

**Appendix B**  
**Current Infrastructure Development Projects**



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**Current Road Development Projects in the Northern Palawan, No.1**

Road Section	Location	Length (km)	Outline Project	Project Status	Estimated Cost (mil. Pesos)	Remarks	Implementation Schedule							
							1994	95	96	97	98	99	2000	
National Road 1 Puerto Princesa-Salvacion 2 Salvacion-Lagogan 3 Lagogan-Roxas 4 Roxas-Itabiak 5 Itabiak-Abongan 6 Taytay-El Nido 7 Coron-Busuanga	Puerto Princesa	37.36	AC Pavement	F/S completed (DPWH/PEO)	60.28	Main road, facilitate transport of farm production to commercial center								
	Puerto Princesa	43.68	AC Pavement	F/S completed (DPWH/PEO)	81.82	Main road, facilitate transport of farm production to commercial center								
	P.P./Roxas	56.56	AC Pavement	F/S completed (DPWH/PEO)	92.56	Main road, facilitate transport of farm production to commercial center								
	Roxas	26.75	Gravel Rehabilitation	Completed	16.17	Agricultural/irrigation sites								
	Roxas	38.70	Gravel Rehabilitation	On-going	23.97	Agricultural/irrigation sites								
	Taytay/El Nido	55.00	Gravel Rehabilitation	F/S completed	60.85	Fishing/agriculture/tourism								
	Coron/Busuanga	78.00	Gravel Rehab/New Const.	Completed Rehabil; on-going	56.31	Fishing/agriculture/tourism/irrigation								
Feeder Road 8 San Jose-Port Barton 9 Port Barton-Kenting 10 Itangil-Layoc 11 Itangil-Latogay-Sta. Teresita 12 Jet. National road-Tumarong-Roxas	Roxas/San Vicente	24.00	Rehabilitation	Completed	5.08	Tourism/rural agricultural center								
	San Vicente	18.00	Reconstruction	Committed (Suspended)	13.00	Fishing/agriculture/tourism								
	Dumaran	2.40	Rehabilitation	Completed	5.37	Access road for two irrigation scheme								
	Dumaran	29.00	Rehabilitation/Reconstruction	Completed	14.20	Fishing/agriculture Transship point of Sta. Teresita for poblacion of Dumaran by ship								
	Roxas	15.00	Rehabilitation/Reconstruction	On-going	4.13	Fishing/agriculture/handicraft								

Note:  Master Plan of SPPADP/Central Government Plan  
 Project Implementation Details and Loan Covenants with ADB, PCSD (Already committed project)

Current Road Development Projects in the Northern Palawan, No.2

Road Section	Location	Length (km)	Outline Project	Project Status	Estimated Cost (mil. Pesos)	Remarks	Implementation Schedule						
							1994	95	96	97	98	99	2000
13 Tumanbong-Hiang-Sia-Teresii	Roxas-Dumaran	18.00	Relhabitation/ New construction	On-going (Cy 1996)	11.28	Access road for irrigation scheme Fishing/agriculture	█						
14 Araeeli-Dumaran*	Araeeli/ Dumaran	36.00	Relhabitation/ Reconstruction	Committed (Suspended)	17.43	Direct connection between Roxas and Dumaran Fishing/agriculture, Cashew production		█					
15 Liminangcong-Cataban-Busy Bees-Sandoval	Taytay	40.00	Relhabitation/ New construction	Committed	24.46	Connection between Dumaran and Araeeli Access road for irrigation scheme			█				
16 Marceilla-Borne-San Nicolas	Coron	30.00	Relhabitation/ New construction	Committed (Suspended)	15.49	Connection national road to Liminangcong port Access road for irrigation scheme			█				
17 San Miguel-Pula-Proposed Airport*	Liminapan	15.00	New construction	F/S completed	83.00	Fishery/agriculture Depressed area proposed by Municipality Government, however recently location of the airport was changed to 7777			█				
18 Malaking Patag-Halsey	Culion	13.00	New construction	Committed	10.00	Access road for irrigation scheme at Carrigmalan Agriculture/fishing		█					
19 Libertad-Paglaum Bato	Taytay	6.00	Relhabitation	Completed	5.15	Access road for irrigation site at Bato			█				
20 El Nido-Lamaro-New Ibojay- San Fernando-Lamaro	El Nido	59.00	Relhabitation/ New construction	On-going	32.03	Access road for irrigation site at Taberna and Villa Libertad, Fishery/agriculture			█				
21 Magara-Little Caramay- San Fernando-Lamaro*	Roxas/ San Vicente	34.30	Relhabitation/ New construction	On-going	19.26	Access road for irrigation site at Cararay proposed by Municipality, Fishery/agriculture			█				
22 Jct. Coron-Busuanga National Road-YKR Airport*	Coron	15.00	Relhabitation	Completed	5.86	Access road to the airport Tourism			█				
23 New Guinlo-National Road	Taytay	10.00	Reconstruction	Committed	4.46	Fishery			█				
24 Bacungan-Naglabon*	Perto	9.50	Relhabitation	Completed	5.26	Fishery/agriculture/tourism			█				
25 Salvacion-Bahife-Macnascas	Perto Princesa	22.00	Relhabitation	Completed	2.81	Fishery/agriculture/tourism			█				
Total		732.25			670.22								

Note: █ Master Plan of SPIADP/Central Government Plan  
█ Project Implementation Details and Loan Convenants with ADB, PCSD (Already committed project)

**Current Port Development Project in the Northern Palawan**

Name of Port	Location	Classification	Outline of Project	Implementing Agency	Project Status	Project Cost (1,000 Pesos)	Implementing Schedule										
							1994	95	96	97	98	99	2000				
1 Coron port	Coron	Terminal	Reconstruction Reclamation	PPA/DPWH	F/S Completed	46.6											
2 Liminaucong port	Taytay	Municipal	Upgrading	DOIC	F/S Completed	38.9											
3 Araceli wharf	Araceli	Municipal	Improvement	DOIC	Not yet committed	1.0											
4 Bagong Sikat port	Araceli	Municipal	Rehabilitation	DOIC	Not yet committed	1.0											
5 Linapacan port	Linapacan	Municipal	Improvement Rehabilitation	DOIC	Not yet committed	1.5											
6 El Nido port	El Nido	Municipal	Improvement	DOIC	On-going	2.5											
7 Taytay port	Taytay	Municipal	Improvement Rehabilitation	DOIC	Not yet committed	2.0											
8 Calauag port	Taytay	Municipal	Improvement Rehabilitation	DOIC	Not yet committed	2.5											
9 Embarkadero port	Taytay	Municipal	Improvement Rehabilitation	DOIC	Not yet committed	3.0											
10 Dumanan port	Dumanan	Municipal	Improvement	DOIC	Not yet committed	3.0											

**Current Airport Development Project in the Northern Palawan**

Name of Port	Location	Classification	Outline of Project	Implementing Agency	Status	Project Cost (mil. peso)	Implementing	
							-2000	-2010
Puerto Princesa	Puerto Princesa	Alt. International	- Rehabilitation of Terminal bldg. and Fire Station - Expansion of Terminal bldg. including water system - Construction of cargo terminal bldg. etc.	DOTC/ATO	On-going (1996-1997)	11.0		
Busuanga	Coron	Feeder	- Concreting of runway	DOTC	On-going (1996)	10.0		
Sandval	Taytay	Provincial	- New Construction 720m x 20m, Expansion proposed	Provincial government	On-going			

■ DOTC Medium-term Development Program

■ Proposed project by private firm

Water Supply Projects for Level I & II (Rural Area) in the Northern Palawan

Name of Water Supply System	No of Served Barangays	Implementing Activity	Project Status	Project Cost (million Pesos)	Budget Source	Implementation Schedule			Priority Barangays
						2000	2005	2010	
Busuanga	73	New Construction (Level I)	Proposed		DPWH/SPIADP	○	○	○	Buluang, Calawig, Citey, Old Busuanga
	14	New Construction (Level II)			DPWH/SPIADP	○	○	○	Sagrada, Salvacion, San Rafael, Concepcion
Comn	78	New Construction (Level I)	Proposed		DPWH/SPIADP	○	○	○	Buenavista, Decalacao, Turda
	5	New Construction (Level II)			DPWH/SPIADP	○	○	○	
Culiton		New Construction (Level I)	Proposed		DPWH/SPIADP	○	○	○	Buyot, Langkal, Balala, Garden
	2	New Construction (Level II)			DPWH/SPIADP	○	○	○	
Linauyan	17	New Construction (Level I)	Proposed		DPWH/SPIADP	○	○	○	Baragonan, Decabaitol, New Cuiyabayan,
	5	New Construction (Level II)			DPWH/SPIADP	○	○	○	Pical, San nicolas
El Nido	15	New Construction (Level I)	Proposed		DPWH/SPIADP	○	○	○	Dagong Bayan, Manlag, New Ibajay,
	13	New Construction (Level II)	Committed (partially)		DPWH/SPIADP	○	○	○	Sibaltan, Tenuguiban, Villa Libertad, Pasadena
Laytay	95	New Construction (Level I)	Proposed		DPWH/SPIADP	○	○	○	Dantulan, Dato, Busy Dees, Liminaugeong,
	14	New Construction (Level II)			DPWH/SPIADP	○	○	○	Mayteged, New Guinio, Old Guinio,
San Vicente	35	New Construction (Level I)	Proposed		DPWH/SPIADP	○	○	○	Port Varion, New Agulaya
	2	New Construction (Level II)			DPWH/SPIADP	○	○	○	
Roxas		New Construction (Level I)	Proposed		DPWH/SPIADP	○	○	○	Abaroa, Antonino, Takabang, Tagumpay
	3	New Construction (Level II)			DPWH/SPIADP	○	○	○	Dagongbayan, Dumarno, Magara, San Miguel
Dumaran	48	New Construction (Level I)	Proposed		DPWH/SPIADP	○	○	○	Danleg
	1	New Construction (Level II)			DPWH/SPIADP	○	○	○	
Araceli	12	New Construction (Level I)	Proposed		DPWH/SPIADP	○	○	○	Dalayan, Sto. Nino,
	4	New Construction (Level II)			DPWH/SPIADP	○	○	○	Taloto, Tualela
Puerto Princesa		New Construction (Level I)	Proposed		DPWH/City	○	○	○	Dagong Bayan, Concepcion, Irawan,
	6	New Construction (Level II)			DPWH/City	○	○	○	Manalo, Inngawan, Tagburos

Note: - Target of the urban water supply are 69% and 93% of the total population by 1998 and 2010 respectively.

