

Representational Cooperation Agency (RCA)

Central Institute of Tourism (CIT)

Ministry of Tourism of Panama

The Study

of

# Tourism Development in the Coastal Area of the Republic of Panama

Final Report

October 1995

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**Japan International Cooperation Agency (JICA)**

**Panamanian Institute of Tourism (IPAT)**

**The Republic of Panama**

**The Study  
of**

**Tourism Development  
in the Coastal Area**

**of the Republic of Panama**

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## Preface

In response to the request of the Government of the Republic of Panama, the Government of Japan decided to conduct The Study of Tourism Development in the Coastal Area of the Republic of Panama and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent a study team to Panama three times between March 1994 and July 1995. The study Team was headed by Mr. Takeshi Yoshida and composed of members of Yachiyo Engineering Co., Ltd. and Pacific Consultants International.

The team held discussions with the officials concerned of the Government of Panama, and conducted field surveys at the study area. After the team returned to Japan, further studies were made and the present report was prepared.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of the Republic of Panama for their close cooperation extended to the team.

October 1995



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Kimio Fujita  
President

Japan International Cooperation Agency

October 1995

Mr. Kimio Fujita  
President  
Japan International Cooperation Agency  
Tokyo, Japan

Dear Sir,

### Letter of Transmittal

We are pleased to submit to you the report of The Study of Tourism Development in the Coastal Area of the Republic of Panama. The report includes the advises and suggestions of the authorities concerned of the Government of Japan and your Agency as well as the comments made by the Panamanian Institute of Tourism and other authorities concerned in the Republic of Panama. The report consist of a Summary and a Main Report.

The report deals with the present and future conditions of tourism development in the coastal and waterfront areas of Panama. There were three objectives: one of which was to prepare a Long Term Development Plan for the coastal area; another to carry out a Feasibility Study on priority projects in selected zones of the Study area; and the last one to prepare a set of institutional arrangement proposals for the purpose of preventing disorderly tourism development.

Panama has many and various natural and cultural resources. The Study proposes a target of two million foreign visitors to Panama in 2010. To achieve this target, the Study proposed development plans for six zones, a tourism promotion plan and an institutional development plan. The social and economic benefits to be realized by the implementation of the Development Plan include high rate of return, the increase of employment opportunities, and foreign exchange earnings. Therefore, it is strongly recommended that the Long Term Development Plan be adopted starting with the implementation of the six selected projects.

We wish to take this opportunity to express our sincere gratitude to your Agency, and the Ministry of Foreign Affairs. We also wish to express our deep gratitude to the Panamanian Institute of Tourism and the Governmental Agencies concerned in the Republic of Panama for the close cooperation and assistance extended to us during the Study. We hope this report will contribute to the development of the Republic of Panama.

Very truly yours,



Takeshi Yoshida  
Team Leader  
The Study of  
Tourism Development  
in the Coastal Area  
of the Republic of Panama



# The Study of Tourism Development in the Coastal Area of the Republic of Panama

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# I.INTRODUCTION

## **I. INTRODUCTION**

### **1. Study Development**

In response to the request of the Government of the Republic of Panama, the Government of Japan decided to conduct the study of Tourism Development in the Coastal Area of Panama (hereinafter refer as "the Study").

Accordingly, the Japan International Cooperation Agency (hereinafter referred as "JICA"), the official agency responsible for the implementation of the technical cooperation programs on behalf of the Government of Japan, undertook to conduct the Study.

JICA sent a preparatory Study team to Panama, headed by Mr. Teiji Iwasaki in December of 1993 in order to conclude the implementing arrangements as well as the scope of work for the study, which were subsequently agreed upon between the Panamanian Institute of Tourism (hereinafter referred as "IPAT"), and JICA.

## 2. Objectives and The Study Area

The objectives of the Study are as follows:

- To prepare the Long Term Tourism Development Plan for the Coastal Area of the Republic of Panama with the target year of 2010.
- To carry out a Feasibility Study on priority projects in selected zones of the Study Area.
- To prepare a set of institutional arrangement proposals for the purpose of preventing progress of disorderly tourism development.

### The Study Area

The Study Area consists of coastal areas and waterfront areas including the main study zones and survey sites described below and mapped out in Figure 1.

#### Study Zones:

Study Zone 1	Bastimentos
Study Zone 2	Arco Seco
Study Zone 3	Farallon
Study Zone 4	Metropolitana and Canal Reverted Area (Metropolitana)
Study Zone 5	Portobelo
Study Zone 6	Las Perlas

#### Survey Sites:

Survey Site 1	Coiba National Park (Coiba)
Survey Site 2	Escudo de Veraguas Island
Survey Site 3	The area of Las Lajas Beach and Horconchitos(Horconchitos)

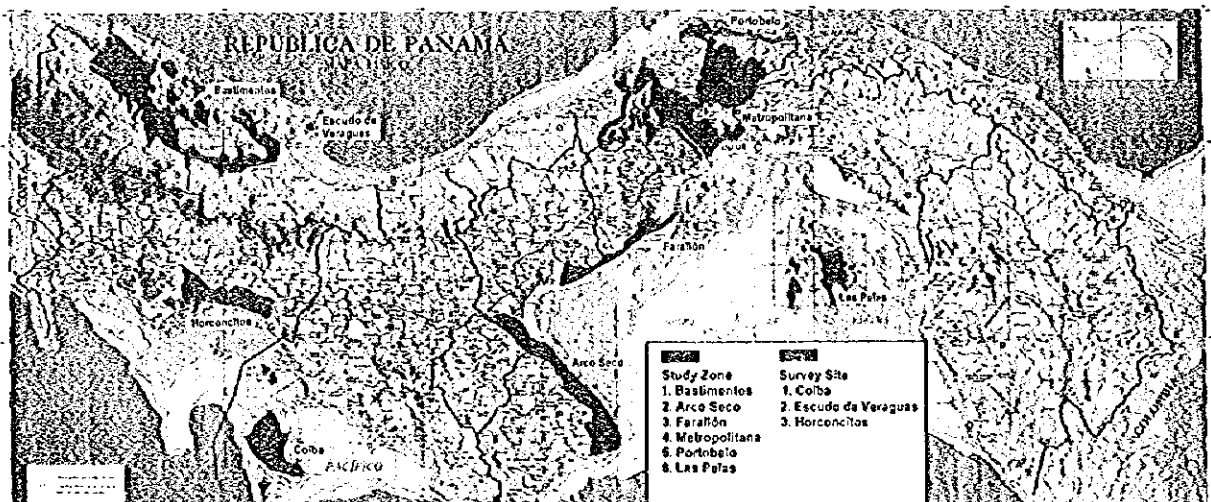


Figure 1 Location of the Study Area

### 3. Study Organization

To conduct the Study, JICA has organized both the Study Team, headed by Mr. Takeshi Yoshida and the Advisory Committee, chaired by Mr. Eiichi Kato (Predecessor: Mr. Teiji Iwasaki). The government of Panama has formed the Counterpart Team, headed by Ms. Gloria C. de Pérez (Predecessor: Mr. Carlos Guerra) under the Panamanian Institute of Tourism (IPAT). IPAT has organized the Steering Committee to facilitate the progress of the Study.

#### Study Organization

##### JICA Study Team

Mr. Takeshi Yoshida	Team Leader
Mr. Noboru Ikenishi	Deputy Leader/ Land Use Plan
Mr. Masao Kuwabara	Tourism Institutional System
Mr. Kazuoki Matsuyoshi	Tourism Promotion Plan
Mr. Yusuke Harada	Tourism Demand Forecast
Mr. Tomokazu Oyagi*	Tourism Demand Forecast
Mr. Goro Hirata	Tourism Facility Plan
Mr. Toshihiro Hotta	Transport Infrastructure Plan
Mr. Naoyuki Minami	Urban Infrastructure Plan
Mr. Masayuki Tamai	Electricity/Telecommunication Plan
Mr. Yasutaka Nagai	Tourism Resources/Landscape Plan
Mr. Satoru Nishino	Coastal Area Development Plan
Mr. Akitoshi Iio	Environmental Analysis
Ms. Chizuko Ihara	Economic/Financial Analysis
Mr. Takeharu Koba	Project Administrator

##### JICA Advisory Committee

Mr. Eiichi Kato	Chairperson
Mr. Teiji Iwasaki*	Chairperson
Mr. Shunji Uemura	Member
Mr. Koichi Katori	Member

##### JICA Coordinator

Mr. Toshihisa Hasegawa*
Mr. Toru Naito

##### IPAT Counterpart Team

Ms. Gloria C. de Pérez	Chief of Counterpart.
Mr. Carlos Guerra*	Chief of Counterpart
Ms. Denisse Guillén	Administrative Coordinator
Ms. Daysi Trujillo*	Administrative Coordinator
Ms. María Correa	Legal Adviser
Ms. Marilyn Díaz	Tourism Institutional Development
Ms. Cecilia Pérez	Tourism Promotion Plan
Ms. Aris Lezcano	Tourism Promotion Plan
Mr. Jaime Cornejo	Tourism Facility Plan
Mr. Evans Canto	Tourism Facility Plan
Mr. Gustavo Echevers	Economic/Financial Analysis
Ms. Nalis Madrid	Economic/Financial Analysis
Mr. Denis Couto	Environmental Analysis
Ms. Anabella Andrade	Environmental Analysis
Mr. Carlos Rodríguez	Transport Infrastructure Plan
Ms. Anayansi Mendieta*	Transport Infrastructure Plan
Mr. Juan Stanziola	Tourism Demand

##### Steering Committee (Panama Side)

Mr. Alfredo Broce	Ministry of Planning and Economic Policy
Mr. Mateo Castellero	Ministry of Planning and Economic Policy
Mr. Juan Hernández	Ministry of Government and Justice
Ms. Matilde de Altuna	Ministry of Treasury
Mr. Darfo Delgado	Ministry of Health
Mr. Leonardo Barnett	Ministry of Health
Ms. Vielka de González	Ministry of Public Works
Mr. Luis Bustos	Ministry of Housing
Mr. Oscar Rendoll	Hydraulic Resources and Electricity Institute
Mr. Ricardo Silvera	National Institute of Water and Drainage
Mr. Plinio A. Terreros	National Institute of Telecommunications
Ms. Leticia de Polo	National Institute of Natural Renewable Resources
Ms. Ana de Reyes	National Port Authority
Mr. Luis Rossi	Department of Civil Aviation
Ms. Montserrat Burillo	Authority of the Interoceanic Region
Mr. Ariel Espino	Panamanian Institute of Culture
Mr. Tomás Vásquez	Panamanian Municipality

##### IPAT General Manager

Mr. Pedro Campagnani
Mr. Anel Béliz*

\* : Predecessor

#### 4. Profile of Panama

##### Past and Present

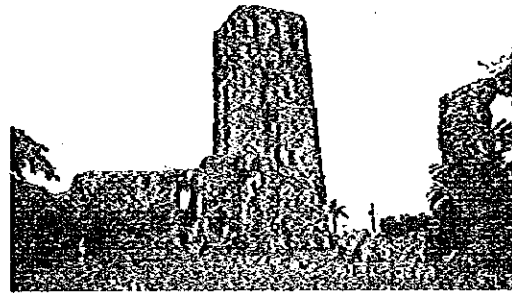
The first visitor to Panama from the European continent was Rodrigo Galvan de Bastidas in 1501. In the following year Christopher Columbus visited the Caribbean coast of Panama during his fourth and final voyage. In 1513 Balboa succeeded in crossing the isthmus and "discovered" the Pacific Ocean. Pizarro, the famous conqueror of the Inca empire, left Panama for his ambitious trip to Peru. After the conquest of the Incas, many of the treasures of Peru were carried to Spain via "Camino Real" and "Camino de Cruces" in the isthmus of Panama. The forts and the custom house of that time remain in Portobelo. English pirates attacked the ports of Panama several times and Morgan, the infamous pirate, destroyed old Panama city. Since then the ruins of the old city have lain as "Panama Viejo." The old compound "Casco Viejo" was founded in 1673.

The Republic of Panama is a relatively young country, established in 1903 to coincide with the construction of the Panama Canal. The construction of the Panama canal commenced in 1880 as the second challenge of Ferdinand de Lesseps, the great builder of the Suez canal. In spite of his effort and enthusiasm, the French canal company was eventually bankrupted due to problems such as the huge volume of rock and soil excavation, flooding of the Chagres river, the spread of yellow fever and malaria, etc.

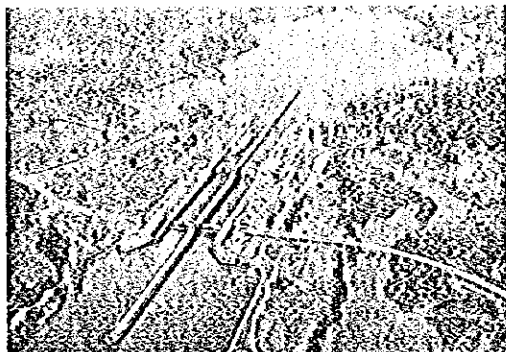
The United States, who had been interested in the isthmus of Panama, supported the independence of Panama and the restarted the construction of the canal in 1904. The Canal was opened for world wide ship transit and global trade in 1914. The new canal treaty was signed in 1977 and the Panama Canal Company was changed to the Panama Canal Commission.



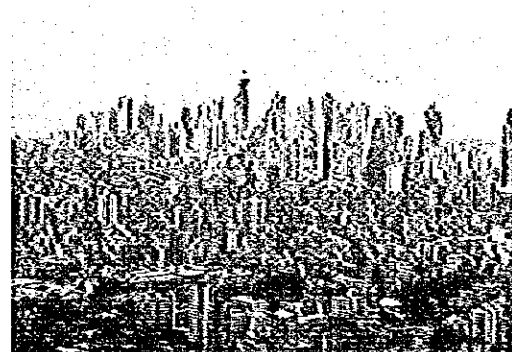
Historical Town Portobelo: Fort San Geronimo



Old Panama Ruin



Miraflores Locks the Panama Canal



Skyscrapers in Panama City



Panama has enjoyed her geographical position as a crossroads of the world. In 1948 a free trade zone was established in Colón city and it has grown into the largest free zone in the American continent. In the 1970's Panama city commenced activities as an international banking center.

## Nature and People

### Climate

The Republic of Panama is located near the equator between the Caribbean Sea and the Pacific Ocean. Therefore, it is in the oceanic tropical zone except for the western mountainous area which is in the temperate zone. It has a dry season (January-April) and a rainy season (May-December) and in most of Panama about 90% of the total annual precipitation falls during the rainy season. However, along the Caribbean Coast the temperature is high with much rainfall all year long. The average temperature is about 27°C , which is almost constant year round. The annual average humidity in the tourist resorts within the study area reaches about 70%

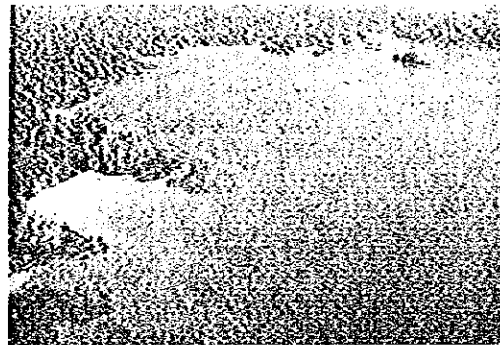
During the dry season the number of rainy days with more than 10 mm per day is 3 days or less per month except at Bastimentos. In Arco Seco zone, Farallon zone, and the Pacific coast (that corresponds to the Metropolitan zone), the number of rainy days is 50 days or less per year. During the dry season the north wind is dominant and is especially strong in the Farallon Zone(Anton). Wind strengths are much lower during the rainy season.

### Topography

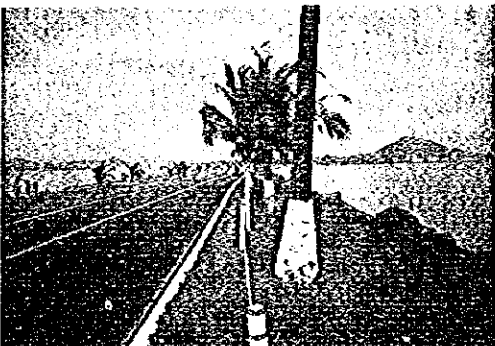
The total area of Panama is 77,512km<sup>2</sup> fronting to the two oceans. High mountain ranges extend east to west along the country and these mountains divide the main watershed of the Caribbean and Pacific.



Transparent Blue Water in Iguana Island



Natural Harbor in Las Perlas Archipelago



Causeway in the Gate of the Panama Canal



Coronado Beach in Farallon Zone

### Plants and Animals

As Panama is in the rain forest zone and the mountains are located in the center, there are abundant kinds of plants and animals including beautiful, interesting or precious species such as mangrove forest, tropical flowers and trees, coral reefs, manatee, turtles, golden frogs, birds etc.

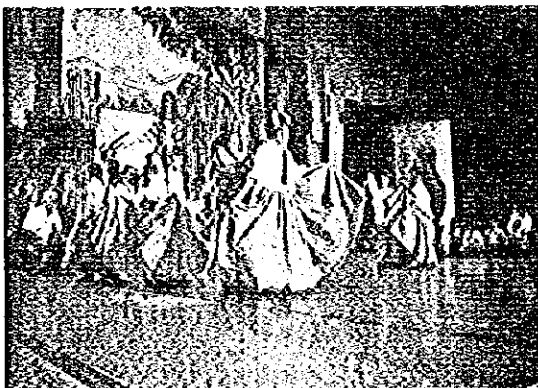
### People and Culture

Panamanian culture and folklore is represented and affected by three main different cultures, Native Americans of several tribes who live in this region, immigrants who are from Europe and others from the West Indies. Panama has a proportion of native American population whose size and distribution of settlements varied depending on geographical condition and climate.

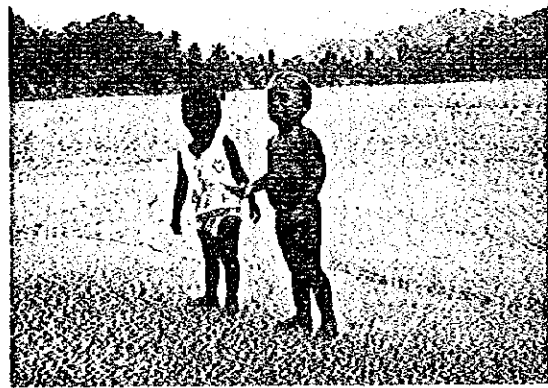
Festivals are evidence of the valuable presence of characteristics of cultural and folklore aspects. The Arco Seco Study Area has been influenced by the Spanish Colónization since the 16th century. Folk music, dance and costumes will entertain domestic as well as international tourists.

### Population

According to the census data in 1990 the total population of Panama was 2,329,329 an increase of 524,042 persons compared with the 1980 census. The average population growth rate between 1980 and 1990 was 2.58% per year.



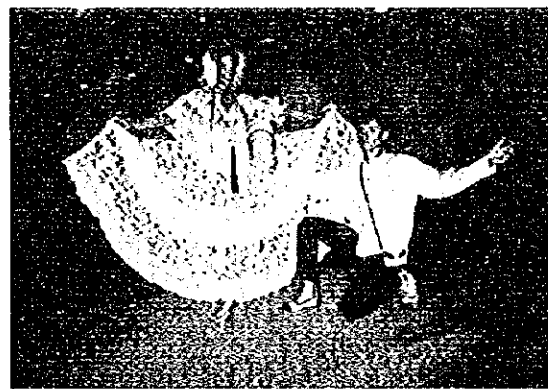
Children's Folklore Dance



Children in Portobelo



Children of Ngobe Indian in Bocas Del Toro Archipelago



A Couple with Traditional Dress "Pollera"

The Province of Panama has the largest population with 1,072,000 in 1990. This figure represents 46% of the population of the whole country. In this province, urban population is 853,000 (approximately 80% of the total province) and rural population is 219,000 (20%).

