Kong                              | High altitude area with a wide diversity of forest types. Supports a range of threatened birds.   |
| Roniem Daun Sam WS               | 40,021    | Battambang                            | Lowland evergreen and semi-evergreen forest of unknown condition.   |
| Kulen Promtep WS                 | 402,500   | Siem Reap, Preah Vihear               | The largest area in the protected areas system intended to protect wildlife. The principal habitats are lowland open dipterocarp forest (which historically held a high density of kouprey), lowland evergreen/semi-evergreen forest, and the largest swamp in northern Cambodia. Very important for large water birds such as Giant Ibis and Sarus Cranes. |
| Boeng Per WS                     | 242,500   | Preah Vihear, Siem Reap, Kampong Thom | A previous wildlife sanctuary, it reportedly has good populations of wild cattle and deer. The area has some important archeological sites.   |
| Lumphat WS                       | 250,000   | Mondulkiri, Ratanakiri                | Mostly evergreen forest on basaltic soils, grassy glades, open deciduous forest, mixed deciduous forest, pockets of evergreen/semi-evergreen forest, riverine habitats and small wetlands. Banteng and Asian wild dog are present and elephants migrate to the area at certain times of the year. A breeding ground for sarus crane.                        |

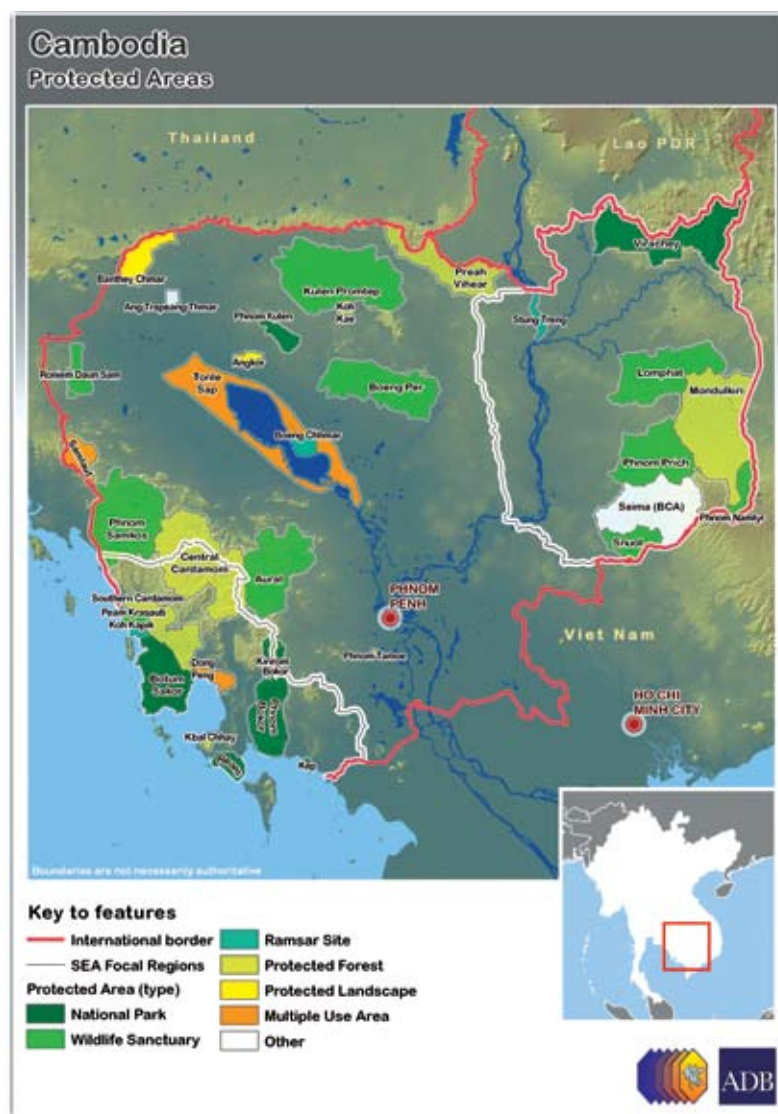
**Table 26: Protected Areas in Cambodia (continued)**

| Name                                   | Area (ha) | Province                       | Some Unique Characteristics   |
|--|-----------|--------------------------------|---|
| <b>Wildlife Sanctuaries (WS)</b>       |           |                                |   |
| Phnom Prich WS                         | 222,500   | Monduliri, Kratie              | Habitats similar to those at Lumphat – mostly evergreen forest on basaltic soils, grassy glades, open deciduous forest, mixed deciduous forest, riverine habitats and small wetlands.                             |
| Phnom Namlear WS                       | 47,500    | Monduliri                      | Mainly evergreen forest which harbors the Green Peafowl, Germain's Peacock Pheasant, and Great Hornbill.  |
| Snuol WS                               | 135,000   | Kratie                         | Consists mostly of logged evergreen forest on a heavily dissected plateau.  |
| <b>Protected Landscapes (PL)</b>       |           |                                |   |
| Angkor PL                              | 10,800    | Koh Kong                       | This mostly forested area includes the Angkor temple complex, perhaps the single-most important archaeological/cultural site in southeast Asia.   |
| Banteay Chhmar PL                      | 81,200    | Banteay Meanchey               | The area was included for its historical sites, including an important temple site.   |
| Preah Vihear PL                        | 5,000     | Preah Vihear                   | The area was included for its archaeological/cultural value, it includes an important temple.   |
| <b>Multiple-use Areas (MUA)</b>        |           |                                |   |
| Dong Peng MUA                          | 27,700    | Koh Kong                       | Lowland coastal wetlands – mostly mangrove and melaleuca swamp forest.  |
| Samlaut MUA                            | 60,000    | Battambang                     | An evergreen forest area within the watershed of the Sangke river. It has been denuded by mining operations causing severe erosion and increased sedimentation of the river, which flows into the Tonle Sap Lake. |
| Tonle Sap MUA                          | 316,250   | Kampong Chhang, Kampong Thom   | Long-standing ichthyological reserve. Great biological, hydrological and cultural/economic importance.  |
| <b>Protected Forest</b>                |           |                                |   |
| Trapeang Thmor                         | 12,650    | Banteay Meanchey               |   |
| Prek Vihear                            | 190,027   | Preah Vihear                   |   |
| Zoo and Tamao Wildlife Sanctuary       | 1,200     | Takeo                          |   |
| Neang Nuon (hard wood) Seed Plantation | 13        | Preah Vihear                   |   |
| Seed Plantation                        | 117       | Kampong Thom                   |   |
| Monduliri                              | 429,438   | Monduliri                      |   |
| Seima Joint Conservation Area          | 305,440   | Monduliri, Kratie              |   |
| Kbal Chhay                             | 6,027     | Sihanoukville                  |   |
| Cardamom Mountains                     | 401,313   | Koh Kong, Pursat, Kampong Speu |   |

Source: MOE, 2005.

**Notes:** *National Parks:* Natural and scenic area of significance for their scientific, education and recreational values, *Wildlife Sanctuaries:* Natural areas possessing some outstanding ecosystems, features and/or species of flora, and/or fauna of natural scientific importance which require protection for their perpetuation. *Multiple-Use Areas:* Areas that provide for sustainable use of water resources, timber, wildlife, fish, pasture, and recreation with the conservation of nature primarily oriented to support these economic activities. Most staff are paid by the Government with an average salary of \$20 per month, while others are paid by international and national organizations which have projects involving protected areas.

The protected areas are facing a number of problems such as illegal logging, collection of fuel-wood, non-timber forest product collections, habitat degradation, and disturbance resulting from human activities. These issues can be best addressed through the development and implementation of management underpinned by the participation of local communities and authorities.

**Figure 22: Cambodia's Protected Areas**

Source: ICEM, 2003.

The protected areas in the northeast are particularly important for the development of ecotourism and nature-based tourism (Table 27). The total area of forest land in the northeastern provinces is currently about 1.48 million ha, accounting for nearly 65% of Cambodia's natural area, including some 630,000 hectares (making up 42.5% of the area of forest land) of natural protected areas, such as Virachey, Lumphat and Phnom Namlear.

Over the past decade, due to great difficulties in securing sustainable livelihoods for poor people and their practice of burning forests to obtain land for cultivation, the forest area in the northeast has declined rapidly (about 20% between 1990 and 2005) and this trend still continues. Reforestation has been conducted slowly, with only slight increases in the additional area of forests planted each year.

#### 4.3.7 Biodiversity Management Regions in Cambodia

According to ICEM (2003), biodiversity management regions in Cambodia can be identified and divided into seven zones as follows (Figure 25):

- *Southwestern Coastal Ranges and Marine Waters:* Wet tropical forest including the Cardamom and Elephant Ranges, coastal formations and marine areas generally associated with sandstones. The area has low population densities and is dominated by natural and modified landscapes used for forestry, marine fisheries and the maintenance of biological diversity. Principal ethnic groups living in this area are the Khmer, Pear, Chong and Sóach.

**Table 27: Protected Areas of the Northeastern Provinces**

| Protected Area                   | Total size (ha) | Typical characteristics   |
|----------------------------------|-----------------|---|
| Virachey National Park           | 332,500.        | Includes a variety of vegetation types including evergreen forest (some on basaltic soils), grassy glades, deciduous forest, riverine habitats and small wetlands. A breeding ground for Sarus crane species, and habitat for large mammal species. |
| Phnom Prich Wildlife Sanctuary   | 222,500.        | Similar habitats to Lumphat   |
| Snuol Wildlife Sanctuary         | 135,000.        | (Previously logged) evergreen forest on a heavily dissected plateau; rich in bird life, mammal habitats.  |
| Phnom Namlear Wildlife Sanctuary | 47,500.         | Mainly evergreen forest that harbors tigers, elephant, pigmy Loris and green peafowl. Also has more hilly, scenic terrain.  |

Source: Ministry of the Environment, National Environmental Action Plan / Data Sheets for the Inclusion of Sites on the Ramsar Convention List.

- *Northern Plains:* Lowland dry evergreen and associated deciduous forests on sandstones. The region has low population densities and natural and modified landscapes used for forestry, the maintenance of biological diversity, and limited agriculture. Ethnic groups living in this area include Khmer, Pear, Kouy and Stieng.
- *Northeastern Forests:* Lowland deciduous forests and limited dry evergreen forest generally associated with sandstones and basalts respectively. The area has low population densities and is dominated by natural and modified landscapes used for forestry, the maintenance of biological diversity, and limited agriculture. Ethnic groups living in this area include the Tampoun, Brao, Rhade, Stieng and Khmer.
- *Kampong Cham:* Remnant dry evergreen forests associated with basalts. High population densities and extensive agriculture, plantations and limited forestry. Principal ethnic groups living in this area are the Khmer and Cham.
- *Mekong Delta Region:* Characterized by very high population density, these alluvial areas are heavily dominated by agriculture and semi-natural wetlands. Ethnic groups living in this area include Khmer, Cham and some Vietnamese.
- *Tonle Sap Floodplain:* This extensive alluvial plain is characterized by unique flooded forest and swamp forests, much of which has been subject to degrading influences. Ethnic groups living in this area are Khmer, Cham and some Vietnamese.
- *Northwestern region:* The Pailin area features lowland evergreen and deciduous forests associated with limestone outcrops. The people living this area are generally Khmer with small numbers of Burmese migrants working in the gem fields. Population densities are higher on the fertile lowland soils of the Battambang Plain, which is highly productive for agriculture.

## 4.4 Environmental Quality

### 4.4.1 Solid and Liquid Waste

Waste collection systems in most provinces in Cambodia are usually the responsibility of the Provincial Department of Public Works and Transport. Waste collection has occasionally been contracted to private companies. Wastes are collected from households, markets, hospitals, and enterprises and disposed of at open dumping sites. Sometimes, the wastes have been burned during the dry season.

Wastes are disposed of in open areas, roads, rivers, streams, and lakes, borrow pits, forest areas, and private properties. This contributes to unsanitary conditions in urban areas such as unpleasant smells, blockage of drains resulting in flooding, and rainwater run-off from refuse causing surface water pollution.

No data and information are available in terms of amount of wastes generated by each province in the northeastern area. The solid waste generation in the coastal provinces in 2005 is provided in Table 28.

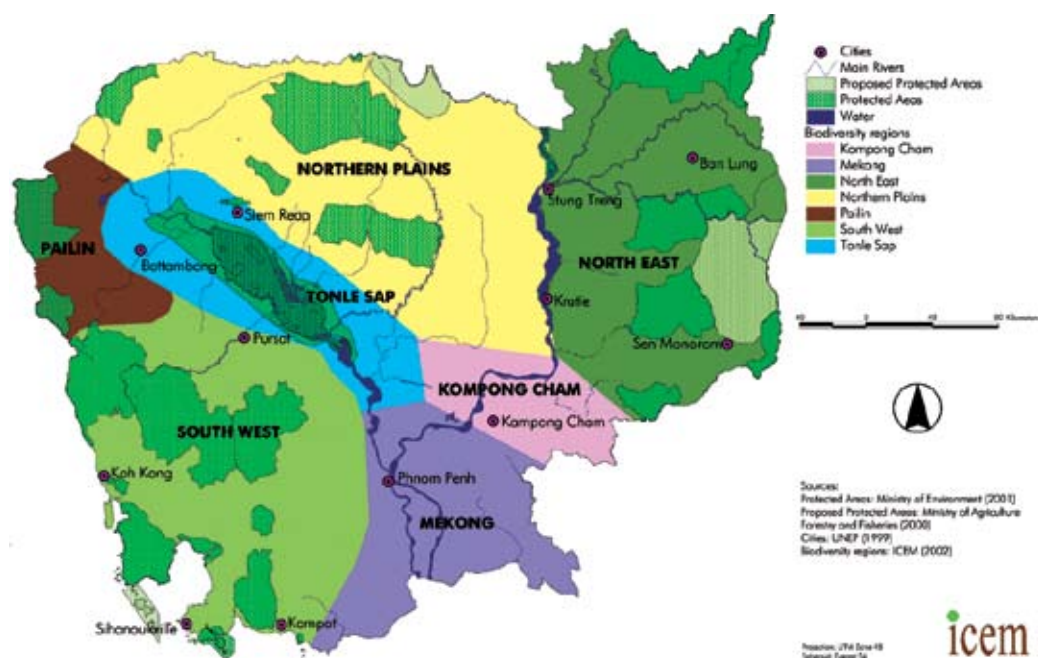
Wastewater systems in the two study areas are very weak. They have not been maintained for a number of years. There are currently no effective wastewater treatment facilities in the two areas. Wastewater from households, industries, and other sources are discharged into public waterways, streams, and finally to the rivers and the sea without treatment. No precise information on wastewater generation exists.

### 4.4.2 Noise and Air Quality

No measurements have been made of air and noise quality in the northeastern and southwestern areas. Air pollution sources in the two areas are likely to be road traffic and possibly maritime traffic in the southwestern area.



Figure 23: Cambodia's Biodiversity Regions



Source: ICEM, 2003.

Table 28: Solid Waste Generated by Households and Markets in 2005

| Province/District         | Domestic Waste, tons/day | Market Waste, tons/day | Waste Amount kg/km <sup>2</sup> /day |
|---------------------------|--------------------------|------------------------|--------------------------------------|
| <b>Kampot Province</b>    | <b>292.18</b>            | <b>58.44</b>           | <b>62</b>                            |
| Angkor Chey               | 39.45                    | 7.89                   | 125                                  |
| Banteay Meas              | 44.58                    | 8.92                   | 117                                  |
| Chhouk                    | 46.51                    | 9.30                   | 35                                   |
| Chum Kiri                 | 22.56                    | 4.51                   | 50                                   |
| Dang Tong                 | 26.24                    | 5.25                   | 83                                   |
| Kampong Trach             | 45.01                    | 9.00                   | 129                                  |
| Kampot                    | 50.29                    | 10.06                  | 33                                   |
| Kampong Bay               | 17.55                    | 3.51                   | 303                                  |
| <b>Koh Kong Province</b>  | <b>65.83</b>             | <b>13.17</b>           | <b>5</b>                             |
| Botum Sakor               | 9.85                     | 1.97                   | 8                                    |
| Kiri Sakor                | 3.25                     | 0.65                   | 5                                    |
| Kaoh Kong                 | 4.10                     | 0.82                   | 3                                    |
| Smach Mean Chey           | 12.82                    | 2.56                   | 128                                  |
| Mondol Seima              | 6.15                     | 1.23                   | 4                                    |
| Sre Ambel                 | 19.30                    | 3.86                   | 8                                    |
| Thmor Bang                | 2.68                     | 0.54                   | 1                                    |
| Kampong Seila             | 7.69                     | 1.54                   | 8                                    |
| <b>Sihanoukville</b>      | <b>85.30</b>             | <b>17.06</b>           | <b>57</b>                            |
| Mittakpheap               | 36.59                    | 7.32                   | 193                                  |
| Prey Nob                  | 42.33                    | 8.47                   | 36                                   |
| Stung Hav                 | 6.37                     | 1.27                   | 48                                   |
| <b>Krong Kep Province</b> | <b>17.33</b>             | <b>3.47</b>            | <b>99</b>                            |
| Damnak Chang'aur          | 11.61                    | 2.32                   | 103                                  |
| Kep                       | 5.72                     | 1.14                   | 92                                   |

Source: NCSC, 2007a.



### 4.4.3 Climate Change

Cambodia ratified the United Nations Framework Convention on Climate Change on December 18, 1995 and the Convention entered into force on March 17, 1996. The base year of the initial inventory was 1994 and it covers three mandatory greenhouse gases (GHG): carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) for five major sectors: (i) energy, (ii) industrial processes, (iii) agriculture, (iv) waste, and (v) land use change and forestry (LUCF). In 2000, the analysis showed that Cambodia was already a net emitter of GHGs. Total emissions (less removal by LUCF) are presented in Table 29 below. By 2020 the main source of GHG emissions would be LUCF (63%), followed by agriculture (27.5%), although industrial projections are not available. Energy would only contribute about 9% of the total national GHG emissions. Net emissions would be 7 times as high as in 2000.

### 4.4.4 Freshwater Quality

Freshwater quality in the northeast shows no remarkable deterioration. According to MRC (2004, p. 23), the chemical composition of the Mekong River water at

Kratie was remarkably similar to the mean composition of world river waters (Table 30). The composition changes upstream, particularly between Kratie and Pakse, reflecting the influence of the large tributaries flowing in from eastern Cambodia which drain the Eastern Highlands. Concentrations of nitrogen were well below the world average. However, concentrations of total phosphorus were relatively high. These concentrations are almost certainly associated with suspended solids in the water (Table 31).

### 4.4.5 Coastal Water Quality

In the southwest, water quality monitoring for coastal water has been conducted by a Coastal Coordination Unit (CCU) in the MOE from June 2004 to April 2007. The major parameters, including total suspended solids, dissolved oxygen, biological oxygen demand, and total phosphorus have been monitored by the CCU. The location of coastal river and marine water sampling stations are provided in Figure 26.

**Table 29: Greenhouse Gas Emissions and Removal by Sector (Gigagrams)**

| Source/Sink          | 1994    | 2000    | 2010    | 2020    |
|----------------------|---------|---------|---------|---------|
| <b>Emissions</b>     |         |         |         |         |
| Energy               | 1,881   | 2,622   | 4,780   | 8,761   |
| Industrial Processes | 50      | -       | -       | -       |
| Agriculture          | 10,560  | 12,030  | 17,789  | 26,821  |
| Waste                | 273     | 331     | 425     | 523     |
| LUCF                 | 55,216  | 58,379  | 57,627  | 61,512  |
| Total Emissions      | 67,980  | 73,362  | 80,621  | 97,617  |
| Removal by LUCF      | -73,122 | -67,118 | -61,090 | -53,769 |
| Net Emissions        | -5,142  | 6,244   | 19,531  | 43,848  |

Source: MOE & UNDP-GEF, 2001.

