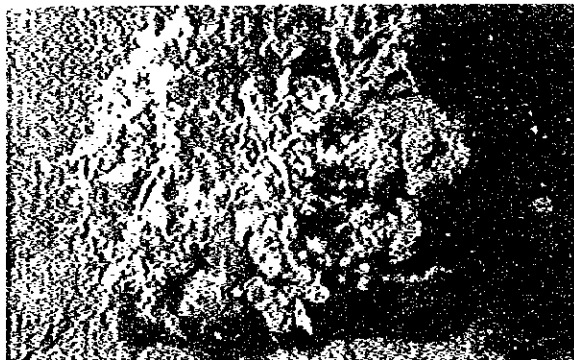


2.4 Existing Environmental Management

- Environmental administration in Palawan is at two levels: one is the national level (DENR) and the other, the provincial level (PCSD). The former is responsible for sustainable development of natural resources and conservation of the ecosystem, while the latter is to oversee the implementation of the Strategic Environmental Plan (SEP) for Palawan. PCSD is a multi-sectoral body comprising representatives of national government agencies, provincial/local governments, non-governmental organizations (NGOs) and people's organizations (POs). It is supported by the Palawan Council for Sustainable Development Staff (PCSDS) which will provide the machinery to coordinate the policy and functions to implement programs, etc.
- The SEP aims to improve the quality of life of the people of Palawan through the use of complementary activities of development and conservation that protect life-support ecosystem and rehabilitate exploited areas to allow future generations to sustain development growth. SEP goals are as follows:
 - to establish an Environmentally Critical Area Network (ECAN) for ensuring protection of vulnerable areas;
 - to implement positive development planning by intensified use of the Environmental Impact Assessment (EIA) and provisions for control of development activities harmful to the environment;
 - to intensify lowland and lowhill agricultural development;
 - to foster proper use and care of common resources by local communities; and
 - to rehabilitate degraded catchments and restore overused and badly damaged lands.
- ECAN areas are classified into three (3) components: Terrestrial, Coastal/Marine, and Tribal Ancestral Lands. These are further sub-divided into three zones: core zone, buffer zone (further comprising restricted use, controlled use, and traditional use), and multiple/manipulative use area. The criteria of ECAN zoning has been prepared by PCSD. Municipalities are required to prepare an ECAN zoning plan; to date, only San Vicente has submitted its preliminary zoning plan.
- At present, the EIA procedure has not been adequately applied due to varied reasons, including the incapability of project proponents to prepare the necessary IEE/EIS reports and lack of qualified manpower and updated data to evaluate those reports. Uncertainties in functional split between DENR and PCSD still remain. While all development projects are supposed to undergo EIA procedure, proper documents are often not presented and, if any, many of them are not properly documented. Environmental monitoring of the approved projects also seems to be insufficiently done.
- In light of the above, inappropriately developed or poorly constructed projects, especially infrastructure projects, often become causes of environmental problems. These projects have been reviewed and findings are as follows:
- A number of road construction projects cause destruction to the environment and to the health and safety of the riding public. Erosion has been observed along the sides of the Taytay-El Nido Road, San Jose-Port Barton Road, and San Jose-Little Caramay-Caruray Road, while the rainwater drainage of Sabang (St. Paul National Park) does not work due to sedimentation. Coron-Busuanga Road becomes very dusty during the dry season while the Taytay-El-Nido Road turns muddy during the rainy season. Logging roads also cause

soil erosion and landslides inasmuch as loggers did not consider road alignment during construction.

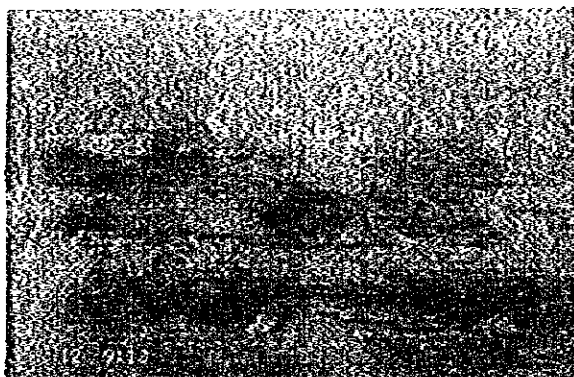
- Ports and port facilities in Palawan pose no serious environmental problems although some aspects of the development should be looked into. Sandoval Airstrip is expected to adversely affect the environment if no action is taken to improve its runway, access roads, and drainage. It is recommended that vegetation work be undertaken on the slopes used as borrowed pits during construction, maintain good soil compression all over the runway and construct ditches covered with concrete or masonry around the runway, and improve access roads with due consideration of the environment. These countermeasures should be immediately undertaken. No further expansion is recommended unless proper feasibility study, including a comprehensive EIA, is done.
- Waste disposal is a problem of island resorts categorized as economy class, such as those in Honda Bay: Garbage is disposed of in dug holes and there is a lack of toilet facilities. Water pollution is bound to occur if many of this type of resorts are established close to the bay. On the other hand, the impact of quality resorts on the environment is very minimal. Garbage is collected and recycled; septic tanks are in place for sewage treatment. Also, some resorts (e.g. Miniloc and Pangulasian Island Resorts, Club Noah-Isabelle, and Club Paradise) patrol their surroundings against illegal activities. The contributions of quality resorts with appropriate management capabilities is acknowledged; however, planning for this type of resort should be undertaken with utmost consideration of the environment as they can also cause the deterioration of the ecosystem.
- Existing environmental management suffers from lack of all resources, including manpower, finance, technologies for planning, implementation, monitoring and enforcement. Strengthening of environmental management system with particular regard to PCSD is badly needed.



Coral reef damage by siltation (Taytay)



Puerto Princesa - Roxas Road



Silt-covered coral reef
due to siltation from land (Taytay)



Little Caramay - Caruray Road (under construction)

2.5 Tourism Development and Potentials, Constraints and Issues

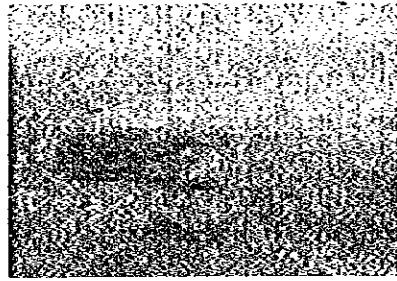
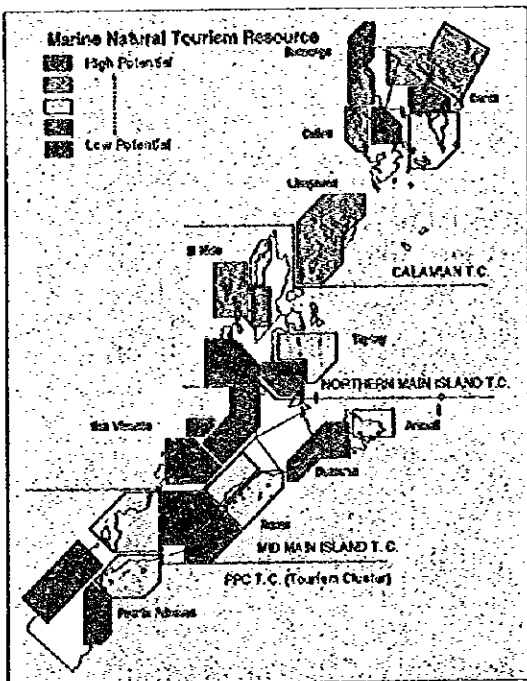
Current Tourism Situation

- Tourism in Northern Palawan is still limited. The current level of tourism demand in Northern Palawan is approximately 54,000 in 1995 comprising 27,000 foreign and 27,000 domestic tourists. The shares in the country's total demand are only 1.3%, 1.5% and 1.1% of 4.3 million, 1.8 million and 2.5 million, respectively.
- In spite of the availability of significant tourism resources, tourism development in Northern Palawan has just started. Present developments are limited to small-scale, high-quality island resorts in El Nido, Taytay and Busuanga by foreign and local capital; small-scale accommodations by local people in some beaches, such as Port Barton, El Nido, etc., and other small-scale or exclusive resort development. In Puerto Princesa City and adjoining areas, development is relatively more intensive than in other areas in Northern Palawan
- In 1995, there were 1,084 rooms in Northern Palawan of which 580 (or 54% of the total) are located in Puerto Princesa City, followed by El Nido (145 or 13%), Calamian Region (137 or 13%), San Vicente (90 or 8%), and so on. Most of the accommodations (829 or 76% of the total) are economy class, while expensive ones are only 168 or 15% of the total

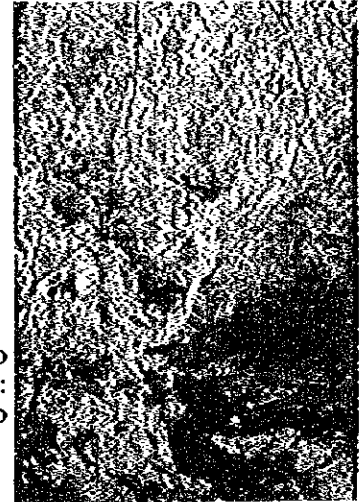
Tourism Resources

- In order to assess the existing tourism resources categorically, firstly, tourism resources have been classified into four, as follows: (1) Marine/coastal natural tourism resources; (2) Inland natural tourism resources; (3) Cultural tourism resources; and (4) Scenery resources. Secondly, the entire Northern Palawan has been divided into 28 tourism areas and four (4) clusters for analytical purpose.
- Assessment of the results are briefly as follows:
 - Northern Palawan's tourism resources are characterized as rich terrestrial, marine and cultural environments which provide ample opportunities for sightseeing, beach holidays, marine sports, adventures, etc. as confirmed also by the tourism market survey conducted by the Study Team;
 - Northern Palawan has a number of world class tourism resources, such as the underground river in St. Paul National Park, karst terrain and lakes in Coron Island, etc;
 - In general, the southern part (Puerto Princesa and adjoining areas) is enriched with superior terrestrial tourism resources, while the northern part (mainland north and Calamian Islands), with marine resources, although varied tourism resources, such as white sand coral beaches, emerald-green-colored coral reef, uniquely-shaped limestone/marble islands and mountains, hot springs, waterfalls, historical and cultural remains and facilities, etc., are widely distributed over Northern Palawan; and
 - Cultural minority groups, especially the Bataks and Tagbanuas, reside in various parts of Northern Palawan and are in the transition period of shifting from a traditional lifestyle. Though their own communities and social values are to be protected, their cultural heritage and crafts can become unique tourism resources.

