

Appendix 12-4 Long Distance Facilities (4/5)

Section	Supporting System	Based 2M	Required Facilities																
			Phase A (1998)				Phase B (2004)				Phase C (2010)								
			Expan. 2M	Replace 2M	Total 2M	System	Expan. 2M	Replace 2M	Total 2M	System	Expan. 2M	Replace 2M	Total 2M	System					
Tacloban-Bolongan			0							0				9			9	DR-34M 1+1	
Tacloban-Cebu			7		7	DR-150M 1+1				15		22					35		57
			26		26	O/F-150M 1+1				31		57	O/F-150M 2+1				61		118
			0							0							0		
SOUTH																			
Cebu-Tagbilaran			5		5	DR-150M 1+1				11		16					28		44
Cebu-Siquijor		7	7		7	DR-8M 1+1				0		7					0		7
Cebu-Ca.de Oro			54		54	O/F-600M 1+1				49		103					133		236
Cebu-Valencia Rly.	DR-140M 2+1	32	31		63					46		109					0		0
																	17		126
Valencia Rly-Dumaguete			11		11	O/F-150M 1+1				11		22					20		42
Valencia Rly-Manticao Rly.	DR-140M 2+1	32	31		63					46		109					0		0
																	17		126
Manticao Rly.-Ozamis	DR-140M 2+1	28	30		58					54		112					0		0
																	14		126
Manticao Rly.-Cag.de Oro	DR-140M 1+1	4	2		6					19		25					0		0
																	28		53
Cag.de Oro-Ozamis			11		11	O/F-150M 1+1				6		17	O/F-150M 2+1				69		86
Cag.de Oro-Mambajao			0							0							11		11
Tacloban-Bunuan			49		49	O/F-600M 1+1				38		87					99		186
Cag.de Oro-Bunuan			41		41	O/F-600M 1+1				32		73					72		145
Cag.de Oro-Ilagan			20		20	O/F-150M 1+1				11		31					31		62
Ilagan-Marawi			5		5	DR-34M 1+1				2		7	DR-34M 2+1				13		20
Ilagan-Dipolog			5		5	DR-34M 1+1				6		11	DR-34M 2+1				9		20
Ozamis-New Pagadian Rly.	DR-140M 2+1	26	27		53					38		91					0		0
																	1		92
New Pagadian Rly.-Zamboanga	DR-140M 1+1	21	-14		7					15		22					0		0
																	14		36
New Pagadian Rly.-Cotabato	DR-140M 1+1	21	0		0	Replacement													
			34		21	55	DR-150M 1+1			40		95	DR-150M 2+1				6		101
Ozamis-Tucturan Rptr.			7		7	O/F-150M 1+1				15		22	O/F-150M 2+1				72		94

Note: The number of systems in each phase is indicated total number of them. DR: Digital Transmission Radio System. O/F: Optical Fiber Transmission System.

Appendix 12-4 Long Distance Facilities (5/5)

Section	Supporting System	Based 2M	Required Facilities													
			Phase A (1998)				Phase B (2004)				Phase C (2010)					
			Expan. 2M	Replace 2M	Total 2M	System	Expan. 2M	Replace 2M	Total 2M	System	Expan. 2M	Replace 2M	Total 2M	System		
Tucuran Rptr.-Zamboanga			7		7	O/F-150M 1+1		15		22			18		40	
Tucuran Rptr.-Cotabato			0		0			0					59		59	O/F-150M 1+1
Cotabato-Davao			0		0			0					62		62	O/F-150M 1+1
Cotabato-Davao	DR-140M 1+1	17	25		42			19		61			0		0	Replacement
Tacloban-Maasin			5		5	DR-150M 1+1		10		15			21		36	
Maasin-Surigao			5		5	DR-150M 1+1		8		13			17		30	
Surigao-Butuan			5		5	DR-150M 1+1		10		15			21		36	
Butuan-Prosperidad			10		10	DR-150M 1+1		10		20			24		44	
Prosperidad-Tandag			9		9	DR-150M 1+1		11		20			40		60	
Prosperidad-Tagum			10		10	DR-150M 1+1		10		20			24		44	
Tagum-Mati			9		9	DR-150M 1+1		20		29			18		47	
Cebu-Butuan			51		51	O/F-600M 1+1		37		88			57		145	
Butuan-Tagum			77		77	O/F-600M 1+1		71		148		O/F-600M 2+1	108		256	
Tagum-Davao			71		71	O/F-600M 1+1		58		129			57		186	
Zamboanga-Isabera			0		0			20		20		DR-150M 1+1	13		33	
Isabera-Jolo			0		0			16		16		DR-34M 2+1	9		25	
Jolo-Bongao			0		0			7		7		DR-34M 1+1	2		9	
Cag.de Oro-Malaybalay			20		20	DR-150M 1+1		19		39		DR-150M 2+1	69		108	
Malaybalay-Kidapawan			20		20	DR-150M 1+1		19		39		DR-150M 2+1	69		108	
Kidapawan-Digos Rly.			20		20	DR-150M 1+1		22		42		DR-150M 2+1	80		122	
Kidapawan-Cotabato			3		3	DR-150M 1+1		7		10			22		32	
Davao-Digos Rly.			37		37	DR-150M 1+1		35		72		DR-150M 3+1	86		158	
Digos Rly.-Gen.Santos			17		17	DR-150M 1+1		14		31		DR-150M 2+1	41		72	
Gen.Santos-Isuran			16		16	DR-150M 1+1		15		31			31		62	
Isuran-Cotabato			17		17	DR-150M 1+1		14		31			31		62	
		1022														
Sub Total			2375		2396			2691		86		2777	5626		1959	7585
Total																12758