**Table 30: Mean Composition of River Waters of the World, Asia, and Mekong River**

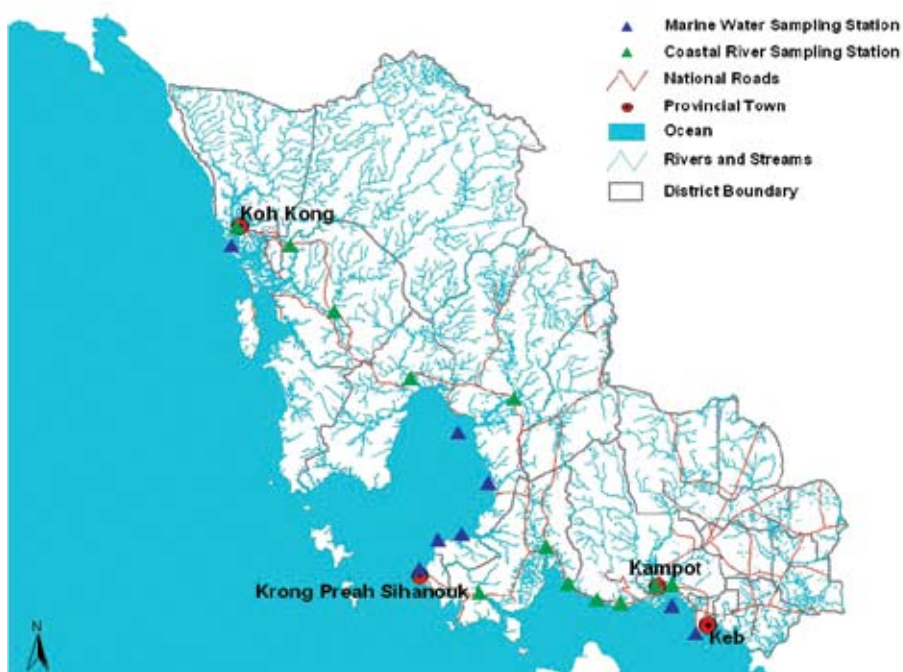
| Source/Sink          | Ca <sup>2+</sup> | Mg <sup>2+</sup> | Na <sup>+</sup> | K <sup>+</sup> | Fe <sup>3+</sup> | SO <sub>4</sub> <sup>2-</sup> | Cl <sup>-</sup> | SiO <sub>2</sub> | NO <sub>3</sub> <sup>-</sup> | HCO <sub>3</sub> <sup>-</sup> /<br>CO <sub>3</sub> <sup>2-</sup> |
|----------------------|------------------|------------------|-----------------|----------------|------------------|-------------------------------|-----------------|------------------|------------------------------|--|
| Asia                 | 18.4             | 5.6              | 5.5             | 3.8            | 0.01             | 8.4                           | 8.7             | 11.7             | 0.7                          | 79   |
| World Average        | 15               | 4.1              | 6.3             | 2.3            | 0.67             | 11.2                          | 7.8             | 13.1             | 1                            | 58   |
| Mekong (Chiang Saen) | 28               | 6.6              | 9.9             | 1.9            | 0.06             | 17.8                          | 8.8             | 11.4             | 0.3                          | 109  |
| Mekong (Pakse)       | 23.1             | 4.6              | 6.7             | 1.6            | 0.18             | 17.1                          | 8.0             | 12.2             | 0.1                          | 83   |
| Mekong (Kratie)      | 15.5             | 4.1              | 6.9             | 1.4            | 1.21             | 9.3                           | 5.0             | 11.4             | 0.1                          | 62   |

Source: MRC, 2003 (from Wetzel (1983))

**Table 31: Total Suspended Solids and Total Phosphorus in the Mekong River**

|                      | TSS (mg/l) |        | Total P (mg/l) |        |
|----------------------|------------|--------|----------------|--------|
|                      | Mean       | Median | Mean           | Median |
| Mekong (Chiang Saen) | 397        | 222    | 0.06           | 0.05   |
| Mekong (Pakse)       | 215        | 130    | 0.04           | 0.04   |
| Mekong (Kratie)      | 122        | 74     | 0.02           | 0.02   |

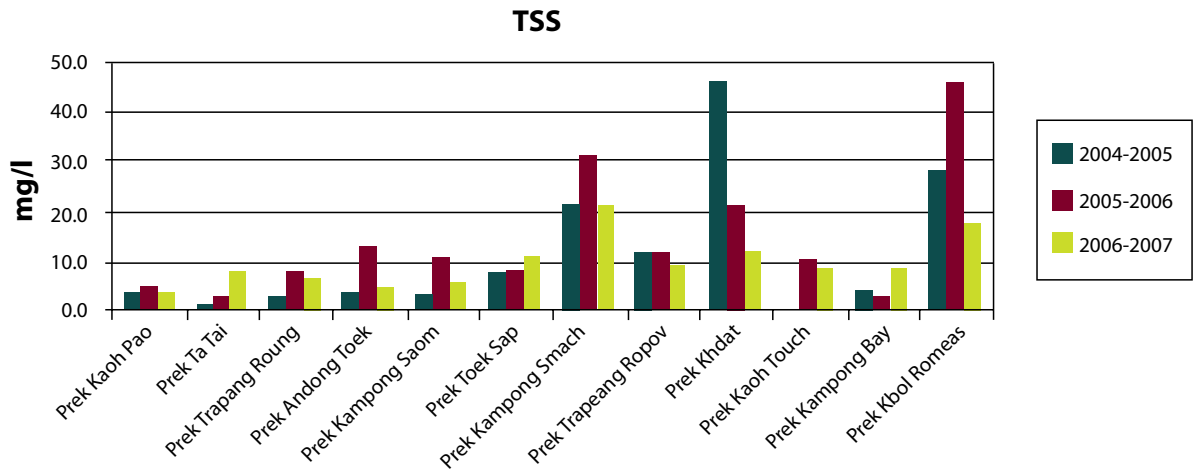
Source: MRC, 2003.

**Figure 24: Marine Water Sampling Stations in the Coastal Zone (2004-2007)**

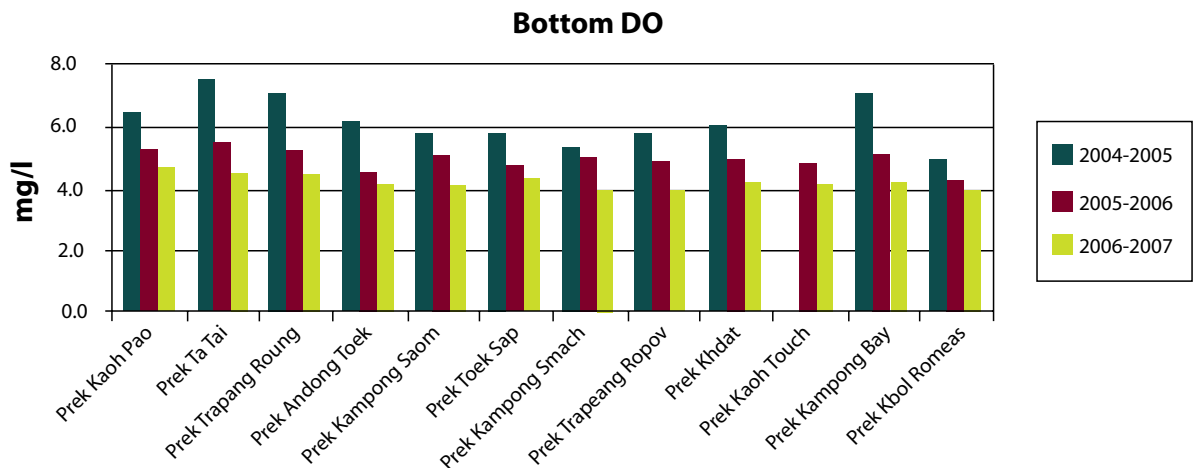
Source: NCSC, 2006.

**Total Suspended Solids (TSS):** According to the NCSC (2007c), from 2006-2007, total suspended solids (TSS) have ranged from about 7 to 14 mg/l, except at Prek Kampong Smach, Prek Trapeang Ropov, and Prek Kbal Romeas, where the concentrations were 20 mg/l,

18 mg/l, and 19 mg/l respectively. If compared to the previous year's values, they have slightly decreased and the concentrations of TSS are not high compared to the MOE's Water Quality Standards for rivers indicating standard values between 25 mg/l to 100 mg/l.

**Figure 25: Total Suspended Solids in Coastal Streams (2004-2007) (mg/l)**

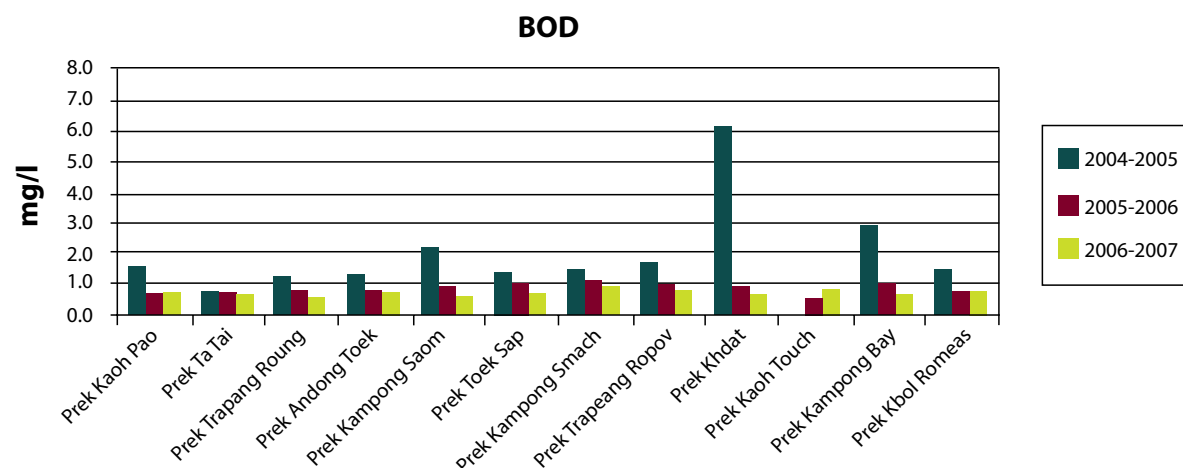
Source: NCSC, 2007c.

**Figure 26: Dissolved Oxygen in Coastal Streams (2004-2007) (mg/l)**

Source: NCSC, 2007c.

**Dissolved Oxygen** – The concentrations of dissolved oxygen (DO) in the period of 2006-2007 ranged between 4.2 mg/l and 4.8 mg/l (NCSC, 2007c). The values of the DO during the period of 2006-2007 have been more or

less similar to the previous periods of 2004-2005 and 2005-2006. The DO concentrations were in good condition if compared to the MOE's Water Quality Standards for rivers, indicating values between 2.0 mg/l and 7.5 mg/l.

**Figure 27: Biochemical Oxygen Demand in Coastal Streams (2004-2007) (mg/l)**

Source: NCSC, 2007c.

**Biochemical Oxygen Demand** – The levels of Biochemical Oxygen Demand (BOD) during the period of 2006-2007 have averaged approximately 0.7mg/l. If compared to the previous years, the BOD levels in the period 2004-2005 were slightly higher, particularly at Prek Khdat station (approximately 6.0 mg/l). Compared to MOE's Water Quality Standards for freshwater of between 1 mg/l to 10 mg/l, the present levels do not look high, but different standards need to be applied to saline water.

**Total Phosphorus** – The Total Phosphorus levels varied from about 0.007mg/l to about 0.015mg/l. As a comparison, MOE's Water Quality Standards for lakes and reservoirs indicate standard values between 0.005 mg/l and 0.05 mg/l.

#### 4.4.6 Marine Water Quality

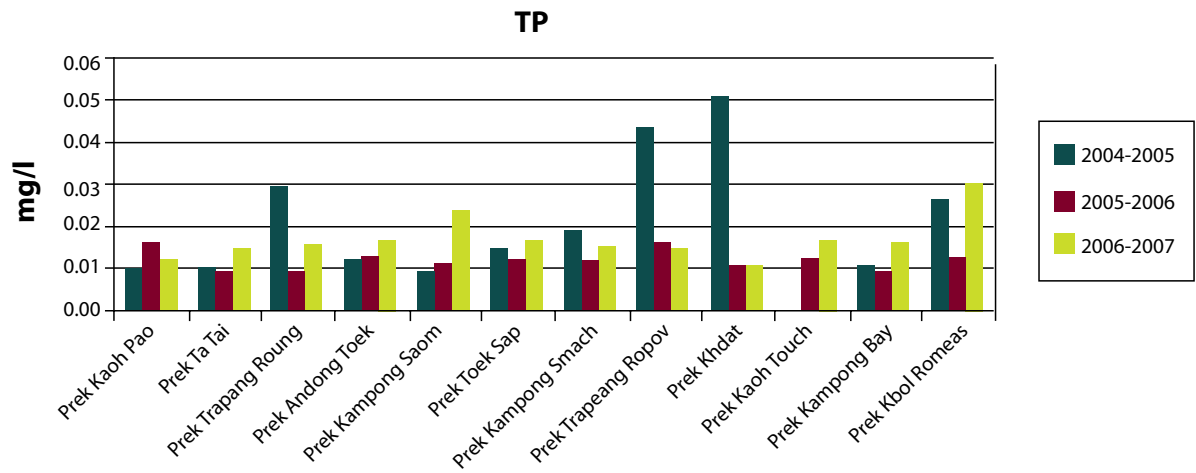
According to NCSC (2007c), the concentrations of Total Suspended Solids (TSS) through the entire transect from Koh Kong 1 in the Northwest part of the monitoring area to Kep 6 in the southeast part of the monitoring area have not been much different, ranging from 16 mg/l to 24 mg/l. If compared to the previous year's situation, the concentration levels were lower in most stations, except

at Kep 6, where the level of TSS concentration was considerably lower (from 44.5 mg/l down to 23.8 mg/l). This indicates that the water condition at Kep 6 has gradually recovered to normal condition.

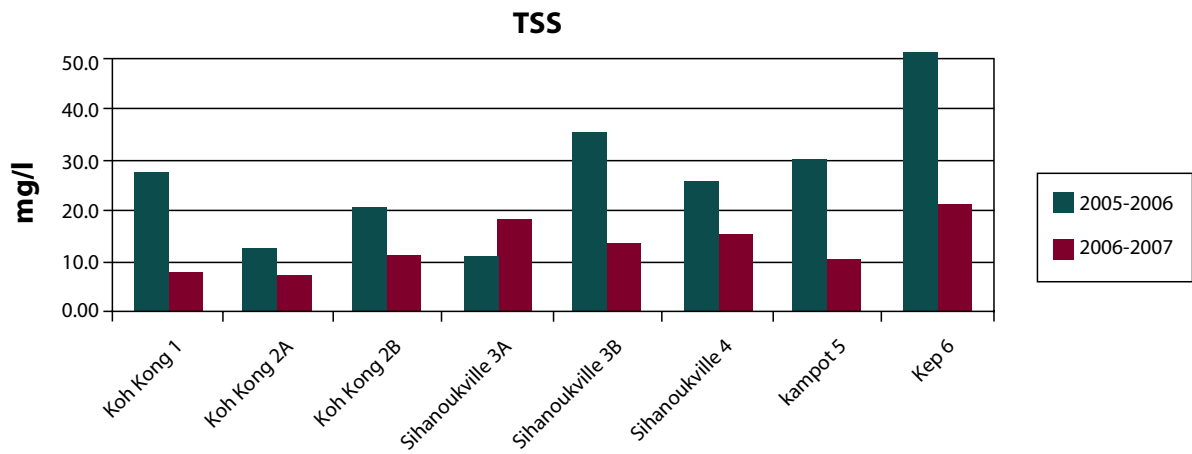
**Dissolved Oxygen** – The values of the DO during the period of 2006-2007 have been more or less similar to the previous periods of 2004-2005 and 2005-2006 (ranging between 4.0-5.0 mg/l). The DO concentrations indicate good condition if compared to MOE's Water Quality Standards for rivers of 2.0-7.5 mg/l.

**Biochemical Oxygen Demand** – The levels of BOD during the period of 2006-2007 have been approximately 0.7 mg/l. If compared to the previous years, the values of BOD have slightly decreased. Compared to the MOE's Water Quality Standards for freshwater of between 1 mg/l to 10 mg/l, the present levels do not look high.

**Total Phosphorus** - The Total Phosphorus levels in the period of 2006-2007 varied from about 0.007 mg/l to about 0.015 mg/l. In comparison to MOE's Water Quality Standards for lakes and reservoirs, the present values are not exceeded, indicating standard values between 0.005 mg/l and 0.05 mg/l (NCSC, 2007c).

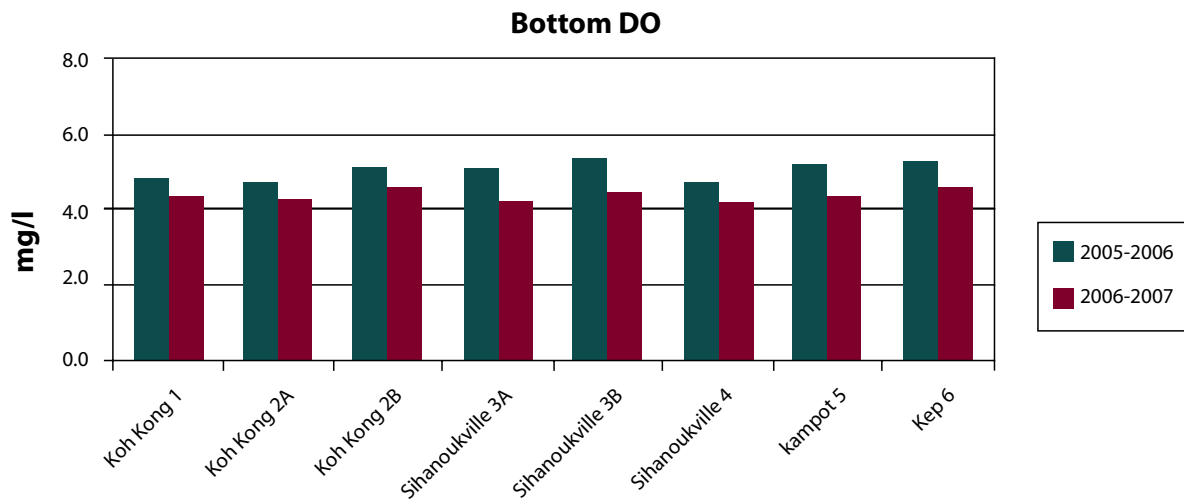
**Figure 28: Total Phosphorus in Coastal Streams (2004-2007)**

Source: NCSC, 2007c.

**Figure 29: Total Suspended Solids in Coastal Waters (2004-2007) (mg/l)**

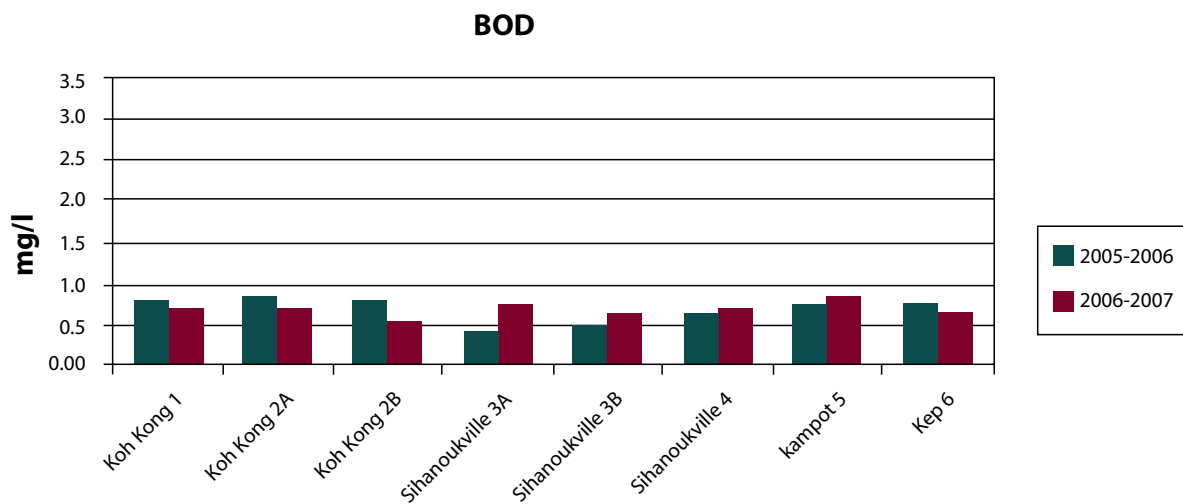
Source: NCSC, 2007c.

