

4. CASE STUDIES FOR THE SELECTED AREAS

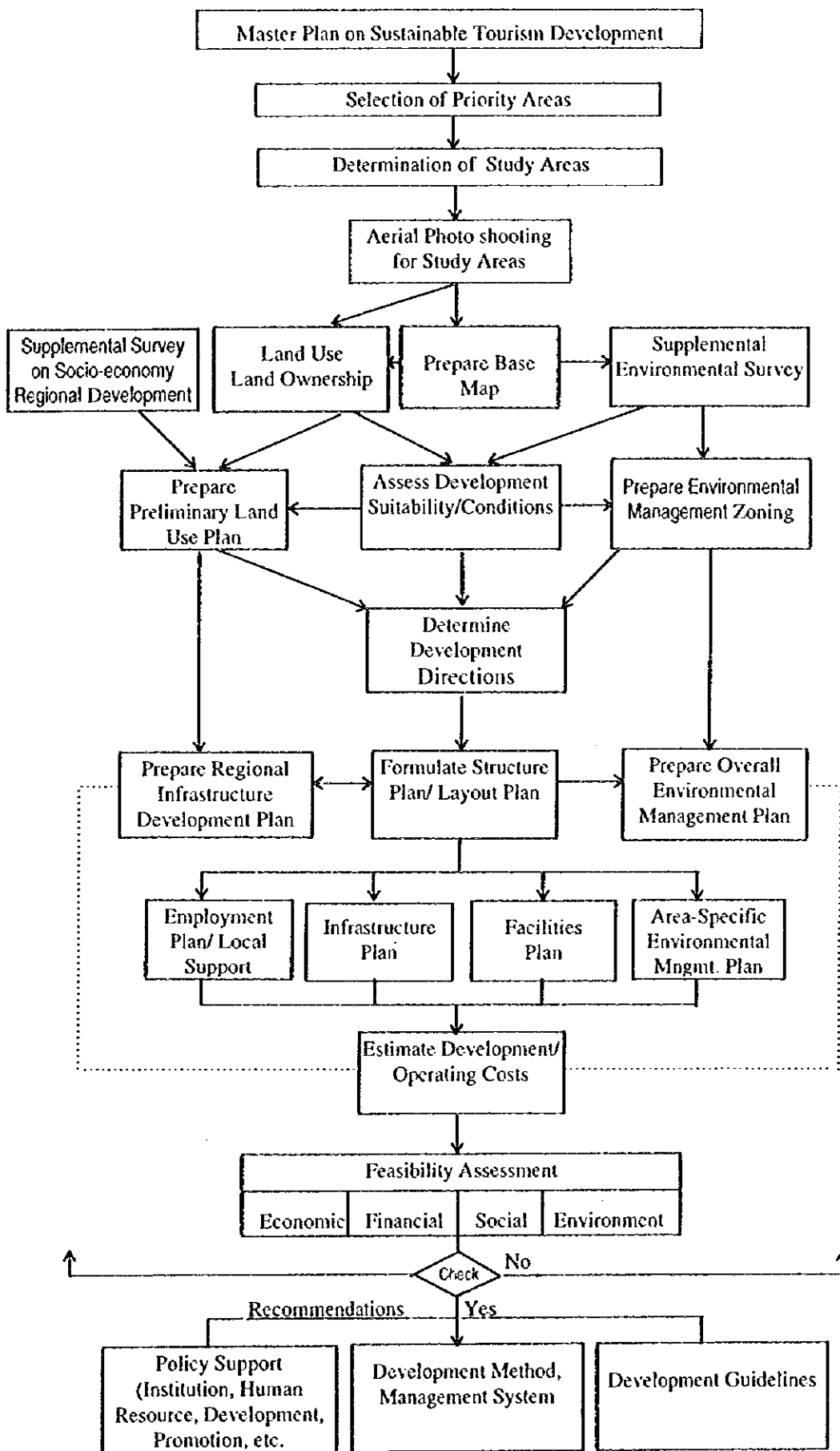
4.1 Case Study Framework

4.1.1 Selection of Case Study Areas

- A set of criteria for selecting the case study areas has been set forth as follows:
 - (1) The areas should represent quality tourism image of Northern Palawan and lead the country's competitive image in international tourism market. This requires certain scale of high quality development based on superior and diversified tourism resources with easy international/regional access.
 - (2) The areas should generate significant impact on regional economy. This requires certain scale of development and mechanism of contributing to mitigating income disparity.
 - (3) The areas' development should be led by the public sector to effectively adjust a large number of factors on infrastructure development, environmental conservation, local socioeconomy, etc.. and to guide properly private sector's investment.
 - (4) The areas should not involve critical development constraints with regard to landownership, and acquisition, cultural minority group's land and activities, water resource, malaria, and endangered species and carrying capacity.
- Interpreting the above criteria in light of the characteristics of Northern Palawan and the basic study objectives, a basic criteria which will be commonly applied to potential priority areas have been derived, i.e., areas with medium- to large-scale beaches, due to the following specific reasons:
 - (a) Overall image of Northern Palawan internationally is that of having a rich marine environment, wherein beaches are practically the most ideal area for developing accommodation facilities which provide a base for tourism activities. Moreover, in Northern Palawan, development of inland terrestrial area is more critical to the environment due to terrain condition and complex ecosystem than in the beach area;
 - (b) Beach areas can best provide the base both for marine and terrestrial activities; and
 - (c) Cost of development in beach areas is normally less than in other types of terrain.
- Five potential priority areas have been identified in Northern Palawan. They are (1) west coast of Busuanga in Calamian Tourism Cluster, (2) northwest coast of El Nido in El Nido/Taytay Tourism Cluster, (3) Roxas beach area and San Vicente beach area in the Roxas/San Vicente Tourism Cluster, and (4) Honda Bay in Puerto Princesa Tourism Cluster. The Steering Committee selected (1) and (2) for further case studies.

4.1.2 Case Study Work Flow

Figure 4.1.1 Work Flow for the Case Study



4.2 Busuanga West Case Study Area

4.2.1 Profile of the Study Area

Location and Geographical Features

- The case study area is located in the western part of Busuanga Island, extending over 14 km from north to south and 16 km from east to west, and covering about 120 sq.km. (refer to Figure 4.2.1). The area used to be covered by lush primary lowland evergreen forest until logging and *kaingin* destroyed most of the primary forests in Busuanga Island resulting in a patchy distribution of primary and secondary forests. The shoreline is irregularly shaped with numerous islands and islets. But compared to other areas in Northern Palawan, the corals and other marine resources in Busuanga are found to be better preserved.
- The case study area includes five (5) barangays, namely, Salvacion (the municipal capital), San Rafael, New Busuanga, Old Busuanga, and Buluang.

Socioeconomic Condition

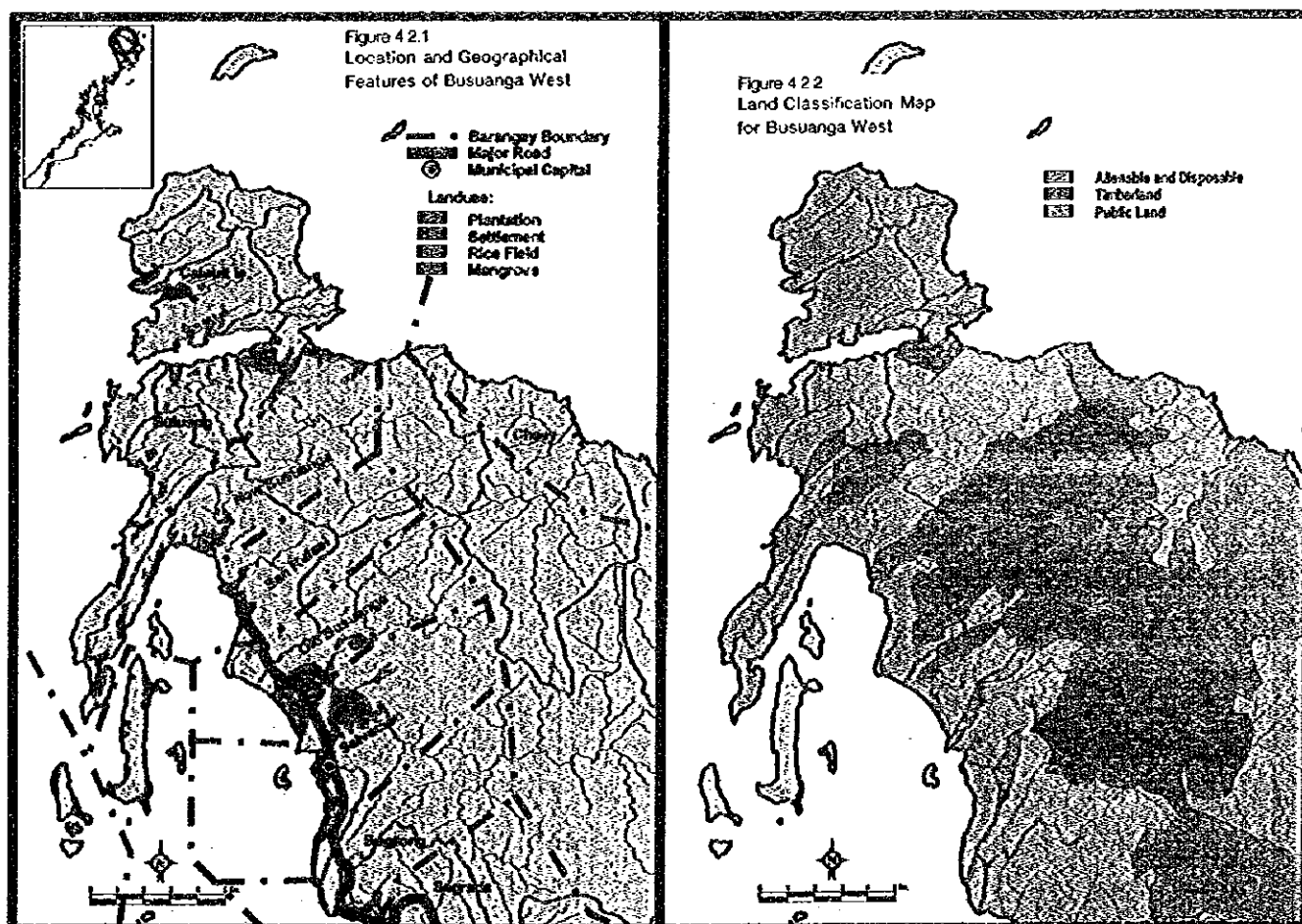
- In 1995, the total population of the case study area was 4,700, and this figure has been increasing at a relatively high growth rate of 6.6% per year (refer to Table 4.2.1). Majority of the people are self-supporting farmers and fishermen, while government employees are concentrated in Salvacion. Although the main source of livelihood is farming and fishing, the only industry that contributes to the municipal revenue is pearl farming.
- The Socioeconomic Household Survey conducted by the Study Team indicates that the top five serious community problems in the case study area are livelihood, road transport, medical service, electricity, and water supply.