Figure 2.8
Assessed Potential Tourism Resources

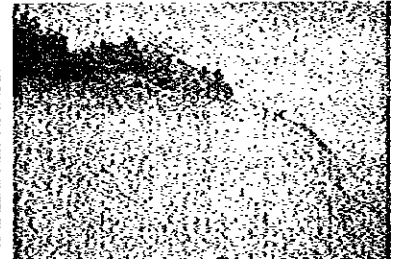
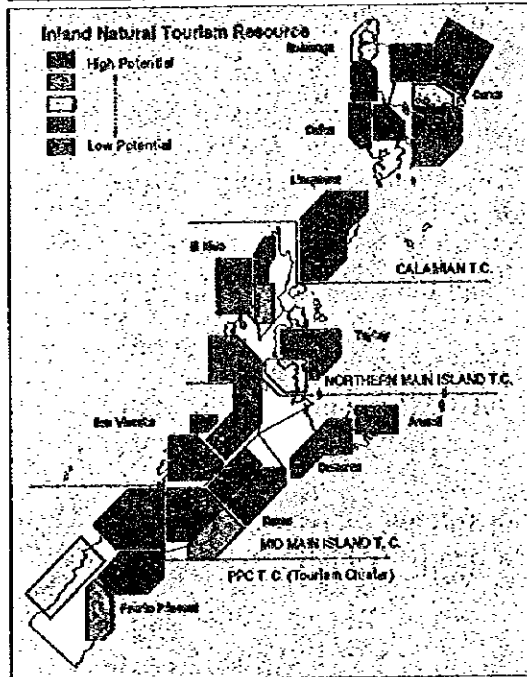


Good Coral Reef: Busuanga West



Bolalacao
Waterfall:
El Nido

Matinloc Island: Bacuit Bay



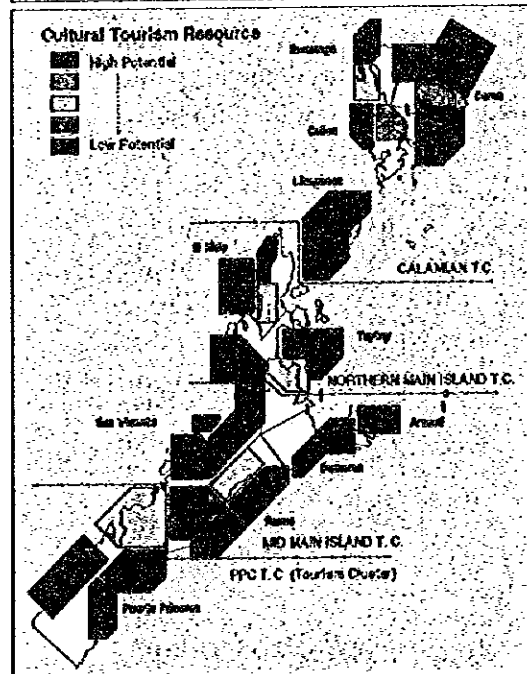
Pamalican Island: Gutob Bay



Base Bay Beach: El Nido



Makinit Hot Spring: Coron



Underground
River:
St. Paul
National
Park

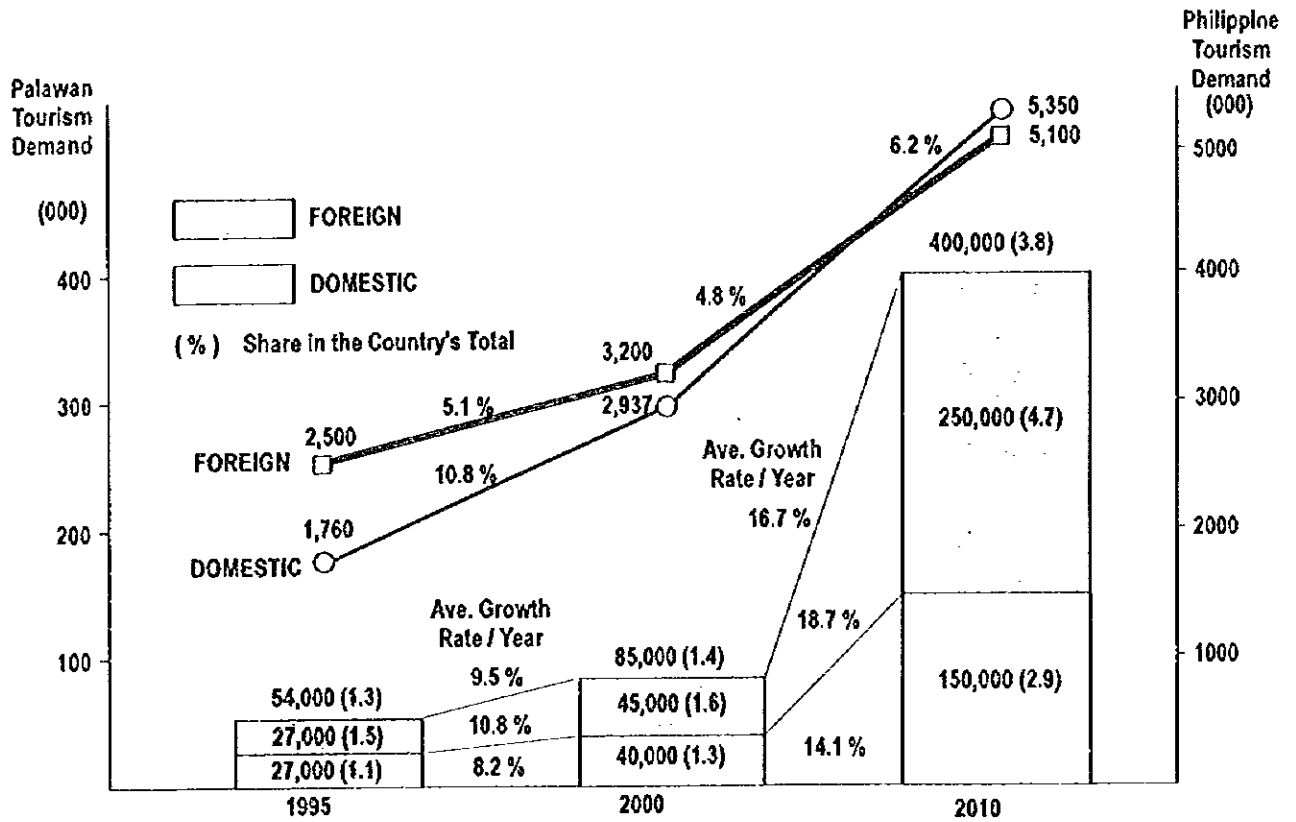
Coron Island:
Coron



Tourism Demand

- In order to supplement information on tourism demand in Northern Palawan, an interview survey was conducted at different places in Northern Palawan as well as at the Manila International Airport. Profiles of the foreign tourists to Northern Palawan are quite different from those to other destinations in the Philippines in general, and they are also different by nationality as summarized below:
 - (i) Major market comprises USA, Japan, Asia, and Europe, the total share of which is almost 90%;
 - (ii) Percentage of female tourists to Northern Palawan is relatively high compared with those to the Philippines;
 - (iii) Main age group of travelers is that of young to middle-age with relatively high educational level and income particularly American, Asian and Japanese tourists;
 - (iv) European tourists to Northern Palawan are different from Japanese and Asian tourists to Northern Palawan. Average daily expenditure of the former is approximately one-half of the latter; and
 - (v) The purpose of travel is mostly for pleasure and for vacation of which the major specific purpose is beach holiday.
 - (vi) Average length of stay is 5.5 days; average total expenditure is US\$2,480, and average group size is 2.7 persons.
- Domestic tourists are significantly different from foreign tourists in terms of travel purpose and group size. The former has a relatively high percentage of business/convention trips and a larger group size.
- Tourism demand for Northern Palawan in year 2000 and 2010 has been determined, for foreign tourists, by projecting the share of Northern Palawan demand by nationality and purpose of visit in the country's total demand, while for domestic tourists, by assuming alternative growth rates. The total number of foreign and domestic tourists are estimated at 250,000 and 150,000 for year 2010, respectively, while 45,000 and 40,000 for year 2000, respectively. The increase of Northern Palawan's share is moderate up to year 2000, which however is expected to accelerate towards year 2010 (refer to Figure 2.9). Major foreign markets for Northern Palawan in the future will be Asia, Japan, Europe and USA, with specific purposes of beach holiday and sightseeing. On the other hand, main purposes of domestic tourists are for business, beach holiday and sightseeing (refer to Table 2.8).

Figure 2.9
Northern Palawan Tourism Demand, 1995, 2000 and 2010



Source: Study Team

Table 2.8
Northern Palawan Tourism Demand Forecast
by Country and Purpose, 2010

	Foreign Tourists by Nationality						Domestic Tourists
	USA	Japan	Asia	Europe	Others	Total	
Pleasure	30 (71)	48 (88)	72 (87)	43 (86)	16 (80)	209 (84)	84 (56)
Sightseeing	11 (25)	15 (28)	19 (23)	17 (34)	7 (35)	69 (28)	30 (20)
Beach holiday	15 (36)	25 (45)	45 (54)	20 (40)	7 (35)	111 (44)	32 (21)
Sports/Adv.	2 (5)	6 (10)	4 (5)	5 (10)	2 (10)	19 (8)	15 (10)
Others	2 (5)	3 (5)	4 (5)	1 (2)	1 (5)	11 (4)	8 (5)
Business	4 (10)	3 (5)	4 (5)	3 (5)	1 (5)	15 (6)	45 (30)
Visit friend/relative	4 (10)	0 (0)	0 (0)	1 (2)	2 (10)	7 (3)	3 (2)
Convention	2 (4)	2 (4)	4 (5)	2 (4)	1 (5)	11 (4)	11 (7)
Others	2 (5)	2 (3)	3 (3)	2 (3)	2 (10)	8 (3)	8 (5)
Total	43 (100)	55 (100)	83 (100)	50 (100)	20 (100)	250 (100)	150 (100)
	(17)-	(22)-	(33)-	(20)-	(8)-	(100) -	--

Source: Study Team

Tourism Development Potentials, Constraints and Issues

- The identified potential tourism development areas assessed based on the methodology have been categorized as follows (refer to Figure 2.10):

The Highest Potential Areas: These include the following areas:

- (1) The west coast of Busuanga
- (2) The west coast of El Nido
- (3) Puerto Princesa - St. Paul tourism corridor

Potential Areas: These include the following areas:

- (1) Coron town and its surrounding areas
- (2) Taytay town and offshore islands
- (3) San Vicente's large-scale beaches
- (4) Port Barton and beaches in Sta. Cruz Bay
- (5) Roxas town's large-scale beaches in the south and islands in Green Bay