Note: The number of systems in each phase is indicated total number of them. DR: Digital Transmission Radio System. O/F: Optical Fiber Transmission System.

APPENDIX 13

OPERATION AND MAINTENANCE PLAN

APPENDIX 14

PROJECT EVALUATION

APPENDIX 15

IMPLEMENTATION PLAN
















Appendix 15-1 Provincial Network Plan

This Map covers all municipalities which are indicated the priority of service plan, expansion plan, operating company's name and transmission routes assumed up to 2010.

Location of the municipalities in this map is made based on the Road Map of the Philippines 1985, however some municipalities are not shown on the Road Map of the Philippines.

When selection of media such as radio link or fiber optic cable link is needed, detailed engineering is required.

Legend :

-  : Existing and Planned Combined (Toll and local) Exchanges including RTDP-Phase C, NTP 1-1, NTP 1-2 and PLDT X-5C, X-6
 -  : Existing and Planned Pure Toll Exchanges including RTDP-Phase C, NTP 1-1 NTP 1-2, and PLDT X-5C, X-6
 -  : Existing and Planned Local Exchanges/RSU including RTDP-Phase C, NTP 1-1 NTP 1-2, and PLDT X-5C, X-6
 -  : New Combined (Toll and local) Exchanges (Phase A)
 -  : New Pure Toll Exchanges (Phase A)
 -  : New Local Exchanges (Phase A)
 -  : New RSU (Phase A)
 -  : New RLU (Phase A)
 -  : Non Served Municipalities after Phase A
 -  : Existing Radio Link
 -  : Existing Cable Link
 -  : New Digital Radio Link (Phase A)
 -  : New Optical Fiber Link (Phase A)
 -  : New Digital Radio Link (Phase B and C)
 -  : New Optical Fiber Link (Phase B and C)
- (1998) : Phase A
 (2004) : Phase B
 (2010) : Phase C
- } Telephone Served Year each Phase of Master Plan Study