Figure 30: Dissolved Oxygen in Coastal Waters (2004-2007) (mg/l)



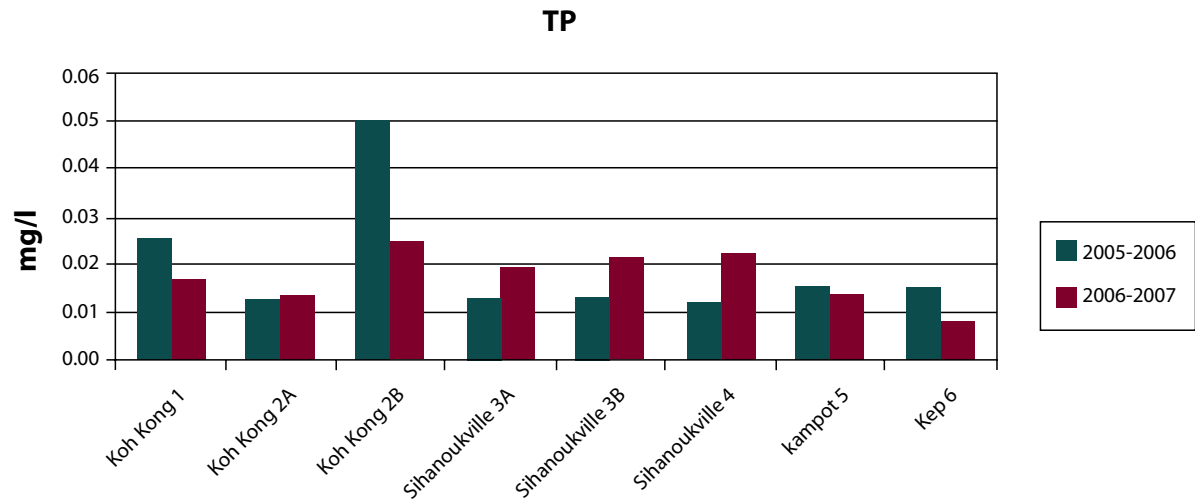
Source: NCSC, 2007c.

Figure 31: Biochemical Oxygen Demand in Coastal Waters (2004-2007) (mg/l)



Source: NCSC, 2007c.



**Figure 32: Total Phosphorus in Coastal Waters (2004-2007) (mg/l)**

Source: NCSC, 2007c.





# Strategic Environmental Assessment of Tourism Impacts

## 5.1 SEA Approach

It must be stressed that SEA is best treated as an ongoing process for consideration of environmental concerns at the same time as real time decisions are being made on policies, plans and programmes, rather than as a stand alone document that is prepared separately and is soon dated (OECD 2006). Accordingly, this SEA is intended to assist the Government in its ongoing planning processes at the national level and for the two priority tourism areas as well as helping to build capacity within the MOT, MOE, and MAFF, rather than providing a once-off consultant-driven report.

At the national level, relatively generic environmental impacts or consequences of decisions are outline in the SEA approach, so that these impacts can be considered by decision makers before making final choices. The SEA also establishes a baseline of environmental conditions in the two selected geographic areas and compares the changes in these conditions as a result of current plans and programmes and alternative approaches. Based on this assessment, possible mitigation and adaptation measures are identified and a preferred approach is recommended. Implementation arrangements, capacity building programmes, and monitoring and evaluation programmes are then identified.

Impact assessment operates at two levels: (i) direct impacts from the tourism sector activity; and (ii) indirect impacts from other sectors that will damage the environmental quality or natural resources on which

tourism depends. In this SEA, greater attention is given to the former direct impacts, although indirect impacts are also identified wherever possible.

Tourism also has impacts (both positive and negative) on the social environment. Some of the positive impacts include (i) provision of employment; (ii) development of small businesses; and (iii) involvement of women and the ability to spread the benefits into remote areas. The negative impacts mirror the positive and include social issues such as intrusion into and “commodification” of culture, exploitation of women, impact on remote areas and shifts away from traditional livelihoods. While this study is cognizant of these issues, it was beyond the present scope to take these fully into consideration.

## 5.2 Impact Assessment – National Policy Level (Tourism Law)

The draft Tourism Law was prepared under ADB’s technical assistance to Cambodia’s tourism sector, translated into Khmer, and submitted to the Council of Ministers on two occasions. As the private sector still has some issues of concern regarding the draft law, it has been returned to MOT for further consultations. Therefore, the draft law is in an ideal situation for environmental screening using the SEA approach. Table 32 draws from an earlier draft of the law that was commented on by the private sector (Annex 1) and identifies some potential improvements that could be considered to ensure that the finally approved Tourism Law adequately mainstreams environmental concerns.

**Table 32: Environmental Impacts of (draft) National Tourism Law**

| Tourism Law Provision  | Environmental Impacts or Consequences  | Extent   |
|--|--|--|
| Article 4 – provides for national tourism development plan and regional tourism development plans, with review and revision every five years.  | Tourism development plans may inadvertently propose development activities that adversely impact on environmental quality or natural resource management.  | High and may increase as tourism expands   |
| Article 4 also provides for the plans to propose measures to ensure sustainable development of tourism.  | The proposed law does not define what is meant by sustainable development of the tourism sector.   | Low, provided that sustainable development is defined in other national laws.    |
| Article 5 – definition of tourism business   | Ecotourism businesses may need to be separately defined and potentially certified, with independent third party verification.  | Moderate, but should be covered by eco-tourism policy.                           |
| Article 6 – requires a tourism license for each type of tourism business   | Village-based ecotourism businesses, like home-stays, may need simplified licensing provisions.  | Low, provided assistance is given to villages.                                   |
| Article 7 – requires a fee for renewal of tourism license.   | Fees could be waived or discounted for pro-poor, village-based ecotourism.   | Low  |
| Article 8 – standards and criteria for each type of tourism license, to establish and maintain quality of services.  | Environmental standards should be included in conjunction with MOE.  | High, and may require new MOE standards.   |
| Article 9 – requires MOT to inspect and evaluate applications for tourism licenses.  | MOE and MOT staff could jointly inspect selected applicants where there may be concern about environmental impacts.  | High, as EIA process appears to be ineffective.                                  |
| Article 10 – provides for 3 month temporary licenses.  | MOE should be consulted when a license is withheld due to environmental concerns.  | Moderate, if joint inspection is agreed.   |
| Article 12 – provides for sale or transfer of tourism licenses.  | MOE should be consulted regarding past environmental performance of the purchaser or any outstanding environmental improvements required of the transferor.  | Moderate, as environmental obligations may not be evident.                       |
| Article 13 – establishes a public register of tourism licenses, including refusal, cancellation, or suspension of a license.   | Inadequate environmental performance should be identified on the register, so that applicants know the consequences.   | Low, but could be mirrored on MOE website.                                       |
| Article 14 - sets out the grounds for canceling, suspending or downgrading a tourism license. Posing a serious potential risk to the environment is one cause for immediate cancellation or suspension of a license. | Listed activities do not include damage to the environment or degradation of natural resources or failure to comply with the Environment Act. The ability of MOT staff to determine a potential risk to the environment suggests the need to consult with MOE. | High, as the law sets sustainable development of tourism as a key national goal. |
| Article 15 – provides for appeal against cancellation or suspension of a tourism license.  | Need to make clear that environmentally damaging activities (or damages to health and safety) cannot continue pending resolution of the appeal.  | High, as 30 day appeal period may cause a lot of damage.                         |
| Article 16 – provides for tour operators and travel agents to be licensed.   | The MOT regulations for tour operators should include environmental performance conditions, and possibly an environmental guarantee fee, that could be used for emergency clean up or rehabilitation.  | High, as mass tourism can cause high levels of damage.                           |
| Article 17 – sets qualifications for licensed tour operators or travel agents.   | The level of training specified (vocational training in tourism) should be expanded to include some basic environmental training.  | Low, but the license holder's staff may not be trained at all.                   |
| Article 20 – requires tour operators and travel agents to establish a bank deposit.  | See comment on Article 16 about the need for an environmental guarantee fee.   | High, as any environmental emergency needs to be funded quickly.                 |
| Article 21 – establishes the rights of MOT to use the deposit account, and compensate tourists or other tourism business operators.  | Specify that MOT in consultation with MOE can use the funds to clean up or rehabilitate an environmentally damaged site.   | High, as firms might challenge use of the funds for this purpose.                |
| Article 24 – sets the qualifications of tour guides.   | Tour guides for nature-based tourism (like trekking) should be required to pass a knowledge test regarding outdoor survival and ecology of the authorized area.  | Moderate, as inexperienced guides will be avoided.                               |
| Article 26 – requires accommodation, food and beverage businesses to acquire a tourism license.  | While the license criteria are to be provided in separate regulations, those regulations should encompass a range of important environmental criteria and standards, established in consultation with MOE.   | High, as hotels and restaurants may cause high levels of environmental damage.   |

**Table 32: Environmental Impacts of (draft) National Tourism Law (continued)**

| Tourism Law Provision   | Environmental Impacts or Consequences   | Extent  |
|---|---|---|
| Article 27 – sets the qualifications for a holder of business authorization for accommodation, food and beverage service businesses.  | Consideration should be given to setting a higher qualification standard for operators of eco-lodges or ecotourism food and beverage outlets.   | High, as tourists seeking eco-tourism outlets demand high standards.  |
| Article 29 – sets the conditions for foreign operators of accommodation or food and beverage businesses.  | Should recognize qualified foreign certification of ecotourism businesses, as adequate grounds for providing a license in Cambodia.   | High, as local operators may learn from foreign business operators.   |
| Article 30 – requires operators to implement MOT regulations regarding technical standards, service standards, and, inter alia, guarantee no effect on the environment.   | "No effect" on the environment is an excessively high standard. The allowable extent of effects should be specified in an environmental management plan prepared as part of an EIA, and authorized by MOE.  | High, as most new tourism businesses avoid any EIA requirements.  |
| Article 31 – provides for MOT to establish a grading system, according to international standards.  | Consideration should be given to adopting an internationally recognized certification system (such as Green Globe) for environmentally sound and sustainable tourism operations.  | High, as an international standard would help to protect the environment  |
| Article 34 – provides for tourism training institutions to be established   |   |   |
| Article 35 – requires MOT to establish a national tourism research institution.   | Certificate courses should be established for ecotourism and environmental management of tourism enterprises.   | Moderate, as all environment courses should include tourism.  |
| Article 37 – sets out the functions of the MOT, including to "collaborate and take measures for environmental protection."  | A specific collaboration mechanism with MOE (and possibly environmental NGOs) could be specified in the law, such as a permanent joint committee to address all environmental issues associated with tourism proposals and operational issues.  | High, as EIA provisions alone are clearly insufficient in Cambodia.   |
| Article 38 states that MOT is the coordinator of all disputes related to tourism businesses.  | Environmental disputes related to tourism could be referred to the joint committee suggested in relation to Article 37.   | Moderate, as other avenues are available.   |
| Article 39 – notes the role of MOT in providing information related to tourism.   | MOT has a specific role in promoting the environmental and natural resources of Cambodia that support tourism. However, support from MOE and MAFF are vital in this role.   | High, as tourism heavily depends on maintaining these natural resources.  |
| Article 42 – requires MOT to develop an Eco-label to be awarded to businesses that comply with MOE's standards.   | While the intent is excellent, greater value may stem from adopting an internationally accepted eco-label that already has high visibility and credibility in the market.   | Moderate, as any form of eco-label depends on credibility.  |
| Article 43 – provides for benefits and incentives for operators awarded the MOT eco-label.  | In conjunction with MOE and MAFF, perhaps only eco-label credited firms should be allowed to operate in or close to protected areas.  | Moderate, as access rights to protected areas would be an incentive.  |
| Article 44 – provides for an annual good service award for outstanding operators.   | Environmental performance should be included in the criteria for this special award.  | Moderate  |
| Article 46 – requires tourism operators to comply with relevant laws and regulations, contribute to maintenance of natural resources, and refrain from polluting or damaging the environment, among other things. | Apart from cancellation or suspension of a tourism license, there are no other sanctions included in the draft law for damage to the environment. Consideration should be given to a new article specifying that MOT has a range of sanctions covering willful environmental damage that may be imposed and these are detailed in an associated regulation or decree. | High, as damage to the environment may be irreversible and criminal, civil or financial penalties should apply. |
| Article 48 – specifies obligations of tourists, including refraining from polluting the environment or damaging the cultural heritage.  | As for tourism operators, there are no specific sanctions associated with these obligations, without reference to other laws. Sanctions for willful damage by tourists should be considered.  | High, especially if the laws covering the environment are too weak.   |
| Article 58 – among the sanctions, any person who violates articles 26, 28, 29, 30 and 31 shall be subject to a fine of 1-10 million Riels (\$250-2,500).  | As Article 31 refers to "no effect" on the environment, theoretically this sanction might apply. However, more specific (and higher) penalties as suggested under Article 46 should be considered.  | High, as this sanction is too weak and too small.   |

The draft Tourism Law clearly recognizes the need for cross-reference to the various instruments available for protecting the environment and the natural resources on which so much of Cambodia's tourism development depends. For example, Article 37 specifically requires MOT to "collaborate and take measures for environmental protection." Article 42 indicates that one of those measures, within its own powers, is to establish an eco-label for tourism businesses, while Article 43 allows MOT to provide benefits and incentives for operators awarded an MOT eco-label. Article 46 requires tourism operators to comply with relevant laws and regulations, contribute to maintenance of natural resources, and refrain from polluting or damaging the environment. Article 48 specifies that one obligation of tourists is to refrain from polluting the environment or damaging Cambodia's cultural heritage.

These are all sensible provisions and go some way to ensuring the sustainable tourism development specified in Article 4 of the draft Law. As illustrated in Table 32, however, much more could be done to mainstream environmental issues through the national tourism legislation. For example, the following additional provisions have high priority for inclusion in the draft legislation:

- (i) Cross reference to EIA requirements for tourism development proposals;
- (ii) Specific reference to an agreement between MOT, MOE, and MAFF on conditions applying to tourism development in or near protected areas;
- (iii) The need for environmental standards and criteria, agreed with MOE, to be applied in allocating tourism licenses;

- (iv) Defining a "serious potential risk to the environment", again in conjunction with MOE, as the basis for cancellation, suspension, or downgrading of a tourism license, along with subsequent processes to deal with the risk; and
- (v) Specifically providing for an environmental guarantee fund, as part of the tourism license fees, which would provide immediately available funding for emergency clean up or rehabilitation of the environment as a result of a tourism-related incident.

Further details of specific mitigation measures for all identified priority concerns identified in Table 32 are provided in Section 6.

A similar treatment may be applied to other relevant laws (such as the Environment Act, or Forestry Act) as they intersect with tourism development and more detailed decrees and regulations subordinate to the Tourism Law, as they come up for review and revision.

### 5.3 Impact Assessment – National Policy and Strategy Level (Ecotourism Policy and Strategy)

This portion of the impact assessment draws from a draft Ecotourism Policy and Strategy Framework prepared by MOT and SNV.

**Table 33: Environmental Impacts of National Ecotourism Policy and Strategy**

| National Ecotourism Policies   | Environmental Impacts   | Extent  |
|--|---|---|
| Balance conservation and development by minimizing negative impacts on nature and culture, optimizing conservation, and respecting environmental laws and regulations. | Emphasis should be placed on seeking win-win outcomes rather than trade-offs between conservation and development. Ecotourism should be seen as one way of generating financing for conservation.                             | Positive, but a slightly stronger contribution to environmental conservation can be promoted.         |
| Ensure viable, long-term, and equitable economic operations, including in host communities.  | Viable ecotourism operations should contribute to the maintenance of the natural resources and environment on which they depend.  | Moderate, as ecotourism has some negative impacts.  |
| Support poverty alleviation by developing ecotourism in the northeast, Tonle Sap and coastal and Cardamom Mountains regions.   | If poor people are diverted from existing destructive activities and provided with alternative livelihoods, then ecotourism will have positive impacts.   | Low, but could be positive if current activities cease.   |
| Undertake sustainable marketing in developing relevant products and promoting these to culturally and environmentally sensitive markets.                               | Targeting potential environmental volunteers could add to existing capacity and provide an attractive option for some ecotourists.  | Low, but could be positive if volunteers are attracted.   |
| Establish a national multi-stakeholder coordination body and integrate ecotourism into sectoral and provincial development plans.                                      | Integration of ecotourism into transport, energy, water supply and other sectoral plans would help to ensure sustainability of the industry. Environmental NGOs should be well represented on the proposed coordination body. | Positive provided that other sectors and provinces are prepared to build ecotourism into their plans. |



**Table 33: Environmental Impacts of National Ecotourism Policy and Strategy (continued)**

| National Ecotourism Policies  | Environmental Impacts   | Extent  |
|---|---|---|
| Create ecotourism products which provide a brand image and mobilize producers.  | The eco-label proposed in the draft Tourism Law (see Table 32) would help with branding. Adopting a globally accepted label would be even better.                               | Moderate, but depends on controls on producers.                             |
| Ensure quality of ecotourism products and services through standards, capacity building and training.   | Environmental standards need to be agreed with MOE, based on global best practice.  | Low, depending on the standards adopted.                                    |
| Enhance local attitudes towards tourism and environmental conservation through public awareness campaigns.  | Combined ecotourism and environmental awareness campaigns could be positive for environmental management.   | Positive, but campaign must be sustained.                                   |
| Optimize visitor fulfillment by providing a total experience, which will support economic sustainability and local well-being.  | The carrying capacity of ecotourism attractions may be exceeded if specific areas become too popular.   | Moderate, but could be higher if carrying capacity is exceeded.             |
| Encourage micro-enterprise and SME development through incentives, access to information, participation in provincial tourism development committees and public-private partnerships. | Promotion of small scale ecotourism enterprises is positive for employment creation but could be negative for the environment, unless operators are given appropriate training. | Moderate, but could be higher in some sites due to local lack of knowledge. |

The draft ecotourism policy and strategy is broadly positive for the environment, although greater attention could be paid to forming a stronger connection between development of ecotourism and generating finance for protection of the environment on which the industry depends. Global best practice in ecotourism and a globally accepted eco-label could form important elements of the national policy.

## 5.4 Impact Assessment – Transboundary Area-based SEA (Northeast Triangle)

The impact assessment for the northeast (Table 34) is based mainly on two planning documents: (i) Action Plan for Triangle Tourism Development in Thailand, Lao PDR, and Cambodia<sup>19</sup>; and (ii) Master Plan for Tourism Development in Ratanakiri and Mondulakiri, both prepared by TISTR for TAT. These documents are supplemented by detailed plans for tourism development by the provincial DOTs, provided through field interviews in 2007.