(Water supply, sewerage and sanitation development plan, 1994-2010, SPIADP)

- Rehabilitation of existing facilities for Level I & II in the Northern Palawan will be required as soon as possible

- Environmental Impact Analysis (EIA ) will be required for the implementation.



### Water Supply Projects for Level III (Urban Area) In the Northern Palawan

Name of Water Supply System	Existing Problems	Project Status	Distance of water source from Poblacion/City Proper	Project Cost (million Peso)	Priority
<b>Level III for Urban Water Roxas Water Supply System</b>	Water shortage areas during the dry season - Poblacion, New Barukan, Island barangays	Proposed	Water reservoir approx. 15 km		
<b>Puerto Princesa Water Supply System</b>	Immediate Improvement program (IIP) for existing deficiency and improvement and expansion of system - a serious of wells in the Iwahig area (18 wells) - pumping station and distribution system - 2002 of the target year	F/S implemented	New wells 22 km	280.6	
<b>Coron Water System</b>	Water shortage areas during the dry season - Poblacion, Island barangays	Proposed			
<b>El Nido Water System</b>	Water shortage areas during the dry season - Poblacion, Island barangays	F/S implemented	Water reservoir approx. 1.5 km	8.7	
<b>Taytay Water System</b>	Water shortage areas during the dry season - Poblacion, Liminaugong, Pancel, Batu, New Guinro	Proposed			

## Current Irrigation Development Projects in the Northern Palawan

Name of Projects/Irrigation Systems	Location	Type	Implementing Agency	Served Area (ha)	Project Status	Project Cost (1,000 P)	Implementing Schedule									
							1994	95	96	97	98	99	2000	beyond 2000		
1 Cheey CIP	Busuanga	New	LG	500	Proposed	88,725										
2 New Busuanga CIP	Busuanga	New	LG	1200	Proposed	212,940										
3 Sagrada CIP	Busuanga	New	LG	420	Proposed	74,529										
4 Buluang CIP	Busuanga	New	LG	150	Proposed	26,618										
5 Sto Nino CIP	Busuanga	New	LG	300	On-going	53,235										
6 San Nicolas, Borae & Guadalupe CIPs	Coron	New	LG	600	Proposed	106,470										
7 Various CIPs (Barotuan, Manlag etc.)	El Nido	New	LG	2800	Proposed	496,860										
8 Taberna CIP	El Nido	New	NIA	200	Committed	35,490										
9 Villa Libertad	El Nido	New	NIA	200	F/S completed	35,490										
10 Abongan CIP	Taytay	New	LG	1000	Committed	177,450										
11 Catban CIP	Taytay	New	LG/NIA	150	Committed	26,618										
12 Busy Bees CIP	Taytay	New	LG	200	F/S completed	35,490										
13 Alacalian CIP	Taytay	New	LG	150	Proposed	26,618										
14 Paglaom CIP	Taytay	New	LG	400	Proposed	70,980										
15 Sandoval CIP	Taytay	New	LG	150	F/S completed	26,618										
16 Kendang CIP	San Vicente	New	NIA	100	On-going	17,745										
17 Maringit-ringit CIP	San Vicente	New	NIA	100	F/S completed	17,745										
18 Various CIPs (Port Barton)	San Vicente	New	LG	150	Proposed	26,618										
19 Layok CIS	Dumaran	Rhab.	LG/NIA	172	On-going	3,968										
20 Impatient CIS	Dumaran	Rhab.	LG/NIA	100	F/S completed	2,307										
21 Ilian I CIS	Dumaran	Rhab.	LG/NIA	150	On-going	3,461										
22 Ilian II CIS	Dumaran	Rhab.	LG/NIA	135	On-going	3,114										
23 Sta. Teresita CIP	Dumaran	New	LG	130	Proposed	23,069										
24 SWIM (2 units, Sto Tomas)	Dumaran	New	LG	200	Proposed	35,490										
25 SWIM (Poblacion)	Dumaran	New	LG	60	Proposed	10,647										
26 Various CIPs (Dgy. IV, Sandoval etc.)	Roxas	New/Rehab.	LG	n.a.	Proposed	n.a.										

Note 1: Proposed: proposed project by SPIADP  
 F/S completed: High priority project by SPIADP  
 Committed: Committed project by ADB

Note 2: Project costs are estimated based on the result of F/S study of SPIADP.

Master Plan of SPIADP

Project Implementation Details and Loan Convenants with ADB, PCSD

### Structures and Facilities Under the Irrigation Component, NIA-SPIADP

Name of Project	Location	Potential Area (ha)	Accomplishment/Status
◦ Lamikan CIP	Quezon	400	◦ 100% completed, already turned-over to Irrigator's Association (IA).
◦ Quinlogan CIP	Quezon	250	◦ 100% completed, already turned-over to Irrigator's Association (IA).
◦ Tagbuaya CIP	Quezon	250	◦ 100% completed, already turned-over to Irrigator's Association (IA).
◦ Marangas CIP	Bataraza	500	◦ 100% completed, already turned-over to Irrigator's Association (IA).
◦ Iraan CIP	Rizal	300	◦ The project is sustainability completed with a total accomplishment of 98.50%.
◦ Candawaga CIP	Rizal	400	◦ The project is sustainability completed with a total accomplishment of 99.10%.
◦ Maasin CIP	Brooke's Point	1,000	◦ The construction is on-going (23.75% completed).
◦ Sabsaban CIP	Brooke's Point	300	◦ The construction is on-going (47.00% completed).
◦ Tamlang CIP	Brooke's Point	1,100	◦ The construction is on-going (19.25% completed).
◦ Talakaigan CIP	Aborlan	54	◦ The construction is on-going (80.00% completed).
◦ Pinamaratan CIP	Coron	60	◦ The construction is on-going (66.50% completed).
◦ San Nicolas CIP	Coron	80	◦ The construction is on-going (55.00% completed).
◦ Sto. Nino CIP	Coron	60	◦ The construction is on-going (57.75% completed).
◦ Busybees CIP	Taytay	120	◦ Feasibility Study completed, (may not be implemented due to funding shortfall).
◦ Cataban CIP	Taytay	150	◦ Feasibility Study completed (not feasible).
◦ Taberna CIP	El Nido	200	◦ Feasibility Study completed, (may not be implemented due to funding shortfall).
◦ Layok CIS	Dumaran	172	◦ Feasibility Study completed, (may not be implemented due to funding shortfall).
◦ Ilian I CIS	Dumaran	150	◦ Feasibility Study completed (not feasible).
◦ Ilian II CIS	Dumaran	135	◦ Feasibility Study completed (not feasible).
◦ Kamdeng CIP	San Vicente	100	◦ Feasibility Study completed, (may not be implemented due to funding shortfall).

*CIS- COMMUNAL IRRIGATION SYSTEM (REHABILITATION)*

*CIP – COMMUNAL IRRIGATION PROJECT (NEW)*

Fifteen (15) Irrigator's Service Association (ISA) were organized and registered with the Securities and Exchange Commission (SEC).

**Structures and Facilities Under the Integrated Health Program  
Component, DOH-SPIADP**

Barangay Health Station	Location	Status	Services
1. Aporawan BHS	Aporawan, Aborlan	Operational	Conduct Family Health Care
2. Sagpangan BHS	Sapangan, Aborlan	-do-	
3. Isaub BHS	Isub, Aborlan	-do-	Malaria Control Health Services
4. Burirao BHS	Burirao, Narra	-do-	
5. Sandoval BHS	Sandoval, Narra	-do-	Nutrition Program
6. Malinao BHS	Malina, Narra	-do-	
7. Maasin BHS	Maasin, Quezon	-do-	Anti-TB Program
8. Berong BHS	Berong, Quezon	-do-	
9. Kaitagbak BHS	Kalatagbak, Quezon	-do-	
10. Panalingaan BHS	Panalingaan, Rizal	-do-	
11. Taburi BHS	Taburi, Rizal	-do-	
12. Candawaga BHS	Candawaga, Rizal	-do-	
13. Bunog BHS	Bunog, Rizal	-do-	
14. Canipaan BHS	Canipaan, Rizal	-do-	
15. Ransang BHS	Ransang, Rizal	-do-	
16. Maasin BHS	Maasin, Brooke's Point	-do-	
17. Mainit BHS	Mainit, Brooke's Point	-do-	
18. Oring-orng BHS	Oring-orng, Brooke's Point	-do-	
19. Pulot Shore BHS	Pulot Shore, Espanola	-do-	
20. Punang BHS	Punang, Espanola	-do-	
21. Panitian BHS	Panitian, Espanola	On going construction	
22. Inogbong BHS	Inogbong, Bataraza	Operational	
23. Marangas BHS	Marangas, Bataraza	-do-	
24. Tarusan BHS	Tarusan, Bataraza	-do-	
25. Malihud BHS	Malihud, Bataraza	-do-	
26. Igang-igang BHS	Igang-igang, Bataraza	-do-	
27. Mangsee BHS	Mangsee, Balabac	-do-	
28. Bancalaan BHS	Bancalaan, Balabac	On going construction	
29. Melville BHS	Melville, Balabac	-do-	
30. Simpocan BHS	Simpocan, Ppcity	completed	
31. Luzviminda BHS	Luzviminda, Ppcity	Completed-Operational	
32. Langoan BHS	Langoan, Ppcity	-do-	
33. Marufinas BHS	Marufinas, Ppcity	-do-	
34. Mendoza BHS	Mendoza, Roxas	Operational	
35. Tinitian BHS	Tinitian, Roxas	Operational	
36. Dumarao BHS	Dumarao, Roxas	Operational	
37. Magara BHS	Magara, Roxas	Not yet Operational	
38. San Miguel BHS	San Miguel, Roxas	Completed	
39. San Jose BHS	San Jose, Roxas	Completed	
40. New Cuyo BHS	New Cuyo, Roxas	Not yet Operational	
41. Antonio BHS	Antonio, Roxas	completed	
42. Casian BHS	Casian, Roxas	completed	
43. Banbanan BHS	Banbanan, Taytay	completed	
44. Bantulan BHS	Bantulan, Taytay	completed	
45. Talog BHS	Talog, Taytay	completed	
46. Pancol BHS	Pancol, Taytay	completed	
47. Busy Bees BHS	Busybees, Taytay	completed	
48. Manlag BHS	Manlag, El Nido	completed	
49. Tiniguiban BHS	Tiniguiban, El Nido	completed	
50. Pasadena BHS	Pasadena, El Nido	completed	
51. Sibaltan BHS	Sibaltan, El Nido	completed	
52. New Canipo BHS	New Canipo, San Vicente	Operational	
53. New Villafria BHS	New Villafria, San Vicente	completed	
54. Caruray BHS	Caruray, San Vicente	completed	
55. Binga BHS	Binga, San Vicente	On going construction	
56. Itangil BHS	Itangil, Dumarán	completed	
57. Tanatanaon BHS	Tanatanaon, Dumarán	Operational	
58. Bacao BHS	Bacao, Dumarán	Operational	
59. Madolodolon BHS	Madolodolon, Araceli	Operational	
60. Sto. Nino BHS	Sto. Nino, Araceli	Operational	
61. Balogo BHS	Balogo, Araceli	Operational	
62. Caponayan BHS	Caponayan, Cuyo	completed	
63. Lubid BHS	Luid, Cuyo	completed	
64. Cocoro BHS	Cocoro, Magsaysay	completed	
65. Canipo BHS	Canipo, Magsaysay	completed	
66. Matarawis BHS	Matarawis, Agutaya	On going Construction	

