

5. Long Term Tourism Development Plan by Zone

5.1 Bastimentos Zone

5.1.1 Bastimentos Zone in General

(1) Zone Designation

The Province of Bocas del Toro has the longest coastal length (488.3 km.) among the three provinces facing the Caribbean. Its name is translated as "Mouths of the Bull" because the coast curves to create a bay in with a lot of islands creating some beautiful scenery. According to the guidebook, there are 9 islands, 51 islets and 200 rocky isles in the Province.

This zone belongs to Changuinola, Bocas del Toro and Chiriquí Grande districts of Bocas del Toro Province. The area covered is 8,745 km², and the population was 93,361 persons as of the 1990 Census.



Figure 5.1 Existing Map

(2) Natural Conditions

1) Climate

The climate of Bastimentos study zone is characterized by high rainfall throughout the year and total rainfall exceeds 3,000 mm. In general, July has the maximum monthly rainfall of about 400 mm and February has the minimum rainfall of 140 mm. Annual average temperature is 25.4 degree centigrade.

2) Physiography and Geology

Many large and small islands which are widely distributed in the Caribbean sea are the main topographic component of this zone. Colón, Popa, Bastimentos and Cristobal islands are the largest islands of the study zone with areas of 61 sq.km, 53 sq.km, 51 sq.km and 37 sq.km respectively.

Wave conditions of the inland sea area of the gulfs of Almirante and Chiriquí are relatively calm, and the beaches are not well developed. Tropical vegetation is dense and grows close to the sea shore. According to the geological data, these islands are mainly composed of upper tertiary sedimentary rocks and quaternary sediments. Coral reefs are well developed in the near shore area and sedimentation is limited due to the lack of a large river. The largest river in Bocas del Toro province is Changuinola river which has a total drainage basin area of 2,992 sq.km and a 118 km long main channel.

3) Flora and Fauna

Diverse ecosystems such as lagoons, mangroves, coral reefs and humid tropical forests are still well preserved in this study zone because of the low progress of human habitation and regional development.

La Amistad National Park covers a large part of the mountain areas of Bocas del Toro and Chiriquí province. A maritime national park is also located in Bastimentos island.

(3) Socioeconomic Conditions

1) Historical Background

The town of Bocas del Toro which is the capital of Bocas del Toro province has a great appeal because of the Caribbean breeze. The island was baptized by Christopher Columbus in 1502, during his 4th and last trip to the New World when he saw a waterfall in the shape of a bull's mouth. In 1880, several American companies entered the banana business, creating their own plantations and buying from local growers. Fierce competition left only one firm named United Fruit Company established in 1899, as the sole entrepreneur of the region which became the most prosperous in the country apart from Panama and Colón. With that success a new wave of Afro-Antilles immigrants came to work in the banana farms, some contracted directly from Jamaica, and others were workers left unemployed after the French canal failure. In 1895-1896, the town Bocas del Toro was a leader in foreign trade, exporting 54.3% of the total export while Panama and Colón summed only 36.2%. Early in this century, a disease destroyed most of the plantations located in Chiriquí lagoon. Banana operations were

transferred to Changuinola where the disease stuck again in 1930 leaving province's economy in total collapse.

As a result of the Caribbean breeze and migration from West Indies, an architecture style known as Georgian Architecture was brought to Bocas del Toro.

2) Population and Land Use

According to the 1980 and 1990 Census, total population in this study zone was 53,489 and 93,361 respectively. The census data shows a sharp increase in population during this period. The average annual growth rate of the population in this study zone during this decade is the nation's highest value at 5.73%. The population density is 10.7 persons per square kilometer. Bocas del Toro province is the third largest province in Panama and it has 8,745 sq.km of land area. Total agricultural land use area in this province is 88,372 ha. with 3,197 farms. Only 10 % of the provincial land is utilized for agriculture. Changuinola which is the largest city of the Bocas del Toro province, is the main center of economic activities and large banana estate has been operating there. The town of Bocas del Toro is located in Colón Island and Bastimentos is located in Bastimentos Island respectively. These towns are the only areas where the population is concentrated. Development of the rest of the area in this study zone has shown little progress and agriculture is practiced in self sufficient levels, in general. Tropical rain forest is extensive in this region.

3) Economic Conditions

The main economic activity in this study zone is dependent on the primary sector and the primary sector share of the total employment was 66% in the 1990 Census. Total employment is 21,797 in Bocas del Toro province and employment of tourism related industries such as hotels and restaurants is 440 persons, and the share of the provincial employment in tourism is 2%. According to the investment budget of the central government for the year of 1994, a total of 2,984 thousand Balboas was planned to be invested for this province. Share of investment budget for this province was 0.3%. Energy, Telecommunication and housing sector had no public investment budget. Employment of the secondary sector is 5%.

(4) Inventory of Tourism Resources and Facilities

Among the 94 tourism resources listed in IPAT's database, most in this area are coastal, consisting of 16 beaches, 13 fishing spots, 14 flora and fauna locations and 7 coral-reefs. Two-thirds of the tourism resources in this area are found on the Colón (with 37) and Bastimentos islands (with 26). Two National parks are also situated in this area, the Parque Nacional Marino Isla Bastimentos covering an area of 132.64 km² and Bosque Protector Palo Seco covering 2,500 km². Especially important are the 14 places listed with a rank II in the IPAT database. These consist of 3 areas in the Colón Island, 2 on Bastimentos Island, 1 in Chiriquí and 8 on small Island of Escudo de Veraguas (4.5 km²).

Principal Tourism Attractions

(Rank II and higher by IPAT database)

Isla Escudo de Veraguas:

North Beach, South Beach, Coral reef, Fishing spots, Cliff, Canal, Flora and Fauna Isla

Colón and Bocas del Toro Town:
Isla Colón, Coral reef, Historical town of Bocas del Toro

Isla Bastimentos:
Isla Bastimentos, Isla Bastimentos National Marine Park

Other areas:
Banana plantation in Changuinola
"Oleoducto transistmico" of Chiriquí Grande transisthmian oil pipeline

These Tourism Resources are shown in Table 5.1.

(5) Infrastructure Conditions

Existing infrastructure conditions, such as transportation and public utilities in this study zone, are described as follows.

1) Airport and Airline

There are 10 airports in the Bocas del Toro province, and two airports, Bocas del Toro and Changuinola, are designated as the international airports. These two airports have scheduled flights to Panama City and David. Bocas del Toro Airport has a 1,500m runway paved in asphalt and the new terminal building is under construction. Careful attention should be paid to the environment in case of extension of the runway, because both ends of the runway face the sea. Changuinola Airport has a 1,100m runway paved in asphalt. There is a railway at the North side of the runway, and the other side is a banana estate. Extension of this runway on the southern side is technically easier.

2) Port and Sea Traffic

There are four ports in this zone, named Almirante, Bocas del Toro, Chiriquí Grande and Bastimentos. Only Port Almirante and Chiriquí Grande have piers. Many small boats with capacity for 2-8 passengers, called boat taxis or launches, are widely used to connect the surrounding islands as the sea conditions are usually calm.

3) Road and Land Traffic

Development of the trunk road networks in this zone is quite limited, and there is no road network connecting each development area. In 1980's, a new road was constructed with 2 lanes of asphalt paving to connect between Caribbean and Pacific Coast. The road crosses the steep mountainous area, which is more than 1,400 meters in elevation.

Almirante and Changuinola are connected by a 2 lane asphalt paved road. On Colón island, existing roads are mostly gravel pavement around Bocas del Toro. The Ministry of the Public Works has a plan to construct a connecting road between Chiriquí Grande and Changuinola but the construction schedule is not clear.

Table 5.1 Matrix of Tourism Attractions (Bestimientos)

Distritos	Corregimientos	Natural attractions		Cultural attractions							Total numbers	Tourist accommodations	Population 1990					
		Name of areas	Islands	Beaches	Others	Fishing	Flora	Roads	Parks	Type 1				Type 2	Type 3	Type 4	Type 5	
Changuinola	Changuinola*	1. Changuinola area						#79				#81	3					
		Almirante	2. Almirante area															
			3. Isla Colón and Bocas del Toro Town	#17 61.80km ²	Playa Bluff: #01 Playa Flores: #02 Playa La Cabana: #04 Playa Punchi: #05 Playa Almira's Bay: #06 Playa Big-creek: #08 Playa Boca Del Drago: #09	Bay: #10 Coral reef: #13 Coral reef: #14 Coral reef: #15 Lagoon: #19 River: #20 Cave: #21	#26 #28 #29 #30	#22 #24 #25	#31 #32 #34		#65	#66 #73	#74		2-Hotels: 38 Pensions: 5			
	Bocas del Toro**	4. Cayo Camero												40				
		5. Cayo Cixoe																
	Bocas del Toro	Bastimentos	6. Isla de Los Pajaros															
			7. Isla Cristobal	37.70km ²		Coral reef: #12												
	Chiriquí Grande	Chiriquí Grande*	8. Cerro Bruja															
			9. Isla Bastimentos	#42 51.36km ²	Playa Wizard: #03 Playa Drefre: #07 Playa Laraga: #38 Playa Punta Vieja: #39	Cliff: #11	#49 #50 #52 #53	#43 #44 #46 #48	#53 #55 #56 #57		#59 #60 #61 #62 #63 #64 #68 #71			30				
			10. Cayo Small Water							#54	#47 #58							
			11. Cayo Nancy	7.03km ²														
			Punta Laurel	12. Cayos Zapantillas (Norte-Sur)	0.50km ²	Playa C. Zapantilla Norte: #36 Playa C. Zapantilla Sur.: #37	Cliff: #40 Coral reef: #41	#51	#45						6			
				13. Isla Popa	53.05km ²													
			Bahía Azul	14. Cava Agua	14.40km ²													
				15. Península Variente												2		
			Tobobe	16. Isla Escudo de Veraguas	#91 4.48km ²	Playa E. Veraguas Norte: #87 Playa E. Veraguas Sur: #88	Cliff: #89 Coral reef: #90 Canal: #92	#94	#93							8		
				17. Chiriquí Grande area		Playa de Guayabito: #82		#83					#84 #85 #86		5			
		3											94	Capacity 43-rooms				
			16										70	24				

Notes: **Provincial center, * District center
#123 = IPAT Code Number of Principal Attractions

4) Electricity and Telecommunication

This zone is not connected to the national grid and each region is independent. On Colón island, there is a generating station of IRHE that has only one diesel generator with capacity of 1.69 megawatts.

5) Water Supply, Sewerage and Solid Waste

In Bocas del Toro town, there is a potable water treatment plant with capacity of 984 cubic meters per day. The average consumption is 345 lit/day/capita and water supply is managed by the municipality.

A sewerage piping system with sedimentation pond is operated in Bocas del Toro town and 17% of households are connected to the system while 58% of households have a septic tank. Solid waste should be treated properly in this study zone.

5.1.2 Bastimentos Zone Development Policy

(1) Development Goals

Development goals in this study zone will be set as follows:

- The whole of the sea resources areas are designated as marine ecology resources and the development of this area should consider the balance with nature from a long term point of view
- Formation of a model development for island type resorts in Panama
- Tourism development as a key element for regional development

(2) Development Strategy

To efficiently manage the tourist resources, the following types of tourist development are possible.

Escudo de Veraguas

This isolated island in the Caribbean is ideal for resort development. Surrounded by a large coral reef and beach, with many exotic plants, animals, and fishing spots, it is an island where tourists can enjoy a quiet vacation.

Colón Island

This historical sightseeing area named after Columbus and the historical streets of "Bocas del Toro."

Marine Excursions

The mirror-like surface of the sea reflects many mangrove trees on the little islands, South of the Bastimentos Islands.

The Twin Islands of Zapatilla

This area already is part of Panama's unique National Ocean Park, and its beautiful Coral Reef and tropical fish. The Southern island houses the INRENARE (Instituto Nacional de Recursos Naturales Renovables), which has set up a base for the study of the sea turtles residing on the

island, and recent interest in their development will make this area a center for marine ecology.

Gnobe

The village of Gnobe with its "Indio" settlement has value for cultural anthropology, and provides an opportunity to study earlier civilizations.

5.1.3 Bastimentos Zone Development Framework

(1) Target of Tourist Inflows

By the year 2010, 0.8 million night-stay tourists and 0.5 million daytime visitors are expected.

Table 5.2 Target of tourist inflows (Annual base)

			(unit: person-nights)		
Tourist types			2000	2005	2010
Night-stay tourists	Foreign	By Changuinola Airport	---	---	350,000
		Via Tocumen Airport	78,000	263,000	195,000
		Via Paso Canoas	12,000	17,000	25,000
		By cruising ships	10,000	20,000	30,000
	Domestic		68,000	123,000	248,000
	Total	(person-night base)	168,000	423,000	848,000
Daytime visitors	Foreign	Daytime excursion	109,000	221,000	383,000
	Domestic	Weekenders	44,000	73,000	136,000
	Total		153,000	294,000	519,000

(2) Tourism Transportation Scheme

There will be two gateways for tourists to visit the Bastimentos zone. One gateway is Changuinola airport for international charter flights mainly from North America, other one is Almirante port for international cruise ships. The existing Changuinola airport would be improved with a runway extension and a new air terminal building appropriate for an international gateway. Also Almirante port's existing facilities would be improved for use by international cruise ships. Interzonal transportation by air, by sea and by road could also be developed to improve accessibility to the tourist area.

Table 5.3 International Gateways

Categories	Items	Descriptions	Status
Air gateway	Changuinola International Airport	Chartered flights from north America	⊙
Maritime gateway	Almirante Port	Port of call for international cruise ships	⊙

Note: ○ Utilization of existing ⊙ Improvement of existing ● New development

Table 5.4 Inter-zone Transportation System

Categories	Items	Descriptions	Status
Inter-zone air service	Changuinola Airport	Domestic airline between Paitilla - Changuinola	⊙
Inter-zone maritime services	By ferryboats	Route between Cristobal - Almirante	●
Inter-zone bus services	Long-distant bus route	Panama - Farallón - Chiriquí Grande - Changuinola	⊙

Note: Existing ferryboat and speed boat services between Chiriquí Grande and Almirante will be changed to land transportation after construction of Chiriquí Grande - Almirante Road.

Table 5.5 Road and railway network system

Categories	Items	Descriptions	Status
Trunk roads	Chiriquí - Chiriquí Grande	Trans-isthmian road, km	●
	Chiriquí Grande - Almirante	West coast road of Bocas del Toro Bay, km	●
	Chiriquí Grande - Punta Icaco	East coast road of Bocas del Toro Bay, km	●
	Almirante - Changuinola	km	⊙
	Almirante - Punta Anton	km	●
	Bocas del Toro - Punta Rancho	km	●
Railway	Almirante - Changuinola - Guabito	km	⊙

(3) Tourism Facility Development Scheme

Existing hotel accommodations in this zone total 211 rooms of cabana class and there is no accommodations of international standard. During the planning period of this study, a total of 1,664 additional hotel rooms will be supplied of which 498 rooms will be high standard, 1,099 will be medium class and 278 rooms will be economy class.

The accommodation supply program in this zone is shown in Table 5.6.

Table 5.6 Accommodation Supply Program

(unit: number of rooms)

Standards	Existing stocks	Additional supply				Total Stocks
		Up to 2000	2001-2005	2006-2010	Total	
High	---	59	159	280	498	498
Medium	---	178	362	559	1,099	1,099
Economy	211			67	67	278
Total	211	237	521	906	1,664	1,875

5.1.4 Bastimentos Zone Development Plan**(1) Development Guidelines**

The Tourism Development Plans for Bastimentos zone are illustrated in Figure 5.2, Figure 5.3 and Figure 5.4 and development guidelines are shown in the Appendix.

(2) Accommodation Allocation Plan

The result by accommodation distribution for both classified categories by time frame phasing for Bastimentos is displayed in Table 5.7.

Clearly this indicates an urgent need to encourage the development of at least a few medium and/or high standard hotel accommodations to be constructed and made operational in Isla Colón and Changuinola during a short term.

It is also recommended that existing accommodation be upgraded by a renovation supporting program and that at least 50% of total rooms be implemented during the short and medium terms. However, if as recommended, increased utilization by international tourists of medium class hotel rooms is achieved by target marketing efforts, then these upgraded hotel can absorb some of this forecasted shortfall.

This up-market shift to utilization of up-graded hotel accommodation is in line with the recommended short and medium development for Bastimentos.

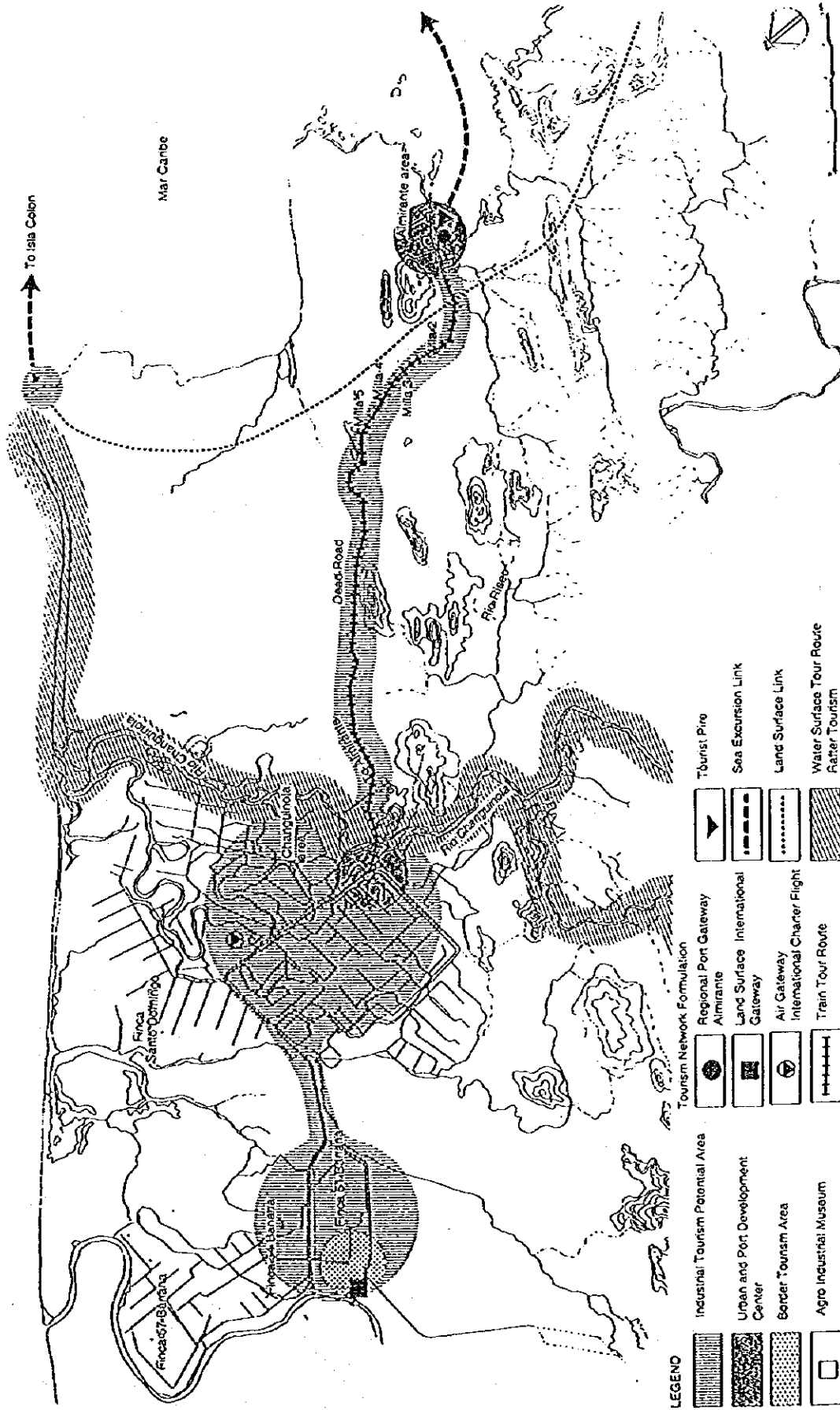
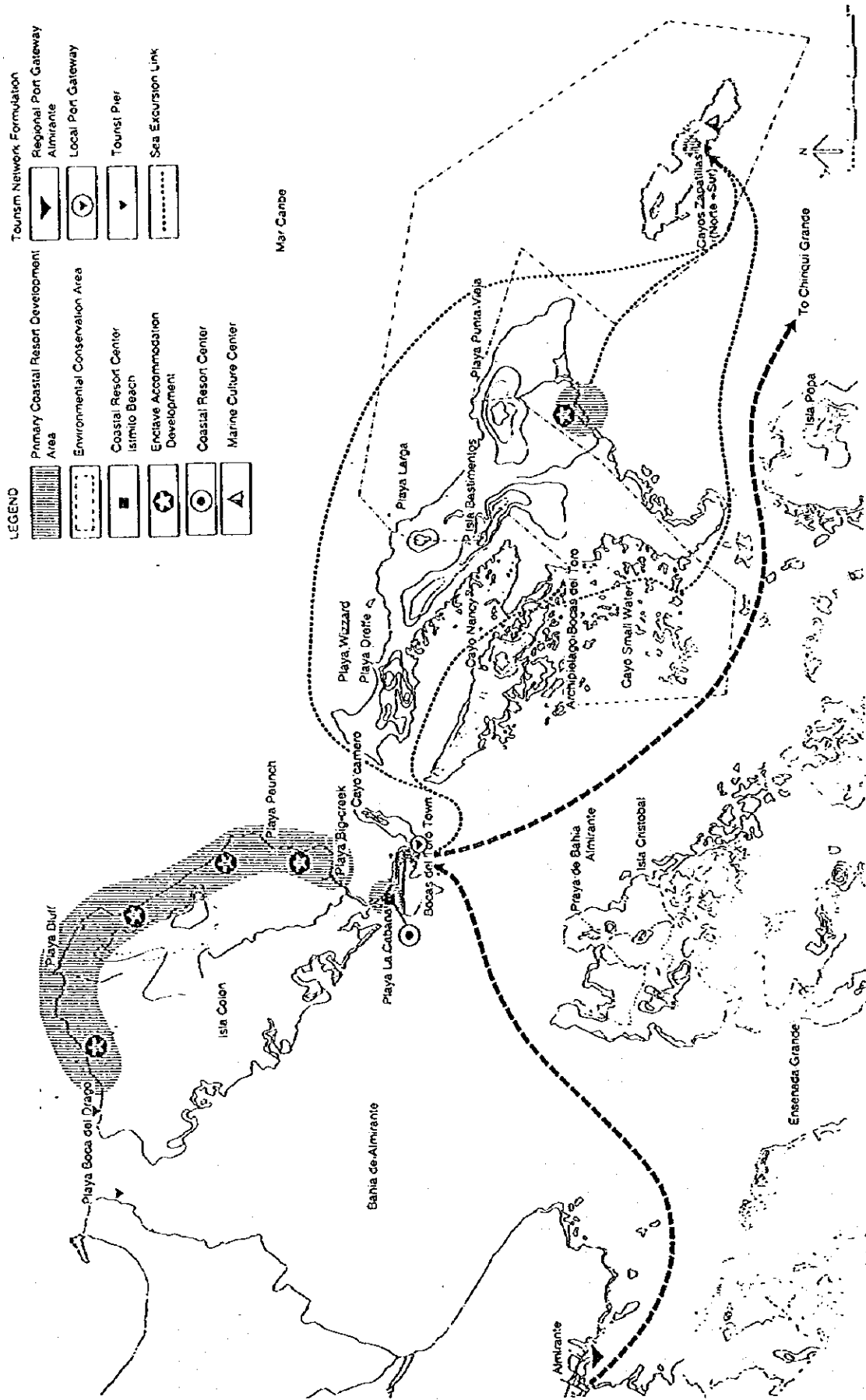


Figure 5.2 Bastimentos area development plan



LEGEND

	Primary Coastal Resort Development Area		Tourism Network Formulation
	Environmental Conservation Area		Regional Port Gateway
	Coastal Resort Center		Local Port Gateway
	Enclave Accommodation Development		Touist Pier
	Coastal Resort Center		Sea Excursion Link
	Marine Culture Center		

Figure 5.3 Changuinola area development plan

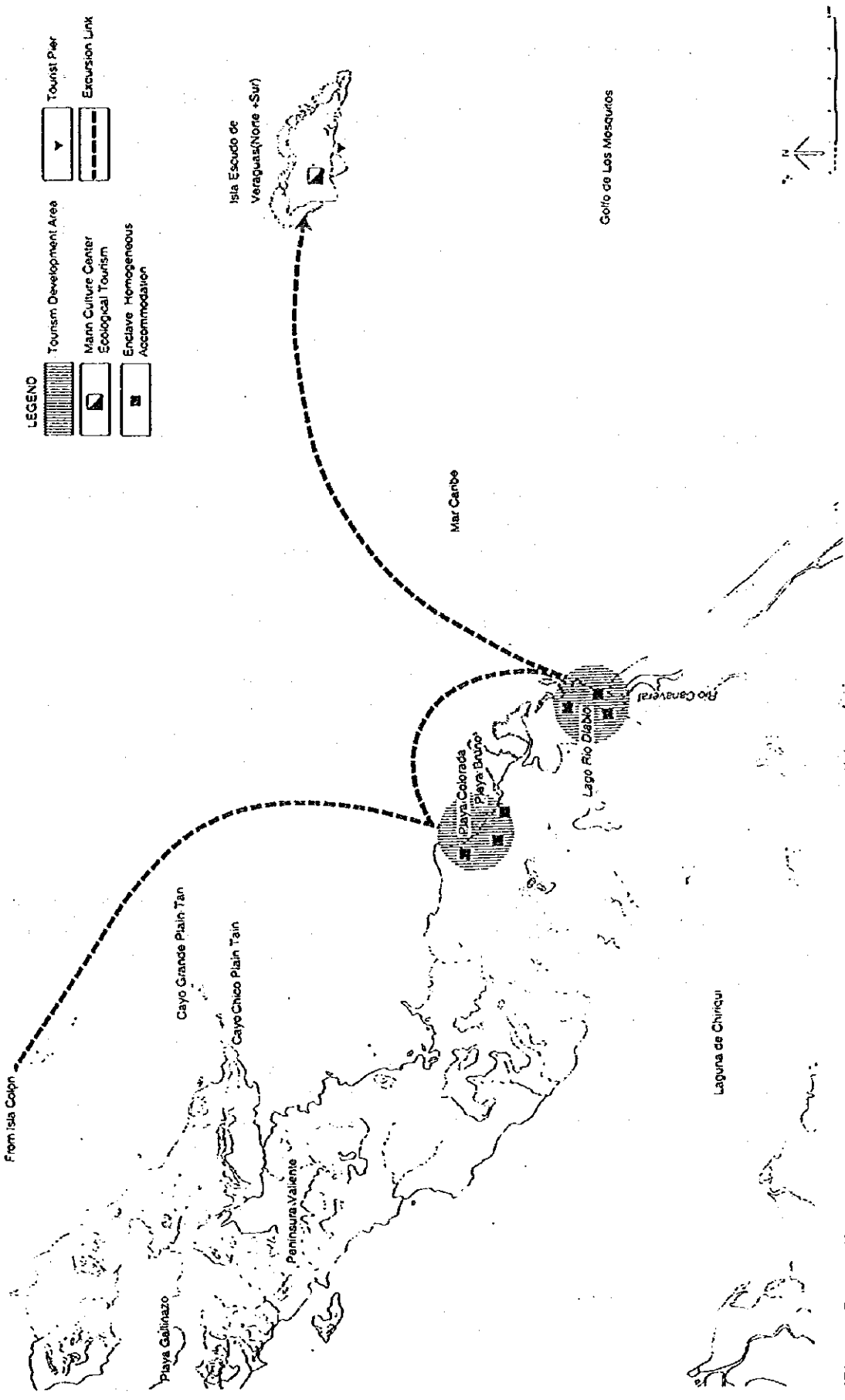


Figure 5.4 Bastimentos (3) Toboche Area

Table 5.7 Accommodation Allocation Plan

(unit: number of rooms)

Areas	Existing stocks			Up to 2000			2001 - 2005			2006 - 2010			Cumulative total		
	High	Med.	Eco.	High	Med.	Eco.	High	Med.	Eco.	High	Med.	Eco.	High	Med.	Eco.
Changuinola			94			101	40	90		100			140	191	94
Almirante			32					52		100			100	52	32
Colón Island				59	77		119	199			129	40	178	405	40
Bastimentos Is.			43							80	120		80	120	43
Escudo Veraguas											100		0	100	0
Tobobe											210		0	210	0
Chiriquí Grande			42										0	0	42
La Amistad							21					27	0	21	27
International Park															
Total			211	59	178	0	159	362	0	280	559	67	498	1099	278
			211		237			521			906			1875	

(3) Development Projects

The primary development strategy in this zone is optimal use of excellent coastal - island type tourism resources and the maritime national park and the secondary strategy is tourism development in Changuinola and Almirante towns as a gateway for international tourists.

Along these lines, transportation infrastructure and new accommodation development are planned in this zone. Changuinola and Almirante area and Colón island are the main development areas in the short and mid-term planning period. Tobobe area will be developed in long term point of view in accordance to the development of transportation networks. Besides the development of accommodation and infrastructure, tourist facilities such as tourist guide center, marine science center and visitor will be constructed on a small island or in the national park area of La Amistad. These development projects by subzone are listed in Table 5.8.

(4) Development Phasing Program

There are many attraction places located at far distance from one another in each zone. It takes varying amount of trip time and means of transportation to reach each place. A tour route should offer a variety of attractions appropriate to the needs and available time of the tourists as well as other tourist facilities and services which must be developed accordingly.