**Table 34: Environmental Impact Assessment of Northeast Tourism Development – Emerald Triangle Tourism Development Action Plan**

| Northeast Tourism Plans  | Environmental Impacts  | Extent  |
|--|--|---|
| Road construction programme: (i) Stung Treng-Quy Nhan (R9); (ii) Attapeau-Ratanakiri-Mondulakiri (No. 75); (iii) Mondulakiri-Kratie (No. 301); and (iv) Kratie-Kampong Thom (No. 223). | Road construction has major environmental impacts and each route should be subjected to an EIA prior to approval of works. Soil erosion, waste management, biodiversity loss, noise are among the key impacts. | Very high, especially where roads pass through or near protected areas and/or rivers. |
| Tourism plan for development in protected areas (11 sites in Cambodia).  | Tourism development in protected areas can cause serious environmental impacts. Protected areas need to be zoned with least affected areas available for tourism.  | High, as tourism development can be incompatible with conservation objectives.        |
| Opening Khmer historical and cultural sites.   | Carrying capacity of the sites is an important consideration, as well as security of artifacts and waste disposal.   | Moderate, but depends on site carrying capacity.                                      |
| Mekong waterway tourist attraction (Don Khong-Stung Treng).  | Increased waterway traffic in this section of the Mekong is a danger to dolphins. Noise, litter and oil discharge are other environmental concerns.  | High, as dolphin populations are already highly endangered.                           |
| Promote community participation in tourism management.   | Community members need to be trained in basic hygiene and environmental management.  | Moderate, but may be higher in vulnerable sites.                                      |

<sup>19</sup> Only proposals for development in Cambodia are taken from this document, recognizing that linkages are intended in Thailand and Lao PDR, as well as with parallel developments in Viet Nam. Upstream developments in neighboring countries may have indirect impacts on Cambodian sites.

**Table 34: Environmental Impact Assessment of Northeast Tourism Development – Emerald Triangle Tourism Development Action Plan (*continued*)**

| Northeast Tourism Plans   | Environmental Impacts   | Extent   |
|---|---|--|
| Tourism marketing and promotion.                                    | Promotional material should convey a strong environmental conservation message.   | Low, but could also be positive with the right messages and effective delivery.                                  |
| Cross-border tourist transportation.                                | Border bus-stops, check-points, and car parks need to deal with solid waste management, provision of public toilets, and strong controls on illegal wildlife trafficking.   | High, as border crossings involve concentrations of people and vehicles.   |
| Airport improvement (Ban Lung, Sen Monorom, Don Khong).             | Major environmental issues are associated with both construction and operations. An EIA should be completed prior to approval to proceed with these projects. Noise, solid and liquid waste, safety and security are the main issues. | High, with indirect effects on surrounding areas due to the increased access provided.                           |
| Accommodation for ecotourism (Ratanakiri group, Mondulakiri group). | In addition to strict controls over building materials and design, renewable energy supply and insulation, waste disposal, sewage treatment, and constructing access routes are the main environmental impacts.                       | High, as building anything in areas of natural beauty, ecosystem services and high biodiversity can be damaging. |
| Middle and low level accommodation (Kratie).                        | Building controls, waste disposal, sewage treatment, water supply, landscaping, operational management are the main environmental issues.   | Moderate, as this area is already built up.  |
| Investment in tourism business for 9 groups of attractions.         | Consideration should be given to an agreement with MOE on trigger points for mandatory EIAs to be completed along with economic feasibility studies.  | High, as many tourism projects do not undertake EIAs.  |
| Development of border area – Cambodia-Lao PDR.                      | Development of casinos, resorts, and golf courses, for example, may cause serious environmental damage  | High, as border areas are mostly forested, protected or close to rivers.   |
| Development of tourism major cities – Kratie.                       | Building controls, waste disposal, sewage treatment, water supply, landscaping, noise, public open space, parks, and operational management are the main environmental issues.  | Moderate, as this area is already built up, but waste disposal is lagging behind growth.                         |
| Development of biodiversity ecotourism centre - Ratanakiri          | Virachey National Park is the logical area for such a centre. Balancing conservation and tourism interests is needed.   | High, biodiversity in this area is of global value.  |
| Open land linkage – Attapeau-Ratanakiri                             | Road linkage would probably pass through a national park, opening up the area for hunting, poaching and land clearing for swidden agriculture.  | High, biodiversity in this area is of global value and already threatened  |
| Establish border areas tourism committees                           | Consideration could be given to appointing an environmental advisor to these committees.  | Low, although it is hoped that they would also discuss environmental issues.                                     |
| Improve service standards   | Higher than normal service standards are needed for ecotourism activities in or near protected areas.   | Low, but treatment of environment should be added.   |
| Establish agreement on Attapeau-Ratanakiri biodiversity area        | Currently threats to Virachey National Park are attributed to incursions from the Lao PDR side, so agreement is needed.   | Positive, provided the agreement is enforced.  |
| Promotion of investment in Khmer cultural souvenirs                 | Wood carvings may target rare tree species (like rosewood) and use toxic materials (like lead-based paint). Some form of sustainability certificate might be worthwhile considering.  | Low, especially if a third party verified sustainability certificate could be provided.                          |

**Table 34: Environmental Impact Assessment of Northeast Tourism Development – Emerald Triangle Tourism Development Action Plan (*continued*)**

| Northeast Tourism Plans                         | Environmental Impacts   | Extent  |
|---|---|---|
| Livelihood promotion relating to border tourism | If the new livelihoods replace damaging ones, like hunting and illegal wildlife trading, then impacts may be positive. Basic training in environmental protection would be needed.    | Low, especially if wildlife traders and hunters could be targeted for specific attention. |
| Promotion of biodiversity guided tours          | Carrying capacity of trails, removal of litter, toilet arrangements, and campsites are the main environmental issues.   | Moderate, as trekking trails may open up forests.   |
| Village based tourism arrangements.             | Coliform bacteria from toilets and home-stays may contaminate fishing areas and freshwater sources. Handicraft production may involve use of toxic materials, like lead-based paints. | Moderate, but depends on visitor numbers and village locations.                           |
| Tourism network development fund.               | Awareness raising on environmental impacts of tourism could be funded.  | Low, provided that it is limited to promotion and marketing.                              |
| Promotion of free zone for tourism investment.  | Concentration of tourism outlets in border zones could lead to cumulative environmental impacts.  | High, due to high concentration of tourism facilities.                                    |

**Table 35: Environmental Impact Assessment of Northeast Tourism Development – Master Plan for Tourism Development Ratanakiri and Mondulakiri**

| Master Plan Proposals   | Environmental Impacts  | Extent  |
|---|--|---|
| Yeak Laom Lake (RK) – signage, bird watching, elephant trekking, cultural shows, improved buildings, car parks and service facilities.  | Animal and human waste from elephant camps too close to the lake. Drainage of oil and suspended sediment from car parks. Possible seepage of sewage from septic tanks into the lake. Sediment from over-used elephant trails.                                    | Moderate, as a large lake can absorb and assimilate some organic wastes and sediment. |
| Charay Village (RK) – signage, handbooks, cultural shows, home-stays, handicraft production, riverside rest area, fishing, souvenir shops, construction of toilets.                     | Coliform bacteria from toilets and home-stays may contaminate fishing areas and freshwater sources. Handicraft production may involve use of toxic materials, like lead-based paints.  | Moderate, as expected visitor numbers are not too high.                               |
| Kachagnh waterfall (RK) – road construction, signage, swimming areas, adventure canoe rides (downstream), pedestrian pathway, construction of toilets and steps to waterfall.           | Soil erosion and sediment from road, trail, and steps construction. Seepage of sewage from septic tanks may contaminate swimming areas, if located upstream.   | Moderate, depending on location choices and construction techniques.                  |
| Eisey Patamak Mountain – religious site information, signage, viewing point, building improvement for reclining Buddha image  | Soil erosion and sediment from road upgrading and construction of viewing point.   | Low, as this site is already frequently visited and no major works are proposed.      |
| Veal Rumplan Volcano – trekking path, signs, butterfly watching, rest area, interpretive walking path, construction of car park, toilets, and new road to avoid the lava flow.          | Soil erosion and sediment from new road location and construction of viewing point, car park, and trekking path. Sewage seepage from septic tanks at public toilets. Possible loss of biodiversity from butterfly catching.                                      | High, as major road relocation is proposed.   |
| Kachagnh waterfall – improved access road and nature learning route, signage, scenic viewpoint, elephant trekking trail, agro-tourism activities, construction of toilets and car park. | Animal and human waste from elephant camps too close to the river. Drainage of oil and suspended sediment from car parks. Possible seepage of sewage from septic tanks. Sediment from over-used elephant trails. Waste management from agro-tourism market site. | Moderate, depending on location choices and construction techniques.                  |
| Norngkabat forest – access road, travel signs, nature trail, animal hides, trekking route, bird watching piers.   | Sediment from access road and trekking route. Increased access may allow hunting and poaching of wildlife.   | Moderate, as opening up forest areas must be controlled.                              |
| Bar Keo gem mining – road construction, route signs, gem mining demonstration, gem shop, gem mine pathway, parking lot, construction of tourist centre                                  | Gem mining is already damaging the environment. Further encouragement of this activity by making it a tourism attraction will add to existing pressures.   | High, as additional pressure will be added to an already degraded environment.        |

**Table 35: Environmental Impact Assessment of Northeast Tourism Development – Master Plan for Tourism Development Ratanakiri and Mondulkiri (*continued*)**

| Master Plan Proposals  | Environmental Impacts   | Extent   |
|--|---|--|
| O'Chaloy islet – construction of road and entrance, route signs, viewing point, botanic zoning, nature trail, swimming area, canoe adventure tour, bird watching tower.  | Balancing nature conservation and active recreation in this area will need to be carefully planned, with strict zoning and development controls. Visitor numbers may need to be restricted.   | High, as there is potential for conflict between recreation and conservation.                              |
| Cha Ung waterfall – road improvement, route signs, brochures for nature study, water site for swimming, construction of pathway and viewing point, toilets and parking lot.  | Soil erosion and sediment from road, trail, and viewing point construction. Seepage of sewage from septic tanks may contaminate swimming areas, if located upstream.  | Moderate, depending on location choices and construction techniques.                                       |
| Virachey National Park – transportation management for boating, nature trails, survey and plan for park management, construction of camping sites, pathways, viewing point at waterfall, toilets at parking lot.                           | As the World Bank planning for this national park is well developed, the main danger is that government funding will decline significantly after this project is completed. Reduced management could lead to significant biodiversity loss.                             | High, as increased access and less visible management are likely to lead to high biodiversity losses.      |
| Sen Monorom Group – city tour signs, tourist service centre, road link from city to viewing point, construction of mountain top viewing point, horse riding around city, ethnic culture demonstration, town centre park improvement.       | As the tourism hub for Mondulkiri, the main danger is growth of a very unattractive town, inconsistent with the nature of ecotourism plans for the surrounding area. Increased attention to urban planning, building controls, and environmental management are needed. | High, as city growth is likely to be uncontrolled and inconsistent with ecotourism plans for the province. |
| Monorom waterfall – signage, training of local volunteers, community participation, basic services for resting and nature tours, landscape improvement, tree planting, construction of parking lot, bridge, nature trails, and site signs. | High levels of usage, especially on weekends and holidays may lead to problems of waste management, litter control, seepage from septic tanks, and erosion on nature trails and from the car parking area.  | Moderate, as high levels of usage can be expected as road access is improved.                              |
| Bousra waterfall – signage and tourist information, guided nature tour, ecotourism site development, rapids canoeing, and construction of car park, trekking path, tourist signs, and lodging at Wang Bousra.                              | Soil erosion and sediment from road, trail, and viewing point construction. Seepage of sewage from septic tanks may contaminate swimming areas, if located upstream. Ecotourism site development and lodging will need strict controls.                                 | Moderate, as the area is already popular and improved access will increase use by domestic tourists.       |

**Table 36: Environmental Impact Assessment of Northeast Tourism Development – Provincial DOT Plans**

| Provincial Proposals  | Environmental Impacts   | Extent  |
|---|---|---|
| <b><i>DOT Kratie Proposals</i></b>  |   |   |
| Kampi Dolphin Pool – install jetty and ladder, move floating restaurant to river bank, parking lot, garbage bins, and toilet.                     | Carrying capacity may be exceeded and dolphin numbers decline. Upstream impacts on habitat. Waste increases, including from restaurant. Seepage from toilets too close to river bank.         | High, as dolphin numbers are already under a high level of threat.                  |
| Other dolphin pools – tourist ports, car parks, garbage bins, toilets, road access, security and safety, assist in dolphin conservation           | Plans for dolphin based tourism depend on improved management of dolphin habitats and removal of threats. Increased tourist pressure may hasten their demise.                                 | High, as dolphin numbers decline they will become less visible.                     |
| Kratie town – improve landfill, solid waste management, and solid waste transport, install roadside lights, construct wastewater treatment plant. | The solid waste management and wastewater treatment plant proposals will improve environmental conditions in Kratie.  | Positive impacts, although improved operational management is also needed.          |
| Pro-poor tourism – lodges, tea houses, refreshment kiosks, small boat scenic tours, bicycle hire, sale of handicrafts, and restaurants.           | Villagers will need to be trained in basic hygiene and environmental management, plus safety and security issues. Increased waste management problems.  | Moderate, as increased visitors will increase waste volumes.                        |
| Eco-lodges incorporating traditional architectural forms, catering to high-end tourism market.  | Impacts can vary depending on extent of strict controls on design, construction and operation of eco-lodges. Waste management and access roads in remote locations are potentially difficult. | Moderate, but depends on the extent of controls and enforcement by local authority. |

**Table 36: Environmental Impact Assessment of Northeast Tourism Development – Provincial DOT Plans (continued)**

| Provincial Proposals   | Environmental Impacts   | Extent  |
|--|---|---|
| <b>DOT Kratie Proposals</b>  |   |   |
| Tourism information and interpretation material, signage, and website.   | Information provision of this sort should not create any significant environmental impacts.   | Low, although litter control is an important issue.                                     |
| Tour guide training and associated skills like first aid.  | Training should be extended to environmental management.  | Low, but tour guides play an important role.  |
| <b>DOT Stung Treng Proposals</b>   |   |   |
| O' Svay – ecotourism, Ramsar site, dolphin pools.  | Increased visitors, noise and poor operational controls may accelerate the demise of dolphin populations.   | High, as dolphin numbers are already highly threatened.                                 |
| Siembok – village tourism, homestays, small infrastructure   | Villagers will need to be trained in basic hygiene and environmental management, plus safety and security issues. Increased waste management problems.                                  | Moderate, as increased visitors will increase waste volumes.                            |
| Airport upgrade – resurface and extend runway, new taxiway, apron, drainage system, passenger terminal, airport fence, control tower, operations building, car park and access, equipment.     | Airport is currently unused, so major environmental issues associated with both construction and operations. An EIA should be completed prior to approval to proceed with this project. | High, with noise, liquid and solid waste, safety and security issues needing attention. |
| Sopheak waterfall – road construction and bridges.   | Potential erosion and sediment from road construction and bridge approaches. Need to avoid side-casting road construction material.   | Moderate, depending on extent and type of road works.                                   |
| <b>DOT Mondulakiri Proposals</b>   |   |   |
| Five swing bridges plan for waterfalls – Bousra, Monorom, Leng Bokbrah, Romnea I & II.   | The swing bridges per se do not cause major environmental impacts, although associated access might cause erosion. Visual impacts may be a concern.                                     | Low, depending on extent of access works.   |
| Tourism service centre at Sen Monorom – transport services (including elephants and horses), currency exchange, tourist bazaars, and sports equipment.   | Location of elephant and horse camps will be important. Other facilities will need proper waste management facilities and well managed public toilets.                                  | Moderate, but depends partly on location decisions.                                     |
| Community organization of tour operators and souvenir shops to participate in ecotourism.  | If busloads of tourists are anticipated, public toilet facilities need to be constructed in urban areas.  | Low, but each community needs environmental training.                                   |
| Accommodation and food services – local materials, low rise, eastern highland cultural style.  | Accommodation and restaurants have associated problems of liquid and solid waste management.  | Moderate, but depends on number of units.   |
| Tourism routes – one day ring route and two day trekking route (overnight).  | Bus and car transport can endanger wildlife at night. Trekking routes need to ensure all solid waste is removed and toilet facilities are carefully located.                            | Moderate, but could increase as access to the province improves.                        |
| <b>DOT Ratanakiri Proposals</b>  |   |   |
| Ban Lung tourist centre – loop and ring network, centred on Ban Lung, restaurants and accommodation, elephant tours, bicycle and motorcycle rental, tourism information centres, access roads. | Solid and liquid waste management, wastewater treatment, urban noise, and possibly air pollution are the main impacts anticipated. Protection of urban water sources is also needed.    | Moderate provided best practice environmental management is applied.                    |

The two planning documents and provincial level plans for tourism development in the northeast of Cambodia clearly show the heavy reliance being placed on the region's natural resource attractions – waterfalls, dolphin pools, protected areas, and lakes. Ecotourism is the preferred mode of development and many of the plans relate to establishing ecotourism facilities and providing publicly funded support initiatives (such as information, promotional campaigns, tourism signs, car parks, and public toilets). Provision of improved access (by road and air) is also seen as essential, to enable much larger numbers of visitors (as shown in Section 3) to visit the many attractions of the northeast. Dispersal of visitors is also important to reduce impacts and loads on sensitive attractions. However, this must be carried out in a staged manner to first develop the market for the products so that this market can later be dispersed.

Many of the environmental concerns that are associated with these plans relate to the direct and indirect effects of improved access (Table 34). First, road construction and airports have significant (and cumulative) environmental impacts in both the construction and operational phases. Second, improved access opens up previously remote areas not only to ecotourists but also to hunters, poachers, traders in illegal wildlife, and ordinary visitors who may inadvertently collect rare and endangered species (like orchids or butterflies) from the wild. In particular, proposals for increased border crossings from Attapeau in Lao PDR or from the central highlands (Dak Lak Province) in Viet Nam would impinge heavily on globally important protected areas, such as Virachey National Park and the Monduliri wilderness area. Special care will need to be taken with road locations, design parameters, construction methods, location of borrow pits and quarries, equipment noise control, location of construction camps, and rehabilitation of materials dumps in or near protected areas. Each road link should be subjected to a detailed EIA as specified by MOE. Border crossings also concentrate a variety of activities in potentially vulnerable areas (such as river crossings) and the cumulative environmental impacts of these activities on water quality, habitats, forest cover and other environmental values can be severe.

In addition to planned development in or near forested protected areas, major emphasis is placed on plans for tourism development along the Mekong River, targeted at viewing the rare and endangered Irrawaddy Dolphin. The dolphin is under threat from developments both external and internal to the tourism sector. Continued decline of dolphin populations to the point that they become extremely difficult for visitors to see will render

much of the investment in the Dolphin Discovery Trail and the Stung Treng Ramsar site obsolete. Proposals such as water-based recreation, scenic boat trips, developments on islands in the Mekong River, and river-bank locations for accommodation, car parks, and restaurants raise the direct threat level from tourism, due to litter, discharges of polluted water, noise, and injury from boat propellers. As indicated in Section 3, where the carrying capacity of Kampi Pool is described, as the dolphins become increasingly rare, tourist numbers may increase, but at a certain level of population decline the proportion of disappointed tourists will increase and this activity may cease completely. Accordingly, specific provisions should be built into tourism plans for Stung Treng and Kratie Provinces to provide additional funding for research into the causes of dolphin deaths and development of appropriate management regimes.

Ecotourism is notoriously difficult to define but the main environmental issues related to ecotourism accommodation cover controls over site locations, building materials and design, renewable energy supply and building insulation, solid and liquid waste disposal, water supplies, sewage treatment, and constructing and maintaining access routes. Ecotourism by definition works in support of an area's or country's conservation and social objectives. However, as this form of tourism places visitors in potentially sensitive areas away from municipal services support, extra care is required in designing and regulating the built features.

Environmental aspects associated with ecotourism activities include location of trekking routes and campsites, provision of information and training of guides, solid waste removal, location and treatment of toilet facilities, fire management, noise controls, and safety and security arrangements. Where elephant trekking or horse riding are envisaged specific attention needs to be paid to location and management of camps, location and maintenance of trails, and possible introduction of invasive plant species with imported animal feed. Animal camps should not be located upstream of urban water supply offtakes.