Potential Areas for Special Interests: These include the following areas:

- (1) Cleopatra Needle and cultural minority group area for preserved terrestrial nature and cultural heritage
- (2) Tinitian beach for isolated beach resort and diving
- (3) Linapacan Island for isolated small-scale island resorts and diving
- (4) West coast of Culion Island for isolated beach resorts
- (5) Culion town for cultural tourism
- (6) Coron Island and nearby islets for aerial sightseeing and small-scale resorts
- (7) Small islands north and northeast of Busuanga Island for small-scale resorts and diving

- Problems and constraints the current tourism is facing are as follows:

- 1) Degradation of environment: Northern Palawan's asset for tourism is its environment. While many non-tourism activities, such as mismanaged infrastructure development, construction of logging roads, illegal logging, kaingin, illegal fishing, etc, still contribute to the degradation of environment, the existing tourism development has not harmed the environment. On the contrary, most of the island resorts are equipped with adequate protection facilities, such as wastewater treatment, garbage recycling system, fish sanctuary, regular patrol against harmful activities, etc., and comply with EIA requirements in constructing facilities.
- 2) Lack of infrastructure: Except for Puerto Princesa area, transportation facilities and services, as well as other infrastructures including water supply, communication system, power supply, medical services, etc, are extremely underdeveloped. This causes inconvenience and risk for tourists and, at the same time, high investment and operating costs for tourism

3. SUSTAINABLE TOURISM MASTER PLAN

3.1 Sustainable Tourism Development Framework

Current Policy Direction for Sustainable Tourism Development

- Palawan's initiative to promote sustainable development led to the creation of the PCSD (Palawan Council for Sustainable Development) in 1992 through RA 7611, otherwise called SEP (Strategic Environmental Planning), for Northern Palawan and supported by PCSDS (Palawan Council for Sustainable Development Staff). The PCSD's main functions include the formulation of plans and policies to carry out the provisions of the SEP Law, coordination with local governments to ensure that the plans conform with those of SEP, enforcement of the provision of SEP Law, coordination with government and private agencies/organizations for cooperation and assistance in performing its functions, and so on. PCSDS is to implement "environmental monitoring and evaluation system," "environmental education extension," "environmental research," and the "ECAN (Environmentally Critical Area Network)," and is responsible for planning, monitoring and coordinating the activities of SPIADP (Second Palawan Integrated Area Development Project). While PCSD has been institutionalized for the first time in the country to oversee and manage development and activities to enhance the environment, it still lacks more concrete regulatory framework, guidelines, organization and staffing, reliable database, technical capabilities, implementing mechanism, financial source, and so on. Strengthening the capabilities of PCSD is considered critical to promote the sustainable development of Northern Palawan, while basic institutional framework and administration already exist.
- Regional development policy is directed to mitigate poverty by expanding livelihood opportunities and improving agriculture and fishery production which are the main industries in Northern Palawan. However, lack of necessary infrastructure and marketing facilities seriously hampers the actualization of potentials. Although the infrastructure developments are implemented or coordinated by SPIADP they are neither supported with an overall regional development plan, nor clearly integrated with an industry promotion program; furthermore adequate environmental measures and costs are not considered in construction and maintenance. Lack of water resource is also considered an impediment to agricultural and industrial development. High rate of migration, in addition to high natural growth of population, is a cause for concern in socioeconomic development, which however has not been properly addressed in the current development policy.
- The tourism sector, whose contribution to the present economy of Northern Palawan is still insignificant, has not yet been adequately incorporated in the regional development policy and framework. Establishment of tourist offices is limited to the Provincial Government, Puerto Princesa City and the municipality of El Nido. Similarly, the Palawan Tourism Council and El Nido Tourism Council have only been recently established. Tourism development and promotion strategies for Northern Palawan at the national level need further study, while those at the provincial level are yet unclear.

Potential Role of Tourism for Promoting Sustainable Development

- Northern Palawan has been constrained from development in many ways: poor infrastructure, lack of water resource, poor soil, limited arable lands, low productivity, insufficient marketing/distribution system, lack of technological and financial support, high rate of population growth, poor land management system, and so on. Rich natural environment has been providing the people with direct and indirect livelihood opportunities which, however, have been degrading due to various harmful activities. Therefore, stricter management of the environment has become a primary concern of the government. However, it is very likely that unless alternative ways are provided to increase the people's income, the remaining environment will not be enhanced but further degraded and aggravated by the area's poverty incidence. While efforts are made by the government to improve productivity and production of conventional industries, particularly agriculture and fishery, these alone may not be sufficient. Abundance of rich environment and human resource is considered to be a major advantage for tourism to become an alternative sector to promote socioeconomic development in Northern Palawan. Tourism is a rather labor-intensive industry with wide economic spillover effects and does not consume the environment directly if it is properly managed. Since tourism requires quality environment, it is expected that tourism by itself can contribute to conserving the environment. Accordingly, tourism in Northern Palawan could play a much larger role in improving the economy and conserving the environment.

Tourism Development Goals

- Tourism development goals for Northern Palawan have been more specifically delineated as follows:
 - 1) Tourism should become a strategic means of promoting sustainable development of Northern Palawan with effective integration with environment and local socio-economy: Tourism can benefit the local community through direct employment and purchase of local supplies, protect the environment within its activity area, and generate additional revenues to the government for environmental management and infrastructure development.
 - 2) Tourism should become a primary industry: In order to maximize the effects of tourism, developments should be significant in scale and quantity as well as quality within the framework of sustainable development.
 - 3) Tourism in Northern Palawan should contribute to the enhancement of the overall image of Philippine tourism, thus inducing tourist arrivals to the country: Northern Palawan has a great potential to become a highly competitive tourist destination in the international market which will contribute to the increase in tourist arrivals not only to Northern Palawan but also to the entire country owing to its enhanced image.

3.2 Environmental Management Plan

Environmental Management

- **Environmental management is the sole basis for a sustainable tourism development and socioeconomic development in Northern Palawan.** In order to tackle various environmental issues, the current environmental administration should be considerably strengthened. This includes strengthening of organizations, providing more specific environmental conservation/restoration plans and guidelines, more effective monitoring, enforcing/implementing rules and plans, and acquiring necessary funding source and equipment. In Northern Palawan, it is not only the existing environment that needs to be conserved or restored but, also, the deteriorated environment should be rehabilitated or conserved; otherwise, the remaining environment will deteriorate further. Environmental conservation and restoration cannot be separated in Northern Palawan. This is particularly the case wherein a large-scale of coral reef communities have been damaged as a result of various activities harmful to the terrestrial environment

Environmental Management Area Classification

- Environmental management area classification has been made to provide a basis for formulating the tourism development plan. Since there was no actual ECAN Zoning formulated for municipalities in Northern Palawan, the results of the supplemental surveys had been fully utilized. Particularly, the condition of coral reef areas, mangrove forests and key terrestrial ecosystems were important inputs to this work which had been done in such a way that they could also be used as an input to formulate the ECAN Zoning; therefore, compliance with ECAN Zoning concept and system was basically maintained (refer to Figure 3.1).

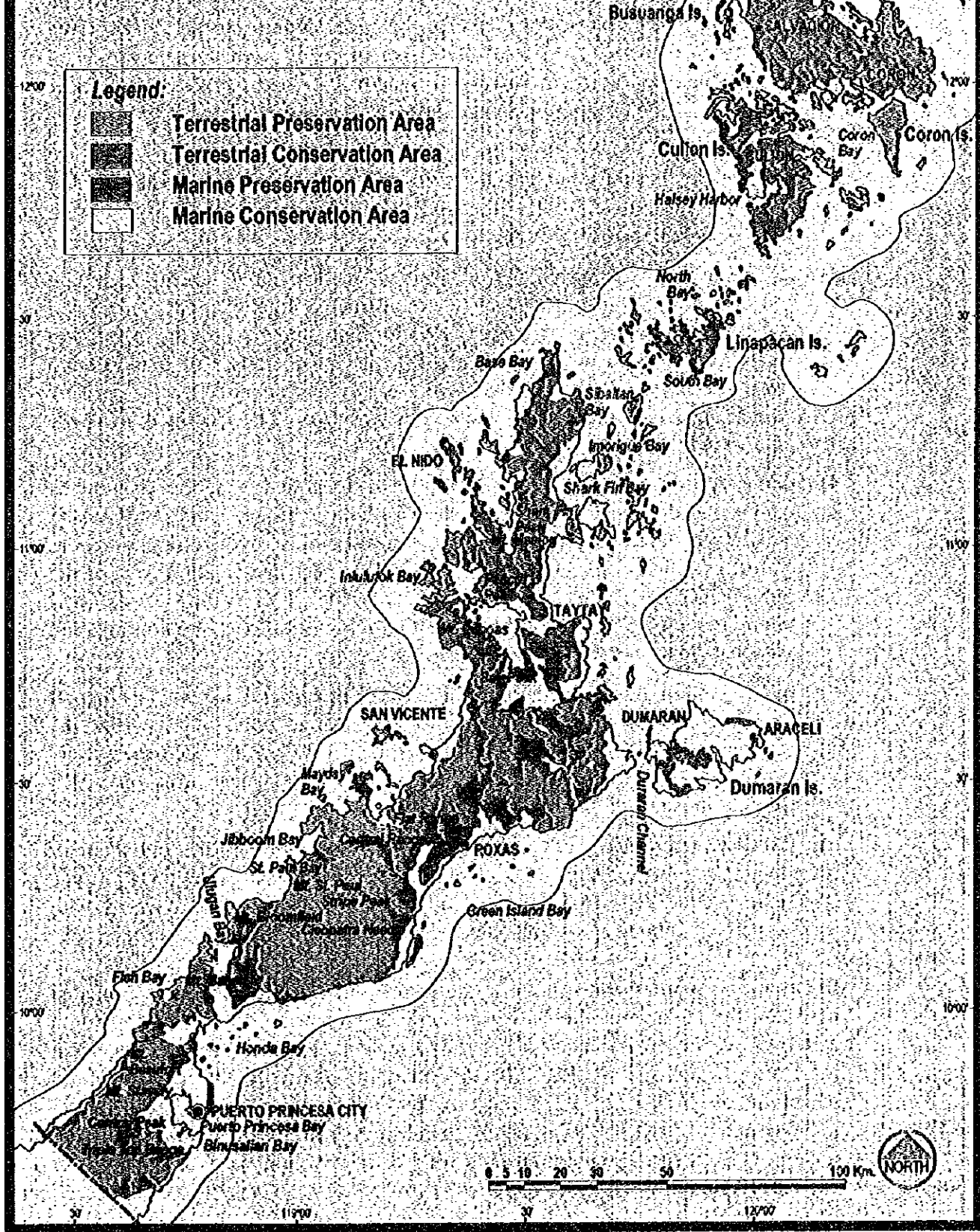
Table 3.1
Criteria of Environmental Zoning and ECAN Zoning