Transportation and Infrastructure

- Roads and road transport are limited. One on-going project is the New Busuanga-Cheey Road Project, which is a 4-km national road that will extend to New Busuanga. This project is under the DPWH/SPIADP with 60% completion as of July 1996. An airstrip with an 800m x 30m runway owned by SUMAPI, a pearl farm owner, exists but it is not provided with adequate drainage facilities. The municipal port is located in Putod Point, Barangay Salvacion, although there are other public and private wooden piers.
- The four (4) barangays of Salvacion, Old Busuanga, New Busuanga, and Buluang are served with 24-hour electricity by NAPOCOR/BISELCO although the number of consumers is only 254 households. Water facilities remain undeveloped even though the island of Busuanga has good ground water potential. Level III facilities are available only in the town center of Salvacion. Telecommunications is poorly provided with an unreliable telephone service and single-band radio at the municipal hall.

Land Classification and Ownership

- Lands are classified into “timberland” and “alienable and disposable.” Private ownership is allowed only in the latter category (refer to Figure 4.2.2). Approximately 55% of the lands in Busuanga are privately-owned, while government lands, which are mostly inland, are owned by the national government. In general, areas that are 40 meters inland from the coastline at high tide fall under “salvage zone,” and these are owned by the national government. Riverbanks are also owned by the government and require 20 meters setback.



Source: Study Team

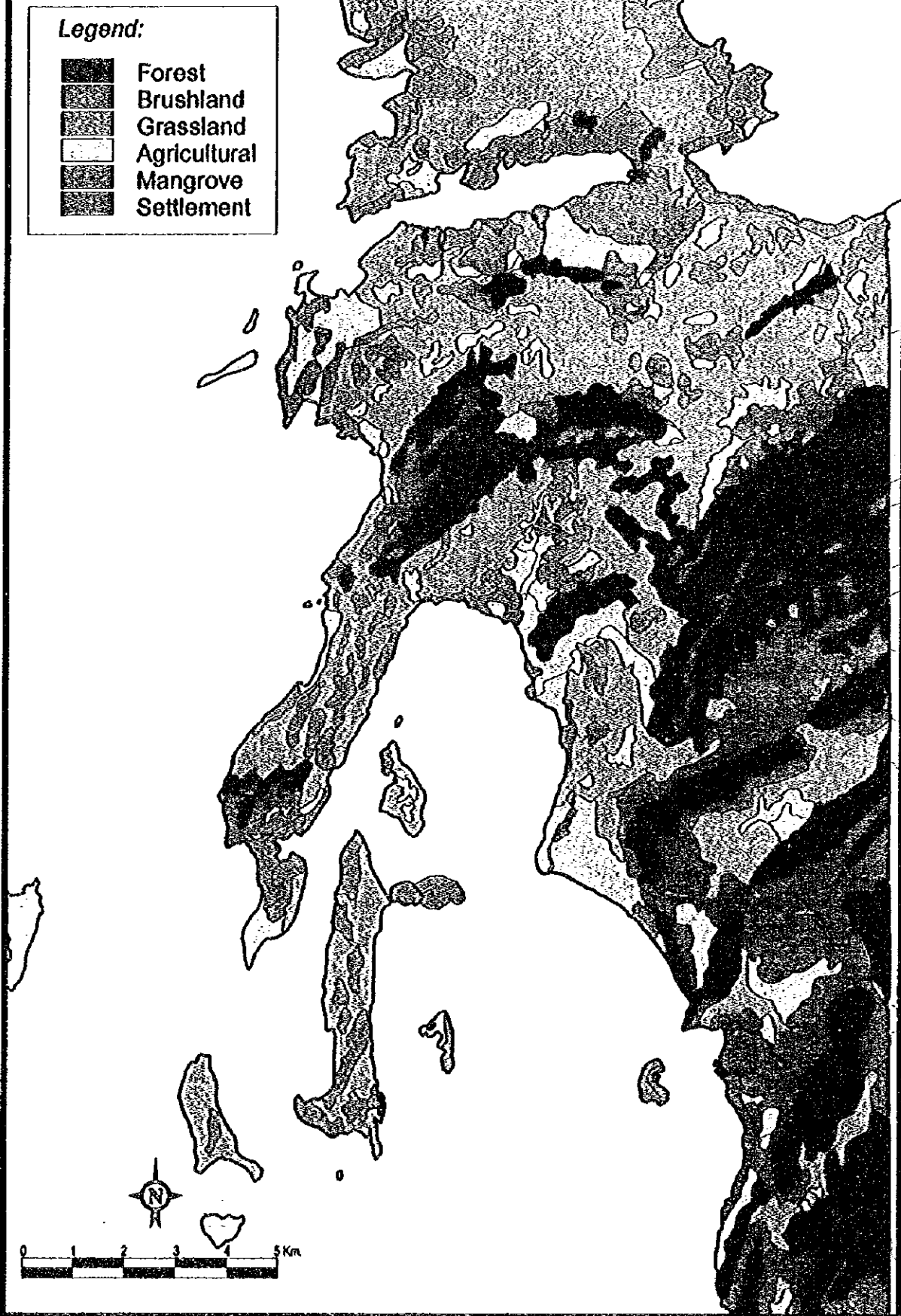
Source: Dept. of Agriculture

Table 4.2.1
Population Growth

| Barangay | 1990 | 1995 | 1990-1995 Growth Rate %/yr. |
|--------------|-------|-------|-----------------------------------|
| Salvacion | 1,163 | 2,376 | 15.4 |
| Old Busuanga | 607 | 648 | 1.3 |
| New Busuanga | 825 | 696 | -3.3 |
| Buluang | 511 | 514 | 0.1 |
| San Rafael | 315 | 470 | 8.3 |
| Total | 3,421 | 4,704 | 6.6 |

Source: Study Team

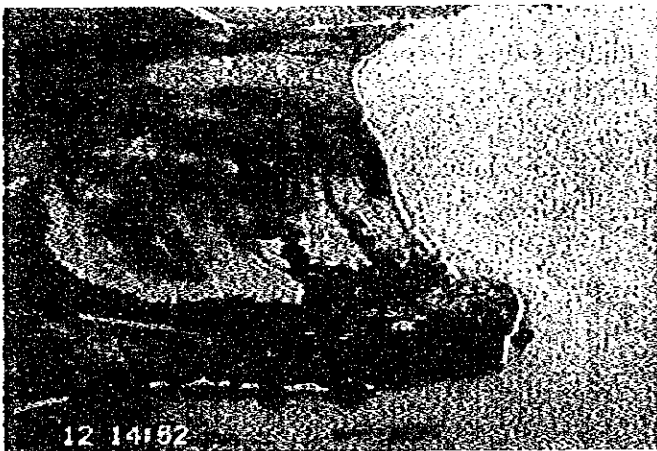
Figure 4.2.3
Existing Land Use Map
for Busuanga West