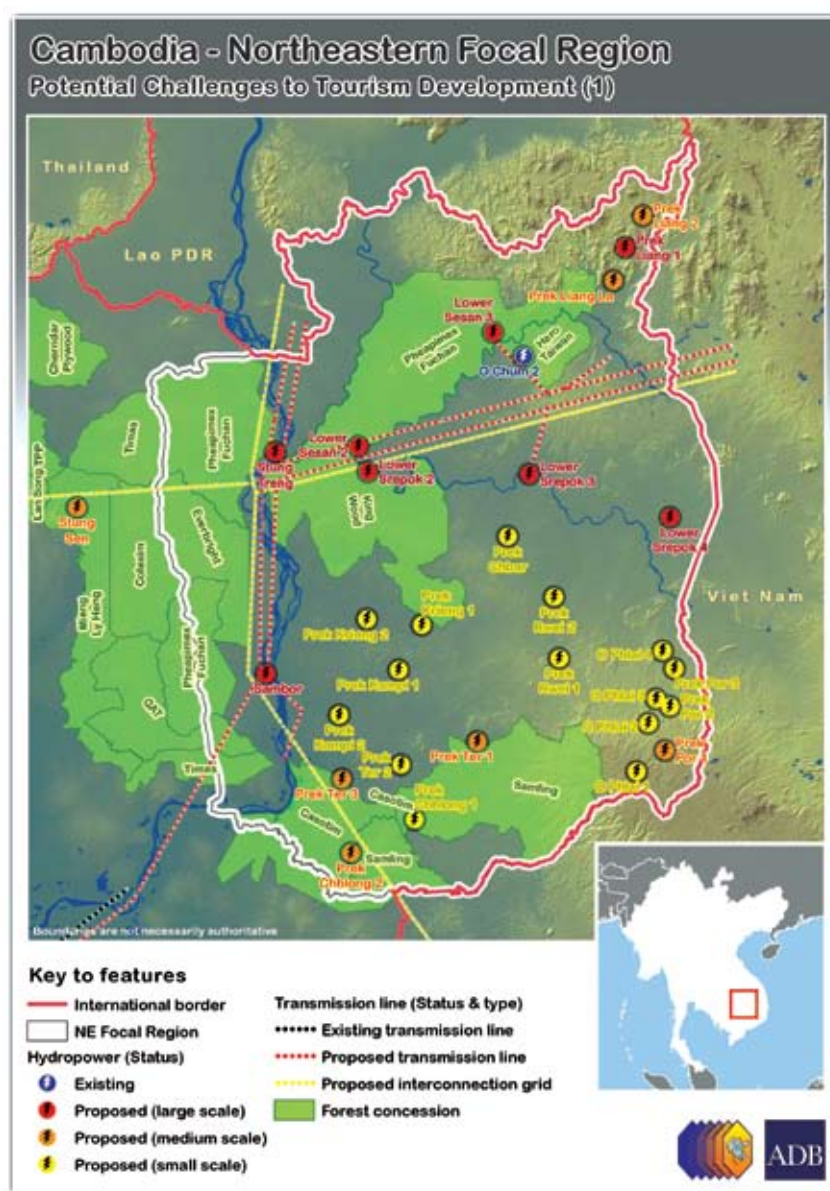
Tourism facilities in the main tourism hubs of Kratie, Stung Treng, Sen Monorom, and Ban Lung also require careful treatment of environmental issues such as building controls, solid and liquid waste disposal, sewage treatment, water supply, landscaping, public parks, renewable energy, and environmental management in specific high use areas like ports, bus stops, and markets. Development of casinos, luxury resorts, recreation parks, zoos, and golf courses also impose excessive burdens on the environment and should be subject to detailed EIAs.



The threats to environmental quality and natural resources, aside from the direct tourism proposals, that would pose some concern to the long term sustainability of the ecotourism strategy in the northeast include

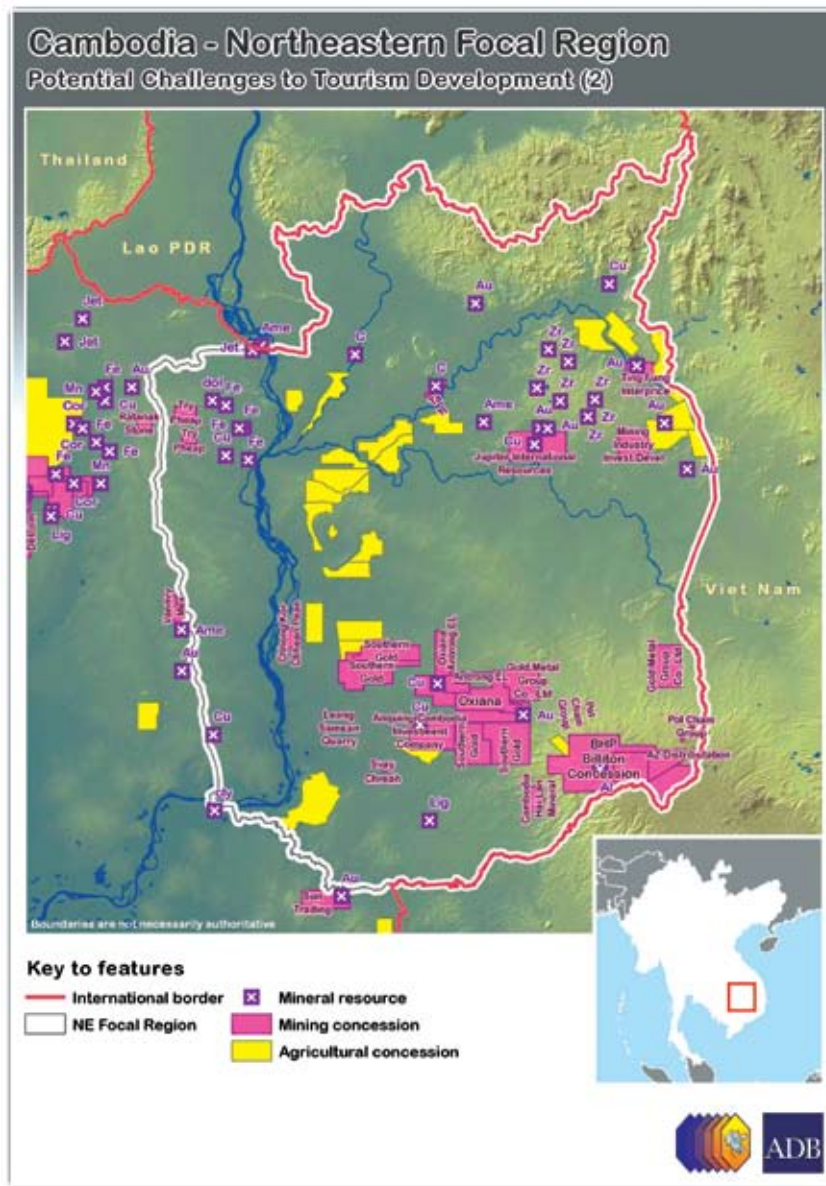
(i) logging concessions, (ii) mining and mineral exploration, (iii) agricultural encroachment into forest areas, (iv) fishing (especially use of nets, poisons, explosives and electric fishing), (v) hunting and illegal wildlife and plant collection; (vi) hydropower development; and (vii) electricity transmission lines. Figure 35 shows the location of some of these challenges in northeast Cambodia. The large expanse of forest and mining concessions possibly poses the greatest threat to ecotourism development, as ecotourists do not appreciate traveling through degraded areas en route to their final destination.

**Figure: 33.1 Indirect Challenges to Tourism Development - Northeast**



<sup>20</sup> One possible cause of the demise of juvenile dolphins is heavy metals and/or arsenic in the river water, potentially exacerbated by mining.



**Figure: 33.2 Indirect Challenges to Tourism Development – Northeast**

## 5.5 Impact Assessment – Area-based SEA (K4 Coastal Tourism Strategy)

This section of the impact assessment draws primarily from the Master Plan for Tourism Development in the Coastal Zone, Kingdom of Cambodia prepared by TISTR

for TAT and MOT. This document describes the general condition of the study area, conducts a tourism site study and analysis and outlines 9 plans and projects for the southern coastal zone of Cambodia. The main elements of the plans, the likely types of environmental impacts and a subjective assessment of the extent of those impacts are included in Table 37.

**Table 37: Environmental Impact Assessment of the Southern Coastal Zone Tourism Master Plan**

| Southern Coastal Tourism Plan   | Environmental Impacts  | Extent  |
|---|--|---|
| Market promotion plan – overnight stays, destination markets linkages, cooperation with neighboring countries, main markets   | The market promotion plan, per se, would not have direct environmental impacts, as these would emerge from the promoted activities.  | Low, depending on the activities promoted.  |
| Border tourism development – information, stimulate socio-economic development  | Border development may have serious environmental consequences because activities are concentrated and border zones are remote from central government oversight.  | High, due to concentrated form of tourism activities with minimal oversight.                              |
| Koh Kong ecotourism – signage, villager training, community development at Peam Krasaop wildlife sanctuary  | Increased access to the sanctuary may increase poaching and illegal wildlife trade counterbalanced by training of villagers and alternative livelihood opportunities.  | Low, and may even be positive in the long term.   |
| Koh Kong town development – beach resorts, road linkages among beaches, establish conservation unit   | Significant transformation of Koh Kong town may cause environmental damage if infrastructure does not keep pace. Waste disposal and sewage treatment are the two main environmental concerns. Roads need to be set back from beaches.  | High, as Koh Kong local government may not have enough resources for infrastructure development.          |
| Sihanoukville tourism development – development of Victory, Hawaii, Sokka, Independent beaches, training villagers at Samdech Hun Sen beach   | Linear development of multiple beaches poses long term environmental impacts, likely to be exacerbated by climate change and sea level rise.   | High, due to linear development pattern responding to demand.   |
| Sihanoukville tourism development – local market, Wat Leu, Wat Krom, Independent Square, Victory Monument and waterfall improvement by landscaping, improved parking, rest rooms and tourism signs. | Town development in Sihanoukville is necessary to respond to the anticipated massive increase in tourist numbers. The proposed activities will have minimal environmental impacts, but increased attention to landfills, water supply and wastewater treatment will be needed too. | Moderate, as town development must be matched by increased funding of environmental infrastructure too.   |
| Sihanoukville tourism development – Peam National Park – improved access, tourism signs, information centre for ecotourism.   | Given anticipated visitor numbers to this area, multiple access points to the park and recreational activities inside the park could cause damage to biodiversity and ecosystem services.  | High, due to large number of visitors expected under 20-30% growth projections.                           |
| Sihanoukville tourism development – registration of offshore island chains and development for day trip tourism.  | Day trip tourism may be less damaging than permanent occupation, but care is needed with solid waste, toilet facilities, coral trampling, shell collection, fire management, piers and boat access.  | High, as offshore island ecosystems are vulnerable to heavy visitor use in peak periods.                  |
| Japan Cape and Coconut Cape – improved access, ecotourism area, recreation and sports area, develop as quiet beach.   | Road construction and provision of car parks should be set back some distance from the high tide line. Controlling visitor numbers to maintain quiet beach character may conflict with better access.  | Moderate, but improved access may increase environmental pressures.                                       |
| Koh Sdach – improved pier, tourist service centre, beach reclamation, waste disposal system, tourism routes, training villagers, forest conservation, luxury lodging/resort development.            | As a scheduled stop on the Koh Kong to Sihanoukville boat route, completion of the road upgrading may reduce visitor numbers. Luxury resort development on islands results in numerous environmental pressures such as water supply and waste disposal. An EIA will be needed.     | High, as resort development to replace transit passengers will result in serious environmental pressures. |
| Koh Rong – develop as “Pearl of Cambodian Sea”, land settlement for local villagers, declaration of conservation area, develop pier and temporary transportation at Koh Sdach and Sihanoukville.    | An archipelago of small islets, of which Koh Rong Samlem (10 km from Sihanoukville) is the largest. Forest cover, coral reefs and wildlife are threatened by mass tourism development on these islets.   | High, as small islands are very vulnerable to mass tourism plans linked to Sihanoukville.                 |

**Table 37: Environmental Impact Assessment of the Southern Coastal Zone Tourism Master Plan (continued)**

| Southern Coastal Tourism Plan   | Environmental Impacts   | Extent  |
|---|---|---|
| Bokor Mountain development – landscaping, viewing point, signage, conservation of hill area for recreation and walking paths, information centre, shops, hotel, tour guides, renovate guesthouse for tourism office, feasibility study on cable car development.      | As this area has been developed for rest and recreation during colonial times, the proposed plans will add only moderate pressure to the area. The cable car plan, however, would need an EIA to be conducted at the same time as the feasibility study.  | Moderate, as this area has been used for “tourism” for a long time already.   |
| Teuk Chhou waterfall – relocate service road, parking area, agricultural produce market, viewing area, shopping area and landscaping, improve island area and construct temporary bridge, signage.  | Road construction, bridge, car park and landscaping could result in considerable soil erosion and sedimentation. Shopping area, market, and public toilets should be located well back from river front.  | Moderate, as the proposed facility construction impacts would be mostly temporary.  |
| Town improvement (Koh Kong, Kampot and Sihanoukville) – information centres, pedestrian roads, laws and regulation to conserve old town and buildings, museum, agriculture market, public park, zoo, cultural shows.  | In addition to town beautification and preservation of significant buildings, attention needs to be paid to sanitary landfills, wastewater treatment plants, protection of water supply catchments, and adaptation to climate change impacts.   | Moderate, but failure to provide environmental infrastructure will lead to long term deterioration.   |
| Kep Cape development – Crab Market improvement (restaurant, seafood fair), landscaping White Lady beach, east coast beach, or old beach resort areas, tourist boat pier, old casino buildings replaced by a park, conservation of French colonial town for education. | Development of Kep as a historical and educational precinct, as well as providing for active recreation, is sensible. However, environmental infrastructure such as a sanitary landfill, public toilets, improved water supply, and improved drainage (e.g. through a constructed wetland) are needed to maintain an attractive location. | Moderate, as this area was already well developed in French colonial times. Failure to provide needed infrastructure could lead to high levels of impact. |
| Koh Tunsay development – nature trail, view point, signs, community involvement in ecotourism   | Involves several islets near Kep, including a former French prison. Coastal ecosystem and seaweed collection are vulnerable to tourism development.   | Moderate, as anticipated visitor numbers are small.   |
| Angkork Touch beach – layout of beach for development, road improvement, promote investment in lodging and tourism services.  | Plan to attract tourists from Viet Nam needs further analysis. Beach development needs attention to solid waste and toilet facilities.  | Moderate, but could be higher if opened to tourists from Viet Nam.  |
| Highway development for tourism network – Viet Nam border to Kep, Highway 48 to Japan Cape, Koh Kong to Sre Ampel.  | Highway construction will have major impacts on forest areas, wildlife, river and coastal zone water quality, mangroves and coral reefs. High construction standards are needed.  | High, both during construction and operation, in and near protected and vulnerable areas.   |
| Air transport networks – Koh Kong to Sihanoukville, Siem Reap-Koh Kong-Sihanoukville, Thailand’s Phuket, U-Tapao, Samui, Hua Hin, Viet Nam’s Ho Chi Minh City, upgrade Sihanoukville to international airport.  | Major environmental issues are associated with both construction and operations. An EIA should be completed prior to approval to proceed with these projects. Noise, solid and liquid waste, safety and security are the main issues.   | High, with indirect effects on surrounding areas due to the increased access provided.  |
| Overland route development – Phnom Penh to Sihanoukville, Phnom Penh to Koh Kong, Phnom Penh to Kampot, Coastal roads (Kep-Kampot-Sihanoukville-Koh Kong).  | Overland routes have major impacts on forest areas, wildlife, river and coastal zone water quality, mangroves and coral reefs. Attention needs to be paid to rest stops, camp sites, and roadside accommodation and restaurants.  | High, in and near protected forests and vulnerable coastal areas.   |
| Car and boat rental businesses.   | Inexperienced boat operators can do considerable damage to seagrass beds and coral reefs, as well as discharging solid wastes directly into the sea.  | Moderate, unless boat rental grows into a major activity.   |
| Environmental protection plan – waste management, registration of tourist sites, conservation of natural resources, public relations campaign, identification of conservation areas, building codes, protection of mangroves and biodiversity areas.                  | The environmental protection plan should be seen as integrated with each of the tourism development proposals, rather than a separate plan that may or may not be funded. Nevertheless, the proposed activities would be helpful. Attention to climate change impacts is also needed.   | Positive, but could be supplemented by some of the mitigation measures listed in this SEA report.   |

**Table 37: Environmental Impact Assessment of the Southern Coastal Zone Tourism Master Plan (continued)**

| Southern Coastal Tourism Plan  | Environmental Impacts  | Extent  |
|--|--|---|
| Community development plan – souvenir products, ecotourism management, promotion of small scale enterprises.   | Community-based tourism is not necessarily environmentally benign. Training and funding of environmental management are needed.  | Moderate, but may depend on specific locations affected.      |
| Visa free zone – Trat, Thailand; Koh Kong and Kep, Cambodia; Hatien, Viet Nam.   | Visa free zone may be superseded by the proposed GMS tourist visa. Direct environmental consequences are low.  | Low, but indirect impacts could be higher.                    |
| Border check-point opening – border towns Cambodia and Viet Nam, Koh Sdach, Koh Phu Quoc, Sihanoukville.   | Border bus-stops, check-points, and car parks need to deal with solid waste management, provision of public toilets, and strong controls on illegal wildlife trafficking.      | High, due to concentration of activities at border crossings. |
| Tourist security project – security centres in tourism towns, tourism police, coastal safeguards, campaigns and public relations regarding security. | Minimal environmental impacts, although tourism police may need additional training on environmental issues like wildlife restaurants or live coral harvesting.                | Low, but potentially positive given adequate training.        |
| Tourism management – provincial tourism centres, tourism units at main sites, establish coastal tourism office.                                      | Tourism units and provincial centres may contribute to raising awareness on key environmental issues.  | Low, and potentially positive.                                |
| Investment promotion – invite foreign investors, promote domestic investment, revise investment laws, establish investment centre.                   | Environmental impacts depend on the kinds of investment attracted. Investment centre could become a one-stop centre that also provides environmental guidance                  | Moderate, but depends on the types of investment.             |
| Tourism cooperation plan – framework agreement among 3 countries, tourism cooperation committee, action plan for coastal tourism linkages.           | Framework agreement should be extended to environmental issues like wildlife trading, endangered species souvenirs, and common approaches to EIAs and environmental standards. | Moderate, but depends on the extent of cooperation attained.  |

**Table 38: Tourism Plans of Southern Provincial DOTs**

| Provincial Tourism Proposals   | Environmental Impacts   | Extent   |
|--|---|--|
| <b>Kampot Province</b>   |   |  |
| Upgrade Teuk Chhou waterfall – road repair, toilets, solid waste incinerator, improved signage, landscaping. | Sedimentation from road repair, borrow pits damage, seepage from septic tanks, but improved solid waste management.   | Low, as scale of works is not very high.                       |
| Phnom Chnougk – ancient temple in a cave – parking, access, toilet   | Detailed activities are not available.  | TBD – but probably low.  |
| Kampong Trach caves – access, signage  | Detailed activities are not available.  | TBD – but probably low.  |
| Landscaping of all key tourist attractions for domestic and international visitors.                          | Landscaping should improve the visual environment and increase ground cover. Care should be taken to use local species of plants rather than imported ones. | Positive, as landscaping also provides new habitats for birds. |
| Kep Thmey Resort, Prek Ampil – encourage two high standard restaurants to be established.                    | Waste management and sewage treatment are the two main issues.  | Low, provided locations are appropriate.                       |
| Litter management – criteria and standards, provision of litter bins, public awareness.                      | A major litter campaign as envisaged will contribute to maintenance of environmental quality.   | Positive, but collected litter must be properly disposed.      |
| Human resources – hospitality training courses for workers in hotels, guesthouses and restaurants.           | Hospitality training should include basic environmental management issues.  | Low, but could also be positive.                               |
| Tourism business licenses – encourage hotel and guesthouse owners to extend their licenses.                  | Renewal of licenses should be subject to clearance from the provincial DOE that environmental performance is satisfactory                                   | Low, provided performance is checked.                          |

**Table 38: Tourism Plans of Southern Provincial DOTs (continued)**

| Provincial Tourism Proposals  | Environmental Impacts   | Extent   |
|---|---|--|
| <b>Sihanoukville Municipality</b>   |   |  |
| Tourism Development Committee – prepare master plan and strategy, implement national policy, help DOT to develop high quality products, raise public awareness and research/surveys | Master plan and strategy development should use these SEA results as an input and conduct full public participation process.  | Low, provided SEA results are adequately incorporated.                             |
| <b>Koh Kong Province</b>  |   |  |
| Border Tourism – development of area around the check-point to attract more visitors and cross-border traffic.  | Increased visitation will result in additional demand on waste management systems. The concentration of activities and the types of development could overwhelm the local authorities' ability to manage. The area should be planned to not only be an attractive entry point to Cambodia, but also to deal with impacts from increased visitation. | Moderate, due to the concentration of activities, unless impacts are well managed. |
| Ecotourism – Development of Koh Kong's natural assets for ecotourism.   | Developing ecotourism will require providing access to the core attractions, building accommodation and activity centres. These areas are sensitive to development and beyond the reach of municipal services.  | Moderate, but could be lowered.  |
| Koh Kong Town to be developed for tourism. Ecotourism, beach tourism and conservation. Some recreational site development.  | Access to the assets is required as well as accommodation and services to deal with increased waste.  | Low provided developments are managed and facilities are provided.                 |
| <b>Krong Kep Province</b>   |   |  |
| Promotion of community based enterprises and souvenir industry.   | Impacts on natural resources if these are used for the souvenirs. Potential to reduce pressure on opening new land through new livelihoods  | Low, depending on the types of enterprises and souvenirs                           |
| Promotion of community-based tourism in villages.   | Increased waste loads in villages with limited facilities. Demands on water supply and increased pressure on fuel sources for cooking. All impacts can be managed through appropriate technology and guidance.  | Moderate. Can be lowered by using appropriate technology                           |
| Revitalize the beach areas including making use of suitable former colonial buildings as service centres.   | Need to upgrade the waste management facilities as well as the infrastructure.  | Low, potentially positive effects  |

Most of the tourism proposals in Table 37 and 38 are related to coastal environments (especially sandy beaches) and offshore islands, although there are some plans that affect the Cardamom Mountains, national parks, limestone caves, and border crossing points.