	ECAN Zoning	Proposed Environmental Management Area Classification
T e r r e s t r i a l	Core Zone <ul style="list-style-type: none"> • areas above 1,000m elevation • virgin forest or first growth forest • area with slope above 50% • mountain peaks with elevation above 500m horizontal from epicenter 	Preservation Area <ul style="list-style-type: none"> • area above 1,000m elevation • mossy forest and old growth forest • unique ecosystem with biological significance • area with slope above 50%
	Buffer Zone (Restricted Use) <ul style="list-style-type: none"> • area with elevation range of 500-1,000m • area with slope range of 38% - 50% • habitat of wildlife species • 10km belt around core zone • poor, stunted and sparse stands of semi-deciduous forest which has low regeneration capacity • lower altitude limit can be lowered to 300m base in areas adjacent to critical ecosystems 	Conservation Area <ul style="list-style-type: none"> • area with elevation of 100 - 1,000m • area with slope range of 18 - 50% • area with 100m elevation facing the core zone based on mossy forest and old growth forest
M a r i n e	Core Zone <ul style="list-style-type: none"> • intact coral reef with fair to excellent coral condition or 25% - 100% • coralline sites with all coral genera found in the management unit • mangrove area bordering waterways, extending 20m from the riverbank and 50m from shore • mangrove area in small islands • mangrove area of old growth stand and reproductive brush • mangrove area with all species found in the management unit • seagrass bed bordering the core zone, mangrove and corals • seagrass bed with at least 50% cover of macrophytes • seagrass beds with sightings of dugong 	Preservation Area <ul style="list-style-type: none"> • intact coral reef with good to excellent coral condition or more than 75% coral cover • slightly disturbed mangrove forest with more than 500 ha. and moderately disturbed mangrove forest with more than 1,000 ha. • seagrass beds with sighting of dugong • sightings of sea turtles
		Conservation Area <ul style="list-style-type: none"> • 7 km from the coastline/islands

Source: SEP and Study Team

- 1) ECAN Zoning further specifies criteria for controlled use and traditional use.
- 2) No buffer zone is designated in ECAN Zoning.

Figure 3.1
Proposed Environmental
Management Area for
Northern Palawan





Source: Study Team

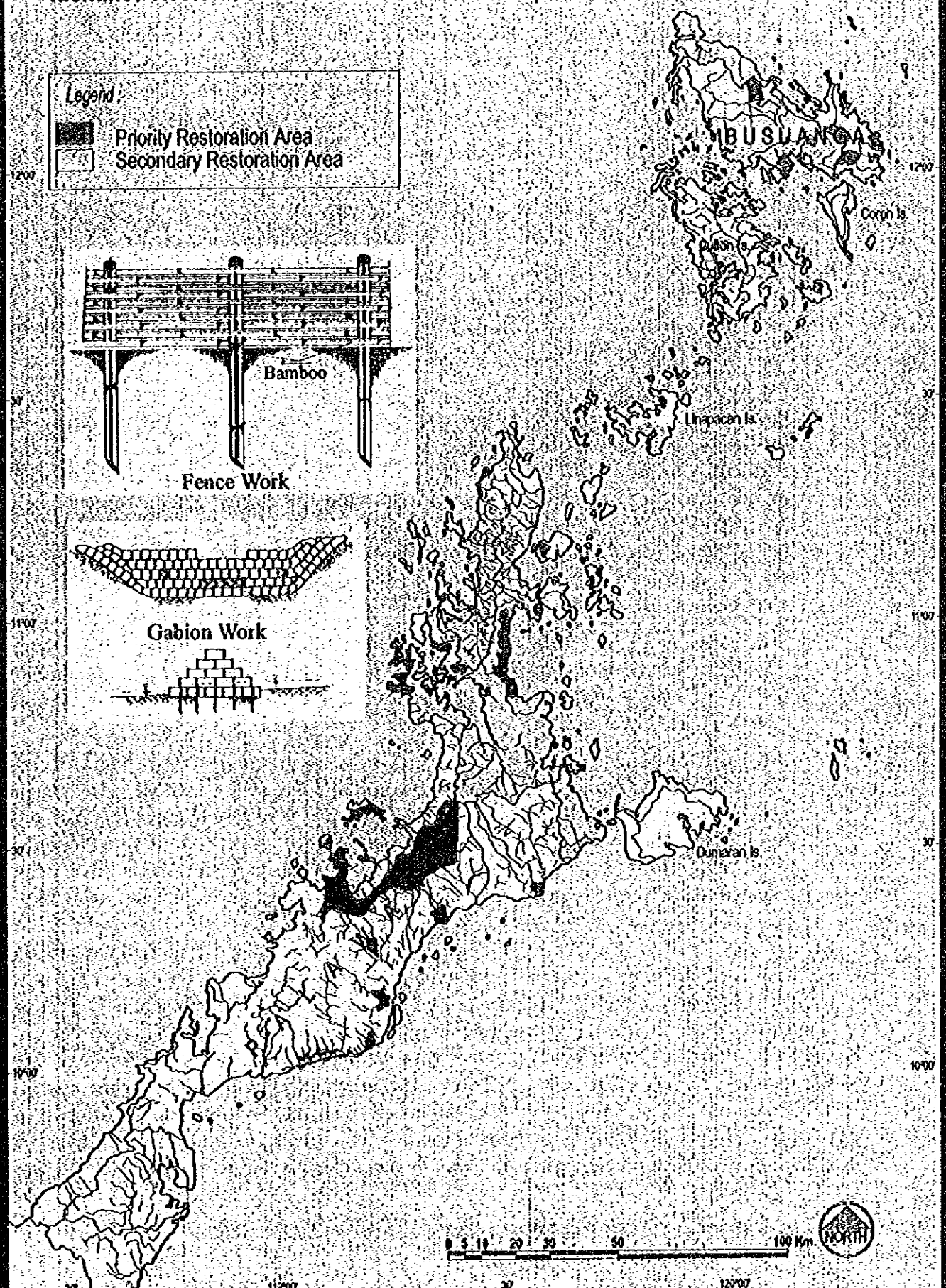
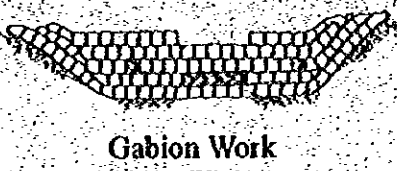
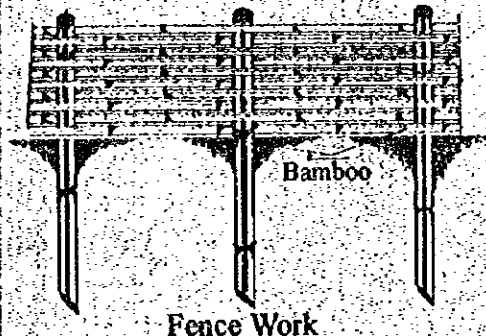
Measures/Actions Needed for Environmental Conservation/Restoration

- Specific areas of environmental conservation and restoration have been identified based on the assessment results of the existing environment and Environmental Management Area. They are categorized as follows:
 - 1) Rehabilitation of inadequate infrastructure: Many roads need to be rehabilitated with particular regard to drainage, slope protection and surface maintenance for which a total of 60 km of roads have been identified in various parts of Northern Palawan. Sandoval Airport requires provision of proper drainage facilities, including those of its access roads.
 - 2) Strengthening of control measures against illegal/harmful activities, particularly illegal fishing, illegal cutting of trees, and *kaingin*: They are still practiced on different scales all over Palawan. A patrolling and monitoring system should be greatly strengthened.
 - 3) Restoration of damaged terrestrial and marine environment, including reforestation, closure of inadequately constructed logging roads, prevention of siltation, slope protection, etc: Priority should be given to the restoration of severely-eroded areas which are still the major causes of deteriorating marine ecosystem and for which there is virtually no effective measure by which impact on the marine side can be avoided. The identified areas are shown in Figure 3.2.
 - 4) Conservation of terrestrial environment: Identified superior ecosystems should be adequately conserved such as lowland evergreen rainforest, lowland semi-deciduous rainforest, submontane forest, forest over ultra-basic rock, forest over limestone, etc, which are covered under Preservation Area of the environmental zoning. Protection of the Preservation Area and Conservation Area should be done through institutions, monitoring, and adequate management organizations.
 - 5) Conservation of marine environment: Focus of conservation will be on coral reef, seagrass beds, mangrove forest and marine wildlife, especially the dugong and sea turtle. The superior marine ecosystem has been specifically identified and covered in the Environmental Management Area on which monitoring and enforcement measures are worked out.
 - 6) Another important area requiring immediate attention is the old mercury mining site and the jetty constructed from its surplus soil. The open-pit type mining site needs to be closed and the jetty removed and covered with concrete. Dredging of contaminated soil around the jetty is also needed.
- Environmental conservation and restoration costs have been preliminarily estimated based on the findings of the study, including environmental zoning (preservation and conservation areas) management (P349 million), protected area management for Coron Island and St. Paul-Mt. Bloomfield-Cleopatra Needle (P40 million), patrol on illegal fishing (P238 million), rehabilitation of eroded areas (4,451 million), and road rehabilitation/ improvement from environmental viewpoint (P201 million). Even for the above areas, a total of P5.3 billion pesos is required for 1997-2010 period.