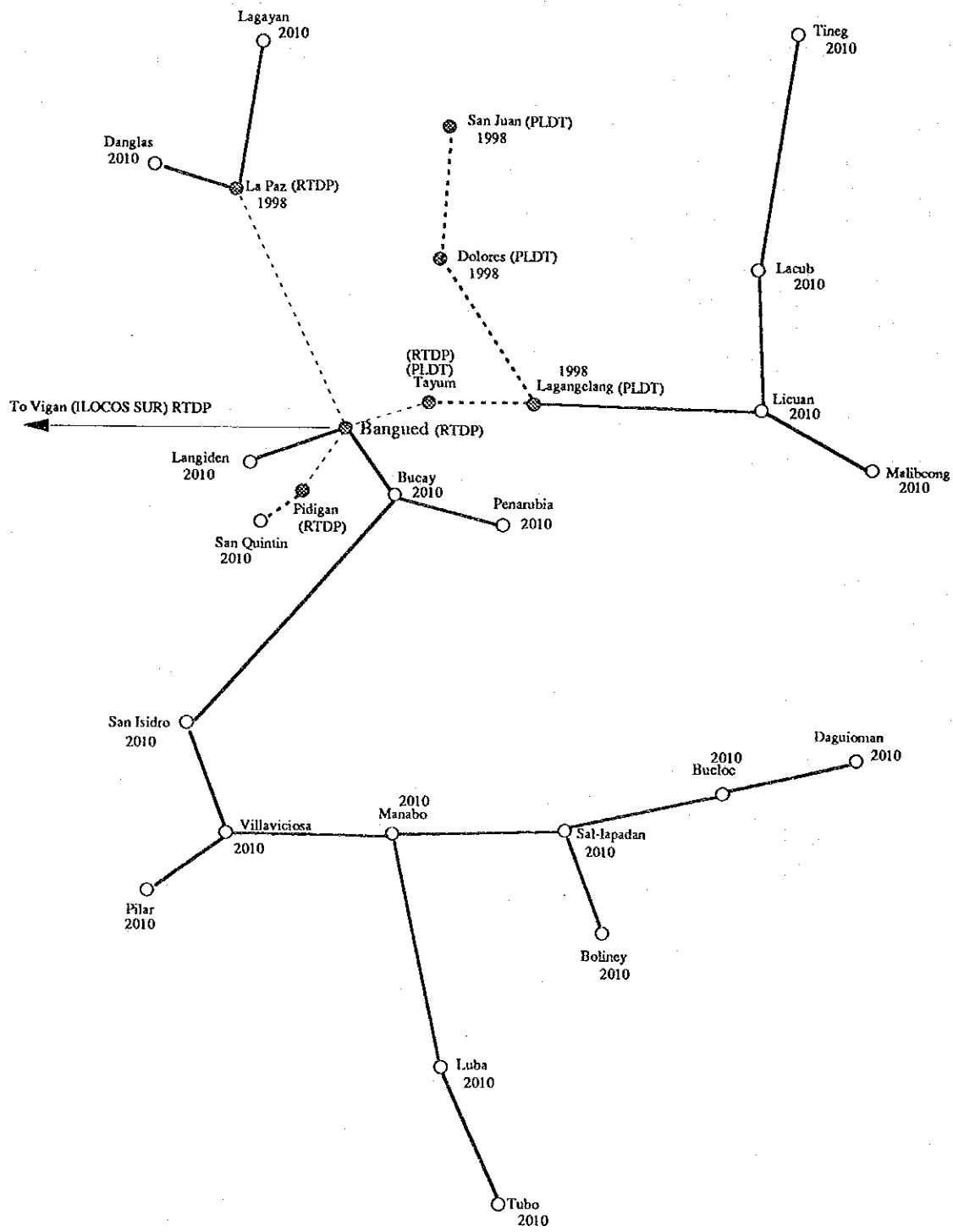
Appendix 15 Telephone served area after project packages (1/2)

Region Name	Province Name	No. of Mun.	Served Mun. by 1998	Service Rate (%)	Service Rate in Region (%)	Map No.
1	ABRA	27	7	25.9		1
1/(CAR)	BENGUET	14	3	21.4		2
1	ILOCOS NORTE	23	19	82.6		3
1	ILOCOS SUR	34	17	50.0	63.1	4
1	LA UNION	20	15	75.0		5
1/(CAR)	MT.PROVINCE	10	6	60.0		6
1	PANGASINAN	48	44	91.7		7
2	BATANES	6	1	16.7		8
2	CAGAYAN VALLEY	29	25	86.2		9
2/(CAR)	IFUGAO	10	2	20.0		10
2	ISABELA	37	29	78.4	58.5	11
2/(CAR)	KALINGA APAYAO	15	1	6.7		12
2	NUEVA VISCAYA	15	9	60.0		13
2	QUIRINO	6	2	33.3		14
3	BATAAN	12	10	83.3		15
3	BULACAN	24	23	95.8		16
3	NUEVA ECIJA	32	30	93.8	91.0	17
3	PAMPANGA	22	22	100.0		18
3	TARLAC	18	14	77.8		19
3	ZAMBALES	14	12	85.7		20
4	RIZAL	14	11	78.6		21
4	AURORA	8	4	50.0		22
4	BATANGAS	34	31	91.2		23
4	CAVITE	23	21	91.3		24
4	LAGUNA	30	26	86.7	69.7	25
4	MARINDUQUE	6	3	50.0		26
4	OCCIDENTAL MINDORO	11	4	36.4		27
4	ORIENTAL MINDORO	15	14	93.3		28
4	PALAWAN	22	8	36.4		29
4	QUEZON	41	31	75.6		30
4	ROMBLON	17	1	5.9		31
5	ALBAY	18	16	88.9		32
5	CAMARINES NORTE	12	10	83.3		33
5	CAMARINES SUR	37	27	73.0	58.3	34
5	CATANDUANES	11	1	9.1		35
5	MASBATE	21	3	14.3		36
5	SORSOGON	16	10	62.5		37
6	AKLAN	17	6	35.3		38
6	ANTIQUE	18	2	11.1		39
6	CAPIZ	17	10	58.8	60.3	40
6	ILOILO	47	35	74.5		41
6	NEGROS OCCIDENTAL	32	26	81.3		42
7	BOHOL	48	8	16.7		43
7	CEBU	53	34	64.2	40.9	44
7	NEGROS ORIENTAL	25	12	48.0		45
7	SIQUIJOR	6	0	0.0		46
8	EASTERN SAMAR	23	5	21.7		47
8	LEYTE	51	14	27.5		48
8	NORTHERN SAMAR	24	4	16.7	21.0	49
8	SOUTHERN LEYTE	19	1	5.3		50
8	WESTERN SAMAR	26	6	23.1		51

