

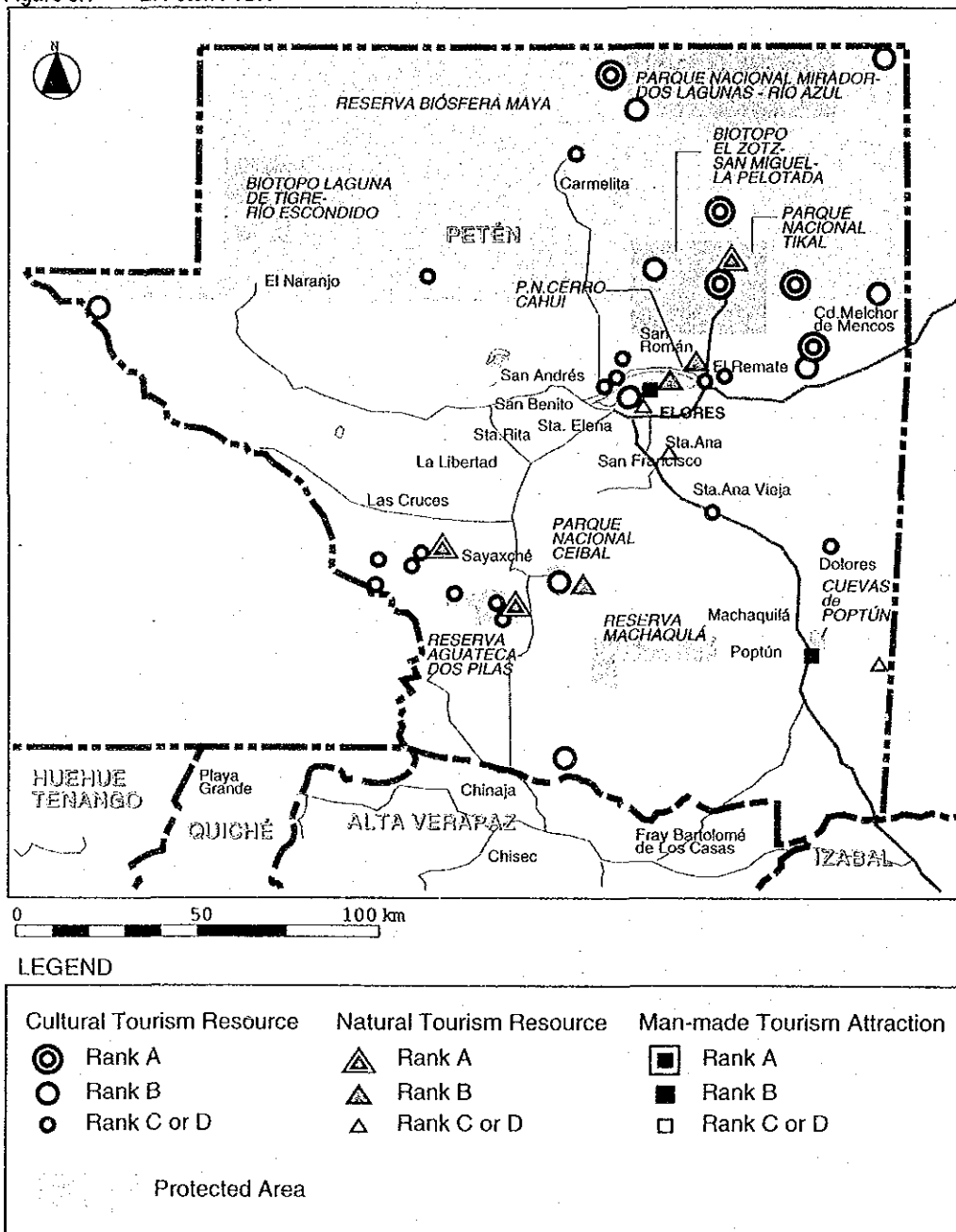
3. TOURISM DEVELOPMENT PLANS FOR THE THREE PRIORITY DEVELOPMENT AREAS

3.1. Tourism Development Plan for El Peten PTDA

3.1.1. Regional Context

El Peten PTDA, which corresponds to the El Peten Department and “Mayan Adventure” Tourism Region, occupies the northern part of Guatemala. The PTDA was once a heartland of the Classic Maya Civilization, and has a number of archaeological sites, the most famous of which is Tikal.

Figure 3.1 El Peten PTDA



Source: JICA Study Team

After the collapse of Classic Maya, the area had been buried under dense jungle for a millennium until the government of Guatemala embarked on development of agriculture and oil exploitation in the 1960s. Due to a rapid population increase caused by internal migration from the Highlands, most notably from Alta Verapaz, El Peten's vast expanse of tropical rain forests, which makes another important tourism attraction in the area, is shrinking at a rapid pace for conversion to agricultural lands and ranches.

Percentage of indigenous population is 35%, which is not high from the Guatemalan standard. Percentage of people who live under the poverty line is 60%.

The area received 590,000 bed-nights and 250,000 visitor arrivals in 2000. 54% of the visitor arrivals are estimated to be from outside Guatemala, which is conspicuously high compared with other tourism destinations in Guatemala. As shown in Table 3.1, percentage of "tourists" both independent and organized is much higher than the national average, which indicates that El Peten is becoming an established tourism destination in the international tourism market.

Table 3.1 Visitor characteristics of El Peten PTDA

Item	El Peten PTDA		Guatemala	
	Response	(%)	Response	(%)
Visitor Type	667	100.0%	3,046	100.0%
Independent	424	63.6%	1,320	43.3%
Organized	81	12.1%	166	5.4%
Business*	73	10.9%	943	31.0%
Friend & Relatives*	79	11.8%	562	18.5%
Others	10	1.5%	55	1.8%
Regional Market	667	100.0%	3,037	100.0%
Neighboring Countries	151	22.7%	1,585	52.2%
North America	231	34.7%	785	25.8%
South America	49	7.4%	142	4.7%
Europe	192	28.8%	402	13.2%
Others	43	6.5%	123	4.1%

Source: Visitor Survey (March and July 2001), JICA Study Team

As shown in Table 3.2, the most important category of tourism resources in El Peten PTDA is archaeological sites. Tikal, Uaxactun, Yaxhá, Nakum and, El Mirador are evaluated as Rank A out of 26 archaeological sites listed as tourism resources.

Natural tourism resources are also important in this PTDA. Lake Petexbatun and Río Pasión are evaluated as Rank A. Tikal National Park, which contains Tikal archaeological site, is also evaluated as Rank A as a nature tourism resource. The townscape of Flores, which is the largest accommodation base in this PTDA, is evaluated as Rank B.

Table 3.2 Tourism resources in El Petén PTDA

Name	Department	Municipality	Category				Rank
			Cultural	Natural	Man-made	Others	
Tikal (Including Museums)	Petén	-	X				A
Uaxactún	Petén	-	X				A
Yaxhá	Petén	-	X				A
Topoxté	Petén	-	X				B
Nakúm	Petén	-	X				A
El Naranjo	Petén	-	X				B
Aguateca	Petén	-	X				C
Ceibal	Petén	-	X				B
Dos Pilas	Petén	-	X				C
El Mirador	Petén	-	X				A
Nakubé	Petén	-	X				B
El Tintal	Petén	-	X				D
El Perú	Petén	-	X				C
El Zotz	Petén	-	X				B
Piedras Negras	Petén	-	X				B
Río Azul	Petén	-	X				B
Cancuén	Petén	-	X				B
El Caribe	Petén	-	X				D
El Chal	Petén	-	X				D
Itzán	Petén	-	X				D
Ixkún	Petén	-	X				D
La Amelia	Petén	-	X				D
Tamarindito	Petén	-	X				D
Alter de Sacrificios	Petén	-	X				D
Motúl de San José	Petén	-	X				C
Ruins of Ixlú	Petén	El Cruce	X				D
Townscape	Petén	Flores	X				B
Village Scenery	Petén	San Andrés	X				C
Village Scenery	Petén	San José	X				C
Wood carving	Petén	El Remate	X				B
Lake Patexbatún	Petén	-		X			A
Río de la Pasión	Petén	-		X			A
Lake Petén Itzá	Petén	-		X			A
Aktun Kan Cave	Petén	-		X			D
Naj Tunich Cave	Petén	-		X			D
Parque Nacional Tikal	Petén	-		X			A
Biotopo Cerro Cahuí	Petén	-		X			C
Parque Nacional Ceibal	Petén	-		X			B
Petécito	Petén	-			X		C
Finca Ixobel & Tierra Grande	Petén	Poptún			X		C
Meats of wild animals (Tepezcuintle, Almadillo etc.)	Petén	-				X	C

Source: Compiled by JICA Study Team

3.1.2. Considerations for Sustainable Tourism

Table 3.3 shows the considerations for sustainable tourism, which is considered especially important for El Peten PTDA.

Table 3.3 Considerations for sustainable tourism in El Peten PTDA

Natural environment	Social environment	Cultural heritage
<ul style="list-style-type: none"> • Considerations for the risk of deforestation in case of road development • Considerations for landscape when developing canopy walkways • Protection of endangered species such as jaguar, scarlet macaw and trogon. • Harmonization of infrastructure designs and surrounding environment • Use of native species for landscaping • Waste management in tourism sites • Installment of visitor management system in nature protected areas • Strengthening of tourism promotion for nature tourism 	<ul style="list-style-type: none"> • Respect for community will when introducing tourism • Respect for community will when planning tourism products • Ban on the exaggeration of traditional cultures for commercial purposes • Tourism use of local agro-products such as xate and ciclet. • Local participation based on a co-management scheme • Supports for local enterprises that represent community interests • Gradual transfer of responsibility in managing tourism sites to local people • Use of local people for managing nature areas and archaeological sites • Awareness campaign of tourism for local people in lakeside communities of Peten Itza and major archaeological sites • Awareness campaign for local people to promote understanding of the importance of natural and cultural heritage • Establishment of a community organization for managing Community Tourism 	<ul style="list-style-type: none"> • Tourism development with considerations for manageable scale • Considerations for nature areas surrounding archaeological sites • Development of walking trails and provision of information about the trail • Establishment of design standards based on traditional architectural style for conserving townscape of Flores and San Jose • Promotion of wise use of traditional buildings • Permission of minimum modifications for amenities and security under certain guidelines • Public awareness campaign for cultural conservation • Installment of interpretation boards to historical buildings to develop cultural awareness among local people • Conduct of archaeological survey before construction • Protection against acid rain and air pollution

Source: JICA Study Team

3.1.3. Tourism Development Strategy

(1) SWOT analysis

Development strategy of El Peten PTDA was conceived based on the SWOT analysis, which is a summary of the analysis of existing conditions of tourism and regional contexts. The results are shown in Table 3.4.

Table 3.4 SWOT analysis of tourism in El Peten PTDA

	Positive factors	Negative factors
Present	<p>Strengths</p> <ul style="list-style-type: none"> • The area abounds in competitive tourism resources of Mayan archaeological sites. • The area is also endowed with different types of nature tourism resources such as tropical rain forests, river, wetlands, and lakes, as well as cultural tourism resources like the colonial city of Flores. • Being located at the crossroad of the Palenque - Belize and Antigua - Flores Tourism Corridors, the area is a node of the transportation network of Mundo Maya. 	<p>Weaknesses</p> <ul style="list-style-type: none"> • Deforestation is continuing at an alarming rate due to internal migration from the Highlands for agricultural lands. • Average length of stay is too short for its tourism potential. • Tourism in the area depends too much on a single tourism product - Tikal. • Surface transport linkage with neighboring tourism destinations is weak, and transportation cost is high due to the dependency on air services. • Insufficient supply of accommodations for resort and nature tourism would limit the diversification of tourism types. • Many of the attractive archaeological sites in the area do not have adequate access roads, visitor facilities, and site protection from looters, and a system to charge entrance fees. • The lack of historical ties with archaeological sites and the poor economic linkage with tourism make it difficult to motivate local people for the conservation of archaeological sites.
Future	<p>Opportunities</p> <ul style="list-style-type: none"> • Combining archaeological tourism with nature tourism would strengthen its appeal to the tourism market that is increasingly nature-oriented. • The area abounds in opportunities for soft adventure and ecotourism such as canopy walk and river cruise, which are the fastest growing market segments. • Peten Itza has good potential for resort development. • Improvement of the road from Coban would result in the increase of visitor arrivals, in particular, from the Guatemalan Highlands and neighboring countries. 	<p>Threats</p> <ul style="list-style-type: none"> • Failing to establish a system to economically motivate archaeological conservation through tourism would lead to destruction of archaeological sites, which will seriously damage the competitiveness of Guatemalan tourism. • Failing to establish the same system for nature conservation would lead to destruction of nature areas, which would reduce the possibility of tourism diversification. • Improvement of the road from Coban would result in massive arrivals of visitors to Tikal, which would deteriorate the world heritage site and degrade the satisfaction level of visitors.

Source: JICA Study Team

(2) **Tourism development directions**

As has been pointed out by the SWOT analysis, tourism in El Peten PTDA heavily depends on Tikal, and most of its visitors stay a short period only to see the World Heritage site. Taking into account its numerous tourism possibilities, it is viable to make efforts at extending visitors' length of stay through diversification of tourism products. The following five tourism development directions are identified:

- Diversification of archaeological tourism products,
- Development of Peten Itza as a resort destination,
- Development of nature tourism products and their integration with archaeological tourism,
- Revitalization of local cultural traditions through tourism, and
- Strengthening of tourism network.

a. Diversification of archaeological tourism

Visitor survey results clearly show that Mayan archaeological sites are the highlight of Guatemalan tourism, and El Peten is the primary destination for this type of cultural tourism. Archaeological sites developed for tourists are quite limited, however, and Tikal has a risk of over-use.

b. Development of Peten Itza as a resort destination

Scenic Peten Itza has good potential to be a resort destination like Lake Atitlan. This would make the visitors to stay longer, develop a new market segment that is not linked with visits to archaeological sites, and promote repeats visits, which would assure future sustainable growth.

c. Development of nature tourism and integration with archaeological tourism

Being fueled by global concerns for environmental issues, ecotourism is the fastest growing market segment in the world tourism market. El Peten PTDA is endowed with potential nature tourism resources ideal to be used for this type of tourism. Deforestation is a serious environmental issue in El Peten, and tourism is expected to provide an alternative livelihood for local people to curb the deforestation. Development of nature tourism products would relieve congestion in traditional tourism sites including Tikal. All these point to the necessity to develop nature tourism products, and to combine them with archaeological tourism.

d. Revitalization of local cultural traditions through tourism

Although cultural tourism attractions in El Peten PTDA are not as famous as its archaeological sites, the indigenous culture of Itza Maya and local economic activities such as the collection of Xate and Chicle as well as local handicrafts would be important tourism attractions. Community Tourism should be introduced to communities that have potential and willingness for tourism in order to revitalize their cultural identity.

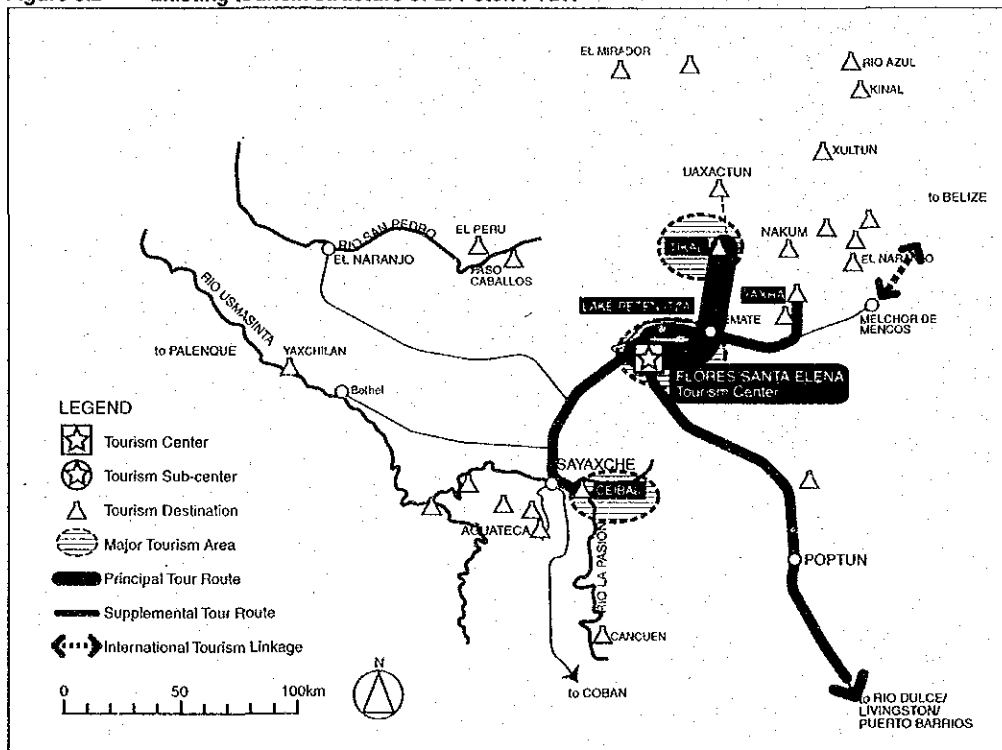
e. Strengthening of the tourism network

El Peten is an isolate tourism destination and most of the visitors fly in and out of El Peten. However, taking into account the geographic location of the PTDA in the Mundo Maya Circuit, distribution of anchor tourism products in neighboring countries, progress of road improvements in Guatemala, and moves toward regional integration, it is the timing for El Peten to reconsider its isolated tourism strategy.

(3) Tourism development scenario and tourism structure

The purposes of setting a development scenario are to identify the priority of actions, and to clarify the sequential procedure to achieve the development strategy. As shown in Figure 3.2, current tourist activities are heavily concentrated in the area between Flores and Tikal regardless of El Peten's enormous tourism potentials.

Figure 3.2 Existing tourism structure of El Peten PTDA



Source: JICA Study Team

After evaluating development and marketing possibilities of tourism in El Peten based on various surveys and interviews with the travel trade and relevant government institutions, the following basic directions are identified:

- Diversification of archaeological tourism products has the highest priority, and
- Development of nature tourism, cultural tourism, and resort tourism is necessary and some needs to be started in the short-term; but the priority is lower than archaeological tourism.

a. Short-term plan

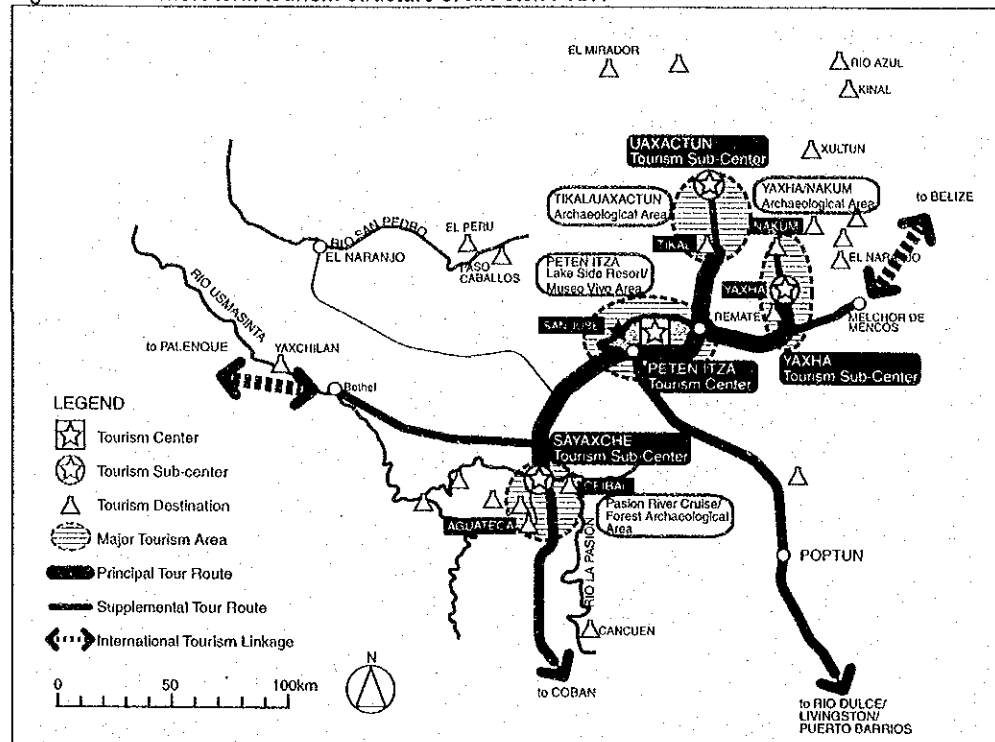
Projects that contribute to the diversification of archaeological tourism are given the highest priority in the short-term plan although some projects related to Peten Itza Resort are initiated:

- Tourism improvement of archaeological sites that are important from a tourism viewpoint and are ready to receive visitors;
 - Tourism improvement of Ceibal and Aguateca and development of river cruise facilities,
 - Tourism improvements of Yaxha and Nakum,
 - Tourism improvement of Uaxactun,
- Development of Peten Itza Resort;
 - Development of Community Tourism in San Jose,
 - Tourism Improvement of Flores,
 - Peten Itza Environmental Improvement Study, and
- Study of visitor management system in Tikal.