**Appendix C**  
**Social Environment Survey Results**

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## **1. Introduction**

This supplemental survey on the social environment of Northern Palawan focused on the perceptions of indigenous communities on development, especially through an environmentally sustainable tourism development.

### **1.1 Objectives**

In general, this survey aims to determine the following:

- (a) the approximate distribution of indigenous cultural communities (ICCs), e.g. Bataks and Tagbanuas, in Northern Palawan;
- (b) the social acceptability of government-initiated development projects, specifically, tourism development, in the community among leaders in Northern Palawan; and
- (c) the respondents' attitude towards indigenous cultural communities and their role in the development and the preservation of the environment in Northern Palawan.

Specifically, the survey will determine the present distribution pattern of indigenous cultural communities where "Ancestral Domain Claims" are anticipated, and to find out the respondents' views or perception on the following:

- (b) concept of development in relation to the environment and the indigenous communities;
- (c) modes of natural resources utilization and their attitude towards the environment;
- (d) level of knowledge of tourism in relation to the environment and the indigenous communities in Northern Palawan;
- (e) environmentally sustainable tourism;
- (f) possibility of involving indigenous communities in the development of tourism in Northern Palawan;
- (g) personal involvement in community development;
- (h) level of commitment to cooperate with government efforts toward community development;
- (i) how to balance development and environmental preservation; and
- (j) awareness of indigenous people in their community.



## 1.2 Methodology

Only five municipalities were surveyed owing to limitations of time and cost. These were the municipalities of Taytay, El Nido, San Vicente, Roxas, and Puerto Princesa City.

The survey was conducted by PANLIPI (*Tanggapang Panligal ng Katutubong Pilipino*), which means Legal Assistance Center for Indigenous Filipinos, a non-governmental organization. Two sets of questionnaires were used, one in English and the other in Filipino (refer to Annex B-1 and Annex B-2). Fifty-nine barangays in five municipalities were visited. These sites were selected for their known indigenous communities and considering the time frame for the survey. The areas especially requested by the JICA Study Team to be reached were those inhabited by the Tandulanen and Silanganen groups, which are sub-groups of the Tagbanua community.

The respondents of this survey were barangay (community) chairmen and tribal leaders, numbering 105 in total. The surveyors actually visited them in their communities by the surveyors, several of which were accessible only by foot, and given the set of questionnaires to answer. Afterwhich, the questionnaires were collated, organized and the results tabulated.

The rich natural resources and pristine environment in Northern Palawan have been found to be more useful for tourism rather than extractive development activities. Therefore, tourism as a form of development, with the ultimate purpose of improving the quality of life of the local population, at the same time enriching the experience of people from other places, may be socially acceptable to the people in Northern Palawan.

## 1.3 Limitations of the Survey

The survey was very basic in nature. Time constraint prevented a deeper analyses on the livelihood income of indigenous peoples (IPs). Such information as the livelihood and income data require time and academic studies, such as daily record keeping.

The customs and traditional cultures of the IPs were also not well considered since these information also require a longer length of time spent with the tribes. However, secondary data available on the established tribes of Bataks and Tagbanuas seemed to be no longer adaptable to the present indigenous groups as they are in the process of change. Elder generations hope to re-acquire their traditional way of life but the younger generation are more flexible as they can adapt to new cultures. Inter-marriage between IPs and neighboring Christian Filipinos are already underway.

The archaeological spots identified and listed by the National Museum which served as basis in the selection of the survey sites were found either to be non-existent or already had names that are different from the local names of such

locations. Also, the respondents were unable to identify such spots. Hence, it was impossible to verify them on the base map.

## 2. Results of the Survey

The following are the tabulated answers to the questionnaire given. The total number of answers are more or less 105 due to plural answers to one question or lack of answer to a specific question.

### 2.1 Socioeconomic Characteristics

#### 1) Tribal Communities and Ancestral Domain

Out of the 58 barangays, 57 have been identified to have indigenous groups. Of the 57 barangays, 12 have both Tagbanuas and Bataks, two have Bataks only, and the remaining 43 have Tagbanuas only. Barangays which have indigenous groups are shown in Table 2-2 and their distribution is indicated in Figure 2-1.

The approximate number of families of the indigenous groups was also asked, which is given in Table 2-1

Table 2-1 Approximate Number of Families of Indigenous Groups

No. of Families	Tagbanua		Batak		Total	
	B.C.	T.L.	B.C.	T.L.	B.C.	T.L.
More or less 50	38	32	12	8	50	40
More or less 100	11	5	1	0	12	5
More or less 150	3	0	0	0	3	0
More or less 200	1	2	0	2	1	4
Total	53	39	13	10	66	49

Note: BC : Barangay Captain

TL : Tribal Leader

In most cases, the estimated size of indigenous communities is not so large, rarely exceeding 100 families. An interesting point is the tendency of barangay captains to estimate a larger family size than those of tribal leaders.

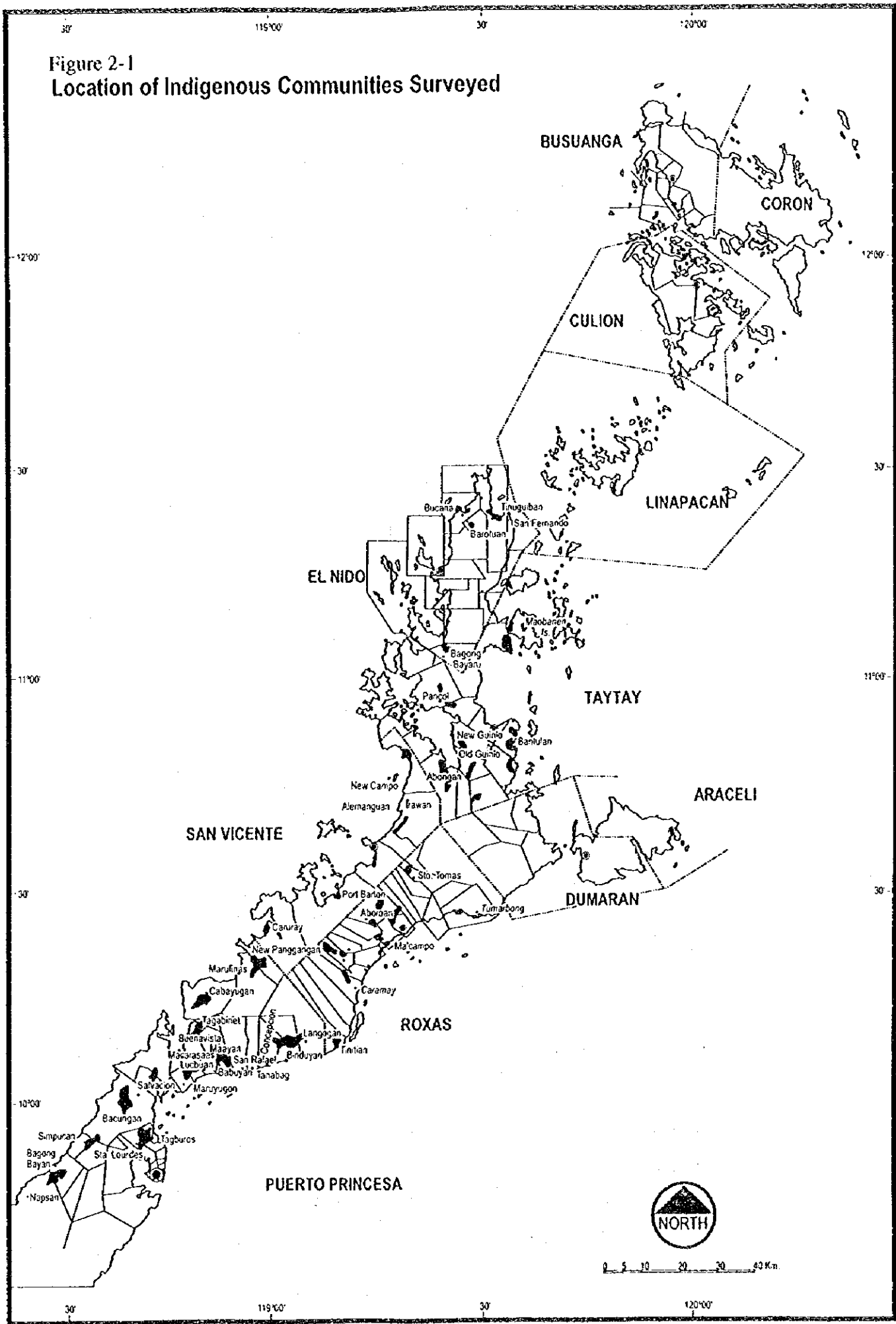
To the question if there is any Ancestral Domain claimed in the area where indigenous groups are distributed, 74% of barangay captains answered 'Yes' (16% answered 'No') while 88.1% of tribal leaders answered 'Yes' (only 7.1% answered 'No') in the case of the Tagbanua groups. In case of the Batak groups, 81.3% of Barangay Captains answered 'Yes' while it is a 100% for Tribal Leaders.