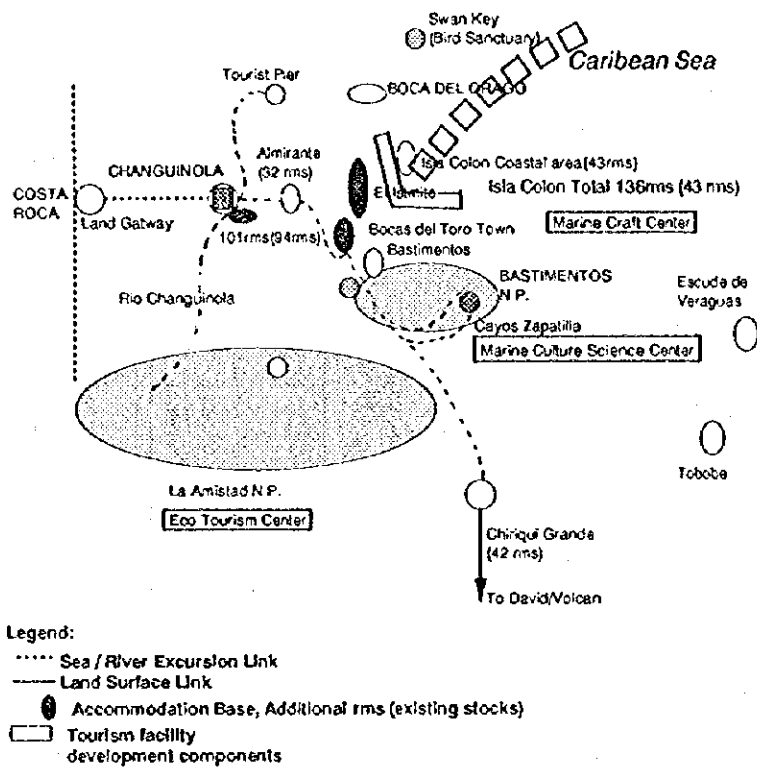
The routes have been set for each zone, according to the significance of tourist resources, and to make the most advantage of the existing air, land and sea link networks. Figure 5.5, Figure 5.6, and Figure 5.7 show the arrangement for tour routes to various tourist places in Bastimentos zone in the short, mid and long term development programs respectively.

Table 5.8 Development Projects by Subzone

Development components		Project package	Phase program			Dev't body	
			Sho.	Mid.	Lon.	Pub.	Pri.
Subzone-I Changuinola Area	Changuinola Town	Changuinola Airport improvement Accommodation development (ex. 94 rm**+new 330 rm) Tourist facilities Urban road, Public utilities	○	○	○	○	○
	Almirante Town	Almirante Port improvement, with tourist pier and marina Accommodation development (ex. 32 rm**+new 150 rm) Tourist facilities Urban road, Public utilities	○	○	○	○	○
Subzone-II Bocas del Toro Archipelagos Area	Bocas del Toro Colon Island and Town	Accommodation development - Bocas del Toro Town (ex. 43 rm**+new 160 rm) - El Ismito Area (new 220 rm) - Boca del Drago Area (new 80 rm)	○	○	○	○	○
		- Other coastal area in Bocas del Toro Island (new 160 rm) Colón Island road (Bocas del Toro Town - Punta Rancho) Bocas del Toro Town: Urban road, Public utilities, Tourist facilities	○	○	○	○	○
	Bastimentos Island	Accommodation development (new 200 rm) Public utilities, Tourist facilities, Tourist pier	○	○	○	○	○
	Bastimentos Marine Park	Cayos Zapatillas Islets: Tourist guide center	○			○	
Subzone-III Eastern	Tobobe	Accommodation development (new 210 rm) Public utilities, Tourist facilities, Tourist pier			○	○	○
Bocas del Toro Area	Eseudo de Veraguas Island	Accommodation development (new 100 rm) Marine science center, Tourist pier			○	○	○
Subzone-IV Chiriquí Grande Area		Accommodation development (ex. 42 rm**) Urban road, Tourist pier	○	○		○	○
Subzone-V La Amistad International Park		Accommodation development (new 50 rm) Visitor center		○	○	○	○
Road development		Cross isthmus road (Chiriquí - Chiriquí Grande) Chiriquí Lagoon west coast road (Chiriquí Grande - Almirante)* Chiriquí Lagoon east coast road (Chiriquí Grande - Punta Icaco)* Regional road (Almirante - Changuinola)		○		○	○

Note: * = National project

** = Existing economy class hotel rooms to be upgraded by renovation support program



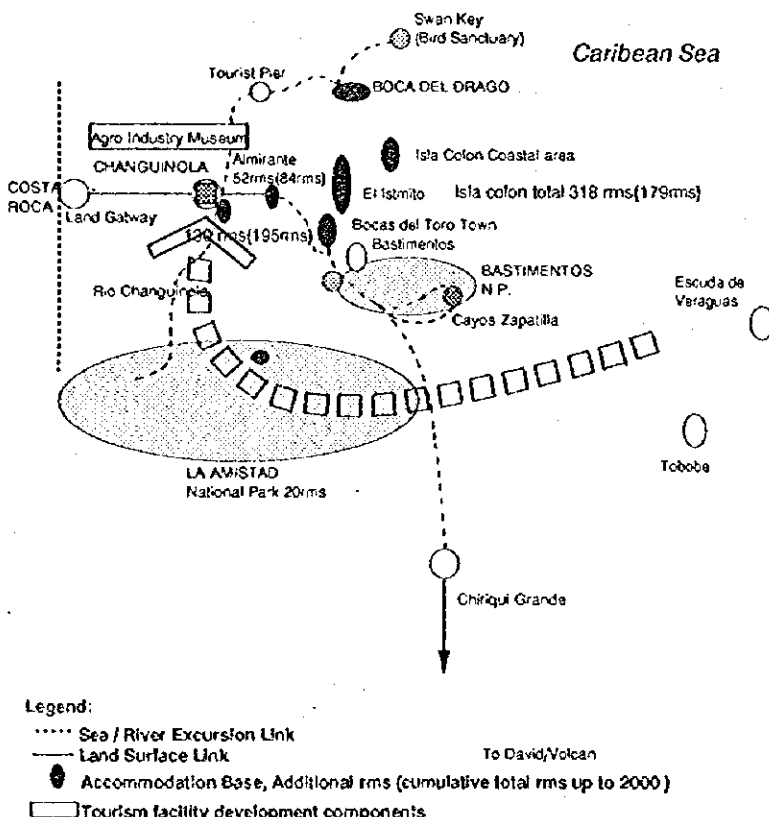
Bastimentos : Short Term Tour pattern
 Beach Holiday and Marine Culture in Bastimentos
 (Bocas del Toro Gateway)

Tour Theme / Geographical location / distribution

- 1) Coastal Resort :**
 *Bocas del Toro / Istmito beach (2-4days)
 (Marine Craft Center)
- 2) Underwater Discovery :**
 *Bocas del Toro - Isla Zapatillas (1day)
 ((Marine Culture Science Center)
- 3) Sea Excursion :**
 *Bocas del Toro - Bastimentos N.P.(1day)
- 4) Urban / Culture :**
 *Bocas del Toro Town (1/2 day)
- 5) Natural Wonder:**
 *Changuinola - Rio Changuinola -La Amistad
 N.P. (Eco Tourism Center,1-2 days)
 (to be surveyed for natural wonder)

*New and improved tour destination
 Regular:3-4 days

Figure 5.5 Tour Pattern in Bastimentos/Short Term (Bocas del Toro Gateway)



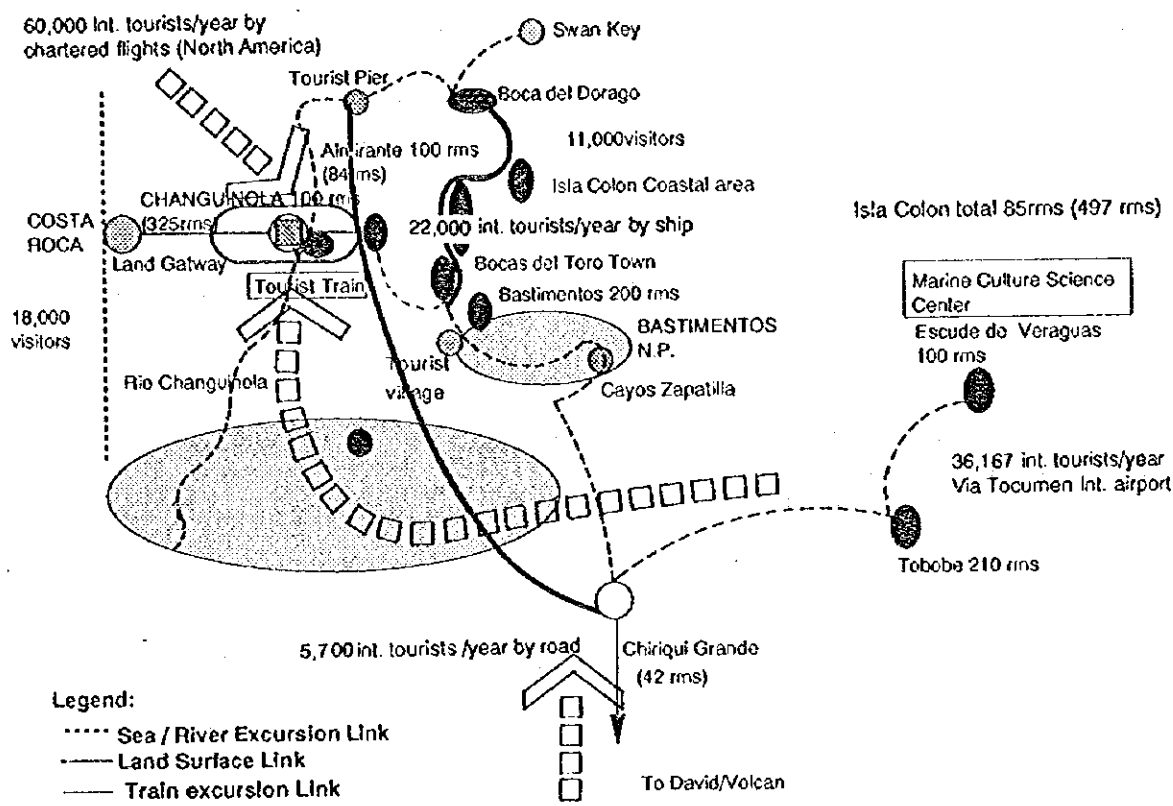
Bastimentos : Medium Term Tour pattern
 Beach Holiday and Natural Wonder in Bastimentos
 (Changuinola Gateway)

Tour Theme / Geographical location / distribution

- 1) Coastal Resort:**
 Bocas del Toro / Istmito beach / *Boca del Drago
 (2-4 days)
- 2) Underwater Discovery:**
 Bocas del Toro - Isla Zapatillas (1day)
- 3) Sea Excursion:**
 Bocas del Toro Bastimentos N.P. (1day)
 *Bocas del Drago - Isla Swan Key (1/2 day)
- 4) Urban Amenity:**
 Bocas del Toro town (1/2 day)
 *Changuinola town (1 day)
 (Agro-industry Museum)
- 5) Natural Wonder:**
 *Changuinola - Rio Changuinola -La Amistad
 N.P. (1-2 days)
 (to be surveyed for natural wonder)

* Additional and improved tour destination
 Regular:4-5 days
 Option to Escude de Veraguas sea excursion
 (+1 day)

Figure 5.6 Tour Pattern in Bastimentos/Medium Term (Changuinola Gateway)



Legend:

- Sea / River Excursion Link
- Land Surface Link
- Train excursion Link
- Accommodation Base, Additional rms (cumulative total rms up to 2005)
- Development components

Bastimentos : Long Term Tour Pattern Average duration of international tourists in Bastimentos Zone : Beach Holiday and Back to Nature in Bocas del Toro (Changuinola Gateway) **3.94 nights**

Tour Theme / Geographical location / distribution

- 1) **Coastal Resort:**
 - Changuinola - Bocas del Toro / Istmito beach / Boca del Drago
 - *Bocas del Toro coastal area (2-4 days)
 - *Almirante - Bastimentos (2-4 days)
 - *Chiriqui Grande - Tobobe - Escudo de Veraguas (2-4 days)
 - *Chiriqui Grande - Tobobe (2-4 days)
- 2) **Underwater Discovery :**
 - Bocas del Toro -Isla Zapatillas (1day)
 - *Tobobe - Escudo de Veraguas (2-3 days)
- 3) **Sea Excursion :**
 - Bocas del Toro - Bastimentos N.P. (1day)
 - *Bocas del Drago - Isla Swan Key (1/2 day)
 - Almirante - Bastimentos N.P. - Escudo de Veraguas (2-3 days)
 - (Marine Culture Science Center)
- 4) **Urban Amenity:**
 - Bocas del Toro town(1/2 day) *Bastimentos town (1/2day)*Changuinola(1day)
 - *Almirante/ Border town (1- 2 day)
- 5) **Natural Wonder :**
 - Changuinola - Rio Changuinola -La Amistad N.P. (1-2 days)
 - (to be surveyed for natural wonder)
- 6) **Traditional Village :**
 - Coco Key village etc. (1/2 -1 day)
 - * Additional and improved tour destination
 - Regular:4-7 days
 - Option to Portobelo sea excursion (+2)
 - Option to Volcan Baru N.P. (+2)

Figure 5.7 Tour Pattern in Bastimentos/Long Term (Changuinola Gateway)

5.2 Arco Seco Zone

5.2.1 Arco Seco Zone in General

(1) Zone Designation

This zone under study is located between the Herrera and Los Santos provinces. The coastal length of Herrera and Los Santos provinces, which face the Pacific Ocean are 17.5 km. and 200.3 km., respectively.

This zone is located East and South in the coastal area of the Azuero Peninsula, and belongs to Herrera and Los Santos provinces.

The area covers total of 6,146 km², and has a population of 170,628 as of the 1990 Census.

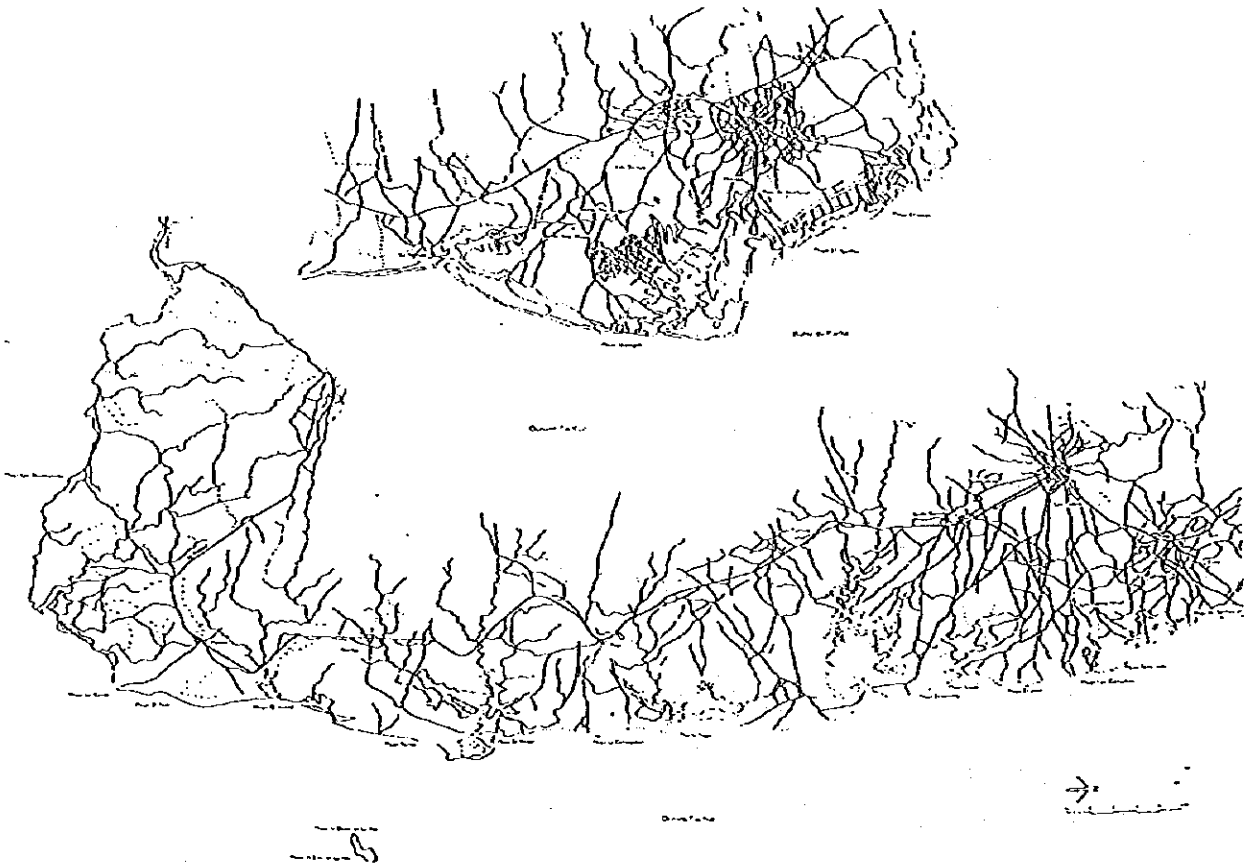


Figure 5.8 Existing map

(2) Natural Conditions

1) Climate

The name of Arco Seco means dry arch. As the name of the region is indicative of the climatic characteristics, and this study zone has a relatively little rainfall and total rainfall is 899 mm. The rainy season starts in May and ends in November. Total rainfall in these rainy months is 846 mm and 94% of annual rainfall is concentrated in these seven months. The very clear dry season starts from December and continues up to April. Total rainfall in these five months is 53 mm only. Annual average temperature is 27.7 degree centigrade, and April is the warmest month with 29 degree.

2) Physiography and Geology

The topography of the coastal area of Arco Seco is mainly composed of low rolling and hilly uplands. The elevation of the hilly upland is 20-30m in the coastal area and gradually increases further inland. The topographical elevation in the mountain areas of Arco Seco reaches 400-500 meters above sea level.

Alluvial lowland is formed at the mouth of large rivers. River La Villa, Guarare, Salado, Purio and Caldera are forming alluvial lowland at their lower reaches. These lowlands are densely covered by mangrove forests. For the entire length of the coastal line sand dunes are formed close to large river mouths. Long and narrow beaches developed along the coastline of this zone.

Regarding geology, tertiary sedimentary rock is the main geology in this zone while Mesozoic sedimentary rock is found in limited areas.

3) Fauna and Flora

The natural primary vegetation has been totally replaced by agricultural development in hilly upland areas. Resources in natural flora and fauna are very poor in this zone. Mangrove forests in the lowlands area can only sustain the local ecosystems.

Sarigua National Park has designated areas of about 8,000 ha. in the Herrera province and a part of the Cerro Hoya National Park is located in Los Santos province. El Minutes and La Trines forest reserve are also designated in this study zone. As wildlife shelters, Isla Iguana, Penón de la Honda, Cenogón del Mangle and Cienaga Las Macanas areas are designated.

(3) Socioeconomic Conditions

1) Historical Background

Arco Seco is known as a Cradle of Culture in Panama. Spanish colonization started in this zone in the 16th century. The Spanish cultural heritage has been preserved by the local people. The old Spanish colonial style housing still remains in Parita, Los Santos, Pedasi and other parts of this region.

Archaeological evidence of pre-Colombian culture and ancient Monagrillo cultures are prevalent in La Arena, as well as prehistoric remains in Sarigua. Production of traditional style pottery and ceramics, local festivals and old folklore derived from the mixture of Spanish and native culture are unique cultural assets in this zone.

2) Population and Land Use

The population of the Herrera province in 1990 was 93,681 while it was 76,947 in Los Santos Province. Average growth rate of the population in these provinces between 1980 and 1990 was 1.34 % and 0.91% respectively. These figures represent the minimum growth rates in Panama during this decade. In Los Santos province, the total population reached more than 70 thousand in 1960, and after that, population growth has been almost nil. The population growth rate in Herrera province is showing the same tendency and the growth rate has been around 1% since the 1970 Census. Average density of population is 40 persons per sq.km in Herrera and 20 persons per sq.km in Los Santos province based on 1990 data.

The total area of Herrera province is 2,341 sq.km and 3,806 sq.km in Los Santos. These provinces are the smallest province of Panama, however, the percentage of the agricultural land use is very high. In Los Santos, 81% of the provincial land is used for agriculture and 79 % in Herrera. In Panama, approximately 50% of the corn and 45% of the sugar cane are produced by these two provinces. Livestock production is also very high in both provinces. In coastal area of Chitré, salt production is practiced by artificial salt bed based on the dry climatic conditions.

3) Economic conditions

According to the employment data from the 1990 Census, the total employment in Herrera and Los Santos provinces is 31,048 and 27,888 respectively. Although agricultural land use has been extensively promoted, the share of employment by the primary sector is relatively small, 42% in Herrera and 49% in Los Santos provinces. The share of employment by the tertiary sector is relatively higher with 44% in Herrera and 40% in Los Santos provinces. Regarding the tourism related industries, such as hotel and restaurant employment, there were 587 employees in Herrera and 560 employees in Los Santos.

The public investment budget by central government in 1994 was 7,926 thousand Balboas in Herrera, and 4,225 thousand Balboas was invested in Los Santos province. In Herrera, industry and commerce and the telecommunication sector had no investment budget by the central government. In Los Santos the province, agriculture, industry and commerce, telecommunication, labor and social security and the housing sector had no investment budget by central government.

(4) Inventory of Tourism Resources and Facilities

This area is convenient for road and aerial transportation from Panama City. Also, Arco Seco's (Dry Arch) climate is dry, and compared to other areas this results in long a tourist season. There are 149 tourism resources (38 coastal, 27 other natural and 84 cultural). The cultural resources in this area exist in higher numbers when compared to other areas studied. The carnivals, pilgrimages and Easter celebrations has also attracted a lot of domestic tourists. Although this is the second largest area for accommodation after the capital urban area of

Panama City itself, more than half of the people visit the area for business, but local pilgrims usually stay at pensions.

The 3 most valuable resources that are listed in the IPAT database are the following:

- Carnavales de Las Tablas, Rank III.
- Parque Nacional Sarigua, reserve area of 80 km², Rank II.
- Poblado de la Villa de Los Santos, Rank II

The most highly ranked areas for the quality of their resources are:

- Refugio de Vida Silvestre Isla Iguana, Rank I to III.
- Festival de la Pollera, Rank I to III

National historical monuments

Shown in the cities' plans (maps) 43.2 and 43.3 with the exception of No 4. Source: Atlas Nacional p.178

Iglesia de Santo Domingo de Guzman (Parita of Chatter)

Iglesia de San Atanasio (Los Santos of Los Santos)

Casa del Cabildo (Los Santos of Los Santos)

Iglesia de Santa Librada (Los Santos of Los Santos)

These Tourism Resources are shown in Table 5.9.

(5) Infrastructure Conditions

Existing infrastructure conditions such as transportation and urban utilities in Arco Seco are briefly mentioned as follows:

1) Airport and Airlines

There are seven airports in Herrera and Los Santos province and there are some flight services between Panama city and Chitré. Chitré airport has a 1,460 meters runway with asphalt pavement. The two regular flights are operated in the morning and evening, every day, by small size aircraft with maximum capacity of 20 passengers.

2) Port and Sea Traffic

Azuero port near Chatter is the only one managed by private sector in this zone, and this port is used for the shipment of the agricultural products. It is difficult to use the pier of this port at the time of the low tide.

3) Road and Land Traffic

The main road in this zone is National Highway No.3 which runs 2-7 km inside along the coastline. It has 2 lanes and is paved by asphalt until Pedasi. From Pedasi to more Southern area of this zone, the pavement is mainly gravel.

The principal public transportation is a long distance bus which is operated to connect this zone to the main urban centers such as Panama city and other provincial cities.

Table 5.9 Arco Seco: Matrix of Tourism Attractions

Provincias	Unidades Administrativas	Atractivos Costeros			Atractivos Naturales			Atractivos Culturales			Cantidad Total	Alojamiento Turístico			
		Distritos	Cortegimientos	Otros	Playas	Parques	Escenarios	Parque	Tipo 1	Tipo 2			Tipo 3	Tipo 4	Tipo 5
Herrera	Sta. María	El Rincón				#23						#105	2		
		París				#44								2	
		Parita				#35, 32	#54							3	
	Chitré	La Arena			#19, 31	Playa El Agallito: #14	#37, 21, 38	#95		#52, 56, 58, 39	#66, 81, 87, 95	#99	#110, 120	17	
		Monagrillo				Playa El Retén: #01							#112, 126	3	
		Chitré							#33, 61	#75, 76			#114, 116	6	6 hoteles: 137 3 pensiones: 34
		Los Santos					#22	#35	#51, 55, 57	#65, 80, 88, 93	#97		#101, 115, 121 #125, 127	16	Hoteles: 26
	Santos	Santa Ana			#41	Playa Monagre: #05	#42	#60						5	
		Guararé				Playa Berro: #06	#25		#54	#67, 68, 69			#102, 103 #107, 111	12	Pensiones: 54
	Los Santos	La Enca	La Enca			Playa Bella Vista: #12								2	
Las Tablas					Playa El Puerto: #16									2	
Las Tablas		Las Tablas			#24	Playa El Jobo: #08			#60	#64, 70, 72			#104, 108, 122 #117, 123	15	Hoteles: 22
		Las Tablas			#28	Playa El Uvero: #11								5	
		Abajo			#29	Playa Las Comadres: #09								2	
Las Tablas		Santo Domingo				Playa Lajas: #15				#74, 85				2	
		Sesrendero								#63				1	
Poerí		La Palma												2	
		Poerí				Playa La Concepción: #13	#26			#83				4	
Pedasí		Maribae				Playa El Rincón: #04								2	
	Pedasí	Pedasí			Playa Berro: #07									2	
		Pedasí			#30	Playa El Arenal: #03	#27			#71, 73, 79, #84, 92, 96			#106, 109 #118, 124	16	Pensión: 9
		Pedasí				Playa Los Destiladeros: #10								7	
	Tonosí	Tonosí			#138	Playa El Toro: #17								2	
		Tonosí			#135	Playa La Garita: #18								1	
El Correo	Guánito				Playa al Este de la Isla: #46	#49							1		
	El Correo			10	Playa al Oeste de la Isla: #47								1		
				28	Playa Venado: #02						#98		2		
				38	Cañas								1		
					#128, 129, 130, 131	#136, 139							19		
					#132, 133, 134, 137	#140				#144, 145, 146			19		
													1		
													1		
													149	Capacidad 282 habitaciones	
													34		
													3		
													31		

Nota: *Centro provincial, * Centro Distrital
#123 = Número de Código del IPAT para las Principales Atracciones

Table 5.9 Arco Seco: Matrix of Tourism Attractions

Provincias	Unidades Administrativas		Atracciones Costeras		Atracciones Nativas		Atracciones Culturales			Cantidad		Asociamiento Turístico	
	Distritos	Corporaciones	Playas	Otros	Excursiones	Parque	Tipo 1	Tipo 2	Tipo 3	Tipo 4	Tipo 5		Total
Herrera	Sta. María	Santa María		#23							#105	3	
		El Rincón		#44		#43						3	
	Parita	Parita		#35, 32		#34						3	
		La Arena	Playa El Apollino #14	#19, 31	#37, 21, 38	#36	#52, 56, 58, 59	#66, 81, 87, 95	#99		#110, 120	17	
Chirre	Monagallo	Playa El Reten #05				#53, 61						3	
	Chirre											6	6 hoteles, 137 3 restaurantes, 32
Los Santos	Los Santos				#22	#33	#65, 80, 88, 93	#97		#101, 115, 121	#125, 127	16	Hoteles: 26
	Santa Ana	Playa Monagré #05 Playa Bermeo #06	#41	#42	#40							5	
Guataré	Guataré			#25		#64	#67, 68, 69			#102, 103	#107, 111	12	Personajes: 54
	La Inca	Playa Hella Vista #12 Playa El Puerto #16										2	
Las Tablas	Las Tablas	Playa El Jobo #08 Playa El Uvero #11		#24		#60	#64, 70, 72			#104, 108, 122	#117, 123	15	Hoteles: 22
	Las Tablas	Playa Las Comadres #09 Playa Labas #15	#29	#28								5	
Los Santos	Santo Domingo											2	
	Sesúadero						#74, 85					2	
Pueci	La Patina						#63					1	
	Mamabe	Playa La Concepción #13 Playa El Rincón #04 Playa Bermeo #07		#26			#83					2	
Pedasí	Pedasí	Playa El Atenal #03 Playa Los Destacaderos #10 Playa El Torvo #17 Playa La Gapiá #18	#30	#27			#71, 73, 79			#106, 109	#118, 124	16	Personajes: 9
	Uña Iguana	Playa al Este de la Isla #26 Playa al Oeste de la Isla #27 Playa Verado #02	#20, 48, 50	#49	#45							7	
Tonosí	Cañas					#142						2	
	Tomosí	#128, 129, 130, 131 #132, 133, 134, 137	#138 #135	#136, 139 #140			#144, 145, 146			#147, 148, 149		19	
El Coto	Guamito					#143						1	
	El Coto											1	
			28	30	19	8	13	37	3	31		149	Capacidad 282 habitaciones
			38		27		84						

Nota: * = Centro provincial, * = Centro Distrital
#123 = Número de Código del IPAT para las Principales Atracciones

4) Electricity and Telecommunication

For electricity, this zone is connected with the National Grid. IRHE has a generator of which nominal capacity is 16.5 megawatts in Chitré, but the actual capacity of the generator is considered to be around 1 megawatts due to the old type of facilities with low generative efficiency. The type of power distribution lines are 34.5 KV and 13.8 KV. The regional electrification ratio of this zone is 88.6%. Further investment will be necessary to support future tourism development in this zone, and a new distribution line of 34.5 KV should be constructed from La Arena substation.

In telecommunications, telephone centers are located at Chitré, Los Santos, Las Tablas, Poci and Pedasi. The telephones are connected with the national telecommunication network through the Canajagua relay station.