Archaeological sites to be developed for tourism is chosen by considering the possibility for future tourism diversification and the strengthening of linkage with neighboring destinations. Tourism improvement of Yaxha – Nakum will pave the way to introduce forest-based nature tourism in the surrounding areas, while that of Ceibal – Aguateca is to be combined with nature cruise along the Pasion River and Petexbatun Lake. Tourism improvement of Uaxactun provides satellite facilities for the Community Tourism in Uaxactun that would be developed in the long-term. Development of Community Tourism in San Jose and tourism improvement of Flores should be started, which constitutes part of Peten Itza Resort.

Figure 3.3 shows the short-term tourism structure for El Peten PTDA.

Figure 3.3 Short-term tourism structure of El Peten PTDA



Source: JICA Study Team

The above-mentioned actions will be reflected to the following tourism structure development:

- Tourism Sub-Centers would be established in Sayaxche, Yaxha and Uaxactun,
- Existing Flores Tourism Center would be expanded to cover the whole lakeside area to formulate the Peten Itza Resort that has 3 functions of accommodation base, tourism attractions, and one-day touring circuit,
- Pasion River archaeological sites group, Yaxha – Nakum archaeological sites, as well as Peten Itza Resort are principal additions to the existing tourism structure,
- Enforced linkages between Melchor de Mencos and Belize City, and between Sayaxche and Palenque would strengthen the Mundo Maya Circuit, and
- Tourism Corridors of Flores – Sayaxche – Coban, and Flores – Poptun – Puerto Barrios would be established.

b. Long-term plan

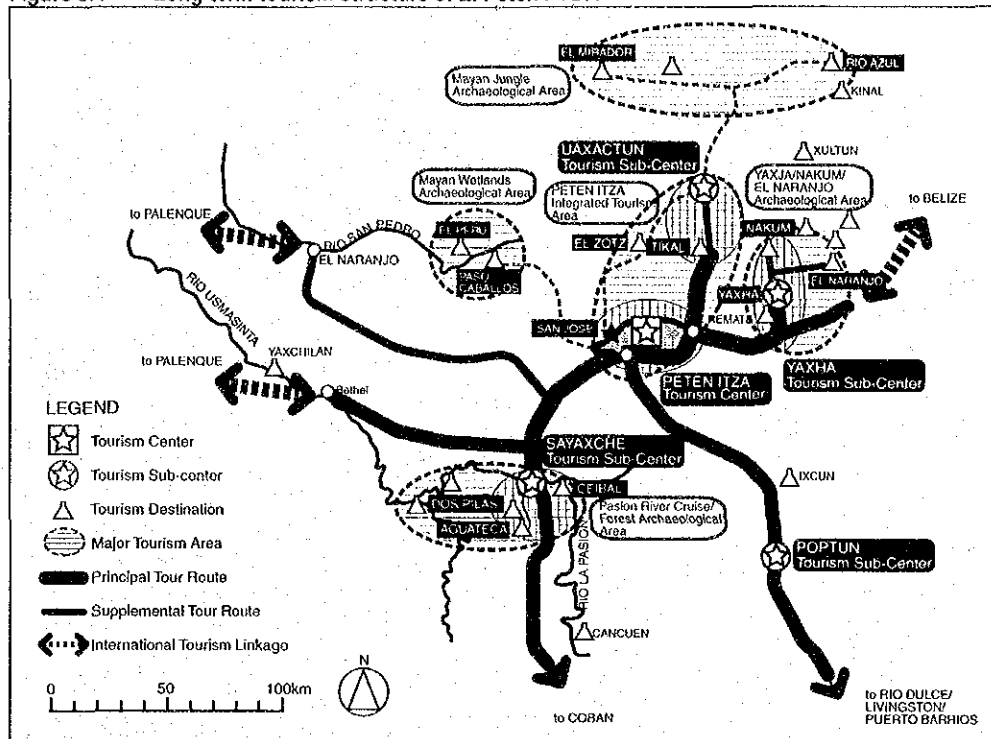
Long-term plan places more emphasis on developing tourism products other than archaeological tourism, and develops the followings:

- Development of Peten Itza Resort,
- Development of Community Tourism in Uaxactun,
- Development of nature tourism facilities along the San Pedro River, and

- Tourism improvement of archaeological sites in remote areas.

Figure 3.4 shows the long-term structure of El Peten PTDA.

Figure 3.4 Long-term tourism structure of El Peten PTDA



Source: JICA Study Team

The above actions will be reflected to the following tourism structure development:

- Naranjo would be added to formulate the Yaxha – Nakum - Naranjo archaeological triangle,
- Rio Azul and El Mirador would be developed to receive more visitors,
- Dos Pilas would be developed and added to the Paston River archaeological sites group, and
- San Pedro River and Laguna del Tigre Reserve would be improved for tourism use.

(4) Marketing directions

Marketing directions for El Peten PTDA is summarized in Table 3.5.

Table 3.5 Marketing directions for El Peten PTDA

Origin market	Products, segments, promotion etc
Domestic	Promotion of overland trips, MICE
Mexico & Central America	Colonial city of Flores, lakeside resort
North America	Archaeological site and nature
Other Americas	Archaeological site and colonial city
Europe and others	Archaeological sites, combinatiion with Izabal (Europe only)

Source: JICA Study Team

(5) Tourism development framework

Tourism development framework was established as shown in Table 3.6.

Table 3.6 Tourism development framework of El Petén PTDA

Frame	Year	2000		2010		2020	
		Bed-night	Arrival	Bed-night	Arrival	Bed-night	Arrival
Hotel visitor arrivals	Total	694,537	251,553	1,184,879	417,875	1,943,022	698,862
	Domestic	135,629	90,419	198,438	132,292	340,246	226,831
	International	¹⁾ 558,908	161,134	986,441	285,583	1,602,776	472,032
	Short Haul	107,514	34,744	198,542	64,598	355,579	115,764
	Middle Haul	249,498	67,572	393,256	106,427	606,079	166,522
	Long Haul	201,349	58,544	394,644	114,558	641,117	189,746
Room require ment	Total		1,921		3,111		4,987
	High Class		72		233		553
	Middle Class		821		1,518		2,776
	Low Class		1,028		1,360		1,658

Note: ¹⁾ Total of international visitor arrivals 2000 includes N.A. figures of the Visitor Survey

Source: Visitor Survey (March and July 2001), JICA Study Team, INGUAT

3.1.4. Projects and Programs

(1) Project evaluation

Existing projects and project ideas proposed by a broad range of organization and individuals, as well as by JICA Study Team were evaluated with the following criteria:

- Conformity with development strategy,
- Development effects,
- Project maturity, and
- Necessity for the central government development supports.

Each project was evaluated by calculating the total of points given in 3 grades to the respective evaluation criteria. In El Peten PTDA, tourism improvement of archaeological sites including a museum and research/learning facility is given a relatively high point to comply with its development strategy. Projects are evaluated and classified into the three categories: short-term pilot projects (more than 11 points), other short-term project (7 – 10 points), and long-term projects (less than 6 points).

(2) Short-term pilot projects

a. Tourism Improvement of Yaxha and Nakum Archaeological Sites

Outline of the project

A group of archaeological sites located to the east of Tikal: Yaxha, Nakum and El Naranjo, is identified by Mundo Maya Organization as having a high priority for tourism development. Among the three sites, Yaxha and Nakum have partly restored and, therefore, are evaluated to be ready for tourism development in the short-term. Components of the project are as follows:

- Access road development: gravel road between Yaxha and Nakum, 15km, and
- Visitor facilities development: a visitor center in Yaxha, an information office, resting areas/ washrooms, a registration office/ security post in Nakum, power, electricity, signs.

Implementation setup

IDAHE should be responsible for the implementation of the project. MICIVI will construct and maintain the access road.

IDAHE should set up a project implementation committee with members from INGUAT, MICIVI, MICUDE, CONAP, INFOM, Mundo Maya Organization, Melchor de Mencos municipality, private tourism enterprises, and La Maquina community. The committee would be converted to an organization for the co-management of the tourism site after construction works are completed.

b. Development of the Maya Research and Learning Center

Outline of the project

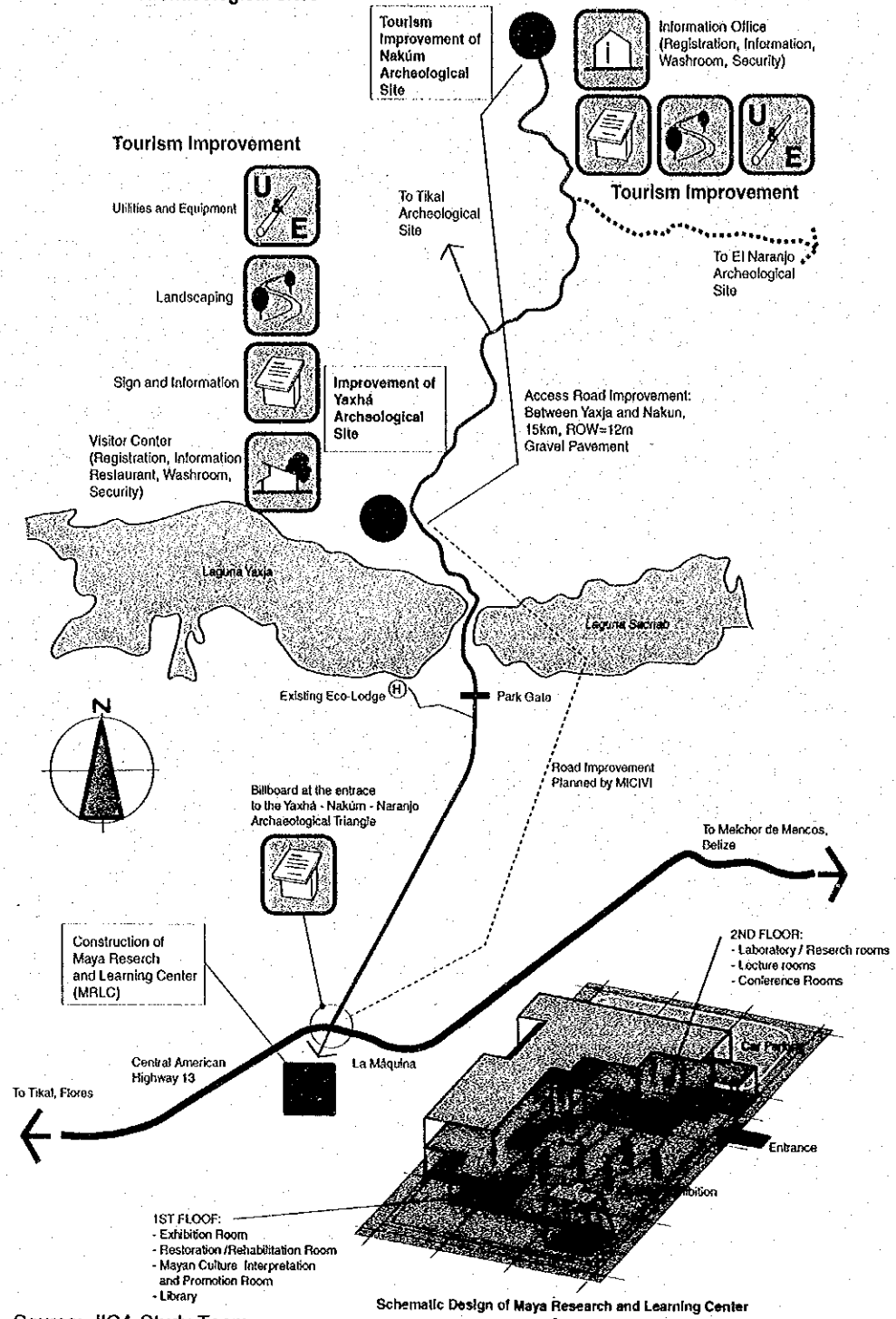
Maya Research and Learning Center is the core facility for Mayan archaeological study and exhibition. Proposed site is conveniently located in La Maquina community on the Central American Highway 13 at the entrance to the Yaxha, Nakum and Naranjo triangle. The facility should be designed to establish a close relationship with La Maquina community to promote its tourism businesses. The functions of the center is as follows:

- Provision of a facility for research and learning on Mayan archaeology,
- Protection and exhibition of archaeological artifacts under a safe condition,
- Hosting of periodical exhibitions on relevant themes, and
- Function as the administration center for the Yaxha – Nakum – Naranjo triangle.

Implementation setup

IDAHE should be responsible for the implementation of the project. MICIVI will construct and maintain the access road. The project will be managed by the same project implementation committee for the project of Yaxha and Nakum.

Figure 3.5 Schematic plan of the Maya Research and Learning Center and Yaxhá and Nakúm Archaeological Sites



Source: JICA Study Team

c. Tourism Improvement of Ceibal and Aguateca Archaeological Sites

Outline of the project

Sayaxche, which is located 50km from Flores to the southwest, is an exploration base for archaeological sites along the Pasion River. Ceibal and Aguateca are archaeological sites that are relatively accessible and ready to receive visitors. A remarkable characteristic of the archaeological sites are the access by boat, which provides natural attractions of river and lake scenery, and opportunity to observe wildlife such as birds, butterflies and crocodiles. Components of the project are as follows:

- Development of river cruise facilities: boat piers, a boat terminal, and
- Development of visitor facilities: site museum, visitor center, trails, water supply, landscaping, signs and interpretation boards.

Implementation setup

IDAHE should be responsible for the implementation of the project.

IDAHE should set up a project implementation committee with members from INGUAT, MICUDE, CONAP, INFOM, Sayaxche municipality, and the Local Tourism Committee. The committee would be converted to an organization for the co-management of the tourism site after construction works are completed.

d. Development of Archaeology and Regional Culture Center

Outline of the project

The surrounding areas of Sayaxche have many archaeological sites, and excavated artifacts need a place for restoration, preservation, as well as protection against robbery, which is a serious problem in archaeological sites in the area. Since Sayaxche is located on major travel routes to Coban and Palenque, the proposed center is conveniently located to exhibit these artifacts to tourists who are traveling the route. Local Tourism Committee of Sayaxche hopes to have a regional tourism/ culture center, which can be integrated into IDAHE's original plan. Components of the project are as follows:

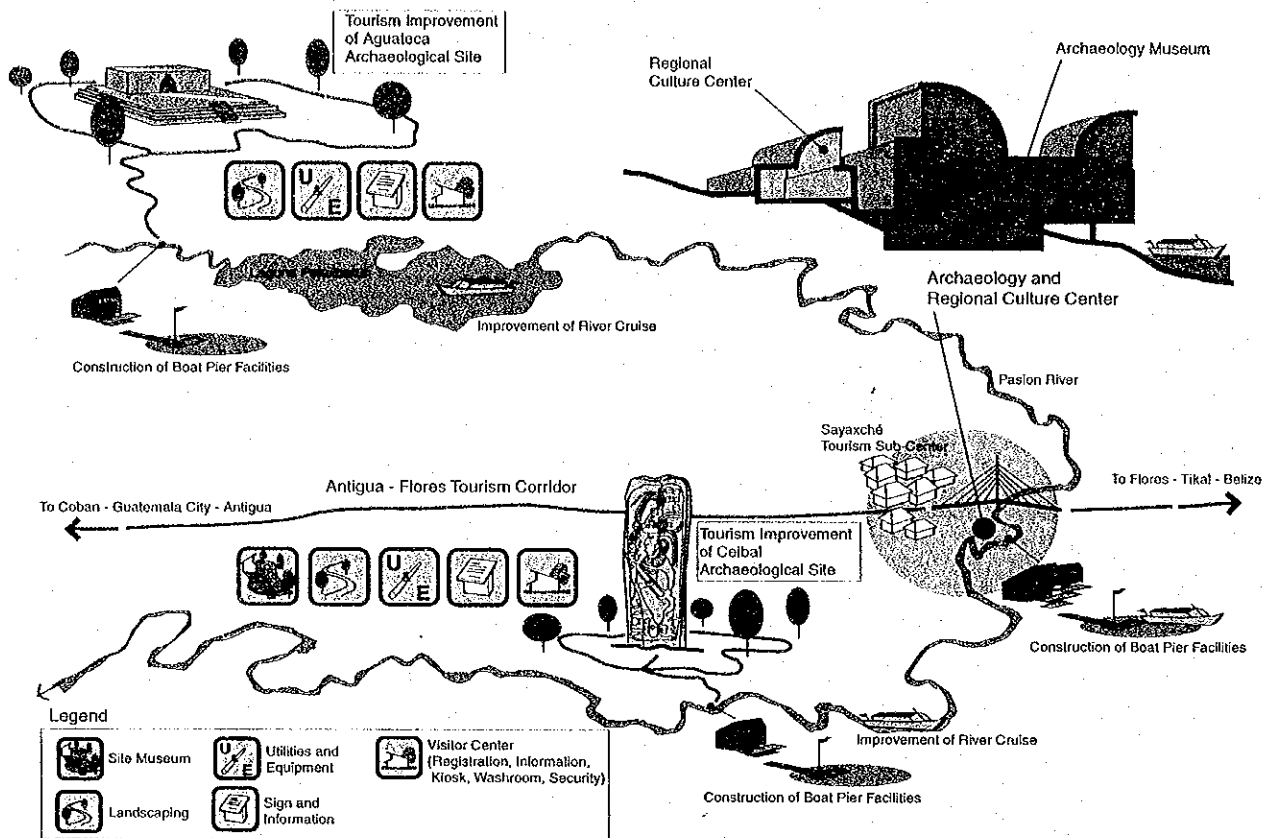
- Restoration and exhibition of archaeological findings,
- Regional tourist information,
- Conference room for regional cultural activities, and
- Multi-function room for educational programs.

Implementation setup

Project will be implemented and managed by IDAHE.

Sayaxche municipality would provide land for IDAHE and IDAHE would provide some space for the municipality to use for a regional culture center. The project will be managed by the same committee that is in charge of the project for Aguateca and Ceibal.

Figure 3.6 Schematic plan of the Ceibal and Aguateca Archaeological Sites and the Archaeology and Regional Culture Center In Sayaxché



Source: JICA Study Team

e. Tourism Improvement of Uaxactun Archaeological Site

Outline of the project

Uaxactun is a “xate” and “chicle” collectors’ community located 20km to the north of Tikal. It is well known for an archaeological complex with the same name. The community is expected in the long-term to be an exploration base for the archaeological sites in the northern part of El Peten including Mirador. This project aims at improving existing visitor facilities for the archaeological sites that would be a Satellite facility of the proposed Community Tourism project in the long-term. Components of the project is as follows:

- Development of access road from Tikal: 20km, and
- Development of visitor facilities: registration office, parking area, washroom, water supply, power supply, landscaping, signs and interpretation boards.