It may be noted that even if Tribal Leaders answered 'No,' it does not mean that they have given up the claiming of Ancestral Domain. All it means is that the indigenous groups have either already claimed or under preparation of claiming their Ancestral Domain.

**Table 2-2 Indigenous Groups in the Survey Area**

Municipality	Barangay	Indigenous Group
Taytay	Batas	Tagbanua
	Abongan	Tagbanua
	Panantolon	Tagbanua
	Pancol	Tagbanua
	Bantulan	Tagbanua
	Baras	Tagbanua
	Banbanan	Tagbanua
	New Guinlo	Tagbanua
	Old Guinlo	Tagbanua
	Liminangcong	Tagbanua
	Bato	Tagbanua
	Paglana	Tagbanua
	Silanga	Tagbanua
	Maytigueo	Tagbanua
Casian	Tagbanua	
El Nido	Bucana	Tagbanua
	Bagong Bayan	Tagbanua
	Teneguiban	Tagbanua
	San Fernando	Tagbanua
	Barotuan	Tagbanua
San Vicente	Alimanguan	Tagbanua
	Bella Frea	Tagbanua
	Port Barton	Tagbanua
	Binga	Tagbanua
	Caruray	Tagbanua
Roxas	Tinitian	Tagbanua and Batak
	Sto. Tomas	Tagbanua
	Tumarbong	Tagbanua
	Magara	Tagbanua and Batak
	Tagumpay	Batak
	Abaroan	Tagbanua and Batak
	Iraan	Tagbanua
	Caramay	Tagbanua and Batak
Malcampo	Tagbanua	
Puerto Princesa	Benduyon	Tagbanua
	Lucbuen	Tagbanua
	Buenavista	Tagbanua and Batak
	San Rafael	Tagbanua
	Bacungan	Tagbanua
	Marufinas	Tagbanua
	Simpucan	Tagbanua
	Cabayugan	Tagbanua and Batak
	Bagong Bayan	Tagbanua
	Sta. Lourdes	Tagbanua
	Irawan	Tagbanua
	Concepcion	Tagbanua and Batak
	Manalo	Tagbanua and Batak
	Babuyan	Tagbanua
	Kemuning	Tagbanua
	Salvacion	Tagbanua
	Maruyugon	Tagbanua
	Napsan	Tagbanua
	Tagabinet	Tagbanua and Batak
	Tabanag	Batak
Tagbueros	Tagbanua and Batak	
Maoyon	Tagbanua and Batak	
Langogan	Tagbanua and Batak	

**Figure 2-1**  
**Location of Indigenous Communities Surveyed**



## 2) Livelihood and Income

The major source of income of indigenous groups are shown in Table 2-3. Honey, rattan, and Almaciga resin gathering, which are non-timber forest products, topped the answers, especially from the tribal point of view. On the other hand, the guess of barangay captains is that fishing is not a major source of income among the Tagbanuas but it is among the Bataks. Overall, handicraft making is not so popular yet. Farming is mainly done "kaingin style" and as the method is prohibited now, productivity is very low, and therefore, it becomes a poor source of income. Other sources of income include land rental, gold panning, shellcraft, lumber gathering, and land clearing.

Table 2-3 Major Sources of Income of Indigenous Groups

Source of Income	Tagbanua		Batak		All Respondents		
	B.C.	T.L.	B.C.	T.L.	B.C.	T.L.	Total
Honey gathering	58.9	83.3	100.0	100.0	67.7	86.8	76.3
Rattan gathering	58.9	76.2	64.3	81.8	60.0	77.4	67.8
Almaciga resin gathering	29.4	40.5	64.3	81.8	36.9	77.4	42.4
Fishing	60.8	28.6	7.1	36.4	49.2	30.2	40.7
Handicrafts	33.3	14.3	28.6	27.3	32.3	17.0	25.4
Farming	37.3	26.2	21.4	18.2	33.8	24.5	29.7

Note: Figures are percentages to total answers.

As the non-timber products are the major source of income for the indigenous communities, the sustainability of these resources must be studied and planned if those indigenous communities are to be preserved. Also, alternative means of income such as handicrafts for souvenirs utilizing renewable forest and marine (riverine) products, improvement of cultivation system, etc., must be promoted.

The above statement is especially important as annual incomes of indigenous communities are very low, between P1,000 and P5,000 (US\$40 to 200), as shown below:

Table 2-4 Income Level of Indigenous Communities

Income Range	Barangay Captains	Tribal Leaders	All Respondents
Less than P1,000	16.0	8.2	12.5
P1,000 - P5,000	28.2	67.3	50.0
P5,001 - P10,000	33.3	24.5	28.4
More than P10,000	21.5	-	9.1
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

## 2.2 Perception on Development

### 2.2.1 Indications of Development in the Community

#### 1) Infrastructure Projects

When the barangay captains and tribal leaders were asked about what they think would be indications of development in their community, they answered buildings, hotels, roads, bridges, resorts, ice plants, etc. Majority, therefore, viewed 'development' as synonymous to 'infrastructure.' This is especially true among the barangay captains, most of whom are either non-indigenous or immigrants from other provinces. However, among tribal leaders, 'development' does not necessarily mean 'development projects,' as shown in Table 2-5. More than one-third of them are 'Not Sure' about it, and the ratio of 'Agree' (including 'Completely Agree') and 'Disagree' (including 'Completely Disagree') is almost equal: 32.0% and 30.2%, respectively.

Table 2-5 Infrastructure Projects as Indication of Development

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	32.0	13.2	22.6
Agree	56.6	18.9	37.7
Not Sure	5.7	37.7	21.7
Disagree	5.7	28.3	17.1
Completely Disagree	-	1.9	0.9
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

#### 2) Natural Resources/Environment Will be Maintained and Visited by Tourists

A great majority of the respondents have no objection to tourist visits and maintenance of the natural resources or natural environment, which they consider an asset in development, especially in tourism development.

Table 2-6 Visits to and Maintenance of Natural Resources by Tourists

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	41.2	43.4	42.3
Agree	51.0	52.8	51.9
Not Sure	3.9	-	1.9
Disagree	3.9	3.8	3.8
Completely Disagree	-	1.9	0.9
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

### 3) ICCs Will Care for Mountains and Forests to be Visited by Tourists

Majority of the respondents 'agree' on the significant role of ICCs in development, especially tourism development. However, there is a little uncertainty on both sides, barangay captains and tribal leaders, on whether or not the indigenous cultural communities should be seen as assets in tourism development. In case of the barangay captains group, several of them seem to think that the ICCs might not be suitable for tourism development because the IPs or their communities are not yet sophisticated enough to be a tourism resource. On the other hand, some tribal leaders seem to think that their communities and/or traditional culture might be disturbed if they allow tourists to visit their communities. There may be implications of this in development projects involving IPs and their ancestral domains.

Table 2-7 Visits by Tourists to Natural Resources Taken Care of by ICCs

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	36.4	34.4	35.2
Agree	50.0	49.2	49.5
Not Sure	-	-	-
Disagree	11.4	16.4	14.3
Completely Disagree	2.3	-	1.0
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

### 4) Sale of Lands to Foreigners

The question on sale of lands to foreigners, as posed to the indigenous communities, can be considered useless considering that indigenous peoples do not have tenurial rights. Even if the IPs have identified their Ancestral Domain Claim, they are still prohibited to sell those lands to foreigners. Nonetheless, as expected, 57% 'completely disagreed' and 55.6% 'disagree.'

On the part of barangay captains and non-tribal dwellers, although they have tenurial rights, more than three-fourths of them disagreed to sell their lands even for the sake of development.

Table 2-8 Sale of Lands to Foreigners

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	1.9	-	1.3
Agree	5.8	3.7	5.1
Not Sure	15.4	3.7	11.4
Disagree	50.0	55.6	51.9
Completely Disagree	26.9	37.0	31.2
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

5) Clearing of Forests to Give Way to Roads and Buildings

Majority of both groups see the value of forests over infrastructure. On the part of barangay captains, 48.1% 'disagree' (plus 25.9 who completely 'disagree') and 57.5% of tribal leaders (plus 40% who completely 'disagree.') This indicates a shift in view from the original perception that development necessarily require infrastructure. This may pave the way for environmentally sustainable tourism development to have some kind of community support.

Table 2-9 Clearance of Forests to Give Way to Roads and Buildings

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	3.7	-	2.1
Agree	11.1	-	6.4
Not Sure	11.1	2.5	7.4
Disagree	48.1	57.5	52.1
Completely Disagree	25.9	40.0	31.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Note: Figures are percentages to total answers

6) Increase of Employment Opportunities

The opposing views of the IPs and non-IPs on development is clearly shown in the answers to the question on the possibility of increase in employment opportunities through development. Majority of the former either are 'not sure' (47.2%), or 'disagree'(30.2%), while majority of the latter 'agree.' (45.1%) or 'completely agree' (33.3%) This is understandable in light of the fact that IPs may not have the skills that are required in the process of development. Hence, any kind of development projects must consider the role of capability building among IPs in order that they can have a role and a chance to participate in the said activities.