Appendix 15 Telephone served area after project packages (2/2)

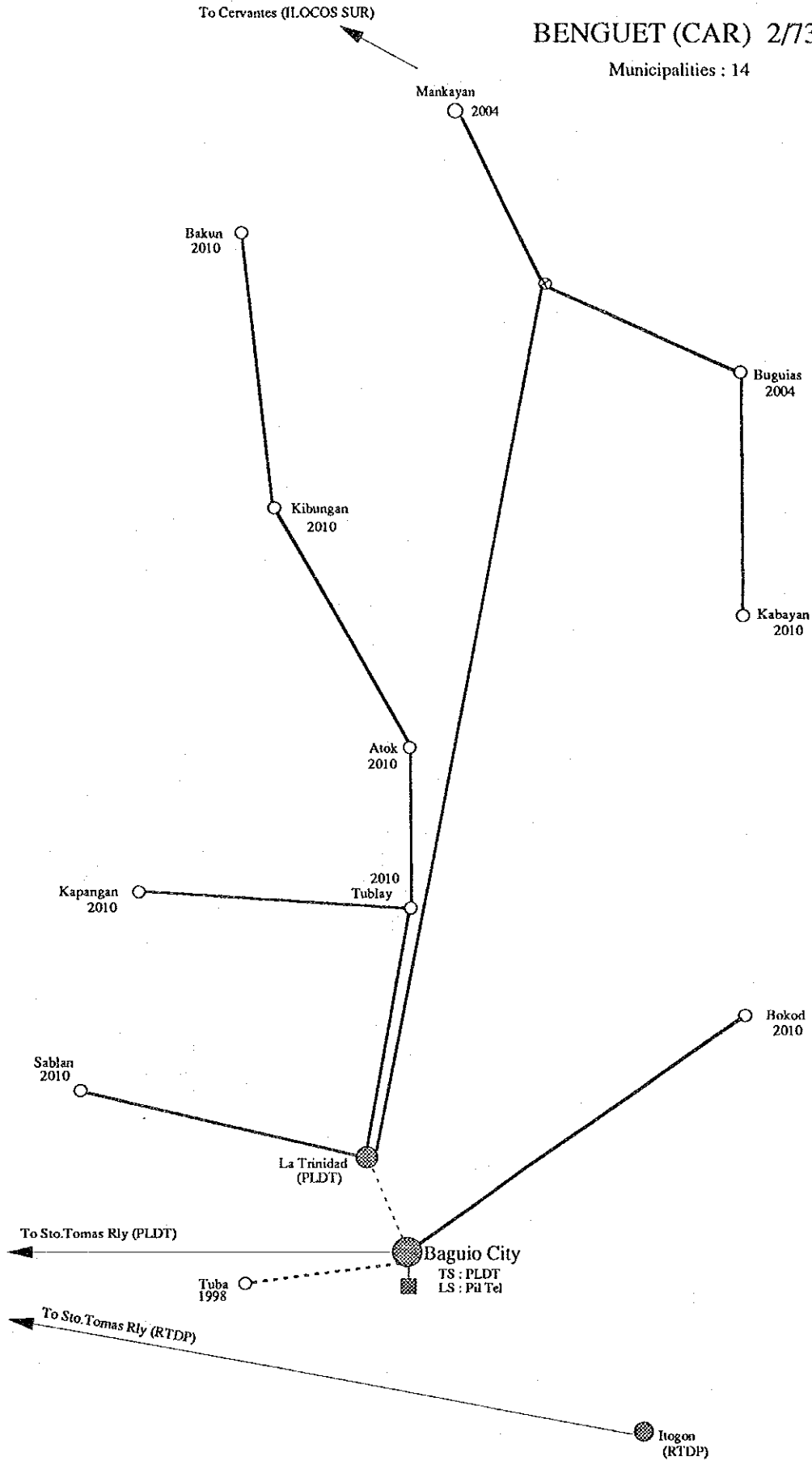
Region Name	Province Name	No.of Mun.	Served Mun. by 1998	Service Rate (%)	Service Rate in Region (%)	Map No.
9	BASILAN	7	3	42.9		52
9/(ARMM)	SULU	18	4	22.2		53
9/(ARMM)	TAWI-TAWI	10	2	20.0	23.1	54
9	ZAMBOANGA DEL NORTE	27	6	22.2		55
9	ZAMBOANGA DEL SUR	42	9	21.4		56
10	AGUSAN DEL NORTE	12	6	50.0		57
10	AGUSAN DEL SUR	14	3	21.4		58
10	BUKIDON	22	11	50.0		59
10	CAMINGAN	5	1	20.0	46.0	60
10	MISAMIS OCCIDENTAL	17	8	47.1		61
10	MISAMIS ORIENTAL	26	22	84.6		62
10	SURIGAO DEL NORTE	28	6	21.4		63
11	DAVAO DEL NORTE	21	15	71.4		64
11	DAVAO DEL SUR	16	15	93.8		65
11	DAVAO ORIENTAL	11	8	72.7	62.8	66
11	SOUTHERN COTABATO	19	12	63.2		67
11	SURIGAO DEL SUR	19	4	21.1		68
12	LANAO DEL NORTE	23	8	34.8		69
12/(ARMM)	LANAO DEL SUR	38	3	7.9		70
12/(ARMM)	MAGUINDANAO	18	6	33.3	26.9	71
12	NORTHERN COTABATO	17	10	58.8		72
12	SULTAN KUDARAT	12	2	16.7		73
Total		1580	839	53.1		