Source: worked out based on aerial photo taken by Study Team, 1996



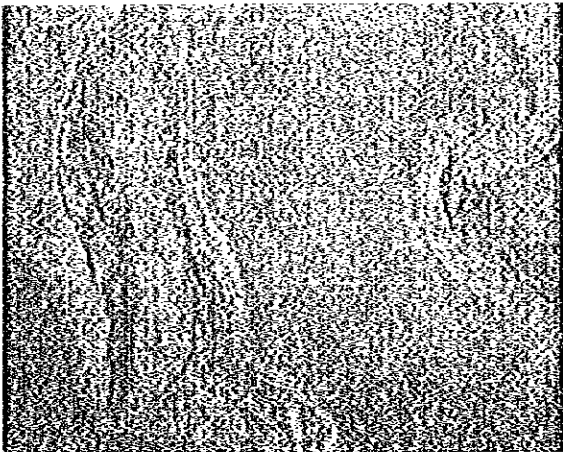
Calauit Island



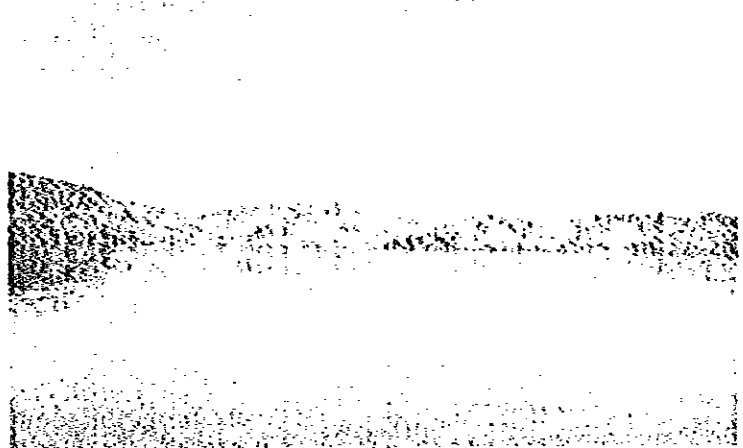
SUMAPI Airstrip



Busuanga West Peninsula



Talampulan Island

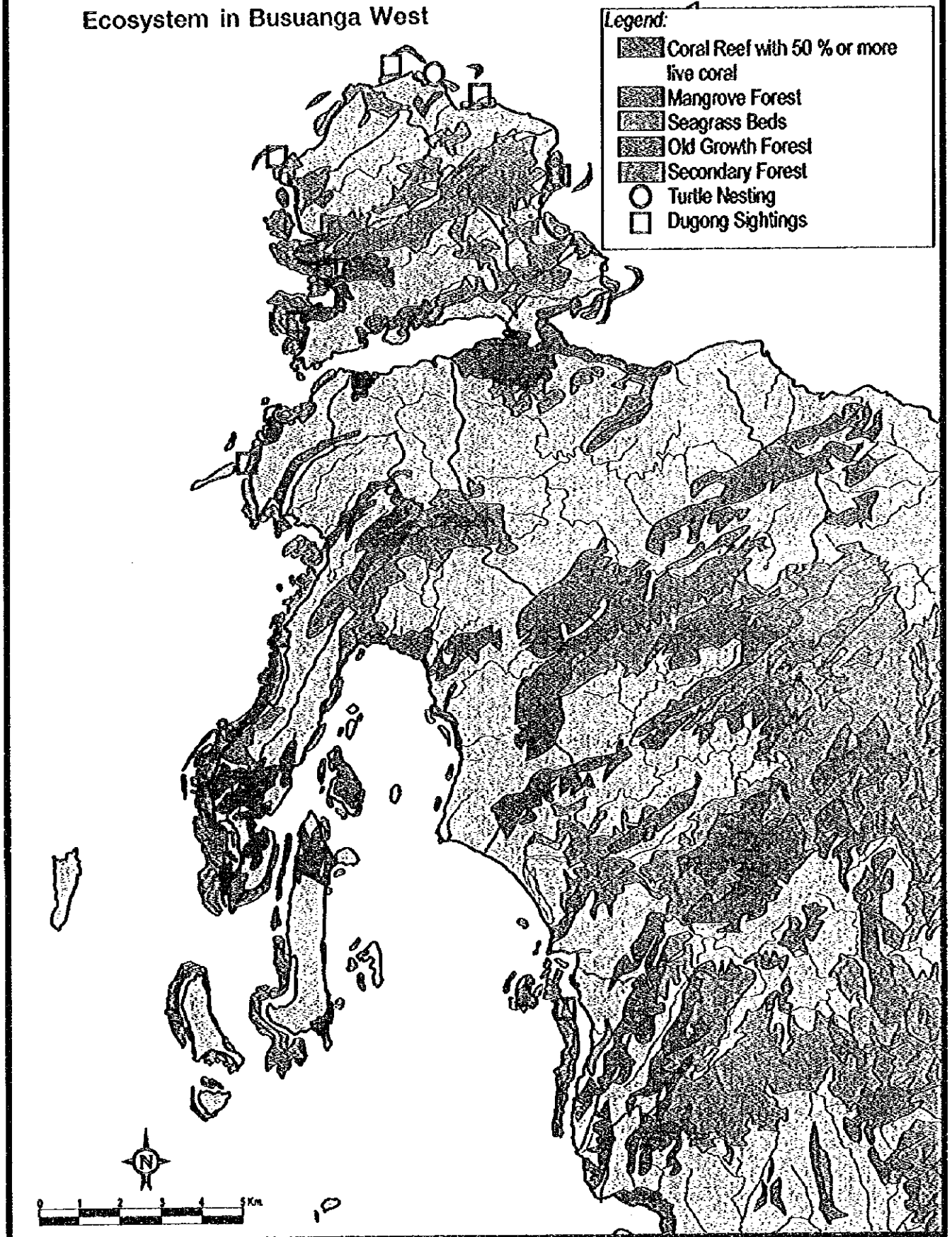


North of Gutob Bay

Environment

- Forest cover in the area has been decreasing. When the 1992 JAFTA map and 1996 aerial photo taken by the Study Team were compared, it had been found that old growth forest and secondary forest decreased by approximately 12% and 41%, respectively. Conversion of the forest to grass/agricultural land in Calauit Island as well as the reported over-population of Calamian Deer have significant impact on vegetation, which need to be conserved. The *dipterocarpus* and molave in the old growth forest and large-scale, well-developed secondary forest including the Calamian Deer's habitat should also be given attention (refer to Figure 4.2.3).
- Composition of fauna in Busuanga is different from that in the main island of Palawan. The most indicative and important species that are under human pressure include the Philippine Cockatoo and Calamian Deer. The former are seen only in old growth forests, while the latter are distributed widely but their habitat is shrinking significantly and being divided due to deforestation.
- There are coral reefs with excellent condition along the open seacoast of Busuanga peninsula which show live coral cover of more than 75%. Coral reef condition in the rest of the study area is rather poor. Seagrass beds are found extensively, particularly along the coast of Calauit Island where dugong sightings are more frequently reported. The mangrove forest south of Calauit Island is considered to be the best preserved, while other mangrove forests have been degraded. In addition to the dugong, sea turtles are also abundant in the area (refer to Figure 4.2.4).
- Out of 15 barangays in the municipality of Busuanga, 10 barangays have indigenous people. They belong to the Tagbanua/Calamian or "Sea Tagbanua" and mostly residing in islands. They depend on fishing and bird nests gathering, with average annual household income of about P21,000. However, they can be engaged in the above livelihood activities only for five months between February and June. There are no ancestral domains/land claims, although the municipality of Busuanga has designated Malajom Island (Black Island), and the neighboring islands of Colocotoc, Elet, Kalampisao and Eli as "edible bird nests' sanctuary and ancestral lands exclusively for the cultural minorities" (Resolution No. 39, 1996).
- The environment in the study area will further degrade unless adequate measures are taken particularly for the following:
 - (1) Logging and *kaingin* in the remaining forests as well as illegal fishing should be continuously prohibited and effective control measures need to be worked out;
 - (2) Practical management program of the Calamian Deer is badly needed. This includes culling of overpopulated Calamian Deer, developing corridors for them to move from Calauit Island to the main land forests; and
 - (3) Soil discharge which causes adverse impact on coral reefs should be stopped.

Figure 4.2.4
Terrestrial and Marine
Ecosystem in Busuanga West



Source: Study Team

4.2.2 Environmental Management

Environmental Management Area Classification

- In order to provide a basis for environmental management plan formulation, the study area has been classified based on the assessment of existing environmental conditions and levels of needed actions. Criteria have been set by target environment; specifically, the preservation area should be under the core zone while the conservation area under restricted use of the buffer zone in ECAN zoning system (refer to Table 4.2.2 and Figure 4.2.5).

Table 4.2.2
Criteria for Environmental Management Area Classification

| | Criteria for | |
|----------------------|--|--|
| | Preservation Area | Conservation |
| Forest | <ul style="list-style-type: none"> • intact, unique, and biologically significant ecosystem • mossy forest and old growth forest | <ul style="list-style-type: none"> • large-scale secondary forest Forest Quasi-Conservation Area • residual forest |
| Slope | <ul style="list-style-type: none"> • area with slope of above 50% Slope Conservation Area | <ul style="list-style-type: none"> • area with slope range of 18% - 50% |
| Terrestrial Wildlife | | <ul style="list-style-type: none"> • habitat of endangered and endemic species |
| Coral Reef | <ul style="list-style-type: none"> • coral reef in excellent condition • coral reef in fairly healthy condition or more than 75% live coral cover | |
| Seagrass | | <ul style="list-style-type: none"> • seagrass beds with at least 50% cover of macrophytes |
| Mangrove Forest | <ul style="list-style-type: none"> • slightly disturbed mangrove forest with an area of more than 500 ha. • moderately disturbed mangrove forest with an area of more than 1,000 ha. | <ul style="list-style-type: none"> • slightly disturbed mangrove forest with an area of less than 500 ha. • moderately disturbed mangrove forest with an area of 500-1,000 ha. • severely disturbed mangrove forest with an area of more than 1,000 ha. |
| Dugong | | <ul style="list-style-type: none"> • frequent dugong sighting |
| Sea Turtle | | <ul style="list-style-type: none"> • dominant nesting beach for sea turtles. |

Source: Study Team

Environmental Management Plan

- The study area requires both restoration and conservation work to enhance the environment. Restoration work comprise reforestation and rehabilitation of eroded areas with which passageways for the Calamian Deer are ensured and the problem of siltation avoided. Conservation work includes monitoring and controlling harmful activities in accordance with zoning (refer to Table 4.2.3).

Table 4.2.3
Projects/Programs Necessary for Environmental Restoration/Conservation

| Measures | Initial Cost: P 000 | O & M Cost: P 000/yr. | Total(1997-2010): P million |
|---|------------------------|--------------------------|--------------------------------|
| 1. Restoration | | | |
| 1) Reforestation (360 ha) ^{1/} | 7,090 | - | 7.1 |
| 2) Rehabilitation of Eroded Area ^{1/} | 4,930 | - | 4.9 |
| 2. Monitoring of Key Environment ^{2/} | - | 1,100 | 15.4 |
| 3. Establishment of Busuanga Peninsula Protected Area ^{3/} | 3,280 | 990 | 17.1 |
| 4. Overall Environmental Area Management and Administration ^{4/} | 1,000 | 500 | 8.0 |
| Total | 16,300 | 2,590 | 52.6 |

Source: Study Team

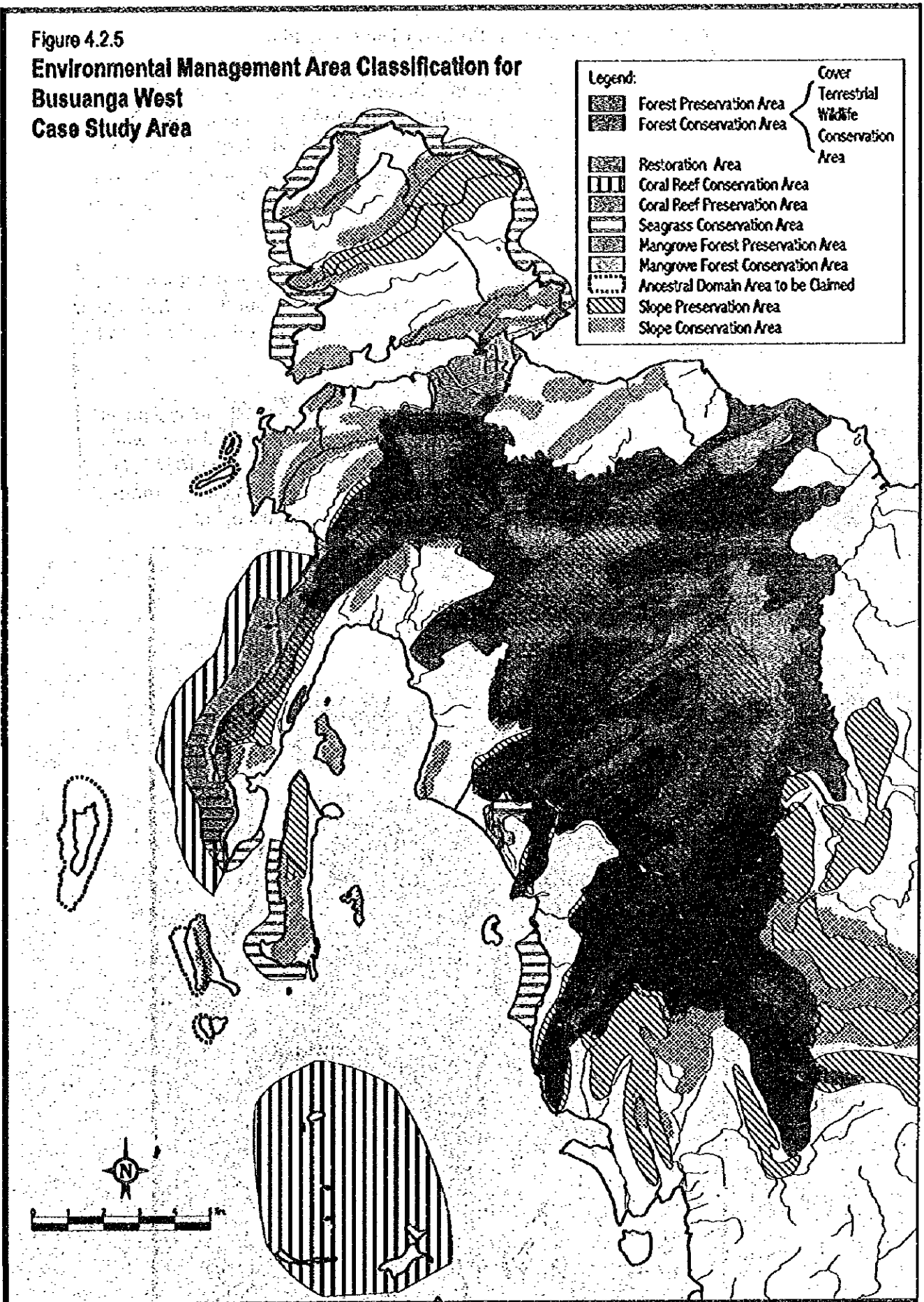
1/ including nursery operation, plantation establishment, maintenance, administration etc., estimated unit cost is P 19,700/ha