The average population growth changes province by province. The largest population growth rate in the past 10 years is seen in Bocas del Toro where the average growth rate has been 5.73%.

## **Economy**

### **Gross Domestic Product**

During the 1970s, Panama experienced sustained economic growth and the share of the service sector of the GDP increased. During the period from 1980 to 1987, Panama's economy experienced modest growth. Due to the effect of the Panamanian crisis 1987-1989, the real GDP significantly declined in 1988, however there has been continuous growth since 1989. The growth rates of construction drastically declined, then sharply recovered and continue to increase. The service sectors have also experienced favorable growth since 1990. Consumer prices in these 10 years have been constant.

### **Trade**

Tourism revenues amounted to 22,337 thousand Balboas which was 46.9% of the total F.O.B. in 1992.

### **Employment**

The employment generated by tourism varies widely among the sectors: direct employment such as hotels, restaurants, transport operations and souvenir shops, indirect employment that is stimulated by tourist expenditure such as manufacturing or primary sector that supply goods and services to tourism sector, and investment related employment such as construction of hotels and infrastructure development.

In 1991, 26,406 employees were hired in "Hotels & Restaurants", representing 3.7% of the total employment.

Almost 50% of employment is concentrated in Panama Province, followed by 16% in Chiriquí Province. The share of the tertiary sector was high in Panama and Colón Provinces, while the share of the primary sector was very high in Darién, Bocas del Toro and Veraguas Provinces. Regarding the employment in "Hotels & Restaurants" the concentration in Panama Province was even more evident.

The unemployment rate sharply increased to 16.3% in 1988 due to the crisis and has not yet recovered.

The number of employees whose income are less than 175 Balboas per month including employees without income amounted to 358,737 persons or 50.5% of total employees in 1990.

### **Investment**

The investment drastically declined from 26.8% in 1980 to 3.8% of the total domestic demand in 1989 and the share of public investment of the fixed capital formation declined from 40.7% in 1980 to 13.2% in 1990.

The investment budget of the Central Government for the year 1994 was 888,502 thousand Balboas.

The investment budget of IPAT in 1994 has been approved as shown below, however, Ministry of Planning Economic Policy MIPPE required an adjustment of IPAT's budget in July 1994. All the investment budget of IPAT was deleted except the budget for urban works in the tourist center in Isla Colón-Bocas del Toro that was reduced to 295,000 Balboas (50,000 Balboas decrease).

## **II. LONG TERM TOURISM DEVELOPMENT PLAN**

# **1. Planning Condition**

## **II. LONG TERM TOURISM DEVELOPMENT PLAN**

### **1. Planning Conditions**

#### **1.1 Tourism Development Potential**

##### **1.1.1 Inventory of Tourism Resources in Panama**

The IPAT (Instituto Panameño de Turismo) compiled a Database of Panama's potential tourism resources, following the completion of the Master Plan Study that was carried out during 1992 - 1993.

The 1,398 areas that the Database lists, have been broken down in to five groups (ref. Table 1-1) namely, Natural, Cultural and Historical, Folklore, Industrial and Technical and Event Areas. Among these, Natural Resources accounts for 75% of the total.

For the JICA Study, through out the country, major sea shore districts were reviewed, and the five categories of IPAT were changed to Coastal, Other Natural and Cultural. These are shown in the right column of Table 1.1.

Of these 3 groups, the 678 areas that comprise the Coastal resources is the largest with 48.5% of the total: followed by the 393 Cultural Resources (28.1%) and 327 Other Natural resources (23.4%). Nearly half of Panama's tourism resources belong to the coastal type. However, some fishing spots, namely the Lago Gatun inland fishing lake, originally categorized as Coastal Resources are listed as exceptions. Also, half of the Flora, Fauna and Parks that are categorized as Other Natural resources, can also be listed as Coastal.

##### **1.1.2 Inventory of Panama's Coastal Tourism Resources**

In Table 1.2 shown below, based on IPAT Database, the distribution of the country's tourist resources are organized in terms of providence. Panama province has the country's highest number of tourism resources with 337 locations. San Blas is second with 290, and the Coelé province has the fewest. Of the Coastal resources, San Blas has 262 tourism resources, followed by Panama with 172, and in Other Natural resources, Panama has 85 attractions. In the cultural category, Panama leads with 80.

Similarly in Table 1.3, the Coastal resources together with their respective coastal length according to province.

Panama's coastal length consists of 1,287.7 Km facing the Caribbean Sea and 1,700.6 Km facing the Pacific Ocean, producing a total length of 2,988 Km. Of all the provinces, Bocas del Toro province has the longest coastal length facing the Caribbean Sea with 488.3 Km. On the Pacific Ocean side, Panama coastal length is the longest with 406.3 Km. Veraguas is the only province which is surrounded by both the Pacific Ocean and the Caribbean Sea.

The Coastal resources are broken down into 318 islands, followed by 220 Beaches, 54 Fishing Spots and 41 Coral Reefs. Areas worth mentioning are San Blas with 238 islands, Panama with 101 Beaches, Bocas del Toro with 16 Fishing Spots and Panama with 15 Coral Reefs.

**Table 1.1 Classification of Tourism Attractions**

IPAT Classification		Numbers		JICA
1. Normal	1.3.1 Beach		220	678 Coastal (48.5%)
	1.3.3 Coral reef		41	
	1.3.6 Island		318	
	1.3.2 Cliff	7	45	
	1.3.4 Islet	4		
	1.3.8 Canal	6		
	1.3.9 Peninsula	2		
	1.3.10 Bay	19		
	1.3.11 Gulf	1		
	1.3.12 Inlet	3		
	1.3.13 Point	3		
	1.9 Fishing Spot			54
	1.1 Mountain		23	
	1.2 Plain Land		11	
	1.4 Lake, Lagoon		19	
	1.5 River		56	
	1.6 Falls		24	
	1.7 Cave		6	
	1.8 Flora, Fauna		98	
1.10 Road		46		
1.11 Hot Spring		13		
1.12 Park		31		
2. Cultural, Historical			83	393 Cultural (28.1%)
3. Folklore			140	
4. Industrial, Technical			79	
5. Event			91	
			1398	

**Table 1.2 Tourism Attraction by Province**

Provinces	Coastal	Other Natural	Cultural	Total
Bocas del Toro	48.5	41	30.5	120
Coclé	11	28	18	57
Colón	72	10	40	122
Chiriquí	19.5	48	38.5	106
Darién	12	40	34	86
Herrera	4	19	42	65
Los Santos	34	23	64	121
Panama	172	85	80	337
Veraguas	43	32	19	94
San Blas	262	1	27	290
Total	678	327	393	1,398

(Note: The resources of Bocas del Toro and Chiriquí are counted as 0.5 and are divided between each province.)



**Table 1.3 Breakdown of Coastal Attractions by Province**

Province	Length of coast (km)		Breakdown of Coastal Attractions				
	Caribbean Sea	Pacific Ocean	1.3.1 Beach	1.3.3 Coral Reef	1.3.6 Island	1.9 Fishing	1.3.X Others
Bocas del Toro	488.3	-	17	7	3	15.5	6
Coclé	-	93.2	10	-	1	-	-
Colón	371.2	-	33	10	20	4	5
Chiriquí	-	284.3	11	-	2	4.5	3
Darién	-	345.3	1	-	4	4	3
Herrera	-	17.5	2	-	-	1	1
Los Santos	-	200.3	26	1	3	4	-
Panamá	-	406.3	101	15	40	14	2
Veraguas	42.4	353.5	19	8	8	7	1
San Blas	385.8	-	-	-	238	-	24
Total	1,287.7	1,700.6	220	41	318	54	45

### 1.1.3 Major Tourist Attraction in Panama

In the IPAT Database, the 1,398 tourist attraction are ranked on a scale of between I - IV. In Table 1.4, with the least important rank I omitted, the remaining tourist attractions are listed according to their resources and provinces. There are two places in the country that can be classified as IV, which have the potential to attract international tourists. In the whole nation, there are 8 tourist attractions ranked III and 100 ranked as II. A total of 110 places, classified between II - IV comprise Panama's major tourist attractions.

**Table 1.4 Principal Tourism Attractions by Province**

Province	Coastal			Other Natural			Cultural			Total		
	II	III	IV	II	III	IV	II	III	IV	II	III	IV
Bocas del Toro	9	-	-	2.5	-	-	3	-	-	14.5	-	-
Coclé	-	-	-	5	1	-	2	-	-	7	1	-
Colón	1	-	-	1	-	-	2	-	1	4	-	1
Chiriquí	-	-	-	13.5	-	-	10	-	-	23.5	-	-
Darién	1	1	-	3	-	-	-	-	-	4	1	-
Herrera	-	-	-	1	-	-	-	-	-	1	-	-
Los Santos	-	-	-	-	-	-	1	1	-	1	1	-
Panamá	15	1	-	10	-	-	8	2	1	33	3	1
Veraguas	1	-	-	1	-	-	-	-	-	2	-	-
San Blas	8	1	-	-	-	-	2	1	-	10	2	-
Total	35	3	-	37	1	-	28	4	2	100	8	2

### 1.1.4 Tourism Resources of Each Study Area

#### (1) Bastimentos

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 curve to create a bay in with a lot of islands creating some beautiful scenery. According to the Guide Book, there are 9 inlets, 51 islets and 200 rocky isles in the Province. Among the 94 Tourism Resources listed in the IPAT 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 tourist resources in the province are found in the Colón (with 37) and Bastimentos islands (with 26). Two National Parks are also situated in this area, for example, the Parque Nacional Marino Isla Bastimentos and Bosque Protector Palo Seco.

Especially important are the 14 places listed with a rank II in the IPAT Database. These consist of 3 areas in the Colón Area, 2 on Bastimentos Island, 1 in Chiriquí and 8 on the small island (4.5 Km<sup>2</sup>) of Escudo de Veraguas.

## (2) Arco Seco

This area 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 area is convenient for road and serial transportation from Panama city. Also, Arco Seco's (Dry Arch) climate is dry, and compared with other areas this results in a long tourist season. There are 149 tourism resources (38 Coastal, 27 Other Natural and 84 Cultural). The Cultural resources in this region exist in higher numbers when compared to other areas studied. The Carnivals, Pilgrimages and Easter celebrations have also attracted a lot of domestic tourists. Although this is the second largest area for accommodation after the capitol 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 three 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 Km<sup>2</sup> 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 - III, 0.53 Km<sup>2</sup>
- Festival de la Pollera, Rank I - III

To manage the tourist resources efficiently, the following types of tourist development can be 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 & Pedasí and the richness in the district culture, displayed in Plaza's and museums, are among the areas tourist resources.
- \* Traditional ceramic and Pollera Embroidery, as used to promote the "My Name is Panama" poster IPAT campaign.
- \* The traditional dance and music.
- \* The Pacific Island of Isla Iguana a paradise of dark blue coral reefs, white sand Beaches and sea birds.

### **(3) Farallón**

This area under study is facing the Pacific Ocean and has ocean frontage 75 Km in length. Situated less than 2 hour from the capital urban area of Panama City and beyond Portobelo which faces the Caribbean Sea, this area contains most of the tourist resources in the country.

On this coastal frontage 19 new towns were built during the booming country house development of the 1960's. Further, in July 1973, because of Law No.1, Farallón and Punta Chame were designated special tourist zones for urban development. Since this development started some 30 years ago., 17,000 districts consisting of 2,535 ha. were assembled, but only 2,100 country houses were built (12.4% of the area). At present, with the existing hotels, motels and cabins only 193 renting rooms are available. The problem that this has created is an unbuild-built area of approximately 15,000 blocks and the existing service facilities for the new towns are not sufficient. San Carlos has a small tourist center and is inundated with tourists on weekends but during the week it is quiet.

The eastern part of this zone belongs to Arco Seco's climate zone and the months from December to April are the best. During this period, the week ends receive up to 20,000 tourists. The beach is relatively less attractive due to its dark color. Therefore, further development in this area should be done on improving existing service facilities, and not on the development of the natural environment.

According to IPAT, there are a total of 20 tourism resources in this area, comprising 17 Beach and 3 Other natural. As well, the evaluation made by IPAT shows that there are lacking areas with Rank II, but the following areas with potential were selected:

- Playa Blanca, Rank I - III
- Juan Hombron, Farallón, Santa Clara, Coronado, Nueva Gorgona, Rank I - II

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

- \* Improvement of the regional infra-structure. The present road pattern consists of roads to coastal towns from the main national highway, forming a comb pattern. Today's national roadways stretch to the coast line and end in comb patterns. In the future, national coastal roadways should parallel, creating a ladder pattern.
- \* The creation of an amenity core. One of the reasons for today's diffused land use and life without identity is that there are no central function and landscape. Both soft and hard regional symbols are needed.
- \* Together with the Canal area changes, restructuring of the capital urban area will be done in the 21st Century. The possibility of multiple-purpose land use should be considered; not only for tourist resorts but shared residences for medical rehabilitation, etc.

### **(4) Metropolitana**

As the "gateway" to Panama for foreign visitors, Panama city's population has almost reached 1 million people. Being the origin of the Nation's most important tourist industry has resulted in

80% of the nations accommodation facilities being built, there, but its capacity as a tourist attraction has not yet been fully developed.

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

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

- \* 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 the 21st Century international cooperation, a large scale out door museum and/or theme park could be proposed to fully utilize the Canal Zone.

#### **(5) Portobelo**

The region 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 region has been developed as a tourist area for short term occupancy, with in easy access to the capital urban area. The Grande Island has become the center with 4 hotels and 300 country houses. The possibility exists for an access road to the East of Sabanita, which in conjunction with the Panama to Colón Road will shorten the traveling time.

According to the IPAT Database, there are a total of 80 tourism resources (54 Natural, 26 Cultural). Of the 54 Natural resources, there are marine and Coastal tourism resources which can be further divided into the following items: 18 Beaches, 19 Islands, 6 Coral Reefs and 3 Fishing Spots. There are 18 historical structures in the Portobelo Region and Grande Island, which make up 80% of the total resources in this area.

The three most valuable resources which have a Rank II in the IPAT database are:

- Parque Nacional Portobelo, a reserve area of 359.29 Km<sup>2</sup>
- Procession en Honor al Cristo Negro
- Fiestas del Cristo Negro

#### **(6) Las Perlas**

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 island is the largest (234 km<sup>2</sup>) followed by San Jose and Pedro Gonzales islands. Del Rey is the second largest island, next to Coiba island in the Chiriquí Province.

According to the IPAT Database, there are a total of 136 tourist resources which are all coastal. Among these are 83 Beaches, 33 Islands, 14 Coral Reefs and 4 Fishing Spots of excellent oceanic and coastal quality. There are 52 resources in the northern Island Group, 38 in the Central Islands group such as Viveros Island and 31 concentrated in Del Rey Island. There are 12 notable resources at Rank II in the estimation of IPAT and 8 of them located on the Contadora Island.

## **(7) Horconcos**

The length of the Chiriquí Province coast stretches for 284.3 Km along the Pacific Ocean and its natural resources divided into 3 areas - Western, Central and Eastern consisting of 12, 5 and 7 tourist resources, respectively. The total number of tourist resources in this area is 32, comprising of 11 Beaches, 6 Other Coastal and 15 Cultural resources. The three places that are evaluated with rank II are:

- Oleoducto Transistmico: Petroterminales de Panama
- Vuelta Ciclista Internacional
- Feria Internacional de San Jose de David

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

- \* Puerto Armuelles  
The guided tours of the famous "Puerto Armuelle" harbor that is known for its deep sea bed and for its exports of "Chiquita Banana" through the nostalgic "Banana Railroad". The harbor also plays host to the endless supplies of Alaska crude oil brought by giant oil tankers.
- \* Playa Las Lajas  
Swimming along the Playa Las Lajas coast facing the Pacific Ocean.
- \* Muertos  
Experiencing the mysterious legend of the Bay and Island of Death.
- \* David City  
Tours of the central city of the Chiriquí plain that has the biggest granary in Panama. (David city is the base for the Chiriquí coast and Volcan Baru tourism).
- \* Land of Marine and Farm Products  
Rich supplies of fresh marine and farm gourmet foods as well as field and mountain products.
- \* Paso Canoa  
Tours to the borden town of Paso Canoa, known as the Western Gate of the Pan American Highway.

## **(8) Coiba**

Veraguas is the only province that faces both to the Caribbean Sea and the Pacific Ocean. The coastal length along the Pacific Ocean is 353.5 km. Coiba island, situated on the Pacific Ocean side of Veraguas, is the biggest island in Panama with a surface area of 493 km<sup>2</sup>. The total number of tourism resources based on the IPAT Database is 54 of which most are coastal ones. There are 2 resources with a Rank II:

- \* Parque Nacional Coiba. This reserve including the ocean area, consists of 2,700 km<sup>2</sup>.
- \* Fishing place in Coiba Island

**(9) Escudo de Veraguas**

Large coral reef and beach, with many exotic plants, animals and fishing spots, where tourist can enjoy an isolated vacation.

**1.1.5 National Parks and Conservation Areas**

The Republic of Panama is located at the center of the American continent having privileged geological position that shelters a rich and abundant natural patrimony that turns it into one of the most important parts of the world. In addition, there exist unique flora and fauna with scientific interest.

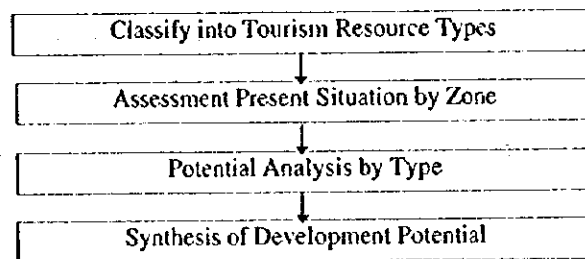
The National Institute of Natural Renewable Resources (INRENARE) and its directorate has established 13 areas categorized as National Parks, seven areas categorized as Forest Reserve, 8 areas categorized as Wild Life Shelter, 2 areas categorized as Protected forest, 2 areas categorized as Hydrological Reserve, 1 area categorized as Natural Monument, and 1 area categorized as Recreational Park.

It is estimated that the total area of the National Parks and conservation areas is 3,010,097 hectares, in other words, is dominant 40 % of the National land.

**1.1.6 Tourism Development Potential by Zone**

**(1) Method of Development Potential Study**

The Tourism Development Potential by Zone has been carried out by classifying resources according to type, assessing and analyzing the present situation and potential and synthesizing the development potential.



**Figure 1.1 Flow of Study Method**

The methodology is described in more detail below.

**(2) Tourism Resource Type and Development Level**

**1) Tourism Resource Type**

The tourism resources are classified into the following five types considering their most important characteristics.

- Island type
- Coastal type
- Urban type
- Mountain type
- River/Lake type

The tourism resources available within the 9 study areas are classified according to type in Table 1.6. Three additional study areas (San Blas, Darién and La Araistad) have also been considered and resource types are shown in the table.