Figure 3.2
Identified Restoration Areas

Legend:

-  Priority Restoration Area
-  Secondary Restoration Area



Source: Study Team

3.3 Tourism Development Structure Plan

Development Concept and Direction

- **Tourism cluster development:** The concept of cluster development is to delineate an idea which cannot be disintegrated to maximize the effects of development, and to distinguish the area characteristics from each other. The following four tourism clusters have been delineated:

- (i) Calamian Tourism Cluster
- (ii) El Nido/Taytay Tourism Cluster
- (iii) Roxas/San Vicente Tourism Cluster
- (iv) Puerto Princesa Tourism Cluster

- **Building an Integrated Tourism Network:** A critical factor for effective tourism development of Northern Palawan is to integrate the area with an international and a national network and individual tourism clusters for each other. For this, a strategic multi-modal transportation network building is very important:

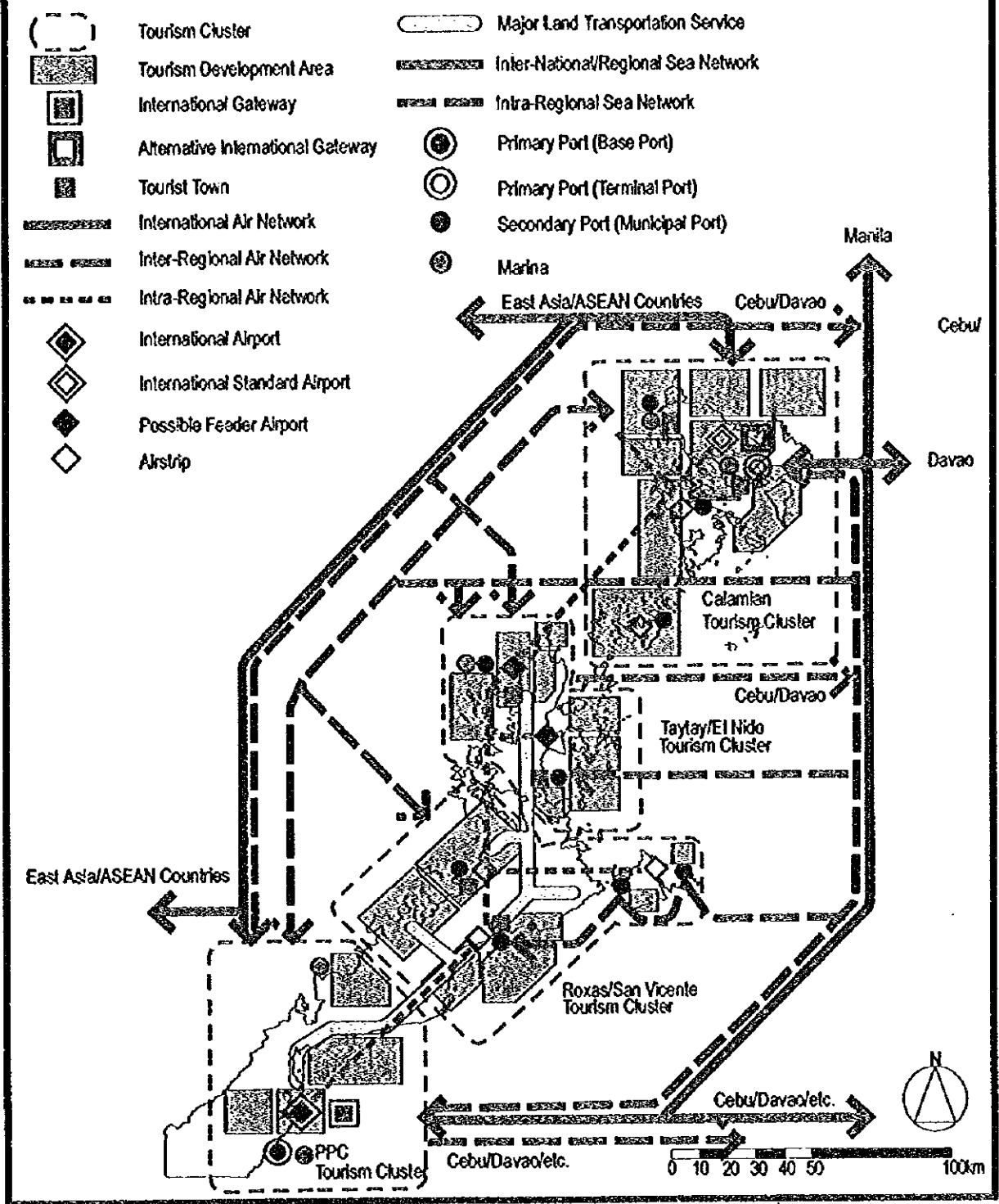
Establishment of air transport hierarchy led by tourism: In addition to Manila, Puerto Princesa should also serve as an international gateway, while the upgrading of Busuanga feeder airport to an airport with international standard to function as the northern gateway to Northern Palawan may be considered. Airport/airstrip of each tourism cluster, particularly in Taytay/El Nido tourism cluster, should be adequately upgraded. With this, air transport services currently provided by resort operators rather individually, can be integrated/coordinated, and thus more efficient and frequent services at reduced cost may become available not only for tourists but also for local communities.

Establishment of effective port network integrated with tourism and regional development: Geographic features of Northern Palawan with scattered distribution of communities and tourism destinations in a large number of islands require a more effective port network.

Road network building in compliance with regional development direction: Roads are the most basic transport infrastructure for regional socioeconomic development which, however, is an expensive undertaking requiring very careful implementation due to the fragile environment in Northern Palawan. Since, in general, tourism alone can hardly afford to shoulder the costs, tourism developments basically rely on existing and planned roads which are justified within the overall regional development framework.

- **Strategic Allocation of Accommodation Facilities:** Accommodation facilities are the key basis for tourism development and activities. The estimated tourism demand has been translated into accommodation requirements for three levels of accommodations: de luxe, standard, and economy. The current composition of accommodation facilities will be and should be shifted to higher levels together with the improvement of room occupancy rate. For the short-term (to year 2000), priority has been given to Puerto Princesa cluster where infrastructure and tourism supporting functions are relatively well-provided. After which, priority will be shifted mainly to El Nido and Calamian clusters, both of which have the highest development potentials in parallel to the other clusters, but to a lesser extent
- The overall development concept is to decentralize the development and activities in accordance with the areas' tourism potentials and to integrate them with a multi-modal access network. Integration of tourism areas has been considered at three levels: (1) international/regional level, (2) inter-cluster level, and (3) intra-cluster (refer to Figure 3.3).

Figure 3.3
Overall Development Concept



Source: Study Team

Development Framework: Allocation of Number of Rooms

Tourism Cluster	1995 Accommodation				2000				2005				2010			
	De Luxe	Standard	Economy	Total	De Luxe	Standard	Economy	Total	De Luxe	Standard	Economy	Total	De Luxe	Standard	Economy	Total
1. PPC	168	0	472	640	170	250	470	890	300	400	490	1,190	600	700	500	1,800
2. Roxas	0	0	63	63	0	30	55	85	0	50	60	110	50	150	100	300
Dumanan	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(20)	(20)	(0)	(0)	(25)	(25)
Azabell	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(50)	(0)	(50)
3. San Vicente	0	0	90	90	0	20	95	115	0	50	100	150	50	150	100	300
4. Taytay	30	0	39	69	50	0	40	90	50	0	50	100	100	50	65	215
5. El Nido	30	34	81	145	70	110	90	270	230	200	110	640	650	500	135	1,285
6. Calamian	0	53	84	137	40	120	90	250	450	270	140	860	850	650	200	1,700
Total (no.)	188	87	829	1,084	330	530	845	1,705	1,030	970	950	3,050	2,300	2,200	1,100	5,600
Total (%)	(15)	(8)	(76)	(100)	(19)	(31)	(49)	(100)	(34)	(35)	(31)	(100)	(41)	(39)	(20)	(100)

Tourism Structure Plan for Clusters

Calamian Tourism Cluster (refer to Figure 3.4)

- The main access point is the upgraded Busuanga airport for air and Coron port for shipping transport. While Coron functions as a major tourist town which links internal tourism destinations and other tourism clusters, major resort developments will be centered in the west coast of Busuanga for which Salvacion will function as a supporting tourist town. The two towns will be linked with upgraded roads along which inland recreational developments be undertaken. Developments by year 2010 will be mostly in Busuanga and partly in Culion and Linapacan. The west coast of Busuanga should also be linked with the El Nido cluster by sea. Culion airstrip can provide an alternative access to the island.
- No tourism development should be allowed in and around Coron Island except for aerial observation, while other developments should be properly guided within the specified physical accommodating capacities in accordance with development guidelines to comply with Environmental Management Area and local socioeconomic requirements. Water resource development is necessary for the development of the west coast of Busuanga which should be implemented in an integral manner with water supply for Salvacion and related communities in the area

Taytay/El Nido Tourism Cluster (refer to Figure 3.5)

- The main access point will be a new El Nido airport linked with Busuanga airport and Puerto Princesa airport. Alternative access will be provided with sea links between Coron, Busuanga, Port Barton, Linapacan, etc., as well as with road links to Taytay and further to Puerto Princesa. The main development area will be along the west coast of El Nido, while supporting tourist towns will be El Nido poblacion area. Further development in Bacuit Bay should be strictly controlled and instead, the bay should be developed for marine tourism activities with minimal facilities. Tourism development in the inland area could be added with due consideration to environmental zoning and carrying capacities in specific areas. Development of the east coast and its offshore islands will be beyond 2010.
- Infrastructure development, such as airport and roads in El Nido area, has to be undertaken with utmost care of the environment, and water resource development of the area should be integrated with existing communities in adjoining areas.
- Access to Taytay includes Sandoval airstrip to be linked with Busuanga and Puerto Princesa airports, Taytay Port to be linked with Coron and Puerto Princesa, and a road to be linked with El Nido and Roxas/Puerto Princesa.
- Taytay's major tourism development will be in offshore islands owing to deteriorated marine ecosystems along the mainland coast. Since island resorts require careful development in terms of environment and higher operating costs scale, type of development should be strictly controlled in compliance with development guidelines.