2/ including personnel, equipment, satellite data analysis

3/ including vehicles, boats, communication equipment, computers, diving equipment, etc.

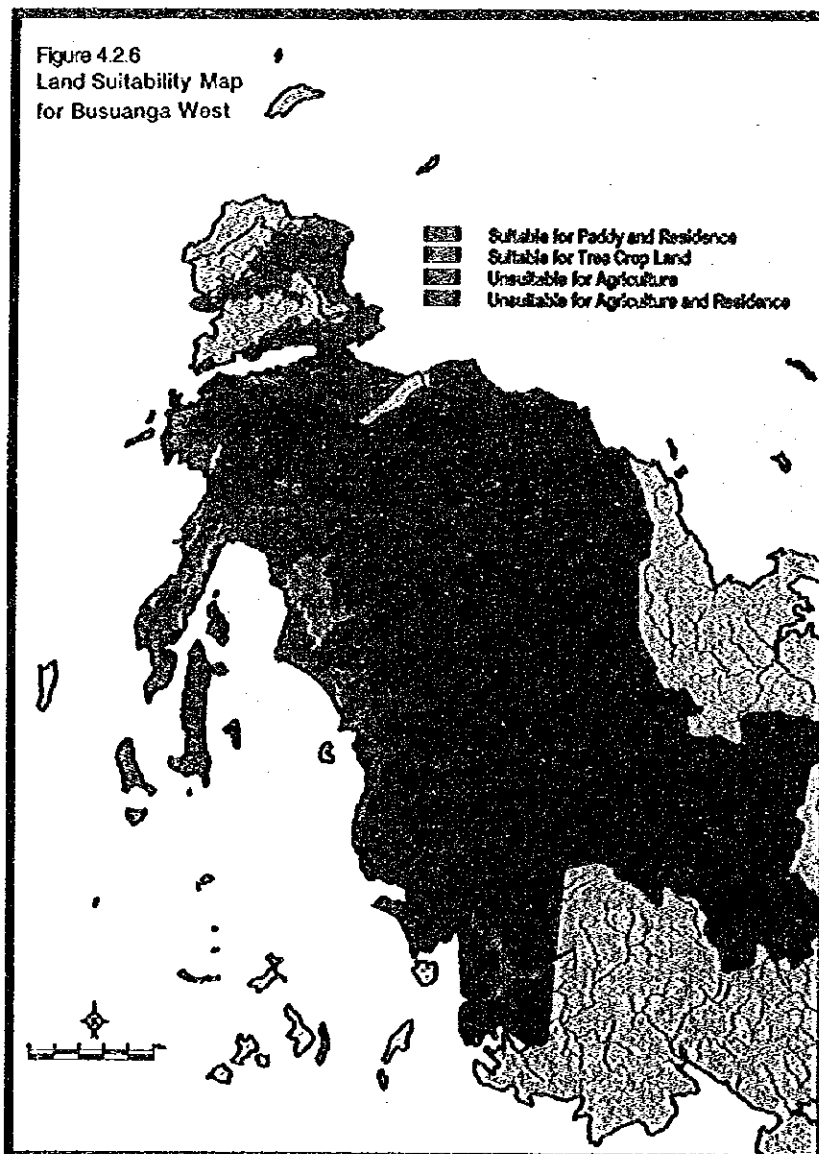
4/ including establishment of a main office, 2 inland and marine stations, operation and management.

Figure 4.2.5
Environmental Management Area Classification for
Busuanga West
Case Study Area



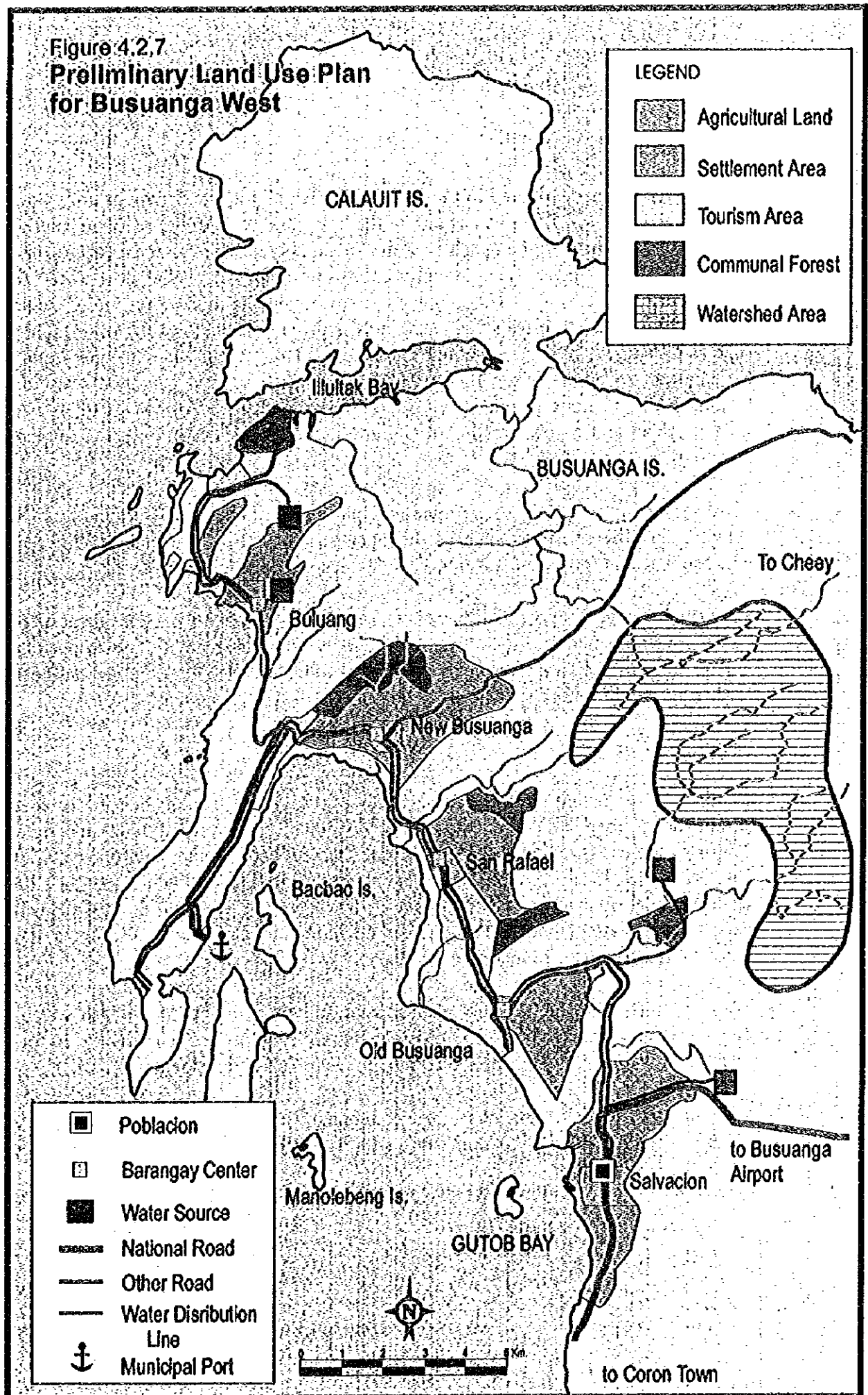
4.2.3 Socioeconomic Framework and Preliminary Land Use Plan

- In order that tourism development becomes an integral part of regional development, a socioeconomic framework and preliminary land use plan have been worked out. It is expected that the population in the case study area will increase from 2,328 to 4,800 between 1995 and 2010 (during the same period, the municipal population will increase from 15,800 to 27,300). For this reason, necessary infrastructure and services as well as livelihood need to be provided.
- Land suitability has been assessed. The most suitable area for development are the areas with less than 8% slope and with alluvial or volcanic soil type. Suitable areas cover those of 8% - 18% slope and with sandy or volcanic soil type (refer to Figure 4.2.6).
- On the basis of the land suitability and environmental management area classification, a land use plan has been preliminarily worked out which also incorporates potential tourism development areas (refer to Figure 4.2.7). This exercise clearly indicates that future development needs of industry, tourism, and settlements can be accommodated in harmony with the environment.



Source: Study Team

**Figure 4.2.7
Preliminary Land Use Plan
for Busuanga West**



Source: Study Team

4.2.4 Tourism Development Structure Plan

Tourism Development Potentials

- Tourism resources distributed in the case study area and its surroundings are varied and of high quality. The area has one of the best coral reefs, frequent opportunities of dugong and turtle sighting, clear water, a number of white sand beaches, and scenic beauty of islands/islets. Mangrove forest in Illultak Bay is the most preserved one in Northern Palawan. Nature inland are also valuable tourism resources. Old growth forest and large-scale secondary forest provide habitats of important fauna such as Calamian Deer and Philippine Cockatoo. Hilly terrain gives an opportunity for panoramic view of Gutob Bay. Cultural resources such as handicrafts or nido hunting by indigenous people may add to the attractions. African mammals in Calauit Island and a cow breeding ranch are also expected to be potential tourism resources.
- These tourism resources can provide ample opportunities for various tourism activities in different areas such as the open sea, bay, beach, inland for different purposes such as sports and adventure, sight-seeing, education, etc.
- Tourism development potentials have been assessed by area with due consideration of other constraint factors such as water supply, land availability, environmental implication, etc. Carrying capacity of each area identified for development has been further assessed to more specifically determine tourism development potentials.