As the mountain type and the river/lake type are minor for the study zones in the coastal areas of Panama, these two types are not included in the diagnosis.

## 2) Development Level

Due to data availability the existing development level is classified according to the number of rooms available for accommodation as an accumulative indication of tourism development, instead of considering the number of tourists.

**Table 1.5 Development Level**

Existing Development	Development	Accommodation (rooms)
Level - 0	No	0
Level - 1	Small	1 ~ 99
Level - 2	Medium	100 ~ 999
Level - 3	Large	1000 ~

### a. Island Type Areas

Isla Contadora has the highest level of development with 15 rooms of high class level among the island types. [Level 2].

Isla Colón, Isla Taboga, Isla Grande, San Blas each have about 50 low class rooms, respectively. [Level 1].

In addition, the following islands were selected for the Study of potential development. [Level 0]:

- Isla Bastimentos
- Isla Del Rey, Isla San Jose, Isla Pedro Gonzales, Isla chapera, Isla Bayoneta, en Las Perlas
- Isla Coiba
- Isla Escudo de Veraguas.

### b. Coastal Type Areas

The largest development is in Farallón (Anton ~ Chame) with 631 rooms; half of them are of the high class, rooms but the area is still under development.

Santa Maria ~ Los Santos in the north part of Arco Seco zone has about 200 low class rooms, and Guarare ~ Las Tablas in middle Arco Seco zone has about 50 low class rooms. There are also about 50 low class rooms in Portobelo.

### **c. Urban Type Areas**

The most developed area is Metropolitana zone (Panama City, Colón City, etc.) with about 6,000 rooms; 25% of which are high class, 25% medium class, and 50% low class.

There are 1,280 rooms in Chiriquí and Coiba represented by David City.

Arco Seco zone, where Chitré and Los Santos city are located, has 657 rooms.

### **(3) Land Conditions in the Study Zone - Potential Analysis by Type**

#### **1) Analysis of Land Conditions in the Study Zone**

Interpretation of aerial photography was conducted to analyze and examine the physical land conditions in the study zone. In addition to aerial photography, available geological maps, topographical maps, and existing Land Sat Images, etc. were also examined as supplemental data for the study zone.

Not only topographical conditions, but also environmentally sensitive areas for development are interpreted.

The key elements of interpretation of land conditions are as follows:

- 1) Elevation
- 2) Relative Relief
- 3) Environmentally Sensitive Areas, such as wet land area, erosion area, sedimentation area, land slide or land collapse etc.
- 4) River conditions
- 5) Coastal Beach Condition
- 6) Coastal Topography, such as coastal terrace, sea cliff, sand dune, sand bar, sand split, etc.
- 7) Type of Existing Land Use

Existing Land Use maps are also prepared for Arco Seco, Farallón, Metropolitana, and Portobelo. Land Sat Images are used for the check of existing land uses of Coiba, Horconitos, and Las Perlas, however, the accuracy of this data is not suitable for detail mapping.

#### **2) Canal Zone Areas to Revert to Panama**

Totally about 3,200 ha. adjacent to the Panama Canal Area will be returned to the Panama Government by the end of 1999 from USA. These areas have been used for military bases or related facilities.

ARI (Inter Oceanic Regions Authority) is conducting a study to maximum use of these reverted area for national economy.



The main components of the study consist of 1) General Land Use Plan, 2) Conservation Plan, and 3) Urban Planning.

Tourism development in the Metropolitan area should be coordinated with the urban land use planning for these areas.

### **3) Land Ownership**

Land ownership is one of the constraints for development. In this study zone, most islands of Las Perlas are already owned by the private sector except a large part of Del Rey.

In Farallón study zone, IPAT is now managing sizable areas of the former military base at Rio Hato and attention is being given to this area as a center for integrated tourism development.

## **1.2 Tourism Planning Conditions**

Panama experienced a steady growth of international tourism in the 1970s, but there was a continuous slowdown in the 1980s. Especially in the period of political instability in 1989, the number of foreign visitors was about 50% lower than its peak. In the 1990s, tourism has recovered with steady growth, but has not yet attained its zenith. Meanwhile, tourist resorts have attained strikingly high growth in other Caribbean countries. Thus, Panama has been left alone behind the waves of high growth.

The following sections summarize challenges and requirements in the future tourism development of Panama, considering the actual problems that Panama faces in the sector of tourism, underdeveloped despite its geographical position between North and South Americas, and its abundant tourist resources.

### **(1) Necessity of Basic Policy of Tourism**

In recent years, the importance of tourist development has been stressed in Panama. The objective is limited to effects on the economy, and there is no law or plan that sets forth the objectives and philosophy of national tourism development policies. Such objectives and philosophy cannot be found in even the IPAT Establishment Act and the Tourism Investment Incentive Act. The Master Plan of Tourism Development drawn by IPAT-OEA simply contains the words; promotion of regional tourism and employment by decentralization, and improvement in balance of external accounts. By nature, tourism promotion policies should be carried out by the consensus of the people and under what is called a Basic Act of Tourism. Panama necessarily requires the consensus of the people and preparation of such an act.

Therefore, the study must clarify the objectives of the Plan.

### **(2) Absence of Integrated Long-Term Development Program**

The Panamanian Government carries out its administrative policies on the basis of a single fiscal year. Weaknesses in drawing up and implementing long-term policies are evident. In the infrastructure sector, a few initiatives have been found such as the Urban Transport plan in the Metropolitan Area and the Metropolitan Power Distribution System Project.

Any tourism development project should be drawn up and carried out by the sector interested by nature. To prepare a new tourism development project, it is necessary to consider the regional use of lands, the construction of infrastructure, economic effects and environmental impacts comprehensively, because this project must be long-term and because no integrated long-term tourism development project has existed in Panama. It is also necessary to coordinate this project, to the full extent possible, with the policies adopted by the new Balladares' government which came into power in September 1994 as well as the future Metropolitana development projects prepared by ARI (Inter Oceanic Regions Authority) and MIVI (Ministry of Housing).

### **(3) New Industries Alternative to Panama Canal, Free Trade Zone and Banking Center**

Panama's economy is now more developed than the neighboring countries, because the Panama Canal, the Colón Free Trade Zone and the Panama banking center make great contributions to its economic development. The tertiary industry flourishes, making use of the geographical position of Panama. However, the society of Panama faces many problems such as the population concentration in the Metropolitana area, regional differences, and the high rate of unemployment. The relatively high wage levels makes it difficult to create the secondary industry. Thus, Panama has little choice but furthering the development of the tertiary industry.

In these circumstances, the people expect much from tourism as the main industry in Panama. Therefore, it is now necessary to make research into how the tourism will be able to meet the people's expectations.

### **(4) Various Tourism Potentials Not Yet Commercialized**

Panama has an abundance of natural and cultural resources with tourism potential. The features of these resources will be described below.

#### **1) Natural resources**

##### **Climate**

The climate in Panama is tropical and favorable for seaside resorts. The rainfall depends on the region, and it is high especially on the coast of the Caribbean Sea and in the Central Mountains. The annual rainfall is relatively high throughout the country, but the dry season of December through April coincides with the winter season in the Northern Hemisphere. The high rainfall contributes to flourishing tropical rain forests in Panama.

##### **Topography**

The total area of the territory is small, but defined by the long coastlines. The territory has many topographical variations with islands, isthmuses and peninsulas as well as a mountainous zone about 3,000m high in the provinces of Chiriquí and Bocas del Toro.

## **Plants**

Panama is still rich in natural plants, though a great part of its forests and plains has been converted by slash-and-burn methods into arable lands and pastures. It has the greatest variety of species of plants in Central America.

## **Animals**

There are various species of animals in Panama. It is famous for the many species of birds inhabiting tropical rain forests. There are also many species of marine animals including corals, turtles and dugongs which are worthy of view. The many species of fish provide potential for sport fishing.

## **2) Cultural resources**

### **Historic resources**

Panama has a few cultural resources dated back to the pre-Columbian period, but is rich in historic spots such as Panama Viejo, Casco Viejo and Portobelo constructed in the post-Colonial period.

### **Ethnic resources**

Ethnic heritage such as the customs and culture of indigenous people and Christian events are worthy of mention.

### **Urban and industrial resources**

There are many resources including the Panama Canal and shopping centers as well as entertainment spots in the City of Panama.

As described above, Panama has many and various natural and cultural resources, a greater part of which are not yet commercialized, due to inaccessibility from the Metropolitan area, inadequate tourist facilities such as hotels, and a lack of public relations. Therefore, it is necessary to promote the development of regional tourist potential, considering their features and locations.

## **(5) Inadequacy of Hotels and Other Tourist Facilities in Rural Area**

An abundance of tourism potential remains underdeveloped in Panama. One of the reasons is that hotels of international class are concentrated only in the City of Panama, leaving many other provinces with few accommodation facilities. To promote the construction of new hotels in provinces, it is imperative to formulate a firm policy of regional tourism development, improve the accessibility to tourist spots, construct new facilities necessary for accepting visitors, and establish an incentive system.

## **(6) Underdeveloped Infrastructure Supporting Tourism**

The infrastructure supporting tourism remains generally underdeveloped in Panama. The infrastructure is developed only in Metropolitan and Farallón. It is important to improve the transportation infrastructure providing access to other provinces, including air routes, airports,

sea routes and roads. In addition, it is essential to construct new power and communication systems as well as new water supply and sewage systems and waste disposal facilities.

The Study, which is made to draw up a long-term tourism development plan, must focus on infrastructure development projects that require long-term work and aim to produce long-term effects.

To realize the infrastructure development projects, it is also necessary to consider the roles of the public sector and the sources of funds.

#### **(7) Lack of Marketing**

At present, Central and South Americas provide the key market for international tourism in Panama. A majority of foreign visitors come to Panama for business and shopping (according to the Master Plan by IPAT-OEA). With such a limited market, the demand for tourism is unlikely to expand very rapidly. Therefore, the sector of tourism in Panama faces many challenges such as expanding its markets in North America, Europe and Asia, attracting foreign visitors for vacation and other tourist purposes, and promoting new market sectors such as group tours.

#### **(8) Lack of a Main Organization Responsible for Tourism Development Projects**

In the future, a much larger investment must be made to promote long-term tourism development projects than in the past. In this case, it is important to ensure that the public and private sectors will establish clear-cut lines of responsibilities and obligations between them. It is also necessary to improve the existing organ or create a new unit responsible for carrying out these projects in the public sector, because IPAT cannot fully manage the implementation of these projects with its powers and personnel. Thus, optimal solutions must be found out to solve these problems. The new organ should have the following functions:

- Overall planning and coordination;
- Implementation of projects;
- Financing and recovery of funds; and
- Promotion of tourism development.

#### **(9) Balance of Development and Environmental Protection**

There have been many cases where the environment has been degraded by tourism development. In this study, it is necessary to frame quantitative and qualitative regulations on tourism activities depending on regional features. To do so, it is important especially to identify the vulnerable components of the environment. For example, valuable species of plants and animals to be protected in the natural environment as well as the living conditions for the local population including minorities.

It is also necessary to determine the possibility of introducing mass tourism and the necessity of launching ecological tourism depending on the environmental features of each region.

## **(10) Ordination between Development constraint and Potential**

Although the tourism development in Panama is to be promoted based on these resources, it can be judged that tourism in Panama has an extremely high development potential and advantage as compared with those in peripheral Caribbean areas, which compete with this country, as described below.

- 1) Outstandingly famous name of "The Panama Canal"
- 2) Diversity of resources for tourism  
(Peripheral Caribbean areas have diversity and complexity of marine, mountain, natural, historical, and cultural resources)
- 3) A "main point" of international traffic routes  
(Located at the geographical center of the American (North and South) Continents and located at a main point of land, ocean, and air traffic routes)
- 4) Connected with the "Panama City," a world-famous business and tourism city  
(A world-famous base as a business city has already been established enabling the diversified development of tourism in connection with it.)

In this way, it can be judged that Panama has the potential to grow into a prominent tourism country in the Latin American and Caribbean areas.

## **2. Development Strategy**

## **2. Development Strategy**

### **2.1 Objectives of the Plan**

The identification of the planning philosophy of tourism development based on the existing problems and future prospects is essential for the establishment of the development strategy.

#### **(1) Tourism Development as a New Nodal Point for International Interchange in the 21st Century**

In the last several decades, Panama has been developed as an international crossroads for shipping, merchandised goods and international currency by the existence of the Canal, the Colón Free Zone and the International Banking Center. Formation of a new tourism node at an international level is recommended in order to achieve significant tourism development in the next century.

Attraction of tourists from all over the world will increase the international prestige of Panama.

#### **(2) The Economic Development Created by Tourism as a Leading Industry**

The advanced and competitive industries of Panama are solely third sector industries, such as transport, commerce, banking, etc.; therefore it is necessary to find a way to develop other types of industries.

Panama has a great geographical position, as well as key elements for tourism development. Therefore, the reinforcement of tourism development is recommended in order to promote foreign currency earnings and the creation of employment.

#### **(3) Rural Development as a Result of Tourism Development**

One of the major problems in Panama is the concentration of almost all economic activities within the Panama metropolitan area, and the existence of economic differences by region. Despite efforts carried out by the Panamanian government, this tendency still continues.

Considering the difficulty in creation of other types of industries within the rural areas, the tourism industry might be the best type that can be developed using the existing resources in these rural areas.

#### **(4) Sustained Conservation of the Natural Environment as well as the Historical and Cultural Heritage for Future Generations**

Panama has a wide range of tourism resources such as beautiful beaches and islands in the Pacific and Atlantic oceans, rain forests with rich flora and fauna, indigenous people with their own unique lifestyle and customs, ruins of Spanish colonial cities, and the Panama Canal as a monumental achievement of civil engineering technology. Among these, there are many valuable heritage, natural and historical sites, which have tourism potential provided they are carefully conserved. Tourism development will help the nation of Panama, especially the younger generations, become conscious of the real value of these resources; and should also be used as an important education topic.

## 2.2 Development Goal

In order to achieve the objectives of the Plan, the goal system should be established.

### (1) Planning Year

Since one of the main purposes of the Study is to formulate a long term development plan and its implementation program, planning years are proposed as follows:

Base year	1994
Short term plan	2000
Mid term plan	2005
Long term plan	2010

### (2) Target Figures

The planning base figure constitutes the number of tourists. According to the tourist demand forecast examined in this Study, 0.5 million foreign visitors are forecast for the year 2010, if the present trend continues, and 2.2 million visitors are forecast if the recommended development policy is introduced. Considering the objectives of the Plan, a target of 2 million visitors is proposed for the year 2010, even though it may be considered an ambitious target.

Therefore, the Plan may be called the "Two Million Plan" for tourism development promotion.

On the other hand, the number of domestic tourists in the year 2010 is forecast as 1.5 million. This figure is also adopted as the target figure. Thus, the total number of tourists is targeted at 3.5 million by the year of 2010.

## 2.3 Development Scenario

In comparison to the surrounding competitive countries, tourism resources in Panama have a variety of features, such as the canal, shopping facilities, beaches and islands, historic monuments, folklore culture, and rich nature, etc.

These kinds of tourist resources don't exist only in the Panama metropolitan area, but are also scattered in rural areas. Considering the objectives of the Plan, the maximum use of rural resources should be developed.

Therefore, the circuit type of tourism development should be given priority over the resort type. In order to develop circuit type tourism, it is desirable to establish tourism development centers which are dispersed nation wide, instead of concentrating development at a small number of locations.

In the study tourism, resources are generally classified into three categories; island type, beach type and urban type. Since Panama city already has an international standard infrastructure as a commercial and financial node, it is efficient to develop tourism resources in the following order:

Urban Type → Beach Type → Island Type



### (1) Short Term Development Scenario (Seeding stage)

- Reinforcement of promotion of tourism resources in the Metropolitana Zone
- Formation of core projects in beach areas
- Preparation of core projects in island areas

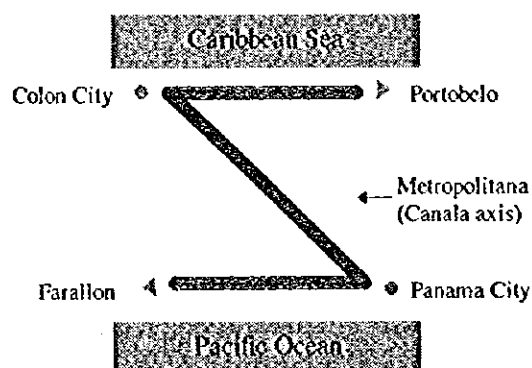
The emphasis in this stage will be concentrated in the Metropolitana Zone where infrastructure is already well developed. By strengthening the promotion of urban type tourism resources in this zone for international tourists, it will be possible to increase tourism in the short term.

Other activities during this stage should be formation of beach type core projects in each zone and preparatory work towards the development of island type core projects in island areas. For the beach type projects, greater emphasis should be given to the formation of projects in Portobelo and Farallón, which are closer to the Metropolitana zone.

### (2) Middle Term Development Scenario (Budding stage)

- Formation of a development axis shaped in the form of a reversed letter "Z"

During this stage the urban type resources in the Metropolitana zone will be complemented by beach type developments in the areas of Portobelo and Farallón. These zones offer the greatest potential in the medium term because the infrastructure is relatively developed, and they are close to the largest market and the gateway for most international travelers into Panama. They are also easily accessible from Panama city by road. Development of these two zones in addition to the Metropolitana zone will result in the formation of a development features in the shape of a reverse "Z".



- Formation of development core in island areas

Also during the medium term the formation of specific core projects in island areas should take place.

### (3) Long Term Development Scenario (Flowering stage)

- Realization of Two Million Plan
- Formation of whole projects in whole coastal area

The emphasis in the long term is development of tourism resources and implementation of supporting measures so that the target of 2 million international visitors by the year 2010 is achieved.

Achievement of this target will require the implementation of major resort type developments in island areas, in addition to the development of urban type and beach type resources. The long term scenario also aims at building a network of tourism clusters, which can each be sustained by international and domestic tourists.

## **2.4 Development Strategy by Study Zone**

Considering the planning objectives and each zone's development potential and constraints, a planning orientation of the long term development plan as a development strategy for each study zone is described below.

### **(1) Bastimentos**

- Conservation and education regarding natural marine resources.
- Restoration and presentation of Caribbean style houses.
- Presentation of indigenous people's culture.
- Presentation of banana industry history.
- Reinforcement of vital commercial town on boarder zone.
- Coastal road development.

### **(2) Arco Seco**

- Restoration and presentation of Spanish colonial style town.
- Presentation of local folk custom.
- Craft art manufacture .
- Fishing and surfing.

### **(3) Farallón**

- Beach resort development
- Base for marine sport
- Tourist transport base
- Circulation to surrounding mountain area

### **(4) Metropolitana**

- Transport network development
- Conservation and restoration of colonial historical monument
- Presentation of Panama Canal
- Safety and Security for shopping
- Promotion of conventions and events
- Urban type entertainment
- Beautification of Colón City
- Conservation and Presentation of nature

**(5) Portobelo**

- Restoration of historical monuments
- Educational presentation of historical drama
- Marine transport base development
- Fishing and diving base development
- Coastal road development

**(6) Las Perlas**

- High grade beach resort development
- Marine transport development
- Fishing and marine sport base development
- Air transport base development

## **3.Planning Framework**

### 3. Planning Framework

#### 3.1 Socio-Economic Framework

This section prepares the socio-economic framework in order to formulate the Long Term Development Plan.