5) Water Supply

There are water supply networks of IDAAN in this zone and Chitré, Los Santos, Las Tablas and Guarare are networked. Chitré has a water supply plant with capacity of 20,818 cubic meters per day and the source is La Villa river.

In Pedasi, there are six wells which have 20 cm in diameter and water supply capacity is 6 to 9 cubic meters per hour. In Mariabe, the well capacity is 21 cubic meters per hour.

Water supply capacity of this zone is critical in dry season and additional water availability should be studied.

6) Sewerage

Sewage treatment system in Chitré, Los Santos, Las Tablas and Guarare are still dependent on septic tanks.

5.2.2 Arco Seco Zone Development Policy

(1) Development Goals

Development goals for Arco Seco zone will be set as follows:

- Tourism development in Arco Seco should be based on the Spanish cultural heritage, proposed in such a way that the traditions and cultural heritage are preserved including historical town scape
- Formation of a center for cultural tourism in Panama
- Succession of folklore and cultural heritage to the 21st century
- Development of coastal resort

(2) Development Strategy

To manage the tourist resources efficiently, the following types of tourist development are possible:

As "Los Santos is the Cradle of the National Folklore" and is proud of this heritage, one of the sales points must be their cultural tourism. For example, during four days of the Festival de la Mejorana, 100,000 people gather from all over the country. This district consists of historical scenery, heritage, festivals and memorial ceremonies that must be focused on in the future. The beautiful Spanish scenery, historical churches like the Parita, Las Tablas & Pedasi, and the richness in the district culture, displayed in plaza's and museums, are among the areas tourist resources.

Traditional Ceramics & Pollera Embroidery to promote the "My Name is Panama" poster IPAT campaign.

The traditional dance and music.

The Pacific Island of Isla Iguana is a paradise of dark blue coral reefs, white sand beaches and sea birds.

5.2.3 Arco Seco Zone Development Framework

(1) Target of Tourist Inflows

At the year of 2010, 1.2 million night-stay tourists and 0.7 million daytime visitors are expected.

Table 5.10 Target of Tourist Inflows (Annual base)

			(unit: persons)		
Tourist types			2000	2005	2010
Night-stay tourists	Foreign	Via Tocumen Airport	138,000	283,000	375,000
		Via Paso Canoa	12,000	17,000	25,000
	Domestic		220,000	396,000	784,000
	Total (person-night base)		370,000	696,000	1,184,000
Daytime visitors	Foreign	Daytime excursion	232,000	289,000	461,000
	Domestic	Weekends	87,000	147,000	273,000
	Total		319,000	436,000	734,000

(2) Tourism Transportation Scheme

A direct gateway for foreign tourists would not be established in Arco Seco zone. Instead, strengthening the transportation facilities between zones as shown in Table 5.11 is proposed. In order to reinforce the domestic air transportation to Panama City, the existing Chitré airport would be improved, especially the runway and passenger terminal. In sea transportation, existing Azuero port would be developed to allow introduction of hydro-jet boats.

The bus network services would be strengthened for public transportation between this zone and Panama city. Also, existing roads providing access the tourist resources would be improved to allow easier movement within the zone area.

Table 5.11 Inter-zonal Transportation System

Categories	Items	Descriptions	Status
Inter-zonal air service	Chatter Airport	Domestic airline between Paitilla - Chitré	⊙
Maritime	Azuero Port		⊙
Inter-zonal maritime services	By hydra-jet-foil boats	Azuero - Nueva Gorgona, and extension to Amador and San Miguel	●
Inter-zonal bus services	Mid-distant bus route	Panama - Farallón - Chatter - Las Tablas - Pedasi	⊙

Note: ○ Utilization of existing ⊙ Improvement of existing ● New development

Table 5.12 Road Network System

Categories	Items	Descriptions	Status
Trunk roads	Santa Maria - Pedasi	Access from National Highway No.1	⊙
(National Highway No.3)	Pedasi - Tonosi	Trunk road extension to Tonosi District	⊙

(3) Tourism Facility Development Scheme

In Arco Seco zone, existing accommodation totals 650 rooms and the quality of hotels are economy standard or pension class. During the planning period of this study, a total of 903 additional rooms will be supplied of which 230 rooms are high standard, 505 rooms are medium class and 168 rooms are economy standard. Upgrading of the existing hotel rooms by renovation is also planned in short and medium term period. Half of the total investment will be made in the long term period. In Table 5.14, the accommodation supply program for this zone is shown.

Table 5.13 Accommodation Supply Program

Standards	Existing stocks	Additional supply			Cumulative Total	Total Stocks
		Up to 2000	2001-2005	2006-2010		
High	---	45	85	100	230	230
Middle	---	205	150	150	505	505
Economy	650			168	168	818
Total	650	250	235	418	903	1,553

5.2.4 Arco Seco Zone Development Plan

(1) Development Guidelines

Tourism Development of Arco Seco is illustrated in Figure 5.9 and Figure 5.10 and development guidelines are shown in Appendix.

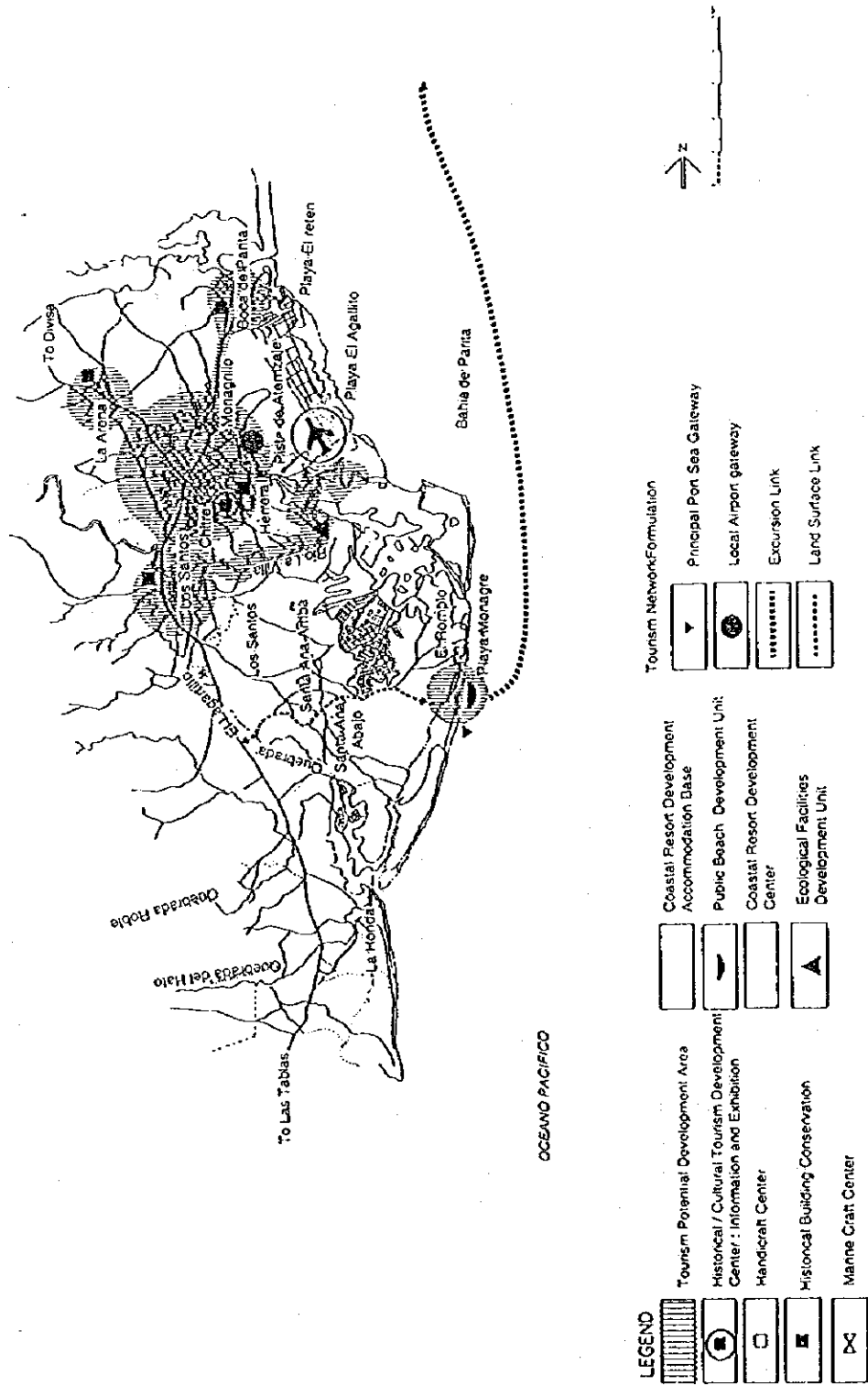


Figure 5.9 Chatter area development plan

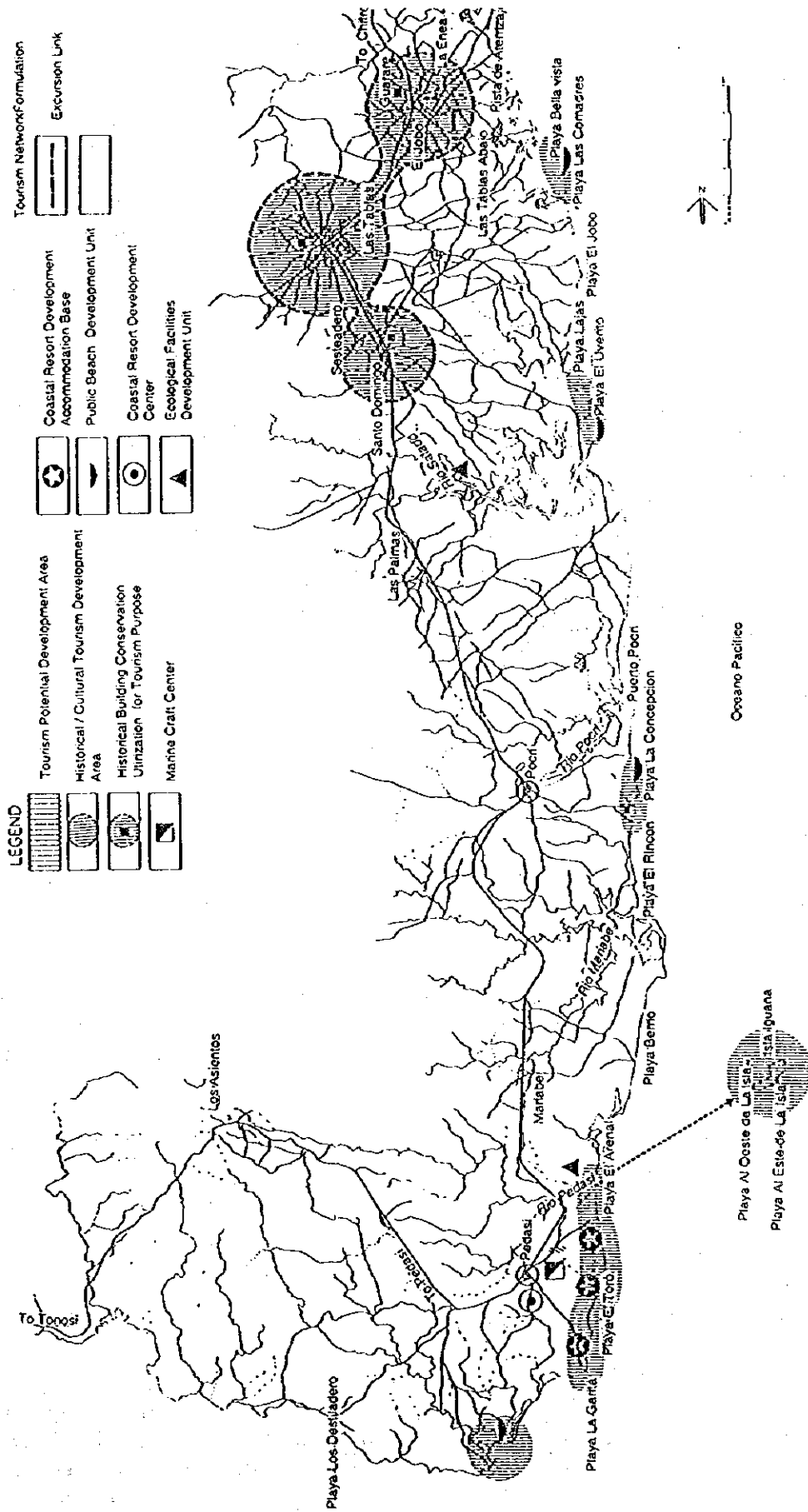


Figure 5.10 Las Tablas and Pedasi areas development plan

(2) Accommodation Allocation Plan

Arco Seco has a serious shortage of medium and high standard hotel rooms as shown in Table 5.16. Clearly this indicates an urgent need to encourage the development of medium and/or high standard hotel accommodation to be constructed and made operational in Chitré as an urban tourism base and in Pedasí as a coastal tourism base during the short term.

It is also recommended that existing accommodation be upgraded by a renovation program and that at least 50% of total rooms be upgraded during the short and medium terms. However, Arco Seco has excess economy class accommodation. The upgrading program should be encouraged and applied in Chitré, Los Santos, Guararé and Las Tablas. Upgraded hotels can absorb some of this forecasted shortfall. Arco Seco Zone is mainly a cultural tourism oriented destination, therefore existing historical buildings should be utilized for hotel accommodation by renovation programs.

Table 5.14 Accomodation Allocation Plan

(unit: number of rooms)

Areas	Existing stocks			Up to 2000			2001 - 2005			2006 - 2010			Total Stock			
	High	Mid.	Eco.	High	Mid.	Eco.	High	Mid	Eco.	High	Mid	Eco.	High	Mid	Eco.	
Chitré			198			50									50	198
Los Santos			42													42
Guarare			54													54
Las Tablas			40													40
Pedasí			14	45	155		85	130		100	150	119	230	435	13	
Tonosí			13					20							20	133
Other area			289									49				338
Total			650	45	205	0	85	150	0	100	150	168	230	505	818	
			650		250			235			418			1553		

(3) Development Projects

The main development area of accommodations in this zone is the coastal area of Pedasi and Poci. Totally 903 additional rooms will be supplied in this planning period of which 665 rooms will be constructed at Pedasi coast. Regarding road improvement, access roads from National Highway No. 3 to the coastal resort areas should be constructed or improved. The pavement of the National Highway No. 3 from Pedasi to Tonosi should be improved.

From the long term point of view, Chitré air port; should be improved for better access to Panama and another provincial cities.

Tourist facilities such as information centers should also be constructed in large cities. These development projects are listed in Table 5.15.

(4) Development Phasing Program

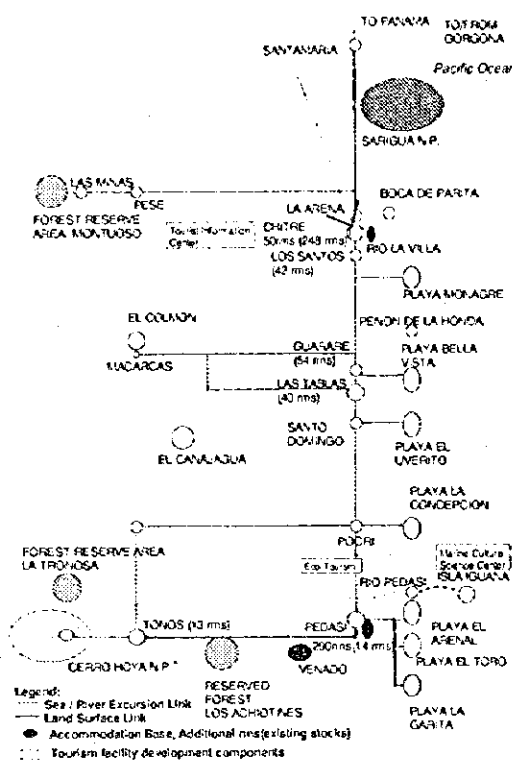
There are many places of attraction separated at a considerable distance from one another in each zone. It takes varying amount of travel time and means of transportation to reach each place. A tour route should offer a variety of attractions appropriate to the needs and available time of the tourists as well as other tourist facilities and services which must be developed accordingly.

A tour route is set at each zone, according to the significance of tourist resources, and to make the most advantage of the existing air, land and sea link networks. Figure 5.11, Figure 5.12, and Figure 5.13 show the arrangement for tour routes to various tourist places in Araco Seco Zone in the short, mid and long term programs respectively.

Table 5.15 Development Projects by Subzone

Development components		Project package	Phase program			Dev't body	
			Sho.	Mid.	Lon.	Pub.	Pri.
Subzone-I Chitré Coast Area	Chitré City	Chitré Airport improvement* Azucero principal tourist port Accommodation development (ex. 198 rm**+new 50 rm) Tourist facilities			○	○	○
	Parita Town	Historical townscape beautification				○	○
Subzone-II Los Santos Northern Coast Area	Los Santos Town	Accommodation development (ex. 42 rm**) Rio La Villa eco-tour visitor center Monagre Beach improvement				○	○
	Guarare Town	Accommodation development (ex. 54 rm**) Bella Vista Beach improvement	○	○		○	○
	Las Tablas City	Accommodation development (ex. 40 rm**) Tourist facilities El Uverito Beach improvement				○	○
Subzone-III Los Santos Central Coast Area	Pedasi Town	Accommodation development (ex. 14 rm** + new 220 rm) Tourist facilities	○	○		○	○
	Pocri Coastal Area	Accommodation development (ex. 284 rm** + new 440rm) Beach improvement, Tourist pier to Iguana Island		○		○	○
	Iguana Island	Tourist pier, Information center	○	○		○	
	Venado Coastal Area	Accommodation development (ex. 5 rm**+new 120 rm) Beach improvement	○	○	○	○	○
Subzone-V Los Santos Southern Coast Area	Tonosí Coastal Area	Accommodation development (ex. 13 rm** + new 20rm)	○	○		○	○
	Cerro Hoya National Park	Accommodation development (new 50 rm)		○	○		○
Road development		National Highway No. 3 improvement (Pedasi - Tonosi) Access roads between National Highway and coastal areas	○			○	○

Note: * = National project
** = Existing economy class hotel rooms to be upgraded by renovation support program



Arco Seco : Short Term Tour Pattern

Culture and Eco tourism in Arco Seco

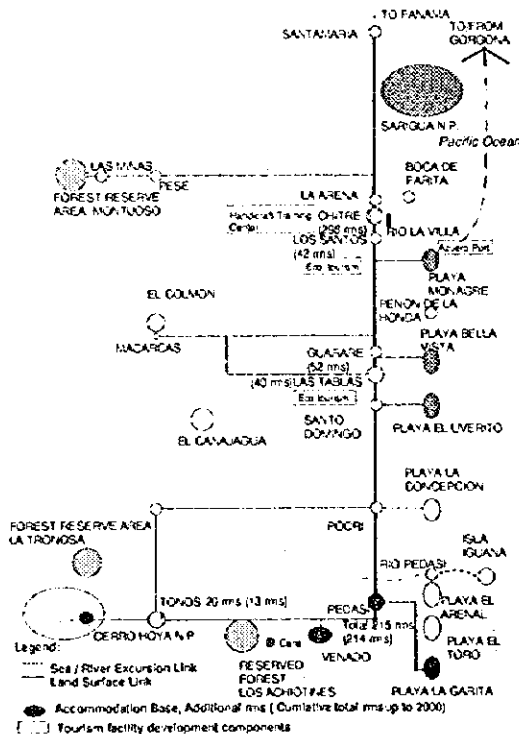
Tour Theme / Geographical location / distribution

- 1) **Urban / Culture :**
 *Chitre - Los Santos - Las Tablas - Pedasi town(2-3 days)
 (Tourist Information Center, Colonial Town)
- 2) **Underwater Discovery :**
 *Pedasi - Isla Iguana (1 day)
 (Marine Culture Science Center)
- 3) **Natural Wander :**
 Chitre - Sarigua N.P. (1/2 day)
 *Chitre - El Montuoso Forest Reserve (1 day)
 *Pedasi - Rio Pedasi (1/2 day)
 (to be surveyed for natural wonder)
- 4) **Coastal Resort :**
 *Los Santos - Playa Monagre (1day)

* New and improved tour destination

Regular:3-4 days
 Option to Isla de Canas - Cerro Hoya N.P. (+2day)

Figure 5.11 Tour Pattern in Arco Seco/Long Term (Chitré Gateway)



Arco Seco : Medium Term Tour Pattern

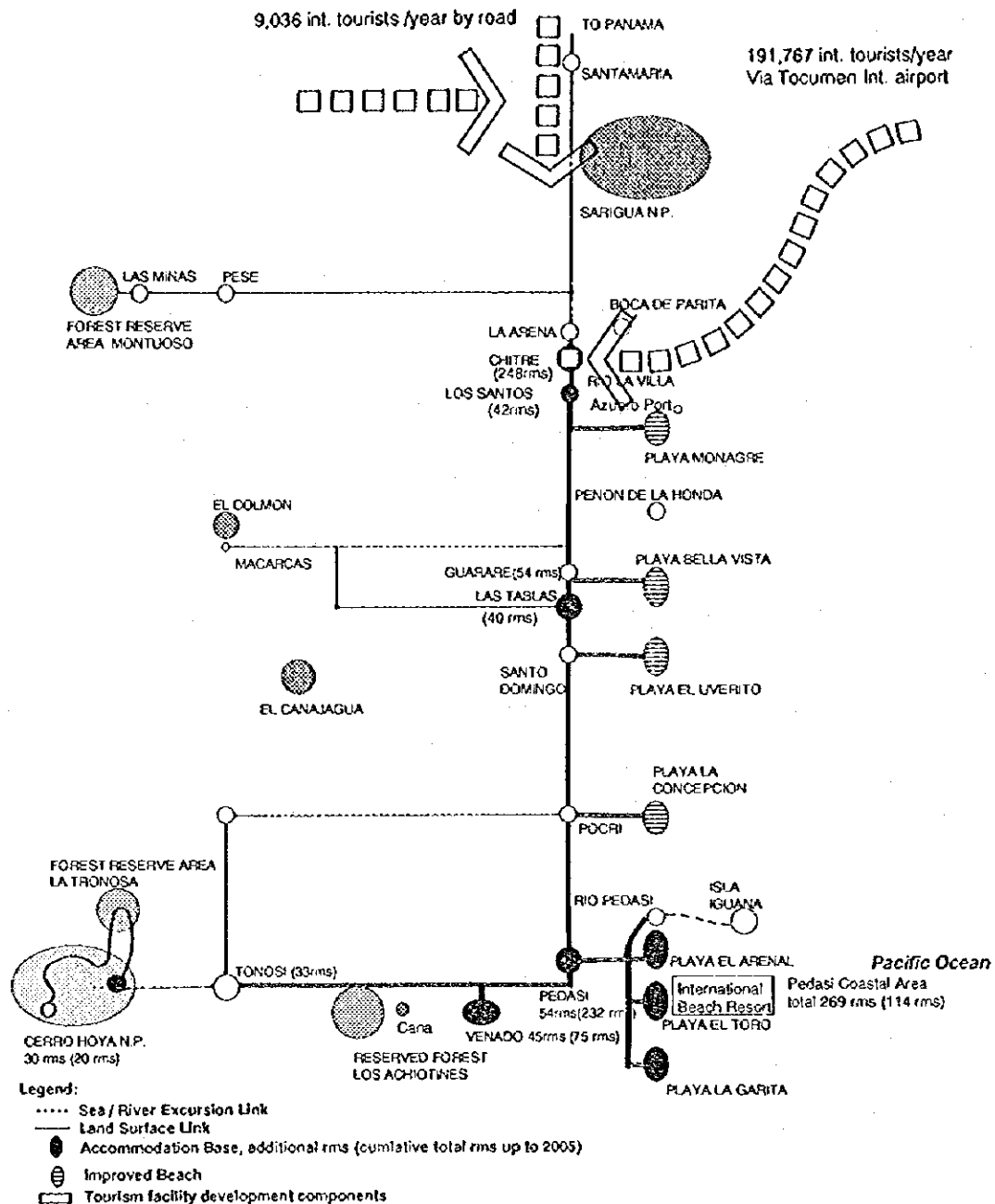
Culture and Eco tourism in Arco Seco
 (Chitre Gateway)

Tour Theme / Geographical location / distribution

- 1) **History and Culture:**
 Chitre - Los Santos - Las Tablas - Pedasi town(1-2 days)
 *Chitre Handicraft Training Center (1/2 day)
- 2) **Underwater Discovery :**
 Pedasi - Isla Iguana (1 day)
- 3) **Natural Wander :**
 Chitre - Sarigua N.P.(1/2 day)
 *Pedasi - Isla de Canas - Cerro Hoya N.P.(2 days)
 Pedasi - El Montuoso Forest Reserve (1 day)
 Pedasi - Rio Pedasi (1 day)
 Las Tablas - Rio Salado (1 day)
 Los Santos - Rio Flavilla
 (to be surveyed for natural wonder)
- 4) **Coastal Resort :**
 Los Santos - Playa Monagre (1-2 day)
 *Los Tablas - Playa el Uvero-La Concepcion(1-2 days)
 *Pedasi - Playa el Arenal (2-3 days)
 *Pedasi - Venado (2-3 days)

* Additional and improved tour destination
 Regular:4-5 days
 Option to Isla del Rey (+1 days)

Figure 5.12 Tour Pattern in Arco Seco/Medium Term (Chitré Gateway)



Arco Seco : Long Term Tour Pattern Average duration of international tourists in Arco Seco Zone : 2.49 nights
 Culture and Eco Tourism in Arco Seco (Chitre Gateway)

Tour Theme / Geographical location / distribution

1) History and Culture:

- Chitre - Los Santos - Las Tablas - Pedasi town (1-2 days)
- Chitre Handicraft Training Center (1/2 day)

2) Underwater Discovery:

- Pedasi - Isla Iguana (1 day)

3) Natural Wander :

- Chitre - Sarigua N.P. (1/2 day)
- Pedasi - Los Achitones - Isla de Canas - *La Tronosa - *La Angostura - Cerro Hoya N.P. (2-3 days)
- Chitre - El Montuoso Forest Reserve (1 day)
- Pedasi - Rio Pedasi (1 day)
- Las Tablas - Rio Salado - El Colimon (1 day)
- Los Santos - Rio Ravilla (1 day)

(to be surveyed for natural wonder)

4) Coastal Resort :

- Los Santos - Playa Monagre (1 day)
- Los Tablas - Playa el Uverito - La Concepcion (1-2 days)
- *Pedasi - Playa el Arenal - Playa el Toro - *Playa la Garita (3-4 days)

*Additional and improved tour destination
 Regular : 5-7 days
 Option to Isla del Rey (+2 days)

Figure 5.13 Tour Pattern in Arco Seco/Long Term (Chitre Gateway)

5.3 Farallón Zone

5.3.1 Farallón Zone in General

(1) Zone Designation

This study faces the Pacific Ocean and has ocean frontage 75km in length. Situated less than 2 hours from the capital urban area of Panama City, this zone contains most of the tourist facilities in the country.

On this coastal frontage 19 newtowns were built during the booming country house development of the 1960's up to now. Further, in July 1973, because of Law No.11, Farallón and Punta Chame were designated special tourism zones for urban development. Since this development started some 30 years ago, 17,000 lots consisting of 2,535 ha. were assembled, but only 2,100 country houses were built (12.4% of the total area).

At present, with the existing hotels, motels, and cabins 675 rentable rooms are available. The problem that this has created is an unbuilt area of approximately 15,000 lots, and the existing service facilities for the newtowns are not sufficient. San Carlos has a small tourist center, but on weekends the area is inundated with tourists. During the week, however, it is quiet.

This zone belongs to Chame and San Carlos districts of Panama Province and Anton District of Cocle Province. The area between Pan-American Highway and coastal line totals 16,815km², and population was 1,245,317 persons as of the 1990 Census.

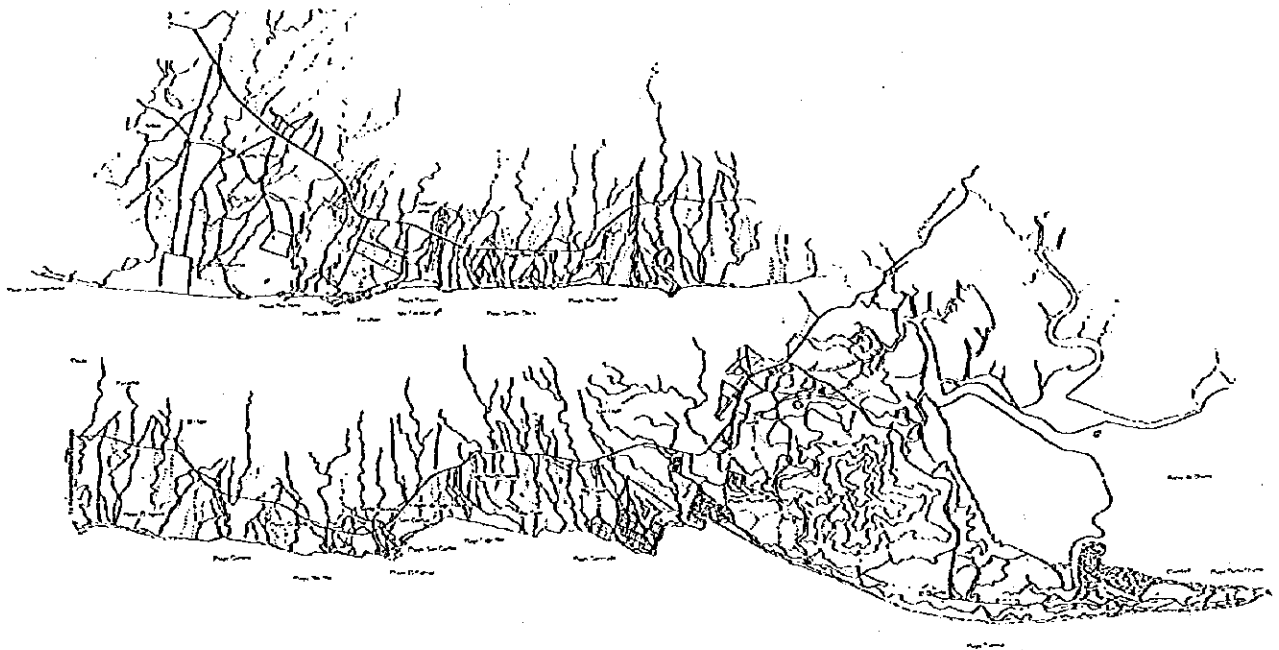


Figure 5.14 Existing map

(2) Natural Conditions

1) Climate

This study zone is located between the Capital area of Panama and Arco Seco, facing to the Pacific Ocean. Although the annual pattern of precipitation is very similar to that of Arco Seco, this study zone has more rainfall than Arco Seco. Total annual rainfall is 1,479 mm. The rainy season starts in May and ends in November. In these rainy months, 89% of annual rainfall is concentrated while the dry season between December and April has only the remaining 11% of annual rainfall. February and March are the extremely dry months. Annual average temperature of this zone is 27.7 degree centigrade and September is the warmest at 29 degrees and March is the relatively cooler at 26.7 degrees.