Development Concept

- Tourism development in the Busuanga case study area is intended to achieve sustainable tourism at community and regional/national levels at the same time. Tourism serves as a catalyst to integrate socioeconomy and environment. It enhances the local economy and generates additional funding source for environmental management. Moreover, the proposed tourism development is expected to create competitive products in the international market and lead to a new image of the country's tourism.
- Marine resorts with high quality environment and tourism activities which will be developed and managed by a consortium comprising public and private sectors including the local government and community is the basic development concept.
- Targeted size of development is to accommodate approximately 141,500 tourists (95,000 foreign and 46,500 domestic) with 1,200 hotel rooms of different price ranges by year 2010.

Physical Development Framework, 2010

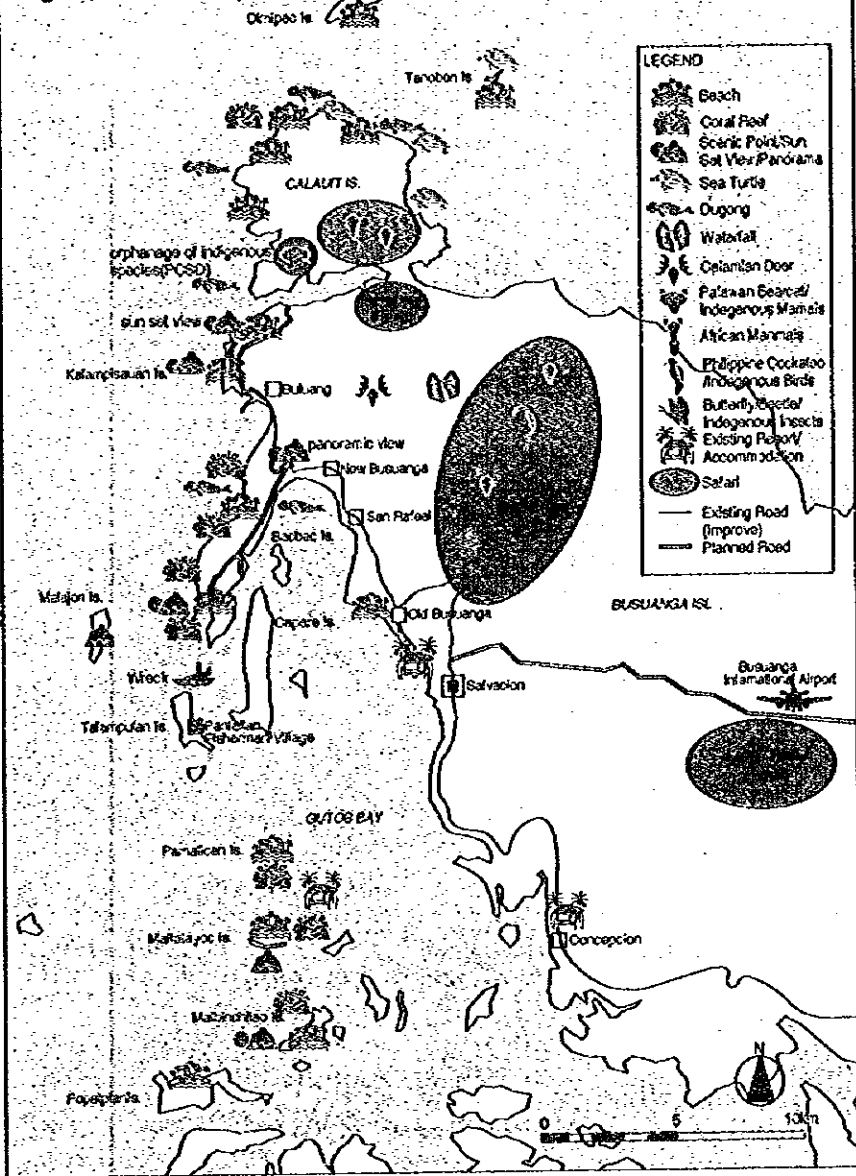
| | | Foreign | Domestic | Total |
|-----------------------|----------|---------|----------|-------|
| No. of Tourists (000) | 6 nights | 30 | 0 | 30 |
| | 5 nights | 42 | 0 | 42 |
| | 4 nights | 4 | 16 | 20 |
| | 3 nights | 0 | 30.5 | 30.5 |
| | 1 nights | 19 | 0 | 19 |
| Total | | 95 | 46.5 | 141.5 |
| Tourists-nights (000) | | 425 | 155.5 | 580.5 |

Source: Study Team

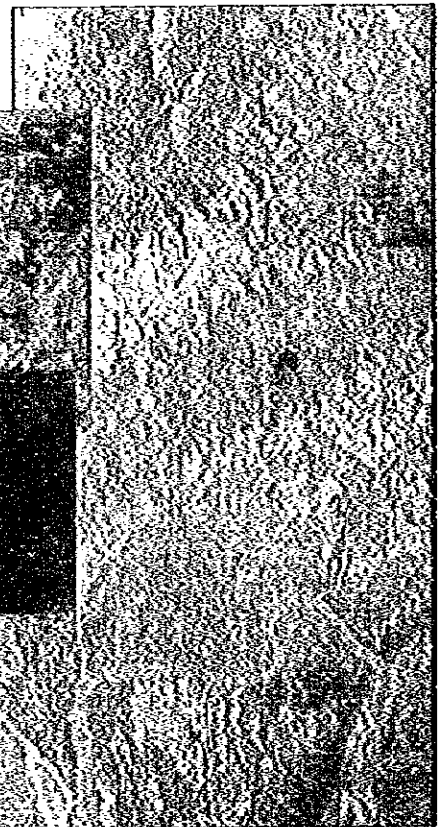
| Tourist Inflow | 2000 | 2010 |
|---------------------|------|-------|
| Average Daily | 150 | 1,800 |
| - Lodge in Busuanga | 110 | 1,550 |
| - From Outside | 40 | 250 |
| Peak Day | 500 | 4,350 |
| - Lodge in Busuanga | 350 | 3,750 |
| - From Outside | 150 | 600 |