##### 3.1.1 Population

The long term population projections of the whole country until 2025, which include the projections by province, were undertaken by the National Committee on Population Projections. The future population has been estimated based on the projection above and the adjustment by actual population records in 1990 as shown in Table 3.1. By 2010, the target year of the Long Term Development Plan, the country's population is estimated to amount to 3,173,000 and the annual growth will gradually slow down from 1.88% in 1990-1995 to 1.65% in 1995-2000, 1.44% in 2000-2005 and 1.26% in 2005-2010.

**Table 3.1 Estimated Population and Average Annual Growth Rate in Long Term Development Plan**

Year	Population Projection (1,000)	Average Annual Growth Rate	Period
1990	2,329		
1995	2,556	1.88 %	1990-1995
2000	2,774	1.65 %	1995-2000
2005	2,980	1.44 %	2000-2005
2010	3,173	1.26 %	2005-2010
		1.56 %	1990-2010

Source: Proyección de la Población Total del País por sexo, según grupo de edad, Años 1990-2025, Contraloría General de la República

The future population by Province up to 2010 has been estimated as shown in Table 3.2. Panama Province had a population of 1,072,100 or 46% of the country's population in 1990. This is estimated to increase to 1,592,600 by 2010 at an average growth rate of 2.0% (1990-2010) and so Panama Province will continue to have a dominant share of the country's population in 2010.

**Table 3.2 Estimated Projection and Annual Growth Rate by Province, 1990 - 2020**

Year	Bocas del Toro	Cocle	Colón	Chiriquí	Darién	Herrera	Los Santos	Panama	Veraguas	Total
Population Projection (1,000 persons)										
1990	93.4	173.2	202.3	370.2	43.8	93.7	76.9	1,072.1	203.6	2,329.3
2010	176.8	210.9	253.8	463.6	82.6	102.8	73.7	1,591.6	217.3	3,173.1
Annual Growth Rate (1990-2010)										
	3.24%	0.99%	1.14%	1.13%	3.22%	0.47%	-0.21%	2.00%	0.33%	1.56%

Source: Proyección la población total del país por sexo, según grupos de edad, años 1990-2025, Contraloría General

Among the provinces, the population of Bocas del Toro and Darién have considerably higher growth rates, twice as high as the country's average growth rate of 1.56%, that is, 3.24% and 3.22% respectively, during the period between 1990 and 2010.

On the contrary, the population of Los Santos Province is estimated to decline from 76,900 in 1990 to 73,700 in 2010. The growth rates in Herrera and Veraguas Provinces are also low.

### **3.1.2 Production**

#### **(1) National Economic Development Plan**

Since December 1989, when the democratic Government came into power, the recovery and stabilization of the national economy have been an urgent priority of the new government in order to resolve the serious external debt problems and receive the support of international financial organizations. MIPPE prepared an economic strategy paper in September 1990 and the Cabinet approved it as a Comprehensive Economic Recovery Program of the Republic. The program remains effective after some revisions.

The Program aims to promote efficiency and international competitiveness of the country's economy. The components of the Program are as follows:

- 1) Public Sector Reform, aiming at reduction of the public sector deficit.
- 2) Privatization Program, in order to increase the efficiency of the economy and reduce the size of the public sector.
- 3) Public Investment, to promote a sound investment program.
- 4) Tax Reform, in order to promote efficiency and equity and to reduce disincentives to working, investing and saving.
- 5) Trade and Domestic Deregulation, include trade liberalization program, domestic price deregulation and labor market adjustment.
- 6) Social Security Program, aiming to eliminate the deficit of the government for the social security system.
- 7) Financial Sector Reform, intending to rationalize the operation of public banks, and,
- 8) Poverty Alleviation.

During the period of the Comprehensive Economic Recovery Program, the country's economic performance has been estimated to attain real GDP growth rates of 5.4% in 1992-1995 and 6.8% in 1996 - 2000 due to implementation of the Program. The service sector is expected to play an important role in achieving the goal of the Comprehensive Economic Recovery Program.

In September 1994, Dr. Ernest Perez Balladares, the new president of the Republic, announced "Políticas públicas para el desarrollo integral", which followed the Comprehensive Economic Recovery Program in general and stresses the policy for social development in particular. The main objectives of the Policy are the reduction of poverty and improvement in income distribution before the end of the five year period of the new government. Sustainable economic growth is required through improved efficiency and higher productivity.

In the Policy, the tourism industry has been recognized to be the sector with highest potential and would have the capacity to generate several hundreds of millions of Balboas of additional income for a period of the five years with appropriate development. The development of basic infrastructure for tourism is a requirement of the Policy. It is stated that the Government will carry out investment on the basic infrastructure of selected areas with high tourism potential.

## (2) GDP Growth

The growth rate of National Domestic Product (GDP) of the country during the planning period for the Long Term Development Plan up to 2010 has basically been estimated based on the Comprehensive Economic Recovery Program and Políticas públicas el desarrollo integral. However, the latest performances of the Panamanian economy have been taken into account in the process of the estimation. The future GDP growth for the Long Term Development Plan has been estimated as shown in Table 3.3.

**Table 3.3 Estimated GDP Prospect in Panama (1992-2010) for Long Term Development Plan**

Year	GDP (at constant price of 1970) Million Balboas	Annual Growth Rate
1992	2,213	Actual: 8.5%/1992
1993	2,332	5.4%/1993
1994	2,442	4.7%/1994
1995	2,597	5.4% (1992-1995)
2000	3,609	6.8% (1995-2000)
2005	4,391	4.0% (2000-2005)
2010	5,342	4.0% (2005-2010)

The contribution of sectors to the GDP growth up to 2010 has been estimated by adopting the following assumptions and the result are shown in Table 3.4:

- 1) High growth of the primary sector cannot be expected and its annual growth rate will be 2% up to 2010.
- 2) The share of secondary sector in Panama was 14% of the country's GDP in 1992 and will remain at the same level in 2010, and
- 3) To attain the growth goal the contribution of the service sector is largely expected to be as described in the Comprehensive Economic Recovery Program and Políticas públicas para el desarrollo integral.

The shares of primary sector, secondary sector and tertiary sector are estimated at 6%, 14% and 80% of the GDP, respectively, and the average annual growth rates of primary sector, secondary sector and tertiary sector are 2.0%, 4.8% and 5.4% respectively during the period between 1992 and 2010.

**Table 3.4 Estimated Sector Contribution to GDP in 2010**

Sector	1992		2010		Average annual growth rate (1992-2010)
	GDP at constant price of 1970 (Million Balboas)	Share	GDP at constant price of 1970 (Million Balboas)	Share	
Primary Sector	234	11%	335	6%	2.0%
Secondary Sector	321	14%	748	14%	4.8%
Tertiary Sector	1,659	75%	4,259	80%	5.4%
Total	2,214	100%	5,342	100%	5.0%

### (3) GDP Per Capita

Based on the population and the GDP estimations described above, per capita GDP in Panama has been calculated as shown in Table 3.5. Per capita GDP is estimated to exceed 3,500 Balboas (or US\$) in 2000, the target year of the Short Term Development Plan and to exceed 4,500 Balboas in 2010, the target year of the Long Term Development Plan.

**Table 3.5 Estimated Population, GDP and Per Capita GDP (1995-2010)**

Year	Population (Persons 1,000)	GDP at constant price of 1970 (Million Balboas)	Per capita GDP at constant price of 1970 (Balboas)	Per capita GDP at constant price of 1970 (Balboas)
1995	2,556	2,597	1,016	2,754
2000	2,774	3,609	1,301	3,526
2005	2,980	4,391	1,473	3,994
2010	3,173	5,342	1,684	4,563

### 3.1.3 Employment

#### (1) Labor Productivity

Table 3.6 shows the labor productivity by sector in 1980 and 1991. In 1991 GDPs per worker were 1,150 Balboas, 2,749 Balboas and 3,597 Balboas in the primary, secondary, and tertiary sectors respectively, which were lower than the levels in 1980 in every sector. The labor productivity declined at 1970 constant prices.

**Table 3.6 Labor Productivity by Sector in 1980 and 1991**

Sector	Employment (persons)		GDP (million Balboas at constant 1970 price)		GDP per worker (Balboas at constant 1970 price)	
	1980	1991	1980	1991	1980	1991
Primary Sector	137,141	191,830	164.3	220.6	1,198	1,150
Secondary Sector	83,759	96,036	309.5	264.0	3,695	2,749
Tertiary Sector	271,452	432,234	1,262.6	1,554.8	4,651	3,597
Total	492,352	720,100	1,736.4	2,039.4	3,527	2,832

#### (2) Employment

In Table 3.7 the size of the labor force, number employed, and unemployment are estimated based on the population over 15 years in 2010 on the Long Term Population Projection. The unemployment rate in Panama amounted to 16.1% in 1991 and declined to 13.2% in 1993. In the projection of socio-economic framework, it is estimated that the unemployment rate will decrease to 6.0% in 2010.

The average annual growth rate of population over 15 years old is higher than that of the total population because of the population age structure. The number employed is required to grow at the higher growth rate, 3.22% per annum, so that the unemployment rate might be reduced to 6.0% in 2010.



**Table 3.7 Future Employment**

	1991	2010	Average annual growth
Population (thousand persons)	2,329 (1)	3,173	1.56%
Population over 15 years old (thousand persons)	1,497	2,332 (2)	2.36%
Labor force (thousand persons)	859	1,399	2.60%
Labor force rate	57.0%	60.0%	
Employment (thousand persons)	720	1,315	3.22%
Unemployment (thousand persons)	138	84	
Unemployment rate	16.1%	6.0%	

(1) Population in 1990

(2) Calculated based on the long-term population projection

The labor productivity of the primary sector will be constant up to 2010. It is urgently required for the secondary sector to increase the labor productivity in order to promote international competitiveness, while the service sector is expected to be the sector to absorb the additional employment.

Taking into account labor productivity and the projected GDP growth, the 595,000 new job-opportunities that will be created will comprise 87,000, 91,000 and 417,000 new jobs in the primary sector, secondary sector and tertiary sector, respectively, during the period between 1991 and 2010.

### (3) Employment by Province

#### 1) Distribution of GDP by Province

Since the actual data of GDP distribution at the provincial level have not been prepared and published by the Government in Panama, the future projection of GRDP (Gross Regional Domestic Product) was not made. The data of employment structure by Province were applied to estimate the sector contribution to the provincial economies and the structure for GRDP in 1990, by province, may be assumed as shown in Table 3.8.

**Table 3.8 Estimated GRDP Structure by Province in 1990**

	Bocas del Toro	Cocle	Colón	Chiriquí	Darién	Herrera	Los santos	Panama	Vera-guas
Primary Sector	39%	23%	6%	24%	52%	20%	24%	3%	34%
Secondary Sector	8%	19%	13%	12%	6%	15%	13%	14%	11%
Tertiary Sector	53%	58%	81%	64%	42%	65%	63%	83%	55%

#### 2) Employment

The future labor force has been estimated by province taking into account the population projections by age in the Long Term Projection by the Government of Panama. The number in the labor force can be estimated based on population over 15 years and the labor participation rate. Table 3.9 shows the projection of the labor forces by province in 2010, the target year of the Long Term Development Plan.

In Panama Province, the labor force is assumed to increase by 312,200 during the period between 1990 and 2010, which will be more than half of the total labor force increase of the country. The labor force growth rates are high in Bocas del Toro and Darién Provinces, and low in Los Santos Province.

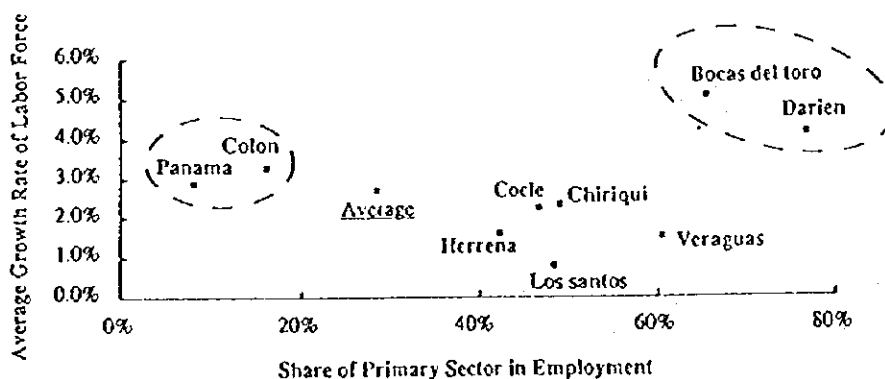
**Table 3.9 Projection of Labor Forces by Province in 2010**

	Bocas del toro	Cocle	Colon	Chiriqui	Darien	Herrera	Los santos	Panama	Vera-guas	Total
<b>Labor force in 1990 (thousand persons)</b>										
Labor force	25.8	57.8	56.7	127.1	14.4	33.9	29.9	413.6	68.9	828.0
<b>Labor force in 2010 (thousand persons)</b>										
Population over 15 years old	114.9	149.7	180.2	333.8	53.7	77.1	58.3	1,209.6	154.3	2,331.6
(% of population)	65%	71%	71%	72%	65%	75%	79%	76%	71%	73%
Labor force	69.0	89.8	108.1	200.3	32.2	46.3	35.0	725.8	92.6	1,398.9
Average annual growth rate (1990 - 2010)	5.0%	2.2%	3.3%	2.3%	4.1%	1.6%	0.8%	2.9%	1.5%	2.7%
Increased labor force (1990 - 2010)	43.2	32.1	51.4	73.2	17.8	12.4	5.1	312.2	23.7	571.0

**3) GRDP Structure and Labor Force**

Figure 3.1 shows the relation ship between the share of employment of primary sector by province in 1990, and the average annual growth rate of labor forces projected during the period between 1990 and 2010, calculated in Table 3.9.

As described above, the labor forces will grow at higher rates in Bocas del Toro and Darién Provinces, at the same time the provincial economies of Bocas del Toro and Darién are heavily dependent on agriculture. The agriculture sector, however, cannot be expected to have a high growth of production in the future and is unlikely to be able to absorb the increase in work force. Therefore, the shortage of the employment opportunities will be serious in those provinces. The efforts to introduce labor-intensive industries will be desirable for the development of regional economies. On the contrary, in the provinces where the increase of labor forces is small, such as Los Santos, the migration from other provinces will be required in order to develop labor intensive industries.



**Figure 3.1 Share of Employment of Primary Sector in 1990, and the Average Annual Growth Rate of Labor Forces (1990-2010) by Province**

## 3.2 Tourist Demand Study

### 3.2.1 Methodology

#### (1) Study Cases

In the long term tourist demand forecast, the following 6 cases are studied:

**Table 3.10 Study Cases-Long Term Demand Forecast**

	Demand Forecast of Tourist 1995-2010		Domestic Distribution of Tourists in 2010	
	International	Domestic	International	Domestic
Opportunity Demand (without projects)	○ Case 1	○ Case 1	—	—
Planning Demand (with project)	○ Case 2	○ Case 2	○	○

○: Studied      —: Not studied

In this table "opportunity demand" means "do nothing case" according to recent trends in the number of the tourists, while "planning demand" is a case taking into consideration the political and strategic factors for tourism development in Panama in addition to the economic projections for the countries of origin of the tourists.

#### (2) Method of International Tourist Demand Forecast

International tourist demand in 1995, 2000, 2005 and 2010, is forecasted using the method of multi-variate analysis. The following variables are taken considering influence to tourism demand;

- 1) GNP of the country of origin as economic factor
- 2) Distance from the country of origin to Panama as location factor
- 3) Language of the country of origin as social factor
- 4) Capacity of accommodations of Panama
- 5) Tourism promotion of Panama

The forecast is mainly based on the projection of socioeconomic indexes. Especially, capability of individual expenditures is emphasized, as an economic index taking into account the GNP of their country.

The planning demand is calculated with the following equation:

$$I_j = \sum_{i=1}^n I_{ij}$$

$$\text{Log} I_{ij} = a \cdot \log A_{jc} + b \cdot \log A_{jc} + g \cdot \log P_i + q \cdot L_{ij} - d \cdot \log(d_{ij})^2$$

where

"i" means the country or the area of origin

"j" means Panama as destination,

- Ij* :Total Tourists Visit to Panama
- Iij* :Total Tourist from *i* to *j* (Panama)
- Dij* :Distance from *i* (country of origin) to *j* (Panama) from the capital city of *i* to Panama city by air (miles)
- Pi* :GNP of Country of origin in US\$ millions (current)
- Ajc* :Attractiveness (*c*) - number of rooms of high grade hotels
- Ajp* :Attractiveness (*p*) - Budget of IPAT for promotion sector (Balboas)
- Lij* :Coefficient of resistance - Difference of language between *i* and *j*

*a, b, g, q, d* coefficients set in multi-variate analysis

The opportunity demand is calculated without *Ajc* and *Ajp* which are political variables. The value of *Ajc* and *Ajp* are set as follows;

**Table 3.11 The Value of *Ajc* and *Ajp***

Year	<i>Ajc</i>	<i>Ajp</i>
1992	1,062	1,677,670
1995	3,000	3,000,000
2000	10,000	6,000,000
2005	20,000	12,000,000
2010	30,000	18,000,000

### (3) Method of Domestic Tourist Demand Forecast

The analysis of the questionnaire to the tourists in major hotels in Panama by the Study Team and the OEA master plan gives an estimation of the following values;

- a* : Proportion of total domestic tourists who use hotels
- b* : Proportion of total international tourists who use hotels
- c* : Proportion of hotel guests who are international tourists.

The number of domestic tourists and international tourists have the following relations;

$$bx = (bX + aY)c$$

$$Y = b(1 - c)X / (ac)$$

where

*X* : number of international tourists

*Y* : number of domestic tourists

The ratio between the number of domestic tourists and that of international tourists is assumed constant and domestic tourist demand is forecasted with simple regression using GDP per capita as the coefficient (when GDP per capita exceed 3,000 USD or Balboas, the increase rate is to be doubled, because the frequency of traveling usually rises remarkably when the GDP per capita exceeds 3,000 - 5,000 USD in many countries).

For planning demand forecast the inducement coefficient is set after 1996 when the projects planned in this study will be realized. This inducement coefficient is not used for opportunity demand forecast.

#### (4) Method of Potential Distribution

##### 1) Method of Potential Distribution of International Tourists

Potential distribution of the international tourists to each tourism zone is calculated as follows;

$$Y_j = \sum_{i=1}^4 \frac{A_i \cdot G_i}{(T_{ij})^2 \cdot (C_{ij})}$$

where,

$Y_j$  : number of tourists in zone(j)

$A_j$  : attractiveness of zone(j)

$G_i$  : number of tourists from gate(i)  
air gate : Tocumen, David, Changuinola  
sea gate : Balboa, Colón, Almirante

$T_{ij}$  : traveling time from gate(i) to a center of zone(j)

$C_{ij}$  : traveling cost from gate(i) to a center of zone(j)

- One night would be spent at the gate entered.
- 85 % is assumed to be allocated to the 6 study zones.