2) Physiography and Geology

Punta Chame is a typical sand bar which is formed by the action of coastal currents. The sedimentation process is still continuing. Delta lowland is widely developed around the Gulf of Punta Chame, and this lowland area is densely covered by mangrove forests. Close to Punta Chame, Chame hill (523 m.) is located.

The area between Nueva Gorgona and Punta La PeÒa near Rio Hato is the foot slope area of Mt.Gaital. Contour lines of this area are showing convex to the coastal line in general and sea cliffs are formed with 10-30 meters height along the coastal line. These sea cliffs are suffering from erosion by wave actions. Beaches are formed between the foot of sea cliffs and the shoreline.

Rivers flowing down in this area from Mt.Gaital are deeply eroding the land surface and many small ridges and valleys are formed.

Geology of this study zone is mainly quaternary sand gravel, and lowland area around Punta Chame and Eastern area of Rio Hato are composed of alluvial deposits.

3) Flora and Fauna

The study zone is located in the coastal area along the Panamerican Highway. Original vegetation in this area has been altered by human habitation and development. These human activities strongly affected the local flora and fauna. The densely forested mangrove area near Chame is providing a significant base for the native ecosystem. Altos de Campana National Park is located close to Chame.

(3) Socioeconomic Conditions

1) Population and Land Use

The population in this zone was 1,245,317 total by the Census of 1990, of which 68% (852,922) is an urban population concentrated in Panama city. Population of Cocle province is only 173,190. Local towns and villages are developed mainly along the Panamerican Highway. In coastal areas, resort towns such as Nueva Gorgona, Coronado, Rio Mar and San Carlos have been developed over the past 20 years. However, population density in this study zone is still small at 35 persons per sq.km in Cocle province. Annual average growth rate in Cocle province was 2.08% and 2.85% in Panama province from 1980 to 1990.

Regional development in this zone has relatively progressed and 48% of the area of Cocle province and 62% of the area of Panama province is agricultural land. Pastures are extensively developed along the Panamerican Highway. In lowland areas in Chame and Anton, irrigated farms are developed and secondary forest covers the rest of the area. Large scale shrimp culture ponds are developed in Punta Chame area.

2) Economic Conditions

According to the Census of 1990, the employment share of Cocle province was 47% in the primary sector, 16% in the secondary sector, and 37% in the tertiary sector. Hotel and restaurant employment is 811. In Panama province, 76% of total employment was in the tertiary sector and only 8% was in the primary sector. Hotel and restaurant employment totaled 14,169, and this figure represents 66% of the total employment of hotels and restaurants in the country. Except the metropolitan area of Panama, employment in the study zone still mainly depend on the primary sector.

The investment budget of the central government in 1994 was 9,030 thousand Balboa in Cocle and 268,170 thousand Balboa in Panama province. The percentage of the budget share of Panama Province was 30.2% of the country.

(4) Inventory of Tourism Resources and Facilities

East part of this zone belong to Arco Seco's climate zone and the months from December to April are the best. During this period, the area receives up to 20,000 tourists on weekends. The beaches are relatively less attractive due to this dark color. Therefore, further development in this area should concentrate on improving existing service facilities, and not on development of the natural environment.

According to the IPAT database, the number of total tourism resources in the coastal area is 20, comprising 17 beaches and 3 other natural. Moreover, the evaluation made by IPAT shows that there are few areas with Rank II, but the following areas with potential were selected:

- Playa Blanca Beach, Rank I to III.
- Juan Hombrón, Farallón, Santa Clara, Coronado, Nueva Gorgona beaches, Rank I to II.
- Altos de Campana

Principal tourism attractions of the El Valle area consist of 11 Rank II and over by IPAT, as follows:

- Flora and Fauna of El Valle of Anton
- Complejo El Valle of Anton (Mountain)
- Chorro El Salto del Macho (Fall)
- Chorro Las Mozas (Fall)
- Manifestaciones Termales de El Valle (Hot spring)
- Mercado Artesanal de El Valle de Anton (Market)

National historical monuments in Farallón

(Aparecen en los planos de ciudades 43.2 y 43.3 a excepción del No 4. Source: Atlas Nacional p.178)

Iglesia de Natá (Natá of Cocle)

Monumento a Rodolfo Chiari (Aguadulce, Coeló)

These Tourism Resources are shown in Table 5.16.

(5) Infrastructure Conditions

Infrastructure conditions of this zone, such as transportation and utilities, are briefly mentioned as follows.

1) Airport and Airlines

Rio Hato, Chame, Playa Coronado and Punta Chame have small sized airports. Rio Hato has a runway of 1,325 meters with asphalt pavement. Playa Coronado and Punta Chame are suitable for light airplanes only. Punta Chame is a landing strip. There are no regular flight services in this zone.

2) Port and Sea Traffic

There are no port facilities in this zone.

3) Road and Land Traffic

The Panamerican Highway is the trunk road that connects the study zone to Panama city, and many access roads are developed between resort development areas and the Panamerican Highway. These access roads ordinarily have two lanes and paved by asphalt. Traffic volumes of Panamerican Highway are 4,000 to 5,000 vehicles per day in this zone.

The main public transportation is the long distance bus which connects to Panama city and many other provincial cities along the Panamerican Highway.

4) Electricity and Telecommunication

With reference to electricity, this zone is connected with the National Grid. IRHE has a generator with nominal capacity of 9.6 megawatts in Capira, but the actual capacity of this generator is estimated to be about 2.6 megawatts, as it is an old with low efficiency. The type of the power distribution lines are 34.5 KV and 13.8 KV. The regional electrification ratio in this zone is 55.4%. Construction of new power distribution lines of 34.5 KV at Coronado substation will be required when tourism development starts in this zone.

Regarding telecommunications, there are telephone centers at San Carlos, Coronado and Chame. The telephones are connected with the national telecommunication networks through Campana relay station. Anton telephone center is directly connected to the national microwave networks, and these lines will be altered to the digital transmission network in the future.

5) Water Supply

IDDAN is managing the water supply of Rio Hato, Farallón, Santa Clara, Playa Coronado and Nueva Gorgona. In Coronado, there is a water supply plant with a capacity of 1,623 cubic meters per day. The water source of this plant is Las Lajas River. In San Carlos, there is a water supply plant with a capacity of 833 cubic meters per day, and the water source of this plant is Mata Ahogado River. Water production in the Coronado Beach is 3,730 cubic meters per day together with well production water.

In Rio Mar, a private water supply facility is in operation.

Tabla S.16 Farallón: Matrix of Tourism Attractions

Provincias	Unidades Administrativas		Nombre del Área	Atracciones Turísticas		Evaluación Exl. Pol.	Cantidad Total	Situaciones de Desarrollo			
	Distritos	Corregimientos		Playas	Otros			Área de Desarrollo	Casas de Fin de Semana	Alojamiento Turístico	
Coclé	El Chirí		Playa Juan Hombroón	#04		I	II	19ha	120 (57)		
			Playa Río Hato			-	-	183ha			
			Playa Farallón	#03		I	II	30ha	192 (131)	Cabañas: 8	
	Antón		Isla Farallón			I	I				
			Área del Aeropuerto			-	-				
			Playa Blanca	#01		I	III	10ha	14 (8)		
			Playa Santa Clara	#02		I	II	215ha	264 (83)	Cabañas: 14	
			Playa Sea Cliff	#05		I	I	246ha	37 (8)		
			Playa Río Pantanal	#07		I	I	14ha	75 (64)		
			Playa Chumico Redondo	#06		I	I	321ha	8 (1)		
San Carlos		La Ermita	#15		I	I		27 (15)			
		Playa Grande	#14		I	I					
		Playa Corona	#11		I	I	55ha	156 (45)	Hotel: 66		
		Playa Río Mar	#12		I	I	31ha	16 (1)	Cabañas: 14		
		Playa El Palmar	#17		I	I	11ha	61 (4)			
		Playa San Carlos	#16		I	I			Hotel: 14 Cabañas: 4		
		Playa Lago Mar	#13		I	I	225ha	30 (11)			
		Lago Mar (Mirador)			Risco: #18	I					
		Lagos de Lago Mar			Laguna: #20	I					
		Chame		Costa Esmeralda			-	-		103ha	2 (2)
Playa Coronado	#10				I	II	822ha	1,013 (142)	Cabañas: 2		
Playa Nueva Gorgona	#09				I	II	200ha	566 (234)	Hotel: 60 Cabañas: 74		
Chame		Claridad			-	-		5ha	14 (8)		
		Bahía de Chame			-	-					
		Punta Chame			I	II	15ha	238 (64)	Motel 4		
						17	3		2,505	2,833 (878)	Total: 60 hab.

Nota: **Centro provincial, * Centro Distrital
#123 = Número de Código del IPAT para las Principales Atracciones

6) Sewerage

A sewage piping system to a septic tank with capacity of 43 cubic meters is available in San Carlos. The sewerage is discharged into rivers or the ocean without treatment or through the septic tank system.

5.3.2 Farallón Zone Development Policy

(1) Development Goals

Development goals for Farallón zone are set as follows:

- Facility oriented resort development should be promoted because of the lack of natural resources in the area
- Rio Hato where 230 ha. of government land is available and Rio Chame are the main centers for resort development
- Land use change by integrated resort development from an isolated villa area to a modern tourist area
- Enhancement of the capability to absorb outflows from the capital region of Panama

(2) Development Strategy

To manage the tourist resources efficiently, the following types of tourist development can be recommended:

- To improve the regional infrastructure of the region. Today's national roadways stretch to the coast line and end in comb patterns. In the future, national coastal roadways should be parallel, creating a ladder pattern.
- The creation of an amenity core. One of the reasons for today's diffused land use and life style without identity is that there are no central function and landscape. Both soft and hard regional symbols are needed.
- Together with the Canal area's changes, the restructuring of the capitol urban area are to be done in the 21st Century. The possibility of multipurpose land use should be considered; not only for tourist resorts, but as shared residences for medical rehabilitation, etc.

5.3.3 Farallón Zone Development Framework

(1) Target of Tourist Inflows

At the year of 2010, 2.7 millions night-stay tourists and also 2.2 millions daytime visitors are expected.

Table 5.17 Target of Tourist Inflows (Annual base)

			(unit: persons)		
Tourist types			2000	2005	2010
Night-stay tourists	Foreign	By Chartered flights	---	850,000	1,275,000
		Via Tocumen Airports	288,000	133,000	700,000
	Domestic	Via Paso Canoas	12,000	17,000	25,000
		Total (person-night base)	204,000	369,000	732,000
Daytime visitors	Foreign	Daytime excursion	281,000	670,000	978,000
	Domestic	Weekenders	382,000	653,000	1,228,000
	Total		663,000	1,323,000	2,206,000

Note: Rio Hato Airport planned to open up to 2001.

(2) Tourism Transportation Scheme

The gateway for foreign tourists to visit the Farallón zone would only be Rio Hato airport which would be improved from its existing poor conditions to an airport acceptable for charter flights on mainly North America and Europe.

Nueva Gorgona new port, hydrofoils and speed boat would be used to introduce a new sea transportation system to connect with Farallón to provide an alternative to the poor quality of bus services.

Concerning the road network, the Pan American Highway would be widened to 4 lane for improving the link with Panama city, and access roads to tourist spots in the zone would be improved to ensure mobility.

Table 5.18 International Gateway and Inter-zonal Transportation System

Categories	Items	Descriptions	Status
Air gateway	Rio Hato Airport	Chartered flights from north America and Europe	⊙
Maritime bases	Nueva Gorgona Port	Located Nueva Gorgona in Chame area	●
Inter-zonal maritime services	By hydrofoils	Triangle circuit between Amador - San Miguel - Nueva Gorgona, and extension to Azuero (Chitré)	●
	By speed boats	Nueva Gorgona - Chame - Otoque - Taboga - Amador	●
Inter-zonal bus services	Mid distant bus route	Panama - Chame - Rio Hato - Penonome	⊙

Note: ○ Utilization of existing facilities ⊙ Improvement of existing facilities ● New developments

Table 5.19 Inter-zonal Road Network System

Categories	Items	Descriptions	Status
National highway	Pan American Highway	Chorrera - Penonome	⊙
Access roads	Chame Farallón Cornice Road	Chame Point - Gorgona	●
	Chame area	Gorgona - San Carlos	●
	Road San Carlos area	San Carlos - Farallón	●
	Rio Hato area		●
	Altos de Campana National Park		⊙

(3) Tourism facility development scheme

The Existing number of hotel rooms total 675 in this zone, - 321 of which are high standard, 132 are medium and 222 are economy standard. During the planning period of this study, a total of 4,654 new rooms will be supplied of which 1,159 are high standard, 3,182 are medium standard and 313 are economy standard. The Target of investment will be the high and medium standard hotels in this zone and 53% of the total supply will be planned for the long term period. The accommodation supply program in Farallón is shown in Table 5.20.

Table 5.20 Accommodation supply program

Standards	Existing Stocks	Additional supply			Cumulative Total	Total stocks
		Up to 2000	2001-2005	2006-2010		
High	321	---	466	693	1,159	1,480
Medium	132	441	1,152	1,589	3,182	3,314
Economy	222	---	127	186	313	535
Total	675	441	1,745	2,468	4,654	5,329

(unit: number of rooms)

5.3.4 Farallón Zone Development Plan

(1) Development Guidelines

Tourism developments of Farallón Zone are illustrated in Figure 5.15 and Figure 5.16. and development guidelines are shown in Appendix.

(2) Accommodation allocation plan

Accommodation allocation plan of Farallón zone is shown in Table 5.21. Rio Chame and Rio Hato are the main centers for tourism development in this zone. In Rio Chame, totally 2,387 rooms are planned of which 602 are for high standard and 1,785 medium standard. In Rio Hato, totally 716 new rooms will be supplied of which 557 are for high standard and 159 are medium standard. The share of Rio Chame in the new accommodation supply program is 51% of the total.

Table 5.21 Accommodation Allocation Plan

Areas	Existing stocks			Up to 2000			2001 - 2005			2006 - 2010			Cumulative total		
	High	Mid.	Eco.	High	Mid.	Eco.	High	Mid.	Eco.	High	Mid.	Eco.	High	Mid.	Eco.
Punta Chame		12	7		71			92		400	94		0	575	101
Rio Chame					181		180	820		422	784		602	1785	0
Gorgona Town			67							100			0	100	67
San Carlos C.	310		43		300			240			222		310	492	43
San Carlos H.		120	18										0	120	18
Rio Hato		11	43		159		286			271			568	159	43
Altos de Campana												36	0	0	85
El Valle			44								91		0	174	87
Total	321	132	222	0	441	0	466	1152	36	693	1589	186	1480	3314	535
		675			441			1745			2468			5329	

(unit: number of rooms)

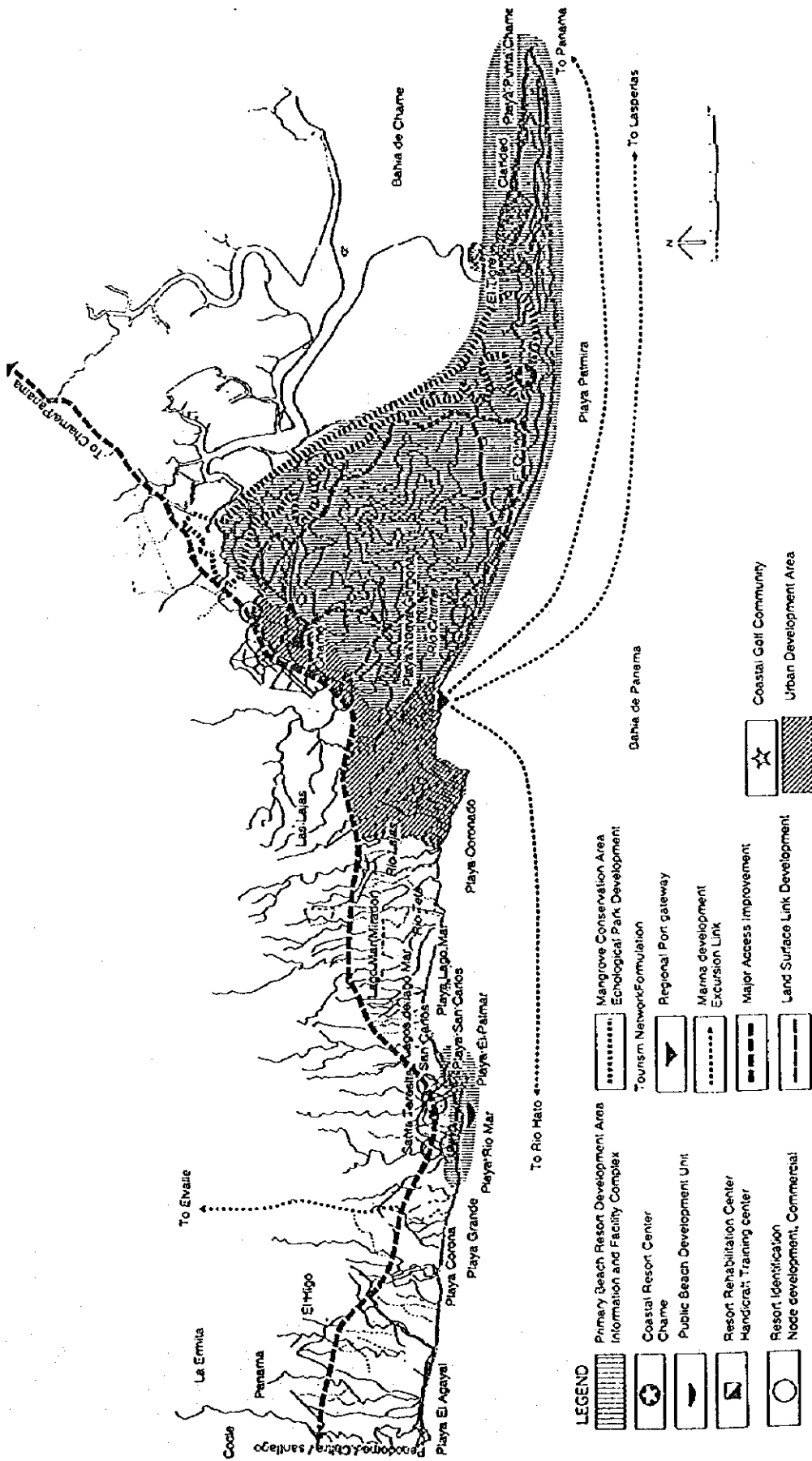


Figure 5.16 Chame and San Carlos areas development plan

(3) Development Projects

The largest tourism development in this zone is planned at Rio Chame. New development of accommodation will reach 2,390 rooms by the year 2010. Hotel development is also planned at San Carlos and Rio Hato as a coastal resort and at El Valle and Altos Campana as mountain resorts.

In regard to transportation infrastructure, improvement of the Pan American Highway has the highest priority as a national project. Construction and improvement of the existing access roads to the resort areas are the essential projects in this zone. Access roads to the mountain resorts should be improved in the medium term planning period. Rio Hato airport should be improved as a gateway for international charter flights. Nueva Gorgona Port and Marina will be constructed as part of a new maritime transportation network connecting Panama city and the Las Perlas islands. These development projects are listed in Table 5.22 in detail.

(4) Development phasing program

These are many attractive places located at some distance from one another in each zone. It takes a varying amount of trip time and means of transportation to reach each place. A tour route should offer a variety of attractions appropriate to the needs and available time of the tourists as well as other tourist facilities and services which should be developed accordingly.

Tour routes are set for each Zone according to the significance of tourist resources, and the convenience of air, land surface, and sea link networks. Figure 5.17., Figure 5.18., and Figure 5.19. show the arrangements planned for tours to various tourist places in Farallón Zone for each development term.

Table 5.22..Development Projects by sub-zone (Farallon)

Development components		Project package	Phase program			Dev't body	
			Sho.	Mid.	Lon.	pub.	Pri.
Coastal areas development	Subzone-I Chame Coastal Area	Punta Chame Area	○	○	○	○	○
		Rio Chame Area	○	○	○		○
		Gorgona Town Area	○	○	○	○	○
	Subzone-II San Carlos Coastal Area	San Carlos Coastal	○	○	○	○	○
		San Carlos Hinterland	○	○	○	○	○
	Subzone-III Rio Hato Coastal Area	Rio Hato Airport improvement Accommodation development(ex. 54rm + new 720rm) Tourist facilities Yacht harbor	○	○	○	○	○
Highland area	Subzone-IV Altos de Campana Area	Accommodation development(new 85rm)		○	○		○
	Subzone-V El Valle area	Accommodation development(ex.44rm + 220rm)		○	○		○
Road development	Trunk road	Pan American Highway (Chorrera - Anton)* Chame Area access road (Punta Chame - Rio Chame)		○	○		○
	Access roads	San Carlos Area access road (Gorgona - San Carlos - Farallón)		○	○		○
		Access roads from Pan American Highway to beach areas		○	○		○
		El Valle Area access road (La Union - El Valle)*		○	○		○
		Altos de Campana National Park access road		○	○		○

Note:*= National projects

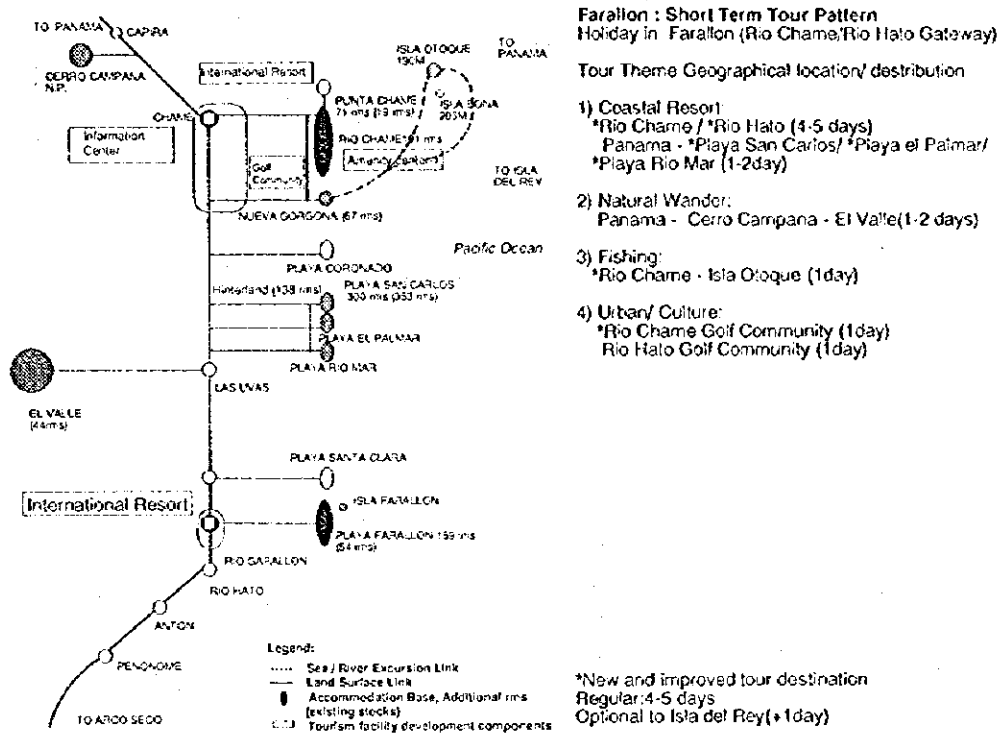


Figure 5.17 Short-term development program

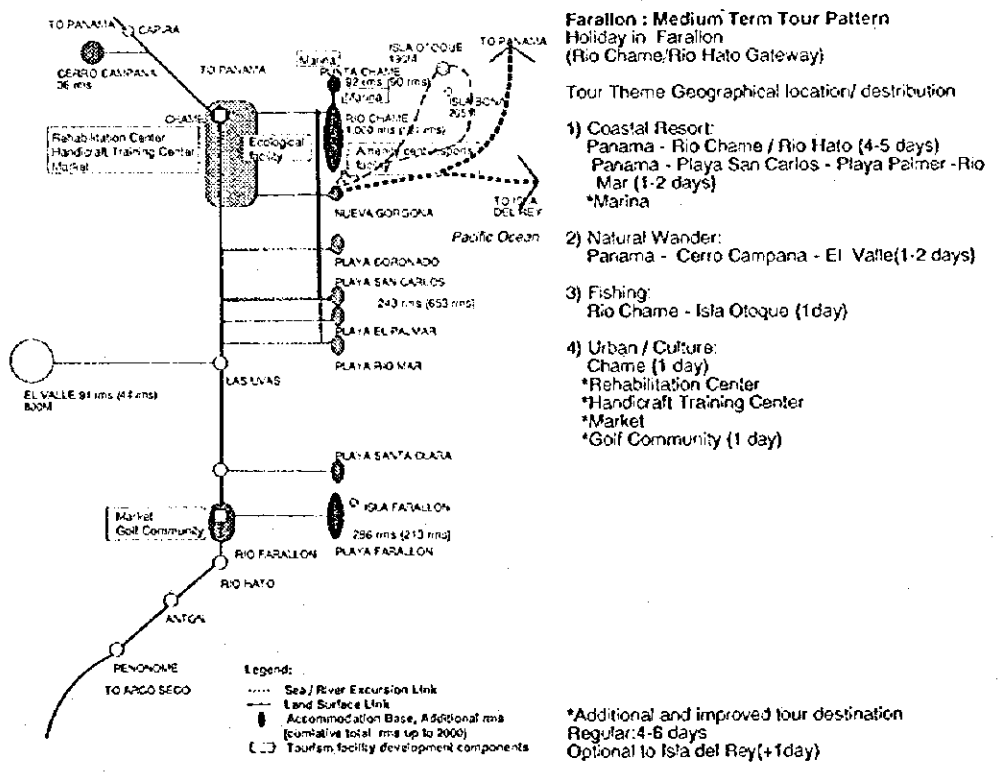
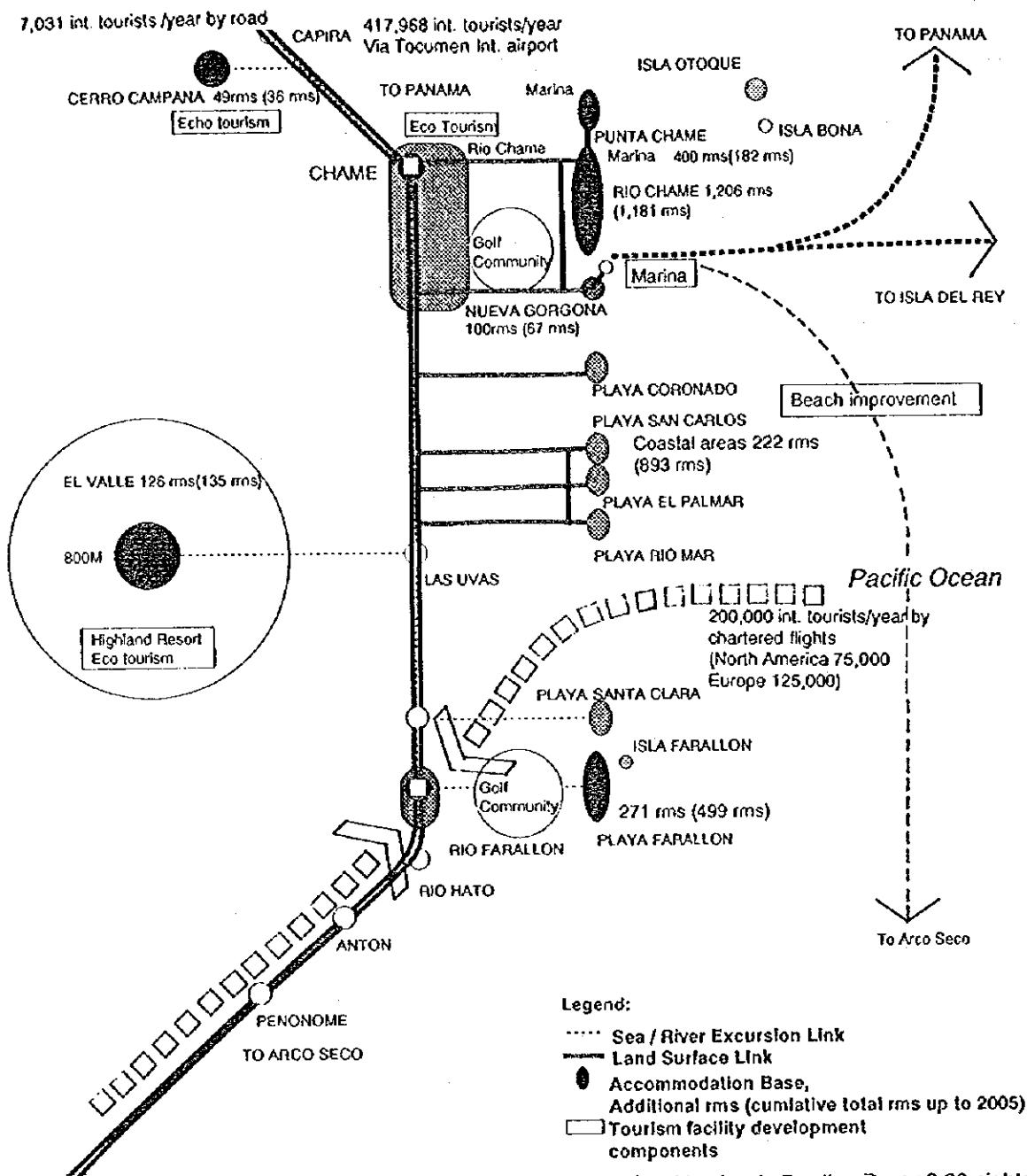


Figure 5.18 Mid-term development program



Average duration of international tourists in Farallon Zone : 3.20 nights

Farallon : Long Term Tour Pattern
 Holiday in Pacific Coast
 Tour Theme /Geographical location / distribution

1) Coastal Resort :

- *Rio Chame - Rio Hato (4-5 days)
- Panama - Playa San Carlos - Playa Palmer - Rio Mar - *Playa Santa Clara (1-2 days)

2) Natural Wander :

- Panama - Cerro Campana - El Valle(1-2 days)
- *Rio Chame (1/2 day)

3) Fishing :

- *Rio Chame - Isla Otoque (1day)

4) Urban /Culture :

- *Chame (1/2 day)
- Rehabilitation Center
- Handicraft Center
- Market
- Golf Community

*Additional and improved toure destination

Regular:4-7 days
 Optional to Isla del Rey (+2day)

Figure 5.19 Long-term development program

5.4 Metropolitana Zone

5.4.1 Metropolitana Zone In General

(1) Zone designation

Panama City is the "gateway" to Panama for foreign visitors. It's population approach almost 1 million people. As the center of the Nation's important tourism industry 80% of the country's accommodation facilities are located here. Despite the numerous historical and cultural sites, and the existence of the Canal, and even though many shopping facilities have been built, its capacity as a center for tourism has not yet been fully developed.