ABRA (CAR) 1/73
Municipalities : 27



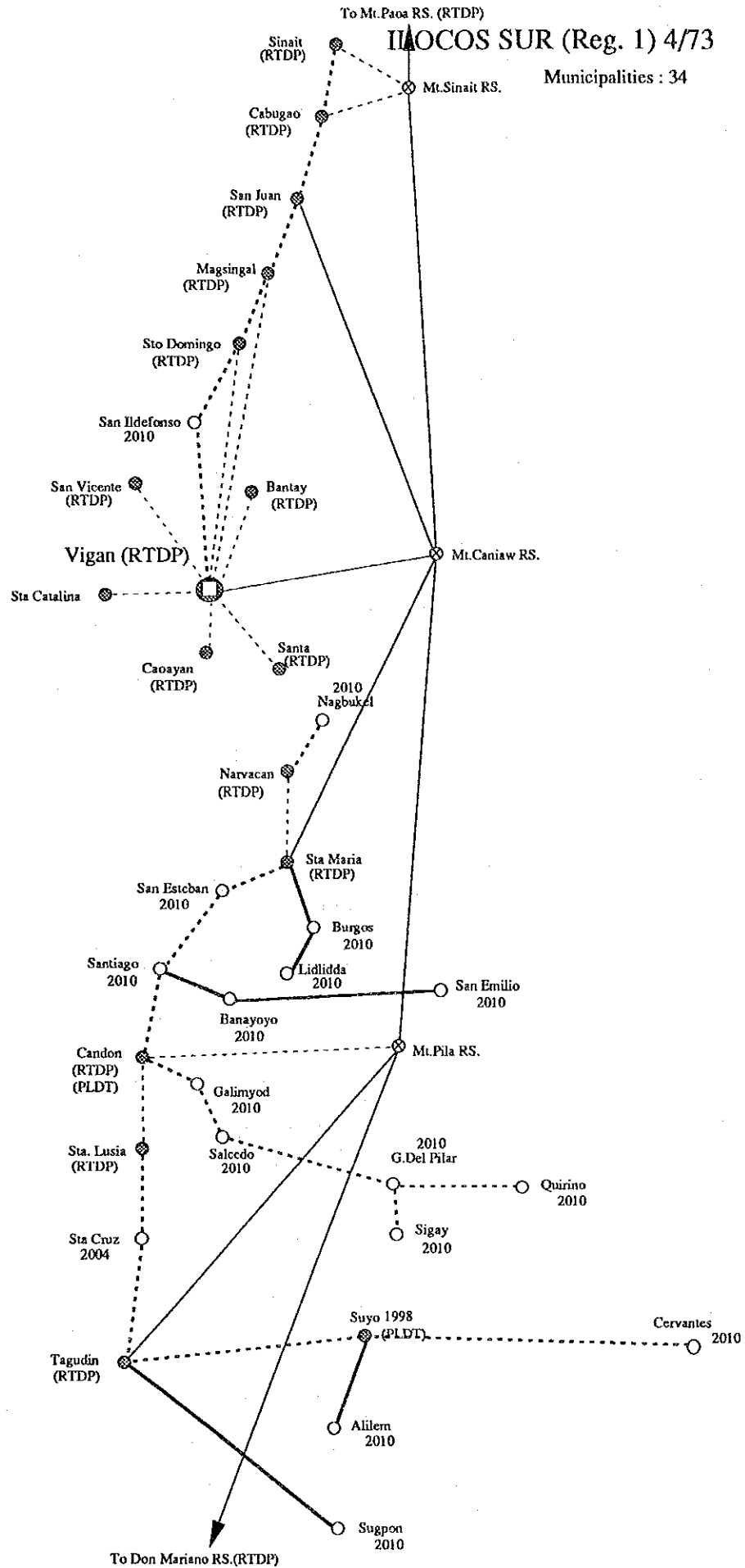
BENGUET (CAR) 2/73

Municipalities : 14