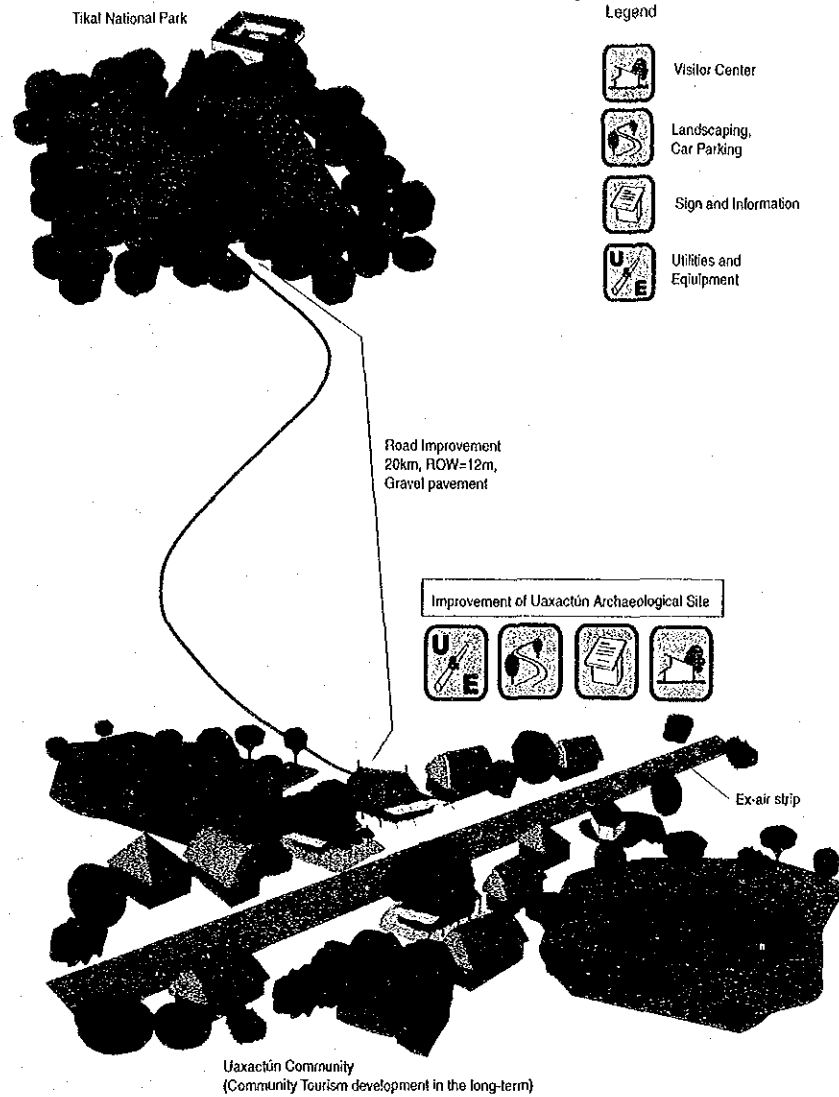
Implementation setup

IDAHE should implement the project and take the charge of its operation and maintenance.

IDAHE should set up a project implementation committee with members from INGUAT, CONAP, MICUDE, Municipality of Flores, Uaxactun community. After the completion

of the construction works, the committee would be converted to a committee for developing Community Tourism in Uacactun.

Figure 3.7 Schematic plan of the Uaxactun archaeological site



Source: JICA Study Team

(3) Other short-term projects

a. Development of Community Tourism In San Jose

San Jose is an Itza Maya community, and was evaluated to be the most suitable location to introduce Community Tourism. Proposed facilities are as follows:

- Induction Center and interpretative trails,
- Satellite-1: Itza Maya Culture Museum,
- Satellite-2: Itza Maya Language Inheritor Museum,
- Satellite-3: Pharmaceuticals and Herbs Museum, and
- Comet: Motul archaeological site.

b. Beautification of Noj Peten

Flores Island, its ancient name is Noj Peten, is a colonial city on an island in the Lake Peten Itza, which is built on a ceremonial center of the last Mayan kingdom of Tayasal that survived until 1697 when it was finally conquered by Spaniards. The followings are possible measures to increase the attractiveness of the town.

- Improvement of building roofs,
- Enforcement of Municipal Regulation for building standards,
- Improvement of the public access to the lakefront, and beautification of lakeside areas, and
- Standardization of color scheme, materials, design, and lighting of signs, information and advertisement at building and roadsides.

c. Peten Itza Environmental Improvement Project

Peten Itza is evaluated to have potential for a resort destination. It is necessary, however, to have a master plan to protect the environment before private investments arrive to the lake. In this context, a comprehensive water quality improvement project is necessary that would solve the water contamination and related environmental issues in Peten Itza Lake and its surrounding areas.

d. Planning Study of a Visitor Management System in Tikal National Park

A visitor management system will be needed for the Tikal National Park to cope with the increase of visitor arrivals and to address the security issues. A study is required to design a visitor management system to minimize negative impacts on the archaeological site and the surrounding forests without sacrificing visitor satisfaction.

e. Improvement of Sylvanus Morley Archaeological Museum

Sylvanus Morley Archaeological Museum is located in the Tikal National Park. It is recommended to improve its facility.

(4) Long-term projects**a. Peten Itza Resort Development Package**

Converting the surroundings of Peten Itza Lake to an anchor resort destination is a long-term goal for El Peten PTDA. Development of Community Tourism in San Jose and the beautification of Flores Island that are proposed in the short-term stage constitute part of the plan. The followings actions are proposed in the long-term:

- Circumferential road improvement around the Peten Itza Lake,
- Development of handicrafts showcase,
- Development of Tayasal archaeological site,
- Development of a Convention center,
- Development of a Peten Itza cruise boat piers,
- Improvement of the Petencito Zoo, and
- Improvement of Cerro Cahui National Park.

b. Diversification of archaeological tourism

It is recommended to improve visitor facilities that are not ready for tourism in the short-term stage such as Mirador, Naranjo, Dos Pilas, El Peru, Cancuen and El Zotz.

c. Improvement of Community Tourism

Community Tourism is expected to develop reflecting the dynamism of local communities. Therefore, the followings should be implemented in the long-term.

- Review and renewal of existing facilities to maintain the quality of services,
- Development of new facilities and attractions, and
- Training of personnel to inherit traditions and culture.

d. Tourism attraction in tropical rainforest, wetlands and river

The wetland in the western part of Peten, which is the largest in the Central America, abounds in attractive places for nature lovers. Tourist stations (accommodation, guide offices, security stations) should be built to cater for the high-spending market segments like bird-watchers. Candidate sites are the areas between Paso Caballos and Naranjo that is close to the Mexican border, and the other is the Petexbatun Lake and its surrounding wetlands.

(5) Construction cost

Total direct construction cost for the short-term pilot projects is US\$ 14.0 million. Breakdown of the cost is summarized in Table 3.7. Total direct construction cost for other short-term projects including private sector investments in accommodation is calculated at US\$19.1 million.

Table 3.7 Construction cost for the short-term pilot project of El Peten PTDA

No.	Projects and components	Cost (US\$1,000)	Remarks	
	Total of El Peten PTDA	14,043		
PSP-01	Tourism Improvement of Uaxactun Archaeological Site			
	a. Access road	3,600	ROW=12m, Gravel pavement	
	b. Electricity power supply	1,320	Including community	
	c. Visitor center building	60	Single story, timber structure	
	d. Landscaping, parking	20	Surrounding of the building and parking	
	e. Utilities	8	Septic tank and well water	
	f. Equipment	6	For the building	
	g. Sign & information boards	16	Sign system in the site	
	Construction cost total	5,030		
PSP-02	Tourism Improvement of Yaxha and Nakum Archaeological Site			
	a. Access road	2,700	ROW=12m, Gravel pavement	
	b. Electricity power supply	720	From the CA13	
	c. Visitor Center Building	100	Single story, timber structure	
	d. Information center	50	Single story, timber structure	
	e. Landscaping, Parking	12	Surrounding of the buildings and parking	
	f. Utilities	8	Septic tank and well water	
	g. Equipment	6	For the buildings	
	h. Sign & information boards	8	Sign system in the sites	
	Construction cost total	3,604		
PSP-03	Development of Maya Research and Learning Center			
	a. Regional center building	1,200	2 stories, reinforced concrete structure	
	b. Landscaping, parking	168	Surrounding of the building and parking	
	c. Utilities	40	Septic tank, piped water	
	d. Equipment	240	For the buildings	
	e. Special equipment	200	For laboratory, library, etc.	
	Construction cost total	1,848		
PSP-04	1) Tourism Improvement of Aguateca and El Ceibal Archaeological Site and Field Museum			
	a. Access pathway	80	Asphalt pavement	
	b. Site museum building	80	Single story, timber structure	
	c. Field museum	200	Display of replicas	
	d. Visitor center	75	Single story, timber structure	
	e. Landscaping, parking	40	Surrounding of the buildings and parking	
	f. Utilities	18	Septic tank, well water, generator	
	g. Equipment	14	For the building	
	h. Sign & information boards	13	Sign system in the site	
		Construction cost total	520	
	2) Development of Pasion River Cruise Facilities			
	a. Boat piers	400	3 locations (Sayaxche, Aguateca, El Ceibal)	
	b. Mooring facilities	1,000	Both side	
	c. Terminal buildings	75	Single story, timber structure	
	d. Souvenir shops	15	Single story, timber structure	
	e. Equipment	10	For the buildings	
	f. Toilet	40	Timber and concrete block structure	
	g. Utilities	16	Septic tank	
	h. Landscaping, parking	240	Surrounding of the buildings and parking	
i. Site preparation	300	Within riverbank (public area)		
	Construction cost total	2,096		
PSP-05	Construction of Archaeology and Regional Culture Center			
	a. Exhibition building	800	2 stories, reinforced concrete structure	
	b. Landscaping, parking	60	Surrounding of the building and parking	
	c. Utilities	5	Septic tank, piped water	
	d. Equipment	80	For the building	
	Construction cost total	945		

Note: a) Official tax is not included.
 b) Price escalation, contingency, engineering and approval costs, and inflation are not included.

Source: JICA Study Team

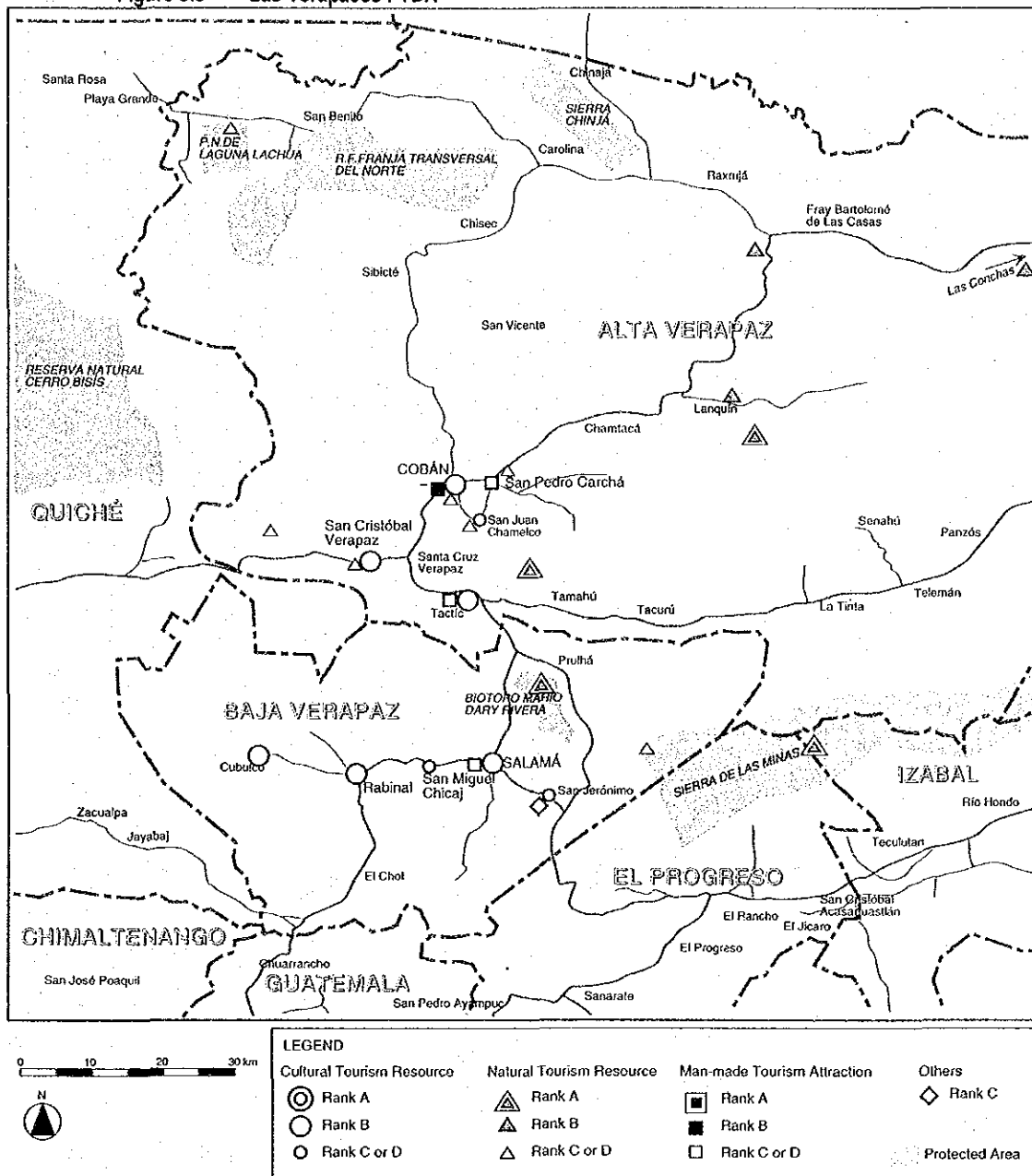
3.2. Tourism Development Plan for Las Verapaces PTDA

3.2.1. Regional Context

Las Verapaces PTDA is made up of two Departments: Alta Verapaz and Baja Verapaz. The PTDA corresponds to “Nature Paradise” Tourism Region.

The area produced cacao beans during the pre-hispanic times, coffee after the 19th century, and cardamom in the past few decades. Mountaneous areas striding over the two departments provide habitat for Quetzal – the national symbol of Guatemala, and are to be incorporated into the national system of Ecological Corridors.

Figure 3.8 Las Verapaces PTDA



Source: JICA Study Team

The area is located at the cross road of the two important travel routes: the road from Antigua to Flores, and the road from Huehuetenango to Izabal. Due to this, the area is expected to develop as an important tourism transport node.

The percentages of indigenous population out of the total populations in Alta Verapaz and Baja Verapaz were 89% and 56%, respectively, which are relatively high. The percentages of those who live under the poverty line in Alta Verapaz and Baja Verapaz are 76% and 72%, respectively, which are one of the highest in the country. The human development index (HDI) of Alta Verapaz was at the worst level among the 22 departments of Guatemala. They provide backgrounds for rapid deforestation and migration to El Peten.

Las Verapaces PTDA received 390,000 bed-nights and 220,000 visitor arrivals, of which 170,000 arrivals or 77% of the total visitor arrivals were domestic. Table 3.8 and interviews with the travel trade shows that family trips from El Salvador and backpackers from Europe and North America are important market segments other than domestic tourists.

Table 3.8 Visitor characteristics of Las Verapaces PTDA

Item	Las Verapaces PTDA		Guatemala	
	Response	(%)	Response	(%)
Visitor Type	205	100.0%	3,046	100.0%
Independent	137	66.8%	1,320	43.3%
Organized	8	3.9%	166	5.4%
Business	33	16.1%	943	31.0%
Friend & Relatives	24	11.7%	562	18.5%
Others	3	1.5%	55	1.8%
Regional Market	205	100.0%	3,037	100.0%
Neighboring Countries	107	52.2%	1,585	52.2%
North America	43	21.0%	785	25.8%
South America	5	2.4%	142	4.7%
Europe	40	19.5%	402	13.2%
Others	10	4.9%	123	4.1%

Source: Visitor Survey (March and July 2001), JICA Study Team

Table 3.9 shows the tourism resources in Las Verapaces PTDA. The main tourism resources in Las Verapaces PTDA are nature-based ones. There are three tourism resources evaluated as Rank A: Semuc Champey, Sierra de Yalijux, and Sierra de Las Minas. There are some attractive villages evaluated as Rank B because of their markets, festivals and village-scapes.

Table 3.9 Tourism resources in Las Verapaces PTDA

Name	Department	City/Village	Category				Rank
			Cultural	Natural	Man-made	Others	
Colonial townscape and architecture	Alta Verapaz	Cobán	X				C
National Folklore Festival	Alta Verapaz	Cobán	X				B
Parque Nacional Las Victorias	Alta Verapaz	Cobán		X			D
Museo El Príncipe Maya	Alta Verapaz	Cobán			X		C
Finca Santa Margarita: Coffee farm	Alta Verapaz	Cobán			X		B
Vivero Verapaz: Orchid nursery	Alta Verapaz	Cobán			X		B
Katínamit Museum	Alta Verapaz	San Cristóbal Verapaz	X				B
Village Scenery	Alta Verapaz	San Cristóbal Verapaz	X				B
Laguna Chichoj	Alta Verapaz	San Cristóbal Verapaz		X			D
Fiesta	Alta Verapaz	San Juan Chamelco	X				D
Grutas del Rey Marcos	Alta Verapaz	San Juan Chamelco		X			C
Balneario Las Islas	Alta Verapaz	San Pedro Carchá		X			D
Regional Museum	Alta Verapaz	San Pedro Carchá			X		C
Chi-ixim Chapel	Alta Verapaz	Tactic	X				C
Village Scenery	Alta Verapaz	Tactic	X				B
Balneario Chamche	Alta Verapaz	Tactic			X		D
Fiesta	Baja Verapaz	Cubulco	X				B
Market	Baja Verapaz	Cubulco	X				C
Church	Baja Verapaz	Rabinal	X				D
Fiesta of Saint Peter	Baja Verapaz	Rabinal	X				B
Pottery making center	Baja Verapaz	Rabinal	X				B
Market	Baja Verapaz	Rabinal	X				C
Church	Baja Verapaz	Salamá	X				D
Fiesta	Baja Verapaz	Salamá	X				B
Market	Baja Verapaz	Salamá	X				C
Finca San Lorenzo (Coffee farm)	Baja Verapaz	Salamá			X		D
Los Arcos (Aqueduct) & Old sugar mill	Baja Verapaz	San Jerónimo	X				C
Aguardiente (brewed by Sugar Cane)	Baja Verapaz	San Jerónimo				X	C
Fiesta	Baja Verapaz	San Miguel Chicaj	X				C
Weaving	Baja Verapaz	San Miguel Chicaj	X				C
Semuc Champey	Alta Verapaz	-		X			A
Parque Nacional Laguna Lachúa	Alta Verapaz	-		X			B
Chilascó	Baja Verapaz	-		X			B
Candelaria Caves	Alta Verapaz	-		X			B
Lanquín Cave	Alta Verapaz	-		X			B
Las Conchas Cave	Alta Verapaz	-		X			B
Sierra de Yalijux	Alta Verapaz	-		X			A
Mountainous Areas between Panpacche and Queja	Alta Verapaz	(Caquipec)		X			B
Biotopo del Quetzal	Baja Verapaz	-		X			B
Kak'ik	-	-				X	C

Source: JICA Study Team

3.2.2. Considerations for Sustainable Tourism

Table 3.17 shows the considerations for sustainable tourism, which are considered important under the regional context of Las Verapaces PTDA.