Facing the Caribbean Sea, Panama's second city, Colón, is the center for visitors on business, but there are seldom visitors for sight-seeing. Today the city lacks a system for receiving visitors and also experiences security problems, which makes it less attractive for tourism.

This area adjoins the Canal Zone, and administratively belong to Panama province, on the Pacific ocean side, and Colón province on the Caribbean sea side.

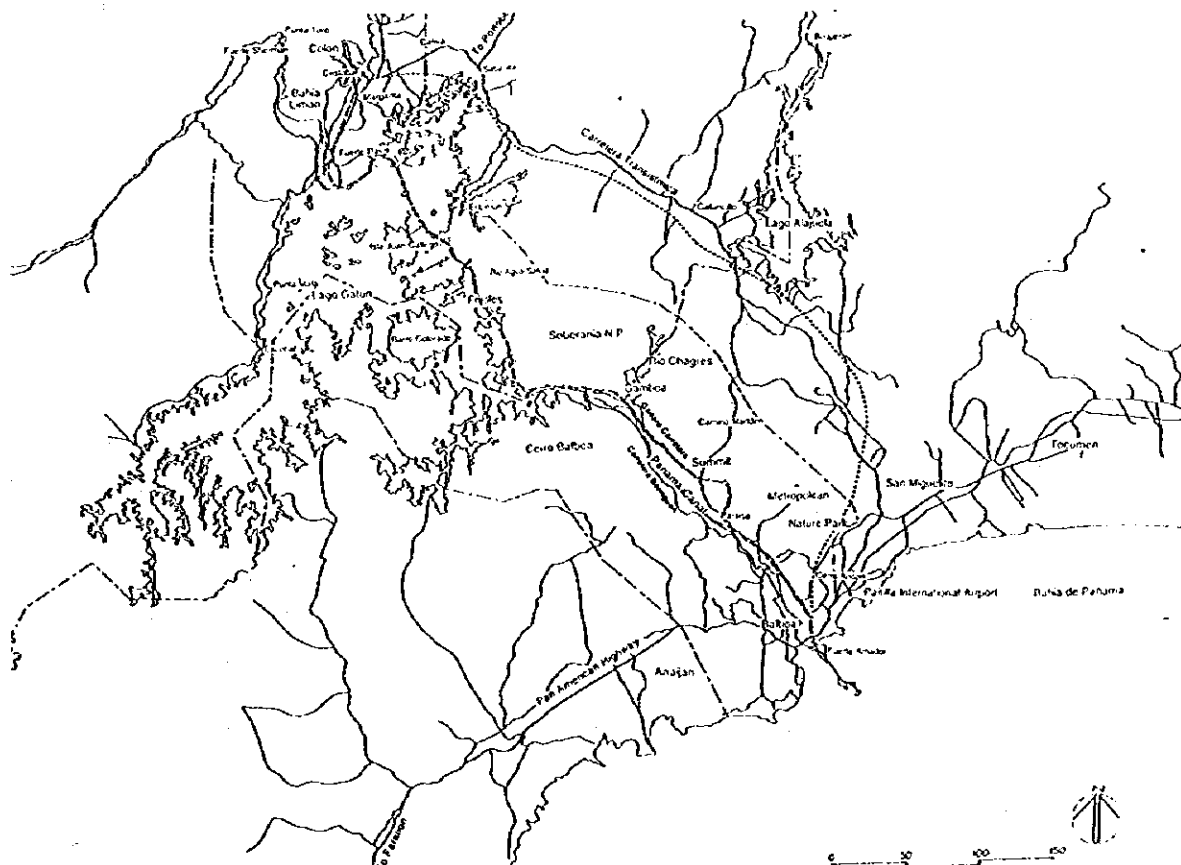


Figure 5.20 Existing map

(2) Natural Conditions

1) Climate

The study zone is located mainly in the canal zone and the capital city of Panama has developed on the Pacific Ocean side. Colón city, which is the second largest city in Panama, is developed on the Atlantic side.

Referring to the climatic conditions in this zone, total amount of annual precipitation is quite different between the Pacific and the Atlantic ocean sides. The Annual precipitation of Panama city is 1,718mm and it is 3,550mm in Colón city. Dry and rainy seasons can be identified in Panama and the dry season starts in December and ends in April. In the rainy season, from May to November, 89% of the annual precipitation is recorded. In Colón, there is a relatively short dry season in January and February and the remaining months of the year have more than 100mm rainfall. Especially in October and November, monthly rainfall exceeds 500mm.

The Annual average temperature of Panama city is 26.7 degree in centigrade and the warmest season is April at 27.6 degree. The coolest season is November at 25.4 degree. Annual average temperature of Colón city is 26.5 degrees centigrade and April is the warmest month at 27.2 degrees and November is the coolest at 25.9 degrees. There is no significant difference in the temperature conditions in this zone.

2) Physiology and Geology

Hilly upland and mountains are the dominant topography through most of this zone and the elevation of hilly upland area is 50m to 400m above sea level in general. The highest point in the zone is the peak of Mt. Bruja elevation 979m which is located in the northern part of the zone. Panama Canal is constructed in the lowest part of these hilly uplands crossing the continental divide. Hilly uplands and mountains in the study zone are still densely covered by tropical forest.

Rio Chagres has the largest drainage basin of 3,315 km² and the length of its main channel is 125km. The river has two large dams at Gatun and Alajuela and the water stored by these dams is fully utilized to maintain the canal operation.

The Geology of the study zone is mainly composed of Mesozoic and Tertiary sedimentary rocks and Tertiary volcanic rocks. Mesozoic plutonic rock such as diorite intruded widely into these sedimentary rocks which are distributed in the Chagres river basin. Quaternary and alluvial deposits are distributed at the Pacific Ocean side. On the Pacific coast, tidal flat is extensively formed due to the large fluctuation of tide.

3) Fauna and Flora

Tropical vegetation is widely preserved within the canal zone and the Chagres river basin. The remaining area of the study zone, natural primary vegetation has been altered totally and replaced by pastures, plantations and urbanized area as a result of human activities. Deforestation in Panama in general, was a consequence of slash and burn farming and abandonment agricultural system practiced since Spanish Colonization in the 16th century.

After the completion of the Panama Canal, the large man made lake of Gatun and lake Madden appeared in early 20th century. Economic activities of the local people in the canal zone have prohibited and the forest of the canal zone has been conserved. Man made lakes and well conserved tropical forest have been providing and supporting rich fauna and flora in the canal zone.

Many national parks have been designated in this zone to conserve the existing natural environment. Chagres National Park which has 129,000 ha. of area is located in the upper reaches of the Chagres river. Soberania National Park is a designated area of 22,104 ha. in the canal zone and Camino de Cruces National Park has an area of 4,000 ha. in the eastern part of the Panama canal. Besides these national parks, Barro Colorado Natural Monument (5,400 ha.), Gatun Recreational Park (348 ha.), Metropolitan Natural Park (265 ha.) and Summit Botanical Garden and Zoo (250 ha.) have been designated. Taboga island is designated as a wildlife shelter area.

Table 5.23 National Parks and Conservation Areas

Name	Area (ha)	Remarks
Las Américas Interoceanic National Park		
Camino de Cruces National Park	4,000	
Soberania National Park	22,104	Gamboa, Summit, Frijoles
Chagres National Park	129,000	
Taboga Island Wildlife Shelter	258	Taboga Town
Barro Colorado Natural Monument	5,400	Barro Colorado
Metropolitan Natural Park	265	Downtown of Panama City
Gatun Lake Recreational Park *	348	Gamboa, Cerro Balboa, Gatun Lock

Note: *Area unknown

(3) Socioeconomic conditions

1) Historical Background

Since the beginning of the Spanish colonization in early 16th century, Panama city has been playing an important role as a base for immigrants from Spain. In 1519, the first fortress was founded in the Eastern suburb of the present Panama city. This fortress named Panama Viejo was destroyed in the attack of Morgan in 1670, and was abandoned after that. In 1673, the King of Spain decided to reconstruct a new fortress in Casco Viejo and old township and street networks are still identified in Casco Viejo at present. With the extension of Spanish colonization, not only in central America but also in south American countries like Colombia and Peru, large amounts of gold and valuable objects from these regions were transported to Spain through the treasures route named Las Cruces Trail. A narrow gravel paved road was constructed in the tropical forest from Panama to the Caribbean seaside and this road was partly connected with Chagres river channel. Ruins of this old road named Camino de Cruces have been discovered in the study zone. After the decline of Spanish power, the peoples of Panama won their independence from Colombia under the auspices of the United States of American in the beginning of the 20th century. In 1914, the Panama Canal was constructed by the United States and the canal has been managed by them ever since. The Panama Canal which connects the Pacific ocean with Atlantic Ocean, is the most famous and valuable tourism resources in Panama.

2) Population and Land Use

Panama city has been the capital city of Panama since independence and the population at the 1990 Census is 1,072,000 of which 853 thousand is urban population. Historically, the population of Panama province in 1911 was 61,855, in 1930 was 114,103, in 1950, 248,335, in 1970, 576,645 and in 1980 it was 809,100. The Annual average growth rate of the population was the most highest up to 1980 - value was the mostly more than 3 to 4 points. Between 1980 and 1990, population flow into Panama city slowed down and population growth was 2.85%. The Population of Colón province is 202,338 of which 99 thousand is urban. The Annual average growth rate of population in Colón province between 1980 and 1990 was 2.22%.

Urbanized areas of Panama city are extending to the east along the Pan American Highway and to North along the road to Colón city. Based on the Census data in 1990, approximately 62% area of Panama province is used for agriculture, however, cultivated land is quite limited and extensive areas are mainly used for pasture land. Land use in the canal zone area is strictly managed and controlled by the Canal Authority and tropical forest is well conserved. In this study zone, 32,000 ha. of military land use area will be returned to government of Panama by the end of 1999 and land use plan of those areas are now discussing by the authorities. In Colón province, 23% of the area of the total province is used for agriculture only.

3) Economic Conditions

Panama city is not only the national economic center but also act as the international banking center for Central America. Many foreign banks are established here; and international monetary trading is quite active. The total number of employed people in Panama province was 357,266 in 1990 according to the Census of which 76% was shared by the tertiary sector and the primary sector accounted for only 8% of total employment. This figure is the smallest of any sector in the country. Hotel and restaurant employment in Panama totalled 14,169 and 66% of the share of this sector was in Panama City due to the concentration of international hotels and many business activities there. In Colón city where the Free Zone is located, employment in the tertiary sector shows relatively large figures and 69% of total employment was accounted for by this sector. The Primary sector shared 16% of the provincial employment in Colón province.

(4) Inventory of tourism resources and facilities

According to the IPAT database, there are a total of 167 tourism resources (89 natural and 78 cultural). The natural resources can be further divided into the following items; 17 coastal, 29 scenarios, 22 flora and fauna 9 fishing spots and so on. There are 8 national parks and conservation areas.

Principal tourism attractives (Rank II and over by IPAT database)

Panama City:

Cerro Ancon

La Calzada de Amador

Conjunto monumental Casco Antique (17) anexo, San Felipe

Conjunto monumental de Panama La Vieja (16) anexo
Calzada de Amador
Centro Bancario Intenacional
Ciudad de Panama
Carnavales de Panama
Instituto de Investigacion Tropical Smithsonian

Canal Zone:

Canal de Panama
Esclusas Miraflores y Pedro Miguel
Soberania National Park

Gatun Lake:

Rio Chagres (Area of Tharpon Club)
South west of the Lake
Fishing spot of Lagarterita
Fishing spot of La Arenosa
Fishing spot of limited northeast Soberania Park
Esclusas y represa

Isla Taboga:

Isla Taboga, La Restinga beach

Colón City:

Zona Libre de Colón, Compras

Tourism resources are listed in Table 5.24.

(5) Infrastructure Conditions

Infrastructure conditions of transportation and utilities in the study zone are mentioned briefly as follows.

1) Airport and Airline

There are two international airports, Tocumen and Marcos A. Gelabert (Paitilla) in this zone. Tocumen airport had 38,500 flight operations of which 17,500(45% of total) were for passenger flights in 1992 and this airport is used for large aircraft of international airlines. The number of chartered flights for passenger was 180 in 1989, but in 1992, it decreased to 33 flights. In order to meet future tourist demand, consideration should be given improving the terminal services for passenger, nighttime operation of the runway, and the rational utilization of the second runway.

Marcos A.Gelabert airport is used for small-size airplanes of the domestic airlines. In 1992, the total number of operation was 55,900 of which 27,600 were for passenger flights and the number of passengers was 192,000. This airport is located in the center of Panama city and many high-storied buildings have been constructed in the area surrounding the airport making extension of the runway and night flights difficult.

Table 5.24 Matrix of Tourism Attractions (Portobelo)

Administrative unit	Reaches	Islands	Others	N. Park	Type 2: Archaeological/historical	Type 3	Type 5	Total numbers	Tourist accommodations
District	Corrientes								
	Maana Chiquita								
	Playa Maana Chiquita: #06 Playa La Anchoa: #07								
	Playa Suenas: #10 Playa Blanca: #11 Playa en Isla Magone: #20	Isla del Padre: #31 Isla Mojoro: #32 Isla de Las Hermanas: #33 Isla Pueblo Nuevo: #34 Isla del Buzo: #35 Isla Magone: #28 Isla Drake: #29 Isla Maney: #30	Road: #08 Coral reef: #22 Coral reef: #23 Coral reef: #24 Coral reef: #27 Cliff: #21 Bay: #48 Fishing: #52 Fishing: #53 Lagoon: #50		Ruinas de Santiago de La Gloria: #55 Puerto Suenas de San Jeronimo: #36 Bahera Santiago: #57 Casa Puerte de Santiago: #38 Ruinas Puerte San Cristobal: #59 Primitiva Ponzalera de Santiago: #60 La Trichera: #61 Reducto de San Buenaventura: #62 Bahera Baja de San Fernando: #64 Bahera Alta de San Fernando: #65 Casa Puerte de San Fernando: #66 Adriano: #67 Ruinas Casa Colón: #68 Ruinas Casa Colón: #69 Iglesia San Juan de Dios: #71 Paulo de Milias: #72	#74 #75 #76 #77	#78 #80	3	
	Portobelo *							46	
	Playa en Isla Sotelo: #19	Isla Sotelo: #36						2	
Cacerque								5	
	Puerto Lindo o Guerec	Isla Mire: #37 Isla Palma: #38 Isla La Peñada: #39 Isla Cabro: #40 Isla Linton: #41 Isla Grande: #42 Isla Tambor: #43 Isla Torro: #44 Isla Los Mogotes: #45 Isla La Islita: #46	Coral reef: #26 Flora fauna: #51 Coral reef: #25 Bay: #49 Fishing: #54				#79	18	Hotel: 17 4-cabins
	Isla Grande	Playa La Guana: #12 Playa en Isla Grande: #13 Playa Grande: #14 Playa Guama: #15 Playa Avelina: #16 Playa en Desembocadura Rio Indio: #17 Playa Punta Manzanillo: #18							
	Nombre de Dios	Playa Nombre de Dios: #05							
	Viento Frio	Playa Viento Frio: #01							
	Palenque *								
	Miramar	Playa Miramar: #04							
	Cuango	Playa Cuango: #02						6	
Sanos Isabel									
	Playa Chiquita								
	Palmera Chiquita								
	Santa Isabel	Playa Palenque: #03							
	* District center	18	16	1	19	4	3	80	capacity 45 rooms
		54			3				

2) Port and Sea Traffic

There are four ports in the study zone, Cristobal, Balboa, Taboga and Tabougita. International ports are Cristobal and Balboa and these ports handled 44 ships, and a total of 134 cruise tours and 55,400 passengers and 51,000 crews entered Panama from September 1991 to May 1992. During September 1992 to May 1993, seventy passenger ships moored at both ports. These ships usually visit Panama in dry season. Regular ship service is operated between Balboa and Taboga island. Between Balboa and Las Perlas islands, a non-regular service is operated. A new passenger pier will be necessary in Balboa when the tourism development in Las Perlas islands starts. There are a few non-regular ship services between the port of Cristobal and Bocas del Toro, San Blas and Porobelo. In 1994, international regular ship service started between Cristobal and Cartagena in Colombia.

3) Road and Land Traffic

The Pan American Highway crossing the Panama city from East to West and Transithmian Highway (national highway No.3) connecting Panama city and Colón from North to South are the trunk road networks in the study zone. Main road systems in Panama and Colón city area have 4 lanes. The daily traffic volume of Transithmian Highway is more than 10,000 vehicles and Pan American Highway at American Bridge has more than 20,000 vehicles per day. Traffic jam occurs almost every day in the city of Panama and comprehensive improvement of the road network will be required.

4) Electricity and Telecommunication

This zone is connected to the national network IRHE has seven generation facilities with a nominal capacity of 456.5 megawatts ,however, the actual capacity of the generators is considered to be around 260 megawatts due to old facilities and low generation efficiency. The voltage of power transmission lines are 230 KV, 115 KV and 13.8 KV. Regional electrification in the zone covers almost 100% of requirements.

Reference the telecommunications system, there are telephone centers at Panama, Colón and Sabanitas and the line capacity is sufficient.

5) Water Supply

The water supply system in Panama city is divided into 3 zones as follows;

- a) Eastern Zone :Miraflores plant (capacity of 110,900 cubic meters/day)
source : the Canal
- b) Central Zone :Chilibre plant (capacity of 511,000 cubic meters/day)
source: Lago Alajuela
- c) Western Zone :Villalobos plant (capacity of 13,200 cubic meters/day)
source: Juan Diaz river
Las Mananitas plant (capacity of 2,600 cubic meters/day)
source: Tapia river
Altos de Tocumen plant (capacity of 5,700 cubic meters/day)
source: Tocumen river
Rio Cabra plant (capacity of 7,600 cubic meters/day)
source: Cabra river

The total water supply capacity of these plants is 651,000 cubic meters per day. The cost of 46% of the supplied water is not recovered due to leakage, lack of meters or negligence in making payment. The piping system of the Eastern zone is very old and water loss by leakage is increasing. The existing water supply system in the zone has sufficient capacity for the additional demand from the newly to be developed tourism sector. The total water supply system in this zone will be improved based on a new master plan, which is under preparation by the authority. In Taboga Island, ground water has been developed for daily use but the total capacity is insufficient.

6) Sewerage

In Panama city, 95% of the households are connected to mains sewage. The older city area (West of Paitilla) has a combined system and the newer city area has a separate system. There is no sewage treatment plant in the old city area and sewage is discharged directly into Panama Bay and rivers causing environmental pollution. In the new city area, septic tanks have been installed by developers and at present IDAAN is responsible for the management and maintenance of these facilities instead of the developers. Colón city also has mains sewage systems.

7) Solid Waste

DIMA (Dirección Metropolitana de Asco) collects and disposes of solid waste in the city of Panama and Colón. Landfill sites are located at Cerro Patron for Panama and Mont. Hope for Colón city. According to the Comité Inter-Institucional de Agua Saneamiento y Medio Ambiente (CIASNA), Panama city produces approximately 932 tons of solid waste per day of which 70% is collected.

5.4.2 Metropolitana Zone Development Policy

(1) Development Goals

Development goals of the Metropolitana Zone will be set as follows:

- Optimal use of Panama Canal as a tourism attraction
- Formation of a hub for a tourism network for Panama
- Integration of Panama city, Panama Canal and the national parks as a tourism cluster.

(2) Development Strategy

To manage the tourist resources efficiently, the following types of tourist development can be envisaged.

The historical significance of the construction of the Panama Canal has to continued into the 21st Century. The canal has been the symbol of the 20th Century's civilization and technology. The vision of a "Second Panama Canal" based on 21st century international cooperation, a large scale out door museum and/or theme park could be proposed to fully utilize the tourism resources of the Canal Zone.

Promotion of the conservation and restoration of Colonial historical monuments such as Panama Viejo, Casco Viejo or related old ruins of the Colonial era.

Promotion of environmental conservation of the Canal Zone where tropical rainforest is well preserved and limited use of these resources for eco-tourism, education and research purposes. Improvement of impressions given by Panama as the main gateway of the country.

5.4.3 Metropolitana Zone Development Framework

(1) Target of tourist inflows

By the year 2010, 5.8 million night-stay tourists and also over 6 million daytime visitors are expected.

Table 5.25 Target of Tourist Inflows (Annual base)

			(unit: persons)		
Tourist types			2000	2005	2010
Night-stay tourists	Foreign	Via Tocumen Airport	1,528,000	3,057,000	3,660,000
		Via Paso Canoas	132,000	186,000	250,000
		By cruise ships	200,000	310,000	390,000
	Domestic	420,000	741,000	1,476,000	
Total (person-night base)		2,280,000	4,304,000	5,776,000	
Daytime visitors	Foreign	Daytime excursion	936,000	1,898,000	2,390,000
	Domestic	Weekenders	1,145,000	1,959,000	3,682,000
	Total		2,081,000	3,857,000	6,072,000

(2) Tourism transportation scheme

The gateway for foreigner tourists is located in three places - Tocumen airport, and Balboa and Cristobal ports. Tocumen airport is the most important gateway to Panama and should be improved with expansion of the terminal for future tourist demand. Cristobal and Balboa ports are at either end of the Panama Canal. Piers should be newly constructed for new cruise ships.

For air transportation within the country, the function of the existing Paitilla airport should be transferred to Albrook airport which has a longer runway, and is better able to meet the increase in future tourist demand.

An inter-city bus station and urban bus center should be newly constructed for the convenience of tourists. The Panama-Colón highway and the urban trunk road of the North and South Corridors would be constructed to ensure high tourist mobility and easy accessibility to tourist resorts. Moreover, the access roads to tourist locations would be improved for the convenience of tourists.

The Panama-Colón railway which runs parallel to the Panama Canal would be rehabilitated to raise the tourist value of the canal railway.

Table 5.26 International Gateways

Categories	Ports of gateway	Descriptions	Status
Air gateway	Tocumen International Airport	Located at Panama City	⊙
Maritime gateways	Balboa Port, Cristobal Port	Located at Panama City, facing the Pacific Ocean	⊙
		Located at Colón City, facing the Caribbean Sea	⊙

Note: ○Utilization of existing facilities, ⊙Improvement of existing facilities, ●New development

Table 5.27 Tourist distribute transportation system to other zones

Categories	Transportation bases and means	Descriptions	Status	
Air services	Paitilla Airport, as a domestic hub-airport	Daily flights to the airports of Changuinola, David, Chitré, San Blas, Darien, and so on	⊙	
Maritime services	New Amador Port Cristobal Port	Mother port of coastal areas facing the Pacific Ocean Mother port of coastal areas facing the Caribbean Sea	● ⊙	
Sea lane	Gulf of Panama	By hydro-jet-foil boats	Triangle circuit between Amador - San Miguel - Nueva Gorgona, and extension to Azuero (Chitré)	●
		By speed boats	Route of Amador - Taboga - Otoque - Nueva Gorgona	●
	East coast of Caribbean Sea	By high-speed boats	Route of Cristobal - Portobelo - Nombre de Dios - El Porvenir (San Blas)	●
	West coast of Caribbean Sea	By ferryboats	Route between Cristobal - Almirante (Bocas del Toro)	●
Bus services	Panama City Bus Terminal	Long-distantce bus services both domestic and international, using the Pan American Highway	⊙	

Table 5.28 Road Network System

Items	Transportation bases and means	Description	Status
Trunk roads	Transisting Highway	Panama - Colón, (Route no.2)	⊙
	New Panama Colón Highway	Panama - Colón,	●
Trunk train	Panama Canal Railway	Panama - Colón,	⊙
Principal arterial roads	Panama City North Corridor	Tocumen - Albrook,	●
	Panama City South Corridor Autopista	Tocumen - Centro, Arrajan - La Chorrera,	⊙ ⊙

Table 5.29 Access Roads to each Tourism Area

Areas	Transportation bases and means	Descriptions	Status
Panama City	Flora Corridors	- Creation of the scene of arrival for visitors	⊙
		- Beautification of townscape and atmosphere	⊙
		- Organic integration of tourist attractives	⊙
Canal Zone and Gatun Lake	Gaillard Road	- Gamboa, east bank of the Canal	⊙
	Borinquen Road	- Cerro Balboa, west bank of the Canal Puerto Balboa	⊙●
	Northern road of Gatun Lake	Gatun Lock - Escobal - Cuipo	⊙
	Access to southern Gatun Lake	La Chorrera - La Laguna El Espino - Lagarterita / Arenosa	⊙ ⊙
Chagres National Park and Alajuela Lake	Gatuncillo - Boqueron road	Access to northern part of Alajuela Lake	⊙
		Access port to Southern Alajuela Lake	⊙
Others	Madden Road	Summit Botanical Park - El Cruce	⊙
	Calzada Road	La Cabima - Buenos Aires	⊙

(3) Tourism facility development scheme

The existing accomodation in this zone is the largest and totally 6,031 rooms are available of which 1,500 are for high standard ,1,560 medium standard and 2,971 economy class. During the planning period of this study,totally 6,529 additional rooms will be supplied of which 1,712 for high standard and 4,817 for medium standard.The peak of the supply is planned for the medium term and 3,776 rooms (58% of total plan) will be supplied in that period. New investment for hotels is targeted at high and medium standard in this zone. At the end of the planning period, a total of 12,560 rooms will be supplied in the metropolitan zone. The accomodation supply program is shown in Table 5.30.

Table 5.30 Accommodation Supply Program

(unit: number of rooms)

Standards	Existing	Additional supply			Cumulative Total	Total
		Up to 2000	2001-2005	2006-2010		
High	1,584	624	1,088	---	1,712	3,296
Middle	1,571	575	2,688	1,549	4,812	6,383
Economy	2,876	---	---	---	---	2,876
Total	6,031	1,199	3,776	1,549	6,524	12,555

5.4.4 Metropolitana Zone Development Plan**(1) Development Guidelines**

The Tourism Development of Metropolitana Zone is illustrated in Figure 5.21, and development guidelines are shown in Appendix.

(2) Accommodation Allocation Plan

In the short term, an additional 624 rooms of high standard will be supplied in Panama city and Gamboa and another 1,088 rooms of the same standard will be supplied the medium term in Panama city, Fuerte Amador, Gamboa and Punta Toro. By the end of the medium term planning period, the market for high standard hotels will be saturated in this zone and no investment is planned for high standard hotels in the long term period. Medium standard hotels will be located in many places of this zone throughout the planning period such as Taboga island, Soberania National Park, Alajuela Lake and so on.

Accommodation allocation plan is shown in Table 5.31 in detail.

Table 5.31 Accommodation Allocation Plan

(unit: number of rooms)

Areas	Existing stocks			Up to 2000			2001 - 2005			2006 - 2010			Cumulative total		
	High	Med.	Eco.	High	Med.	Eco.	High	Med	Eco.	High	Med	Eco.	High	Med	Eco.
Panama City	1500	1515	2374	504	250		340	980			810		2344	3555	2374
Fuerte Amador							300	380			155		300	535	0
Taboga Island		56	14		60								0	116	14
Gamboa				120			300	80			150		420	230	0
Soberania National Park					25			76			30		0	131	
Alajuela Lake								151			155		0	306	0
Colón City	84		488								155		84	155	488
Punta Toro							148	228					148	228	0
Other area					240			793			94		0	1127	0
Total	1584	1571	2876	624	575	0	1088	2688	0	0	1549	0	3296	6383	2876
		6031			1199			3776			1549			12555	

(3) Development Projects

In regard to the supply of hotel accommodation in Metropolitana Zone, totally about 3,700 rooms of high and medium standard will be constructed - by the year 2010 in Panama City and Fuerte Amador areas. New hotels will be also planned in Gamboa, Summit, Alajuela and Punta Toro and other locations.

Airport improvement of Tocumen as an international gateway and Paitilla, Albrook or Kobbe for domestic use should be promoted in the short and medium term planning period.