Among the island development proposals, Koh Kong, Koh Sdach, Koh Rong, and Koh Tunsay are singled out for development, although there are many smaller islets that are also potentially affected. The main environmental concerns with tourism development on these small islands (mostly less than 20 km<sup>2</sup>) are (i) litter management and solid waste disposal, given inadequate space for landfills; (ii) wastewater treatment and sewage

disposal, often in soils with little absorptive capacity; (iii) the need to adapt to future climate change and sea level rise; (iv) damage to fringing coral reefs and seagrass beds, with consequent impacts on biodiversity; and (v) deforestation, either of mangroves for piers, jetties, and roads, or of forest cover for accommodation, shops and recreation facilities. Over-development of islands can make them very unattractive to tourists, leading to adjacent islands being developed. Proposals for day-trip tourism are generally less damaging than permanent residences, but day trippers can also cause damage to coral reefs, collect shells of endangered species, leave uncollected litter, and damage mangrove areas with jetties, piers and informal boat landings.

Beach development is mostly associated with fringe development of accommodation, restaurants and bars, souvenir shops, car and bicycle rental offices, massage parlors, and other tourism services in a linear development pattern parallel to the beach. Long before beach usage reaches a saturation point (or as beaches are taken up for private use by luxury resorts), new areas are opened up further away from the main urban centre. This linear development pattern creates problems for basic services such as water supply, wastewater treatment, and solid waste collection, often leaving the new areas to make their own arrangements while the local authorities attempt to catch up with services in established areas. On the beaches, changing facilities, showers and toilets discharge their wastewater directly onto the beach or via pipes into the sea, polluting the water and potentially creating health risks due to high bacterial levels. Litter and other solid waste, often from mobile vendors patrolling the beaches, are mixed in with the sand and pose a visual and safety problem.

The active beaches include motorized sports, horse rides, and possibly fun parks—all of which add to the solid and liquid waste disposal problems. Proposed “full moon parties” and similar youth culture events (like rock concerts or “rave” dances) pose an additional problem with drug dealing and disposal of contaminated syringes. The more “active” and international that these beaches become, the greater the demand for quieter, family oriented beaches for domestic tourists, possibly leading to greater demand for day trips to the offshore islands.

For the nature-based tourism to caves, waterfalls, national parks, historic and cultural sites, attractions that abound in this region, the main environmental problems are (i) increased access for poachers, hunters, and collectors of natural products, putting pressure on the region's biodiversity; (ii) soil erosion and sedimentation from road construction and maintenance, with impacts on river water quality and nearshore habitats like coral reefs; (iii) litter collection and solid waste disposal at popular sites; and (iv) inadequate toilet facilities and seepage of contaminated water into streams.

In both urban areas and border-crossing sites, the heavy concentration of people, of which only a portion is associated with tourism, results in a range of environmental impacts including water quality, air quality, and solid waste collection and disposal. Expansion of urban areas into vulnerable ecosystems like mangroves, establishment of port facilities, and construction of roads close to the shoreline also cause significant environmental impacts. Increasingly, adaptation to the impacts of climate change must also be considered.

The other developments in the K4 region that will impact on the environmental quality that tourism depends on are illustrated in Figure 36. Forest and agriculture concessions occupy most of the K4 region and unsustainable forest operations will have major impacts on coastal environments. Oil and gas development offshore will also have a major impact on Sihanoukville and other coastal locations.<sup>21</sup> Potential oil spills and leakages and possibly associated use of proven gas resources for electricity production could impinge on beach areas and the overall attraction of the coastal area for tourism development.

<sup>21</sup> According to the IMF, by 2011, Cambodia could be receiving oil industry revenues of around \$174 million and by 2021 could be earning \$1.7 billion per year. Properly used, this revenue could propel Cambodia out of poverty. Using the revenue potential from the oil industry and focusing on the key tourism assets (Angkor Wat and ecotourism), Cambodia can position itself as a high value destination offering cultural and nature experiences rather than a destination for the mass tourism market.



Figure 34.1: Challenges to Development – Southern Coastal Region

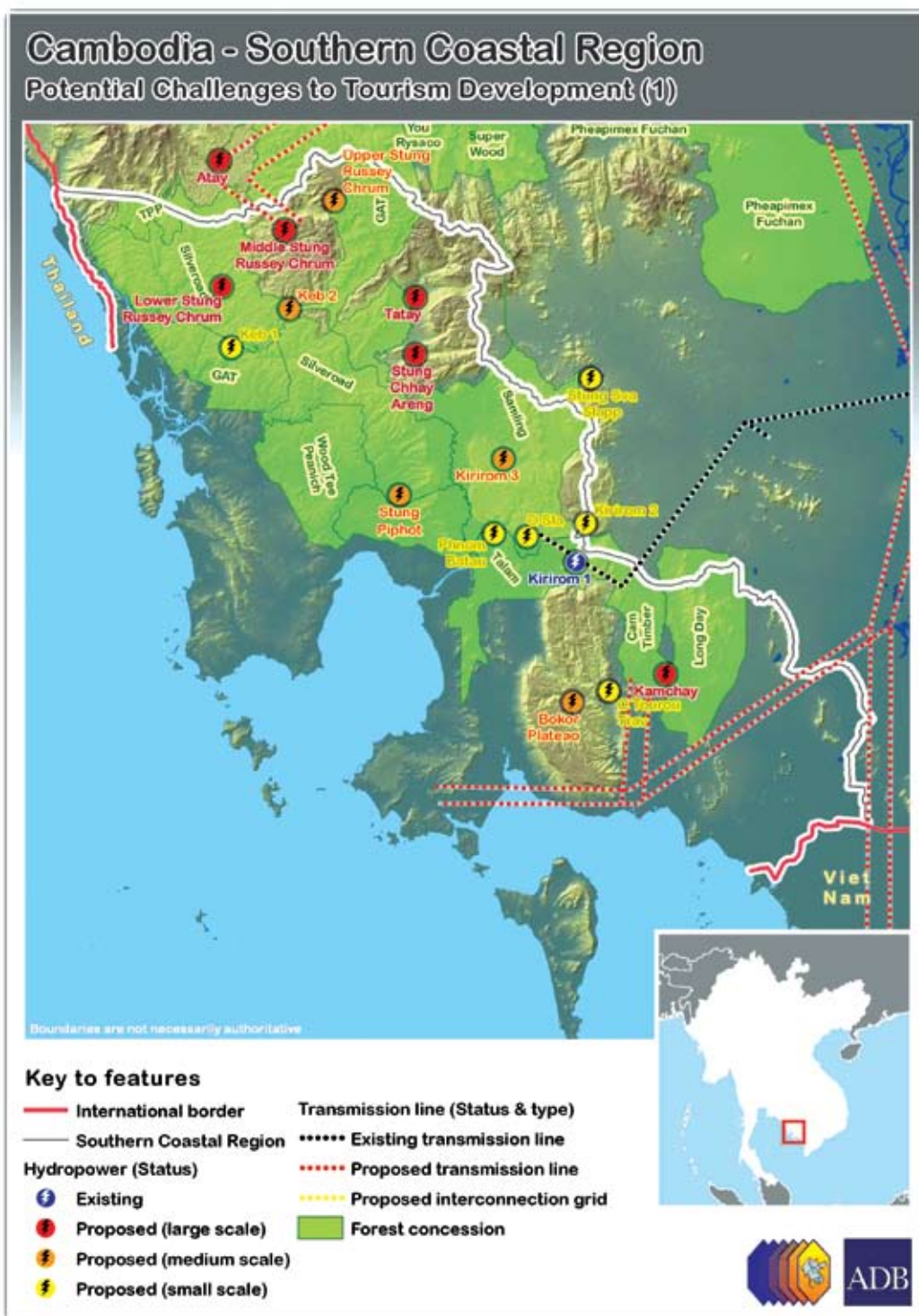
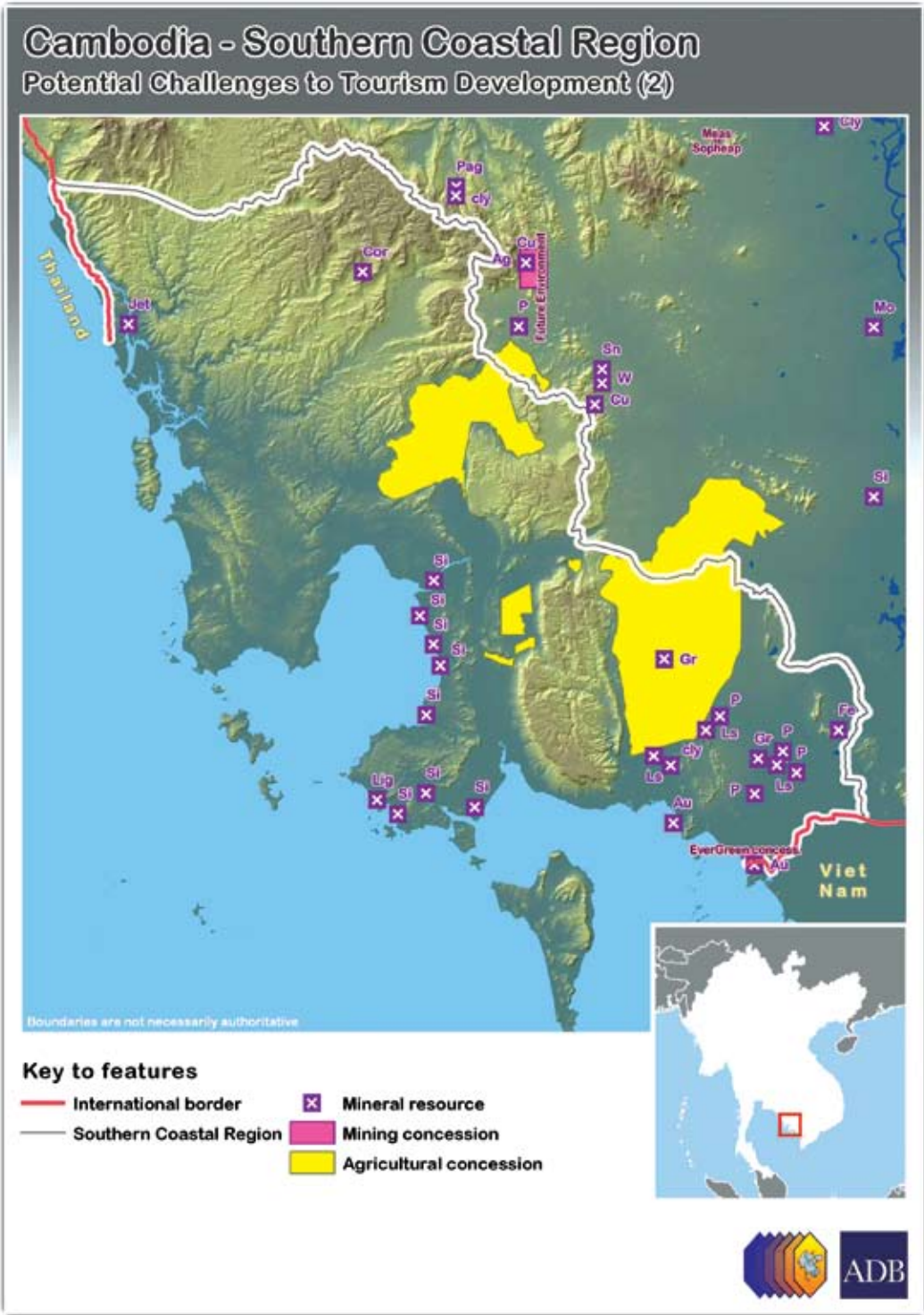


Figure 34.2: Challenges to Development – Southern Coastal Region









# Possible Mitigation and Adaptation Measures

Based on the environmental impacts identified in Section 5, a range of mitigation or adaptation measures that could be adopted are outlined in this section. For specific sites or projects, more detailed measures should be documented in an environmental management plan as part of an EIA.

## 6.1 National Policy Level (Tourism Law)

The main ways to address the shortcomings of the draft Tourism Law (from an environmental perspective) are to (i) amend the legislation; (ii) prepare implementing regulations; and (iii) amend related laws and regulations (like the Environment Act).

- (a) Legislative amendments: The draft Tourism Law could add a definition of sustainable tourism, as this may mean different things to the range of stakeholders involved. Similarly, a definition of “ecotourism business” could be added to the definition of tourism business. Alternatively, the Law could provide for an independently verified certification system, based on international best practice (such as the Green Globe certificate) for ecotourism businesses.
- (b) Implementing regulations: The licensing provisions for home-stays and village-based tourism could be simplified and made more appropriate to the

micro-scale of such businesses. In addition, much lower licensing fees should apply to these village-based enterprises than for large, internationally owned or controlled resort developments. Such fees could even be waived for village-based, pro-poor tourism businesses, although it is still important for them to be registered.

The standards and criteria for each type of tourism license should include the expected environmental outcomes, either drawing from existing environmental standards, or developing new standards and criteria in conjunction with the MOE. In evaluating applications for licenses, MOT could consider joint inspections with MOE, and under these circumstances regulations should be drafted to set out the procedures for such collaboration. Where a license is withdrawn, temporarily or permanently, due to environmental concerns, the regulations should specify the arrangements for consultation with MOE and indicate which agency has the final call in terms of approving continuation or canceling the license. The grounds for canceling, suspending, or downgrading a license (Article 14) should clearly specify not only a risk to the environment but also detail specific types of damage to the environment and degradation of natural resources. Cross-reference should be made to MOE and MAFF laws and regulations and there should be a clear understanding of the specific roles of each agency.

New regulations may also be needed in relation to collection and use of the bank deposit by tour operators and travel agents and other fees collected from the industry to possibly establish an environmental guarantee fund that could be used for emergency treatment of environmental accidents or rehabilitation of damaged areas (for example, where a bankrupt company has left behind an environmentally degraded site). The regulations would need to specify that MOT could transfer such funds for implementation by the MOE or contractors engaged by MOE, or other arrangements satisfactory to both parties.

- (c) Related laws and regulations: The principal law that needs to be applied in conjunction with the Tourism Law is the Law on Environmental Protection and Natural Resource Management (the Environment Law). Article 7 specifies that “all investment project applications and all projects proposed by the State shall have an Initial Environmental Impact Assessment (IEIA) or an EIA as specified in article 6 of this law. The MOE shall review and provide recommendations on the IEIA or the EIA to the competent organization within the period determined in the Law on Investment of the Kingdom of Cambodia.” MOT should ensure compliance of all tourism investors with this provision of the Environment Law and the 1999 sub-decree on the EIA process, including the provisions for public participation in the decision making process.

As much of the nature-based tourism is located in or near forest areas under the administration of MAFF, the provisions of the Forest Law should also be cross-referenced in the Tourism Law (and subsequent regulations). The Forest Law specifies that protected forests may be used for recreation or religious purposes (among others) as well as being used by local communities. MAFF may propose that any part of the permanent forest reserve be designated as protection forest, including for its tourism value, and the Forest Administration is required to prepare a management plan for such uses.

Where the anticipated use of an area of protection forest is for recreation or tourism, MAFF should ensure that the management plan is jointly prepared with MOT and responsibilities for management, maintenance, collection of entrance fees, and other aspects are clearly documented in the management plan. Where community management of the protection forest is intended, then the affected community should be

engaged with MAFF and MOT in drawing up the management plan. Detailed provisions for such joint preparation and implementation of tourism zones in protected forests should be covered by regulations under the Tourism Law and the Forest Law. The Forest Law should stipulate that the primary function of the protected areas is for conservation and that any uses of the protected area should support and contribute positively to upholding these values. Adoption of the national ecotourism strategy as the policy for developing tourism and supporting conservation in protected areas would provide more institutional linkages between MAFF and MOT.

Road construction to provide access to tourism sites that requires clearing of forest is covered by Article 24 of the Forestry Law. In such cases, government approval must be sought by the Ministry of Public Works and Transport after consultation with MAFF. Where such roads are specifically identified as access roads to key tourism sites, it may be necessary for MAFF, Ministry of Public Works and Transport, local government, and MOT to agree on funding arrangements and responsibility for road maintenance.

MAFF has recently suggested that it will encourage trophy hunting by wealthy tourists in the Monduliri and Ratanakiri forest reserves. A specific proposal by a Spanish firm for a five-star jungle camp for hunting safaris, with a list of 30 targeted mammals, birds and reptiles, is under consideration by MAFF.<sup>22</sup> The Forest Law specifies that all wildlife (with the exception of water-based species) is under the management authority of the Forest Administration (Article 32), so such proposals are clearly within their mandate (no matter whether they are desirable from a wildlife conservation perspective or not). However, establishing a luxury jungle camp should be under the approval authority of MOT in coordination with the conservation objectives outlined in the protected area management plans required under the Forest Law. Clarification of responsibilities in such cases may require amendment to one or both laws. A widely ignored provision of the Environment Law (Article 10) requires all ministries to consult with MOE prior to issuing any decisions or undertakings related to the conservation, development, or management of natural resources (including wildlife).