Table 3.10 Considerations for sustainable tourism in Las Verapaces PTDA

Natural environment	Social environment	Cultural heritage
<ul style="list-style-type: none"> • Considerations for the risk of deforestation in case of road development • Considerations for landscape when developing canopy walkways • Protection of endangered species such as jaguar, scarlet macaw and trogon. • Harmonization of infrastructure designs and surrounding environment • Use of native species for landscaping • Waste management in tourism sites • Supports for private and municipal reserves • Conduct of environmental awareness campaigns • Strengthening of tourism promotion for nature tourism 	<ul style="list-style-type: none"> • Respect for the community will when planning tourism products • Ban on the exaggeration of traditional cultures for commercial purposes • Awareness campaign toward tourists regarding appropriate manners in indigenous communities • Tourism use of local agro-products such as cacao, coffee, and cardamom • Local participation based on a co-management scheme • Supports for local enterprises that represent community interests • Considerations for the seasonality of agricultural activities • Use of a participatory planning methods for developing Community Tourism • Establishment of a community organization for managing Community Tourism • Establishment of a code of behaviors for the visitors to Community Tourism site • Zoning for local people when introducing Community Tourism 	<ul style="list-style-type: none"> • Conservation efforts for an area rather than individual buildings • Establishment of design standards based on traditional architectural style • Development of walking trails and provision of information about the trail • Promotion of wise use of traditional buildings • Respect for the daily activities of local people • Permission of minimum modification for amenities and security under certain guidelines • Public awareness campaign for cultural conservatoin • Respect for the original interior designs when renovating traditional buildings • Protection against acid rain and air pollution

Source: JICA Study Team

3.2.3. Tourism Development Strategy

(1) SWOT analysis

Development strategy of Las Verapaces PTDA was conceived based on the SWOT analysis as shown in Table 3.11, which is a summary of the tourism and regional socioeconomic situations analysis.

Table 3.11 SWOT analysis of tourism in Las Verapaces PTDA

	Positive factors	Negative factors
Present	<p><u>Strengths</u></p> <ul style="list-style-type: none"> • The area is relatively close to Guatemala City (200km) that is the largest source of domestic tourists and the principal gateway for international visitors. • The area is well known in Guatemala and neighboring countries as a nature destination of cloud forests. • The area is also endowed with diverse tourism resources such as agricultural activities of coffee, cardamom, and cacao, and cultural attractions of living indigenous cultures and festivals. 	<p><u>Weaknesses</u></p> <ul style="list-style-type: none"> • Deforestation is in progress at a rapid pace due to heavy dependency on agriculture coupled with a rapid population growth. • Local economy, which has been monoculture of cash crops, is subject to the price fluctuation of international markets. • Accommodation supply, in particular, for nature tourism, is insufficient both in terms of quality and quantity. • There is a lack of human resources needed to develop nature tourism such as nature guides and eco-lodge operators. • Many of the remaining nature areas are located in remote areas, which makes it difficult to use them for tourism purposes. • Coban City, which is expected to be the Tourism Center of the area, lacks in tourism attractions and visitor facilitation services. • Poor awareness of Guatemala as a nature destination in the international tourism market makes the marketing of this area difficult.
Future	<p><u>Opportunities</u></p> <ul style="list-style-type: none"> • Being located at the crossroad of the two Tourism Corridors of Huehuetenango – Izabal and Antigua – Flores Tourism, the area is expected to increase its importance as a stopover with the improvement of the road conditions. • It is expected in the area to formulate an Ecological Corridor that connects Sierra de las Minas and Sierra de los Cuchumatanes, which would favor tourism development as well. • The area abounds in tourism resources for soft adventure and ecotourism, which are among the fastest growing tourism market segments. • The area is well known for its agricultural produce, which could be favorable for introducing agro-tourism. • Indigenous cultures combined with nature-based attractions could be a competitive tourism product. 	<p><u>Threats</u></p> <ul style="list-style-type: none"> • Deforestation would diminish the area's potential for tourism development, and the local economy would continue to depend on unstable cash crops and fail in economic diversification. • Due to the lack of tourism attractions, international tourists would not travel by road to El Peten and skip to visit Las Verapaces.

Source: JICA Study Team

(2) Development directions

As has been pointed out in the SWOT analysis, Las Verapaces PTDA is a nature destination under a risk of losing its tourism resources. Therefore securing of its remaining nature areas is the priority issue, while diversification of its tourism products, in particular, toward agrotourism and cultural tourism is an issue that should be coped with in the long-term.

The development strategy of Las Verapaces PTDA consists of the following four directions:

- Consolidation of existing nature areas,
- Introduction of agrotourism,
- Revitalization of cultural traditions through tourism,
- Strengthening of tourism network, and

The following sections elaborate on the above directions in more details.

a. Consolidation of the existing nature areas

“Nature” has been the principal tourism image of Las Verapaces PTDA; therefore protection of the forests should be given a high priority for the tourism sector development. It could be mentioned otherwise that the development of the tourism sector is indispensable to protect the forests since the tourism use of the forests could curtail the deforestation.

b. Introduction of agrotourism

Agrotourism is considered to be the most possible direction for Las Verapaces to increase its tourism product variety due to the consistency with its “green” destination image. In the context of Las Verapaces, promotion of agrotourism has a very close link with the environmental conservation because tourism can be a mechanism that converts the “unused land” or remaining forests into economic benefits.

c. Revitalization of cultural traditions through tourism

Alta Verapaz is one of the departments that have the highest percentage of indigenous population, and both departments abound in distinctive cultural traditions ranging from indigenous cultures to gourmet, festivals, and handicrafts. They could supplement, or be combined with, nature-based tourism attractions to enrich tourism in Las Verapaces.

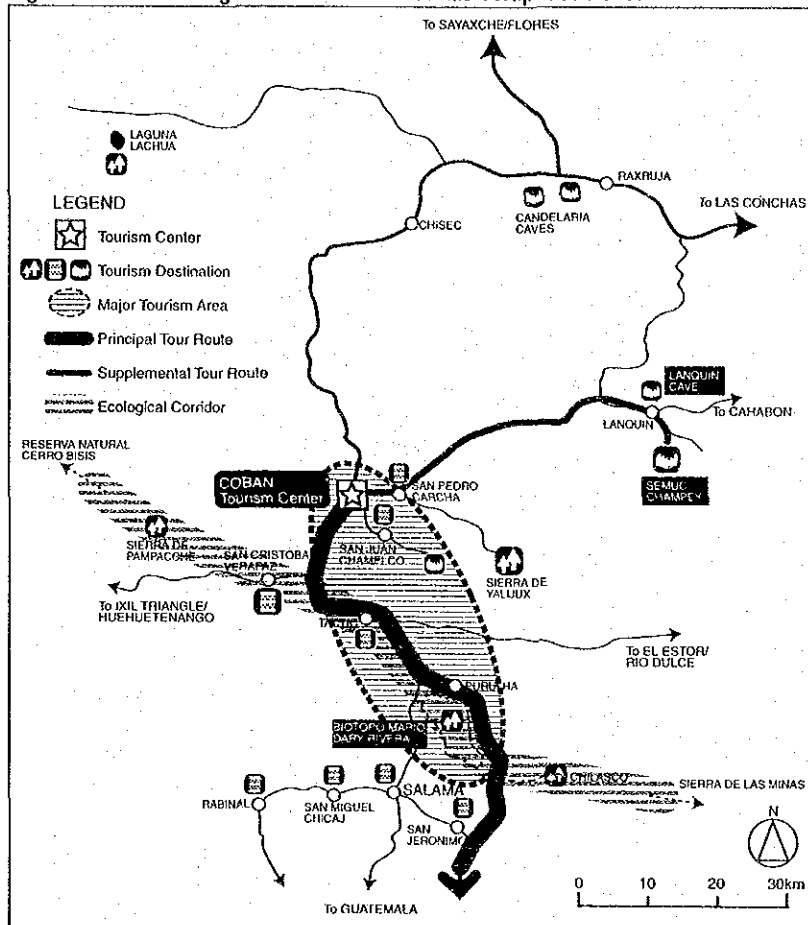
d. Establishment of Las Verapaces as a crossroad of tourism network

Las Verapaces PTDA is located at a dead end of the current tourism network. The improvement of the road conditions, however, is converting the PTDA as a transport node of the national tourism network.

(3) Development scenario and tourism structure

Although there are potential tourism sites such as Lanquin Caves, Semuc Champey, Sierra de Yalijux, and Laguna Lachua, current tourist activities are limited in Coban Tourism Center, nature areas in its vicinity, and along the Atlantic Highway due to poor road conditions. Traveling between Coban and Flores is not very common. Figure 3.9 shows the existing tourism structure of Las Verapaces PTDA.

Figure 3.9 Existing tourism structure of Las Verapaces PTDA



Source: JICA Study Team

The following basic directions are identified after evaluating development and marketing possibilities of tourism in Las Verapaces:

- Securing of remaining nature areas with tourism potential along the Verapaz Eco-Corridors has the highest priority, and
- Actions for tourism diversification toward agrotourism and cultural tourism should be introduced during the short-term stage so as to supplement the Eco-Corridor formulation, and need to be strengthened in the long-term.

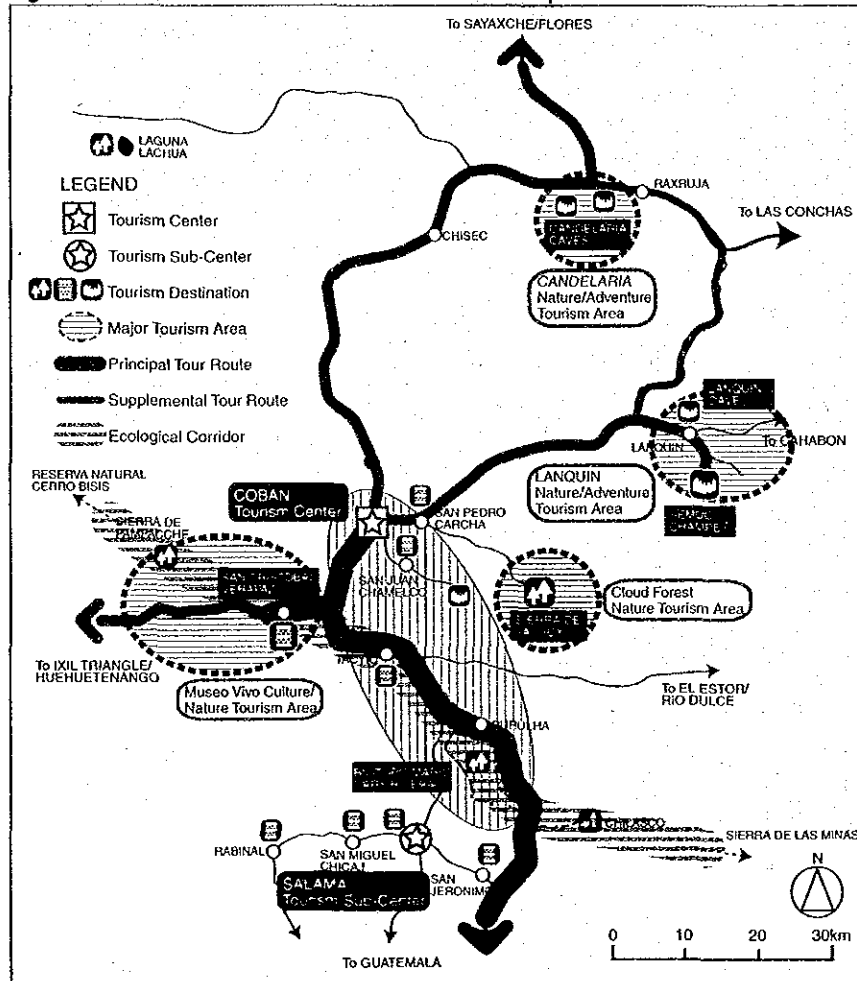
a. Short-term plan

Projects that would produce immediate effects to secure the remaining nature areas in the Verapaz Eco-Corridor are given the highest priority for implementation:

- Tourism developments for the Verapaz Eco-Corridor formulation;
 - Tourism improvements of Sierra de Yalijux (Eco-Quetzal reserve),
 - Development of Sierra Pampacche Forest Park as a Sattelite facility of the Community Tourism in San Cristobal Verapaz, and
 - Development of the Verapaz Eco-Corridor Interpretation Center,
- Development of Community Tourism in San Cristobal Verapaz,
- Promotion and supports for agrotourism and private reserve, and
- Improvement of existing tourism products along the Coban – Flores Tourism Corridor, and promotion of the overland trip from Coban to Flores.

Figure 3.10 shows the short-term tourism structure for Las Verapaces PTDA.

Figure 3.10 Short-term tourism structure of Las Verapaces PTDA



Source: JICA Study Team

The above-mentioned actions are reflected to the following tourism structure development:

- Tourism development projects should be introduced along the Atlantic Highway and the surroundings of the Coban City, where road conditions are relatively good,
- Antigua – Coban – Flores Tourism Corridors (north – south route) should be established to strengthen the linkage among Tourism Regions, and
- Community Tourism development in San Cristobal needs to be supported from the viewpoint of tourism structure development; it occupies a strategic location at the entrance to Quiche and the Ixil triangle, linkage with which are to be strengthened at the long-term stage.

b. Long-term plan

Development efforts at the long-term stage should focus more on product diversification and sophistication of tourism products. Necessary actions are summarized as follows:

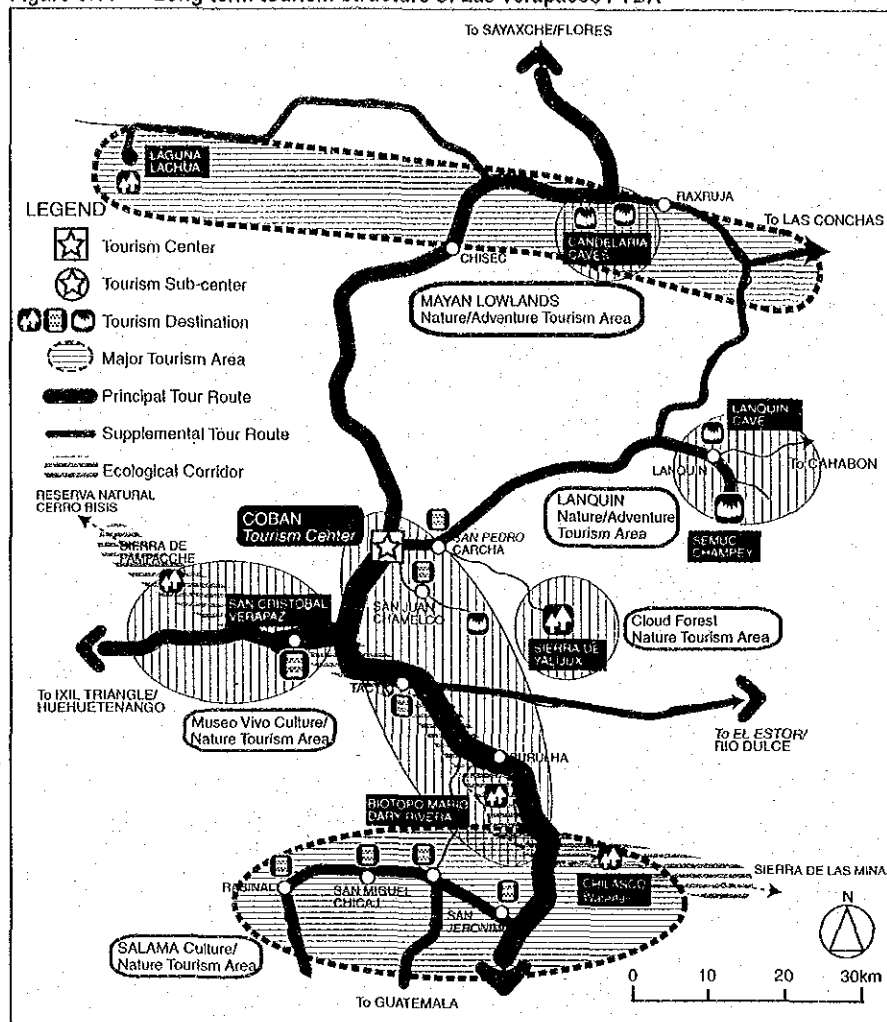
- Tourism improvements of Coban City: museums, creation gathering places,
- Extension of the Verapaz Eco-Corridor: Chilasco Falls, Laguna Lachua,
- Establishment of the Huehuetenango – Coban – Izabal Tourism Corridor, and
- Development of a bypass road that connects Guatemala City and Salama.

The above actions are reflected to the following tourism structure development:

- Improvement of the scenic Motagua River route between Salama and Guatemala City would boost domestic tourism in Baja Verapaz,
- Huehuetenango – Coban Tourism Corridor, which connects San Cristobal Verapaz and the Ixil Triangle, should be strengthened to circulate visitors from Quetzaltenango, and
- Coban – Izabal Tourism Corridor via Polonchic Valley should be established to connect Las Verapaces with the Caribbean beach destination in Guatemala.

Figure 3.11 shows the long-term tourism structure of Las Verapaces PTDA.

Figure 3.11 Long-term tourism structure of Las Verapaces PTDA



Source: JICA Study Team

(4) Marketing directions

Marketing directions for Las Verapaces PTDA are summarized in Table 3.12

Table 3.12 Marketing directions for Las Verapaces PTDA

Origin market	Products, segments, promotion etc
Domestic	Nature tourists from Guatemala City, students for adventure tourism
Mexico & Central America	Salvadorians for nature and climate
North America	Nature tourism and Community Tourism
Other Americas	Overland trip between Antigua and Flores
Europe and others	Nature tourism and Community Tourism, Overland trip

Source: JICA Study Team

(5) Tourism demand framework

Tourism development framework was set based on the estimation of the bed-nights in Las Verapaces PTDA as shown in Table 3.13. Total visito arrivals to Las Verapaces PTDA is expected to be 350,000 in 2010, and 580,000 in 2020.

Table 3.13 Development framework of Las Verapaces PTDA

Year		2000		2010		2020	
		Bed-night	Arrival	Bed-night	Arrival	Bed-night	Arrival
Hotel visitor	Total	385,962	224,114	628,514	350,161	1,029,819	576,332
	Domestic	262,307	174,871	358,368	238,912	581,503	387,669
	International	107,000	49,243	270,146	111,249	448,316	188,663
	Short Haul	50,064	27,631	98,072	51,277	174,055	89,407
	Middle Haul	29,546	9,575	73,811	30,356	122,276	51,522
	Long Haul	44,045	12,037	98,263	29,616	151,984	47,734
Room Requirement	Total	1,314		1,676		2,691	
	High Class	0		68		159	
	Middle Class	576		779		1,476	
	Low Class	738		829		1,056	

Source: Visitor Survey (March and July 2001), JICA Study Team, INGUAT

3.2.4. Projects and Programs

(1) Project evaluation

Existing projects, project ideas proposed by a broad range of organizations and individuals, as well as those by JICA Study Team were evaluated with the same manner as used for El Peten PTDA. In the Las Verapaces PTDA, tourism projects that would promote tourism use of nature areas are given a high priority to comply with its development strategy.