Source: Study Team

Figure 4.2.8 Major Tourism Resources



Buluang

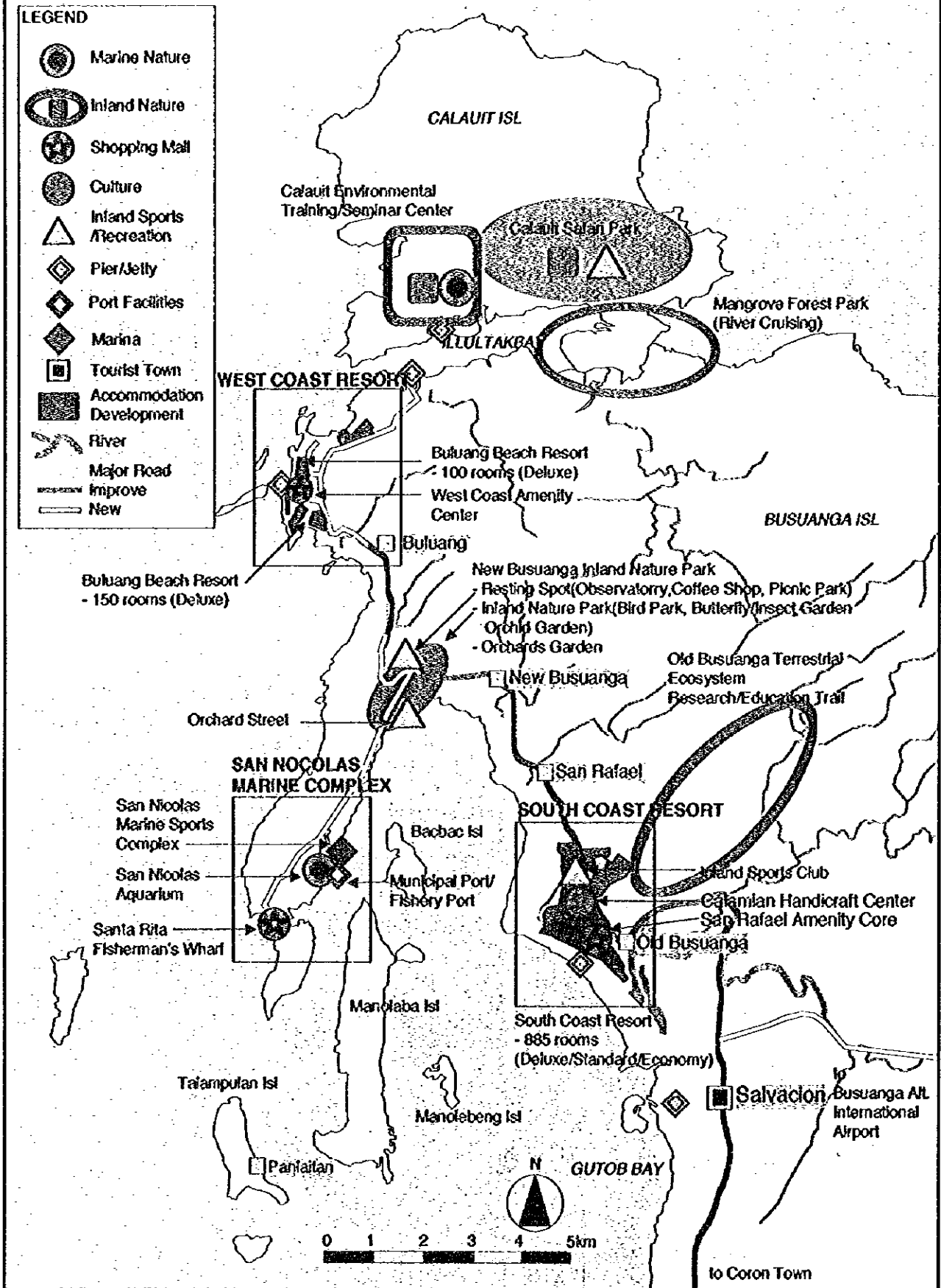


Old Busuanga

San Nicolas / Sta. Rita

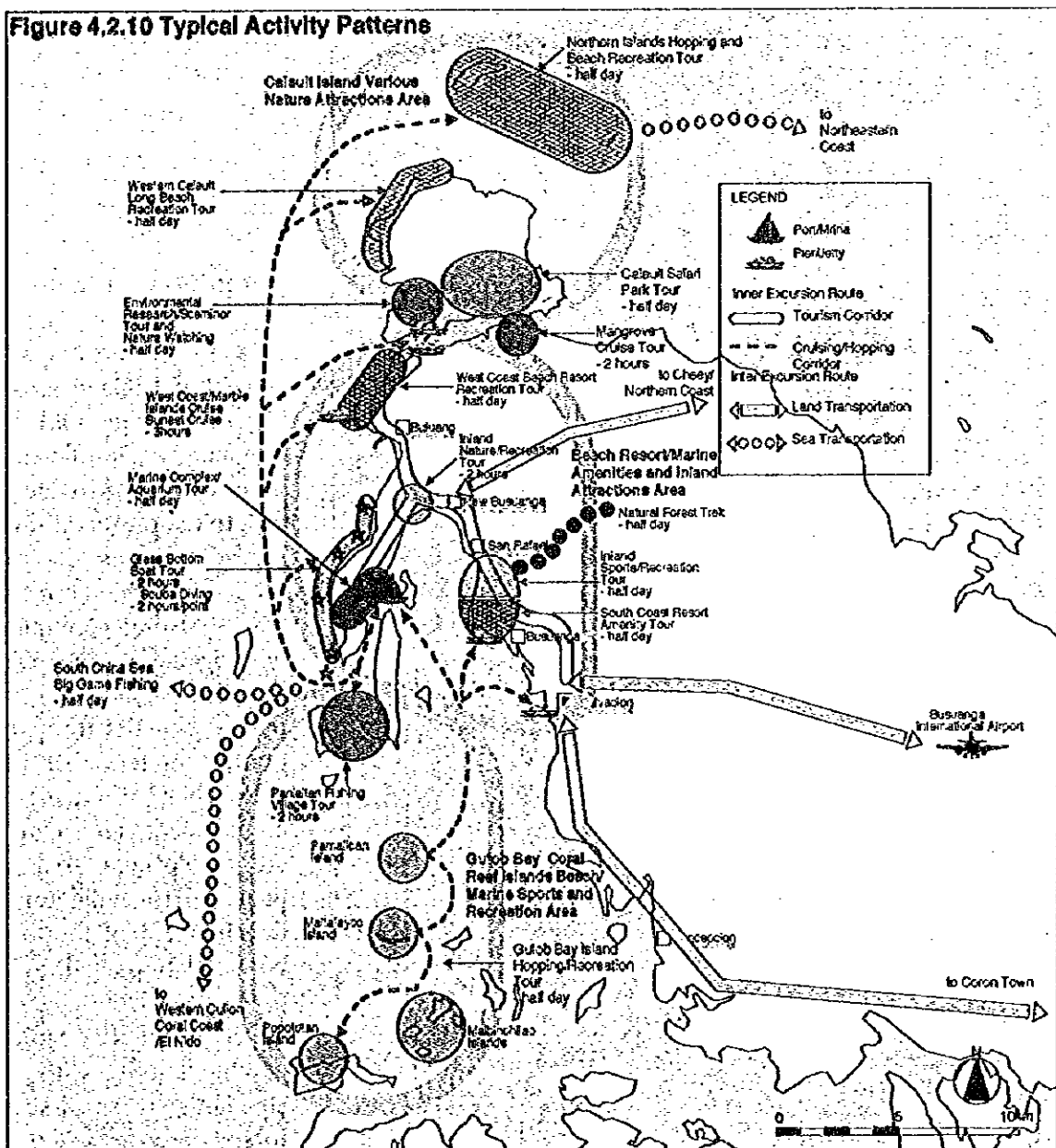


Figure 4.2.9 Tourism Development Structure Plan



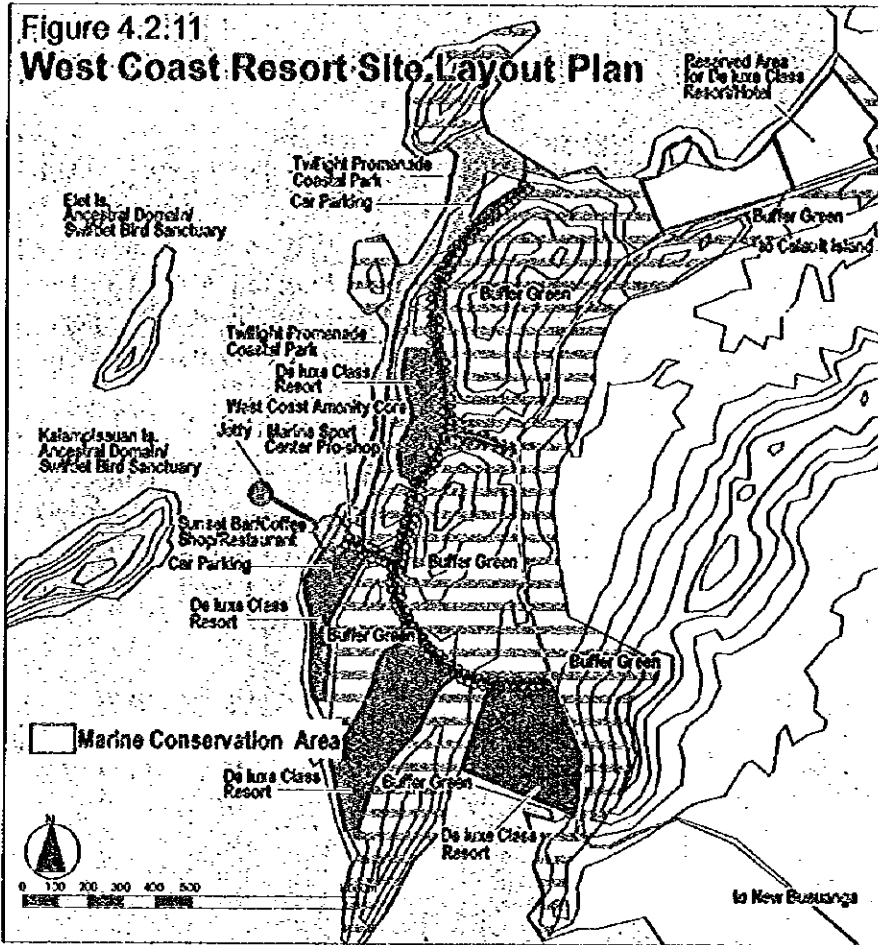
Development Structure Plan

- Tourism development in the area will be composed of facilities development area where accommodation and tourism facilities are concentrated (Old Busuanga, San Nicolas and Buluang beach areas), and tourism activity area which distribute widely over sea and land. These development areas will not be isolated from the existing communities but rather integrated particularly to maximize the benefits of additional infrastructure development. This will also help further integration of existing communities and activity centers (refer to Figure 4.2.9).
- Entry point to the area is the upgraded Busuanga Airport which will be connected directly with Salvacion via a new road. Possible tourism activities by tourists in this area are varied and extensive. The activity areas will not only be limited to immediate environs where developments take place but include the entire Gutob Bay and Calauit Island as well as Cheey, the northern coast of the island, Coron, etc (refer to Figure 4.2.10).