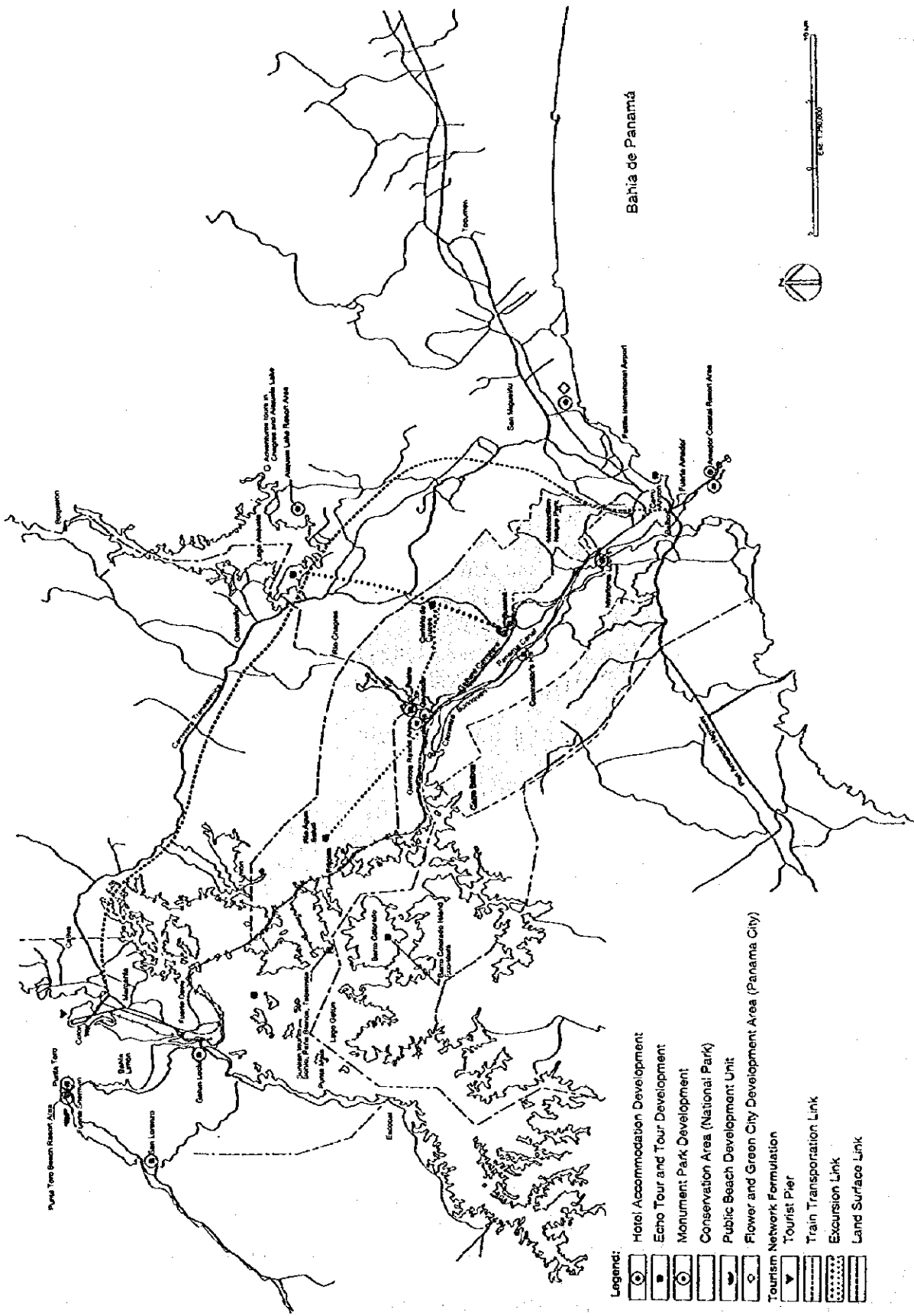


Figure 5.21 Metropolitana Zone development plan-

Table 5.32 Development projects by Sub-zone (Metropolitana)

Development components		Project package	Phase program			Dev't body	
			Sho.	Mid.	Lon.	Pub.	Pri.
Subzone-I Pacific Ocean-side Area	Panama City	Tocumen International Airport improvement		○		○	
		Metropolitan domestic airport improvement(Paitilla, Albrook of Accommodation development (ex.5,389 rm + new 2,880rm)	○	○	○		○
		Flower and Green City Project, Inter-urban bus center	○	○	○	○	
	Puerto Amador	Accommodation development(new 830rm) Amador Port improvement		○	○		○
	Balboa Port	Balboa Port improvement	○	○	○	○	
Metropolitana Natural Park	Visitor center		○		○		
Taboga Island	Accommodation development (ex.70rm + new 60rm)	○				○	
Subzone-II Isthmus Area	Gatun Lake Gamboa Area	Gamboa area accommodation development(new 650rm)	○	○	○		○
		Tourist center, Tourist pier, Marina Panama Canal Tower, Panama Canal Museum Gamboa Bridge	○	○		○	○
	Soberania NP Summit Area	Summit area accommodation development (new 130rm) Zoological park, Botanical garden, Ecological study center Food Entertainment	○	○	○	○	○
	Camino de Cruses NP	Visitor center Eco-trail			○	○	
Chagres NP Alajuela Lake	Alajuela Lake area accommodation development(new 300rm)		○	○		○	
Subzone-III Caribbean Sea-side Area	Colón City	Cristobal Port facilities and marina Accommodation development(ex.572rm + new 155rm)		○	○	○	○
	Punta Toro Area	Accommodation development(new 380rm) Marina		○	○		○
	Gatun Area	Marina		○			○
Land transportation development	Railway	Panama Railway(Panama- Colón)*		○	○		○
	Trunk road	New Panama Colón Highway(Panama - Colón)*	○				○
	Arterial roads	Panama City North and South Corridors, Autopista*	○	○			○
	Access roads	Access roads of Canal Zone and Gatun Lake areas Access roads of Chagress NP and Alajuela Lake areas		○		○	○

Note:*= National projects

Enhancement of the seaport facility of Balboa and Cristobal will be promoted and marinas at Gamboa, Punta Toro, Gatun Lake and Amador etc. will be constructed.

Access road development is planned in the Canal Zone and Gatun Lake area and the Chagres National Park area. The Trunk road between Panama and Colón should be developed as a national project.

Many tourist facilities are planned in this study zone. The detailed project list is shown in Table 5.32.

(4) Development phasing program

Many attractions are located at some distance from one another in each zone.

It takes a varying amount of trip time and means of transportation to reach each place. A tour route should offer a variety of attractions appropriate to the needs and available time of the tourists as well as other tourist facilities and services which should be developed accordingly. The tour route is set at each Zone according to the significance of tourist resources, and the convenience of air, land, and sea link networks. Figure 5.22, Figure 5.23, and Figure 5.24 show the arrangement for tours to various tourist places in Metropolitana Zone for each development term.

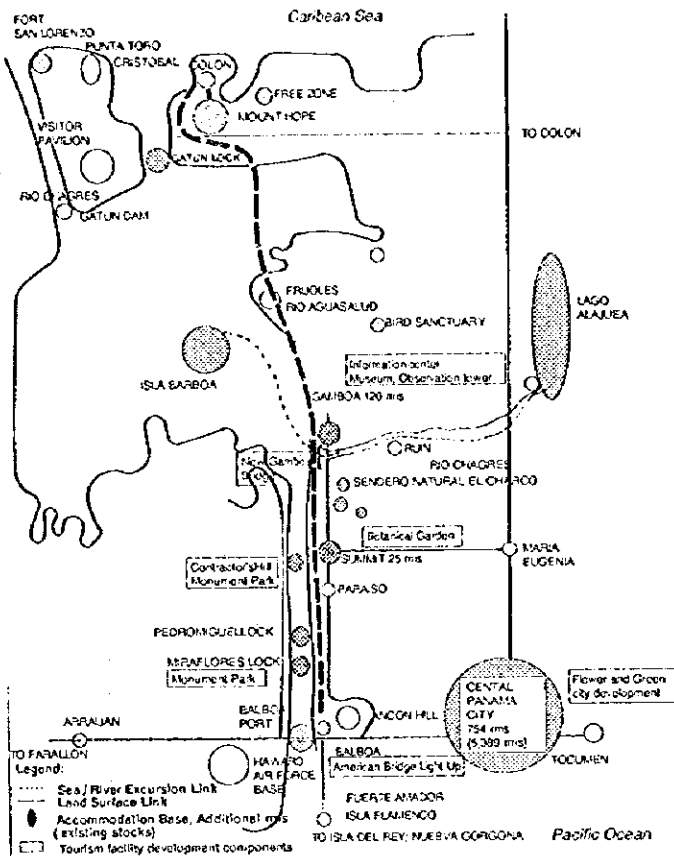


Figure 5.22 Short-term development program

Metropolitana : Short Term Tour Pattern
 Holiday in Panama (Panama Gateway)

Tour Theme /Geographical location/ distribution

- 1) **Urban / Culture :**
 *Panama city (Themed tour 2-3 days)
- 2) **Panama Canal:**
 Miraflores Lock - Pedro Miguel Lock - summit - Balboa (1 days)
 *Theme Park (1 day)
 *Observation tower - Museum (1 day)
- 3) **History / Culture :**
 *Panama city (Themed tour 1-2 day)
- 4) **Underwater Discovery :**
 Gatun Lake (1day), Isla Taboga (1-2 days)
- 5) **Fishing:**
 Gatun Lake (1-2 days)
- 6) **Crusing :**
 Panama Canal (1day)
 Panama - Isla Taboga (1-2 days)
- 7) **Natural Wander:**
 Isla Barro Colorado (1 day)
 Isla Tobago (1-2 days)
- 8) **History / Culture :**
 *Panama city (Themed tour 1-2 day)
- 9) **Coastal Resort:**
 *Punta Toro

*New and improved tour destination
 Regular 2-3 days
 Option to Panama - Isla Contadora - Isla del Rey (+ 2 days)

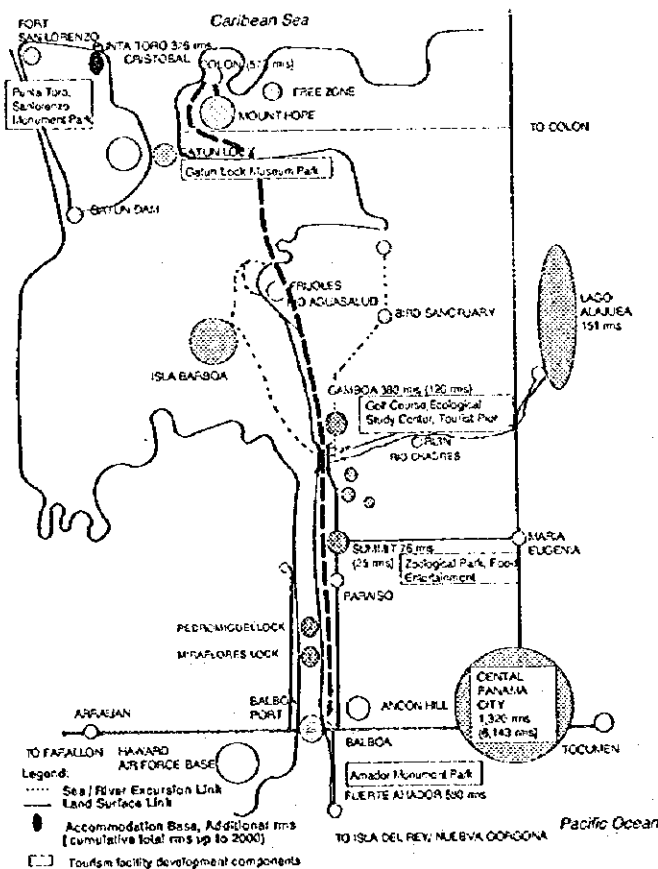


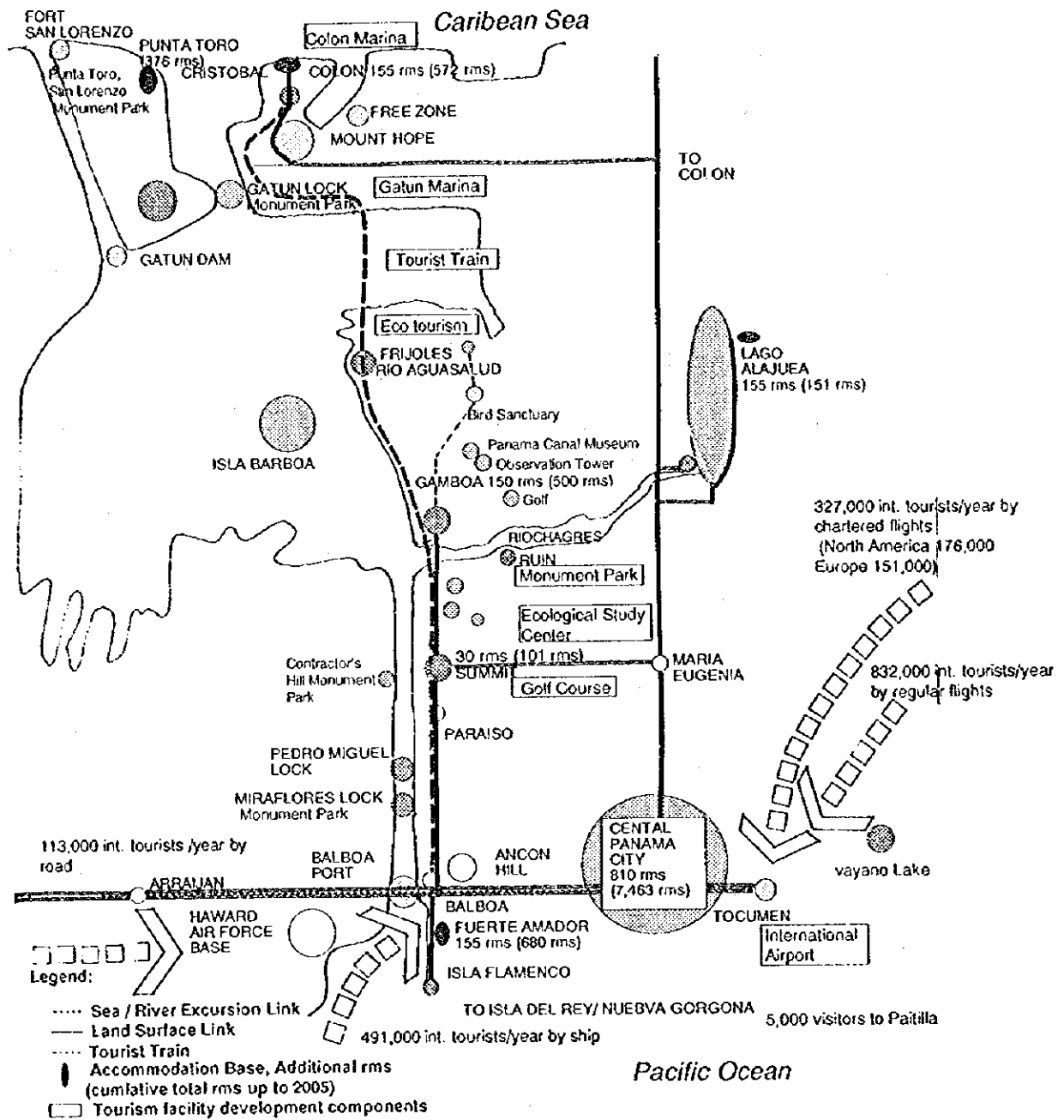
Figure 5.23 Mid-term development program

Metropolitana : Medium Term Tour Pattern

Holiday in Panama (Panama Gateway)
 Tour Theme /Geographical location/ distribution

- 1) **Urban / Culture:**
 Panama city (Themed tour 2-3 days)
- 2) **Panama Canal:**
 Miraflores Lock - Pedro Miguel Lock - summit - Balboa (1 days)
 Theme Park (1 day)
 Observation tower - Museum (1 day)
- 3) **Underwater Discovery:**
 Gatun Lake / Isla Taboga (1-2 days)
- 4) **Fishing:**
 Gatun Lake (1-2 days)
- 5) **Crusing:**
 Panama Canal (1day)
 Panama - Isla Taboga (1-2 days)
- 6) **Natural Wonder:**
 Isla Barboa / *Frijoles / *Soberania N.P. (2-3 days)
 Isla Barro Colorado (1 day)
 Panama - Isla Taboga (1-2 days)
 *Lago Alajuea (1-2 days)
- 8) **Coastal Resort:**
 *Punta Toro

Additional and improved tour destination
 Regular: 3-4 days
 Option to Isla Contadora/ Isla del Rey (+2 days)



Average duration of international tourists in Metropolitana : 2.38 nights

Metropolitana : Long Term Tour Pattern

Holiday in Panama (Panama Gateway)

Tour Theme /Geographical location/ distribution

1) Urban / Culture :

Panama city center / Fuerte Amador
(Themed tour 2-3 days)

2) Panama Canal :

Miraflores Lock- Pedro Miguel Lock -Sumit - Barboa (1-2 days)
*Tourist Train (1/2 day)

3) Underwater Discovery :

Gatun Lake / Isla Taboga (1-2 days)

4) Fishing :

Gatun Lake (1-2 days)

5) Cruising :

Panama Canal / Fuerte Amador (1day)
Panama - Isla Tobago (1-2 days)

6) Natural Wonder :

*Isla Barboa / *Frijoles / *Soberania N.P.
Isla Barro Colorado / Isla Taboga(2-3 days)

7) Coastal Resort :

Punta Toro (2-3 days)

9) Village Tourism :

*Vayano Lake (1 day)
(to be surveyed for village tourism)

*Additional and improved toure destination

Regular:4-5 days

Option to Isla Contadora/ Isla del Rey (+2 days)

Figure 5.24. Long-term development program

5.5 Portobelo Zone

5.5.1 Portobelo Zone in General

(1) Zone designation

The zone under study is a 70 km. stretch of coastal area facing the Caribbean Sea. It is located within a 2 hour commute from Panama City. This zone has been developed as a tourist area for short-term occupancy, with in easy access to the capital urban area. Isla Grande has become the center with 4 hotel (51 rooms) and 300 country houses. An access road to the east of Sabanita in conjunction with the Panama Colón Road would shorter the traveling time.

This zone belong to Portobelo and Santa Isabel districts of eastern part of Colón Province. The area covered 1,123 km², and population is 8,599 persons at 1990 Census.

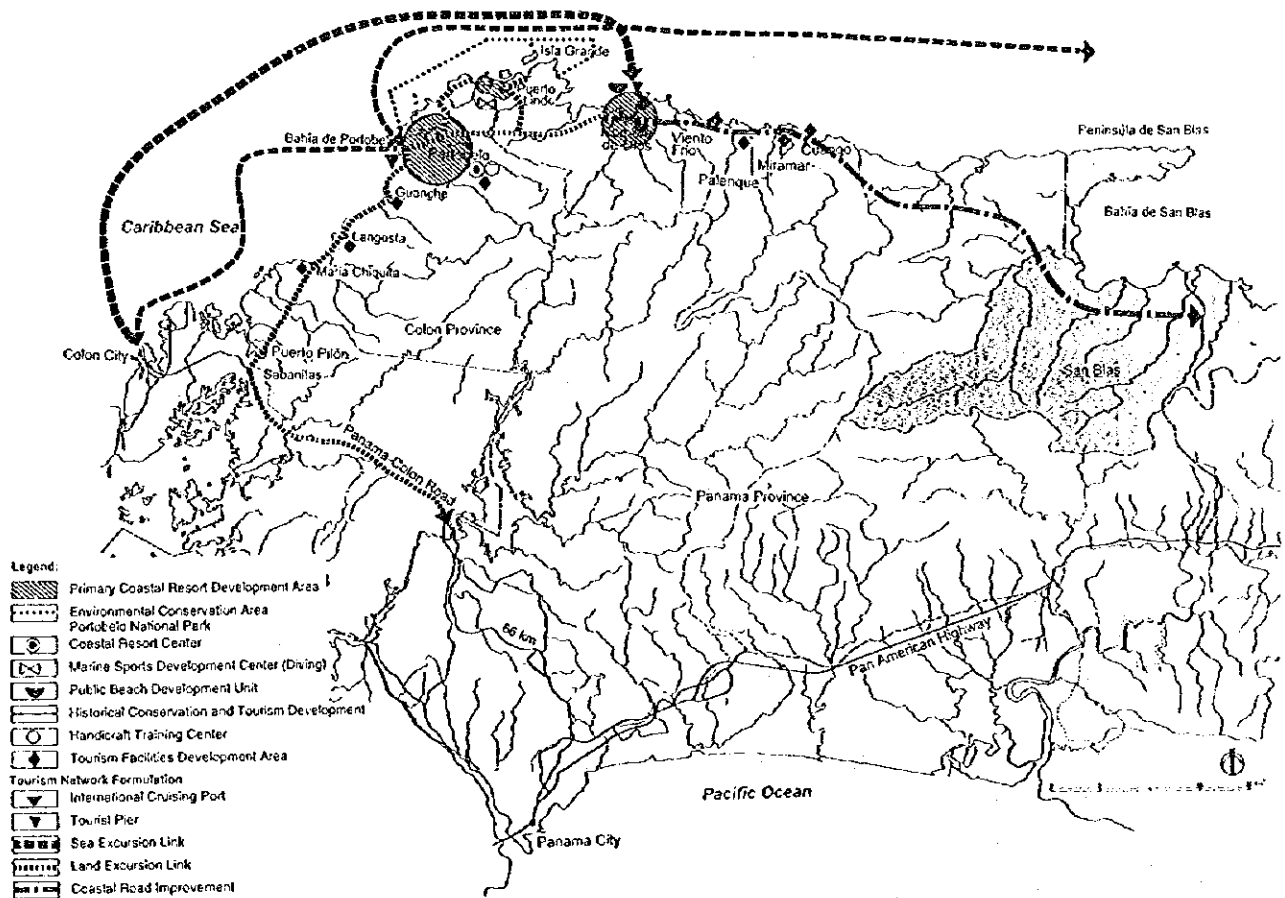


Figure 5.25 Existing map

(2) Natural Conditions

Detail climatic data has not been collected on Portobelo, however, the basic climatic conditions is considered to be similar to those of Colón city. This zone is located on the Caribbean seaside and is affected by North-east trade wind annually. Total rainfall is estimated at around 3,000 mm per year.

The Topographical condition of this zone is mainly composed of hilly upland and mountains and short rivers flowing down the mountainous areas. Development of the alluvial lowland is quite limited and flat land areas lie close to the river mouth. Many small bays, peninsulas, beaches and coral reefs have formed complexes coast line in this zone. Regarding geology, Mesozoic sedimentary and volcanic rocks are the main geological types and quaternary deposits distributed in the lowland coastal areas.

This study zone was designated the Portobelo National Park in 1976 and the park area is 35,929 ha.

Diverse environmental conditions such as tropical forest, grassland, wetland and mangrove forest support rich fauna and flora in this zone. Swamp areas exist near the mouth of the Indio River and Portobelo bay and reptile species such as the Babillo(Caiman crocodiles) and the needle alligator, lizards etc. have been identified. The beaches of the coastal zone of Portobelo are providing reproduction areas for sea turtles.

(3) Socioeconomic conditions

Historically, Columbus visited Portobelo on his fourth voyage to the New world and the fortress of Santiago, San Jeronimo and San Fernando were constructed around Portobelo bay. A church, hospital, plaza and customs house were also constructed. Gold and other valuable commodities collected from the Inca Empire were accumulated here and transported to Spain in the 16th and 17th century. The town was destroyed by Morgan, British pirate, in later 17th century and abandoned after that. Old township, buildings and street networks etc. were kept as they were in the past. INAC is promoting the research of this historical town and conducting the repair of old buildings.

The main land use in this area is pasture land and extensive areas are still reserved as tropical forest. Local towns and villages are located along the roadside. Population density in this zone is very low at 15 persons per square kilometer from the 1990 Census.

(4) Inventory of tourism resources and facilities

According to the IPAT database, there is a total of 80 tourism resources (54 natural and 26 cultural). Within the 54 natural resources, there are marine and coastal resources which can be further divided into the following items; 18 beaches, 19 islands, 6 coral-reefs and 3 fishing locations. There are 18 historical monuments in Portobelo Town. There are 46 tourism resources in Portobelo Town and 18 in the Isla Grande area and this accounts for 80% of the total resources in these areas.

The 3 most valuable resources which have a Rank of II in the IPAT database are:
- Parque Nacional Portobelo, covering an area of 359.29 km²

- Procesion en Honor Al Cristo Negro
- Fiestas del Cristo Negro

Principal national historical monuments are as follows:

(Aparecen en los planos de ciudades 43.2 y 43.3 a excepción del No 4. Source: Atlas Nacional p.178)

- Castillo de San Lorenzo
- La Aduana de Portobelo
- Castillo de San Geronimo
- La Iglesia de San Felipe
- Poblacion de Portobelo

Total tourist accommodation facilities in this zone consist of 8 hotels with a total capacity of 78 rooms, 4 hotels with 51 rooms in the Isla Grande area, 3 hotels (with 20 rooms) in Punta Farnesio area, 1 hotel (1 room) in La Guaira area, and there are no hotels in Portobelo Town. Almost all hotels are of the so-called Cabana type.

There are about 300 private country houses in the coastal area facing the sea.

(5) Infrastructure conditions

The Existing infrastructure conditions in the Portobelo zone are described as follows.

1) Airport and Airlines

There is no airport in this zone but Enrique Jimenez airport in Colón city is located relatively close to Portobelo. There are regular flight to Panama city from this airport.

2) Port and Sea Traffic

There is no port facility in this zone except small piers owned by privately for the purpose of diving or fishing. Small boat taxies are used for sea transportation in this area.

3) Road and Land Traffic

From Sabanita to Portobelo, the coastal road has 2 lanes with asphalt pavement. From Portobelo to the East, the road has 2 lanes but no pavement and the surface condition is very poor.

4) Electricity and Telecommunication

IRHE has no power generator in this zone but the 13.8 KV power distribution lines are connected to National Grid. The regional electrification figures is 55.5%.

Two telephone centers are located in Portobelo and Nombre de Dios with digital systems.

5) Water Supply

The Water supply of Portobelo is managed by the municipality and MS constructed the facility for other towns and villages in the area. IDAAN is managing the water supply of Nombre de Dios.

Tabla 5.33 Portobelo: Matrix of Tourism Attractions

Unidades Administrativas	Comercio		Playas		Islas		Omnibus		Parque N.		Tipo 2: Histórico/Arquitectónico		Tipo 3		Cantidad Total		Alojamiento Turístico			
Districto	María Chiquita		María Chiquita #06 María Chiquita #07		Isla del Padre: #31 Isla Mogote: #32 Isla de Las Hermanas: #33 Isla Pueblo Nuevo: #34 Isla del Buzo: #35 Isla Magote: #28 Isla Drake: #29 Isla Mamey: #40		Carretera: #08				Ruinas de Santagos de La Ciénaga: #55 Puerto Bastero de San Jerónimo: #56 Batería Santiago: #57 Casa Fuerte de Santiago: #58 Ruinas Fuerte San Cristóbal: #59 Primitiva Fortaleza de Santiago: #60 La Tenchera: #61 Reducto de San Buenaventura: #62 Batería Alta de San Fernando: #64 Batería Puente de San Fernando: #66 Calle Puente de San Fernando: #66 Aduana: #67 Ruinas Casa Colonial A: #68 Ruinas Casa Colonial B: #69 Iglesia San Felipe: #70 Iglesia San Juan de Dios: #71 Patio de Militar: #72		#74 #75 #76 #77		#78 #69		3			
Portobelo *							Conal: #22 Conal: #23 Conal: #24 Conal: #27 Risco: #21 Bahía: #47 Bahía: #44 Pesca: #52 Pesca: #53 Laguna: #50								46					
Casique			Playa en Isla Sorolo: 19		Isla Sorolo: #36										2					
Puerto Lindo o Garrofe					Isla Mame: #37 Isla Palmas: #38 Isla La Pelada: #39 Isla Cabeza: #40 Isla Limón: #41 Isla Grande: #42 Isla Tambor: #43 Isla Torto: #44 Isla Los Mogotes: #45 Isla La Salita: #46		Conal: #26 Finca Javara: #51								5		Hotel: 17 4-cabañas			
Isla Grande			Playa La Guaira: #12 Playa en Isla Grande: #13 Playa Grande: #14 Playa Guabano: #15 Playa Anselma: #16 Playa en Desembocadura Río Indio: #17 Playa Punta Manzani: #18				Conal: #25 Bahía: #49 Pesca: #54						#79		18					
Nombre de Dios			Playa Nombre de Dios: #05								Población de Nombre de Dios: #73									
Viento Frio			Playa Viento Frio: #01																	
Palenque *																				
Miramar			Playa Miramar: #04																	
Cuango			Playa Cuango: #02												6					
Playa Chiquita																				
Palmera																				
Chiquita																				
Santa Isabel			Playa Palenque: #03																	
* Centro distrital	18		19		19		16		1		19		4		3		80			
			34								3						Capacidad 45 hab.			

5.5.2 Portobelo Zone Development Policy

(1) Development goals

Development goals of Portobelo Zone will be set as follows:

- Formation of tourism corridor of Caribbean Costa Arriba
- Promotion of environmental conservation and contribution to regional development as a whole.
- Formation of tourism area for day-trippers from Panama city and weekend resorts
- Preparation of a multi-destination route such as Portobelo-Carti Suitupo-El Llano

(2) Development strategy

The Portobelo Zone is mostly covered by National Park and historical tours and diving are dominant attractions at present. Various tourism activities such as cruising, ecological tourism and historical tour route formation will be recommended. Basic development strategies in this zone should be as follows:

- Development of the coastal road for better accessibility from the metropolitan area and as a trigger to tourism and regional development.
- Construction of a pier for the Caribbean cruise ships as a gateway integrated with maritime facilities and accommodation.
- Preparation of new accommodation and tourism facilities in Portobelo Town and coastal areas.
- Conservation, rehabilitation and adequate use of historical, coastal and natural resources.
- Support for conservation of the historical remains in Portobelo.