##### 2) Method of Potential Distribution of Domestic Tourists

Potential distribution of domestic tourists to each tourism zone is calculated as follows;

$$Y_j = \sum_{i=1}^{10} \frac{P_i \cdot M_i \cdot A_j}{(T_{ij})^2 \cdot C_{ij}}$$

where,

$Y_j$  : number of tourists in zone(j)

$A_j$  : attractiveness of zone(j)

$P_i$  : population of province(i)

$M_i$  : GDP per capita in province(i)

$T_{ij}$  : traveling time from a center of province(i) to a center of zone(j)

$C_{ij}$  : traveling cost from a center of province(i) to a center of zone(j)

### 3.2.2 Results of Tourist Demand Forecast

#### (1) International Tourist Demand Forecast

As a result of the method described in the section 3.2.1, the opportunity demand of international tourists in 2010, is forecasted as about 464,000 without the project while the planning demand as about 2,170,000 with the project.

Panama is in the Central American - Caribbean block, which has 30,970,000 international tourists at present. The number of tourists in Panama forms as little as 1.12 % of the block total. By 2010, the forecasted number of 2,170,000 tourists will form 3.71 % of the estimated

58,750,000 to the block and this is not regarded to be too large, considering the potential of the tourism resources in Panama and the size of the market in North America and South America.

**Table 3.12 International Tourist Demand**

Year	International Tourist Demand	
	Opportunity Case	Planning Case
1992	347,173	347,173
1995	382,182	351,593
2000	388,561	618,735
2005	441,049	1,222,421
2010	464,153	2,170,309

**Table 3.13 Breakdown of Tourist Demand by Means of Transport**

Year	Air & Road	Ship	Total
1992	298,582	48,591	347,173
1995	313,273	38,320	351,593
2000	551,299	67,436	618,795
2005	1,089,190	133,231	1,222,421
2010	1,933,768	236,542	2,170,309

**Table 3.14 Participation of Panama in the Central American and Caribbean Block**

	Tourist to Central American and Caribbean Block			Percentage of tourists to Panama (%)	
	Caribbean	Central America	Total	Opportunity Case	Planning Case
1992	11,299,000	19,671,000	30,970,000	1.12%	1.12%
1995	12,744,800	22,851,100	35,605,900	1.07%	0.99%
2005	15,405,800	27,914,600	43,320,400	0.90%	1.43%
2005	18,066,800	32,968,100	51,034,900	0.86%	2.40%
2010	20,727,800	38,021,600	58,749,400	0.79%	3.69%

**(2) Domestic Tourist Demand Forecast**

The opportunity demand of domestic tourists in 2010, is forecasted at about 820,000, without the project, while the planning demand is about 1,580,000 with the project. It may not be an exaggeration that the number of tourists increases 4 times in 15 years on the assumption of stable socio-economic growth in Panama.

**Table 3.15 Domestic Tourist Demand**

	Domestic Tourist Demand	
	Opportunity Case	Planning Case
1992	399,249	399,249
1995	452,485	452,485
2000	589,779	671,155
2005	704,191	1,068,029
2010	818,602	1,583,747

### 3.3 Potential Distribution

#### (1) Potential Distribution of International Tourists

In accordance with the method described in section 3.2.1(4)(1), the international tourists are to be distributed to each zone as follows;

**Table 3.16 Potential Distribution of International Tourists**

Zone	Distribution
Bastimentos	1.5%
Portobelo	6.31%
Metropolitana	53.78%
Farallón	20.87%
Las Perlas	1.64%
Arco Seco	0.94%
Others	15.00%
<b>TOTAL</b>	<b>100.00%</b>

#### (2) Potential Distribution of Domestic Tourists

The domestic tourists are to be distributed to each zone as follows according the method described in section 3.2.1(4) and (2).

**Table 3.17 Potential Distribution of Domestic Tourists**

Zone	Distribution
Bastimentos	2.85%
Portobelo	16.79%
Metropolitana	39.51%
Farallón	10.88%
Las Perlas	0.97%
Arco Seco	14.00%
Others	15.00%
<b>Total</b>	<b>100.00%</b>

The means of transport is considered to have a great influence on the distribution.

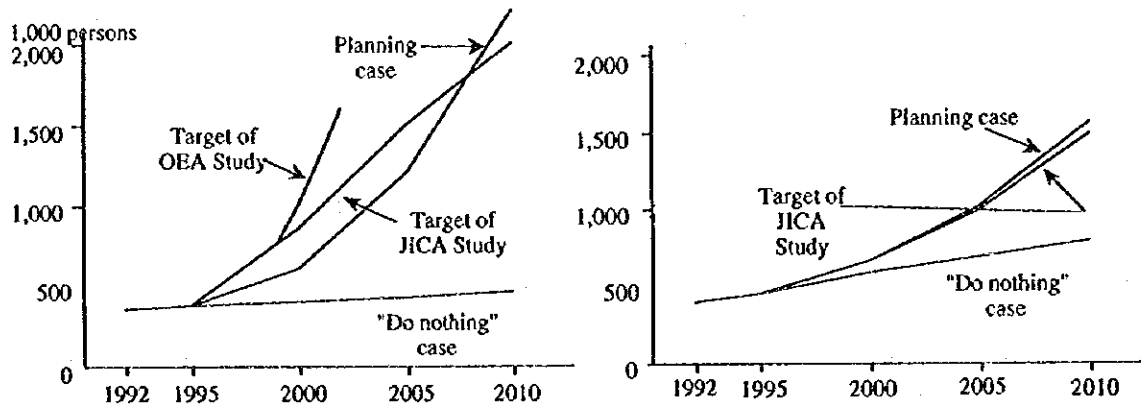
The zones which have a large population, adjacent zones, and zones along the major highways are expected to have great potential. The Metropolitana zone has these advantages.

#### (3) National Tourist Target

According to the analysis results presented in the previous section, the forecast demand for tourism would result in 2,170, 309 foreign tourists and 1,583, 747 domestic tourist, if the tourist development proposals recommended in this study are implemented (i.e. Planning case). These figures appear reasonable as previously described and the tourism development proposals in the study are, therefore, based on a total target of 2,000,000 foreign tourists and 1,500,000 domestic tourists by the year 2010.

**Table 3.18 Target Number of Tourists by Year**

Year	Foreign Tourists		Domestic Tourists	
	Target	Planning Case	Target	Planning Case
1992	-----	347,173	----	399,249
1995	-----	351,593	-----	452,485
2000	800,000	618,950	670,000	671,155
2005	1,500,000	1,222,421	1,000,000	1,068,029
2010	2,000,000	2,170,309	1,500,000	1,583,747



**Figure 3.2 Target Number of Tourist by Year**

### 3.4 Tourist Allocation Plan

Distribution of the target number of tourists to the various tourism zones has been reviewed considering the planning objectives. According to the potential tourism distribution calculations shown above, the concentration to Metropolitana Zone is significant. However, considering the objectives of the Plan, the rural areas should absorb many more tourists in the future. Future tourist allocation has therefore been adjusted based on the following considerations:

- Rural development acceleration policy
- Improvement of accessibility to rural areas
- Tourism resource potential evaluation
- Rural land development possibility
- Tourist facility development in rural area
- Creation of tourist circuit routes

The distribution of the target number of domestic tourists to the various zones in the year 2010 is shown in Figure 3.2.



## 1) Framework of Foreign Tourist Inflows to Panama

**Table 3.19 Target of Foreign Tourist Inflow by Origin Region**

(unit: 1,000 persons)

Origin regions	Number of tourists				Percentage of share				Increase 1992/2010
	1992	2000	2005	2010	1992	2000	2005	2010	
North America	110.3	275	630	800	30.6	34.0	42.0	40.0	7.25
C/S America	204.9	385	510	600	56.8	48.0	34.0	30.0	2.98
Europe	26.2	90	240	400	7.3	11.5	16.0	20.0	15.29
Others	19.2	50	120	200	5.3	6.5	8.0	10.0	10.45
Total	360.6	800	1,500	2,000	100%	100%	100%	100%	5.55

**Table 3.20 Target of Foreign Tourist by Transportation Means**

(unit: 1,000 persons)

Transportation means	Number of tourists				Percentage of share				Increase 1992/2010
	1992	2000	2005	2010	1992	2000	2005	2010	
By air	276.1	600	1,125	1,500	76.5	75.0	75.0	75.0	5.43
Chartered flights	(---)	(32)	(270)	(510)					
Regular flights	(276.1)	(568)	(855)	(990)					
By road	35.9	60	75	100	10.0	7.5	5.0	5.0	2.79
By ship	48.6	140	300	400	13.5	17.5	20.0	20.0	8.23
Total	360.6	800	1,500	2,000	100%	100%	100%	100%	5.55

**Table 3.21 Target of Duration of Stay of Foreign Tourist by Transportation Means**

(unit: 1,000 persons)

Transportation means		1992	2000	2005	2010
By air	Chartered flights from North America	---	7.0	7.0	7.0
	Chartered flights from Europe	---	---	10.0	10.0
	Regular flights	4.0	4.0	4.5	4.5
By road		4.2	4.0	4.2	4.2
By ship		4.0	4.0	4.5	4.5
Average		3.7	3.9	4.8	5.4

## 2) Gateway of Foreign Tourists

**Table 3.22 Breakdown of Tourists Inflows by Airports**

(unit: 1,000 persons)

Types	Airport	Origin	1992/e	2000	2005	2010
Regular flights	Tocumen	North America	83.1	170	320	360
		C/S America	144.7	250	375	360
		Europe	16.7	70	70	130
		Others	11.6	30	90	150
	David	C/S America	20.0	50	75	100
	Subtotal		276.1	570	930	1,100
Chartered flights	Tocumen	North America	---	50	120	125
		Europe	---	---	50	75
	Parallón	North America	---	---	50	75
		Europe	---	---	50	75
	San Miguel	North America	---	---	---	50
		Europe	---	---	50	75
Changuinola	North America	---	---	---	50	
	Subtotal			50	270	500
Total			276.1	620	1,200	1,600

Note: International flights of Patilla and David airports

**Table 3.23 Breakdown of Tourists Inflows by Seaports**

(unit: 1,000 persons)

Ports of Call	Number of tourists					Corresponding zone	Stop over
	1992/e	2000	2005	2010	share		
Colón	29.1	57	85	105	35.0	Metropolitan	Panama Canal and Gatun Lake
Almirante	---	5	10	15	5.0	Bastimentos	Escudo de Veraguas Island
Portobelo	---	5	20	30	10.0	Portobelo	San Blas
(San Blas)	---	---	10	15	5.0	San Blas	Portobelo
Balboa	14.6	43	70	90	30.0	Metropolitan	Panama Canal and Gatun Lake
Puerto Armuelles	4.9	5	10	15	5.0	Chiriquí	Coiba Island
San Miguel	---	5	15	22.5	7.5	Las Perlas	Darién
(Darién)	---	---	5	7.5	2.5	Darién	Las Perlas
<b>Total</b>	<b>48.6</b>	<b>120</b>	<b>225</b>	<b>300</b>	<b>100%</b>		

**Table 3.24 Distribution of Tourists Entering Panama by Road**

(unit: 1,000 persons)

Zones	1992/e	2000	2005	2010	Share (%)
Chiriquí	17.9	30.0	37.5	50.0	25.0
Bastimentos	3.6	6.0	7.5	10.0	5.0
Arco Seco	3.6	6.0	7.5	10.0	5.0
Farallón	3.6	6.0	7.5	10.0	5.0
Metropolitan	43.1	66.0	82.5	100.0	50.0
Portobelo	---	6.0	7.5	10.0	5.0
San Blas	---	---	---	5.0	2.5
Darién	---	---	---	5.0	2.5
<b>Total</b>	<b>71.8</b>	<b>120.0</b>	<b>150.0</b>	<b>200.0</b>	<b>100%</b>

Note: Each tourist stops over at two destination zones, hence the totals in the above table are twice the numbers in Table 3.20.

### 3) Distribution of Foreign Tourist to Each Zone

**Table 3.25 Distribution of Tourist Person-nights to Each Zone**

(unit: 1,000 person-nights)

Zones	1992/e	Share (%)	2000	Share (%)	2005	Share (%)	2010	Share (%)
Bastimentos	20.0	1.5	100.0	3.2	300.0	4.2	600.0	5.6
Arco Seco	40.0	3.0	150.0	4.8	300.0	4.2	400.0	3.7
Farallón	100.0	7.4	300.0	9.6	1,000.0	14.0	2,000.0	18.7
Metropolitan	981.9	73.0	1,860.0	59.8	3,562.5	49.7	4,300.0	40.2
Portobelo	30.0	2.2	200.0	6.4	500.0	7.0	1,000.0	9.3
Las Perlas	60.0	4.4	200.0	6.4	800.0	11.2	1,200.0	11.2
Chiriquí	103.3	7.7	250.0	8.0	500.0	7.0	800.0	7.5
Darién	5.0	0.4	25.0	0.8	100.0	1.4	200.0	1.9
San Blas	5.0	0.4	25.0	0.8	100.0	1.4	200.0	1.9
<b>Total</b>	<b>1,345.2</b>	<b>100%</b>	<b>3,110.0</b>	<b>100%</b>	<b>7,162.5</b>	<b>100%</b>	<b>10,700.0</b>	<b>100%</b>

**Table 3.26 Distribution of Tourists Inflows and Duration of Stay in Each Zone**

(unit: persons)

Zones	1992/e		2000		2005		2010	
Bastimentos	16,400	(1.22)	51,479	(1.94)	115,767	(2.59)	135,653	(4.42)
Arco Seco	36,400	(1.10)	77,617	(1.93)	113,237	(2.65)	126,641	(3.16)
Farallón	96,400	(1.04)	155,461	(1.93)	157,218	(6.36)	377,729	(5.29)
Metropolitan	362,900	(2.71)	786,000	(2.37)	1,337,500	(2.66)	1,595,000	(2.70)
Portobelo	30,000	(1.10)	103,376	(1.93)	192,492	(2.60)	324,603	(3.08)
Las Perlas	60,000	(1.00)	103,376	(1.93)	302,568	(2.64)	217,368	(5.52)
Chiriquí	60,500	(1.71)	126,517	(1.98)	207,230	(2.41)	287,862	(2.78)
Darién	5,000	(1.00)	12,973	(1.93)	38,611	(2.59)	66,155	(3.02)
San Blas	5,000	(1.00)	12,973	(1.93)	39,877	(2.51)	68,989	(2.90)
<b>Total</b>	<b>672,600</b>	<b>(2.00)</b>	<b>1,430,000</b>	<b>(2.17)</b>	<b>2,505,000</b>	<b>(2.86)</b>	<b>3,200,000</b>	<b>(3.34)</b>

Note: ( ) Average duration of stay

**Table 3.27 Breakdown of Target Inflows to Each Zone (Person-night base)**

**Bastimentos**

Tourist types	1992	2000	2005	2010
By chartered flights (North America)	---	---	---	240,000
By road	7,200	12,000	16,875	22,500
By ship	---	40,000	67,500	90,000
Via Tocumen	42,800	98,000	215,625	142,500
Total	50,000	150,000	300,000	500,000

**Arco Seco**

Tourist types	1992	2000	2005	2010
By road	7,200	12,000	16,875	22,500
Via Tocumen	42,800	138,000	283,125	477,500
Total	50,000	150,000	300,000	500,000

**Farallón**

Tourist types	1992	2000	2005	2010
By chartered flights (North America)	---	---	120,000	240,000
By chartered flights (Europe)	---	---	200,000	400,000
By road	7,200	12,000	16,875	22,500
Via Tocumen	92,800	38,000	663,125	1,337,500
Total	100,000	400,000	1,000,000	2,000,000

**Metropolitana**

Tourist types	1992	2000	2005	2010
By chartered flights (North America)	---	64,000	260,000	420,000
By chartered flights (Europe)	---	---	200,000	360,000
By regular flights	552,000	1,136,000	1,710,000	1,980,000
By road	86,400	144,000	202,500	270,000
By ship	165,200	400,000	877,500	1,170,000
(Adjusting)	196,400	170,000	485,000	Δ155,000
Total	1,000,000	1,914,000	3,735,000	4,045,000

**Portobelo**

Tourist types	1992	2000	2005	2010
By ship	---	40,000	202,500	270,000
Via Tocumen	800,000	110,000	297,500	480,000
Total	800,000	150,000	500,000	750,000

**Las Perlas**

Tourist types	1992	2000	2005	2010
By ship	---	40,000	135,000	180,000
Via Tocumen	50,000	160,000	865,000	1,320,000
Total	50,000	200,000	1,000,000	1,500,000

**Chiriquí**

Tourist types	1992	2000	2005	2010
By road	36,000	60,000	84,375	112,500
By ship	19,600	40,000	67,500	90,000
Via Tocumen	44,400	100,000	348,125	547,500
Total	100,000	200,000	500,000	750,000

**Darién**

Tourist types	1992	2000	2005	2010
Via Tocumen	---	50,000	150,000	300,000
Total	---	50,000	150,000	300,000

**San Blas**

Tourist types	1992	2000	2005	2010
Via Tocumen	---	50,000	150,000	300,000
Total	---	50,000	150,000	300,000

## **4. Long Term Development Policy**

## **4. Long Term Development Policy**

### **4.1 Planning Concept for Whole Country**

In the order of 1398 resources have been identified, as described in the previous chapter. Figure 4.1, being conceived at the national level, complirs with the major tourism resources data, which is spatially organized with topological zonification and the following basis:

- 1) The tourist attraction places located near to each other are grouped in one cluster to allow easy travel to all places of attraction.
- 2) The tourist attraction places on the same transportation route are grouped in one cluster to form a tourism route.
- 3) Each cluster must have a principal attraction for tourists so that a distinctive character can be established. A tourism service center can be located at the principal town or attraction place to serve other places within the cluster.

As shown in Figure 4.1., the fourteen tourist attraction clusters are different in their levels of significance, resource conditions, and services. However, their roles in tourism development can be integrated. Thus, these directions are taken into consideration in the process of planning and developing projects and programs. The distribution of clusters needs to be integrated into a tourism concept network consisting of destinations, gateways, linkages and access routes through use of an overlay system. Planning concept is therefore based on the notion of the characteristics of tourism network hierarchy, socio-economic aspects and development plan and program by MIPPE.

The three themed National tourism development concept plans for each zone show strategic frameworks for the creation of comprehensive and integrated marine, coastal, highland, history and cultural component packages. It is to be hoped that through the development of these network links, the regional development components will compete with other tourism destinations in Latin America.

#### **(1) Marine And Coastal Tourism Development**

Because of the limited capacity of air transport to the islands, or difficult access to inland destinations, six sets of interlocking sea network developments are identified to serve marine and coastal activity. Jet speed boat services for short routes between Panama, San Miguel and Gorgona as Panama's nearest major coastal destinations, are recommended.

- 1) Panama, Gorgona and Azuero route development axis.
- 2) Panama and San Miguel route (existing), expand to La Palma development axis.
- 3) Gorgona, San Miguel and La Palma route (new) development axis.
- 4) Puerto Mutis, Punta Damas, Pedregal, Puerto Armuelles route (new) development axis.
- 5) Almirante, Bocas del Toro and Chiriquí route (existing) development axis.
- 6) Bahía Las Minas and San Blas route development axis.