Source: Study Team

**Figure 4.2:11
West Coast Resort Site Layout Plan**

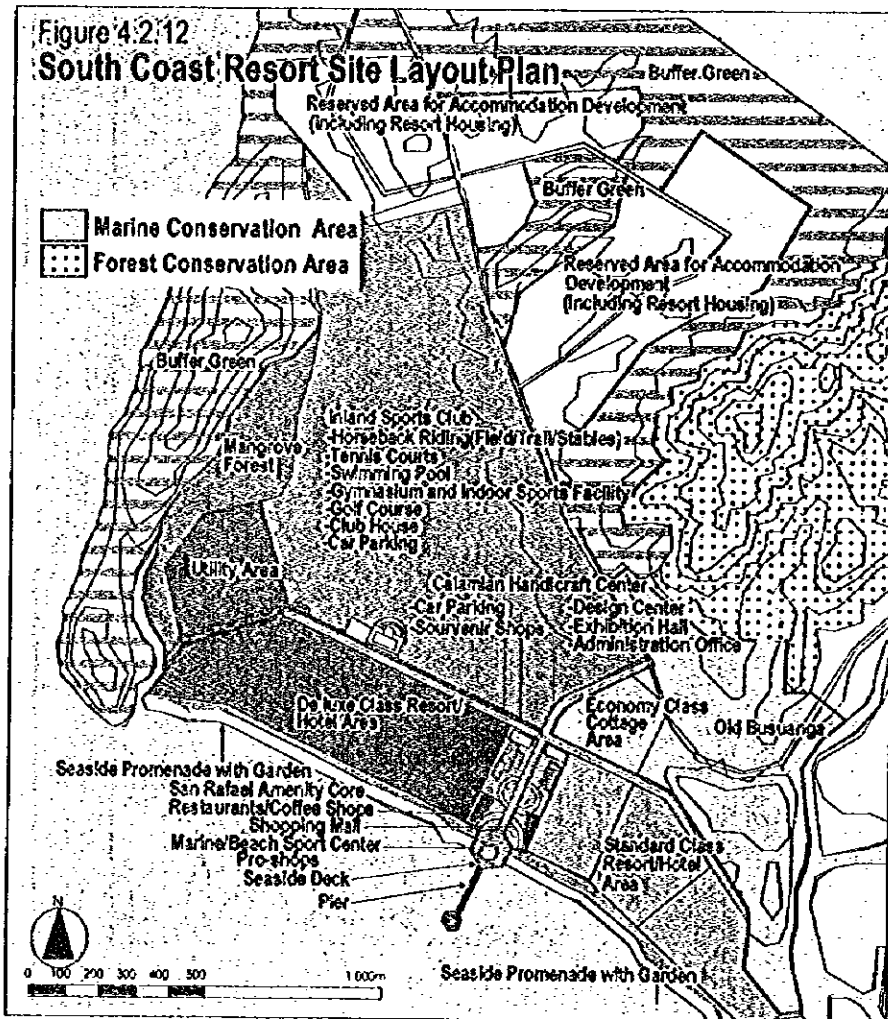


Site Layout Plans for Major Development Areas

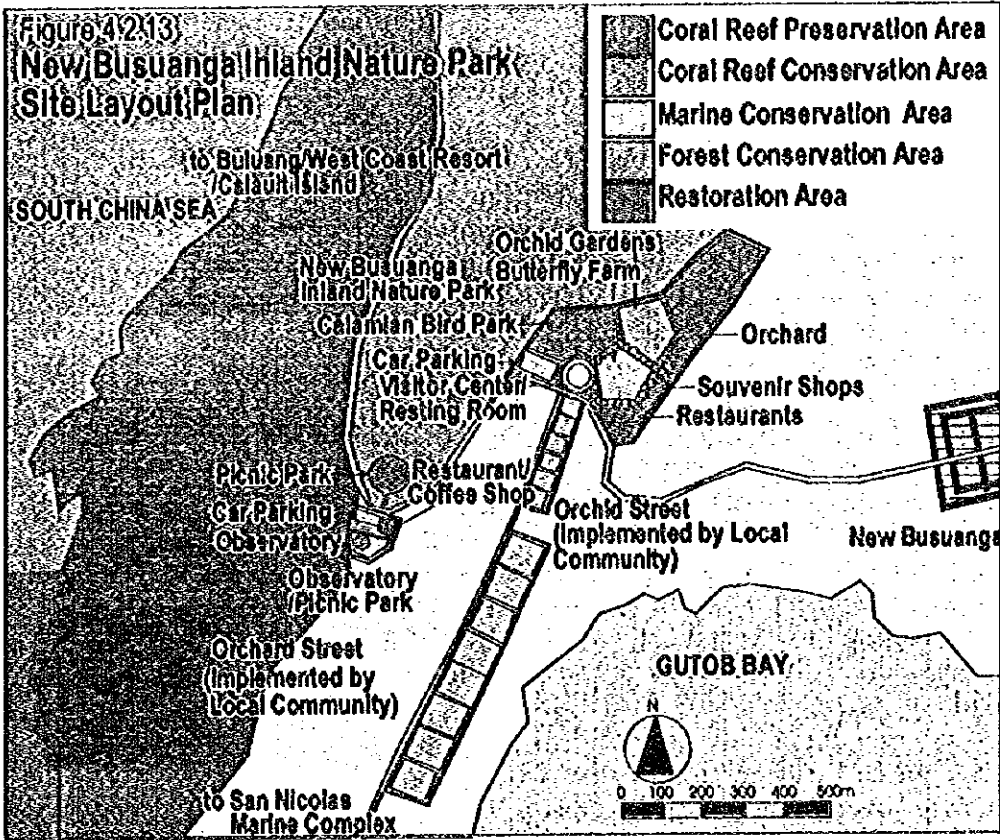
- In compliance with the structure plan, site layout plans have been formulated for major development areas

Buluang Beach Area (West Coast Resort): This area will be developed as the most expensive resort under the most strict development guidelines in terms of environmental considerations and financial contributions.

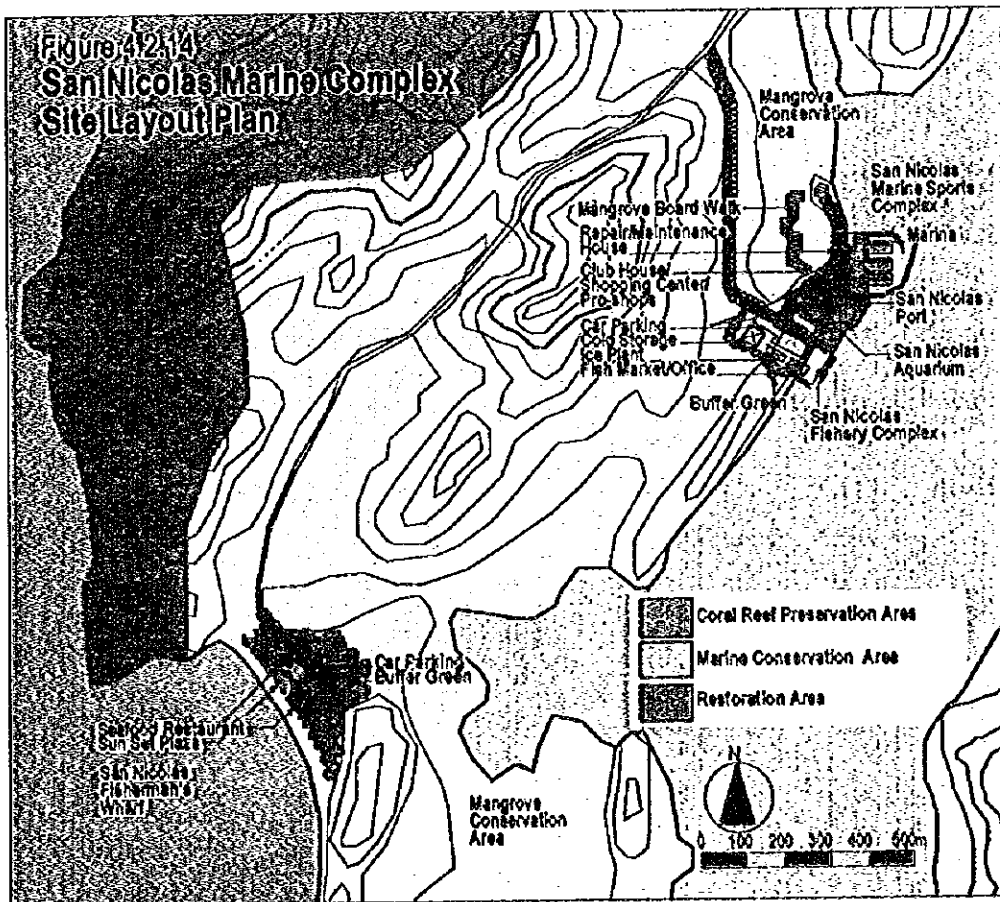
**Figure 4.2:12
South Coast Resort Site Layout Plan**



Old Busuanga (South Coast Resort): This is the largest resort area to be developed in the coastal and inland areas adjoining the existing Old Busuanga community. Sufficient buffer greens will be provided in addition to the preservation and conservation areas determined in the environmental management plan. Existing communities will be adequately integrated with the development to maximize mutual benefits from the development in terms of infrastructure, social services, supplies, employment, area management, etc. A cottage area has been provided to avoid uncontrolled development of low quality accommodations and, at the same time, to encourage controlled development of economy accommodations with adequate standards by small-scale investors.



New Busuanga (Inland Nature Park): This area intends to provide opportunities for tourists to enjoy the sight of orchids, butterflies, birds, rare insects, etc. and to provide local communities including ICCs with additional livelihood and new business opportunities.



San Nicolas (Marine Complex): This area will provide an active base for marine activities in the area not only for tourists but also for local fishermen by constructing an integrated fishery cum pleasure port. No accommodation facilities will be provided.

4.2.5 Tourism Infrastructure/Facilities Development Plan

- Tourism development in the area should be associated with a set of adequate infrastructure not only to sustain a competitive quality tourism but also to minimize the negative impact on the environment. Key infrastructure, including roads, airport, port, water supply, telecommunication, solid waste management, sewage treatment, etc., have been planned in an integral manner taking into consideration the existing and future requirements of neighboring communities to maximize the effects of the development.
- With regard to transportation, external access will be strengthened by upgrading Busuanga Airport to international standard. This means constructing a 2,000-meter runway, a new terminal, and providing a new 12-meter paved road linking the airport with Salvacion. The existing road linking the barangays of Buluang, New Busuanga, San Rafael, Old Busuanga, and Salvacion and functioning as the backbone in the development area will be improved to a 9-meter paved road. Other roads which are required to expand activities in these areas will also be improved. A new municipal port will be constructed in San Nicolas to serve both local and tourism activities.
- Water supply system will not only serve tourism development but also the residents in the affected areas. Telecommunication will be provided via a microwave network system to cover all major activity centers in the project area. Power supply for the area will rely on the Busuanga grid which will be expanded and upgraded.. Solid waste management will become a critical regional issue requiring a more comprehensive solution. Tourism will have to share in this responsibility. Sewage treatment will be properly done based on stabilization/aerated pond process for areas where development concentrate, while individual septic tanks will be used for isolated development areas. This will prevent pollution of the marine ecosystem thereby maintaining sanitary conditions in the area.
- Infrastructure and tourism facilities will be developed strictly in accordance with the approved layout plan to maintain the quality of the development. They are subject for strict EIA. Hotel and accommodation developments will only be allowed in the sites designated beforehand and the developers are obliged to follow planning/design guidelines.
- Total development costs are estimated to be ₱6.6 billion including the basic infrastructure of surrounding communities for which the estimated shared cost (based on demand) is approximately ½ or ₱1.1 million.

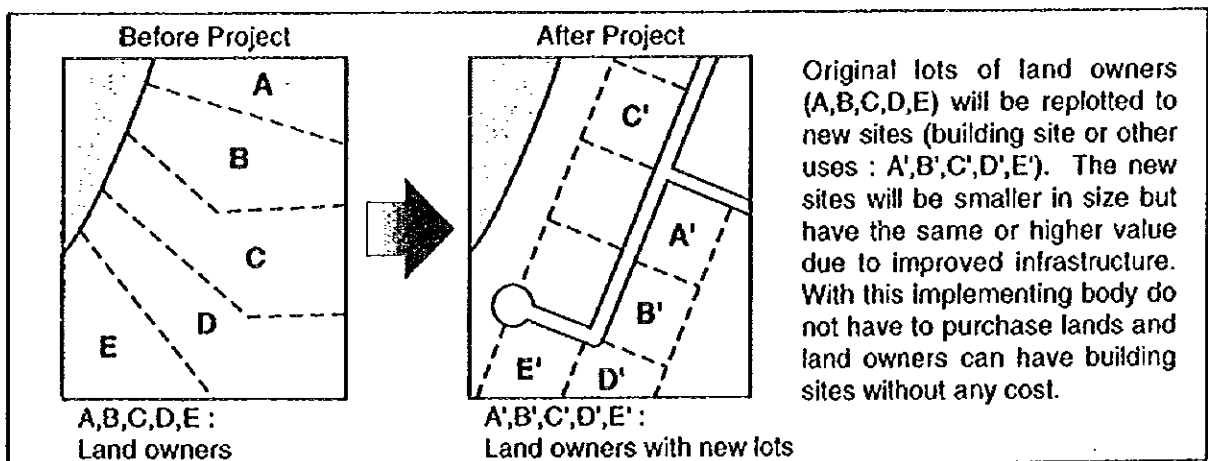
Table 4.2.4
Estimated Development Costs for Busuanga West

| Item | | Construction Cost: P million | Remarks |
|-------------------------------------|-------------------------|------------------------------|--|
| Regional Infrastructure | Airport | 720 | 2000 meter runway, new terminal |
| | Roads | 700 | primary/feeder |
| | Port | 175 | new port at San Nicolas |
| | Water supply | 60 | demand: 2,890 cum/day (60% tourism) |
| | Power supply | 239 | demand: 8,600 KVA (80% tourism) |
| | Telecommunications | 100 | demand: 876 lines (20% tourism) |
| | Solid waste disposal | 90 | demand: 50 cum/day (70% tourism) |
| | Town beautification | 78 | |
| | Medical/health facility | 10 | |
| | Sub-Total | | 2,172 |
| Tourism Supporting Facilities | | 16 | |
| Environmental Management Facilities | | 37 | |
| Tourism Area Development | | 4,385 | internal infrastructure, site development, landscaping |
| TOTAL | | 6,610 | |