5.5.3 Portobelo Zone Development Framework

(1) Target of tourist inflows

At the year 2010, 1.5 million night-stay tourists and also 1.5 million daytime visitors are expected.

Table 5.34 Target of tourist inflows (Annual base)

			(unit: persons)		
Tourist types			2000	2005	2010
Night-stay tourists	Foreign	Via Tocumen Airport	178,000	443,000	915,000
		Via Paso Canoa	12,000	17,000	25,000
		By Cruising ships	10,000	40,000	60,000
	Domestic		135,000	243,000	492,000
Total		(person-night basis)	335,000	743,000	1,492,000
Daytime visitors	Foreign	Daytime excursion	292,000	670,000	879,000
	Domestic	Weekenders	205,000	350,000	655,000
	Total			497,000	950,000

(2) Tourism transportation scheme

The gateway to the Portobelo zone will be a new Portobelo port for international cruise ships. For the coastal maritime tourism, a new service to connect Cristobal, Portobelo, Nombre de Dios and El Porvenir would be established by high speed boats.

Regarding public transportation, the bus route from Portobelo to Panama and Colón city would be strengthened.

Regarding the road network, the alignment and pavement of existing road between Sabanitas Cuango would be improved. For tourism development of Portobelo, This road, which crosses, the zone would be extended to the east until reaches the Pan-American Highway.

Table 5.35 International gateway and inter-zonal transportation system

Categories	Items	Descriptions	Status
Maritime gateway	New Portobelo Port	Port of call for international cruising ships	●
Inter-zonal maritime service	By high-speed boats (East coast of Caribbean Sea)	Route of Cristobal - Portobelo - Nombre de Dios - El Porvenir (San Blas)	●
Inter-zonal bus services	Medium distance bus route	Panama / Colón - Portobelo - Nombre de Dios	⊙

Note: ⊙ Utilization of existing ones, ⊕ Improvement of existing ones, ● Newly development

Table 5.36 Road network system (East Panama Tourism Circuit)

Categories	Items	Descriptions	Status
Trunk roads (Zonal excursion)	Sabanita - Portobelo	Access road from Metropolitan Zone via Colón	⊙
	Portobelo - Cuango	Trunk road extension to Santa Isabel District	⊙
Trunk roads (Inter-zonal excursion)	Cuango - Carti Suitupo	Connection road of Portobelo and San Blas zones	●
	Carti Suitupo - El Llano	Connection road of Metropolitan and San Blas zones	●

Note: ⊙ Alignment and pavement improvement, ● New construction

(3) Tourism facility development scheme

By the year 2010, 2993 additional rooms will be supplied in this zone, of which 841 are for high and 1,885 for medium standard. The accommodation supply program in Portobelo Zone is shown in Table 5.37.

Table 5.37 Accommodation supply program

(unit: number of rooms)

Standards	Existing Supply	Additional supply			Cumulative Total	Total Supply
		Up to 2000	2001-2005	2006-2010		
High	---	188	248	405	841	841
Medium	45	389	571	925	1,885	1,930
Economy	31	74	65	128	267	298
Total	76	651	884	1,458	2,993	3,069

5.5.4 Portobelo Zone Development Plan

(1) Development Guidelines

Tourism Development of Portobelo Zone is illustrated in Figure 5.26, and Figure 5.27 and development guidelines are shown in Appendix.

(2) Accommodation allocation plan

An High standard hotel totaling 300 rooms will be developed at La Escucha during the short and medium term planning period and the development of medium standard hotels is planned at Puerto Lindo, La Guaira, Portobelo Town and Isla Grande. In the long term, various types of hotels will be provided in Nombre de Dios and other coastal areas in response to the adequate establishment of tourism related infrastructure in this zone. At the end of the planning period,

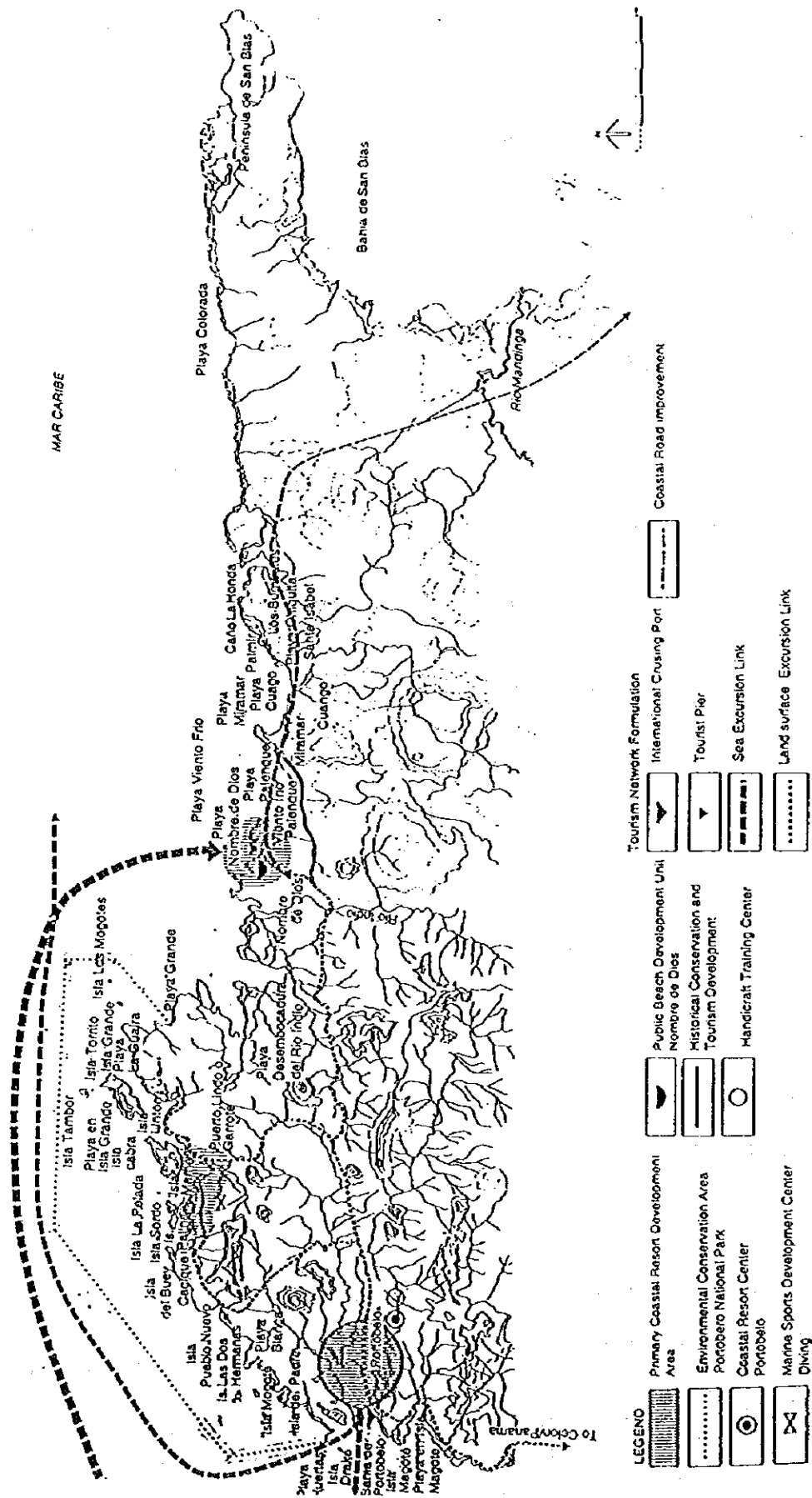
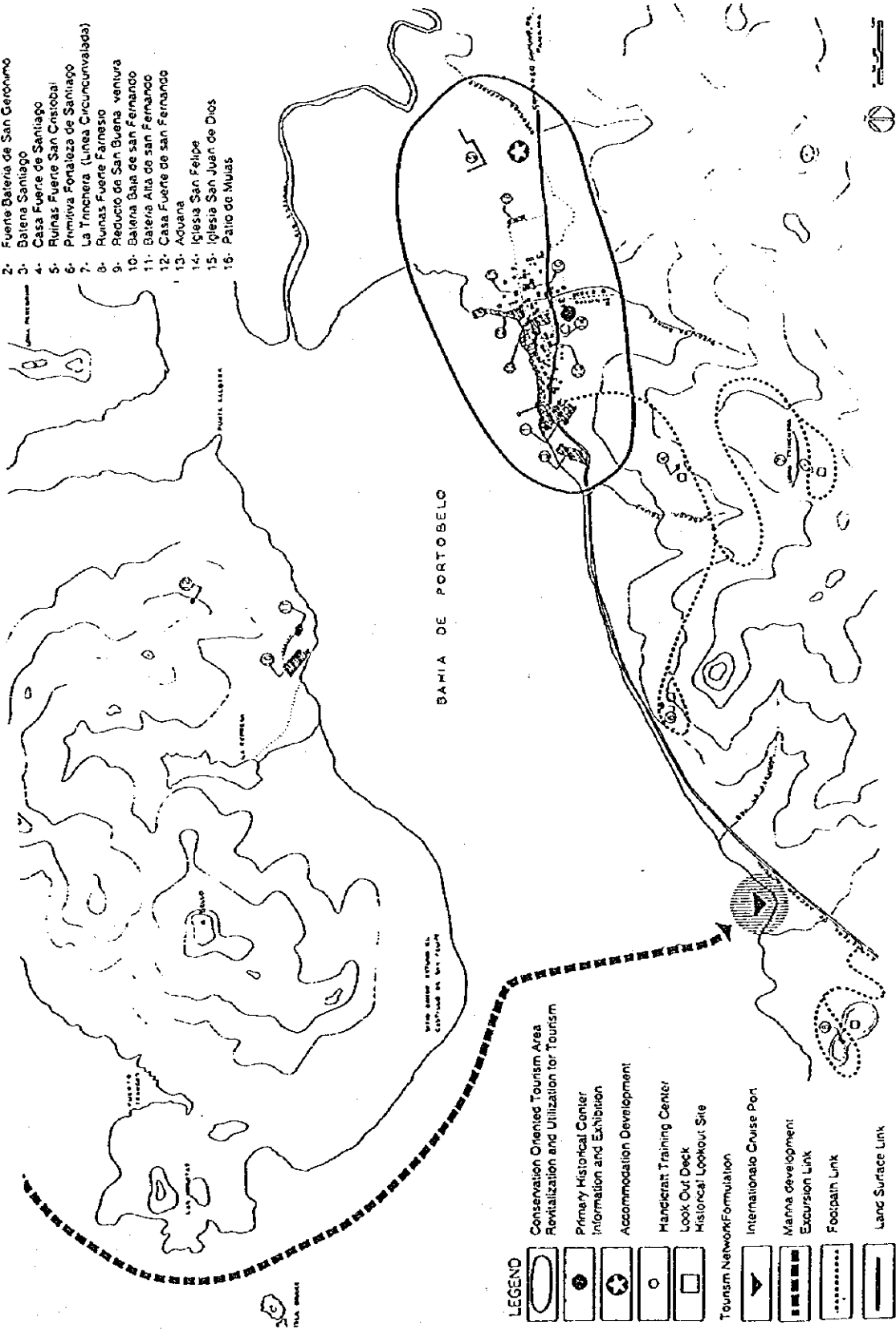


Figure 5.26 Portobelo Zone structure plan

- 1- Ruinas de Santiago de la Glona
- 2- Fuente Baterra de San Gerónimo
- 3- Batena Santiago
- 4- Casa Fuerte de Santiago
- 5- Ruinas Fuerte San Cristobal
- 6- Primitiva Fortaleza de Santiago
- 7- La Trochera (Linea Circuncunvalada)
- 8- Ruinas Fuerte Farnesio
- 9- Reducio de San Buena ventura
- 10- Batena Baia de san Fernando
- 11- Batena Alta de san Fernando
- 12- Casa Fuerte de san Fernando
- 13- Aduana
- 14- Iglesia San Felipe
- 15- Iglesia San Juan de Dios
- 16- Patio de Muías



- LEGEND**
- Conservation Oriented Tourism Area
Revitalization and Utilization for Tourism
 - Primary Historical Center
Information and Exhibition
 - Accommodation Development
 - Handicraft Training Center
 - Look Out Deck
Historical Lookout Site
 - Tourism Network Formulation
 - International Cruise Port
 - Maina Development
Excursion Link
 - Footpath Link
 - Land Surface Link

Figure 5.27 Portobelo Bay Area Development Plan

a totally of 2,993 additional rooms will be supplied in this zone. The accomodation allocation plan is shown in Table 5.38.

Table 5.38 Accommodation Allocation Plan

(unit: number of rooms)

Areas	Existing stocks			Up to 2000			2001 - 2005			2006 - 2010			Cumulative total		
	High	Med.	Eco.	High	Med.	Eco.	High	Med.	Eco.	High	Med.	Eco.	High	Med.	Eco.
La Escucha				150			150						300	0	0
Portobelo town					52			35					0	87	0
Puerto Lindo				19	131		50	100					69	231	0
La Guaira			5	19	131		48	100					67	231	5
Isla Grande		45	6		51								0	96	6
Nombre de Dios							100			170	363	50	170	463	50
Other coastal area			20		24	74	235	65		235	562	78	235	822	237
Total		45	31	188	389	74	248	571	65	405	925	128	841	1930	298
		76			651			884			1458			3069	

(3) Development Projects

By the year 2010, approximately 3,000 hotel rooms will provided in this zone. Hotels will be constructed at Portobelo Town, La Escucha, Puerto Lindo, La Guaira and Isla Grande in the short and medium term planning period.

Coastal roads as a trunk line will be developed and improved along the Caribbean Sea. A passenger pier for international cruise ships will be constructed at the entrance of Portobelo Bay.

Many tourist facilities such as tour information center, visitor center, ecological trail center and so on will be prepared in this zone. Development projects are listed in Table 5.39.

Table 5.39 Development Projects by Subzone (Portobelo)

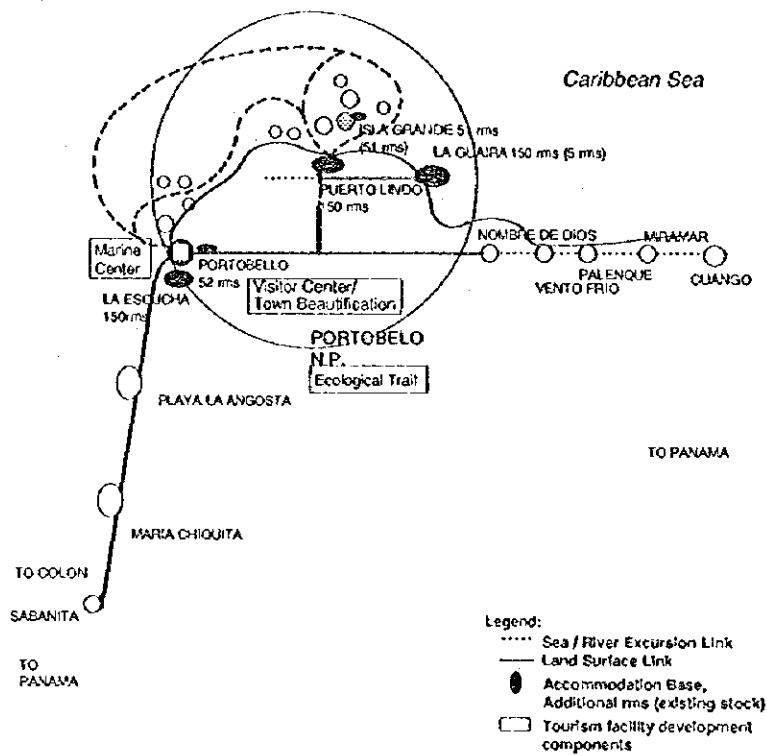
Development components		Project package	Phase program			Dev't body		
			Sho.	Mid.	Lon.	Pub.	Pri.	
Coastal Area Development	Subzone-I Portobelo Town	Restoration of historical monuments	○				○	
		Accommodation development (new 90rm)	○	○			○	
		Town Center beautification	○	○			○	
		Information Center, Handicraft Training Center, Bus Center	○	○			○	
	Portobelo Bay Area	La Escucha	Portobelo Port development		○			○
			Accommodation development (new 300rm) Beach improvement, Marine center	○	○			○
	Subzone-II Portobelo Peninsula Area	Puerto Lindo	Accommodation development (new 300rm) Marine Sports Center, Tourist pier, Beach improvement	○	○			○
		La Guaira	Accommodation development (ex. 5rm+new 300rm) Beach improvement	○	○			○
Isla Grande		Accommodation development (ex. 51rm+new 50 rm)	○				○	
Subzone-III Nombre de Dios Area		Accommodation development (new 680 rm) Tourist pier, Beach improvement, Historical park	○	○	○		○	
		Accommodation development (ex. 20rm+new 1,270rm)	○	○	○		○	
Subzone-V Portobelo National Park		Visitor Center Ecological trail	○				○	
Road development	Trunk roads	Cross isthmus road (Carti Suitupo - El Llano)*			○		○	
		Caribbean Costa Arriba road (Cuango - Carti Suitupo)*		○	○		○	
		Caribbean Costa Arriba road (Sabanita - Cuango)		○			○	
	Access roads	Isla Grande access road (San Antonio - Puerto Lindo - La Guaira), Coastal excursion road (Portobelo Town - Catique - Puerto Lindo)		○	○		○	

Note:*=National project

(4) Development phasing program

Many attractions are located at some distance from one another in each zone. It takes a varying amount of trip time and means of transportation to reach each place. A tour route should offer a variety of attractions appropriate to the needs and available time of the tourist as well as other tourist facilities and services which should be developed accordingly.

The tour route is set at each Zone, according to the significance of tourist resources, and the convenience of air, land and sea link networks. Figure 5.28, Figure 5.29, and Figure 5.30. show the arrangement for tours to various tourist places in Portobelo Zone for each development term.



Portobelo : Short Term Pattern
 Holiday in Historical Town and Caribbean Sea Garden (Panama Gateway)

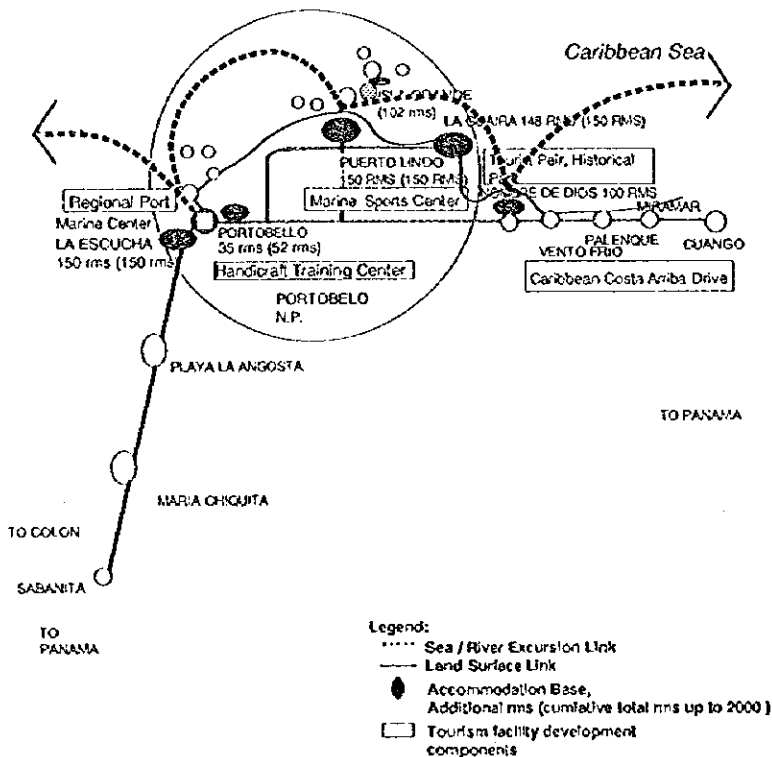
Tour Theme Geographical location/ distribution

- 1) Coastal Resort:
Panama - *Portobelo/La Escucha - Puerto Lindo-La Guaira (4-5 days)
- 2) Underwater Discovery:
Portobelo/La Escucha - La Guaira - Isla Grande (1-2 days)
- 3) Fishing:
Portobelo Archiperago (1-2 days)
- 4) Cruising:
Portobelo Archiperago (1-2 days)
- 5) Town / History / Culture:
*Portobelo Town and Bay Area (1 day)

*New and improved tour destination

Regular: 4-5 days
 Optional to San Bras Cruising (+2day)

Figure 5.28 Short-term development program



Portobelo : Medium Term Tour Pattern

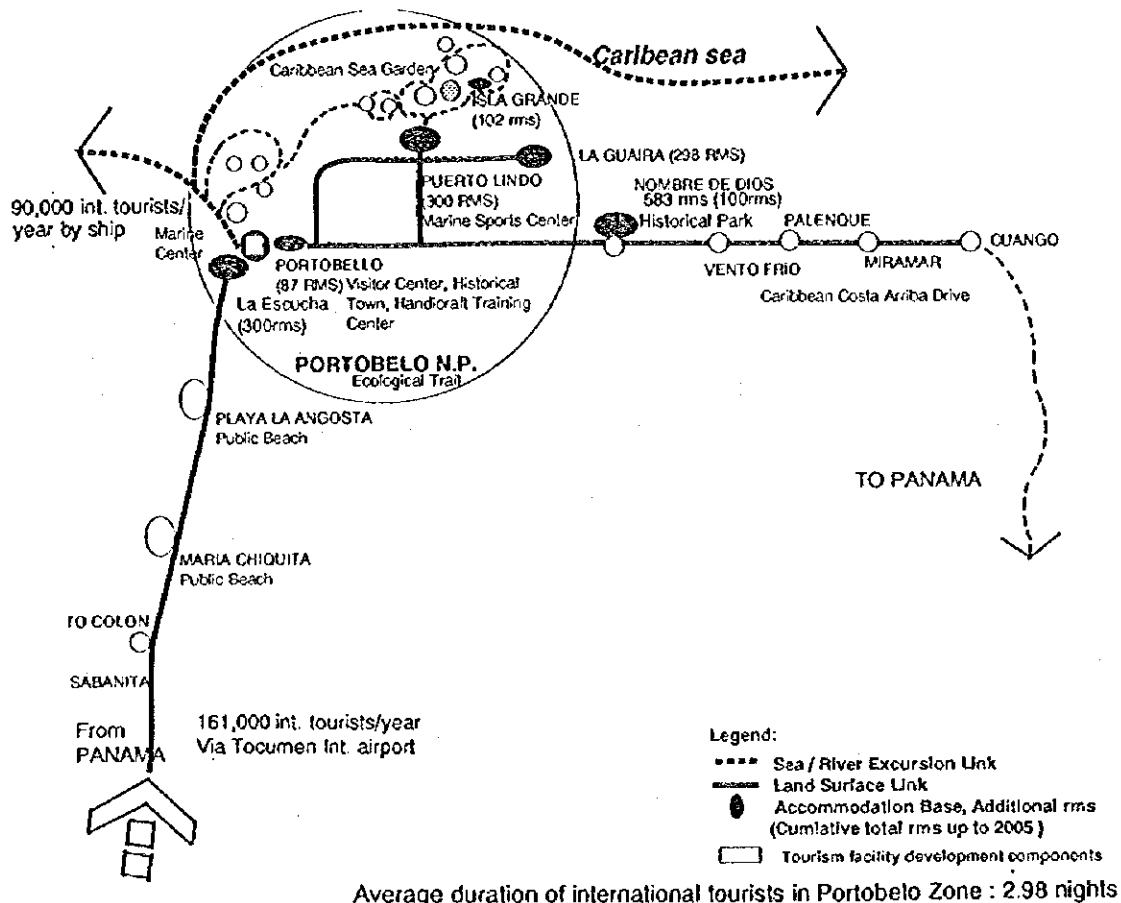
Holiday in Historical Town and Caribbean Sea Garden (Panama Gateway)
 Tour Theme Geographical location/ distribution

- 1) Coastal Resort:
Panama - Portobelo/La Escucha - Puerto Lindo-La Guaira - *Nombre de Dios (4-5 days)
- 2) Underwater Discovery:
Portobelo/La Escucha - La Guaira - Isla Grande (1-2 days)
- 3) Fishing:
Portobelo Archiperago (1-2 days)
- 4) Cruising:
Portobelo Archiperago (1-2 days)
- 5) Town / History / Culture
Portobelo Historical Center (1 day)
*Handicraft Training Center (1/2 day)
*Historical Park in Nombre de Dios
*Caribbean Cost Arriba Drive

*Additional and improved toure destination

Regular: 4-5 days
 Optional to Gulf of San Bras Cruising (+2day)
 Option to Colon (+1 day)

Figure 5.29 Mid-term development program



Portobelo : Long Term Tour Pattern

Holiday in Portobelo and Caribbean Coast
(Portobelo Gateway)
Tour Theme /Geographical location/ distribution

- 1) Coastal Resort:
Panama - Portobelo/La Escucha - Puerto Lindo-La Guaira - Nombre Dios Coastal Area - (4-5 days)
Maria Chiquita - Playa la Angosta (day trip base)
- 2) Underwater Discovery:
Portobelo/La Escucha - La Guaira - Isla Grande - (1-2 days)
- 3) Fishing:
Portobelo Archiperago (1-2 days)
- 4) Cruising:
Portobelo Archiperago (1-2 days)
- 5) Town / History / Culture
Portobelo Historical Town
Handicraft Training Center
Visitor Center
Historical Park in Nombre de Dios
- 6) Natural Wonder:
*Portobelo N.P. Ecological Trail(1 day)
*Caribbean coasta Arriba Drive and Rest Spots (to be surveyed for natural wonder)

*Additional and improved tour destination

- Regular : 4 - 5 days
Option to san Bras Cruising (+2 days)
Option to Cristobal (+1day)
Option to Colombia (+5 days)
Option to Panama Canal (+1day)
Option to Bocas Del Toro (+2 days)

Figure 5.30 Long-term development program

5.6 Las Perlas Zone

5.6.1 Las Perlas Zone in General

(1) Zone designation

Location and zone boundary

The Las Perlas region is made up of approximately 40 islands of various sizes. It is located in the center of the Gulf of Panama and belongs to the Province of Panama. Among the islands, Del Rey is the largest (234 km²) followed by San Jose and Pedro Gonzales. Del Rey is the second largest island in Panama next to Coiba Island in Chiriquí Province.

This zone belongs to the Balboa Districts of Panama Province.

The area covered is 1,123 km², with a population of 8,599 as of at 1990 Census.

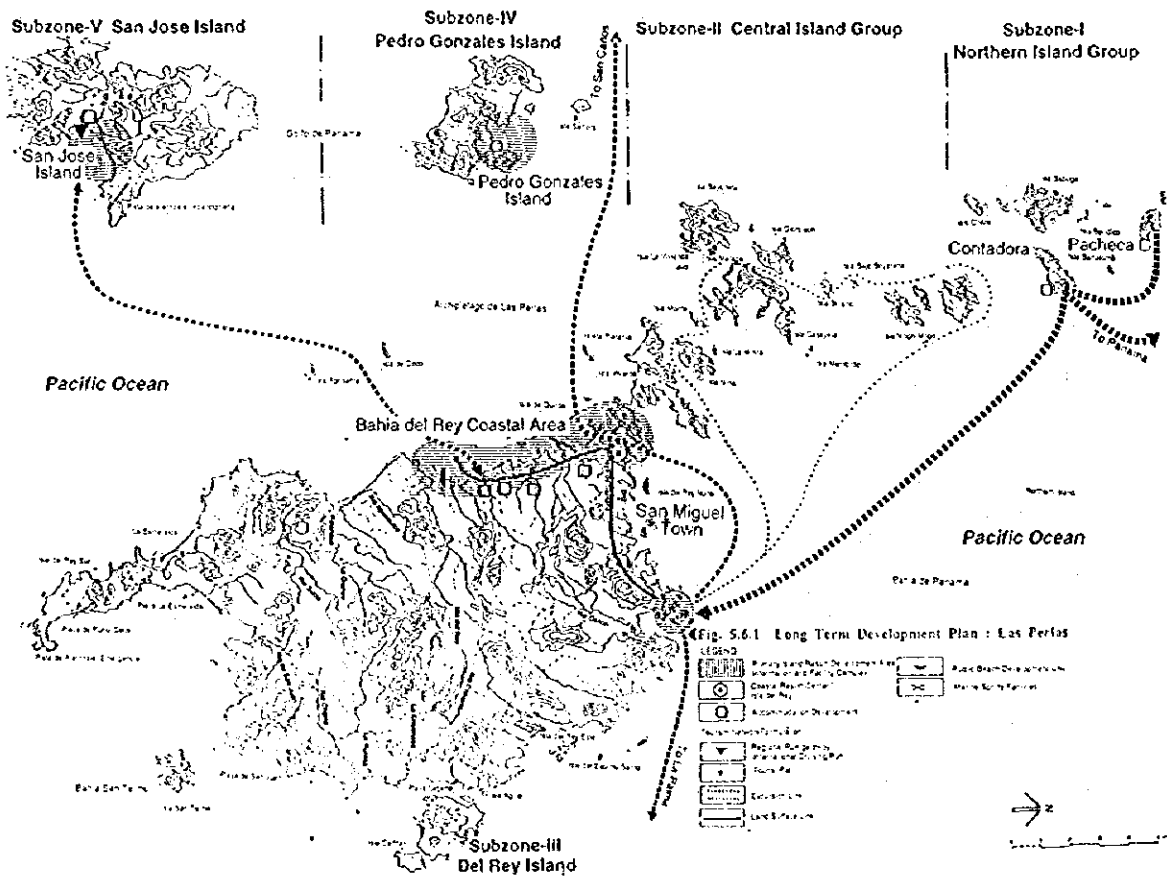


Figure 5.31 Existing map

(2) Natural Conditions

The Climatic conditions of this zone are very similar to Panama city, however, Las Perlas zone has much more rainfall. Total annual rainfall in this zone is 2,684mm and 98% of this rainfall is concentrated in the rainy season from May to December. The dry season lasts four months between January and April. In the rainy season, October has the maximum monthly rainfall at 532mm and in the dry season, February has only 0.8mm rainfall. The annual average temperature is 26.4 degrees centigrade and March is the warmest month at 27.4 degrees. The coolest month is October and the average temperature is 25.6 degrees.