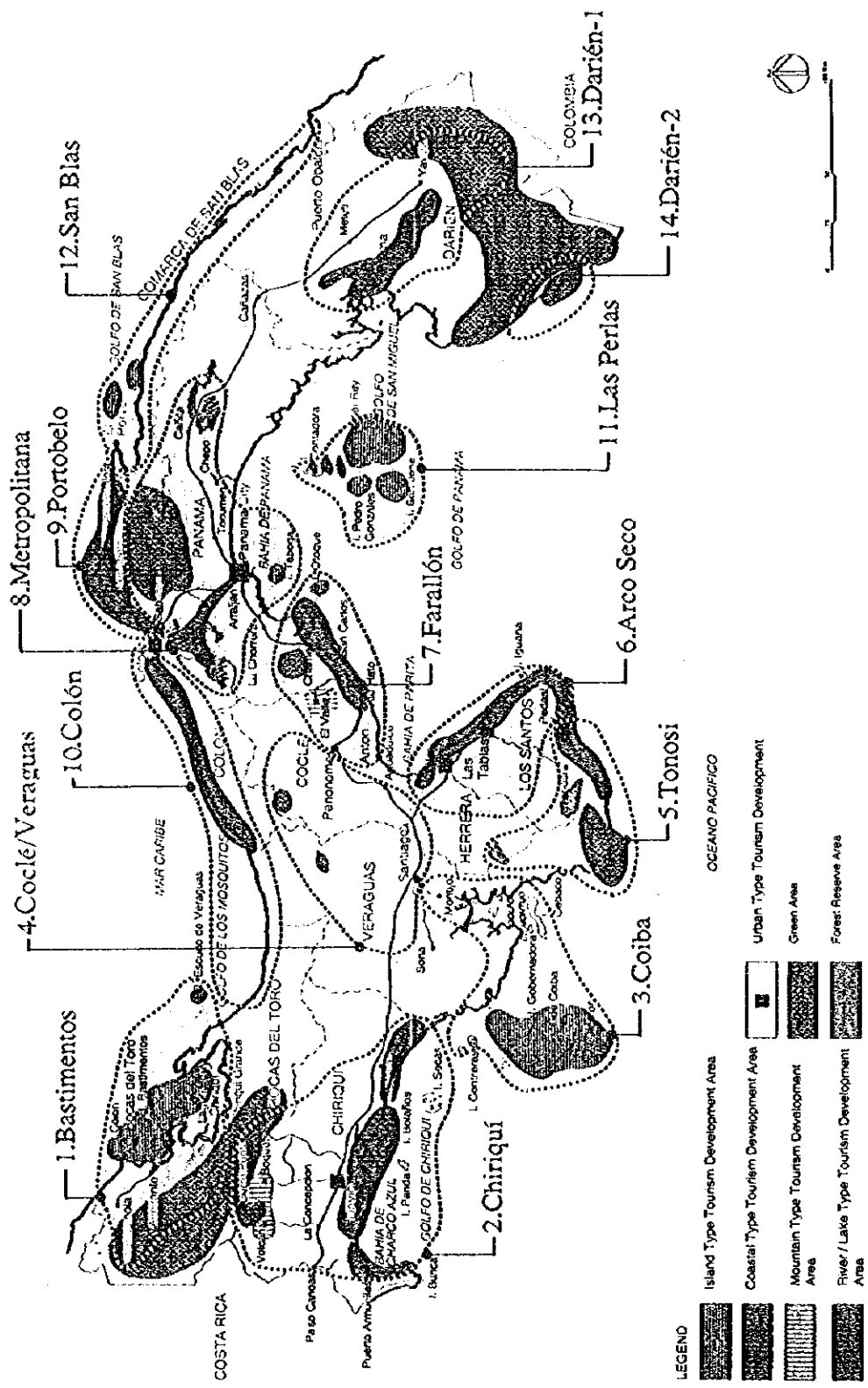


Figure 4.1 Designated Tourism Clusters

The relation between sea carrier tick a load factor, or the degree of route utilization and the scale of development proposed are critical relationships, therefore, if a service already exists, its current utilization and capacity for expansion will be key considerations. Several tourism destination zones are shown with their particular resource attributes in Figure 4.2.

## **(2) Nature and Highland Tourism Development**

One of the themes is the designation of highland resort developments and their associated environmental elements. Making, recreational use of National parks, Forest Reservations centered around nature information centers and from which access to special interests, flora, fauna, and areas of natural scenic beauty would start and terminate.

These resource areal concepts would then be gradually linked through a network of tourism corridors. Each corridor route would have its own zone of influence to allow for the consideration and enhancement of scenic views and natural settings. Ecological tourism is an interesting activity for tourists and an important tourism resource which will inform in the interim report.

## **(3) Historical And Cultural Tourism Development**

Two principal concept for tour packages have been created: the Spanish Historical inquiry, and Cultural Discovery tour routes.

Spanish Historical inquiry would be built around a series of historical town centers: Panama city, Portobelo, Chitré, Las Tablas, Bocas del Toro, supported by primary cultural information and exhibition centers linked to local arts and crafts centers shown in Figure 4.4.

Local arts and Crafts are scattered all over the nation and can be grouped in cultural zones. In order to improve their technologies, it is important to exchange information and improve quality. Therefore, it is proposed to establish a training center in each zone.

## **(4) Long Term Development Plan**

These plans are integrated to establish a concept for a Long Term Development Plan as show in Figure 4.5. It is conceived that ultimately through the development of these network links and distinctive regional attractions a tourist destination which can compete with other Central American tourism regions can be created.

The concept of each zone gives a characterization of tourism region with a geographical and spatial conditions to a diverse range of tourism resources and also interpreted location characteristics into a total image/product with particular market appeal. In terms of the tourism sector, this process of zone characterization can be considered as the bridge that links the resources and the product to sell to the international and national market.

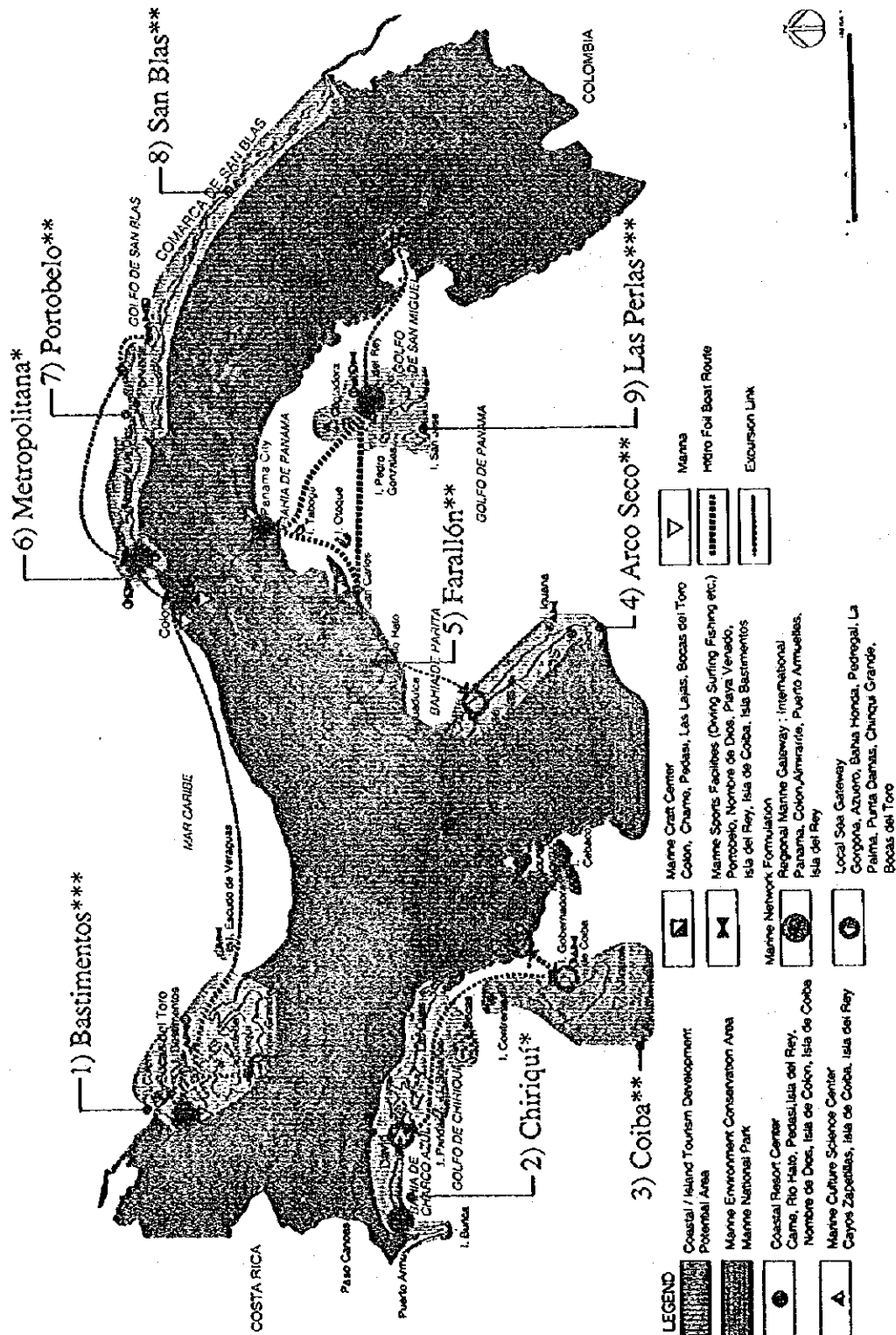


Figure 4.2 Marine and Coastal Tourism Development Plan







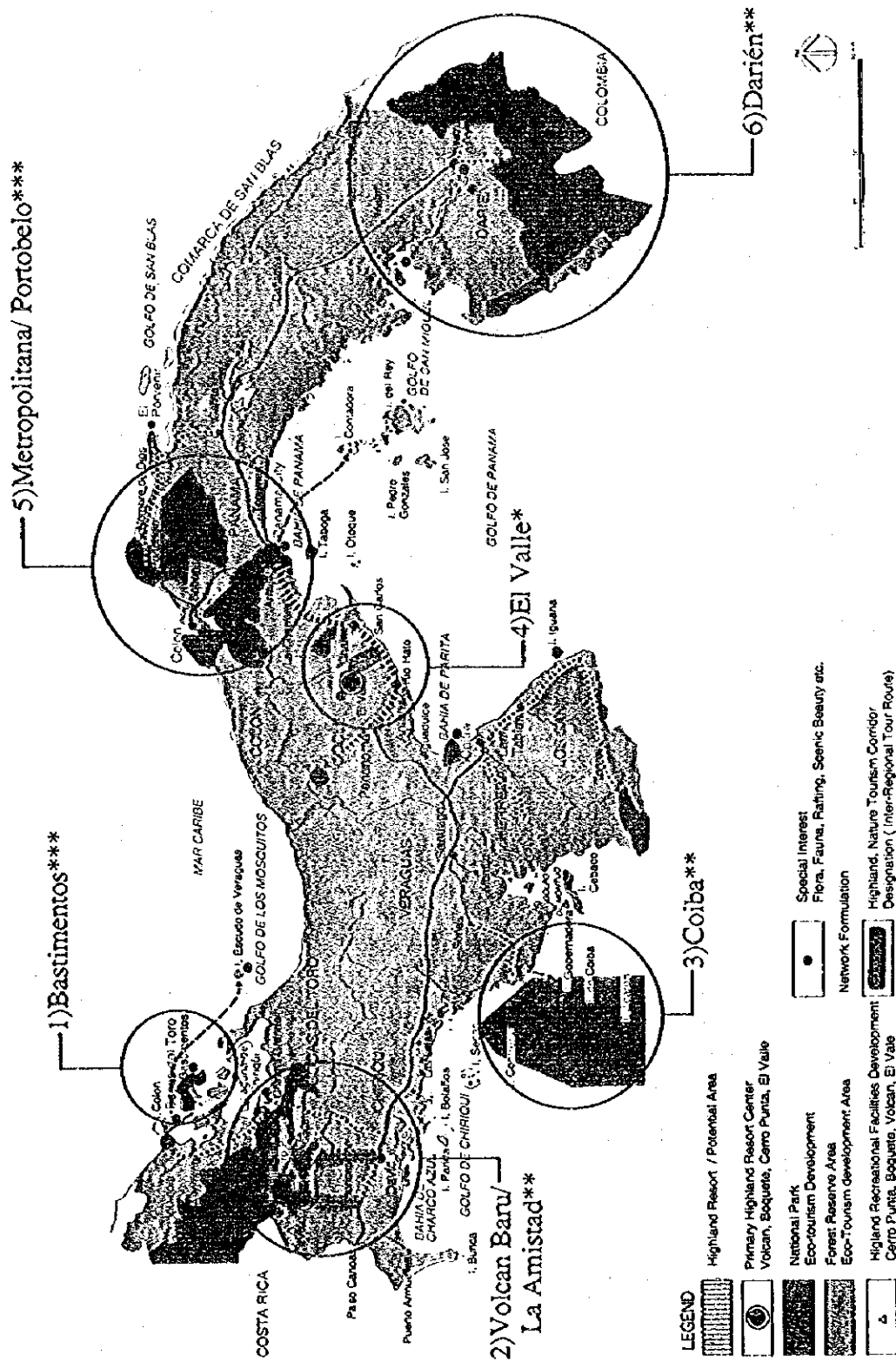


Figure 4.3 Nature and Highland Tourism Development Plan

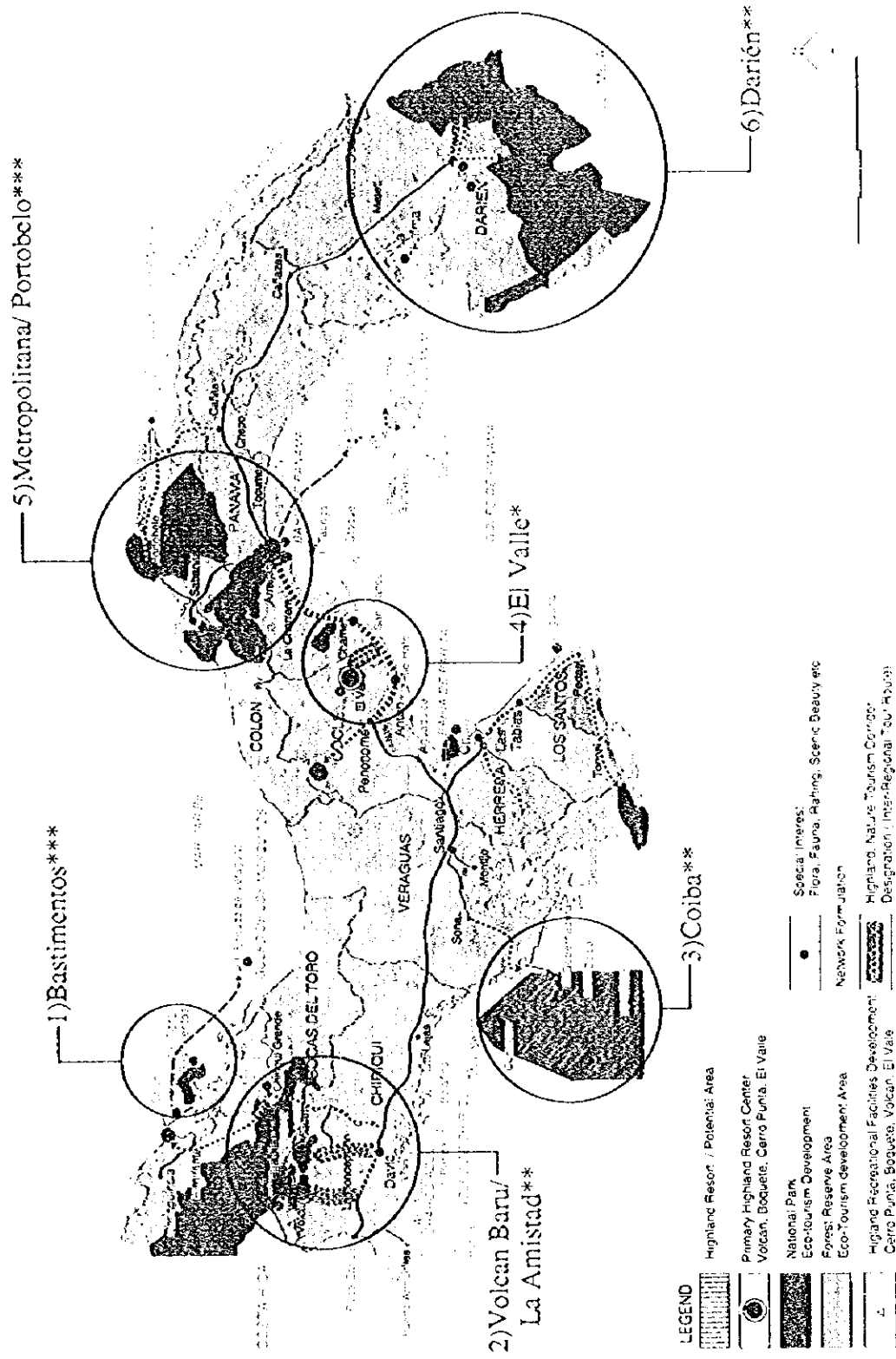
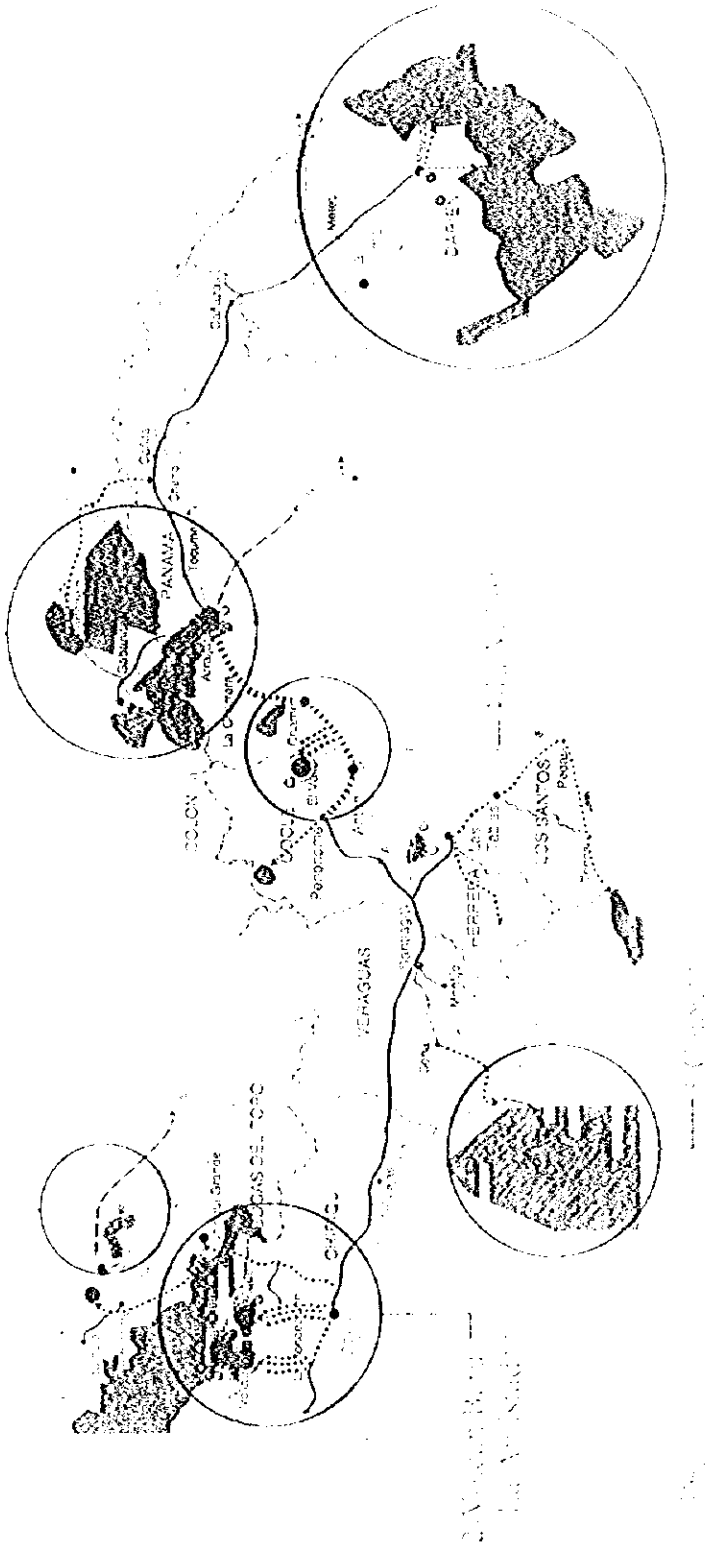