Table 2-10 Development as a Means to Increase Employment Opportunities

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	3.7	-	2.1
Agree	11.1	-	6.4
Not Sure	11.1	2.5	7.4
Disagree	48.1	57.5	52.1
Completely Disagree	25.9	40.0	31.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Note: Figures are percentages to total answers



## 2.2.2 Views on Environment

### 1) Utilization of Natural Environment

Eighty-six percent (86%) of the total respondents 'agree' that the natural environment should be left alone. While several of the barangay captains are thinking of some sort of utilization for human activities, none of the tribal leader thinks so (only 2% answered 'Not Sure.' As the term "natural environment" was not defined in this question, it would require further study to determine if there were any definition of the word and qualification on their views.

Table 2-11 Utilization of the Natural Environment

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	26.7	35.3	30.6
Agree	50.0	62.7	55.9
Not Sure	6.7	2.0	4.5
Disagree	16.7	-	9.0
Completely Disagree	-	-	-
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

### 2) Exploitation (by any Means) of the Natural Environment

The answers of the majority of the respondents to this question may indicate a high degree of awareness on environmental protection, which is very important in any development project to be undertaken. Both non-IPs and IPs 'disagree' to the exploitation of the natural environment by any means (even if destructive)--in total, almost 87% and 98%, respectively, or 92% of the total respondents.

Table 2-12 Exploitation of the Natural Environment

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	1.9	1.9	1.9
Agree	5.8	-	2.9
Not Sure	5.8	-	2.9
Disagree	55.8	56.6	56.2
Completely Disagree	30.8	41.5	36.2
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

3) **Wise Utilization of Natural Resources toward Sustainability**

Similarly, the answers to this question will require further study to know what kind of utilization of natural resources the respondents think "wise."

**Table 2-13 Wise Utilization of Natural Resources toward Sustainability**

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	39.6	41.5	40.6
Agree	49.1	58.5	53.8
Not Sure	1.8	-	0.9
Disagree	9.4	-	4.7
Completely Disagree	-	-	-
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

**2.2.3 Views on Tourism**

1) **Knowledge about Tourism**

There is fertile ground for educational campaign in relation with the environment and tourism development. As the majority shows high degree of awareness on environmental protection, environmentally sustainable tourism should be introduced and popularized among the people, non-IPs and IPs.

**Table 2-14 Knowledge about Tourism**

Answer	Barangay Captains	Tribal Leaders	All Respondents
Much knowledge	21.1	7.5	14.3
Little knowledge	53.8	34.0	43.8
Not sure	19.2	9.4	14.3
No knowledge	5.8	49.1	27.6
Doesn't care	-	-	-
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

2) **Tourism will Destroy the Environment and Not Give Anything Good**

There is a glaring difference between the views given by the barangay captains and by the tribal leaders which should put any development planner

on guard. It may mean that the information needs on tourism of both groups are entirely different and should be addressed separately

Table 2-15 Destruction of the Environment

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	5.8	16.9	11.7
Agree	9.6	40.7	26.1
Not Sure	28.8	18.6	23.4
Disagree	53.8	8.5	29.7
Completely Disagree	1.9	15.3	9.0
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

3) Possibility of a Tourism Development Program that will Not Adversely Affect the Environment

There is not much difference in views among the groups concerning the possibility of environmentally sustainable tourism development (which are all on the positive side), and majority agrees to it: 85% for the non-IPs and 88% for the IPs.

Table 2-16 Possibility of a Tourism Development Program that will Not Adversely Affect the Environment

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	41.5	12.0	25.3
Agree	43.9	76.0	61.5
Not Sure	7.4	8.0	7.7
Disagree	7.4	4.0	5.5
Completely Disagree	-	-	-
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

4) Tourism Should Be Developed in Palawan

This question again elicited very different views between the barangay captains and tribal leaders: 80% of the former agree that tourism should be developed in Palawan, while 74% of the latter do not agree.

It seems that barangay captains welcome any development activities which will increase their communities' income level, promote economic activities

of the area, and contribute to the upliftment of people's lives. Tribal leaders, on the other hand, are reluctant to introduce unknown-to-them type of development of tourism. This again suggests the need for education campaign and information dissemination, specifically addressed to the IPs.

Table 2-17 Development of Tourism in Palawan

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	28.8	6.0	17.6
Agree	51.9	8.0	30.4
Not Sure	13.5	12.0	12.7
Disagree	5.8	62.0	33.3
Completely Disagree	-	12.0	5.9
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

#### 5) Tourism Should be Studied before Implementation

Both groups 'agree' that it is important to undertake prior studies before implementing tourism development in Palawan.

Table 2-18 Tourism Should be Studied Before Implementation in Palawan

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	51.9	41.2	46.6
Agree	42.3	54.9	48.5
Not Sure	1.9	2.0	1.9
Disagree	3.8	2.0	2.9
Completely Disagree	-	-	-
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

### 2.2.4 Measures for a Sustainable Tourism in Palawan

#### 1) Limit the Entry of Tourists to Prevent Any Negative Effect on the Environment

As the barangay captains' group have more knowledge about tourism, less than half (41%) 'agree' in limiting the number of tourists, which will result in the decrease in tourist spending. Meantime, a high number of tribal leaders (96%), who has less knowledge about tourism and sees the increase of "outsiders" as a threat to the environment, 'agree' to limit the entry of tourists.

**Table 2-19 Adoption of Measure to Limit the Entry of Tourists in Palawan**

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	22.4	23.5	22.9
Agree	19.0	72.5	44.0
Not Sure	17.2	3.9	11.0
Disagree	41.4	-	22.0
Completely Disagree	-	-	-
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

2) **Limit the Number of Tourists to Prevent Any Negative Effect on the Indigenous Communities and Indigenous Peoples**

The views among the barangay captains' group are split into two. Half of them 'agree' to limit the number of tourists to prevent any negative impact on the ICs, while one-third 'disagree' to it. The latter also 'disagree' to limit the number of tourists for the sake of the natural environment. It seems that, the latter group values more the economic benefits of development rather than the natural and social environments. On the other hand, a great majority of the tribal leaders 'agree' to limit the number of tourists for the sake of preserving their community and the IPs.

All in all, limiting the number of tourists for the sake of an environmentally sustainable tourism development is supported by the great majority of tribal leaders and approximately half of barangay captains. However, more than one-third of the barangay captains do not agree as it will decrease the economic contribution of the development.

**Table 2-20 Limit the Number of Tourists to Prevent Any Negative Impacts on ICs and IPs**

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	22.2	43.1	31.6
Agree	27.0	52.9	38.6
Not Sure	15.9	-	8.8
Disagree	34.9	2.0	20.2
Completely Disagree	-	2.0	0.9
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

## 2.2.5 Views of the People on Their Involvement in Development Activities/Projects

The barangay captains and tribal leaders were asked to assess the extent of involvement of the IPs in their community (refer to Table 2-21) and in their municipality (refer to Table 2-22) when it comes to development activities and projects.

Overall, both groups think that majority of the people, including indigenous peoples, who are stakeholders of the natural and social resources, are involved in the development activities. In this case, “development” activities mean infrastructure and industrial development, which may exclude tourism. As most people are involved, the development planner should consider the involvement of these people in the planning stage and must give them the opportunity to participate in the formulation of policies.

**Table 2-21 Involvement of Indigenous Peoples in Development Activities/Projects in the Community**

Answer	Barangay Captains	Tribal Leaders	All Respondents
Fully Involved	31.4	17.6	24.5
Involved	62.7	60.8	61.8
I Am Not Sure	3.9	2.0	2.9
Not Involved	2.0	9.8	5.9
Fully Not Involved	-	9.8	4.9
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

**Table 2-22 Involvement of Indigenous Peoples in Development Activities/Projects in the Municipality**

Answer	Barangay Captains	Tribal Leaders	All Respondents
Fully Involved	17.6	28.0	22.8
Involved	60.8	64.0	62.4
I Am Not Sure	3.9	8.0	5.0
Not Involved	9.8	-	5.0
Fully Not Involved	9.8	-	5.0
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

### 2.2.6 Involvement of Barangay Captains and Tribal Leaders in Community Activities

When the barangay captains and tribal leaders were asked about their own involvement in development activities, majority of the barangay captains (89%) acknowledged active participation, as shown below:

Table 2-23 Involvement of Barangay Captains and Tribal Leaders in Development Activities in the Community

Answer	Barangay Captains	Tribal Leaders	All Respondents
Fully Involved	50.0	7.4	27.0
Involved	39.1	46.3	43.0
I Am Not Sure	10.9	44.4	29.0
Not Involved	-	1.9	1.0
Fully Not Involved	-	-	-
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

Tribal leaders show less active attitude and nearly half of them answered 'Not Sure.' The reason may be their lack of experience and knowledge of development activities. The following characterize the kind of development activities that will prompt the barangay captains and tribal leaders to actively participate:

- beautiful
- fast
- sustainable
- long-term
- effective
- good for all
- useful
- progressive
- sustained
- helpful

### 2.2.7 Perception on How the Members of their Communities can Improve their Quality of Life

The barangay captains and tribal leaders were asked how the members of their communities can improve their quality of life. They were given the following questions to react on:

- 1) The people should wait for government assistance.
- 2) The people should cooperate with government in planning for the improvement of their lives.

- 3) The people can improve their lives by themselves and there is no need to cooperate with the government.
- 4) The people need not cooperate with the government because they are content with the present state of things.