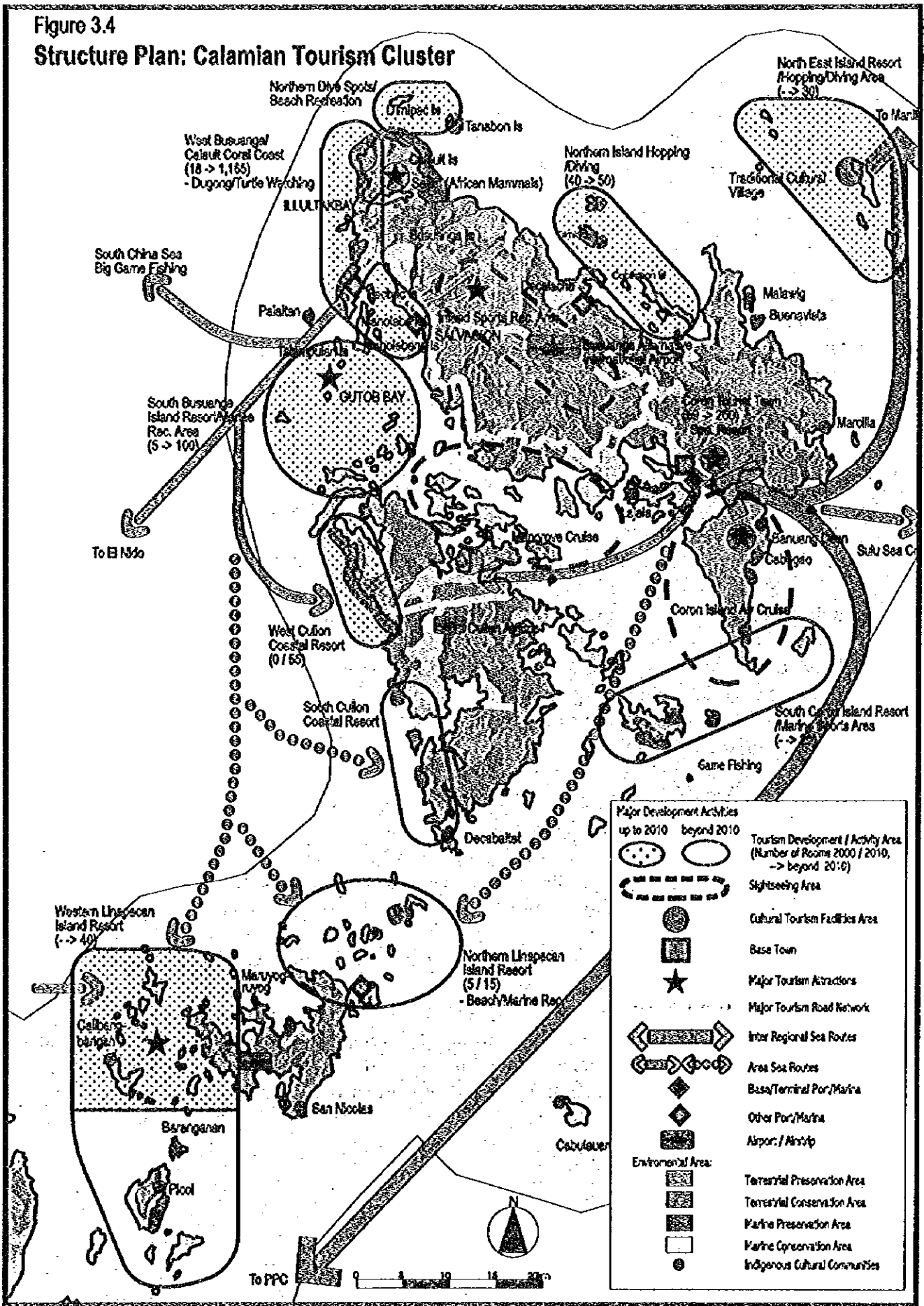
Roxas/San Vicente Tourism Cluster (refer to Figure 3.6)

- The Roxas area includes the coastal area, river basin and mountainous areas of the mainland as well as Dumarán and Araceli, which can provide a combination of varied tourism attractions and activities. While beaches have large accommodating capacities, their development will be a long-term issue considering the market size and its characteristics. However, this cluster can provide various kinds of development opportunities, but on a limited scale. The access is mainly by land from Puerto Princesa.
- Major tourism developments in San Vicente area will be in Port Barton and a long, large-scale beach along the coast including offshore islands. However, targeted market, lack of infrastructure, etc. will not warrant large-scale development of this area. Tourism development will be limited to the existing Port Barton and Boyan Island by year 2010, while further development will be considered thereafter as infrastructure develops and tourism markets grow further.

Puerto Princesa Tourism Cluster (refer to Figure 3.7)

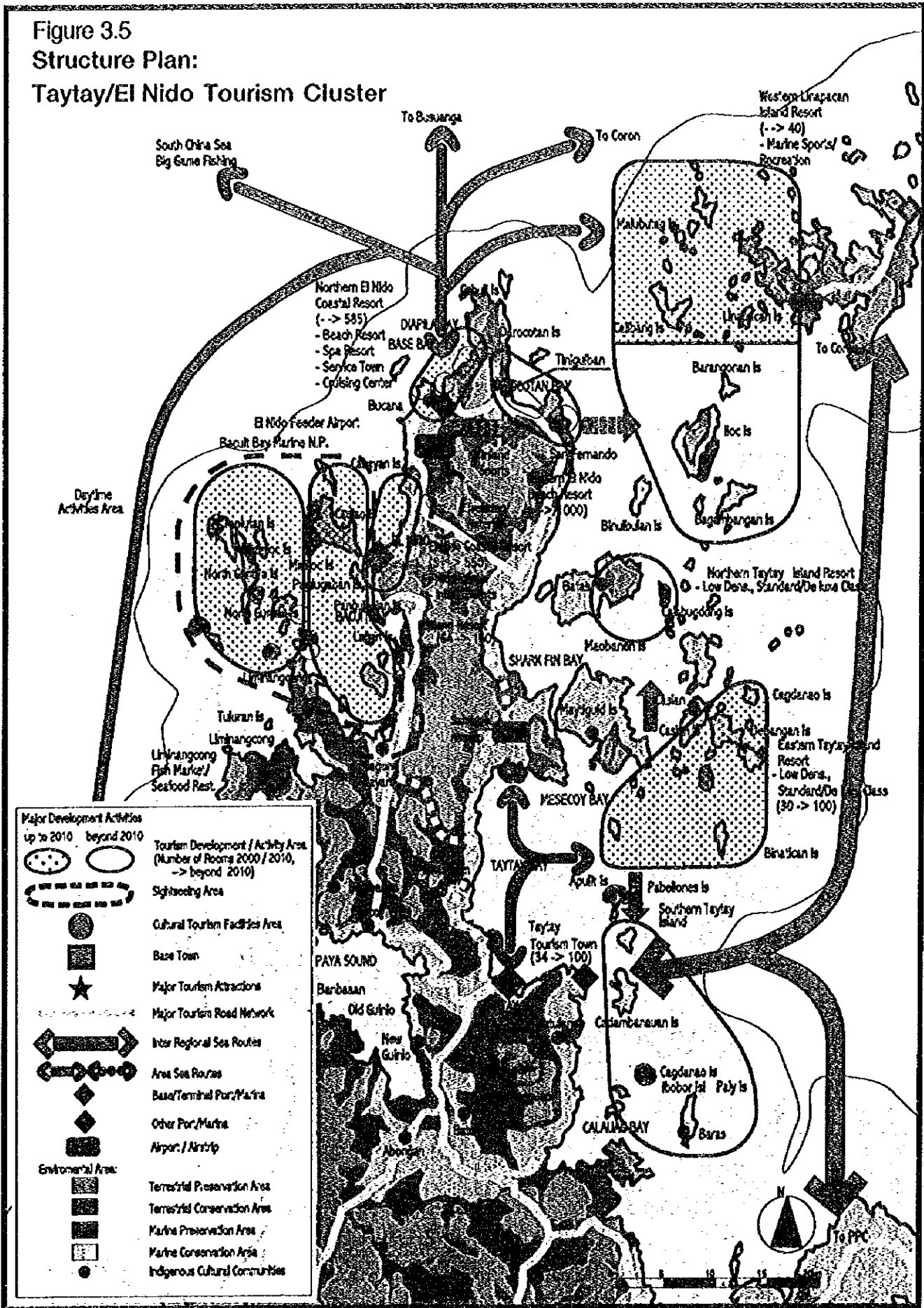
- With relatively well-developed infrastructure and supporting services as well as varied tourism resources both terrestrial and marine, ample development opportunities exist. Although St. Paul National Park and Iwahig are main attractions with rich terrestrial environment, there is a growing concern on the carrying capacity of the underground river of which its international ecosystem level has not been fully investigated and assessed. Honda Bay can provide resort development and marine activity opportunities on a relatively large-scale basis due to its proximity in spite of its relatively low quality of marine ecosystem compared to those in the northern parts. This cluster also involves urban and cultural tourism opportunities.
- Since Puerto Princesa serves as the main gateway to Northern Palawan, the cluster should play varied roles for Northern Palawan tourism including:
 - to represent and introduce the concept and image of sustainable tourism development of Northern Palawan through proper development of individual areas in the cluster;
 - to provide adequate accessibility to, and other information on, other tourism clusters in Northern Palawan; and
 - to function as a center for human resource development, environmental research and management technologies, tourism supporting industries, overall tourism administration, etc. which promote and support sustainable tourism development and operation in Northern Palawan.

Figure 3.4
Structure Plan: Calamian Tourism Cluster



Source: Study Team

Figure 3.5
Structure Plan:
Taytay/El Nido Tourism Cluster



Source: Study Team

3.4 Infrastructure/Tourism Facilities Development

Transportation

- Development and improvement of the transportation system for Northern Palawan with regard to tourism are summarized as follows:
 - 1) Air transportation system: Air transportation is considered a primary transportation mode for international, regional and inter-tourism cluster movements of tourists, the number of which is expected to increase significantly (250,000 foreign tourists and 150,000 domestic visitors in year 2010). Possible areas of improvement include upgrading and expansion of Puerto Princesa airport as a main gateway to Northern Palawan; upgrading of Busuanga airport as an alternative international gateway, particularly to serve the northern part of Northern Palawan where future development will concentrate; and development of a coordinated/integrated intra-regional air transport operation including development of El Nido airport, improvement of Sandoval airport and other airstrips. With this, air transport could serve the needs of local communities.
 - 2) Sea transportation system: Sea transportation is particularly important for goods distribution and access to isolated destinations due to geographical features of Northern Palawan at different levels: regional, inter-island, local, etc. The hierarchy of ports and harbors has been redefined and their potential use for tourism has been defined for needed improvement.
 - 3) Road transportation system: Road development is a costly undertaking but has a great socioeconomic impact. However, the role of roads for tourism in Northern Palawan is not as great as air and sea. Needs are mainly local--to connect with activity centers and access points.

Other Economic Infrastructure

- Water supply is also a critical issue for socioeconomic development in Northern Palawan, though the situation varies by area. Impact of tourism development on water demand has been estimated (refer to Table 3.2). Water demand by tourism is only about 3% in total. Although the impact in Busuanga is significant, a large potential for water resource development has been identified. El Nido area also has potential water resources.