Figure 4.3 Nature and Highland Tourism Development Plan

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— S. Meryphyllus a. Pavesenensis



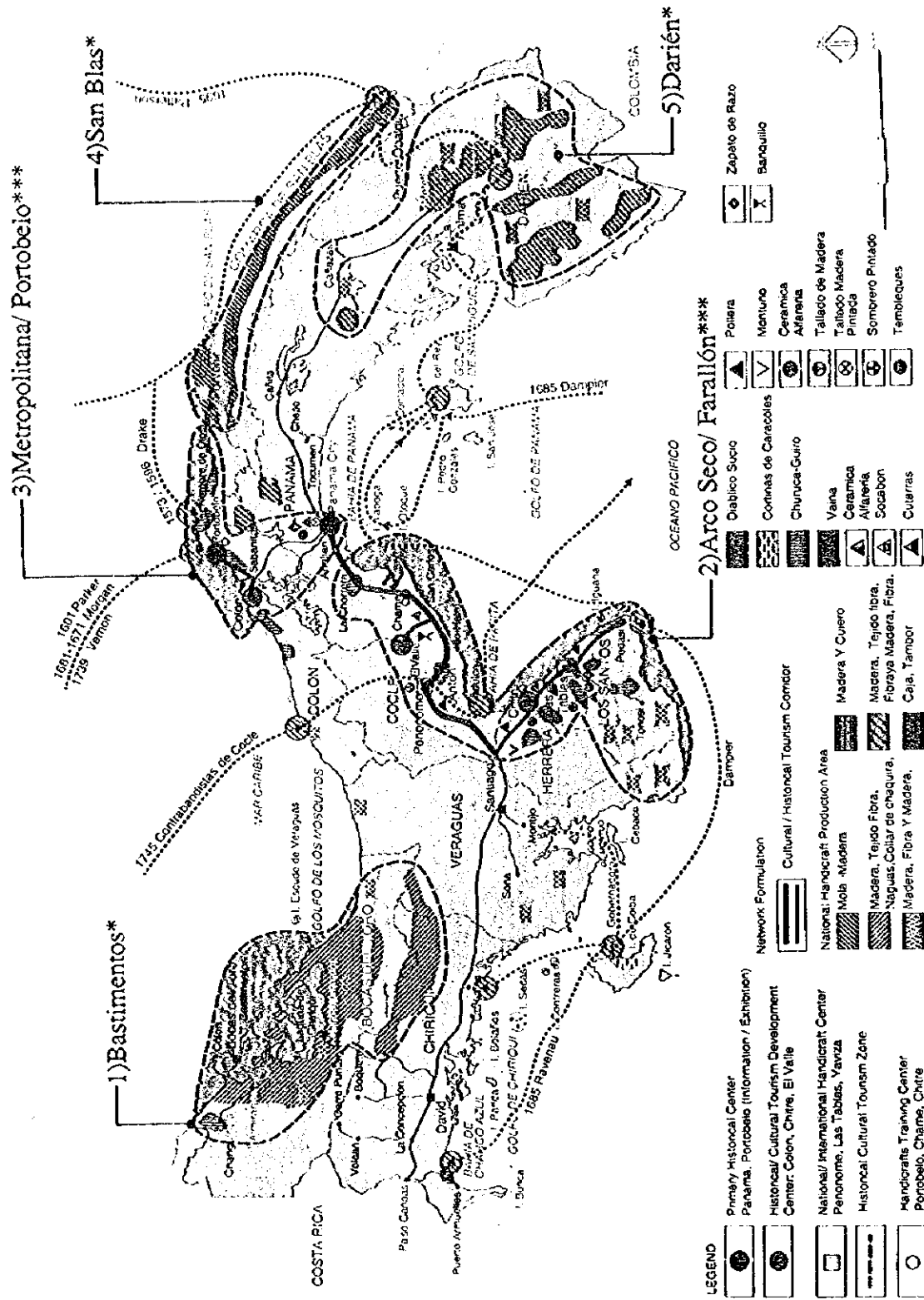


Figure 4.4 Historical and Cultural Tourism Development Plan







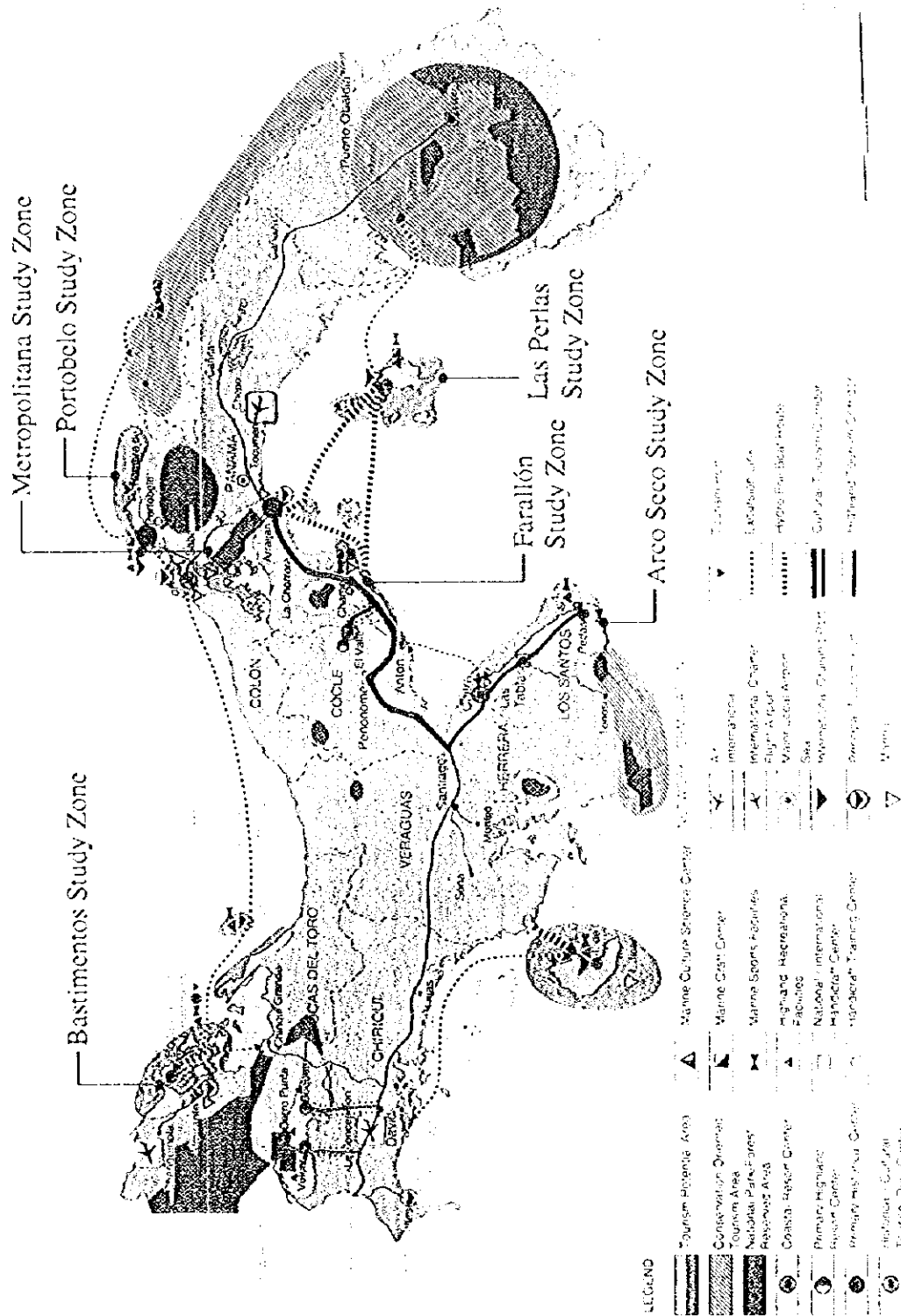


Figure 4.5 Long Term Development Plan

### (5) Development Policy and Strategy by Zones

Relations between the tourism cluster system consisting of 14 zones and the nationwide tourism network consisting of tourism resources of marine, natural and mountainous, and historical and cultural groups as described in the previous section are summarized in Table.5.1. Further, each tourism network has evaluated each cluster from the viewpoint development of potentiality, and tourism resource level and formulated the definition of each zone as the object of study.

**Table 4.1 Tourism Cluster and Tourism Network System**

Tourism cluster	Tourism system			Definition of each zone
	Marine and Coastal	Natural and mountainous	Historical and cultural	
1. Bastimentos	A	A	B	Regional tourism core (marine & natural type)
2. Chiriquí	C	B	-	
3. Coiba	B	B	-	Regional tourism core (cultural & marine type)
4. Coclé - Veraguas	-	B	B	
5. Tonosí	-	-	-	
6. Arco Seco	B	-	A	
7. Farallón	B	B	-	Auxiliary tourism core (marine & mountainous type)
8. Metropolitana	C	A	A	Tourism core (natural & historical type)
9. Portobelo	B	C	A	Auxiliary tourism core (historical & marine type)
10. Colón	C	-	-	Auxiliary tourism core (marine type)
11. Las Perlas	A	-	C	
12. San Blas	B	-	C	
13. Darién-1	C	B	C	
14. Darién-2	-	B	C	

Significance level A: High, B: Medium, C: Low

Development policy and strategy for each zone based on the definition of each zone are summarized in the table below.

**Table 4.2 Development Policy and Strategy Classified by Zones**

Zone	Policy	Strategy
1. Bastimentos	• Formation of a regional tourism core on the shore of the Caribbean Sea utilizing abundant marine and natural resources.	• Utilization of abundant natural resources including indigenous and precious animals and plants and their gatherings and creation of an archipelago-type environmental preservation model.
2. Arco Seco	• Formation of a regional tourism core in the Azuero Peninsula (on the shore of the Pacific Ocean) mainly consisting of Colonial culture and marine resources.	• A combination of the introduction of and experience in ethnic cultures and marine leisure.
3. Farallón	• Formation of an auxiliary tourism core adjacent to the metropolitan area and consisting of shores.	• Formation of a seaside leisure belt integrating neighboring areas.
4. Metropolitana	• Formation of a tourism core backed up by the gateway for tourism in Panama and natural and historical resources.	• Formation of the image of an international tourism city and enhancement of the level of tourism facilities and accessing functions.
5. Portobelo	• Formation of an auxiliary tourism core on the side of the Caribbean Sea backed up by the historical remains of the Colonial age and marine resources.	• Preservation of historical buildings and marine resources
6. Las Perlas	• Formation of an auxiliary tourism core of the	• Formation of a marine tourism cluster and

## **4.2 Infrastructure Development Plan**

### **4.2.1 Air Transport**

Air transportation is the most important requirement for international tourism development. Since by the year 2010, two million international tourists are expected to visit Panama, an international airport development plan should be prepared in the short term. For tours by international and domestic tourists within the country, domestic airport development is also essential.

#### **(1) International Airport**

The following proposals are recommended:

- 1) Reinforcement of the functions of Tocumen Airport
  - Formation of a hub for international flight
  - Renovation of the passenger terminal
  - Transfer system to domestic flights
- 2) Concentration of cargo activities on Colón airport
- 3) Creation of new international charter flight bases
  - Changuinola Airport
  - David Airport
  - Rio Hato Airport

#### **(2) Domestic Air Transport**

The following improvements are recommended:

- 1) Reinforcement of Panama metropolitan domestic airport facilities should be studied considering the following alternatives:
  - Alternative 1 Improvement of Paitilla airport
  - Alternative 2 Integration to Tocumen airport
  - Alternative 3 Removal to Albrook or Kobbe
- 2) Reinforcement of regional airports
  - Changuinola Airport
  - David Airport
  - Chitré Airport
  - Rio Hato Airport
  - San Miguel Airport

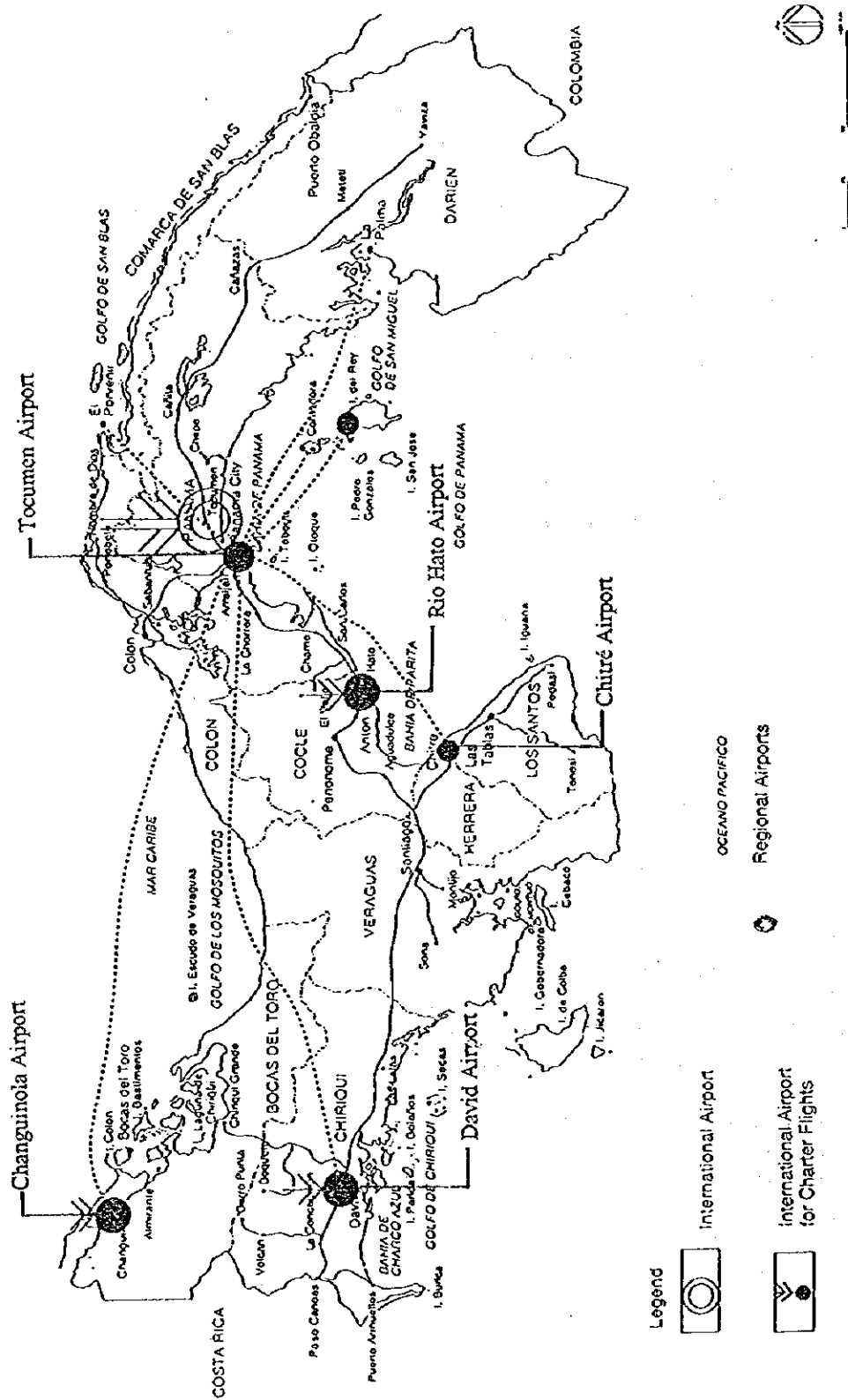


Figure 4.6 Concept for Air transportation Network

## 4.2.2 Maritime Transportation

### (1) International lines

Under present conditions, international passenger boats call at the Port of Cristobal (the Caribbean coast) and at Port of Balboa (the Pacific coast).

Cargoes are also handled at the same ports, and the rate of utilization of capacity of Cristobal and Balboa is 30 % and 80% respectively. Taking future plans into consideration, there should be sufficient capacity.

But, when we consider that the port is an important gateway to the Republic of Panama from foreign countries, special facilities for international passenger shifts should be planned.

Due to the increase in the expected number of tourists, it will be necessary to open several ports to passenger vessels from foreign countries, for example, Portobelo, Almirante, Puerto Armuelles.

### (2) Domestic Lines

At present a domestic transportation network for passengers by sea is not in operation at the national level.

In order to respond to the increase in the number of tourists in the future, it will be necessary to improve existing port facilities and to construct new ports.

The concept of the maritime traffic network is shown in Figure 4.7.

- a) A large-size, super express transportation network  
Between Panama City - Las Perlas - Farallón - Arco Seco, hydrofoil service will be introduced ( 300 - 500 passengers, about 40 knots).
- b) A large - size, express transportation network  
Between Bahia Honda - Coiba Island - Almirante - Bocas del Toro - Chiriquí Grande, Colón - Portobelo - Nombre de Dios - El Porvenir, high - speed boat service will be introduced  
( 100 - 200 passengers, about 30 knots).
- c) An express transportation network  
Between Isla Escudo de Veraguas - Punta Icacó - Bahia Azul - Bocas del Toro - Almirante, high - speed boat service will be introduced ( 20 - 50 passengers, about 20 knots).
- d) A mass transportation network  
Between Colón - Almirante, a ferryboat will be introduced.

## 4.2.3 Land Transportation

### (1) Interregional Highways

The following two highway projects should be implemented not only for tourism development but also to form a national trunk highway network.

New Panama-Colón Highway  
Pan American Highway (Chorrera -  
Penonome)

New 4 Lane Road  
Widening to 4 Lanes



## (2) Principal Arterial Roads in Panama Metropolitan Area

The following projects are necessary in order to mitigate traffic congestion in urban and suburban areas of Panama metropolitan area, and to restore urban functions including tourism activities.

Corridor Norte ( Albrook - Tocumen )	New 4 Lane Road
Corridor Sur ( Centro- Tocumen)	6 Lane & 4 Lane Road
Autopista ( Arraijan - Panama Canal )	New 4 Lane Road
New Canal Bridge	New 4 Lane Bridge

## (3) Tourism Development Roads

For tourism development and promotion, it is necessary to prepare service roads for access to the tourism sites.