Tables 2-24 to 2-27 show the results of the answers to the above questions. Majority of the respondents think that active participation and cooperation of community members with government are needed to improve their lives. Only a little over one-fourth of the tribal leaders think of self improvement and/or express a "leave us along" philosophy. They are willing to cooperate with the government in planning for the improvement of the quality of their lives if there are any proposal from the government side. Of course they lack the experience, technique, information and knowledge, and financial basis for improving their lives. To gain these, they need government assistance. It may be much more efficient and effective, therefore, to involve them in the course of development process not only at the implementation stage but also from the planning and project formulation stage. In that way, they will find what the development means and how they can cooperate and participate with its processes.

Table 2-24 Should Community Members Wait for Government Assistance?

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	9.6	1.9	5.8
Agree	19.2	32.7	26.0
Not Sure	5.8	7.7	6.7
Disagree	57.7	57.7	57.7
Completely Disagree	7.7	-	3.8
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

Table 2-25 Should the People Cooperate with Government to Improve the Quality of Their Lives?

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	47.1	23.5	35.3
Agree	48.1	76.5	62.7
Not Sure	2.0	-	1.0
Disagree	2.0	-	1.0
Completely Disagree	-	-	-
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers



**Table 2-26 Improvement of Life Without Government Assistance**

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	4.8	-	2.7
Agree	7.9	27.7	16.4
Not Sure	27.0	2.1	16.4
Disagree	50.8	70.2	59.1
Completely Disagree	9.5	-	5.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Note: Figures are percentages to total answers

**Table 2-27 Cooperation is Not Necessary Because the People are Content**

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	2.0	-	1.0
Agree	2.0	19.6	10.8
Not Sure	7.8	2.0	4.9
Disagree	62.7	72.5	67.6
Completely Disagree	25.0	5.9	15.7
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Note: Figures are percentages to total answers

### 2.2.8 Views on Development and Environmental Protection and Preservation

Tables 2-28 to 2-31 provide an insight into the sentiments of the respondents about development in relation with the environment.

**Table 2-28 Development May Harm the Environment**

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	11.8	7.8	9.8
Agree	21.6	61.0	36.3
Not Sure	18.6	13.7	25.5
Disagree	25.5	23.5	24.5
Completely Disagree	3.9	3.9	3.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Note: Figures are percentages to total answers

Table 2-29 Sacrifice Environment for Development

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	13.7	27.5	20.6
Agree	19.6	66.7	43.1
Not Sure	19.6	2.0	10.8
Disagree	43.1	3.9	23.5
Completely Disagree	3.9	-	2.0
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

Table 2-30 Sacrifice Development for Environment

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	20.8	32.7	26.7
Agree	34.0	63.5	48.6
Not Sure	24.5	1.9	13.3
Disagree	20.8	1.9	11.4
Completely Disagree	-	-	-
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

Table 2-31 Development Without Destruction of the Environment

Answer	Barangay Captains	Tribal Leaders	All Respondents
Completely Agree	42.3	11.8	24.2
Agree	53.8	53.9	53.9
Not Sure	3.8	32.9	21.1
Disagree	-	1.3	0.8
Completely Disagree	-	-	-
Total	100.0	100.0	100.0

Note: Figures are percentages to total answers

It is interesting to note that up to this question, the tribal leaders expressed great importance on the protection and/or preservation of the environment. But for the sake of development, 94.2% 'agree' to sacrifice the environment. There must have been a misunderstanding here because when asked whether development should be sacrificed for the sake of the environment, 96.2% answered in the affirmative.

The views of the barangay captains are split into three. One-third of them 'agree' to sacrifice the environment for the sake of development, while nearly half 'disagree.' More than half of them agree to sacrifice the development for the sake

of the environment, while one-fifth 'disagree.' There is a 'Not Sure' group to these questions who counted one-fifth to one-fourth of the total barangay captains.

Concerning the way to attain development without destroying the environment, most barangay captains viewed it possible, while one-third of tribal leaders expressed a suspicious attitude.

Overall, the respondents views can be summarized as follows: Development may harm the environment. Development should be sacrificed for the sake of the environment, but if there is a possibility of development being attained without destroying the environment, it will be better to introduce such means with the active involvement and participation of the local people regardless of their origin.

### 3. HIGHLIGHTS OF THE SOCIAL SURVEY RESULTS

The following table summarizes the highlights of the social survey results:

Table 2-32 Highlights of the Social Survey Results

	Tribal Leaders	Barangay Captains	Both Groups
Development	<ul style="list-style-type: none"> <li>• Lands should not be sold to non-residents even if it is for the sake of 'development.'</li> <li>• Forests should not be cleared to give way to infrastructure, such as roads and bridges.</li> <li>• Most of them are not sure if development will increase employment opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>• Natural resources, i.e. the environment is a good tourist attraction.</li> <li>• Indigenous Cultural Communities are also good tourism assets.</li> </ul>	<ul style="list-style-type: none"> <li>• Development is synonymous with infrastructure.</li> </ul>
Natural Resources	Natural resources should be left alone. They should not be exploited by any means.		<ul style="list-style-type: none"> <li>• Natural resources should be utilized wisely in order to be sustainable.</li> </ul>
Tourism	<ul style="list-style-type: none"> <li>• Little knowledge on what is 'tourism.'</li> <li>• Tourism should not be developed in Northern Palawan (part of tribal leaders)</li> </ul>	<ul style="list-style-type: none"> <li>• Tourism will not necessarily destroy the environment.</li> </ul>	<ul style="list-style-type: none"> <li>• It is possible to have a tourism development program that will not damage the environment.</li> <li>• Tourism development should be studied well before implementation.</li> </ul>
Others	<ul style="list-style-type: none"> <li>• Limiting the entry of tourists is necessary to protect the environment and the indigenous people</li> </ul>		<ul style="list-style-type: none"> <li>• Most people are considered to be involved in development activities</li> <li>• Most barangay captains and tribal leaders consider themselves as involved in development activities</li> <li>• People should cooperate with the government in development activities</li> <li>• Development may be attained without destroying the environment</li> </ul>

**QUESTIONNAIRE ON THE PERCEPTION  
OF "DEVELOPMENT" IN RELATION WITH  
ENVIRONMENTALLY SUSTAINABLE TOURISM DEVELOPMENT  
TO BARANGAY CAPTAINS AND/OR TRIBAL LEADERS**

- Question 1 Are there any (1) Ethnologically, (2) Geographically, (3) Socio-Economically isolated population group in your Barangay/Community?
- 1-A If "YES", how many of them? (No. Of Families and population)
- 1-B In which part of your Barangay? Please plot on the map.
- 1-C If they have claimed "Ancestral Domain", please show us the area on the map.
- Question 2 What is their major occupation?
- Question 3 How much is their average income (per annum)?
- Question 4 What is the major source of income?
- Question 5 What is the general attitude of the people's towards the "DEVELOPMENT" in your Barangay/Community?
- A They are eager to participate the development procedure.
- B They are waiting for the opportunity to participate the development procedure.
- C They are indifferent to the development procedure.
- D They are conservative enough to deny any changes accompanied with the development procedure.
- E They are wanting their living standards to be graded up by denying their way-of-life to be changed.
- F They are having no knowledge about what the development means.

Question 6 "Development usually brings much more convenient life, increased income, education and health, but it also brings "Environment" issues such as excessive cutting of trees, decreased number of wildlives and negative changes in the traditional social structure. What is your opinion towards the development in relation with the environment?

- A Development should take place even at the cost of environment.
- B Development should not take place if damages the environment.
- C Development should take place as gradually as possible so as to avoid too much damage on the environment.
- D Both the development and the environment should be taken care of with some sort of harmonious co-existence system.

Question 7 As a certain sort of harmonious co-existence of the development and the environment, "Environmentally Sustainable Tourism Development" is under consideration.

This kind of Tourism Development will;

- (1) limit the number of tourists within the level of sustainable capacity of the environment.
- (2) minimize the harmful development activities such as construction of roads, buildings and other facilities.
- (3) provide the opportunities of your people to participate in the development activities.
- (4) provide the opportunities of increasing your income by selling your products (foods such as grains, vegetables, fruits, meats, fishes, etc. And agro-based handicrafts and cultural souvenirs) and getting jobs at the tourism facilities, and
- (5) identify the significance of both the natural and social environment.

- A Are you willing to participate if the above type of tourism development takes place in or around your domain? Please answer "YES" or "NO".
- B Do you mind if the tourists (including foreigners) visit your village/community to look into your traditional/cultural way of life? Please choose answer from below.

**B** Do you mind if the tourists (including foreigners) visit your village/community to look into your traditional/cultural way of life? Please choose answer from below.

- B-1** Willing to show them your cultural life.
- B-2** Show them your cultural life if they pay for it.
- B-3** Do not want to be looked into even if they pay.
- B-4** Run away if any foreigner approaches.

**C.** Even the above type of tourism development will bring you various changes in your social environment. What is your perception about such changes? Please choose answer from below.

- C-1** Social change is inevitable and we must adapt ourselves to the changes.
- C-2** Prefer present status to be maintained and any change is not to be introduced.
- C-3** Just leave us alone!

**KATANUNGAN PATUNGKOL SA KATUTUBONG PAMAYANAN**

**1. Anu-anong katutubong pamayanan ang makikita sa inyong pamayanan?**

\* TAGBANUA

Saan ang inyong barangay?

N, \_\_\_ S, \_\_\_ E, \_\_\_ W, \_\_\_

Anong Sitio?

\_\_\_\_\_

Bilang ng pamilya.

- a. Mahigit kumulang sa 50 pamilya \_\_\_\_\_
- b. Mahigit kumulang sa 100 pamilya \_\_\_\_\_
- c. Mahigit kumulang sa 150 pamilya \_\_\_\_\_
- d. Sobra sa 200 pamilya \_\_\_\_\_

\* BATAK

Saan ang inyong barangay?

N, \_\_\_ S, \_\_\_ E, \_\_\_ W, \_\_\_

Anong Sitio?

\_\_\_\_\_

Bilang ng pamilya.