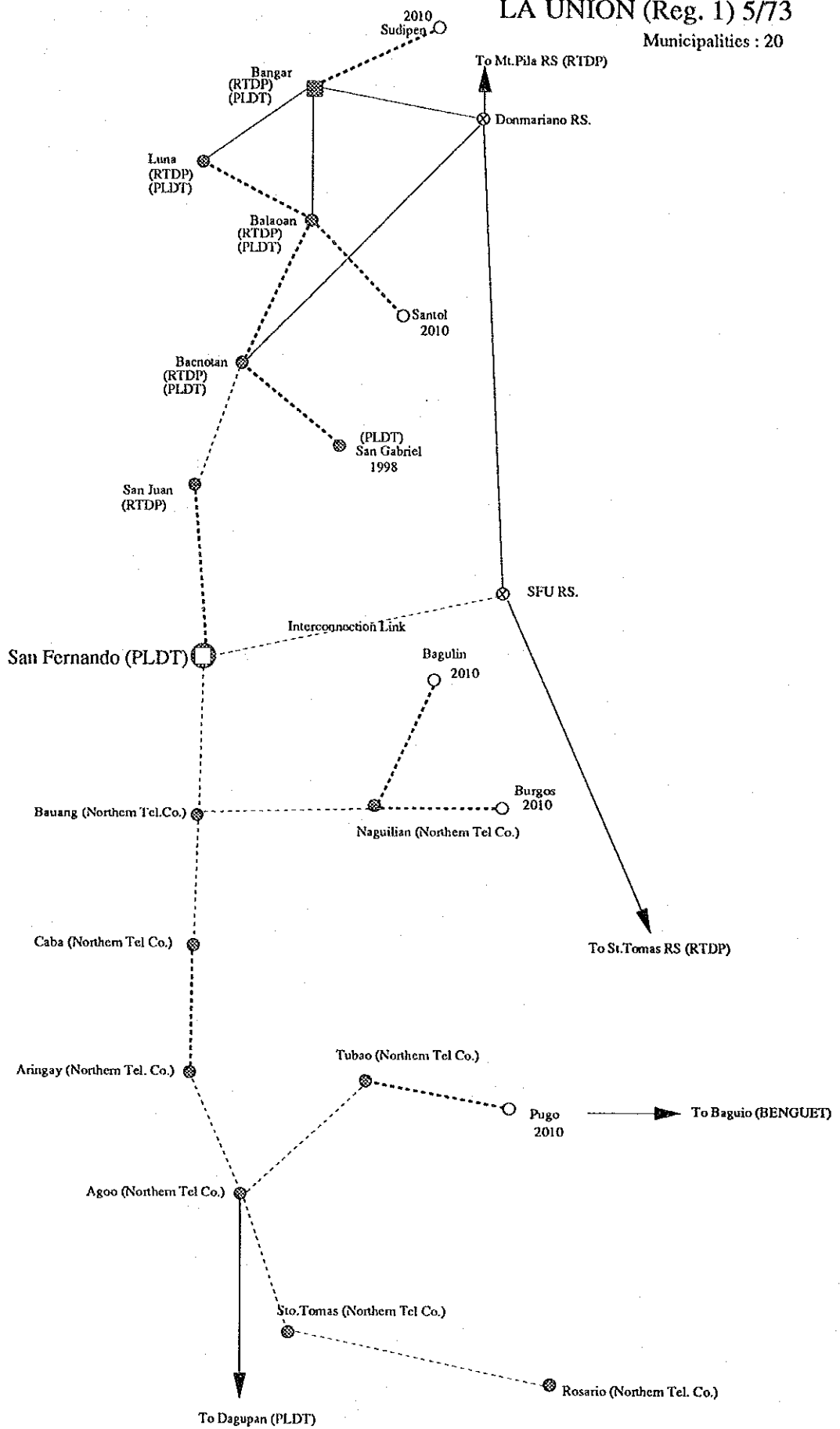
ILOCOS SUR (Reg. 1) 4/73

Municipalities : 34

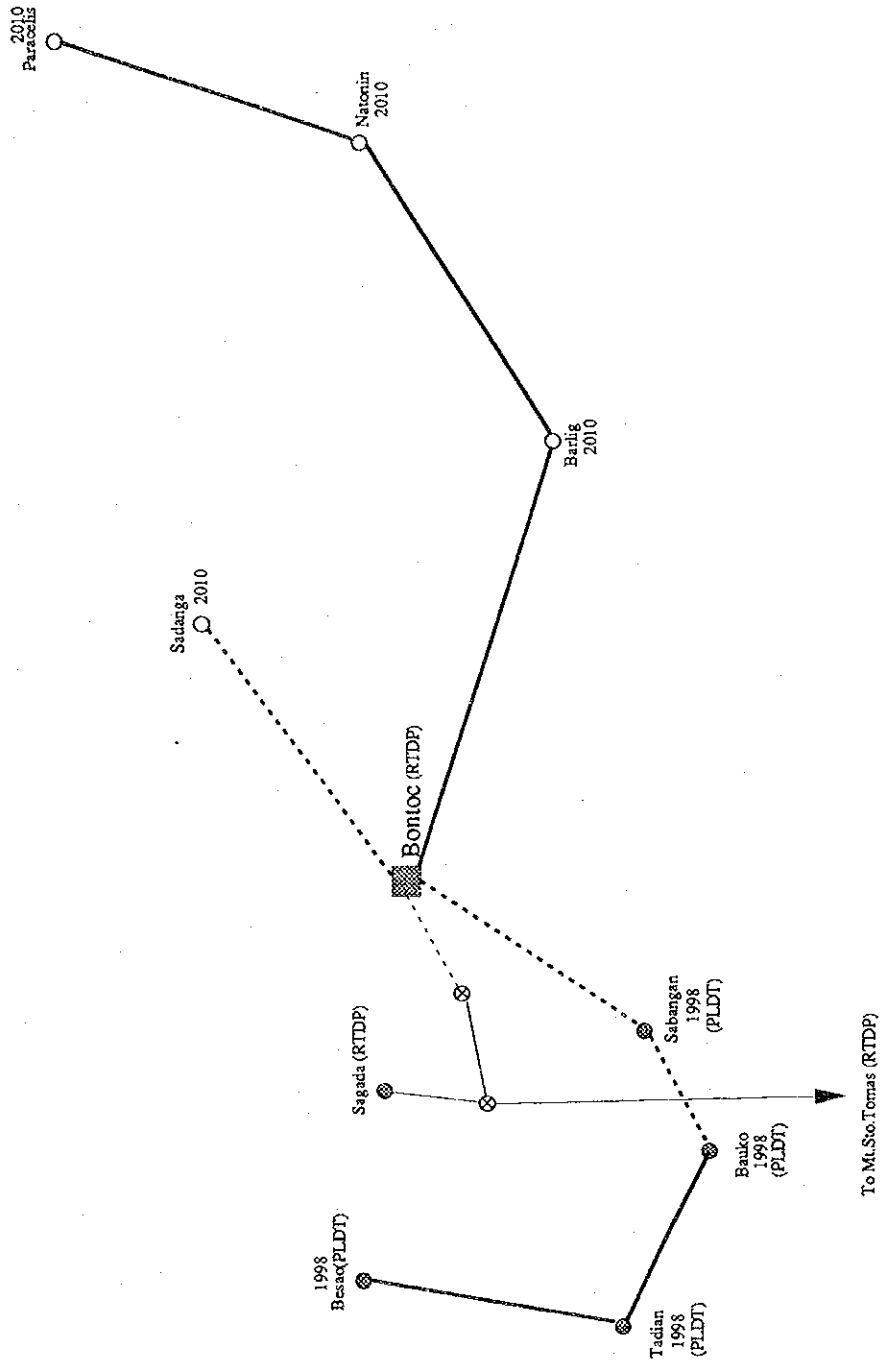