(2) Short-term pilot projects

a. Tourism Improvement of Sierra de Yalijux

Outline of the project

Sierra de Yalijux, which preserves invaluable tropical cloud forests and provides habitats for Quetzal, is located 30km to the southeast from Coban City. A NGO called Eco-Quetzal is assisting local Kekchi people to conserve the forests by introducing alternative livelihoods including a tourism program of home stay at indigenous family and nature observation. The area, however, does not have adequate infrastructure and tourist facilities; therefore it caters mostly for adventurous youth travelers. Since the visitor number and their spending is limited, tourism income is not sufficient for the local community to improve their economic situations while conserving the forests. This project aims at improving the visitor facilities so that the area could receive a large number of high-spending visitors. Components of the project are as follows:

- Improvement of the access trails from the entrance of San Lucas Village to ex-biological station,
- Construction of visitor center and model eco-lodge, and
- Basic infrastructure: power supply, water supply, emergency equipments etc.

Implementation setup

INGUAT should be responsible for implementing the project.

Operation of the eco-lodge would be subcontracted to a private company that has expertise in operating quality accommodation with a purpose to transfer skills to local community members. Other facilities are operated by Chicaenab community. INGUAT should set up a project implementation committee with members from NGOs, CONAP, MARN, MAGA, INFOM, and local communities. The NGO (Eco-Quetzal) would be in charge of coordination with local community. INFOM and INGUAT would provide tourism education and training for local communities. Other government agencies provide technical supports in respective fields of their specialization.

b. Development of the Verapaz Eco-Corridor Interpretation Center

Outline of the project

It is important to have a facility that provides interpretation of, and publicize the importance of conserving, the Eco-Corridor toward the general public and tourists. The facility could be an important tourism attraction that would also strengthen the nature destination image of Las Verapaces. In this context, it is proposed to construct an *interpretation center of the Ecological Corridor*. The proposed Center has the following functions:

- Provision of interpretation about the Verapaz Eco-Corridor as a tourist attraction,
- Promotion of nature tourism and agro-tourism in Las Verapaces PTDA,
- Technical supports for finca and private reserve owners who are interested in agro-tourism and nature tourism, and
- Environmental education for local people.

Implementation setup

INGUAT should build, operate, and maintain the facility.

INGUAT should set up a project implementation committee with representatives from CONAP, MARN, MAGA, INAB, Municipality of Purulha, and NGOs.

c. Development of Sierra de Pampacche Cloud Forest Park

Outline of the project

Sierra Pampacche is located to the north of the town proper of San Cristobal Verapaz in Alta Verapaz Department. The area constitutes part of the Verapaz Eco-Corridor, and is one of the invaluable forested areas. The area, however, is under the risk of deforestation due to tough socioeconomic situations of local communities. It is proposed to develop a cloud forest park in Sierra de Pampacche for use as a tourism attraction thus contributing to the improvement of the economic conditions of the local communities. The forest park is to constitute part of the Community Tourism in San Cristobal Verapaz as an anchor tourism attraction. The project has the following components:

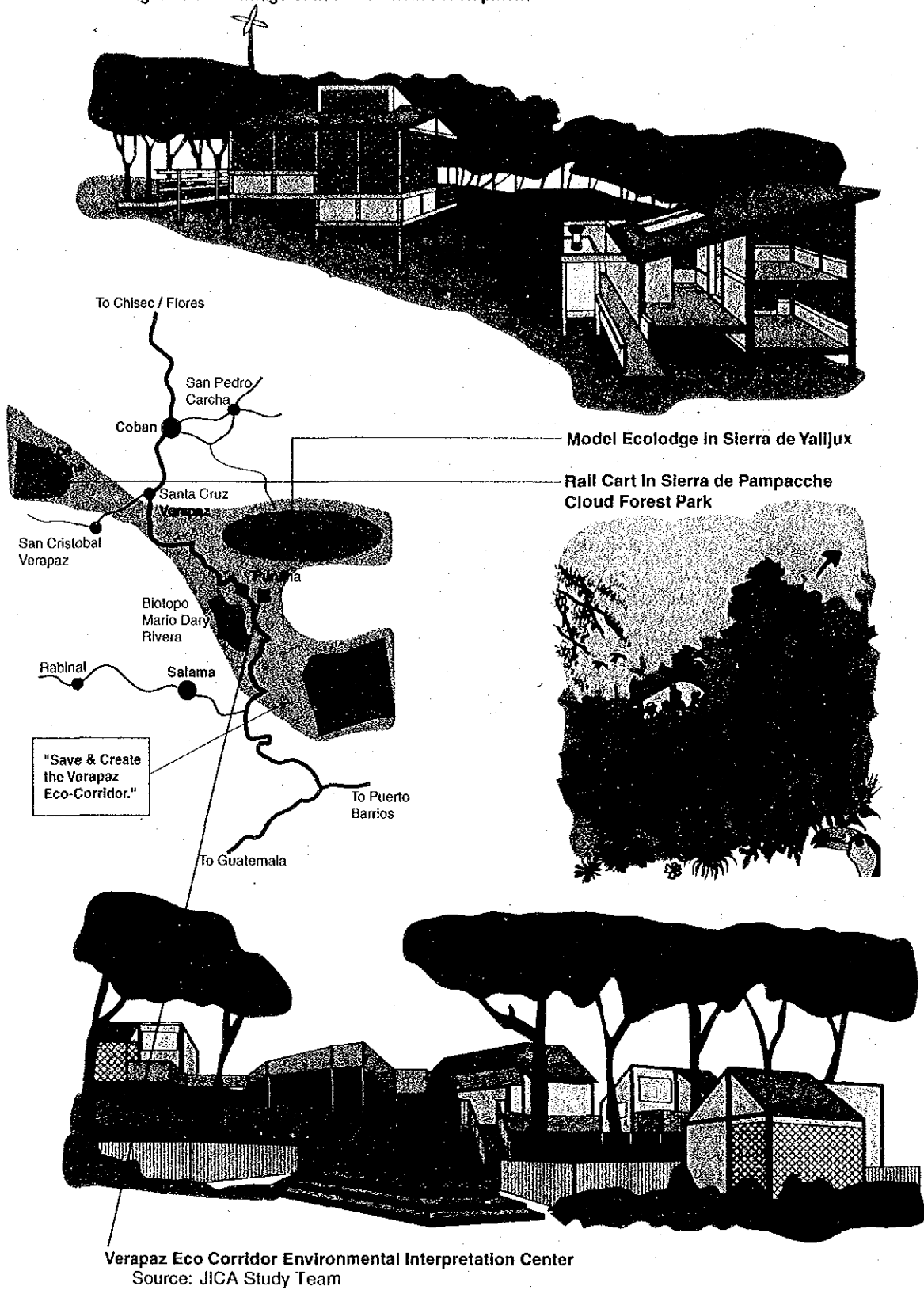
- Rail cart (mono rail),
- Trekking trails: resting hut, bench, observation deck, signs and interpretation boards,
- Canopy walkways,
- Ecolodge, and
- Reforestation.

Implementation setup

INGUAT should take the responsibility of implementing the project. INGUAT will build the facilities. Eco-lodge will be sub-contracted to a private company capable of operating quality hotels. Other facilities will be operated by San Cristobal Municipality.

San Cristoban Verapaz Municipality should set up the San Cristoban Verapaz Community Tourism Committee with close cooperation from INGUAT. Members of the committee would be representatives from the municipality, INGUAT, INAB, CONAP, INFOM, local community of Queja, NGO, sub-contracted hotel operator and those involved in Community Tourism.

Figure 3.12 Image of nature tourism development



(3) Other short-term projects

a. Development of Community Tourism in San Cristobal Verapaz

San Cristobal Verapaz is predominantly a Pokomchi municipality where a process of introducing Community Tourism has been started by local people. Pampacche Cloud Forest Park as described previously is part of the Community Tourism plan, and is expected to strengthen the community-based tourism development project from a viewpoint of marketing since the market perception of Las Verapaces PTDA is a nature destination. Proposed facilities other than the Cloud Forest Park are as follows:

- Induction Center and interpretative trails,
- Satellite-1: Handicrafts showcase,
- Satellite-2: Indigenous cookery restaurant in orchid garden,
- Satellite-3: Coffee and sugarcane finca historical museum, and
- Satellite-4: Marimba workshop and listening hall.

Development of Community Tourism should be lead by the Community Tourism Committee as discussed in the section of Pampacche Cloud Forest Park.

b. Semuc Champey

Semuc Champey is a complex of limestone formations with natural pools, falls, natural bridges, and underground caves. A thatched shelter is built for visitors. It is suggested to develop picnic site with items of: 1) access road between Lanquin Caves and the site, 2) access trail from parking space to the river side picnic site, 3) rest house with kitchen, washrooms, kiosk, and necessary utilities and equipment.

c. Candelaria Caves

The spectacular Candelaria Cave system is located 100km to the northeast from Coban. It is recommended to improve basic tourism infrastructures for cave exploration. The followings should be implemented: 1) improvement of car parking with hut, 2) access trail from the parking to the cave entrance, 3) cave trail with ladders and stairs and, 4) landscaping along the access trail and entrance area.

d. Lanquin Caves

The Lanquin Cave system is another important tourism attraction in the northern part of Las Verapaces. It already has been installed with inside walkways, ladders and chains at danger sections with electric lighting. Following additional improvements are recommended: 1) improvement of access road including car parking, 2) visitor center with washrooms, 3) improvement of cave trails and, 4) landscaping at cave entrance.

(4) Long-term projects

a. Tourism Improvement of Coban City

Improvement of the highway that connects Guatemala City/ Antigua with the Petén Region is expected to boost tourism in Las Verapaz PTDA. Cobán is expected to be the Tourism Center of Las Verapaces due to its infrastructure, services and attractions. Its adequate operation will have a great impact on the region's competitiveness in tourism. The project has the following components.

- Revitalization of the historic center,
- Development of museums and interpretation centers,
- Creation of tourists' gathering places,
- Walking Corridor that connect important tourism attractions,
- Investment promotion for wise use, and
- Improvement of visitor facilitation.

b. Laguna Lachua

The Laguna Lachua National Park is a beautiful volcanic lake surrounded by dense tropical forest suitable for nature tourism. The following developments are recommended: 1) improvement of access road between Sacocpur and San Marcos (entrance of the lake), 2) visitor center with kiosk, and 3) signs and information.

c. Chilasco Waterfall

The following projects is recommended to improve basic tourist infrastructure for the Chilasco Waterfall, which is the highest in Central America: 1) improve and extension of access road from existing parking space to hut (approx. 1km) with car parking, 2) access trail from existing hut to view point, and 3) resting hut with washrooms.

d. Improvement of Community Tourism in San Cristobal Verapaz

The followings should be implemented in the long-term.

- Review and renewal of existing facilities to maintain the quality of services,
- Development of new facilities and attractions, and
- Training of personnel to inherit traditions.

(5) Construction Cost

Total construction cost for the short-term pilot projects is US\$ 3.0 million. Breakdown of the cost is summarized in Table 3.14. Total direct construction cost for the other short-term projects is US\$10.8 million, which includes private sector investment in accommodation.

Table 3.14 Construction cost for the short-term pilot project of Las Verapaces PTDA

No.	Projects and components	Cost (US\$1,000)	Remarks
	Total of Las Verapaces PTDA	2,998	
VSP-01	Tourism Improvement of Sierra de Yalijux		
	a. Visitor center	25	Single story, timber structure
	b. Eco lodge(Low class)	200	Including community
	c. Eco trail	90	Wood-tip pavement
	d. Hiding huts	18	
	e. Sign & information boards	13	Sign system in the site
	f. Toilet	6	
	g. Utilities	18	Septic tank, well water, generator
	Construction cost total	370	
VSP-02	Development of Verapaz Eco-corridor Interpretation Center		
	a. Interpretation center	400	2 stories, reinforced concrete structure
	b. Landscaping, Parking	60	Surrounding of the buildings and parking
	c. Utilities	8	Septic tank, well water
	d. Equipment	40	For the building
	Construction cost total	510	
VSP-03	Development of Sierra Pampacche Cloud Forest Park		
	Trekking trails	60	
	Sign & information boards	20	Sign system in the site
	Resting huts and benches	15	
	Observation deck	5	
	Railing-Cart	30	To climb mountain for tourists and researchers with engine
	Rail works	500	
	Piers	500	
	Canopy walkway	500	
	Observation tower and hut	30	
	Re-forestation	100	
	Eco Lodge	300	Single story, timber structure
	Equipment	30	For the lodge
	Toilet	12	
	Utilities	18	Septic tank, well water, generator
	Construction cost total	2,120	

Note: a) Official tax is not included.
b) Price escalation and inflation are not included.

Source: JICA Study Team

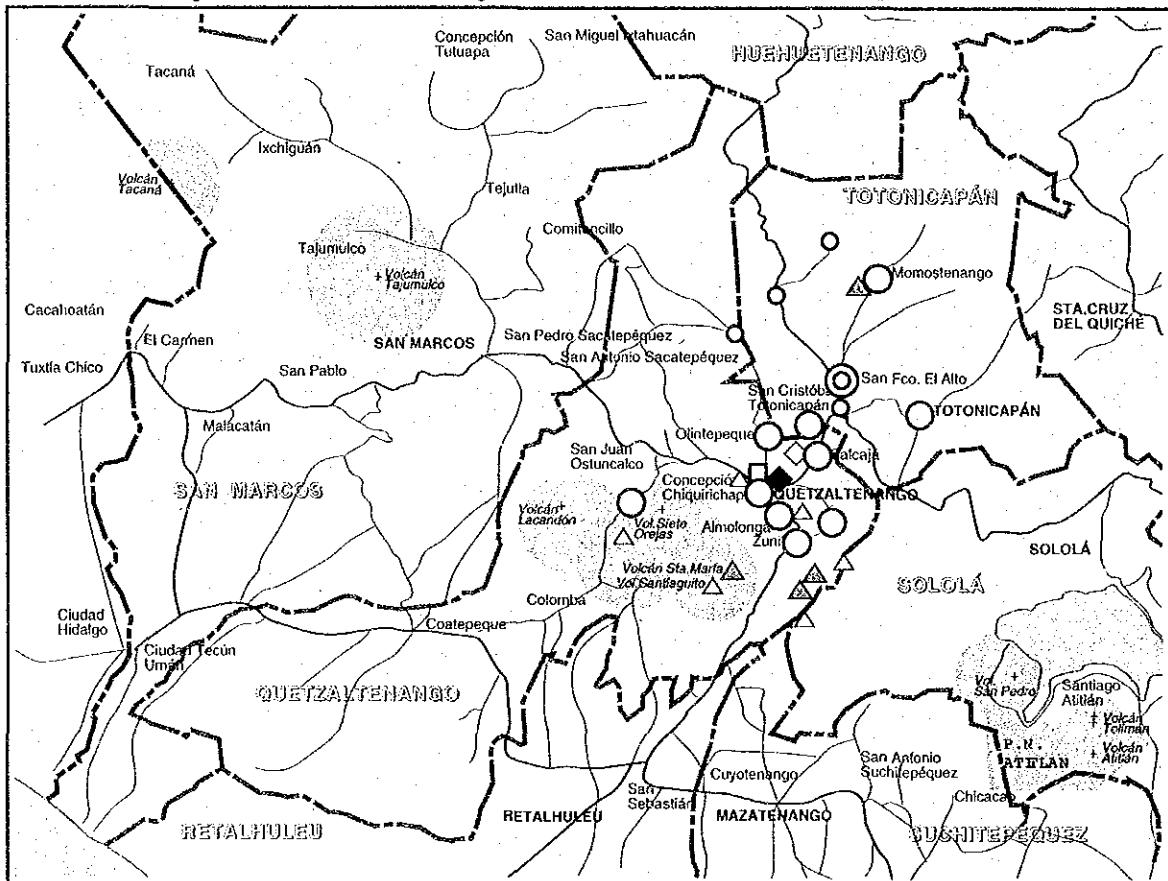
3.3. Tourism Development Plan for the Southwestern Highlands PTDA

3.3.1. Regional Context

The Southwestern Highlands PTDA is made up of two Departments: Quetzaltenango and Totonicapán. The PTDA occupies the southwestern part of the “Living Indigenous Highlands” Tourism Region.

The area is a place of the historical fight between Spanish conqueror Pedro de Alvalado and indigenous Quiche king Tecun Uman. The altitude of the area is from 1200m to 3000m. The area abounds in volcanoes and hot springs. Population density is relatively high, and percentage of indigenous population is 50% for Quetzaltenango department, and as high as 95% for Totonicapán department.

Figure 3.13 Southwestern Highlands PTDA



Legend:			
Cultural Tourism Resource	Natural Tourism Resource	Man-made Attractions	Others
⊙ Rank A	△ Rank A	■ Rank A	◆ Rank A
○ Rank B	△ Rank B	■ Rank B	◆ Rank B
○ Rank C or D	△ Rank C or D	□ Rank C or D	◇ Rank C or D
Protected Area			

Source: JICA Study Team

Poverty in rural areas is a serious social problem in the two departments. 51% of the population in Quetzaltenango department and 85% in Toitonicapan are reported to live under the poverty line. Although agriculture is a dominant economic activity, tourism is regarded to be prospective as a supplementary income source and an alternative livelihood.

There were 770,000 bed-nights, 380,000 visitor arrivals in the Southwestern Highlands PTDA in 2000, of which 320,000 arrivals or 84% of the total visitor arrivals were domestic visitors. Table 3.15 shows that the PTDA is characterized by a high share of independent tourists. Unlike El Peten, the share of the organized tourist segment is lower than the national average, which may suggest that Quetzaltenango is a backpacker destination similar, although to a lesser extent, to Las Verapaces.

Table 3.15 Visitor characteristics of the Southwestern Highlands PTDA

Item	SW Highlands PTDA		Guatemala	
	Response	(%)	Response	(%)
Visitor Type	322	100.0%	3,046	100.0%
Independent	208	64.6%	1,320	43.3%
Organized	18	5.6%	166	5.4%
Business	55	17.1%	943	31.0%
Friend & Relatives	39	12.1%	562	18.5%
Others	2	0.6%	55	1.8%
Regional Market	322	100.0%	3,037	100.0%
Neighboring Countries	144	44.7%	1,585	52.2%
North America	90	28.0%	785	25.8%
South America	9	2.8%	142	4.7%
Europe	66	20.5%	402	13.2%
Others	13	4.0%	123	4.1%

Source: Visitor Survey (March and July 2001), JICA Study Team

The main tourism resources in the Southwestern Highland PTDA are indigenous cultures. The market of San Francisco El Alto is evaluated as Rank A in this PTDA. Villages with B-rank tourism resources of weaving, market, festival and village scape are numerous such as Almolonga, Salcajá, Zunil, San Martín Sacatepéquez, San Francisco El Alto, Olinstepeque, and Momostenango. There are many hot springs identified as tourism resources in this PTDA. Volcanos are also identified as important tourism resources, and Volcano Santa María is evaluated to be Rank B. Table 3.16 shows the list of tourism resources in the Southwestern Highlands PTDA.