Source: Study Team

4.2.6 Development and Management

- In order to assure the sustainability of the development, a number of conditions will have to be met. First, the benefits that are received should arise from the development and not from land transactions. Second, the benefits should be equitably distributed among stakeholders according to their contributions or responsibilities, and at the same time, equally shoulder the costs as well. If this process is maintained over the years, the development areas will be adequately managed.
- The conventional way that private developers construct resorts of different sizes and quality even with development permission, including EIA from the government, may not work effectively in a way that a sustainable tourism concept is assured. Developments may not take place as planned even with an effective ECAN zoning. More concrete measures are necessary with particular regard to effective control over lands and developments both on physical and management aspects.
- In order to ensure the physical quality not only of the direct project site but also to have the development shoulder an adequate share of the external infrastructure and environmental conservation costs from which the development will be benefited, at the least, the following measures are needed: statutory land use plan (e.g. effective ECAN Zoning), strict development permit system including EIA based on workable guidelines, and enforcement charges.
- Even after individual resorts have been constructed initially according to the set standards, the collective resorts may not function as an integrated resort complex nor sustain the quality as a whole. Therefore, it is considered that a single development organization to manage the development as explained in section 3.5 need to be established.
- The development organization acts as the implementing body of the developments to undertake activities such as acquiring/consolidating lands, developing common infrastructures, preparing development sites which then will be sold or leased to private developers, approving development and management plans of the private sector, managing common space and infrastructures based on collection of association dues and so on. A critical area is how to control lands wherein if acquisition is difficult, the concept of land readjustment may be applied.



4.2.7 Feasibility of the Proposed Development

Economic Aspect

- The proposed development has been evaluated similarly as the Master Plan, and a significant EIRR of 23% from the national economic viewpoint is expected. However, as to the economic impact on the local economy at the provincial/municipal level, this depends on how the local economic system will be integrated with the proposed development
- It is indicated from the analysis that government should start working to help the regional/local supply of human resources, materials and services match the demand adequately.

Financial Aspect

- The proposed development requires the costs for regional infrastructure, tourism facilities, environmental management and tourism area development excluding hotel/accommodations and other commercial facilities. On the other hand, the proposed development will produce a total of 92 ha. of building sites with completed infrastructure. When all the development costs are charged to the building sites, it will cost P7,200 per sq.m. when a half of the regional infrastructure is shared by outside the tourism sector, it will cost P6,000 per sq.m..
- With the level of infrastructure provided in the development, it is likely that resort operators will be able to absorb the level of costs.
- An important financial aspect is that environmental fee/contribution to be collected from the tourists in this case study area should be brought to the area where environmental restoration/conservation needs are significant, because the Busuanga area with relatively superior environment requiring less restoration cost should cross-subsidize other unfavorable areas.

Social Aspect

- In the proposed development plan, tourism developments are not isolated from existing settlements but rather are integrated to expect mutual benefits such as shared infrastructure/services and exchange of needed resources. Workers can commute easily without developing separate settlements. Various tourism facilities based on local environmental/cultural resources may provide opportunities for local communities as well as ICCs to participate in the developments.

Environmental Aspect

- Proposed developments have been assessed by area/facility from environmental viewpoint (refer to Table 4.2.5). The results indicate that positive impacts are expected. Negative impacts, if any, are negligible. However, a number of project components such as roads, port and marine sports complex at San Nicolas, waste disposal facility, etc. should be carefully assessed with particular regard to ecology in the area.

Table 4.2.5
Assessment of Possible Environmental Impacts due to the Proposed Developments

| Environmental Element Project Component | Physical & Chemical Effects | | | | | Ecological Effects | | | Aesthetic Effects | | | | | Socioeconomic Effects | | | | | | |
|--|-----------------------------|-------------|---------------------|------|-----------|--------------------|----------------------|----------------------------|-------------------|------------|-------|---------------|------------------|-----------------------|----------|----------------|--------------------------------------|-------------------------------------|--------------------------|---------------------------------|
| | Water | Groundwater | Air Characteristics | Wind | Inversion | Vegetation | Terrestrial Wildlife | Aquatic Species & Habitats | Land | Atmosphere | Water | Flora & Fauna | Man-Made Objects | Demography | Manpower | Transportation | Housing and Community Infrastructure | Education, Health & Social Services | Lifestyle of Communities | Indigenous Cultural Communities |
| 1. CALAUIT SAFARI PARK/ ENVIRONMENT TRAINING CENTER | | | | | | | | | | | | | | | | | | | | |
| 1) Calauit Safari Park | C | C | - | - | - | B- | - | C | - | - | - | - | - | B+ | B+ | - | - | - | - | - |
| 2) Calauit Environmental Training / Seminar Center | C | - | - | - | - | C | - | A+ | - | - | - | - | - | B+ | - | - | - | A+ | - | - |
| 3) Sewage Treatment | B+ | - | C | - | - | C | - | B- | - | - | C | - | - | - | - | - | - | - | - | - |
| 2. WEST COAST RESORT | | | | | | | | | | | | | | | | | | | | |
| 1) Buluang Beach Resort | C | - | - | - | - | C | - | C | C | - | - | - | - | B+ | B+ | - | - | - | B+ | - |
| 2) West Coast Amenity Center | C | - | - | - | - | - | - | B- | - | - | B- | - | - | - | C+ | - | - | - | B+ | - |
| 3) Sewage Treatment | B+ | - | C | - | - | - | - | C+ | - | - | - | - | - | - | - | - | - | - | C+ | - |
| 3. NEW BUSUANGA INLAND NATURE PARK | | | | | | | | | | | | | | | | | | | | |
| 1) New Busuanga Inland Nature Park | C | - | - | - | - | - | - | - | - | - | - | - | - | B+ | B+ | - | - | - | - | - |
| 2) Orchard Street | C | - | - | - | - | - | - | - | - | - | - | - | - | - | C+ | - | - | - | - | - |
| 3) Observatory/Resting Place/ Picnic Park | - | - | - | - | - | - | - | - | - | - | - | - | - | C+ | C+ | - | - | - | - | - |
| 4) Sewage Treatment | B+ | - | C | - | - | - | - | C+ | - | - | - | - | - | - | - | - | - | - | - | - |
| 4. SAN NICOLAS MARINE COMPLEX | | | | | | | | | | | | | | | | | | | | |
| 1) San Nicolas Marine Sports Complex | C | - | - | - | - | C | C | B- | C | - | B- | B- | - | A+ | B+ | - | - | - | - | - |
| 2) San Nicolas Port | C | - | - | - | - | C | - | B- | - | - | B- | B- | - | C+ | A+ | A+ | - | - | - | - |
| 3) San Nicolas Aquarium | C | - | - | - | - | C | - | C | - | - | - | - | - | C+ | - | - | - | B+ | - | - |
| 4) San Nicolas Fishery Complex | C | - | - | - | - | - | - | C | C | - | - | - | - | B+ | B+ | A+ | - | - | - | - |
| 5) Santa Rita Fisherman's Wharf | B- | - | - | - | - | C | - | C | - | - | - | - | - | - | - | - | - | - | - | - |
| 6) Sewage Treatment | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | C+ | - |
| 5. SOUTH COAST RESORT | | | | | | | | | | | | | | | | | | | | |
| 1) Resort and Accommodation | B- | - | - | - | - | - | - | C | - | - | C | - | - | B+ | - | - | - | - | B+ | - |
| 2) Inland Sports Club | C | - | - | - | - | C | - | B- | - | - | C | - | - | B+ | - | - | - | - | - | - |
| 3) San Rafael Amenity Core and Seaside Flower Mall | B- | - | - | - | - | - | - | C | C | - | B- | - | - | B+ | - | - | - | - | - | - |
| 4) Calamian Handicraft Center | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | B+ | B+ |
| 5) Buffer Area/Other Facilities | A+ | - | - | - | - | A+ | B+ | B+ | B+ | - | C | B+ | - | - | - | - | B+ | C+ | - | - |
| 6. TOURISM SUPPORTING FACILITIES | | | | | | | | | | | | | | | | | | | | |
| 1) Tourist Center | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2) Information Center | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 7. IMPROVEMENT AND UPGRADING OF LOCAL COMMUNITIES | | | | | | | | | | | | | | | | | | | | |
| 1) Beautification of Tourist Town and Settlements | - | - | - | - | - | - | - | - | - | - | A+ | A+ | - | B+ | B+ | A+ | - | B+ | - | - |
| 2) Medical Care/Health Facility | - | - | - | - | - | - | - | - | - | - | - | - | C+ | - | - | - | A+ | A+ | - | - |
| 8. TOURISM INFRASTRUCTURE | | | | | | | | | | | | | | | | | | | | |
| 1) Road Construction | - | - | - | - | - | B- | B- | - | B- | - | B+ | B- | - | A+ | A+ | - | - | B+ | - | - |
| 2) Upgrading/Expansion of Busuanga Alt International Airport | - | - | - | - | - | C | - | - | C | - | - | - | - | C+ | C+ | B+ | - | - | - | - |
| 3) Water Resource Devt/Water Supply Main Pipeline | B+ | - | - | - | - | - | - | B- | C | - | B- | C | - | B+ | - | A+ | A+ | A+ | A+ | - |
| 4) Power Supply Network | - | - | C | - | - | - | - | - | B- | - | - | - | - | C+ | C+ | A+ | A+ | A+ | A+ | - |
| 5) Telecommunication Network | - | - | - | - | - | - | - | - | B- | - | - | C | - | C+ | C+ | A+ | A+ | A+ | A+ | - |
| 6) Waste Disposal | B+ | C+ | - | - | - | B- | B- | - | B- | - | B- | - | - | - | - | A+ | A+ | - | - | - |

Source: Study Team

A+ : Significant Positive Impact
B+ : Moderately Positive Impact
C+ : Negligible Positive Impact

A- : Significant Negative Impact
B- : Moderately Negative Impact
C- : Negligible Negative Impact