LA UNION (Reg. 1) 5/73

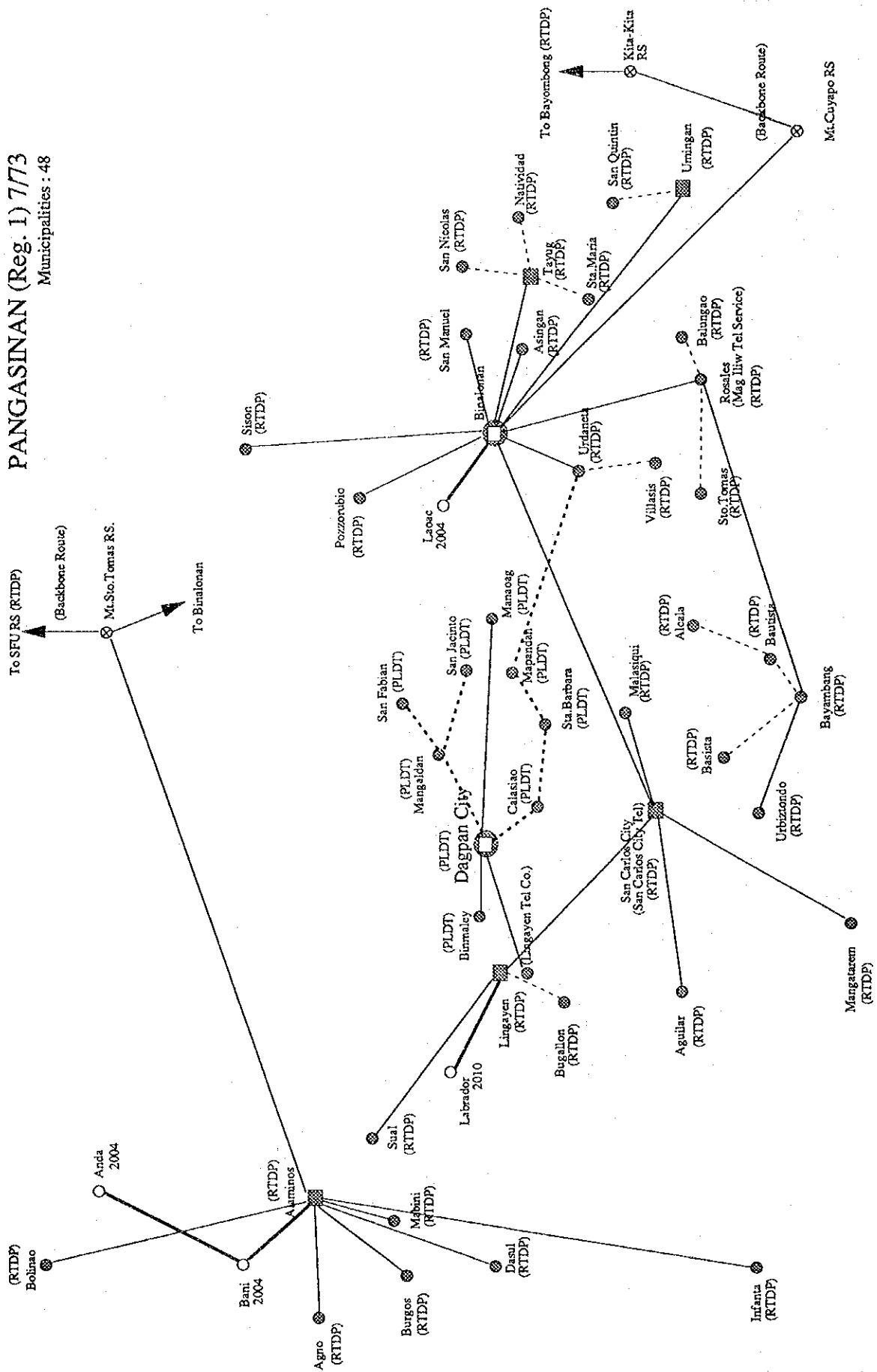
Municipalities : 20



MT. PROVINCE (CAR) 6/73