Table 3.16 Tourism resources in Southwestern Highlands PTDA

Name	Department	City/Village	Category				Rank
			Cultural	Natural	Man-made	Others	
Townscape/ architecture	Quetzaltenango	Quetzaltenango	X				B
Casa de la Cultura (Museums)	Quetzaltenango	Quetzaltenango			X		C
Museo de Arte	Quetzaltenango	Quetzaltenango			X		C
Museo del Ferrocarril de los Allos	Quetzaltenango	Quetzaltenango			X		C
Parque Zoológico Minerva	Quetzaltenango	Quetzaltenango			X		D
Language Schools	Quetzaltenango	Quetzaltenango				X	B
Los Vahos	Quetzaltenango				X		D
Weaving	Quetzaltenango	Almolonga	X				B
Market	Quetzaltenango	Almolonga	X				B
Village Scenery	Quetzaltenango	Almolonga	X				B
Los Baños	Quetzaltenango	1 km from Almolonga			X		D
Copavic Glass Factory	Quetzaltenango	1 km from Cantel	X				C
Market	Quetzaltenango	Olintepeque	X				B
Weaving	Quetzaltenango	Olintepeque	X				C
Iglesia de San Jacinto	Quetzaltenango	Salcajá	X				D
Weaving	Quetzaltenango	Salcajá	X				B
Market	Quetzaltenango	Salcajá	X				C
Rompopo	Quetzaltenango	Salcajá				X	C
Church	Quetzaltenango	San Andrés Xecul	X				B
Annual Festival	Quetzaltenango	San Andrés Xecul	X				C
Market	Quetzaltenango	San Carlos Sija	X				D
Weaving	Quetzaltenango	San Martín Sacatepéquez	X				B
Village Scenery	Quetzaltenango	San Martín Sacatepéquez	X				C
Lake Chicabal	Quetzaltenango			X			C
Market	Quetzaltenango	Zunil	X				C
Village Scenery	Quetzaltenango	Zunil	X				C
Weaving	Quetzaltenango	Zunil	X				C
Festival of Santa Catarina de Alejandria	Quetzaltenango	Zunil	X				B
Festival of San Simón	Quetzaltenango	Zunil	X				B
Fuentes Georginas	Quetzaltenango			X			B
Nature around Aguas Amargas	Quetzaltenango			X			B
Aguas Amargas	Quetzaltenango				X		B
Fuentes Georginas	Quetzaltenango				X		B
Volcano Santa María	Quetzaltenango			X			B
Volcano Santiaguillo, Qtz	Quetzaltenango			X			C
Volcano Santo Tomás	Quetzaltenango			X			C
Volcano Zunil	Quetzaltenango			X			C
Ceramics	Totonicapán	Totonicapán	X				B
Apparition of the Archangel Michael	Totonicapán	Totonicapán	X				B
Festiva of Traditional Dance	Totonicapán	Totonicapán	X				B
Fiesta de Esquipulas	Totonicapán	Totonicapán	X				B
Fiesta Titular de San Miguel Arcángel	Totonicapán	Totonicapán	X				B
Village Scenery	Totonicapán	Totonicapán	X				C
Market	Totonicapán	Totonicapán	X				D
Church	Totonicapán	San Cristóbal Totonicapán	X				C
Fiesta Costumes	Totonicapán	San Cristóbal Totonicapán	X				C
Market	Totonicapán	San Cristóbal Totonicapán	X				C
Market	Totonicapán	San Francisco El Alto	X				A
Village Scenery	Totonicapán	San Francisco El Alto	X				B
Diablo Dance	Totonicapán	Momostenango	X				B
Market	Totonicapán	Momostenango	X				B
Octava de Santiago	Totonicapán	Momostenango	X				B
Village Scenery	Totonicapán	Momostenango	X				B
Wool Production	Totonicapán	Momostenango	X				B
Hot Springs	Totonicapán	Momostenango			X		C
Fiesta	Totonicapán	Pologuá	X				D
Market	Totonicapán	Pologuá	X				D
Market	Totonicapán	San Bartolo	X				D

Source: JICA Study Team

3.3.2. Considerations for Sustainable Tourism

Table 3.17 shows the considerations for sustainable tourism, which is considered especially important in the Southwestern Highlands PTDA.

Table 3.17 Considerations for sustainable tourism in the Southwestern Highlands PTDA

Natural environment	Social environment	Cultural heritage
<ul style="list-style-type: none"> • Protection of endangered species • Control of illegal hunting activities in protected areas • Harmonization of infrastructure designs and surrounding environment • Considerations for nature in case of developing access roads and trails • Use of native species for landscaping • Waste management in tourism sites • Supports for private and municipal reserves • Conduct of environmental awareness campaigns 	<ul style="list-style-type: none"> • Respect for the community will when planning tourism products • Ban on the exaggeration of traditional cultures for commercial purposes • Awareness campaign toward tourists regarding appropriate manners in indigenous communities • Government supports for revitalizing traditional cultures • Supports for local enterprises that represent community interests • Local participation based on a co-management scheme • Awareness campaign toward local people about tourism • Provision of training and job opportunities for tourism • Transfer to management responsibility to local people • Considerations for the seasonality of agricultural activities • Use of a participatory planning methods for developing Community Tourism • Establishment of a code of behaviors for visitors to Community Tourism • Zoning for local people when introducing Community Tourism 	<ul style="list-style-type: none"> • Conservation efforts for an area rather than individual buildings • Establishment of design standards based on traditional architectural style • Development of walking trails • Promotion of wise use of traditional buildings • Respect for the daily activities of local people • Permission of minimum modification for amenities and security under certain guidelines • Respect for the original interior designs when renovating traditional buildings • Protection against acid rain and air pollution • Public awareness campaign for cultural conservation • Installment of interpretation boards to historical buildings to develop cultural awareness among local people

Source: JICA Study Team

3.3.3. Development Strategy

(1) SWOT analysis

Development strategy of the Southwestern Highlands PTDA was conceived based on the SWOT analysis as shown in Table 3.18.

Table 3.18 SWOT analysis of tourism in the Southwestern Highlands

<p>Strength (present positive aspects)</p> <ul style="list-style-type: none"> • There are many indigenous communities that proudly maintain distinctive cultural traditions. • The area is also endowed with diverse types of tourism resources such as colonial cities, volcanoes, cloud forests, and spas. • Handicrafts produced in the area are diverse, and high in quality. 	<p>Weakness (present negative aspects)</p> <ul style="list-style-type: none"> • The area lacks in an anchor tourist attraction. • The area is located as if at a dead end of Guatemala's tourism network. • Traditional townscape is being lost due to the increase of buildings that do not respect traditional design. • Tourism value of indigenous cultures has not been recognized very well due to the weak linkage between tourism and indigenous community. • There is a lack of visitor facilitation such as signs, interpretation boards, and accommodation in indigenous communities. • Despite their high quality and reputation, handicrafts in the area are not used well for tourism. • It is not easy to differentiate the area from neighboring tourism destinations of Panajachel and Chichicastenango. • There are not adequate legal framework and coordination mechanisms to promote wise use of historical buildings.
<p>Opportunities (future positive possibilities)</p> <ul style="list-style-type: none"> • The area is expected to play an important role as a "bridge" between Chiapas Highlands of Mexico and Guatemalan Highlands. • Improvement of the National Road 7W that connects between Huehuetenango and Coban would create a tourism circuit in Guatemala, which is expected to benefit the area. • Indigenous communities are less spoiled by tourism, therefore possibilities exists to introduce alternative tourism products emphasizing more on cultural exchanges between visitors and community members. • Colonial and vernacular houses and buildings could be used for tourism purposes such as hotels, restaurants and art galleries. • Shopping of handicrafts and observation of their production process could be tourism attractions, and Quetzaltenango City could be a center for handicraft shopping. • Spas, which are currently used mostly by locals, could be used for tourism as well. 	<p>Threats (future negative possibilities)</p> <ul style="list-style-type: none"> • Indigenous cultures would fade as globalization trends continue. • Attractive colonial and vernacular buildings would be replaced by uninspiring modern architecture due to high maintenance costs. • Uncontrolled urban development would not only diminish tourism potential but also the residential environment.

Source: JICA Study Team

(2) Development directions

The SWOT analysis shows that the Southwestern Highlands PTDA is a tourism destination that is endowed with various tourism possibilities but lacks a focus, and most of its tourism products have tougher competitors located nearby. This situation exhibits a clear contrast with other PTDA's that need tourism diversification. Therefore, the first priority for its tourism development is to choose a focus of the PTDA. The followings are the future development directions for the Southwestern Highlands PTDA.

- Revitalization of indigenous cultures through tourism,
- Tourism use of historical towns,
- Strengthening of linkage with destinations beyond Cuatro Caminos,
- Tourism use of hot springs, and
- Visitor facility improvements of nature-tourism sites.

a. Revitalization of indigenous cultures through tourism

The Southwestern Highlands PTDA has one of the largest concentrations of indigenous population in Americas, and "living indigenous cultures" observed in the PTDA such as folk Catholicism, handicrafts, festivals, and distinctive lifestyles are overwhelming. However, local people have only limited awareness of the importance of their cultural heritage and its potential for tourism. A system should be introduced for tourism to provide not only economic benefits but also social ones by enhancing a sense of identity and cultural pride among host community members.

b. Tourism use of historical towns

Quetzaltenango City could rival Antigua in terms of its historical importance and tourism potential. The city is also expected to serve as an accommodation base to explore indigenous communities and nature areas in the PTDA; therefore tourism improvement of the city would create immediate effects for promoting tourism to its surrounding areas.

c. Strengthening of linkage with destinations beyond Cuatro Caminos

Like Las Verapaces PDTA, the Southwestern Highlands is currently located at a dead-end of the tourism network, and its future depends largely on its development. More specifically, the PTDA should make efforts to establish new linkage with potential tourism destinations beyond Cuatro Caminos: Huehuetenango and Quiche departments and Chiapas State in Mexico.

d. Tourism use of hot springs

The Southwestern Highlands PTDA is famous for its hot springs, which are mostly used by local people. Hot springs could be a supplementary attraction for tourists, and since they are unique to the area, it is worthwhile to make efforts toward tourism use. It is proposed to introduce a system to pipe hot springs water to respective accommodations

so that the water could be shared by a group of resort hotels. The proposed system would also avoid conflicts with community's use of hot springs.

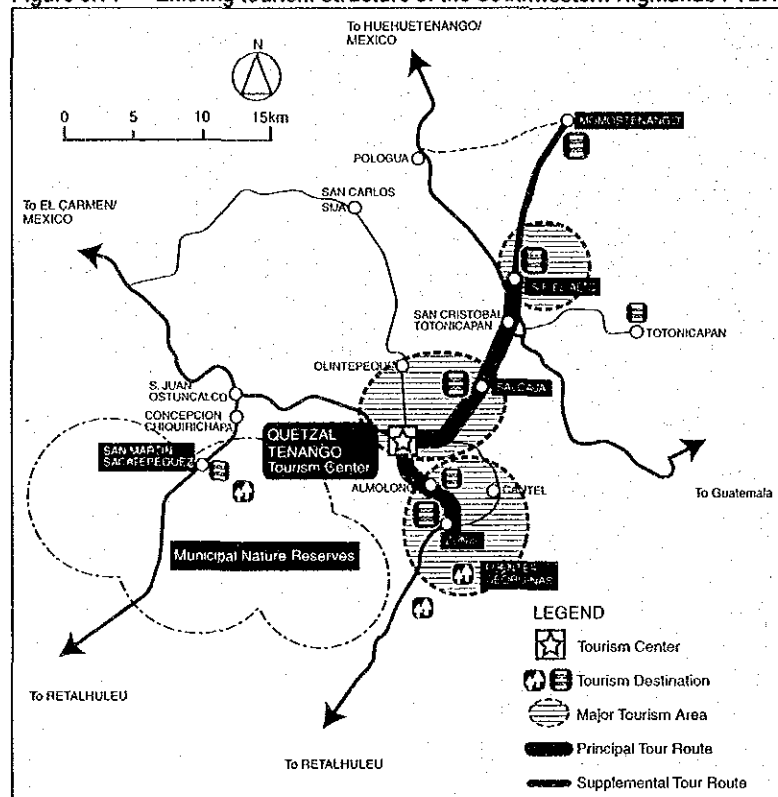
e. Tourism improvement of nature tourism sites

Volcanoes and the forest remaining in the volcanic areas to the south of Quetzaltenango City are important existing tourism products for the PTDA. Visitor facilities such as trails, huts for resting, and observation points need to be improved and/or built for these nature tourism sites.

(3) Tourism development scenario and spatial tourism structure

Figure 3.14 shows the existing spatial tourism structure of the Southwestern Highlands PTDA. Current tourist activities concentrate in the Quetzaltenango Tourism Center, a few villages in its surrounding areas, and San Francisco El Alto, although the visit to the last one is limited to day trips from a nearby accommodation base.

Figure 3.14 Existing tourism structure of the Southwestern Highlands PTDA



Source: JICA Study Team

The followings are basic principles for setting the development scenario:

- The first priority is to create a focus of tourism in the PTDA, more specifically, ethnic tourism development,
- Development of other cultural tourism products is given higher priority in the short-term, and
- Existing nature tourism products will be strengthened in the long-term.

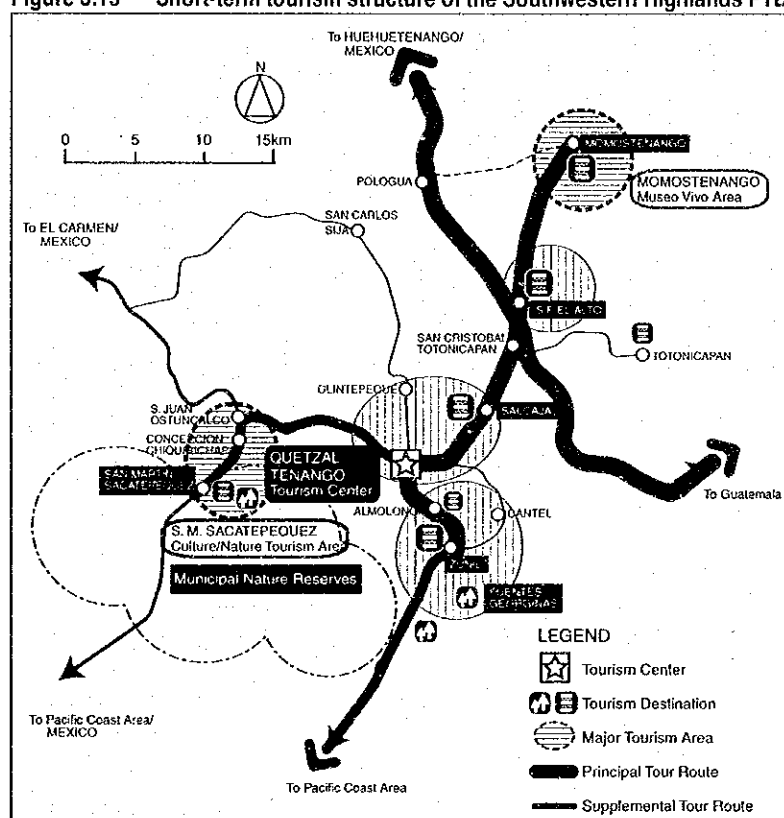
a. Short-term plan

Cultural tourism and, in particular, ethnic tourism or tourism of indigenous cultures should be developed and improved in this stage. Necessary actions in the short-term stage are summarized as follows:

- Development of Community Tourism in Momosteango,
- Tourism improvement of Quetzaltenango City,
- Development/ improvement of visitor facilities related with cultural tourism, and
- Establishment of linkage with ethnic tourism destinations along the Huehuetenango – Coban Tourism Corridor.

Figure 3.15 shows the short-term tourism structure for the Southwestern Highlands PTDA.

Figure 3.15 Short-term tourism structure of the Southwestern Highlands PTDA



Source: JICA Study Team

The above-mentioned actions are reflected to the following tourism structure development:

- Quetzaltenango and Momostenango would be linked more closely with the Huehuetenango – Coban Tourism Corridor,

- Villages surrounding Quetzaltenango City including Momostenango would develop and/or improve existing and/or potential tourism products, and
- Linkage with the Pacific Coast would be strengthened with the development of beach tourism for domestic and Salvadorian visitors.

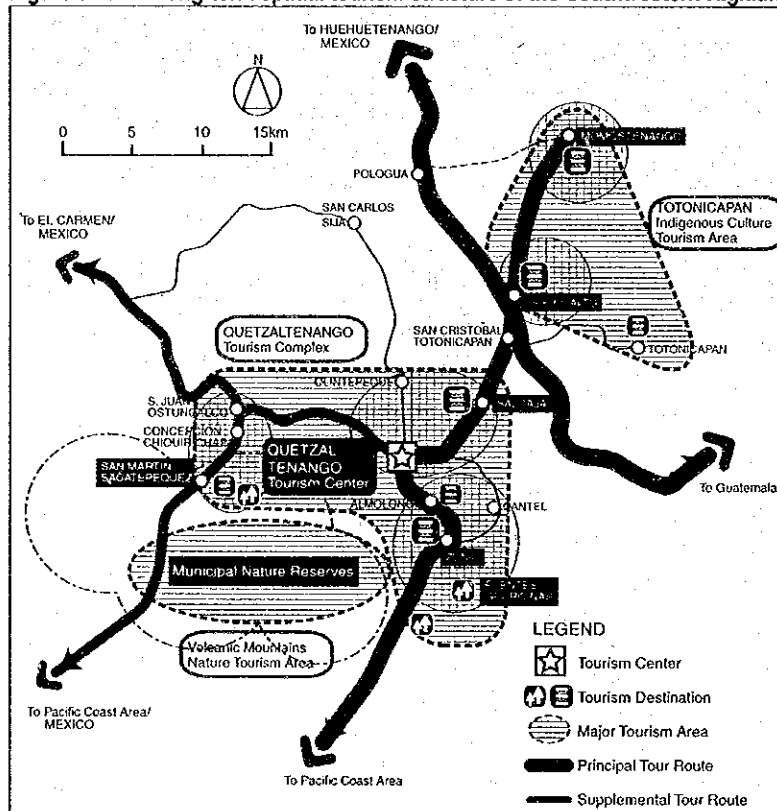
b. Long-term plan

After intensive improvements of cultural tourism products in the short-term stage, diverse tourism products, both existing and potential, would be developed and/or improved with more emphasis on the domestic and short-haul market. The followings summarize the actions needed in the long-term:

- Development/ improvement of nature-based tourism products in the volcanic area,
- Development of spa resorts and their integration with nature and cultural tourism, and
- Strengthening of linkage with Mexico.

Figure 3.16 shows the long-term tourism structure for the Southwestern Highlands PTDA. The above actions are reflected to the following tourism structure development:

Figure 3.16 Long-term spatial tourism structure of the Southwestern Highlands PTDA



Source: JICA Study Team

- Strengthening of linkage with the Chiapas State in Mexico, and
- Development of the southern volcanic areas.

(4) Marketing directions

Marketing directions for the Southwestern Highlands PTDA are summarized in Table 3.19

Table 3.19 Marketing directions for the Southwestern Highlands PTDA

Origin market	Products, segments, promotion etc
Domestic	Cultural activities, MICE
Mexico & Central America	Colonial Quetzaltenango, cultural activities
North America	Living Indigenous cultures, SIT, cultural activities
Other Americas	Community Tourism, SIT
Europe and others	Community Tourism, SIT

Source: JICA Study Team

(5) Development framework

Table 3.20 shows the development framework for the Southwestern Highlands PTDA. It is expected to receive 525,000 visitor arrivals in 2010, and 818,000 in 2020.

Table 3.20 Development framework of the Southwestern Highlands PTDA

Year		2000		2010		2020	
		Bed-night	Arrival	Bed-night	Arrival	Bed-night	Arrival
Hotel visitor	Total	773,540	383,649	1,055,019	524,884	1,631,418	818,486
	Domestic	475,346	316,898	618,321	412,214	962,525	641,683
	International	298,194	66,752	436,698	112,670	668,893	176,802
	Short Haul	137,060	35,838	151,997	47,351	240,231	73,601
	Middle Haul	99,307	14,499	158,604	30,400	235,164	47,511
	Long Haul	61,827	16,414	126,097	34,920	193,499	55,691
Room requirement	Total	2,710		2,979		4,322	
	High Class	75		113		247	
	Middle Class	924		1,155		2,022	
	Low Class	1,711		1,711		2,053	

Source: Visitor Survey (March and July 2001), JICA Study Team, INGUAT

3.3.4. Projects and Programs**(1) Project evaluation**

Existing projects, project ideas proposed by a broad range of organizations and individuals, and those by JICA Study Team were evaluated with the same manner as used for other PTDA's. In the Southwestern Highlands PTDA, tourism development of living indigenous culture is given a high priority to comply with its development strategy.