Other laws that need to be cross-referenced by the Tourism Law (see Annex 1) include the Law on Investment, Land Law, Law of Land Management, Urban Planning and Construction, among others.

<sup>22</sup> MAFF reasons that existing poaching does not generate any revenue for the Government, so it is better to legitimize hunting and use the revenue for improved forest and wildlife management (Reuters, 11 December 2007).

## 6.2 National Policy and Strategy Level (Ecotourism Policy and Strategy)

In general terms, one would expect that the national policy and strategy for ecotourism development in Cambodia would be environmentally benign. However, as shown in Table 33, there are some negative environmental consequences that necessitate mitigation measures. In addition, increased emphasis on seeking win-win outcomes rather than trying to balance conservation and development with trade-offs would improve the national strategy.

The eco-label proposed in the draft Tourism Law would help to create the brand image that the national policy and strategy desires, but the eco-label should be based on an existing, recognized label with independent, third party verification. MOT and MOE should conduct a joint, preliminary evaluation of the existing international eco-labels before deciding on which label would be best for Cambodia.

There is an implicit assumption in the national ecotourism policy and strategy that community-based, SME or micro-scale enterprises are most likely to qualify as ecotourism attractions. Being small-scale, they can operate in a niche market without high overheads. However, global experience suggests that quite large enterprises, often as part of a global chain, can be better at providing the level of comfort expected, while simultaneously addressing environmental concerns, than village-based operations. The extent of training needed to ensure the capacity of a community-based enterprise to provide the combined level of service and environmental management expected by international eco-tourists should not be underestimated. Poor, rural families with limited exposure to tourists or tourism activities cannot be expected to adapt immediately to the opportunities provided by the ecotourism market. Study tours to existing successful ecotourism operations and twinning with larger, nearby operations may help to minimize the learning period. Fostering joint ventures between communities and the private sector tour operators will also help to speed the learning process and connect the village-based tourism products to the market. Guidance in this process for both the villages and the operators is needed to keep the expectations realistic and ensure that there are tangible benefits to the village. The NGOs can play an key role as intermediaries in this process.

While the concept of integrating ecotourism into existing sectoral and provincial development plans is laudable, it is more likely that developments in sectors like forestry or mining will conflict with ecotourism plans. The national multi-stakeholder body proposed will need

to tackle and resolve these conflicts. A higher appeals process, possibly at ministerial level, should be provided to deal with conflicting situations that cannot be resolved by the coordination body. This process can also be used to consider overall zoning of land use and the provision of a range of settings for recreational and opportunities and tourism use.

## 6.3 Transboundary Area-based SEA (Northeast Triangle)

### 6.3.1 Emerald Triangle Tourism Development Action Plan

One of the main concerns regarding the Emerald Triangle plan is that considerably more human pressure is planned for the region's protected areas. Protected area management is mandated by a 1993 Royal Decree on protected areas that established 23 protected areas and the 1996 Law on Environmental Protection and Natural Resource Management (Bugna 2002). The area along the 37 kilometer stretch of the Mekong River between Stung Treng and the Lao PDR border (14,600 ha) was designated as a Ramsar site in 1999 (IUCN 2005). On paper, therefore, it would appear that the key biodiversity areas are adequately protected. Unfortunately, most of these protected areas are not much more than "paper" parks. The key mitigation measure required is to ensure that part of the revenue stream from tourism is directed to management, protection and maintenance of the region's protected area system. In addition, the corridors between protected areas also need to more effectively managed, as relocated soldiers and other villagers are gradually destroying fringing forests and their associated wildlife values. Border protection, in areas like Virachey National Park, also needs to be improved, as incursions from the Lao PDR side of the border are reported as a serious threat to the area's biodiversity.

One of the main reasons the northeast part of Cambodia still has such extensive forest cover and associated wildlife values is because the road network has been poorly developed in the past and core areas have remained essentially as "untouched" wilderness. The proposed road development to provide better access to the main tourist attractions threatens to open up access to less desirable activities too, like illegal logging, collection of non-timber forest products, poaching, hunting, swidden agriculture and mineral exploitation. While it may be impossible to completely avoid all protected areas in constructing the road network, very careful route planning, wildlife and plant inventories, environmentally sensitive construction, and detailed EIAs prior to approval are necessary mitigation measures.



Particular attention needs to be paid to environmental management at border crossing points, where many activities are concentrated. The main mitigation measures needed include (i) sanitary landfills for solid waste management; (ii) provision of safe, treated water supplies; (iii) secondary wastewater treatment facilities; (iv) checking of any trade in toxic or hazardous waste materials; and (v) provision of training and equipment to Customs officials for the detection and control of illegal trade in wildlife and endangered plant species. Litter management at bus stops, market places, truck depots and similar heavy use zones is also a priority.

As for border crossings, the proposed airports developments also require similar mitigation measures, which should be included in an environmental management plan prepared as part of specific project EIAs. Additional mitigation measures specific to airport development include (i) noise control arrangements, especially for surrounding residential areas; (ii) control of birds (especially near any water bodies or wetlands); (iii) bundled aviation fuel tanks and aircraft repair facilities; (iv) safe recycling or disposal of bitumen drums (used for tarmac sealing); and (v) rehabilitation of quarries or borrow pits for fill material used in runway construction.

While ecotourism oriented accommodation is preferable to less sensitive mass tourism accommodation, all high use buildings in the tourism industry have adverse environmental impacts. Mitigation measures for eco-lodges should take a life cycle approach (i) starting with the design of the buildings (aiming at zero net energy use, zero emissions, and 100% recycling of building materials); (ii) ensuring that the construction phase has minimal impacts and, where necessary, rehabilitating affected areas or providing other remedial measures; (iii) operating the accommodation in an environmentally sensitive manner (e.g., minimal use of detergents, composting of food wastes, using organic materials like banana leaf plates, and recycling all useful materials); and (iv) building into the original design, complete recycling of the building when it is ultimately decommissioned or no longer needed; and (v) use of waste management technologies that include adequate levels of treatment of sewage and grey water. Use of constructed wetlands for grey water treatment and composting or bio-gas toilets will reduced the amounts of waste being discharged to the environment. In urban areas, tourism accommodation may not be able to follow these stringent ecotourism design principles, but satisfactory wastewater treatment, optimal recycling of wastes, water efficient showers, and energy efficiency should be included in building approvals as appropriate mitigation measures.

### 6.3.2 Ratanakiri Province

Improved road access from the west, north and south (and possibly from the east) plus airport development, will open up Ban Lung and surrounding tourism attractions to significantly increased tourist numbers. The greatest potential for environmental damage is from construction and operation of the improved road network. Careful route selection, avoiding environmentally sensitive locations (such as wetlands) and specific wildlife habitats (such as salt licks or water holes), is needed in the planning phase. Comprehensive EIAs, subject to public review and critique, are critical prior to approval to proceed. Much environmental damage can be caused during the construction phase but appropriate mitigation measures can minimize this damage. For example, environmentally sensitive construction techniques can include (i) using cut and fill construction, rather than side-casting soil and rock; (ii) revegetating cut faces and fill slopes; (iii) rock lining runoff drains; (iv) close spacing of culverts; (v) rehabilitating borrow pits and quarries, fuel dumps, gravel stockpiles and other disturbed areas; (vi) stockpiling topsoil for revegetation, thus ensuring regeneration of native species; (vii) locating construction camps in non-sensitive areas and prohibiting hunting or collection of forest products; and (viii) recycling or removing fuel and bitumen drums, formwork, and other construction materials.

Other mitigation measures that may be specific to this province include environmental management of elephant camps, breeding of butterflies for sale to tourists, maintenance of trekking trails (especially at stream crossings), and management of eco-lodges (see above).

### 6.3.3 Mondulkiri Province

Most of the mitigation measures needed are covered in Section 6.3.1. As in several provinces, emphasis is being placed on waterfall development, with provision of swing bridges, steps down to the falls, and swimming areas. Associated works include car parks, markets and shops, and access roads. While swing bridges provide an ideal viewing platform for waterfalls, there is some concern that the bridges visually impair the scenic attraction and natural setting. Consideration should be given to leaving some of the more significant waterfalls in their natural condition, rather than developing them all as recreation facilities.

Although details of the proposed hunting safaris in this province are currently sketchy, it is suggested that MAFF, MOT, and MOE form a joint task force to examine this proposal carefully.

### 6.3.4 Kratie Province

The two main environmental issues associated with tourism in this province are solid waste management and conservation/protection of the dolphins. Also, in Kratie Province there is a low level of environmental awareness, so DOE has plans for including environmental education under the socio-economic improvement for local government (Seila Programme).

Although Kratie has a solid waste management plan it has not been implemented and waste is dumped in an open site 9 km from Kratie city. A private contractor has been appointed but only about half of the solid waste is collected. DOE wants to add the solid waste collection fee to the electricity bill with the revenue shared with the electricity company. In relation to wastewater treatment, the urban sewerage system is broken and during flood periods sewage floats to the surface. The Department of Public Works and Transport is currently rehabilitating the sewerage system. Previously waste was discharged to a natural lagoon system but this is now destroyed and needs to be rehabilitated. Fortunately there are no factories, so most of the waste is from households and the market.

Other possible environmental concerns in the province include (i) a hydropower dam being planned by a Chinese company; (ii) rubber factories; (iii) mining; and (iv) contaminated groundwater. Water drawn from wells in the province has a high arsenic content, so urban water is now drawn from the Mekong River and treated with chlorine. The gold mining operation has now stopped and laboratory analysis shows that drainage from this area is not contaminated with mercury and the water quality meets the standards. The cause of death of baby dolphins remains a mystery but it could have something to do with elevated arsenic levels, as most of the deaths occur in the dry season. Additional research is needed to protect this attraction.

The only national park in the province, at Snuol, has 25 rangers but it is not renowned for any particular iconic species to attract tourists. The province also has 3 protected forest areas and day visits from Phnom Penh are increasingly popular. Improved natural resource management may be possible with increased numbers of visitors and collection of entrance fees, although entrance fees are rarely adequate to meet the total operations costs for protected areas.

The flooded forest zone surrounding the Mekong river near the Kratie – Stung Treng provincial border is under increasing stress due to logging and clearing of land for agriculture. The river has been identified as very important habitat for the Mekong dolphin and the

unique forest assemblage that surrounds it is in danger of being lost. Recent investigations of this forest have revealed that this is important remnant forest representing a forest community that once existing over a much larger area and is now only found in a restricted area between Kratie and Stung Treng (Mark Bezuijin et al. 2007). The biodiversity value of this forest is such that it should be protected and there is very good nature and community-based tourism product potential with this area for trips along the Mekong featuring, dolphins, bird life, primates, the flooded forest ecology and this remnant forest. Continued occupation and exploitation of this forest presents a serious threat to the integrity of the biodiversity of the area.

### 6.3.5 Stung Treng Province

Solid waste disposal in Stung Treng Province is an inevitable problem as numbers of visitors increase and borders with Lao PDR and Thailand open up. DOE plans to build a solid waste disposal site close to the market on the Lao PDR border. DOE also intends to step up its cooperation with its counterparts on the Lao PDR side of the border. For example, fish nets are banned on the Cambodian side but not on the Lao PDR side. At least one dolphin has died from being caught in a fish net. The other main problem is the use of pesticides to catch fish. MRC is seen as a possible broker to help bring both sides of the border together and agree on common approaches to aquatic ecosystem management. DOE is preparing an ecotourism plan for the province and is trying to raise funds to buy a patrol boat for improved management of the Ramsar site.

For major tourism developments, like a rumored casino on the Lao PDR border, under the investment law it is the CDC and Ministerial Council that have the power to issue permits. DOE can require an EIA but it is not empowered to issue a license to operate. Nevertheless, the public participation provided for under the Environment Law and the EIA sub-decree would ensure greater scrutiny of such proposals.

As for other urban areas, in Stung Treng municipal area, solid waste and wastewater discharge are also the major problems. Wastewater is essentially discharged untreated into the river, rarely passing through even rudimentary septic tanks. There is a new solid waste dumping site (5 km from town) but disposal has not yet started there (and continues at an open dumping site about 3 km from town). So far only one of the two disposal pits has been excavated. DOE will also need to invite bids from potential contractors to manage the collection and disposal operations. A proposal for a public sewerage system was prepared in 2006 and submitted to JICA but there has been no response to date.

## 6.4 Area-based SEA (K4 southern coastal tourism strategy)

Mitigation measures for the K4 southern coastal tourism strategy are best approached from a geographic/ecological perspective (islands, nearshore waters, mangroves, coral reefs, seagrass beds, beaches, urban areas, forests and hill resorts).

The main mitigation measures for the island ecosystems are (i) determining carrying capacity, especially constrained by water resources, and limiting development accordingly; (ii) mapping coral reefs and seagrass beds and trying to avoid tourism infrastructure near these ecosystems; (iii) solid waste collection and return to the mainland for disposal and/or recycling; (iv) installing composting or other waterless toilets; (v) protecting forest cover with a “no tree removal” regulation; (vi) limiting use of the smaller islands to day trips only; and (vii) imposing strict building codes for those islands where permanent residences or hotels are permitted.

For the mangrove ecosystems, the main mitigation measures are (i) banning further large scale clearing of mangroves for shrimp ponds or other uses; (ii) replanting mangroves in suitable areas; (iii) providing boardwalks and interpretation information for tourist access to the most interesting mangrove areas; (iv) providing protected area status for the most valuable mangrove areas; and (v) prohibiting commercial capture of juvenile fish and crabs in mangrove areas that serve as nurseries for young aquatic organisms.

For the beach areas, depending on the intensity of use anticipated, the main mitigation measures include (i) installation of effective wastewater treatment systems in hotels, restaurants, residences, and public buildings within a 100-200 m distance from the beach; (ii) protection of upland water supply sources and strict controls on exploitation of groundwater; (iii) litter control and beach grooming; (iv) zoning nearshore waters for various uses, so that swimming and power boats, for example, are not using the same water; (v) establishment of an oil spill contingency plan, stockpiling equipment and chemicals, and training personnel; (vi) strict control of vendors, changing rooms and toilets, restaurants and other environmentally damaging activities on the beach, by beach inspectors employed by the local government; (viii) prevention of a linear development pattern by preparing town development plans for all beach areas; and (ix) prohibiting private beaches and exclusive access to tourist resorts.

For the inland areas, such as waterfalls, caves, forest areas, wildlife sanctuaries, hill resorts and other attractions, the main mitigation measures are (i) control of construction and maintenance of roads; (ii) litter management and solid waste disposal; (iii) appropriate wastewater treatment and provision of safe water supplies at public toilets; (iv) use of rangers and Forest Administration officials to control illegal activities such as hunting, collection of plants and mushrooms, and damaging habitats in protected areas; and (v) maintenance of walking trails, interpretive signage, and camping grounds.



# Implementation Arrangements and Monitoring

As has been demonstrated throughout the course of this SEA, MOT and MOE have a common interest in protecting the environment and natural resources on which tourism depends. Similarly MOT and MAFF have a joint interest in protected forest areas and in waterfalls in other forested areas. As the draft Tourism Law and the proposed Ecotourism Policy and Strategy provide for collaboration and establishment of a multi-stakeholder coordination body, it is suggested that MOT take the initiative to set up a standing coordination body, possibly called the National Coordination Committee on Tourism and Environment (NCCTE). This committee would (i) review the national and provincial tourism plans from an environmental perspective; (ii) continue the process of commissioning and reviewing SEAs for tourism policies, plans and programmes; (iii) establish rules for revenue generation and disposition from tourism activities in or near protected areas; (iv) agree on the terms of reference for EIAs for tourism projects; and (v) coordinate monitoring programmes and data collection for feedback into future tourism plans.

One of the roles of the NCCTE should be to maintain an inventory of the areas of strategic importance to tourism. The application of tourism zone status to land areas would provide an identification of a range of settings that could be used for recreation and tourism purposes. Guidelines for the types of usage in each zone should be according to the types of activities proposed and these opportunities could be presented to potential investors. Included in the NCCTE inventory should be a preliminary land tenure audit.

The NCCTE should have linkages to the provinces through the Tourism Development Committees and should foster close working ties by providing the guidelines for identifying and developing the provincial tourism attractions. The TDCs need set criteria and guidelines for identifying the environmentally sensitive areas and the activity zones within these.







# Stakeholder Participation and Capacity Building

## 8.1 Stakeholder Participation

During the course of TA 6279-REG: GMS Sustainable Tourism, one subregional and three national workshops were held with over 120 stakeholders in Cambodia, Lao PDR and Viet Nam. More than 200 in-depth interviews were conducted and focus groups undertaken in 16 villages. Two stakeholder surveys were undertaken in August-September 2006 involving 730 foreign and 654 domestic tourists in 10 sites. Household interviews were also conducted with households in affected communities. Extensive stakeholder participation has been carried out by SNV for the national ecotourism policy and strategy.

Budget restrictions for this SEA did not allow such extensive consultations but through a series of training and consultation workshops, a minimal level of public input into the process has been achieved. Under the proposed National Coordination Committee on Tourism and Environment more extensive public participation could be undertaken on a wide range of future policies, plans and programmes.

## 8.2 Previous Capacity Building Assistance

Cambodia has received considerable capacity building assistance since 1998 as much of the old colonial capacity was destroyed during the Pol Pot era. Examples

of donor-funded capacity building programmes that have relevance to the tourism and environment sectors include:

**National Water Resources Policy** was formulated in 2004 aiming at providing guidelines for efficient and effective water resources management, socio-economic development and welfare of the population and ensuring a sustainable environment.

**Strategic Framework for the Water Sector** followed on from ADB's assistance in creating the National Water Sector Profile and supported MOWRAM in the development of its strategy.

**National Water Resources Strategy for Cambodia** was formulated more or less contemporaneously with the Strategic Framework for the Water Sector with the support of the World Bank through its Agricultural Productivity Improvement Programme.

**National Poverty Reduction Strategy 2003 –2005** was prepared using SEDPII as its key building block. In it the priority poverty reduction actions include maintaining macroeconomic stability; improving rural livelihoods; expanding job opportunities; improving capabilities; strengthening institutions and improving governance; reducing vulnerability and strengthening social inclusion; promoting gender equity; and priority focus on people.

**Governance Action Plan of April 2001** (GAP) was prepared by the Council for Administrative Reform and



has as its main function the definition and relationship of public power and authority to management and control over societal resources. Crosscutting areas covered by GAP include public finance, civil service reform and anti-corruption, judicial and legal system reform, demobilization of armed forces and natural resource management. In the field of natural resource management, issues related to land, forestry and fisheries management are addressed as well as the social question of resource access.

### **National Environmental Action Plan 1998 – 2002**

(NEAP) aimed to integrate environmental concerns into economic activity and ensure future maintenance of the functional capacities of Cambodia's ecosystems. NEAP adopted a precautionary approach, concentrating on environmental protection rather than the more difficult and costly post-impact rehabilitation. Priority areas of intervention were forestry policy, fisheries and agriculture in the Tonle Sap, coastal fisheries management, biodiversity conservation and protected areas, environmental education, energy development and urban waste management.

### **National Biodiversity Strategy and Action Plan 2002**

(NBSAP) was created with a view towards integration of biodiversity conservation and sustainable natural resource use concepts into an overall poverty reduction strategy. NBSAP provides a framework for action at all levels that will enhance productivity, diversity and integrity of natural resources.

## **8.3 Capacity Building Needs Assessment**

The government structure is based on three levels of administration with the following areas of authority:

**Central Level:** Coordination, resource allocation, annual work plans and budgets, Ministry services and policy formulation;

**Provincial Level:** Provincial investment fund, provincial programme support, planning and budgeting, contract administration and support to Commune/Sangkat Councils; and

**Commune/Sangkat Level:** Commune/Sangkat fund, commune/Sangkat planning system, project implementation.

In the tourism and environment sectors, therefore, capacity building needs to address all levels of administration. The priority needs identified by the SEA training programmes to date are (i) hands-on experience in the implementation of SEAs in the tourism sector; (ii) increased understanding of the role of scenarios in considering alternative policy and strategic choices; (iii) matching tourism attractions with targeted marketing programmes; (iv) standards and criteria for ecotourism; (v) effective use of EIAs to identify appropriate environmental management programmes; (vi) raising revenue from tourism operations that can be used for improved environmental management in key tourism attractions; and (vii) conducting monitoring and research that will feed back into future policies, plans and programmes.