Table 3.2
Water Demand of Tourism Development (2010)

Municipality	Demand by Communities				Demand by Tourism		Total Demand
	Rural	Urban	Total	Share (%)	Qty.	% to Total	
Busuanga	1098	807	1,905	77	563	23	2,468
Coron	774	7,669	8,443	99	96	1	8,539
Cullion	1,129	1,731	2,860	99	25	1	2,885
Linapacan	534	605	1,139	98	19	2	1,158
El Nido	2,962	2,249	5,211	91	534	9	5,745
Taytay	5,064	6,131	11,195	99	84	1	11,279
San Vicente	1,581	3,866	5,447	98	103	2	5,550
Roxas	4,069	5,738	9,807	99	79	1	9,886
Araceli	984	1,348	2,332	99	18	1	2,350
Dumaran	2,072	643	2,715	100	6	0	2,721
Puerto Princesa	3,504	23,187	26,591	98	668	2	27,359
Total	23,771	53,974	77,745	97	2,195	3	79,940

- Power supply is still insufficient and unstable, while development of a grid system to ensure 24-hour service is currently being planned. Telecommunication situation is also expected to be improved in the near future with the initiative of private communication companies. Adequate waste disposal is critical not only for public health but also for beautification purposes, wherein tourism development can coordinate with local government and communities in developing necessary facilities and activities.

Social Infrastructure

- Among the social infrastructure, there is a lack of medical facilities and services in most of the areas, which are also critical for tourism development. Therefore, tourism development should and could develop or complement medical facilities/services not only to serve the tourism sector but also local communities.

Tourism Facilities

- Regarding tourism facilities, in addition to accommodation facilities of various types and commercial facilities, such as restaurants, shops, sports and amusement facilities, etc., it is worthwhile to consider educational facilities where visitors can experience primary environment and covered facilities to meet activity demands during bad weather. Major tourism facilities will be introduced in relation to tourism activities.
- Tourism facilities, including related infrastructure, must be carefully developed, designed, constructed and maintained not only to preserve the quality of facilities but also to comply with the environment in accordance with area characteristics and consideration of the requirement of local communities. For this, development concept and guidelines for overall land use, landscaping, location and design of facilities, utilities, construction methods, safety and security measures, sanitary conditions, public health, emergency and rescue system, etc. have been studied.

Estimated Cost for Tourism Infrastructure and Facilities

- Initial development costs for tourism sector have been estimated based on the proposed structure plans. The costs are categorized for (1) accommodation facilities including immediate supporting infrastructure such as service facilities, utilities, parking, internal landscaping, etc, (2) tourism facilities in activity areas, and (3) transportation facilities needed beyond regional development requirements (refer to Table 3.3), which are P7.6 billion, P2.4 billion and P5.4 billion, respectively, or a total of P15.4 billion by year 2010.

Table 3.3
Tourism Development Costs^{1/}

Tourism Cluster	Tourism	Transport Facilities				P million	
		Air	Road	Sea	Total	Tourism Facilities	Total
1. PP.	2,048	-	410	250	1,410	683	4,141
2. Roxas/San Vicente.	674	-	-	28	28	98	800
3. El Nido/Faytay	2,194	775	250	250	1,275	690	4,159
4. Calamian	2,654	2,000	460	250	2,710	910	6,274
Total	7,570	2,775	1,120	778	5,423	2,381	15,374

Source: Study Team

^{1/} exclusive land acquisition cost.

3.5 Tourism Development and Management

- The overall administrative framework for tourism development and management has been worked out in order to provide for an orderly and smooth implementation of the proposed Master Plan (refer to Figure 3.8). It delineates the role of the different relevant agencies and stakeholders, covering the different aspects of tourism development. The DOT is the central agency that will coordinate with the relevant agencies and stakeholders. Actual planning, on the other hand, will be done at the provincial and municipal levels, where the participation and involvement of the local communities is paramount. The development of infrastructure and tourism facilities should be undertaken in an integral manner so that tourism developments can have a spillover effect in the community. Municipal and local governments should be fully involved not only in the development process but also in the management aspect as well. In short, there should be equitable sharing not only of the development benefits but the development costs as well.

Figure 3.8
Administrative Framework for Tourism Development and Management

	DOT	PCSD	Prov'l Gov't	Local Gov't		Local Community	PTA	Private Sector	NGO
				Municipality	Barangay				
Tourism Policy	●	○	○	○	□	□			□
Tourism Development	Planning	● NEDA	○	●	●	■		□	■
	Implementation	○							
	- Infrastructure	● DPWH		●			■	○	
	- Land Acquisition	○ DA, DAR			●	○	■		
	- Tourism Facilities				○		■	■	
Management				○	○	●		●	□
Tourism Promotion	●		●	○	○	○		■	□
Investment Promotion	●		●	○				■	□
Related Industry Promotion			●	●		○		■	■
Human Resource Dev't	●	●	●	●		○		■	■
Environmental Monitoring		●	●	●	●	●		■	■
Monitoring on Regional Development Framework		●	●	●	○	○		□	■

Source: Study Team

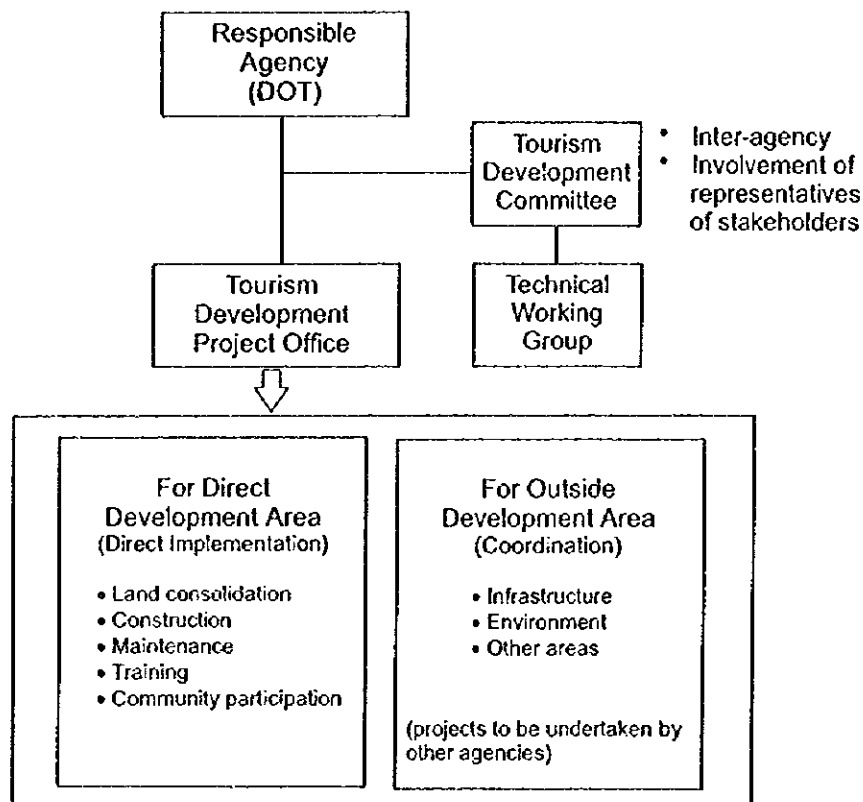
- Legend
- : primarily responsible
 - : secondarily responsible
 - : possible major areas of participation
 - : possible area of participation

- Roles of the public and private sector should be more clearly delineated. The former should be responsible for policy setting, planning, provision of basic infrastructure, land acquisition and control, promotion of tourism, investment and related industries and human resource development, while the latter for development and maintenance of quality facilities and infrastructure and, more importantly, the management of environment and tourism activities within their activity area, jointly with the local communities. The private sector should also be guided to make best use of local resources.

Proposed Development/Management Organization

- In view of the importance of assuring sustainable tourism development in Northern Palawan, it is proposed that the public sector take the lead in development or, more specifically, undertake the creation of a tourism development project office. This office would not only be responsible for the developments in the project area itself but also coordinate with others concerned who are responsible for developments outside the project area (refer to Figure 3.9).

Figure 3.9
Proposed Organizational Structure for Implementation



Source: Study Team

Participation of Local Communities

- The role of local communities and NGOs is wide and can be far-reaching. Local communities should be more actively involved in the process of tourism development to effectively integrate tourism industry activities with local socioeconomy. For this, local communities should also upgrade available human resources and local industries in such a way as to comply with the needs of the tourism sector, while the tourism sector makes its best effort to tap local resources. Management and operation of tourism areas will be an important area of joint undertaking of local communities and the private sector (tourism investor) to protect their mutual interests against the harmful activities of outsiders. NGOs' role is particularly important to strengthen management capabilities of local communities and to bring local issues to the attention of higher authorities.

3.6 Human Resource and Local Tourism Support Industry Development

- Employment and involvement of local industries serve as linkages between tourism development and providing benefits to local socio-economy. Unless local resources are effectively integrated with the proposed development, the benefits will leak to outside Northern Palawan. However, it is also true that unless demand and supply match, external resources will be tapped. Development of human resource and local tourism support industries is critical.
- Direct and indirect employment due to the proposed tourism development is estimated at 15,000 to 16,000. Direct employment generates from hotel/resort development that requires a total of 10,900 in various areas of service such as management/administration, restaurant/kitchen, housekeeping, gardening, maintenance and tourism activities support at different levels; 1,600 for managerial/middle management level, 1,600 for technical/supervisory level, 3,300 skilled and 4,400 for semi-skilled/unskilled level. Indirect employment includes those in other tourism industries.
- In order to meet the demand locally, as much as possible, existing educational institutions should be strengthened and adequate vocational training/educational facilities should be provided. Palawan, State University, Palawan Polytechnic College, etc. should be properly equipped for the needs of higher qualification (refer to Table 3.4). To further ensure employment and development of local human resource, a guideline may be worked out to specify employment quota, in-house training, etc, while tax incentives may be provided in return. Since human resource development needs lengthy time, actions should be taken at an early stage.
- Size of tourism development by year 2010 in Northern Palawan is estimated at 250,000 foreign and 150,000 domestic tourists who are expected to spend 10 billion pesos for different services such as transportation, accommodation, food/beverage, option tour, and shopping/souvenir. Corresponding industries should be developed effectively to maximize benefits from tourism expenditure (refer to Table 3.5).