Las Perlas is an area of islands located 50-100km south east off shore from Panama city. The Islands of Del Rey, San Jose and Pedro Gonzalez are the main islands in this area and have areas of 234 sq.km, 44 sq.km and 14 sq.km respectively. These islands are composed of rolling hilly upland and the highest elevation in Del Rey is 223m and 135m in San Jose. Beaches are developed around the islands intermittenly.

Geologically, these islands are formed by tertiary volcanic rocks. Tropical forest and grassland are the basic flora of these islands but forest is changing into pasture land in the large islands. Las Perlas provide a favourable environment for aquatic birds. Many kind of sea birds nest along the coastal forest, cliffs and reefs.

(3) Socioeconomic conditions

Contadora island in this zone has been developed as a marine resort and basic facilities for tourism are already in place. The northern part of Del Rey island is partly developed some villages are located there. Local people live on fishing and subsistence agriculture.

(4) Inventory of tourism resources and facilities

According to the IPAT database, there are a total of 136 tourism resources which are all coastal. Among these are 83 beaches, 33 islands, 14 coral-reefs and 4 fishing locations of excellent ocean and coastal quality. There are 52 resources in the northern island group; 38 in the central island group such as Viveros Island and 31 concentrated in Del Rey Island. There are 12 notable resources that Rank II in the estimation of IPAT and 8 of them located in Contadora Island.

Principal tourism attractive in Las Perlas (Rank II and over in the IPAT database)

Isla Contadora

Isla Contadora, Larga beach, Galeon beach, Ejecutiva beach, Las Suecas beach, Coral reef, Calles y avenidas

Isla Pacheca

Fishing locations: Northern area of Las Perlas Archipelago, Isla del Rey, Isla Contadora, Punta Cocos of Las Perlas, Southwestern area of Isla Pedro Gonzalez

(5) Infrastructure Conditions

1) Airport and Airlines

There are small airports in Contadora, Viveros, Del Rey and San Jose island. Contadora airport has a 717 meter runway with asphalt pavement. San Miguel and Punta Coco airports

Tabla 5.40 Las Perlas: Matrix of Tourism Attractions

Unidad Administrativa/Geográfica	Nombre de la Isla		Atractivos Costeros										Canal d Total
	Grupo de Islas	Isla	Islas	Playas	Corales	Carretera	Pesca						
Saboga	Islas del Norte	Isla Comadora	#130	#09, 17, 23, 25, 32, 34, 44, 58, 60, 62, 65, 74	#87, 92, 96	#136	#133						
		Isla Saboga	#125	#36, 47, 81	#89								
		Isla Pachequilla	#105		#97								
		Isla Pacheca	#103	#73, 83	#91								
		Isla Barolome	#102	#16									
		Isla Chitré	#119	#66									
		Isla Chupera	#109	#03, 18, 21, 29, 30, 42, 61, 70, 78	#93								
		Isla Mogo-Mogo	#108	#04, 06, 13, 14, 26, 40,	#90								
		Isla Bendico											
		Isla Viberos	#123	#05, 10, 41, 43, 49	#88								
San Miguel	Islas Centrales	Isla Bolaños	#122	#52	#94								
		Isla Gibraltarón	#112	#33									
		Isla Casavas	#117	#11, 20, 28, 68									
		Isla Casaveta	#118		#95								
		Isla Ampón	#129										
		Isla Bayoneta	#104	#07, 38, 57, 80									
		Isla La Vivienda	#121	#63									
		Isla La Minita	#126										
		Isla Mina	#128	#69, 77	#86								
		Isla Gallino	#98										
La Esmeralda	Islas del Rey e Islas vecinas	Isla del Espiritusanto	#99										
		Isla Malaga	#101										
		Isla Trapiche	#106										
		Isla Cañas	#107										
		Isla Cañas	#111										
		Isla Verde											
		Isla Membrillo											
		Isla del Rey Norte (San Miguel)	#100	#02, 22, 50, 51, 67, 71, 72, 75, 76, 79, 82	#84, 85	#35	#131						
		Isla del Rey Este											
		La Esmeralda	Islas del Rey e Islas vecinas	Isla del Rey Oeste									
Isla del Rey Sur	#127			#01, 08, 12, 15, 19, 24, 27, 31, 35, 39, 48, 53, 54, 56			#132						
Isla San Telmo	#120												
Isla Galera	#114												
Isla de Coco													
Pedro González	Islas del Este	Isla Las Cañas											
		Isla Pedro González	#116	#37, 45, 46, 55, 59			#134						
		Isla Señora	#115										
		Isla de Señora	#110										
		Isla San José	#124	#64									
		Isla de Icnco	#113										

Contadora airport operate regular flights to Panama city by small sized aircraft with passenger capacity of less than 20 persons.

2) Port and Sea Traffic

There is no port facility in this zone except a privately owned pier in Contadora island.

3) Electricity and Telecommunications

Electricity supply is independent for each island. IRHE has a generator in Contadora and Del Rey islands. The capacity of these generators is 3.16 and 0.28 megawatts respectively and they have no surplus capacity. Regarding telecommunication, there are telephone centers at San Miguel and Contadora with analog equipment.

4) Water Supply

IDDAN has two water plants in Contadora and San Miguel islands with a capacity of 454 cubic meters per day. In Contadora island, the water supply is not sufficient in the dry season. In the island of Del Rey, small river system have been developed and the Oston river has a flow of 0.02 cubic meters per second (April, 84) and 1.75 cubic meters per second (August, 81). Water supply capacity is one of the critical conditions for future tourism development in these island areas. Detailed investigation of the water supply potential should be conducted.

5.6.2 Las Perlas Zone Development Policy

(1) Development Goals

Goals of tourism development in these islands can be simply set down as follows:

- Model tourism development of islands type resort in Panama
- Tourism development as a key element of regional development

(2) Development Strategy

The development of Las Perlas depends on transportation and the possibility of water supply, therefore, establishment of a new development center at Isla Del Rey is recommended from the long term point of view. Tourism development at Isla Del Rey has the highest priority in Improvement and preparation of maritime transportation services connecting to Panama City are essential issues for tourism development.

Tourist boat triangular service between Panama, Las Perlas and Nueva Gorgona should be operating by the end of this planning period.

5.6.3 Las Perlas Zone Development Framework

(1) Target of tourist inflows

At the year 2010, 1.7 million night-stay tourists and 0.9 million daytime visitors are expected.

Table 5.41 Target of tourist inflows (Annual base)

			(unit: persons)		
Tourist types			2000	2005	2010
Night-stay tourists	Foreign	Via Tocumen Airport	190,000	770,000	1,155,000
		By Cruise ships	10,000	30,000	45,000
	Domestic		135,000	243,000	492,000
Total		(person-night base)	335,000	1,043,000	1,692,000
Daytime visitors	Foreign	Daytime excursion	209,000	464,000	668,000
	Domestic	Weekenders	74,000	124,000	232,000
	Total			283,000	588,000

(2) Tourism Transportation Scheme

The maritime gateway to the Las Perlas zone would be new San Miguel port for international cruise ships. Also inter-zone maritime services would be established to connect Metropolitan and Farallón zones with one hour by hydrofoil-jet boats. Air transportation to Panama city would be ensured by the improvement of San Miguel airport.

New services to connect islands within the area by speed boats would be established. New roads would be constructed to facilitate development of accommodation in Del Rey island and access tourism locations.

Table 5.42 International gateway and inter-zonal transportation system

Categories	Items	Descriptions	Status
Maritime gateway	San Miguel Port	Port of call for international cruise ships	●
Inter-zonal maritime Services	By hydro-jet-foil boats	Triangle circuit between Amador-San Miguel-New Gorgona, and extension to Azuero (Chitré)	●
Inter-zonal air Services	San Miguel Airport Contadora Airport	Connection to Paitilla Airport ditto	⊙

Note: ○ Utilization of existing facilities, ⊙ Improvement of existing facilities, ● New development

Table 5.43 Zonal network system

Categories	Descriptions	Items	Status
Maritime services	By speed boats	San Miguel Port - Each island	●
Local road	Access road	San Miguel Town - Punta Gallinazo	●

(3) Tourism facility development scheme

By the year 2010, a total of 3,513 additional rooms will be supplied to this zone of which 763 are high standard and 2,054 medium standard. The accommodation supply program is shown in Table 5.44.

Table 5.44 Accommodation supply program

Standards	Existing Stocks	Additional supply			Cumulative Total	Total stocks
		Up to 2000	2001-2005	2006-2010		
High	151	---	471	292	763	914
Middle	---	374	1,048	632	2,054	2,054
Economy	---	244	152	300	696	696
Total	151	618	1,671	1,224	3,513	3,664

5.6.4 Las Perlas Zone Development Plan

(1) Development Guidelines

Tourism of Las Perlas Zone is illustrated in Figure 5.32 and development guidelines are shown in Appendix.

(2) Accommodation Allocation Plan

The Island of Del Rey is the main investment area in this zone for new hotel development. Except for accommodation on Contadora island, there is no hotel in this area at present. High standard hotel with 150 rooms will be developed on each of Del Rey, Pedro Gonzalez and San Jose islands in the medium term planning period.

Medium standard hotels with a total of 400 rooms in Del Rey, and 100 rooms in each of Pedro Gonzalez and San Jose will also be constructed in this period. A total 333 rooms of medium standard will be supplied on islands of the central area of this zone. Development in the medium term period of a total of 1,671 rooms will be supplied of which 703 rooms (42%) will be constructed on the island of Del Rey.

In long term period, another high standard hotel with 210 rooms and a medium standard hotel with 328 rooms will be constructed on the island of Del Rey. Economy standard hotel with 300 rooms is also planned in that period. A total of 838 rooms will be supplied in Del Rey in this planning period and this figure represents a 68% share of the accommodation development. The detail accommodation allocation plan is shown in Table 5.45.

Table 5.45 Accommodation allocation plan (unit: number of rooms)
(unit: number of rooms)

Areas	Existing stocks			Up to 2000			2001 - 2005			2006 - 2010			Cumulative total		
	High	Med.	Eco.	High	Med.	Eco.	High	Med	Eco.	High	Med	Eco.	High	Med	Eco.
Contadora	151			155			20	65					171	220	0
Pacheca				30				50			100		0	180	0
Central Group						80		333					0	333	80
Del Rey				189	164		151	400	152	210	328	300	361	917	616
Pedro Gonzalez							150	100			150		150	250	0
San José							150	100		82	54		232	154	0
Total	151	0	0	0	374	244	471	1048	152	292	632	300	914	2054	696
		151			618			1671			1224			3664	

(3) Development Projects

Development projects in this zone are listed in Table 5.46. Main hotel investments are planned in Isla Del Rey and about 1,900 rooms from high to economy standard will be constructed in this planning period.

San Miguel Airport should be improved to accept larger aircraft. The sea port of San Miguel will be constructed for the introduction of high-speed boat service. Access roads on Isla Del Rey will also be developed.

(4) Development phasing Program

There are many attraction places are located at far distance from one another in each zone. It takes varying amount of trip time and means of transportation to reach each place. A tour route should offer a varying attractions appropriate to the needs and available time of the tourists as well as other tourist facilities and services which must be developed accordingly.

Tour route is set at each zone, according to significance of tourist resources, and air, land surface, and sea link network follow their greater convenience and services. Figure 5.33, Figure 5.34 and Figure 5.35 show the arrangement for tour to various tourist places in Las Perlas zone in each development term.

Table 5.46 Development projects by sub-zone

Development components		Project package	Phase program			Dev't body	
			Sho.	Mid.	Lon.	Pub.	Pri.
Subzone-I Northern Islands Group	Contadora Island	Accommodation development (ex. 151rm+new 240rm)	○	○			○
	Pacheca Island	Accommodation development (new 180rm)	○	○	○		○
Subzone-II Central Islands Group		Accommodation development (new 410rm)		○	○		○
Subzone-III Del Rey Island	East San Miguel	San Miguel Airport improvement San Miguel Port development	○	○			○ ○
	San Miguel Town	Tourist facilities	○				○
	Bahia del Rey Coastal Area	Accommodation development: - Playna Agustin Area (new 400rm) - Playa Honda Area (new 400rm) - Playa Maria Grande Area (new 300rm) - Playa flora Area (new 600rm) - Playa Gallinazo Area (new 190rm) Tourist facilities	○	○	○		○ ○ ○ ○ ○ ○
Subzone-IV Pedro Gonzalez Island		Accommodation development (new 400rm)		○	○		○
Subzone-V San Jose Island		Accommodation development (new 390rm)		○	○		○
Road development		Access road (San Miguel Town - Isleta de Eu lalio Port) Access road (San Miguel Town - Punta Gallinazo)	○				○ ○

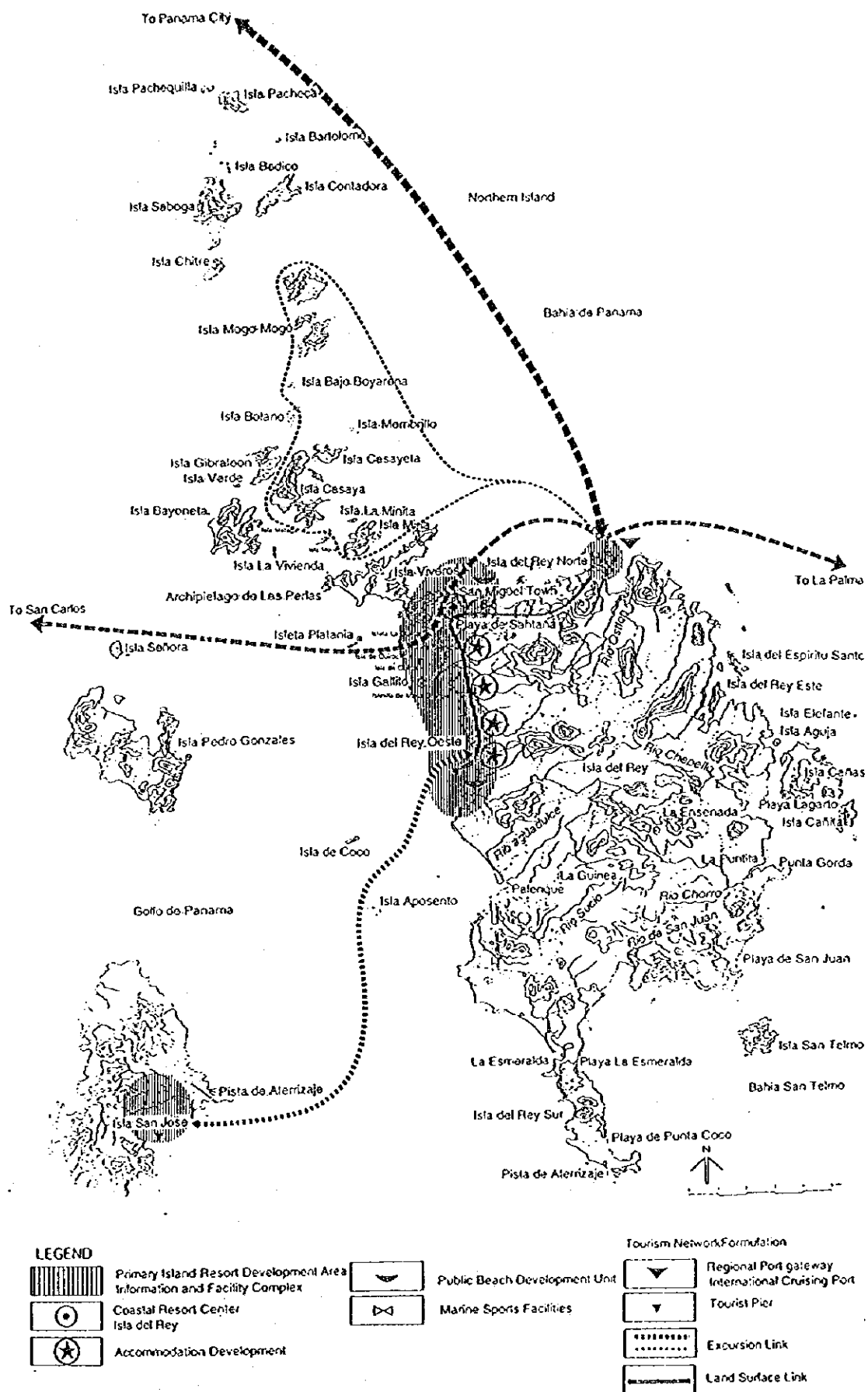
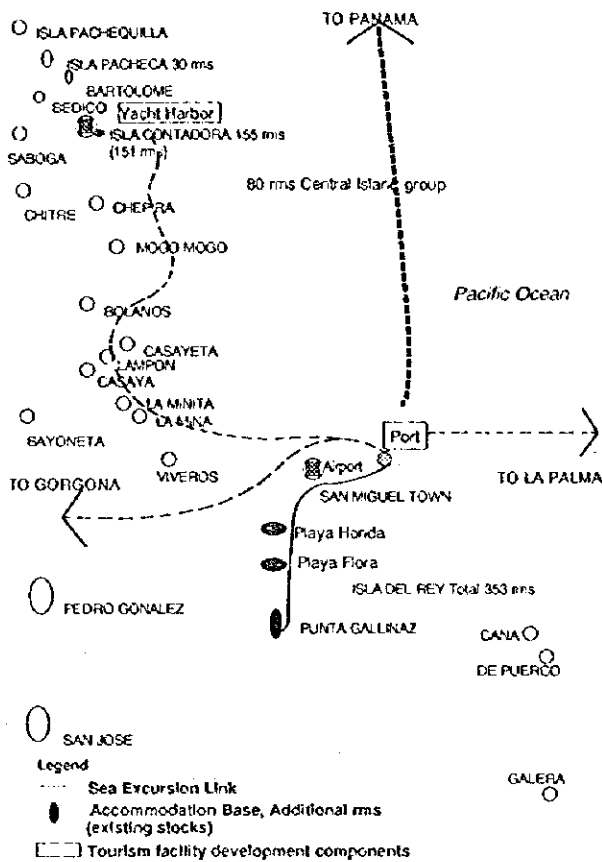


Figure 32 Las Perlas Zone development plan



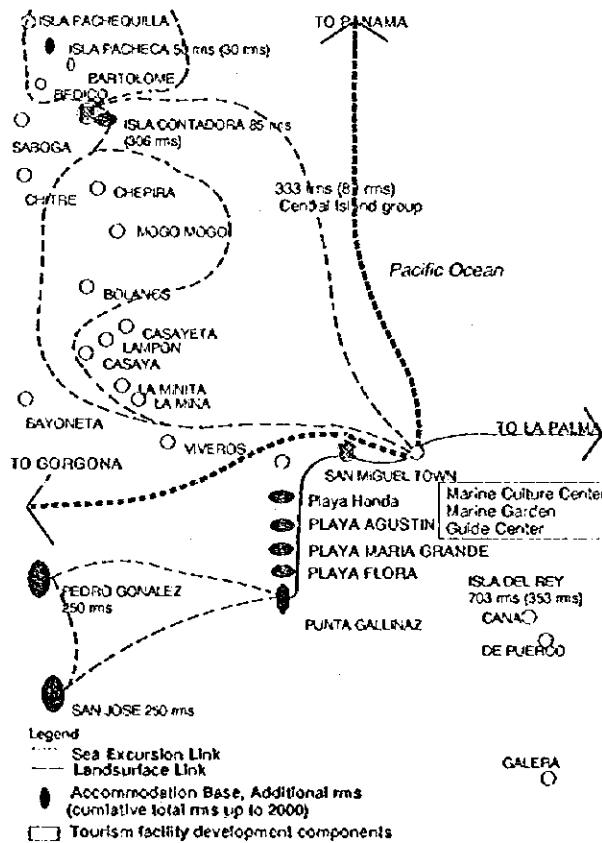
Las Perlas : Short Term Toure Pattern
 Beach Holiday in Isla Contadora/Isla del Rey
 (Panama Gateway)

Tour Theme /Geographical location/ distribution

- 1) Coastal Resort:**
Isla Contadora / *Isla del Rey (2-3 days)
- 2) Underwater Discovery:**
Isla Contadora / *Isla del Rey (2-3day)
- 3) Sea Excursion:**
*Las Perlas Archiperago (1 day)
- 4) Natural Wander:**
*Las Perlas Archiperago (1 day)
(to be surveyed for natural wonder)

* New and improved tour destination
 Regular:3-4 days
 Option to Farallon (+1 day)

Figure 5.33 Short-term development program



Las Perlas : Medium Term Tour pattern

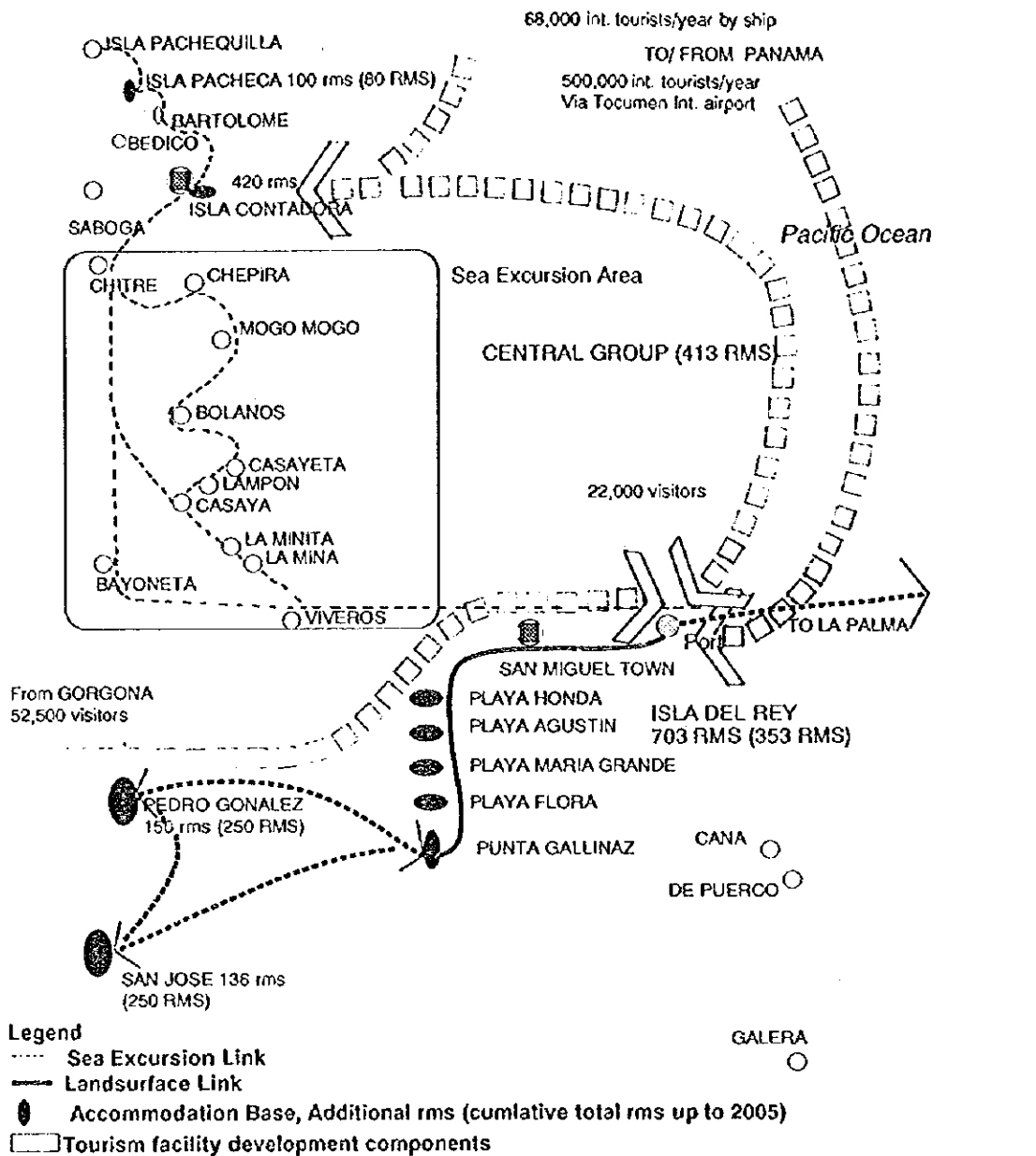
Beach Holiday in National Marin Park (Panama Gateway)

Tour Theme / Geographical location/ distribution

- 1) Coastal Resort:**
*Isla Contadora / Isla del Rey / *Isla San Jose/*Isla Pedro Gonzales / *Isla Pacheca (3-4days)
*Marine Culture Center
*Marine Garden
*Guide Center
- 2) Underwater Discovery:**
*Las Perlas Archiperago (1 day)
- 3) Sea Excursion:**
*Las Perlas Archiperago (1 day)
- 4) Natural Wander:**
*Isla del Rey
(to be surveyed for natural wonder)
- 5) Fishing:**
*Las Perlas Archiperago (1 day)
- 6) Culture**
*Isla del Rey (Marin Culture Center, Guide Center, Marine Garden)

Additional and improved tour destination
 Regular:3-4 days
 Option to Darien (+2days)
 Option to El Valle (+2 days)
 Option to Farallon (+2 days)

Figure 5.34 Medium Term Development program



Average duration of international tourists in Las Perlas Zone : 2.64 nights

Las Perlas : Long Term Tour Pattern

Beach Holiday in Marin Park (Panama Gateway)

Tour Theme / Geographical location/ distribution

1) Coastl Resort :

Isla Contadora / Isla del Rey / *Isla SanJose/
*Isla Pedro Gonzales / *Isla Pacheca (3-4days) etc.

2) Underwater Discovery:

Las Perlas Archiperago (1 day)

3) Sea Excursion:

Las Perlas Archiperago (1 day)

4) Natural Wander:

Las Perlas Archiperago (1 day)
(to be surveyed for natural wonder)

5) Fishing:

Las Perlas Archiperago (1 day)

6) Culture:

Isla del Rey:
Marine Culture Center
Marine Garden
Guide Center

*Additional and improved tour destination

Regular:4-5 days

Option to Darien (+2days)

Option to El Valle (+2 days)

Figure 5.35 Long-term development program

6. Tourism Development Projects

6. Tourism Development Projects

6.1 Development Project Formulation

This section presents the formation of tourism development projects, consisting of packaged projects, description of components, duration, development cost and responsible agencies, as well as the rating of project potential for each project in six selected development areas.

(1) Projects and Programs

The proposed projects for tourism development in the study areas have been identified for each zone as either National Programs or Regional Programs. These programs contain 118 packaged projects and 228 sub projects by phase, as shown in Tables 6.1 and 6.2 for National and Regional projects respectively. The packaged projects in various areas include development projects for principal tourist attractions, air transport, marine transport, land transport, urban facilities, electricity and telecommunication, accommodations other tourist facilities, and environmental projects.

The packaged projects and sub-projects are listed separately for each of the Study Zones in section 6.3.(3) The projects have been formulated after considering regional characteristics, and existing projects and programs.

(2) Project Cost

The total cost of the 118 projects in the Regional Programs amounts to US\$ 961 million for the public sector and US\$ 1774 million for the private sector. It is noted that the costs estimated above exclude land acquisition costs since land is to be provided by the respective implementation agencies. Tables 6.3 and 8.6 provide a summary of the estimated costs of National and Regional projects respectively. Cost estimates for each packaged project and sub-project are shown in the detailed tables for each study zone presented the section 6.3 (3).

(3) Rating of project potential

Projects have been ranked into three levels of project potential to enable a comparison of project priority. Projects are rated as "High Project Potential", "Medium Project Potential" or "Lower Project Potential" based on the extent to which each project meets the following criteria:

1) The extent to which the project serves the objectives of development:

- socioeconomic development
- increased foreign currency income
- stimulation of investment
- improvement of potential areas which will leave a good impression on tourists

Projects that serve all of the above objectives are more desirable and should be given a higher rating of project potential.

- 2) The urgency of the project considering its effect on tourism and whether it is needed to solve existing problems and/or for preventing further damage to the environment.
- 3) The practicality of the project and whether the project can be carried out smoothly without problems.
- 4) The extent to which the project will promote or support existing tourist attractions or will enhance further development of places of attraction.

The following table summarises the number of projects and programs and their respective ratings of project potential for each study zone.

Table 6.1 Rating of Project Potential by Study Zone

Development Zone	Total Number of Packaged Projects	High Project Potential XXX	Medium Project Potential XX	Lower Project Potential X
Bastimentos	26	3	18	5
Arco Seco	15	1	13	1
Farallon	19	3	12	4
Metropolitana	28	5	18	5
Portobelo	15	3	11	1
Las Perlas	15	1	12	2
Total	118	16	84	18

6.2 Phasing Plan

(1) Project Duration

Normally the most important projects should proceed immediately, however some important projects may require many years to complete. Therefore, project implementation should be scheduled in a phased manner according to the urgency, duration and readiness of the project. Implementation is based on the following framework:

- (1) Short term projects will be implemented between the years 1996 - 2000
- (2) Medium term projects will be implemented between the years 2001 - 2005
- (3) Long term projects will be implemented between the years 2006 - 2010

Table 6.2 Phasing Plan of Projects

Development area	Total Number of Projects by phase	Short term 2000	Medium term 2005	Long term 2010
Bastimentos	42	13	15	14
Arco Seco	29	9	13	7
Farallón	40	12	17	11
Metropolitana	54	18	23	13
Portobelo	32	12	13	7
Las Perlas	31	13	11	7
Total	228	77	92	59