- a. Mahigit kumulang sa 50 pamilya \_\_\_\_\_
- b. Mahigit kumulang sa 100 pamilya \_\_\_\_\_
- c. Mahigit kumulang sa 150 pamilya \_\_\_\_\_
- d. Sobra sa 200 pamilya \_\_\_\_\_

\* \_\_\_\_\_

Saan ang inyong barangay?

N, \_\_\_ S, \_\_\_ E, \_\_\_ W, \_\_\_

Anong Sitio?

\_\_\_\_\_

Bilang ng pamilya.

- a. Mahigit kumulang sa 50 pamilya \_\_\_\_\_
- b. Mahigit kumulang sa 100 pamilya \_\_\_\_\_
- c. Mahigit kumulang sa 150 pamilya \_\_\_\_\_
- d. Sobra sa 200 pamilya \_\_\_\_\_

2. Mayroon ba silang mga inaangkanang lupaing ninuno? Mayroon \_\_\_\_\_ Wala \_\_\_\_\_

Saan? N\_\_\_\_, S\_\_\_\_, E\_\_\_\_, W\_\_\_\_\_

Sitio \_\_\_\_\_

3. Ano ang kanilang pinagkakakitaan/ikinabubuhay?

- a. pangunguha ng pulot \_\_\_\_\_
- b. pangunguha ng yantok \_\_\_\_\_
- c. pangunguha ng almaciga \_\_\_\_\_
- d. pangingsida \_\_\_\_\_
- e. paggawa ng "handcrafts" \_\_\_\_\_
- f. atbp. \_\_\_\_\_

4. Magkano sa palagay ninyo ang taunang kita ng isang katutubong pamilya?

- a. Kulang sa P1,000 sa isang taon \_\_\_\_\_
- b. Higit sa P1,000 sa isang taon \_\_\_\_\_
- c. Higit sa P5,000 sa isang taon \_\_\_\_\_
- d. Higit sa P10,000 sa isang taon \_\_\_\_\_
- e. atbp. \_\_\_\_\_

\*\*\*\*\*



**MGA KATANUNGANG PATUNGKOL SA PANANAW  
NG BARANGAY KAPITAN AT ILAN SAMGA LIDER KATUTUBO  
SA ASPETO NG KAPALIGIRAN, KAUNLARAN AT TURISMO**

Pangalan \_\_\_\_\_ Araw Kapanganakan \_\_\_\_\_  
Lugar \_\_\_\_\_ Mula Saang Probinsiya \_\_\_\_\_

**1. Ano ang inyong paniniwala, ang magpapakita ng kaunlaran sa inyong barangay?**

1.1 Maraming mga proyektong “infrastructure” kagaya ng gusali, upahang bahay (hotels/inns), tulay at kalsada, mga pribadong “beache resort”, paggawaan (factories), palaruan ng golf, ice plant, atbp.

- a. lubos na sumasangayon \_\_\_\_\_
- b. sumasangayon \_\_\_\_\_
- c. hindi tiyak \_\_\_\_\_
- d. hindi sumasangayon \_\_\_\_\_
- e. lubos na hindi sumasangayon \_\_\_\_\_

1.2 Manatiling may likas yaman (kagaya ng bundok gubat at dagat) na siyang dadayuhin ng mga turista.

- a. lubos na sumasangayon \_\_\_\_\_
- b. sumasangayon \_\_\_\_\_
- c. hindi tiyak \_\_\_\_\_
- d. hindi sumasangayon \_\_\_\_\_
- e. lubos na hindi sumasangayon \_\_\_\_\_

1.3 May nanatiling mga katutubo na namumuhay ng tahimik at nangangalaga sa bundok at gubat na siyang dadayuhin ng mga turista.

- a. lubos na sumasangayon \_\_\_\_\_
- b. sumasangayon \_\_\_\_\_
- c. hindi tiyak \_\_\_\_\_
- d. hindi sumasangayon \_\_\_\_\_
- e. lubos na hindi sumasangayon \_\_\_\_\_

1.4 Ipagbibili ang mga lupa sa mga dayuhan upang maging produktibo.

- a. lubos na sumasangayon \_\_\_\_\_
- b. sumasangayon \_\_\_\_\_
- c. hindi tiyak \_\_\_\_\_
- d. hindi sumasangayon \_\_\_\_\_
- e. lubos na hindi sumasangayon \_\_\_\_\_

1.5 Tanggalin ang gubat para malagyan ng mga kalsada at gusali.

- a. lubos na sumasangayon \_\_\_\_\_
- b. sumasangayon \_\_\_\_\_
- c. hindi tiyak \_\_\_\_\_
- d. hindi sumasangayon \_\_\_\_\_
- e. lubos na hindi sumasangayon \_\_\_\_\_

1.6 Maraming trabahong mapapasukan.

- a. lubos na sumasangayon \_\_\_\_\_
- b. sumasangayon \_\_\_\_\_
- c. hindi tiyak \_\_\_\_\_
- d. hindi sumasangayon \_\_\_\_\_
- e. lubos na hindi sumasangayon \_\_\_\_\_

2. Ano ang mga paniniwala mo tungkol sa kalikasan?

2.1 Hayaan ang kalikasan na manatili o hindi ginagalaw.

- a. lubos na sumasangayon \_\_\_\_\_
- b. sumasangayon \_\_\_\_\_
- c. hindi tiyak \_\_\_\_\_
- d. hindi sumasangayon \_\_\_\_\_
- e. lubos na hindi sumasangayon \_\_\_\_\_

2.2 Gamitin ang mga yamang kalikasan sa ano mang paraan, (kahit nakasasama) dahil hindi naman ito nauubos.

- a. lubos na sumasangayon \_\_\_\_\_
- b. sumasangayon \_\_\_\_\_
- c. hindi tiyak \_\_\_\_\_
- d. hindi sumasangayon \_\_\_\_\_
- e. lubos na hindi sumasangayon \_\_\_\_\_

2.3 Gamitin ang yamang kalikasan sa pamamaraang hindi mauubos upang tumagal ang kakayahan nitong magbigay-buhay.

- a. lubos na sumasangayon \_\_\_\_\_
- b. sumasangayon \_\_\_\_\_
- c. hindi tiyak \_\_\_\_\_
- d. hindi sumasangayon \_\_\_\_\_
- e. lubos na hindi sumasangayon \_\_\_\_\_

**3. Usapin Tungkol sa Turismo:**

3.1 May nalalaman tungkol sa turismo.

- a. marami \_\_\_\_\_
- b. kaunti \_\_\_\_\_
- c. hindi tiyak \_\_\_\_\_
- d. wala \_\_\_\_\_
- e. walang pakialam \_\_\_\_\_

3.2 Ang turismo ay sisira sa kalikasan walang maidudulot na mganda.

- a. lubos na sumasangayon \_\_\_\_\_
- b. Sumasangayon \_\_\_\_\_
- c. Hindi tiyak \_\_\_\_\_
- d. Hindi sumasangayon \_\_\_\_\_
- e. Lubos na hindi sumasangayon \_\_\_\_\_

3.3 Maaring magkaroon ng pangturismong programa sa barangay na hindi masisira ang kalikasan.

- a. lubos na sumasangayon \_\_\_\_\_
- b. sumasangayon \_\_\_\_\_
- c. hindi tiyak \_\_\_\_\_
- d. hindi sumasangayon \_\_\_\_\_
- e. lubos na hindi sumasangayon \_\_\_\_\_

3.4 Ang turismo ay dapat paunlarin sa Palawan.

- a. lubos na sumasangayon \_\_\_\_\_
- b. sumasangayon \_\_\_\_\_
- c. hindi tiyak \_\_\_\_\_
- d. hindi sumasangayon \_\_\_\_\_
- e. lubos na hindi sumasangayon \_\_\_\_\_

**Appendix D**  
**Calculation of EIRR**

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<b>Master Plan</b>	<b>D-1</b>
<b>El Nido Case Study Area</b>	<b>D-2</b>
<b>Busuanga West Case Study Area</b>	<b>D-3</b>

**Table D-1 Master Plan**

(Unit: Million Peso)

Project Year	Calendar Year	Benefit	Capital Investment	O&M Cost	Residual Value	Net Benefit
1	1997	1,980	3,806	288		-2,114
2	1998	2,168	4,919	340		-3,090
3	1999	2,375	5,047	400		-3,072
4	2000	2,601	2,533	450		-382
5	2001	3,055	2,240	580		234
6	2002	3,588	1,461	677		1,450
7	2003	4,214	976	764		2,474
8	2004	4,950	750	908		3,292
9	2005	5,814	877	1,087		3,850
10	2006	6,747	751	1,136		4,861
11	2007	7,831	844	1,342		5,645
12	2008	9,088	977	1,524		6,587
13	2009	10,547	1,112	1,735		7,700
14	2010	12,240	1,292	2,068		8,880
15	2011	12,240	0	2,068		10,172
16	2012	12,240	0	2,068		10,172
17	2013	12,240	0	2,068		10,172
18	2014	12,240	0	2,068		10,172
19	2015	12,240	0	2,068		10,172
20	2016	12,240	0	2,068		10,172
21	2017	12,240	0	2,068		10,172
22	2018	12,240	0	2,068		10,172
23	2019	12,240	0	2,068		10,172
24	2020	12,240	0	2,069	2,831	13,002
	<b>Total</b>	<b>199,599</b>	<b>27,585</b>	<b>33,983</b>	<b>2,831</b>	<b>140,862</b>

**Economic Internal Rate of Return (EIRR): 26.2%**

- 1) Benefit is estimated based on Input-Output Table of the Philippines which indicates multiplier effects by technical coefficient for subject economic sector. Hotel and lodging sector's multiplier to other economic sector is analyzed to be 2.0000 in the case of Palawan.
- 2) Adjustment Factor applied to Capital Cost and O&M Cost is 0.86 based on shadow pricing and accepted to apply in economic evaluation by NEDA.