(2) Short-term pilot projects**a. Development of Community Tourism in Momostenango****Outline of the project**

Momostenango is a Quiche Maya community located to the north of Quetzaltenango City. It is well known for preserving Mayan cultural traditions as well as local handicrafts. This project is planned with the following objectives:

- To revitalize and activate the Quiche Maya culture using tourism as a catalyst,
- To promote cultural exchange and interaction between locals and visitors, and
- To improve local economic conditions by introducing tourism.

Components of the project are as follows:

- Induction Center and interpretative trails,
- Satellite-1: Riscos Tourist Park,
- Satellite-2: Poncho Textile Museum,
- Satellite-3: Hot Springs Bath and Accommodation,
- Satellite-4: Indigenous Dance and Music Performance Theater,
- Satellite-5: Handicrafts Showcase,
- Satellite-6: Indigenous Cookery Restaurant,
- Satellite-7: Horseback riding center, and
- Satellite-8: Mayan cultural experience house.

Implementation setup

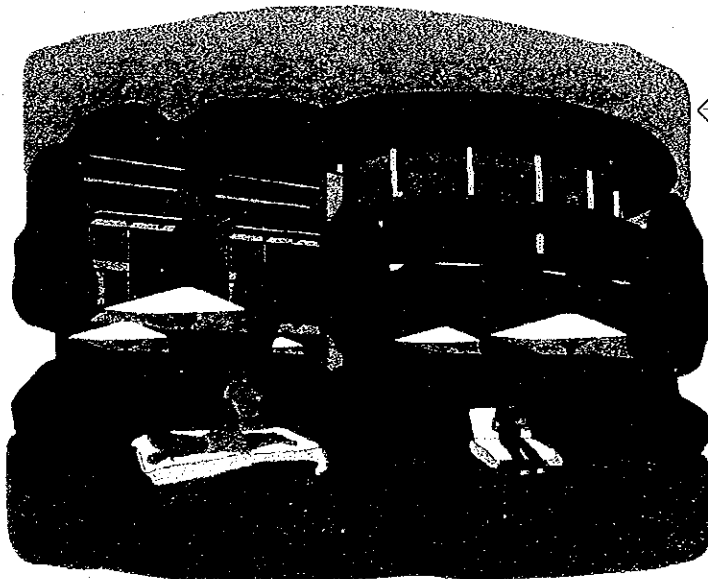
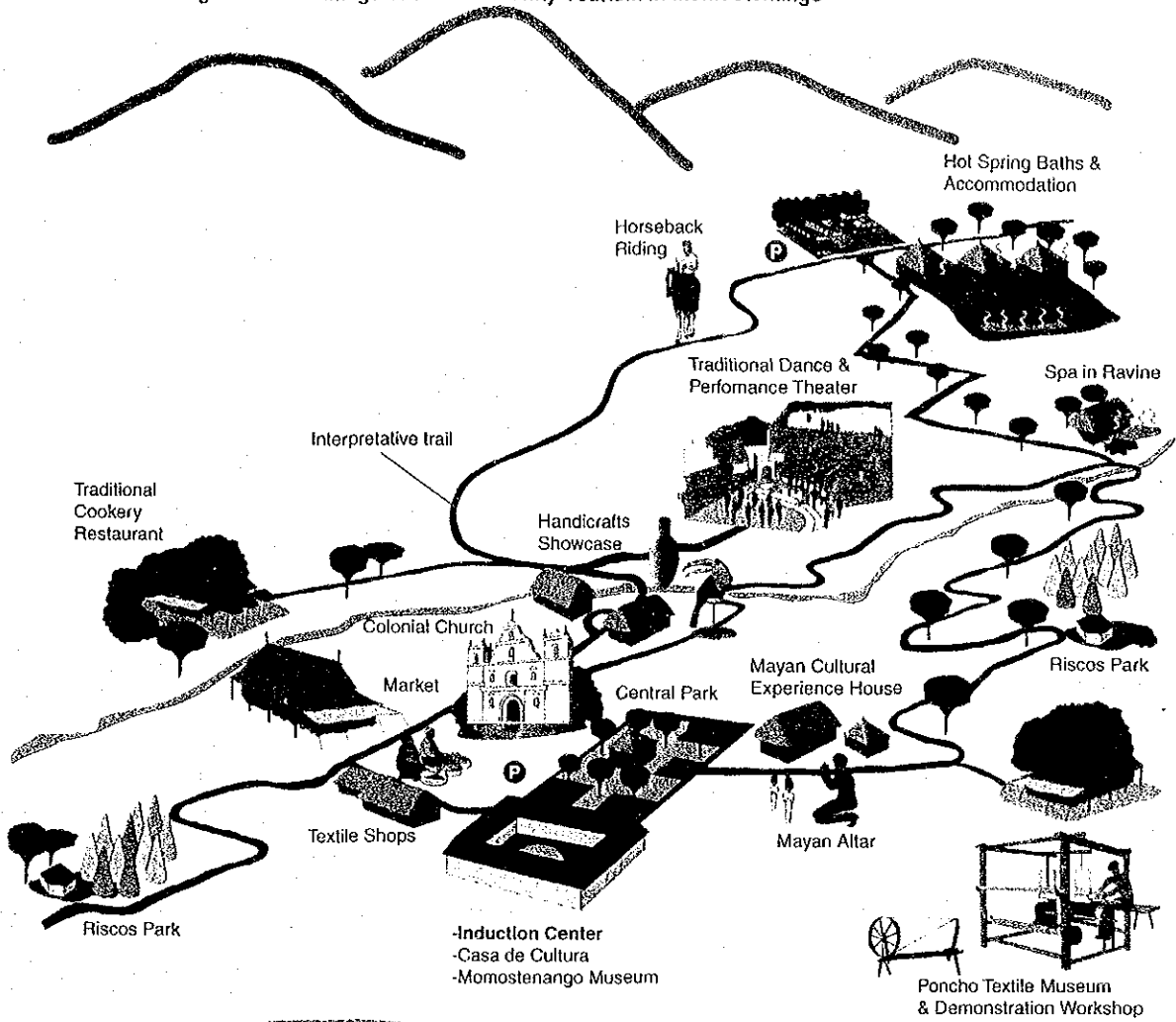
New facilities will be developed by INGUAT and operated by Momostenango Municipality.

INFOM and INGUAT jointly provide technical supports for operating tourism facilities. Operation of the spa resort hotel is subcontracted to a private company that has expertise in operating quality accommodations, which is expected to transfer skills to local communities.

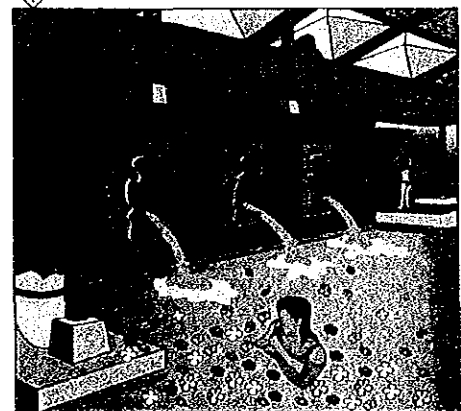
INGUAT should set up a Community Tourism Implementation Committee with the mayor of Momostenango as the chairman. Members of the committee would be INGUAT, INFOM, MICUDE, local private sector companies, and NGOs. Community Tourism should be operated based on a co-management scheme. It is recommendable that Momostenango Municipality would set up a Local Tourism Committee to strengthen the tie with INGUAT and the travel trade for technical supports and marketing feedbacks.

Figure 3.17 shows the images of the Community Tourism in Momostenango.

Figure 3.17 Image of the Community Tourism in Momostenango



Hot Springs baths and accommodation



Source: JICA Study Team

(3) Other short-term projects

a. Tourism Improvement of Quetzaltenango City

Quetzaltenango City, which is the second largest in Guatemala, preserves cultural and historical heritage, in particular, those from the colonial period. Besides, the city occupies a strategic position for tourism development of the Southwestern Highlands PTDA.

Major components of the project are as follows:

- Revitalization of the central park area,
- Walking Corridor from the central park area to the municipal theater area,
- Improvement of the municipal theater area,
- Development/ improvement of museums and interpretation facilities,
- Improvement of “Miradores” – lookout points of the city, and
- Investment promotion for wise use.

b. Integrated tourism development in and around San Martin Sacatepequez

It is recommended to develop/improve the followings in and around San Martin Sacatepequez Municipality:

- Improvement of the trails to, and visitor facilities in, Laguna Chicabal,
- Tourist information center,
- Souvenir shops and restaurants, and
- Improvement of market places, church and access roads.

c. Development of community museums

Development/ improvement of museums, in particular, that specialize in local cultural traditions need to be promoted and implemented with local initiatives since they would encourage cultural awareness that is important to develop tourism products in the PTDA.

- Guatemala Traditional Toy Museum,
- Handicrafts Showcase and Heraldic Museum in Sarcaja, and
- Improvement of Community Museum in Totonicapan.

(4) Long-term Projects

a. Development of volcano trekking facilities

Volcanoes are important tourism products, which are receiving a certain number of visitors. It is also noted that the cloud forests that remain near the peaks of volcanoes have tourism potential and provide bird watching opportunities. The following improvements would be worth a consideration for development in the long-term:

- Development of bird-watching station (hiding hut),
- Improvement of trails for safety,
- Development of observation decks, resting hut with wash room, and
- Installment of signs.

b. Improvement of spa facilities

The Southwestern Highlands PTDA has a number of hot springs with different characteristics, although they are not actively utilized for tourism. Spa facilities should be improved to meet tourists' needs.

c. Upgrading of Community Tourism

Community Tourism in Momostenango is expected to develop reflecting the dynamism of local community. The followings are recommended for implementation in the long-term.

- Revision and renovation of existing facilities,
- Development of new facilities and attractions, and
- Training of people who inherit cultural traditions.

(5) Construction cost

Total construction cost for the short-term pilot projects is US\$ 4.1 million. Breakdown of the cost is summarized in Table 3.21. Total direct construction cost for the other short-term projects is US\$13.2 million including private sector investment in accommodation.

Table 3.21 Construction cost for the short-term pilot project of the Southwestern Highlands PTDA

No.	Projects and components	Cost (US\$1,000)	Remarks
	Total of Southwestern Highlands PTDA	4,115	
QSP-01a	Development of Induction Center		
	a. Center Facility	80	Renovation and extension of "Casa de Cultura"
	b. Utilities	5	Septic tank, piped water
	c. Equipment	8	For the building
	Construction cost total	93	
QSP-01b	Community Tourism Satellite -1: Fiscos Tourist Parks		
	f) Park-A		Near the town center
	a. Landscaping, parking	400	
	b. Light-up illuminations	100	
	c. Rest house	10	Single story, timber structure, with toilet
	d. Utilities	10	Septic tank, piped water
	e. Signs and information	5	Sign system in the site
	2) Park-B		Suburban of the town
	a. Landscaping, parking	200	Sign system in the sites
	b. Observation facility	13	Single story, timber structure, with toilet
	c. Utilities	10	Septic tank, piped water
	d. Signs and information	5	Sign system in the site
	Construction cost total	753	
QSP-01c	Community Tourism Satellite -2: Poncho Textile Museum and Demonstration Workshop		
	Exhibition and interpretation building	240	2 stories, reinforced concrete structure
	Utilities	5	Septic tank, piped water
	Equipment	24	For the building
	Landscaping, parking	12	Surrounding of the building and parking
	Construction cost total	280	
QSP-01d	Community Tourism Satellite -3: Tourists and Community's Spa		
	Exhibition and interpretation building	270	Single story, concrete structure, baths
	Spring water pump-up system	50	For the spa facilities at road side
	Landscaping, parking	60	Surrounding of the building and parking
	Utilities	5	Septic tank, piped water
	Equipment	27	For the building
	Construction cost total	412	
QSP-01e	Community Tourism Satellite -4: Native Dance and Music Performance Theater		
	Theater building	160	Single story, timber structure
	Toilet	6	
	Utilities	10	Septic tank, piped water
	Landscaping, Parking	52	Surrounding of the building and parking
	Theater equipment	32	
	Construction cost total	260	
QSP-01f	Community Tourism Satellite -5: Highlands Handicrafts Showcase		
	Workshop and sales building	125	Single story, timber structure
	Utilities	5	Septic tank, piped water
	Landscaping, Parking	30	Surrounding of the building and parking
	Equipment	13	For the building
	Construction cost total	173	
QSP-01g	Community Tourism Satellite -6: Native Cookery Restaurant		
	Restaurant building	75	Single story, timber structure
	Landscaping, parking	14	Surrounding of the building and parking
	Utilities	5	Septic tank, piped water
	Equipment	8	For the building
	Construction cost total	102	
QSP-01h	Community Tourism Satellite -7: Horseback Riding Arcadia		
	Stable building	20	Single story, timber structure
	Toilet	6	
	Utilities	5	Septic tank, piped water
	Landscaping, Parking	20	Surrounding of the building and parking
	Equipment	10	For the building
	Horse Trail	30	
	Construction cost total	91	
QSP-01i	Community Tourism Satellite -8: Mayan Cultural Experience House		
	Center building	50	Single story, timber structure
	Ceremonial place	40	
	Mayan altar regulated holy places	10	
	Utilities	5	Septic tank, piped water
	Landscaping, parking	28	Surrounding of the building and parking
	Equipment	10	For the building
	Sign and information boards	7	
	Construction cost total	150	
QSP-01j	Community Tourism Satellite -9: Accommodation Development		
	Middle class	1,200	
	Low class	600	
	Construction cost total	1,800	

Note: a) Official tax is not included.
b) Price escalation and inflation are not included.

Source: JICA Study Team

4. PROJECT EVALUATION

4.1. Economic and Financial Assessment

4.1.1. Short-term Project Total Estimated Investment Requirements

Total investment requirements estimated for the realization of the short-term projects, including the proposed pilot projects, is summarized on a PTDA-basis in Table 4.1 to Table 4.3.

Table 4.1 Summary of El Petén PTDA investment requirements

(Unit: million)

Parameter	(Unit: Quetzal)			(Unit: US Dollar)			(Unit: Yen)		
	LC	FC	Total	LC	FC	Total	LC	FC	Total
1) Engineering base cost	296.60	51.45	348.05	37.08	6.43	43.51	4,486.08	778.18	5,264.26
2) Land acquisition & administrative overhead	39.10	0.00	39.10	4.89	0.00	4.89	591.39	0.00	591.39
3) Levies & VAT	42.48	4.67	47.15	5.31	0.58	5.89	642.51	70.63	713.14
4) Working capital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5) IDC	29.43	0.00	29.43	3.68	0.00	3.68	445.13	0.00	445.13
6) Total capital cost	407.61	56.12	463.73	50.95	7.02	57.97	6,165.10	848.82	7,013.92

Note: LC; local currency, FC; foreign currency
Source: JICA Study Team.

Table 4.2 Summary of Las Verapaces PTDA investment requirements

(Unit: million)

Parameter	(Unit: Quetzal)			(Unit: US Dollar)			(Unit: Yen)		
	LC	FC	Total	LC	FC	Total	LC	FC	Total
1) Engineering base cost	107.84	30.68	138.52	13.48	3.84	17.32	1,631.08	464.04	2,095.12
2) Land acquisition & administrative overhead	32.85	0.00	32.85	4.11	0.00	4.11	496.86	0.00	496.86
3) Levies & VAT	22.84	0.00	22.84	2.86	0.00	2.86	345.46	0.00	345.46
4) Working capital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5) IDC	8.81	0.00	8.81	1.10	0.00	1.10	133.25	0.00	133.25
6) Total capital cost	172.34	30.68	203.02	21.54	3.84	25.38	2,605.64	464.04	3,070.68

Source: JICA Study Team.

Table 4.3 Summary of Southwestern Highlands PTDA investment requirements

(Unit: million)

Parameter	(Unit: Quetzal)			(Unit: US Dollar)			(Unit: Yen)		
	LC	FC	Total	LC	FC	Total	LC	FC	Total
1) Engineering base cost	146.32	29.47	175.79	18.29	3.68	21.97	2,213.09	445.73	2,658.82
2) Land acquisition & administrative overhead	29.51	0.00	29.51	3.69	0.00	3.69	446.34	0.00	446.34
3) Levies & VAT	26.75	0.00	26.75	3.34	0.00	3.34	404.59	0.00	404.59
4) Working capital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5) IDC	25.87	0.00	25.87	3.23	0.00	3.23	391.28	0.00	391.28
6) Total capital cost	228.45	29.47	257.92	28.56	3.68	32.24	3,455.31	445.73	3,901.04

Source: JICA Study Team.

The investment requirements for all three PTDA short-term pilot projects is estimated at around Quetzales 924.7 million, equivalent to about US dollar 115.6 million and/or Japanese Yen 13,985.6 million at the exchange rate applied in this Study.

4.1.2. Results of the Economic and Financial Feasibility Investigation

(1) Common definitions and assumptions

The following common definitions and assumptions are employed in the economic (CBA) and financial feasibility investigation:

- The conventional discount method is employed and World Bank guidelines for calculating financial (FIRR) and economic (EIRR) rates of return for development finance cooperation projects are used as guidance
- All financial cost are converted into economic cost taking into account the prevailing fee and levy structure as well as the structural features of individual cost/benefit and cost/revenue streams as discussed in detail in Volume 3
- Both, EIRR and FIRR computations are computed based on the principle of “all cost components and all resources”
- Economic cost are defined as the total short-term project implementation cost and the operations & maintenance (O&M) cost of the facilities as identified in detail in Volume 3
- The economic benefits are defined as the difference in direct and indirect economic benefits that can be achieved in the “with” against the “without” short-term project realization scenarios
- The economic net-benefits are defined as the economic cost plus the economic benefits
- A holistic and life-cycle approach is adopted for both, economic and financial appraisal. The life-cycle adopted for different types of assets follows the depreciation rules as prescribed by Guatemala’s Ministry of Public Finance
- The computations for EIRR and FIRR are undertaken in constant 2001 price base, and
- Exchange rates of Quetzales eight (8) to US dollar one (1) to Japanese Yen 121 are employed for conversion of Quetzales into either US dollars or Japanese Yen.

(2) Results of the economic feasibility investigation

In general, the crucial independent variable in both economic and financial viability considerations is the project’s definition and structure itself, which is elaborated on in detail in Volume 3. It is, therefore, useful, in order to fully appreciate the results of the EIRRs, to introduce briefly the project definitions for the three PTDA.

EI Petén PTDA

The short-term projects, including the pilot project, in the “PTDA Petén” are tailored at archeological site development and a Community Tourism development scheme around San Jose.

Las Verapaces PTDA

The short-term projects, including the pilot project, in the “PTDA Las Verapaces” are tailored at nature-tourism site development and a Community Tourism development scheme.

Southwestern Highlands PTDA

The short-term projects, including the pilot project, in the Southwestern Highlands PTDA are tailored at revitalizing the Quiche Maya culture using a Community Tourism scheme in Momostenango as a catalyst.

It is expected that realization of the short-term pilot projects in all three PTDA's will generate strong positive economic effects driven by investment and tourism-related activities.

Following the general principle that projects should be judged based on their “own merits”, all investigations are undertaken on a “case-by-case”, i.e. PTDA by PTDA basis. The cost streams generated by all short-term projects, including the pilot projects, in constant 2001 economic prices are entered into the EIRR equation on the cost side. The major individual cost categories are (1) total project base cost (all cost components and all resources) excluding transfer and subsidy (if any) payments, and (2) site and facility related O&M expenditures.

On the economic benefit side, direct and indirect economic benefits in constant 2001 prices are entered into the EIRR equation. Direct benefits are measured in terms of average tourist expenditures/day. Indirect benefits are (1) indirect labor generated by accommodation development, (2) indirect labor generated by investment, (3) multiplier effect resulting from tourists’ consumption, and (4) multiplier effects resulting in the construction industry.