### Bastimentos

Chiriquí Grande Intra-Urban Road	New 2 Lane Road
Chiriquí Grande --- Almirante	New 2 Lane Road
Almirante --- Changuinola	Pavement
Almirante --- Punta Anton	New 2 Lane Road
Punta Rancho --- Bocas del Toro	Alignment Improvement and Pavement
Bocas North Coast Road	Alignment Improvement and Pavement
Bocas del Toro Urban Road	Drainage, Pavement
Chiriquí Grande --- Punta Icaco	New 2 Lane Road

### Arco Seco

Pedasi --- Tonosi --- Pedregal	Pavement
National Highway No.3 access road	Pavement

### Farallón

Punta Chame --- Gorgona	New 2 Lane Road
Gorgona --- San Carlos	New 2 Lane Road
San Carlos --- Farallón	New 2 Lane Road
Access Roads (Highway-Tourism Beach)	Pavement

### Metropolitana

Gatuncillo --- Boqueron Arriba	Pavement
Caimitillo --- Lago Alajuela	Pavement
Cerro Balboa Development road	New 2 Lane Road
Carretera Boringen	Pavement
Calzada Road	Pavement

### Portobelo

Sabanita --- Portobelo	Alignment Improvement and Pavement
Portobelo --- Cuango	Alignment Improvement and Pavement
Cuango --- Carti Suitupo New Road	New 2 Lane Road
Carti Suitupo --- El Llano	New 2 Lane Road

<b>Las Perlas</b> Isla del Rey Development Road	New 2 Lane Road
<b>Coiba</b> Sona --- Rio Cate Rio Cate --- Bahia Honda Coiba Development Road	Alignment Improvement and Pavement New 2 Lane Road New 2 Lane Road
<b>Horconchos</b> Chiriquí Grande --- Valle de Mina Cerro Punta --- Bajo Boquete	Slope Protection and Pavement New 2 Lane Road

### (3) Railways

The improvement of the Panama-Colón railway is recommended from the viewpoint of tourism development. However, railway improvement projects are very costly, therefore, such projects should be examined with careful considering of economic aspects.

Panama Railway (Panama-Colón)	Rehabilitation and Improvement
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#### 4.2.4 Urban Facility

Infrastructure may not have a direct visual effect on tourists but pollution of the environment reduces the value of tourism resources. Sewage and solid waste shall be properly treated either by the public or private sector. The public sector has the advantage from the viewpoints of efficiency, adequacy and encouragement of tourism development. Where the demand for infrastructure is large, the public sector should take care of the management.

Negotiation will be required with IDAAN for water supply and sewage, and with a local authority for collection and disposal of solid waste.

### (1) Water Supply

Provision of new water supply facilities will be required to cope with the demands of future tourism facilities except in the Metropolitana zone.

For tourists, 600 liters per day per bed is adopted including use of swimming pool etc., which is the daily maximum amount in accordance with the guidelines of IDAAN. Domestic consumption is projected from 326 liters per day per capita in 1993 with an annual growth rate of 2 % (estimated from "Boletín Estadístico Serie No.9, IDAAN").

Components of water supply will include the following;

- Well and pump or water intake (dam and pump (if necessary))
- Potable water treatment plants
- Piping with valves , booster pump if necessary
- Elevated tanks



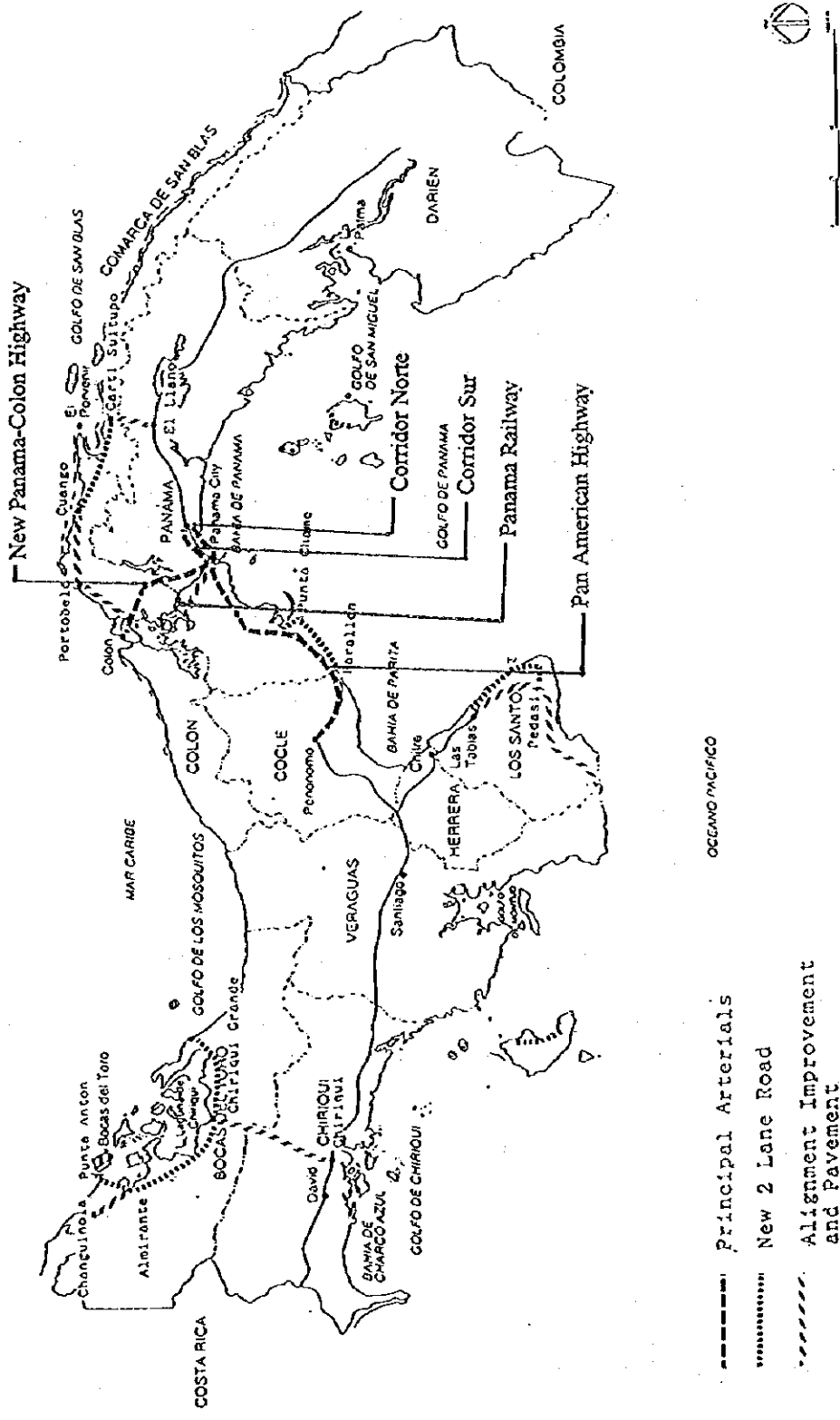


Figure 4.8 Concept of Road Projects for Tourism

## **Long Term Development Plan (Water Supply)**

- Bastimentos** – Provision of water supply system in the tourism development area mainly in Isla Colón
- Improvement and expansion of existing system in Bocas del Toro town, Changuinola, Almirante, Chiriquí Grande
- Arco Seco** – Provision of water supply system in the tourism development area mainly in the Southern area
- Farallón** – Provision of water supply system in the tourism development area mainly in Farallón zone and Chame zone
- Improvement and expansion of the existing system
- Metropolitana** – Improvement and expansion of the existing system
- Portobelo** – Provision of water supply system in the tourism development area mainly in Isla Grande zone
- Improvement and expansion of existing system mainly in Portobelo and Nombre de Dios
- Las Perlas** – Provision of water supply system in the tourism development area
- Improvement and expansion of the existing system in Contadora and San Miguel

## **(2) Sewage and Drainage**

Sewage is to be treated by the hotel or house respectively where proper sewage is not provided. Sewage and rainwater drainage by separate systems, is to be provided at the same time as construction of roads. The quality of treated water is to be regulated to 60 to 120 ppm of BOD in future.

For a large scale development, a central treatment plant for sewage would be advantageous in terms of efficiency and environmental effects.

For cities and towns, improvement of sewage disposal by treatment plants is recommended.

In order to secure provision of adequate treatment facilities, regulations for construction permission shall stipulate requirements for the sewage treatment facility and the quality of treated water.

The components of sewage disposal will include the following

- Piping
- Ditch or Gutter
- Manhole
- Sewage treatment facility (if necessary)

## **Long Term Development Plan (Sewerage)**

- Bastimentos** – Provision of sewage facilities in the tourism development area mainly in Isla Colón
- Improvement and expansion of existing system in Bocas del Toro, Changuinola, Almirante, Chiriquí Grande

- Arco Seco – Provision of waste water disposal facilities in the tourism development area mainly in the Southern area
- Farallón – Provision of waste water sewerage facilities in the tourism development area mainly in Farallón zone and Chame zone
- Improvement and expansion of the existing system
- Metropolitana – Improvement and expansion of the existing system
- Portobelo – Provision of waste water sewerage system in the tourism development area
- Las Perlas – Provision of a sewage system in the tourism development area

### **(3) Solid Waste**

Sanitary landfill sites shall be prepared in accordance with the following guidelines.

- Daily soil covering - Fencing - Weighing and recording  
[Lining and leaching treatment facility (if necessary)]

Recycling shall be promoted as much as possible for reducing the amount of solid waste disposed. A system and market for recycling are required.

The amount of solid waste is projected with an annual growth rate of 2 % from 1,000 g per capita per day in 1994.

The components of solid waste will include the following;

- Sanitary landfill site, access road, excavation, drainage, heavy equipment, weigh-bridge, house, fence and gate, computer, monitoring device, lining and leachate treatment facility (if necessary).
- Collection vehicle
- Garage or workshop

### **Long Term Development Plan (Solid Waste)**

- Bastimentos – Provision of sanitary landfill sites in Isla Colón, Changuinola, Almirante and Chiriquí Grande
- Arco Seco – Provision of sanitary landfill site and collection vehicles
- Farallón – Provision of sanitary landfill site and collection vehicles
- Metropolitana – Provision of new sanitary landfill site and collection vehicles
- Portobelo – Provision of sanitary landfill site and collection vehicles
- Las Perlas – Provision of sanitary landfill site and collection vehicles

## **4.2.5 Electricity and Telecommunication**

### **(1) Electricity**

The electricity for tourism development will be supplied from the network of IRHE. Only island developments, in the Las Perlas and Bastimentos zones will require new electricity generation on the respective islands. The national grid will be extended to Changuinola by 2010.

For the Arco Seco zone, a new 34.5 KV distribution line from La Arena substation will be required for tourism development.

For Farallón zone, a 115 KV distribution line from Chorrera substation will be required. For Metropolitana zone, a 34.5 KV distribution line will be connected from the nearby substation.

For Portobelo zone, a 34.5 KV distribution line will be required from Bahia Las Minas substation.

## (2) Telecommunications

Basically INTEL has sufficient capacity for the telecommunication network in Panama. Digital lines will be provided between Panama and San Miguel, and the connection to this network will be required in Isla del Rey.

## 4.3 Accommodation Allocation Plan

Forecast entire tourist demand of Panama should be distributed to each tourism cluster (zone).

### (1) Tourist Distribution to Each Zone

--The total overnight stays were distributed to each zone.

73% of the overnight stays by foreign tourists are concentrated in the Metropolitana Zone at present and this will decrease gradually to 40% in 2010 with the policy of regional development, which involves enhancing regional zones..

**Table. 4.3 Foreign Overnight Tourists by Zone**

Unit: 1,000 Persons nights

Zones	1992	~2000	~2005	~2010
Metropolitana	980	1,860	3,560	4,300
Share (%)	73%	60%	50%	40%
Bastimentos.	20	100	300	600
Arco Seco	40	150	300	400
Farallón	100	300	1,000	2,000
Portobelo	30	200	500	1,000
Las Perlas	60	200	800	1,200
Other regions	110	300	700	1,200
Local subtotal	360	1,250	3,600	6,400
Total	1,340	3,110	7,160	10,700

**Table. 4.4 Domestic Overnight Tourists by Zone**

Unit: 1,000 Persons nights

Zones	1992	~2000	~2005	~2010
Metropolitana	228	420	741	1,476
Share(%)	25%	25%	25%	25%
Bastimentos	36	68	123	248
Arco Seco	118	220	396	784
Farallón	110	204	369	732
Portobelo	72	135	243	492
Las Perlas	72	135	243	492
Other regions	264	493	885	1,776
Local subtotal	672	1,255	2,259	4,524
Total	900	1,675	3,000	6,000

**(2) Accommodation Allocation Plan**

- There are about 9,000 rooms for accommodation now and 33, 000 rooms will be required by 2010, an increase of 24,000 rooms.
- 66% of accommodation capacity is concentrated in the Metropolitana Zone. By decentralization, the share of accommodation in the Metropolitana Zone will be reduced to 38%.
- The share of accommodation by grade is 23% high class, 20% middle class and 57% economy class at present. In 2010 that will be improved to 24% high class, 53% middle class and 23% economy class.

**Table. 4.5 Accommodation Requirement by Zone**

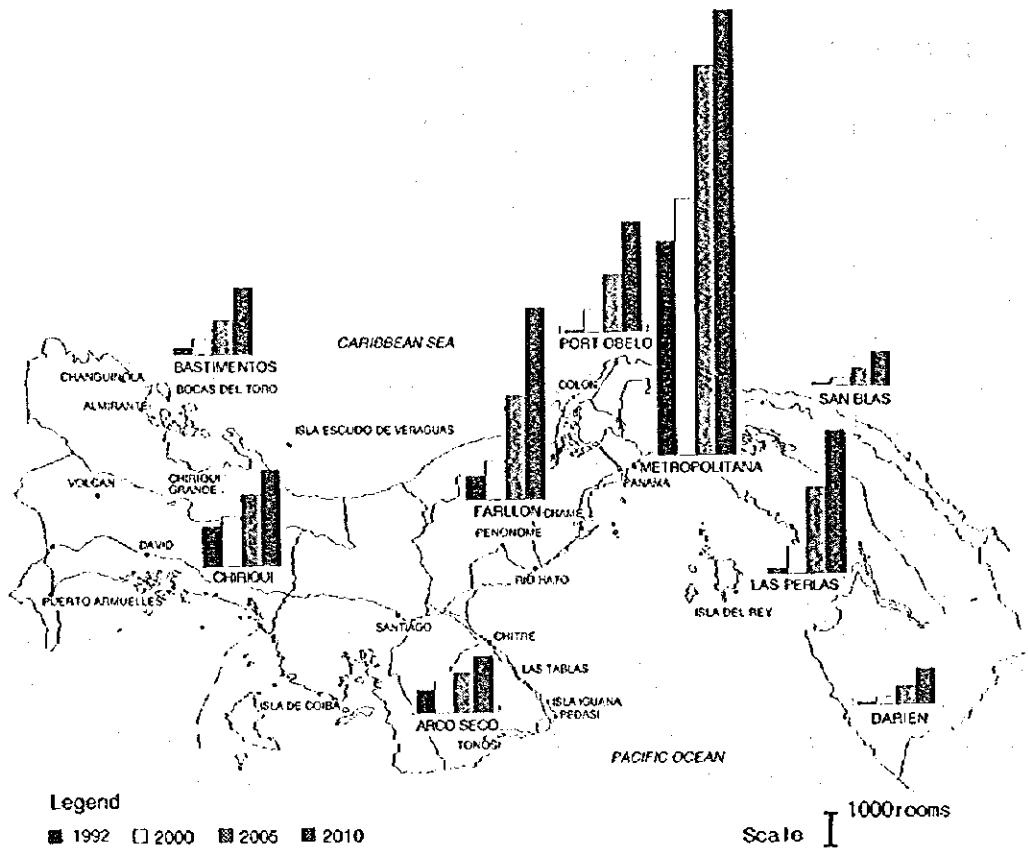
Unit: Number of rooms

Zones	Existing. 1992	Up to 2000	2001-2005	2006-2010	Total
Metropolitana share (%)	6,031 66.4%	1,199 29.6%	3,776 37.6%	1,554 15.9%	12,560 38.2%
Bastimentos	211	237	521	906	1,875
Arco Seco	650	254	227	449	1,580
Farallón	675	441	1,745	2,468	5,329
Portobelo	76	651	884	1,458	3,069
Las Perlas	151	618	1,671	1,224	3,664
Other regions	1,284	646	1,230	1,740	4,900
Local subtotal	3,047	2,847	6,278	8,245	20,417
Total	9,078	4,046	10,054	9,799	32,977

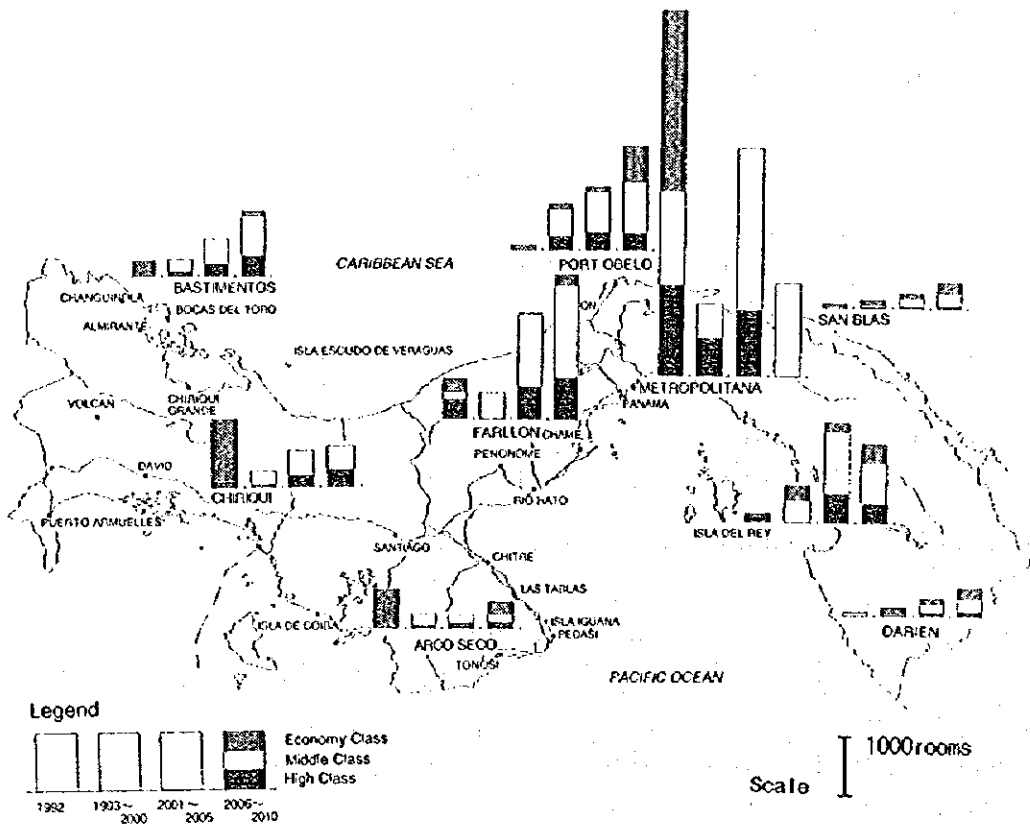
**Table. 4.6 Accommodation Requirement by Class**

Unit: Number of rooms

Classes	Existing. 1992	Up to 2000	2001-2005	2006-2010	Total
High	2,062	988	2,791	2,159	8,000
Medium	1,858	2,528	6,792	6,320	17,498
Economy	5,158	530	471	1,320	7,479
Total	9,078	4,046	10,054	9,799	32,977



**Figure 4.9 Comparative Accommodation Allocation Plan (Cumulative Indication)**



**Figure 4.10 Classified Additional Accommodation Requirement**