Table D-2 El Nido Case Study Area

(Unit: Million Peso)

Project Year	Calendar Year	Number of Rooms Projected	Benefit	Initial Capital Investment	Operation and Management Cost	Residual Value	Net Benefit
1	1997	1	2	420	9		-427
2	1998	3	11	577	20		-586
3	1999	16	59	1,356	25		-1,323
4	2000	90	335	1,061	36		-762
5	2001	112	417	1,346	158		-1,086
6	2002	143	533	528	164		-160
7	2003	185	688	360	175		153
8	2004	254	946	252	195		499
9	2005	460	1,713	515	284		914
10	2006	540	2,012	157	308		1,547
11	2007	637	2,373	190	346		1,836
12	2008	755	2,812	233	383		2,196
13	2009	899	3,347	286	442		2,620
14	2010	1,075	4,002	352	499		3,151
15	2011	1,075	4,002	0	499		3,503
16	2012	1,075	4,002	0	499		3,503
17	2013	1,075	4,002	0	499		3,503
18	2014	1,075	4,002	0	499		3,503
19	2015	1,075	4,002	0	499		3,503
20	2016	1,075	4,002	0	499		3,503
21	2017	1,075	4,002	0	499		3,503
22	2018	1,075	4,002	0	499		3,503
23	2019	1,075	4,002	0	499		3,503
24	2020	1,075	4,002	0	499	1,821	5,324
	Total		59,272	7,633	8,039	1,821	45,421

Economic Internal Rate of Return: 21.5%

Note:

- 1) Benefit is estimated based on Input-Output Table of the Philippines which indicates multiplier effects by technical coefficient for subject economic sector. Hotel and lodging sector's multiplier to other economic sector is analyzed to be 2.0000 in the case of Palawan.
- 2) Adjustment Factor applied to Capital Cost and O&M Cost is 0.86 based on shadow pricing and accepted to apply in economic evaluation by NEDA.

Table D-3 Busuanga West Case Study Area

(Unit: Million Peso)

Project Year	Calendar Year	Number of Rooms Projected	Benefit	Initial Capital Investment	Operation and Maintenance Cost	Residual Value	Net Benefit
1	1997	36	158	920	25		-786
2	1998	48	208	2,046	20		-1,858
3	1999	69	297	1,430	28		-1,160
4	2000	115	499	821	54		-377
5	2001	160	696	703	445		-453
6	2002	226	982	674	479		-171
7	2003	323	1,402	447	524		431
8	2004	466	2,023	569	588		866
9	2005	680	2,949	866	675		1,407
10	2006	764	3,313	362	724		2,228
11	2007	859	3,724	383	764		2,577
12	2008	965	4,186	429	809		2,948
13	2009	1,085	4,705	460	860		3,386
14	2010	1,220	5,290	518	917		3,855
15	2011	1,220	5,290	0	917		4,373
16	2012	1,220	5,290	0	917		4,373
17	2013	1,220	5,290	0	917		4,373
18	2014	1,220	5,290	0	917		4,373
19	2015	1,220	5,290	0	917		4,373
20	2016	1,220	5,290	0	917		4,373
21	2017	1,220	5,290	0	917		4,373
22	2018	1,220	5,290	0	917		4,373
23	2019	1,220	5,290	0	917		4,373
24	2020	1,220	5,290	0	917	2,325	6,698
	Total		83,333	10,628	16,078	2,325	58,952

Economic Internal Rate of Return: **22.1%**

Note:

- 1) Benefit is estimated based on Input-Output Table of the Philippines which indicates multiplier effects by technical coefficient for subject economic sector. Hotel and lodging sector's multiplier to other economic sector is analyzed to be 2.0000 in the case of Palawan.
- 2) Adjustment Factor applied to Capital Cost and O&M Cost is 0.86 based on shadow pricing and accepted to apply in economic evaluation by NEDA.



**Appendix E**  
**Concept of Land Readjustment**

## Concept of Land Readjustment

Land Readjustment (LR) is a land development method where a group of adjoining land parcels is reorganised into a modified plan through cooperation between landowners/lessees to provide necessary economic and social infrastructures and enhance the utility/value of the land parcels. Since LR does not involve compulsory land acquisition, the landowners and lessees can stay in the project area, therefore, existing social system/neighbourhood relationship can continue. The general aim is clearly to promote land development for new or more efficient use of land of an urban nature which covers the following typical situations; urbanization of suburban areas in advance of urbanization, improvement of previously urbanized area, integration of large infrastructure facilities into existing urban area, and rehabilitation of disaster and war-damaged areas, etc. As the implementation of the LR entails maximizing public interests as well as equitably enhancing private benefits, the LR system must be equipped with a number of measures to address these often conflicting interests. They are briefly explained as follows:

**Contribution:** Contribution in the LR context is defined as a portion of land deducted from the lands of the participants (landowners) as their share of the project cost. The lands are the principal equity input to an LR project which cannot be replaced with any other resources, but the lands of landowners. As a result, an LR project does not require any land acquisition. The contribution is composed of the lands necessary for public facilities and Financial Land.

**Financial Land:** In an LR project, lands contributed by landowners are assembled in a number of locations with different purposes depending on their marketability and are then sold to generate revenues to cover the project cost.

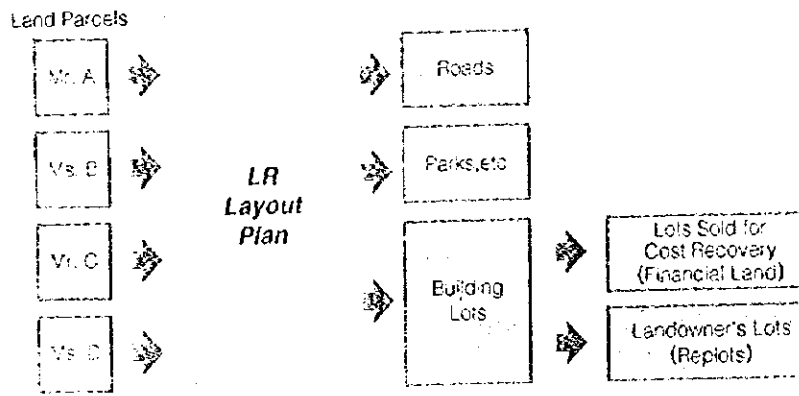
**Replotting:** Replotting is a key technical and institutional concept sustaining LR. Replotting ensures that all rights and encumbrances attached to a land will remain untouched and carried over from the original lots to replots. Replotting makes it possible to reorganize distribution of lands in compliance with planned land use and desired physical features of lands. Replotting protects the rights of landowners, ensures equitable sharing of costs (in terms of contribution) and benefits (in terms of increase in land value) among landowners, and simplifies the troublesome administrative procedure for moving lands which are otherwise required. Replotting benefits the landowners, the implementing body, and the Government.

**Public/Private Responsibilities Sharing:** The principal concept of contribution here is to shoulder the costs according to the benefits received. The contribution will be made both in physical and monetary form by landowners, those who own various rights on the lands, Government and its attached agencies responsible for the development and maintenance of the area, and private utility/public service companies related to the area.

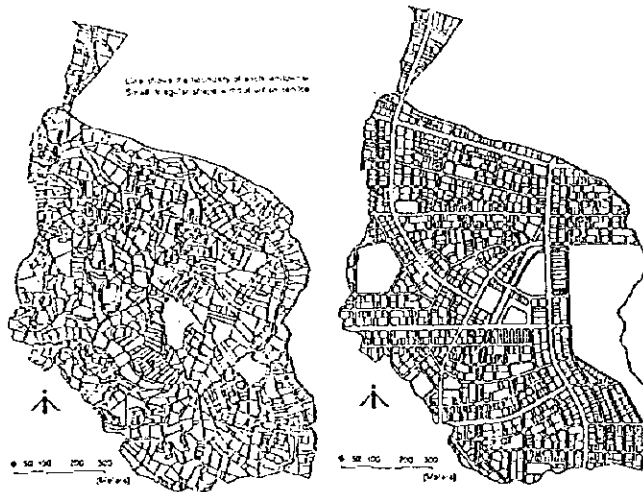
**Statutory Power Granted to Implementing Body:** Once an LR project is approved, the implementing body is granted certain statutory power within the delimited area of action to ensure smooth and effective implementation.

**Public Participation and Consensus Building:** Formal and informal mechanisms are provided for participation and consensus building among landowners. Formal methods are through public hearings and the organization of an LR committee comprising representatives of landowners who can directly negotiate and consult with the authorities, and so on. The venues for formal appeal is primarily confirmed during the period of commencement, replotting and valuation while informal public participation is spread over the entire period to resolve differences and to arrive at a decision acceptable to the majority.

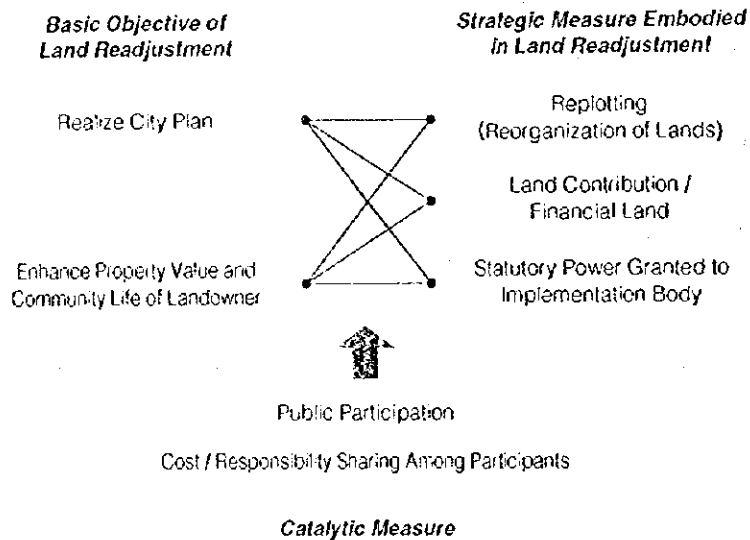
**Figure E-1**  
Mechanism of Land Readjustment



**Figure E-2**  
Example of LR Project Carried Out in Japan



**Figure E-3**  
Conceptual Framework of Land Readjustment





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