The economic gross benefits achievable are measured by the differential achievable when comparing the do-nothing (the “without”) case with the “with” case implying timely and orderly implementation of the proposed short-term pilot projects. Main indicators used are “total visitor arrivals” and total “bed-nights”. Table 4.4 summarizes by PTDA the results of the “without” against “with” comparison scenarios.

Table 4.4 Differential “with” against “without” tourism flow and pattern in the three PTDA's
(Unit: 1000)

Indicator	El Peten			Las Verapaces			Southwestern Highlands		
	2000	2010	2020	2000	2010	2020	2000	2010	2020
Visitor arrivals	0	104	223	0	76	210	0	66	222
Bed-nights	0	252	611	0	261	759	0	170	434

Source: JICA Study Team.

The results of the EIRR computations, including the results of the sensitivity of the EIRR to up to 20 % cost and/or benefit over- or underestimation are presented in Tables 1.5 to 1.7 and briefly introduced thereafter.

Table 4.5 El Petén PTDA EIRR and EIRR sensitivity results

Net benefits	Economic costs									
	-20%		-10%		No change		+10%		+20%	
+20%	TIRE	33.76%	TIRE	28.61%	TIRE	24.86%	TIRE	21.96%	TIRE	19.61%
+10%	TIRE	29.84%	TIRE	25.47%	TIRE	22.20%	TIRE	19.61%	TIRE	17.48%
No change	TIRE	26.24%	TIRE	22.49%	TIRE	19.61%	TIRE	17.28%	TIRE	15.34%
-10%	TIRE	22.85%	TIRE	19.61%	TIRE	17.05%	TIRE	14.95%	TIRE	13.18%
-20%	TIRE	19.61%	TIRE	16.77%	TIRE	14.48%	TIRE	12.58%	TIRE	10.96%

Source: JICA Study Team.

The base-case EIRR (i.e. the error margin is zero) for El Petén PTDA is 19.61 %. However, depending on the extent to which either cost or benefits were over- or underestimated any result between EIRR 10.96 % (worse case) and 33.76 % (best case) is possible.

Table 4.6 Las Verapaces PTDA EIRR and EIRR sensitivity results

Net benefits	Economic costs									
	-20%		-10%		No change		+10%		+20%	
+20%	TIRE	17.07%	TIRE	14.94%	TIRE	13.14%	TIRE	11.58%	TIRE	10.29%
+10%	TIRE	15.48%	TIRE	13.44%	TIRE	11.71%	TIRE	10.29%	TIRE	8.87%
No change	TIRE	13.82%	TIRE	11.87%	TIRE	10.29%	TIRE	8.74%	TIRE	7.43%
-10%	TIRE	12.08%	TIRE	10.29%	TIRE	8.59%	TIRE	7.16%	TIRE	5.87%
-20%	TIRE	10.29%	TIRE	8.40%	TIRE	6.82%	TIRE	5.41%	TIRE	4.13%

Source: JICA Study Team.

The base-case EIRR (i.e. the error margin is zero) for the Las Verapaces PTDA is 10.29 %. However, depending on the extent to which either cost or benefits were over- or underestimated any result between EIRR 4.13 % (worse case) and 17.07 % (best case) is possible.

Table 4.7 Southwestern Highlands PTDA EIRR and EIRR sensitivity results

Net benefits	Economic costs									
	-20%		-10%		No change		+10%		+20%	
+20%	TIRE	22.99%	TIRE	20.43%	TIRE	18.32%	TIRE	16.54%	TIRE	14.98%
+10%	TIRE	21.08%	TIRE	18.68%	TIRE	16.69%	TIRE	14.98%	TIRE	13.50%
No change	TIRE	19.12%	TIRE	16.87%	TIRE	14.98%	TIRE	13.36%	TIRE	11.93%
-10%	TIRE	17.10%	TIRE	14.98%	TIRE	13.19%	TIRE	11.63%	TIRE	10.26%
-20%	TIRE	14.98%	TIRE	12.98%	TIRE	11.28%	TIRE	9.78%	TIRE	8.45%

Source: JICA Study Team.

The base-case EIRR (i.e. the error margin is zero) for the Southwestern Highlands PTDA is 14.98 %. However, depending on the extent to which either cost or benefits were over- or underestimated any result between EIRR 8.45 % (worse case) and 22.99 % (best case) is possible.

(3) Interpretation of EIRR results

EIRR (and also FIRR) results are often used as a decision tool to decide among various investment options. However, the reader must be cautioned here that the above EIRR results cannot be interpreted in the same sense that El Petén PTDA projects are “the best” and Las Verapaces PTDA projects are the “worse” in terms of economic viability. As is

highlighted above, there are often absolute constraining factors, such as number, scope and attractiveness of tourism assets that are beyond the reach of any improvement project. Hence, the EIRR results do not imply any order of priority for the proposed short-term projects in the three PTDA's. They indicate on a case-by-case basis only what is achievable under given circumstances.

(4) Results of the financial feasibility investigation

The financial feasibility investigation (FIRR) is undertaken in constant 2001 financial prices on the cost and revenue sides of the equation. However, on the cost side only those costs directly related to the implementation of the proposed pilot projects enters the equation as well as O&M cost for the sites and facilities in constant 2001 financial prices. Financial pilot project costs are estimated based on the principle of "all cost components and all resources".

The prevailing situation in Guatemala is that a split entrance fee to sites and facilities is applied for international and domestic visitors. This situation describes the "base-case" scenario for the FIRR computations. In addition, three financial scenarios are defined, in order to investigate the FIRR response to, 1) changes in the entrance fee structure and, 2) changes in the FIRR caused by the generation of additional revenues from sales of "other goods and services" to visitors of sites and facilities. The three additional financial scenarios are defined as:

- Revenue scenario 1. Entrance fees for international visitors only to the sites and the facilities are doubled. However, no additional revenues are generated from the sales of "other goods and services"
- Revenue scenario 2. Entrance fees for international visitors only to the sites and the facilities are doubled. Also, additional revenues are generated from the sales in the amount of Quetzales 50 (about US dollar 6.3 or Japanese Yen 756.3) of "other goods and services" to international visitors, and
- Revenue scenario 3. Entrance fees for international visitors only to the sites and the facilities are doubled. Also, additional revenues are generated from the sales in the amount of Quetzales 100 (about US dollar 12.5 or Japanese Yen 1,215.5) of "other goods and services" to international visitors.

The results of the FIRR "Base Case" and the three additional revenue scenarios for the three PTDA's are summarized in Table 4.8.

Table 4.8 Results of FIRR "base case" and FIRR response to changes in revenue structure

	Fiencial scenarios			
	Base case	Additional scenarios		
		1	2	3
El Petén PTDA	1.92%	10.97%	15.23%	18.60%
Las Verapaces PTDA	10.57%	14.00%	15.69%	17.33%
Southwestern Highlands PTDA	13.99%	19.83%	25.36%	29.69%

Source: JICA Study Team.

(5) Interpretation of FIRR results

The following general conclusions and recommendations are to be drawn from the above:

- The doubling of entrance fees to sites and facilities for international visitors improves FIRR performance significantly. Hence, such fees should perhaps be standardized at least for World Heritage sites,
- Also, it is desirable from a financial viability point of view to generate a minimum of additional Q 50 per international visitors, preferably an additional Q 100, in order to bring the financial viability of the pilot project into a range that is very attractive to the ownership entity (FIRR is well above the commercial cost for capital). Such additional revenues may result either from the sales of "other goods and services" and/or the lease of land and/or property located on the sites, and
- The appropriate authorities should adjust nominal fee levels on a regular basis (perhaps every two to three years) at least to reflect general inflationary developments within the economy.

4.2. Environmental Impact Assessment

4.2.1. Outline of the EIA Survey

(1) Process of the IEE and the EIA survey

JICA Study Team has conducted an Initial Environmental Examination (IEE) for all the proposed short-term pilot projects in accordance with the official JICA Environmental Consideration Guidelines for Tourism Development Project. The screenings and scoping of the IEE was carried out based on the available data/information in terms of social and natural environmental situations as well as pollution concerning the proposed short-term pilot projects.

Based on the results of the IEE, ten short-term pilot projects were selected as the projects that need an Environmental Impact Assessment (EIA) Survey.

Then, the EIA Survey for the selected pilot projects has been conducted in collaboration with a subcontracted local environmental consulting firm. Also, the results of this EIA Survey will be utilized as referential results for the EIA approval procedure in Guatemala in the future.

(2) Objectives of the EIA survey

The objectives of the EIA Survey are:

- To identify/ evaluate possible environmental impacts, which could be caused by the project based on the available data/information and field reconnaissance,
- To analyze possible environmental impacts,
- To propose mitigation measures for significant adverse environmental impacts, and
- To recommend environmental monitoring plan as necessary.

(3) Main conclusion and environmental considerations

Table 4.9 shows main environmental considerations for each selected pilot project. According to the EIA Survey, all the selected pilot projects will not cause “serious adverse environmental impacts”, which mean irreversible impacts, in each project area. However, each organization, which is related to the implementation and operation of the project, needs to consider and conduct the proposed mitigation measures and monitoring plans in order to prevent and mitigate the possible adverse impacts.

Table 4.9 Main environmental considerations for the Pilot Projects

Pilot Projects	Main Environmental Considerations (Adverse Impacts)
Tourism Improvement of Uaxactun Archeological Site	<ul style="list-style-type: none"> • Significant impacts of flora/fauna and wastes in the construction phase • Slight impacts of traffic, soil erosion, landscape, and air pollution in the construction phase • Slight impacts of fauna/flora and landscape in the operation phase
Tourism Improvement of Yaxha and Nakum Archeological Sites	<ul style="list-style-type: none"> • Significant impacts of fauna/flora in the construction phase • Slight impacts of traffic, wastes, soil erosion, landscape, air pollution, and water pollution in the construction phase • Slight impacts of fauna/flora, landscape, and noise in the operation phase
Development of Maya Research and Learning Center	<ul style="list-style-type: none"> • Slight impacts of wastes, landscape, and air pollution in the construction phase • Slight impacts of wastes in the operation phase
Tourism Improvement of Aguateca and El Ceibal Archeological Sites	<ul style="list-style-type: none"> • Slight impacts of fauna/flora, landscape, and noise in the construction phase
Development of Pasion River Cruise facilities	<ul style="list-style-type: none"> • Slight impacts of traffic, fauna, landscape, and water pollution in the construction phase • Slight impacts of wastes, and water pollution in the operation phase
Development of Archeological and Regional Culture Center	<ul style="list-style-type: none"> • Slight impacts of traffic, cultural property, wastes, soil erosion, landscape, and noise in the construction phase
Development of the Verapaz Eco Corridor Interpretation Center	<ul style="list-style-type: none"> • Slight impacts of soil erosion, fauna/flora, and landscape in the construction phase • Slight impacts of wastes in the operation phase
Development of Sierra de Pampacche Cloud Forest Park	<ul style="list-style-type: none"> • Slight impacts of fauna/flora, and landscape in the construction phase
Poncho Textile Museum and Demonstration Workshop	<ul style="list-style-type: none"> • Slight impacts of wastes, and soil erosion in the construction phase
Hot Spring Bath and Accommodation	<ul style="list-style-type: none"> • Slight impacts of public facilities, right of common, soil erosion, and water pollution in the construction phase • Slight impacts of right of common in the operation phase

Source: JICA Study Team

Main results of the EIA Survey for each selected pilot project are described in the following sections.

More detailed results, which include present environmental conditions of the project area, detailed environmental impacts, mitigation measures, and environmental monitoring plan, of the EIA Survey for each pilot project are described in the Volume 3.

4.2.2. Main Results of the EIA Survey by Project

(1) El Peten PTDA

a. Tourism Improvement of Uaxactun Archeological Site

The Project, in particular, the access road and visitor center will contribute to the regional economy development in the remote area. However, the construction and maintenance of the access road and electric transmission may cause adverse natural environmental impacts such as disturbance of the present flora and habitats of the wildlife. The following main measures needs to be considered for preventing and mitigating the possible adverse impacts:

- To elaborate the development plan with all the stakeholders of the project,
- To conduct archeology study and flora study in the project preparation phase, and
- To collect and dispose the construction wastes and solid wastes appropriately.

b. Tourism Improvement of Yaxha and Nakum Archeological Site

The Project will enhance and improve the cultural tourism values of the Yaxha and Nakum archaeological sites. Although the construction of access road will contributed to the regional economy through the tourism development, the access road will cause disturbance of the present habitats of the wildlife as well as water contamination of the surrounding lakes, if appropriate measures were not taken. The following main measures needs to be considered for preventing and mitigating the possible adverse impacts:

- To conduct archeology study, flora study as well as hydrology survey in the project preparation phase,
- To select the quarrying sites for the construction materials based on the above flora study, and
- To monitor water quality in Yaxha and Holmul River.

c. Development of Maya Research and Learning Center

Although proposed center building will enhance and improve the cultural tourism values of the surrounding, the construction activities will cause slight construction wastes and the related landscape problems. Also, the excavation and paving activities during the construction phase will cause air nuisances only at the activities sites. The following main measures needs to be considered for preventing and mitigating the possible adverse impacts:

- To elaborate a development plan, in particular the center building location with all the relating governmental agencies and the local residents,
- To collect and dispose the wastes by the related municipalities, and

- To consider creating a green belt around the Project site with native species in order to enhance the surrounding landscape.

d. Tourism Improvement of Aguateca and El Ceibal Archeological Sites

The Project will enhance and improve the cultural tourism value of the Aguateca and El Ceibal archaeological sites. Although the access trail will contribute to the tourism development, it will cause slight disturbance of the present flora and fauna, and the present landscape, if appropriate measures were not taken. The following main measures need to be considered for preventing and mitigating the possible adverse impacts:

- To select an access trail in order to mitigate the disturbance of the present fauna and flora,
- To prepare an environmental guideline to conserve the present forests and landscapes, and
- To monitor noise level in the project site in order to consider the appropriate counter measures.

e. Development of Pasion River Cruise Facilities

The regional economy of the Project site and the surrounding areas will be improved due to the new fluvial communication by the Project operation. However, some investigations and studies need to be conducted in order to select appropriate facilities locations and to prevent the relating conflicts. The following main measures need to be considered for preventing and mitigating the possible adverse impacts:

- To investigate the water rights in the site to prevent from the water right conflicts,
- To conduct hydrological studies in the preparation phase, and
- To monitor water quality of and water fauna of the Pasion River.

f. Development of Archeology and Regional Culture Center

Although the proposed Project will contribute to the local economy of the Sayaxche area, the construction activities of the building will cause slight construction wastes and noise problems in the surrounding residential area. It also needs to conduct archeological survey and supervision during the construction phase. The following main measures need to be considered for preventing and mitigating the possible adverse impacts:

- To conduct archeological investigation in order to prevent from the damages of the local cultural property,
- To provide the waste facilities for the workers from the municipality, and
- To consider creating a green belt around the project site.

(2) Las Verapaces PTDA**a. Development of the Verapaz Eco-Corridor Interpretation Center**

Present unique wildlife habitat areas will enhance and improve its nature tourism value by the Project, which includes development of the interpretation building. Also, the interpretation center will promote understanding of the conservation significances to the visitors. However, the building location and maintenance should be considered based on the soil conditions of the sites. The following main measures needs to be considered for preventing and mitigating the possible adverse impacts:

- To select the construction site of the center in order to prevent from the possible soil erosion, and
- To consider the appropriate disposal methods of the solid wastes for the visitors and the workers.

b. Development of the Pampacche Cloud Forest Park

The Project, which includes rail-cart, canopy walkways, and trekking trails, will enhance and improve the nature tourism value of the forest. Also, the Project will contribute to the local economy through the generation of alternative sources of income for the local peoples. However, the rail-cart and canopy walkways will cause slight disturbance of the present habitats of the wildlife and the natural landscape. The following main measures needs to be considered for preventing and mitigating the possible adverse impacts:

- To investigate the important habitat areas of the wildlife in order to prevent from the disturbances of the present ecosystems;
- To consider the designs of the canopy walkway and the railing-cart in order to harmonize the surrounding natural landscape; and
- To investigate the present forest rights and ownership in order to prevent from the user conflicts among the local peoples.

(3) Southwestern Highlands PDTA**a. Poncho Textile Museum and Demonstration Workshop**

High quality and unique textiles will be core tourism products for vitalizing the local economy in Momostenango municipality. However, the proposed museum building will cause slight soil erosion and related wastes problems during the construction phase due to the erodible location. Also, the landscaping should be taken into account of the erodible soil conditions. The following main measures needs to be considered for preventing and mitigating the possible adverse impacts:

- To use the construction methods for preventing from the soil erosion; and
- To consider and provide the disposal sites for the construction wastes.

b. Hot Spring Baths and Accommodation

Although the capacity of the facility development is not large, it is imperative to consider the community's acceptances of the Project. The local residents use the present hot spring as one of the places for daily activities. Also, slight adverse environmental impacts such as water contamination and soil erosion related to the construction of the proposed facilities will occur, if appropriate countermeasures were not taken. The following main measures needs to be considered for mitigating the possible adverse impacts:

- To investigate present rights of common in the project site,
- To hold public hearings for the local residents affected by the project; and
- To consider the construction methods for preventing the water contamination in the Pala River.

5. CONCLUSIONS AND RECOMMENDATIONS

The followings are the conclusions of the Study, and recommendations for the Government of Guatemala and INGUAT.

- Pilot projects, which are chosen and evaluated in the Study, are indispensable for developing the tourism sector of Guatemala, are economically and financially feasible, and environmentally sound. Therefore these pilot projects should be implemented by the year 2010.
- Tax revenues for INGUAT is expected to increase steadily due to a growth of international visitor arrivals. A large portion of the increased revenues should be directed to tourism investments in rural areas including the implementation of the proposed pilot projects in view of Guatemala's necessity for rural development.
- INGUAT should strengthen its capability for inter-agency coordination since implementation of tourism projects need concerted efforts by different entities. In particular, INGUAT should establish a strategic alliance with IDAEH and build a consensus to implement the proposed pilot projects related to archaeological tourism development.
- Local participation is needed not only for democracy and social development but also for nature and cultural conservation, and for authenticity in tourism. Therefore government agencies in charge of implementing the proposed pilot projects should establish a project implementation committee for respective pilot project sites with members from relevant government agencies, local governments and local communities.
- There are potential tourism sites, which the JICA Study Team could not make surveys due mainly to security concerns. Most of all, Huehuetenango and Quiche Departments abound in both natural and cultural tourism resources, and occupies a strategic location as a link between the Southwestern Highlands PTDA and Las Verapaces PTDA. It is strongly recommended for INGUAT to conduct a tourism study of the departments after security issues are removed.
- Tourism is an economic sector that Guatemala has comparative advantage in the international market. Tourism also contributes greatly to the conservation of natural and cultural heritage and the creation of employments in rural areas. Therefore, it is recommended for the government of Guatemala to strategically nurture its tourism sector as part of the national policy.

JICA

11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
841
842
843
844
845
846
847
848
849
850
851
852
853
854
855
856
857
858
859
860
861
862
863
864
865
866
867
868
869
870
871
872
873
874
875
876
877
878
879
880
881
882
883
884
885
886
887
888
889
890
891
892
893
894
895
896
897
898
899
900
901
902
903
904
905
906
907
908
909
910
911
912
913
914
915
916
917
918
919
920
921
922
923
924
925
926
927
928
929
930
931
932
933
934
935
936
937
938
939
940
941
942
943
944
945
946
947
948
949
950
951
952
953
954
955
956
957
958
959
960
961
962
963
964
965
966
967
968
969
970
971
972
973
974
975
976
977
978
979
980
981
982
983
984
985
986
987
988
989
990
991
992
993
994
995
996
997
998
999
1000