## **8.4 Strengthening the Legal Framework**

This SEA has illustrated the importance of finalizing the draft Tourism Law and its associated regulations. Specific opportunities for cross-referencing appropriate environmental provisions were identified in Section 5.2. A similar review of other relevant laws, outlined in Annex 1, should be conducted to make sure that tourism is specifically referred to as an activity potentially affected by the application of these laws.

Local authority by-laws and planning ordinances also need to be strengthened to ensure that tourism developments fit into a coherent local planning framework.



# Conclusions and Recommendations

## 9.1 Finance and Investment

Tourism is a very important contributor to Cambodia's economy and will continue to provide a significant contribution to the economy in the future. The tourism industry relies on Cambodia's natural and cultural assets as important tourism attractions. Protecting these assets and ensuring that any development is done in a sustainable manner requires proper planning and consideration and mitigation of all potential impacts.

The main investment requirement that tourism businesses look for is long term security, especially over financing and land tenure. The land title issues in Cambodia need to be solved to provide that security for prospective investors. Active participation of tourism agencies in promoting better practices in adjudicating claims and providing land titles for tourism businesses is needed.

SMEs involved in (or interested in) tourism require more information on how to qualify for financing and on the different types of financing appropriate to various types of tourism businesses. MOT could issue periodic brochures on financing tourism ventures in Cambodia, assisted by the banking sector. This information should also be made available at the provincial level through the Tourism Development Committees.

Better investment incentives geared to support SMEs are needed, in contrast to the current incentives which favor large business. In particular, training in basic financial management would help to ensure that tourism ventures are not started and then soon abandoned, leaving environmental damage for which no one takes responsibility.

## 9.2 Human Resources

MOT staff need ongoing training in environmental management, EIAs and SEAs, to build on the foundation that this project has provided. MOE and MAFF staff need training on the tourism industry and how the nation's protected areas can be served (and conserved) by opening up tourism opportunities. This training needs to be extended to the provincial level departments, with training materials available in the Khmer language.

The training should be aimed first at developing a core of trainers who can then impart their knowledge at the provincial and district levels. This knowledge base should be coupled with development and adaptation of appropriate local level environmental technology that can be used in SME enterprises. Training in the use of technologies for composting of vegetable waste and dealing with household waste is important for areas without municipal services. The efforts of NGOs such as CCBEN provide a good platform from which to build and these efforts should be supported.

Public sector tourism training should include:

Organization, administration and logistical skills;  
Tourism research, planning, development,  
and promotion; and  
Basic tourist information servicing.

There is need to formulate a human resources development plan designed to ensure that the necessary quantity and quality of qualified manpower required by the industry and the public sector is in place. This will involve the following components:

- Formulation of a comprehensive long-term human resources development plan in line with the quality requirements indicated by the development planning and marketing programmes, and forecast manpower requirements;
- Specification and initial implementation support for a short-term action plan to 2015.
- Preparation of train-the-trainer programmes in the hospitality, travel operations and guiding, community tourism, ecotourism, and natural and cultural heritage conservation and presentation areas.

The short-term human resource development should focus upon:

- Strengthening national, provincial and district level institutional capacities to manage the sustainable planning, development, and promotion of the tourism sector, and in particular, preparing local communities to participate effectively in tourism development and operation, and conservation of their tourism resources.
- Design and production of training manuals in the hospitality, travel operations and guiding, community tourism, ecotourism, and natural and cultural heritage conservation and presentation, and SME tourism operations areas; and organization of related train-the-trainer programmes.
- Preparation of on-the-job training manuals in hospitality and restaurant operations for use by tourism establishment owners and operators.
- Working with the existing tourism education and training institutions to revise and standardize their existing tourism education and training

More vocational training programmes that serve the needs of SMEs in the tourism sector are needed. Training for staff of large hotels or resorts is usually undertaken in-house whereas the SMEs are generally overlooked. The types of basic training required include:

- Hospitality skills, food and beverage service, food preparation, and basic hygiene practices;
- Basic management and administration skills
- Tour guide knowledge and interpretative techniques; and

- Maintenance skills to ensure that facilities and equipment are properly maintained.
- Handicraft design and production skills.

Practical training and development of information kits for guest houses, smaller hotels, restaurants, transportation services, tourist shops, handicraft producers and travel operations should include:

- Legal and fiduciary responsibilities;
- Building codes and guidelines;
- Basic feasibility evaluation skills before investing;
- Small business techniques and business planning skills;
- Staff recruiting, training and supervision skills; and
- Basic marketing and sales promotion skills

### 9.3 Institutional Strengthening

As ecotourism relies to a large degree on nature-based attractions and these are often part of the country's protected area network, there is a need to ensure there is continued support for the maintenance and upgrading of a professional protected area management service. The standards set by the PA managers and the guidelines for use will ensure that the attractions remain as quality tourism products. The ability to provide high quality interpretation and information services is another aspect of the institutional strengthening required. Examples can be found in the parks services in Australia and New Zealand where tourism benefits derive from sound conservation policy and the development of a professional parks service. The parks service is mainly concerned with the conservation objectives for the protected area and tourism is managed in support of these objectives.

A high priority need for the Government is to bolster the legal framework and institutional capacity building for the management and protection of the country's national parks. The lack of a legal instrument for the management and protection of the national parks could be a serious constraint to the development of ecotourism. Almost all of Cambodia's national parks are threatened by some form of illegal activity (including land encroachment and illegal logging) and this has a direct bearing on the value to ecotourism. At present these issues are being addressed through a combination of law enforcement, education and community development programmes. However, increased efforts are required to improve the management of national parks by strengthening the legal framework, human resources, financial resource mobilization and management planning and implementation.

Experience in Cambodia suggests that the national agencies alone cannot effectively manage and protect national parks. Therefore MOE should develop a

participatory planning and implementation process (for both government and non-government stakeholders) and simultaneously build the capacity of its staff and the communities living near national parks to facilitate local participation. To sustain local stakeholder interest, they must benefit directly from park-related activities such as ecotourism. Conservation efforts and ecotourism development will be undermined if local poverty is not addressed as an integral part of protected area management. Possible positive impacts from improvement conservation management and ecotourism include:

- Employment in ecotourism activities;
- Employment in the protected areas;
- Local support for the conservation efforts
- Improved local markets for produce;
- “Capitalization” of the natural resources in a non-extractive industry;
- Economic benefits at the local level from small and medium enterprises;
- Increased investments in tourism and local development
- Spin-off tourism development in areas adjacent to the protected area.

## 9.4 Marketing

An effective tourism marketing board needs to be created. This is well known and already in the works but the point needs to be stressed again.

More market research on developing alternatives to Siem Reap/Angkor Wat in the northeast and southwest of Cambodia is needed. This knowledge will help to focus the promotional efforts on the key target markets and will also assist in providing the guidelines for developing products appropriate to the market. In many ways, ecotourism is a niche market and careful targeting of marketing is needed to attract international ecotourists and to develop an interest in ecotourism within Cambodia.

Gathering market information and promoting is not a one-off effort and needs to be part of the annual review of the progress of the tourism industry. The statistics gathered by the various tourism offices need to be collated and analyzed to provide information that can be used to develop visitor profiles. Understanding the visitor profile will enable fine-tuning of the marketing message and honing of the products being offered.

Tourism associations and other relevant private sector actors need support in creating economically viable marketing services for their members. Market research information needs to be made available and distributed to all members of the tourism industry to build the collective strength and to enable tourism to be a greater

contributor to the country's economy. Associations of ecotourism guides, home-stays, tourism boat operators and others help to share best practices in the industry, link up with similar international organizations, and share part of the cost of tourism marketing.

Fostering an international interest in ecotourism in Cambodia relies on developing attractions that deliver on the marketing “promise”. The core attractions for ecotourism have been identified, but unless adequate protection and management is provided for these assets the marketing efforts will be in vain. Thus, support to the protected area management and incorporating their efforts in the overall product development is important to ensure that the marketing message is linked to the actual product being offered. This, in turn, garners support for channeling some of the benefits from ecotourism to support conservation efforts.

## 9.5 Participation in Tourism Development Policy and Planning

A more institutionalized approach to participation of the private sector in tourism planning and policy is needed. The current Tourism Working Group cannot do everything for the tourism sector. In the long-run it would be more efficient to involve the private sector on a regular and systematic basis during the process of policy and planning formulation, rather than having the Working Group comment on a post-facto basis. The proposed multi-stakeholder coordination group included in the ecotourism policy and strategy would provide such a permanent body, with appropriate representation from both the private and public sectors.

Tourism working groups should include the private sector and serve as a forum for information exchange; receiving policy information from the central government and providing feedback and tourism planning input. The overall policy and direction is set at the national level and the regional implementation follows in step with this overall vision. Responsibility for planning and the implementation of plans should be vested at the lowest appropriate level and should incorporate the local stakeholder inputs. By extension, this would also include the identification of environmentally sensitive areas and impacts to be mitigated.

Protected area managers play an important role in tourism development and should be included in tourism planning forums so they are aware of the demands, activities and potential threats that may arise. PA managers are responsible for their areas and should have sufficient resources to manage and be able to set conditions for use of these special areas.

Provincial public-private committees on tourism development should be created in provinces focused on tourism development. Several tourism development committees have been formed at the provincial level but they have not been very active to date. MOT has a role in revitalizing these committees and ensuring that each provincial DOE regards servicing such committees as an essential adjunct to their routine duties.

An inter-agency discussion on the direction of the SEA stressed the need for continued inter-ministry and inter-department dialogue and coordination. The following key recommendations were highlighted during the meeting:

- An inter-ministerial task force or a committee including technical staff from the various ministries involved should be established to address cross-sector environmental issues;
- The roles and responsibilities of the task force with regards to managing the environmental concerns resulting from tourism development should be clearly outlined and understood.
- Any tourism areas adjacent to protected areas should be carefully developed to protect the environment and to prevent natural resources from deteriorating.
- The long-term vision of the tourism sector should take into account the need to balance between the number of tourists and the attraction's carrying capacity. Tourism plans should be regularly reviewed and the focus should be on sustainable tourism and the mitigation of negative impacts resulting from the development.
- A balance between the international and domestic tourists should be carefully considered and managed. There is a need to conduct further detailed studies to determine the actual size and strength of both markets. At the same time, the environmental issues should also be taken into account.

Integration and sharing of development plans and important information between agencies is important to be able to guide development and provide a sustainable tourism product. The involvement of the key actors is important to ensure that the inputs reflect the actual needs of the industry and the sectors work in tandem toward the long-term objectives.

The SEA process is a support tool for planners and decision-makers, providing relevant and timely environmental information on the positive and negative implications of plans and programmes. As SEA focuses on policies, it should be carried out at a stage before projects and programmes have been initiated so that any needed changes in direction can be put into place.

## 9.6 Licensing and Regulations

Regulations on tourism business fees need to be made public and more accessible to SMEs in order to reduce corruption or confusion. The draft Tourism Law contains appropriate guidance on licensing and other fees. Using the Provincial Tourism Offices to distribute this information would establish these offices as a resource centre and encourage more cooperation between the private and public sector.

Special provincial tour agency deposits (bonds) should be created in order to facilitate the development of provincial tour agencies, which will help to spread the benefits of tourism in the southwest and northeast.

In Cambodia a number of organizations have emerged with interests or assigned responsibilities for management of the nation's natural resources. There is a need to ensure that all the responsible agencies are involved with formulating the management options are included and that there are no overlaps or gaps in their respective jurisdictions and duties. For example, Mekong dolphin conservation actually involves a number of agencies. While the Ministry of Environment provides overall guidance for environmental performance, the National Commission for Dolphin Conservation has been assigned the responsibility for the dolphins. Thus, there is some overlap in the jurisdictions between the DoE and the NCDC as well as the Department of Fisheries (who have a role in river management). To deal with threats from sources beyond the river corridor the Department of Agriculture needs to be included to assist with impacts that originate from agriculture as does the Department of Industry, Mines, and Energy for issues relate to the hydro-electric power development and the Department of Forests for issues related to logging and land clearing.

Achieving a sustainable tourism industry is thus not just a "tourism industry problem" but should be part of a holistic strategy covering all development. Tourism development must fit into the overall policy scenario that guides the country's development based on clearly understood objectives. Foremost among these objectives should be environmental protection. Recognizing the value of the environmental services and their role in sustaining a variety of functions (including watershed protection, biodiversity, recreation and as tourism attractions) is an important first step to prioritizing how the resources are to be managed. The next step is to ensure that the agencies responsible for these resources have the resources (financial, human, institutional and legal) to fulfill their duty as managers.



## 9.7 Adapting to External Pressures

Globally, there is increasing concern regarding greenhouse gas (GHG) emissions that contribute to global warming and climate change. The travel industry, specifically the air travel and transport sectors, is a significant contributor to GHG emissions (4-6% of the world total). Travelers may eventually be targeted with taxes or a levy to offset the emissions resulting from travel. Some companies have already begun to offer their clients the option of paying for voluntary carbon offsets. How this will affect future travel decisions and tourism volumes remains to be seen and will depend to a large degree on the validity of the carbon offsets.

Cambodia could take the initiative by adopting the Kyoto Protocol requirements as well as advocating tourism development policies that encourage energy efficient design and operation (the cycling tours proposed as part of the Dolphin Discovery Trail in the North East are a good example). The development focus on ecotourism and marketing the country's natural resources such as forests and national parks provides added support to protection of these areas as carbon sinks.

Many tourism attractions in Cambodia are associated with rivers, lakes or the coastal zone. Thus, any changes in the levels of these water bodies due to the effects of climate change will have a direct effect on tourism. The extent of the impact will depend on the location of the development and the degree of change to the respective water bodies or the local weather. Among the predictions presented at the Climate Change Summit in Davos, in October 2007 was that Cambodia could eventually expect higher than normal precipitation for the June to August period.

Changes in the country's rivers and lakes will also have a direct impact on fisheries that is central to the lives of Cambodia's people, particularly the rural poor. Undoubtedly, human impacts on the fisheries (caused by population growth, flood mitigation, increased water abstractions, changes in land use and over fishing) will be greater than the immediate effects of climate, but the pressures are strongly interrelated. The longer people remain poor, the greater the pressure there will be on the remaining natural resources (i.e., the same resources that are being promoted for ecotourism).

## 9.8 Institutional Strengthening

As ecotourism relies to a large degree on nature-based attractions and these are often part of the country's protected area network, there is a need to ensure there is continued support for the maintenance and upgrading of a professional protected area management service. The standards set by the PA managers and the guidelines for use will ensure that the attractions remain as quality tourism products. The ability to provide high quality interpretation and information services is another aspect of the institutional strengthening required. Examples can be found in the parks services in Australia and New Zealand where tourism is possible and benefits from sound conservation policy and the development of a professional parks service. The parks service is mainly concerned with the conservation objectives for the protected area and tourism is managed in support of these objectives.

A high priority need for the government is for bolstering of the legal framework and institutional capacity building for the management and protection of the country's National Parks. The lack of the legal instrument for the management and protection of the National Parks could be a serious constraint to the development of ecotourism. Almost all of Cambodia's national parks are threatened by some form of illegal activity (including land encroachment and illegal logging) and this has a direct bearing on the value to ecotourism. At present these issues are being addressed through a combination of law enforcement, education and community development programmes. However, increased efforts are required to improve the management of national parks by strengthening the legal framework, human resources, financial resource mobilization and management planning and implementation.

The experience in Cambodia suggests that the national agencies alone cannot effectively manage and protect National Parks. Therefore it is important that the Ministry of Environment develops a participatory planning and implementation process (for both government and non-government stakeholders) and simultaneously build the capacity of its staff and the communities living near national parks to facilitate local participation. In order to sustain the local stakeholder interest, it is important that they benefit directly from park-related activities such as ecotourism. Conservation efforts and ecotourism development will be undermined if local poverty is not addressed as an integral part of the protected area management. Possible positive impacts from improvement conservation management and ecotourism include:



- Employment in Eco-tourism activities;
- Employment in the protected areas;
- Local support for the conservation efforts
- Improved local markets for produce;
- “Capitalization” of the natural resources in a non-extractive industry;
- Economic benefits at the local level from small and medium enterprises;
- Increased investments in tourism and local development
- Spin-off tourism development in areas adjacent to the protected area.

The tourism sector should be developed carefully taking into account the impacts on both the natural and the social environment. The introduction and implementation of the SEA process is therefore timely to provide the needed guidance to address these important issues. Managing tourism growth for long-term sustainability requires the cooperation and coordination of the Departments of Tourism and Environment as well as other agencies involved in urban and regional planning.

There is a need for strategic planning at the regional level so that all agencies can realize their respective goals. The impacts from development need to be recognized so that measures to mitigate and eliminate the impacts can be put in place. In terms of visitor numbers MOT and MOE express concerns about the numbers and the rapid growth while MAFF would like to see numbers growth. This divergence is particularly worrying as the key protected areas fall under MAFF’s mandate and management. These discrepancies in policy and direction can be addressed through dialogue and through coordination of objectives and goals.

The types of tourism desired for the protected areas should be coordinated with the overall objective for how Cambodia is going to be promoted and this includes the protected areas. Activities such as game hunting may appeal to a small segment of the tourism market and may benefit a particular sector. While one agency may have proposed hunting, according to the agency looking after wildlife, it may not be feasible, for a variety of reasons. This is why there is an urgent need for a task group to review proposals to ensure they fit within the overall development and promotional themes for the country.

Furthermore, how benefits from tourism are spread among the various actors and in support of the conservation efforts is an important consideration that needs to be addressed. At present this is an important issue that does not seem to have a clear answer. How the duties and the responsibilities for management of the protected areas and how the benefits from tourism are distributed needs further discussion.

## 9.9 Sustainable, Pro-poor Tourism

An important point to consider is that not all villages are suited for tourism. Assessment of tourism potential needs to be carried out by people who understand the tourism industry in conjunction with a village understanding and at a stage before unrealistic expectations have been built. While the supply chain and the levels of services required may be somewhat different in community-based tourism, the basic requirements related to having an actual product to sell are the same. Tourism is not a stand-alone for rural poverty alleviation and should be part of a suite of interventions aimed at diversifying rural economies. The benefits from tourism can contribute to breaking subsistence agriculture cycles, but should be viewed as supplementary to other mainstream income generating activities.

Tourism development projects should focus on creating private sector-driven pro-poor tourism models. Involvement of the private sector is an important consideration as this provides not only access to long-term investment in community tourism but, importantly, linkages to the tourism market. However, communities need to be guided in terms of what to expect and how to deal with the private sector and the private sector also needs guidance regarding how communities should be best approached. There are good examples from the region of private sector / community cooperation and these and other international best practices need to be examined to find models suitable for the Cambodian situation. The role of NGOs such as the CBEN is also important to provide (where needed) bridges in communication between the private sector and the communities. Guidelines and standards on sustainable, pro-poor tourism practices need to be adopted and implemented. An example of the type of guideline to be used is included in Annex 4.

The mechanism for receiving benefits from tourism needs to be carefully considered to ensure that there are benefits going to the entire community as well as to the individuals who may be directly involved in the tourism services. While it may not be possible for all members of the village to be directly involved in tourism, there should be some means of ensuring that the entire community benefits, even if indirectly.

To this end a comprehensive Tourism Strategic Implementation Plan 2006-2010 should be developed to assist the Government to meet as many of its objectives as possible through the sustainability of tourism development.

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