Table 3.4
Estimated Training/Education Needs

Area	Total Demand	Training Expenditure Needs/Yr.	Possible Institutions
1) Middle management/experts	2,500	200	• Strengthening of existing university/ colleges
2) Administrative/guest services	2,500	200	• Vocational training
3) Kitchen/restaurant	3,000	150-200	• Vocational training
4) Housekeeping	650	100	• On-the-job training
5) Gardening	2,000	50	• Vocational training
6) Maintenance	900	100-150	• Vocational training
7) Environment	-	100	• Vocational training

Source: Study Team

Table 3.5
Estimated Expenditure of Tourists, 2010

Item/Service	Total Tourist Expenditure P billion (%)	Estimated % Spent in Palawan	Contribution to Local Economy (P billion)
1) Transportation	2.0 (20)	20	0.4
2) Accommodation	2.5 (25)	80	2.0
3) Food/Beverage	1.5 (15)	60	0.9
4) Optional Tour	2.0 (20)	70	1.4
5) Shopping/Souvenir	2.0 (20)	40	0.8
Total	10.0 (100)	-	5.5

Source: Study Team

3.7 Tourism Promotion and Marketing

Target Markets

- On the basis of the analysis of tourist characteristics and demand forecast, target markets are summarized as follows:
 - (1) The Northern East Asia region (Japan, Taiwan, Korea) and other Asian NICs, such as Hong Kong, will be targeted as the most important market, especially for the young and middle-aged group markets. Rapidly emerging tourism source markets of East Asia is gradually changing from city-based mass tourism to cozy and tailor-made boutique resorts.
 - (2) The European market will be targeted as the trendsetter for Palawan tourism with the aim of attracting European sunseekers and environmentally-conscious travelers-- those who are tired of already spoiled destinations in Asia.
 - (3) The North American market will be targeted as the traditional source market of the Philippines to enhance the steady and continuous growth of arrivals.
 - (4) Domestic market is composed of varied segments for pleasure/vacation (sightseeing and beach holiday), business and convention which will continue in the future. In addition to these, students and young people for environmental education/experience may be a potentially promising market.
 - (5) With improvement of infrastructure and relevant facilities, convention market with particular regard to the environment of the country as well as other Asian countries may be developed.

Promotion and Marketing Strategies

- Promotion and marketing strategies are summarized as follows:
 - (1) Differentiate Northern Palawan tourism from other competing beach resorts in Asia with its appeal of rich natural environment which can be represented by an image character such as the dugong.
 - (2) Although marketing methods vary by country and market segments, the most effective ones include direct promotion to travel agents and use of media (especially travel magazines for users as well as travel industries).

3.8 Evaluation of the Master Plan

- The proposed Master Plan has been preliminarily assessed from the economic, financial, social and environmental viewpoints to verify the sustainability of the proposed developments.

Economic Aspect

- Main sources of economic benefits derived from the proposed sustainable tourism development for Northern Palawan include expenditures of foreign and domestic tourists and benefits owing to conserved environments. The latter further comprise those from the forest area (sustainable logging, reduced nitrogen loss, reduced water loss, reduced fish catch loss), those from low land area (reduced yield decrease in lowland crops) and those from the coastal and reef areas (reduced fish catch loss), while the costs include regional infrastructure construction and maintenance costs. The anticipated benefits are large; for instance, tourism benefits will reach approximately P2.6 billion and P11.8 billion in year 2000 and 2010, respectively, while environmental benefit will be about P1.3 billion a year. The result of benefit/cost analysis shows that the proposed development will generate significant EIRR. Even with tourism benefit alone, EIRR is 26.2%.
- The economic benefits from the proposed developments in 2010 will amount to P14 billion which is equivalent to 73% of the estimated GRDP of Northern Palawan (P19.2 billion in 2010). Assuming that 31% (refer to Table 3.6) of the tourism benefits and 100% of the environmental benefits would remain in Northern Palawan, the benefit from the development would come to about P5 billion, meaning that the contribution of the Master Plan would be roughly 26% of the GRDP of Northern Palawan in 2010.

Table 3.6
Assumed Percentages of Tourist Expenditure which
Remain in Northern Palawan

Expenditure Item	% Composition ^{1/}	% Spent in N. Palawan	% Leaking to Outside N. Palawan	% Remain in N. Palawan
1. Transportation	20	20	80	0.8
2. Accommodation	25	80	60	8.0
3. Food/Beverage	15	60	20	7.2
4. Operational Tour	20	70	20	11.2
5. Shopping/souvenir	20	40	50	4.0
Total	100	-	-	31.2

Source: Study Team

^{1/} based on modification of actual survey data

- It is explicitly concluded that the proposed tourism development is highly viable from the economic viewpoint, at least from the point of view of national economy. Although it will also benefit Northern Palawan, the extent of the benefit highly depends on how the economic/industrial system of Northern Palawan will be integrated in the tourism.

Financial Aspect

- While the proposed development is highly viable from the economic viewpoint, the financial viability portends difficulties. Without proper provision of funding, the environmental issues may not be adequately attended to. Possible sources of revenue to government from the proposed development comprise the following:
 - (a) conventional taxes including (i) corporate income tax from tourism investors; (ii) income tax from tourism personnel; (iii) value added tax; and (4) property tax.
 - (b) a portion of admissions/fees for the use of tourism facilities, designated parks, etc. which will be run by the public sector; and
 - (c) special environmental fees to be charged for the tourists.
- The estimated amount of tax revenue generating from the proposed tourism development is roughly P170 million and P860 million in year 2000 and 2010, respectively, which however is mostly collected by the central government. On the other hand, the financial requirements for environmental conservation/restoration as well as basic infrastructure for tourism development are P6.2 billion and P7.1 billion, respectively (or an annual average cost during 1997-2010 period of P450 million and P510 million, respectively).¹⁷ This implies that the conventional taxes alone cannot generate sufficient revenue to cover the environmental restoration/conservation and basic infrastructure costs, although the environment has not been damaged by tourism and basic infrastructure does not benefit tourism alone but mostly the regional socio-economy; therefore all these costs should not be charged to tourism.
- In reality, local governments who have limited financial capability (total income of 11 municipalities in Northern Palawan is only about P660 million a year) badly need additional funding to meet the above demand.
- Since the economy and tourism at the national level are expected to benefit from the Northern Palawan development, the central government should provide the necessary finances and/or that Northern Palawan create additional direct income source by charging users of environment and beneficiaries of environmental conservation. For example, environmental fee on tourists may be a possible way to generate additional revenue source earmarked for environmental restoration/conservation. In an interview survey conducted in the study on foreign tourists who visited Northern Palawan, they were asked on their willingness to pay additional cost for environmental conservation. Seventy percent (70%) of the tourists answered “yes” and that they were willing to pay an average of US\$50”²¹ per journey. Whether or not this is effectively tapped largely depends on the commitment of the government. It is, however, very clear that without further financial support to Northern Palawan, neither environmental conservation nor socioeconomic development will be undertaken in a sustainable manner.

¹⁷Interest rate is assumed at 8%/year. This is only for rule of thumb comparison.

²¹This corresponds to only 2.5% of the total travel cost of an average foreign tourist to Northern Palawan.

Social Aspect

- Tourism development proposed in the Master Plan emphasizes the involvement of local communities during the various stages of development which, however, should be properly guided and supported by higher administration, especially by the Provincial Government and DOT. While the private sector tries to deploy local resources as much as possible, local communities do upgrading of local resources wherein higher administration provide local communities with financial and technical assistance directly or indirectly. When this mechanism is assured, the results of the social survey for local people and the focused group discussion conducted in the study indicate that the tourism developments be favorably accepted and the benefits thereof for local communities will be maximized. ICCs should also be integrated into this process depending, however, on the willingness of the respective community or group.

Environmental Aspect

- The main purpose of the environmental assessment of the Master Plan is to undertake scoping process to identify potential major impacts which then have been preliminarily assessed.

Puerto Princesa Tourism Cluster: The most critical ecosystem in this cluster are the remaining intact forest found in Iwahig, St. Paul and Cleopatra Needle. Since these terrestrial ecosystems are environmentally delicate and fragile, no major developments should be undertaken and strict EIA be imposed on any scale of developments in these areas. Water pollution in Honda Bay is also important.

Roxas/San Vicente Tourism Cluster: No significant adverse impacts on environment are foreseen. However, the normal process of EIA should be applied before implementation of individual development.

Taytay/El Nido Tourism Cluster: Lake Manguao, the only freshwater lake, and El Nido Marine Reserve in Bacuit Bay are special concerns in the Master Plan. Pollution load to the lake should be minimized by restricting effluent from facilities. The same is necessary for Bacuit Bay, following the standard set by DENR. Although no facilities are planned, the coral reef environment in small islands in Bacuit Bay should be protected against harmful tourist activities by enforcing adequate activity guidelines and providing qualified guides to assist the tourists.

Calamian Tourism Cluster: Soil stability is an important aspect in addition to valuable terrestrial and marine ecosystems similar to those in other clusters. Construction of facilities need extra care for which strict EIA is imposed.

3.9 Implementation Strategies of the the Master Plan

- In order to achieve the tourism development goals effectively, the following strategic measures should be duly considered and materialized:
 - 1) Development of high quality diversified destinations with clear appealing images: Main focus should be placed on high quality marine resorts complimented with diversified tourism resources of marine, terrestrial and social environments to meet diversified activities. Development scale could vary from large-scale to medium or to small-scale depending upon the carrying capacity of areas. However, these developments should be integrated and should create a strong and clear image to appeal to the international market.
 - 2) Development of integrated transportation system: Accessibility at international, inter-regional as well as intra-regional levels, is a key to the effective development of Northern Palawan. The geographic nature of the area also requires effective inter-modal system of air, land and sea. However, since transportation infrastructure and services require large investment and operating costs, tourism and related infrastructure development should be effectively coordinated within the overall regional development framework. .
 - 3) Formulation of sustainable tourism development institutional framework: A concrete mechanism to ensure sustainable tourism development should be guaranteed through the institutional framework as well as non-institutional measures such as: (a) tourism development and operational guidelines; (b) provision of adequate investment incentives for sustainable tourism development undertakings; and (c) promotion of local communities and industries' participation.
 - 4) Role-sharing between public and private sectors and effective introduction of external investment: The public sector should concentrate on the provision of basic infrastructure, adequate institutional framework to encourage and properly guide the investment and activities of the private sector. Once the rules and guidelines are formulated, investment opportunities should be opened to everybody in accordance thereof.
 - 5) To internalize effectively the environmental costs into tourism development and activities: Tourism in Northern Palawan totally relies on its rich environment, while conservation and restoration of the environment require considerable amount of costs in addition to proper environmental management system. Tourism should not be exempted from shouldering part of the cost. User charges in varied forms, such as environmental contribution fees from tourists, development charge/fee from developers, resort operators, and other tourism-related industries should be considered and institutionalized.
 - 6) Phased development: As Northern Palawan is a large area extending over 250 km from north to south, its development should be phased strategically in coordination with regional infrastructure development and in such a way as to enhance the tourism image of Northern Palawan throughout the course of development. Promoting its appeal of rich environment cum tourism in the international market with relatively small-scale development is the first phase, while larger-scale development should follow as infrastructure is developed and tourism market grows and is actualized.