 Municipalities : 10

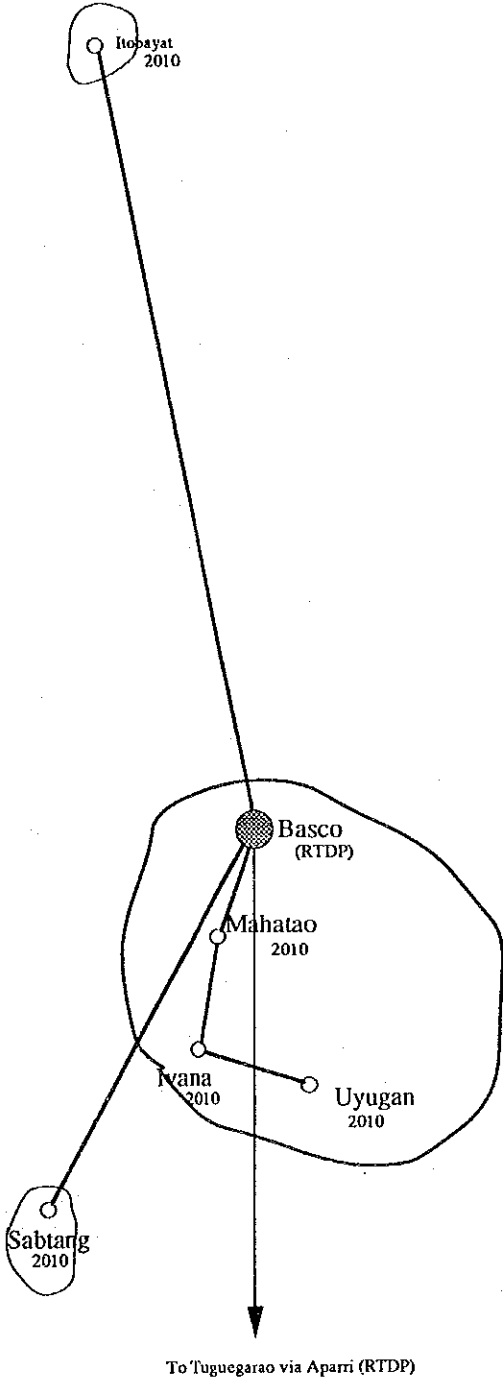


PANGASINAN (Reg. 1) 7/73
Municipalities : 48



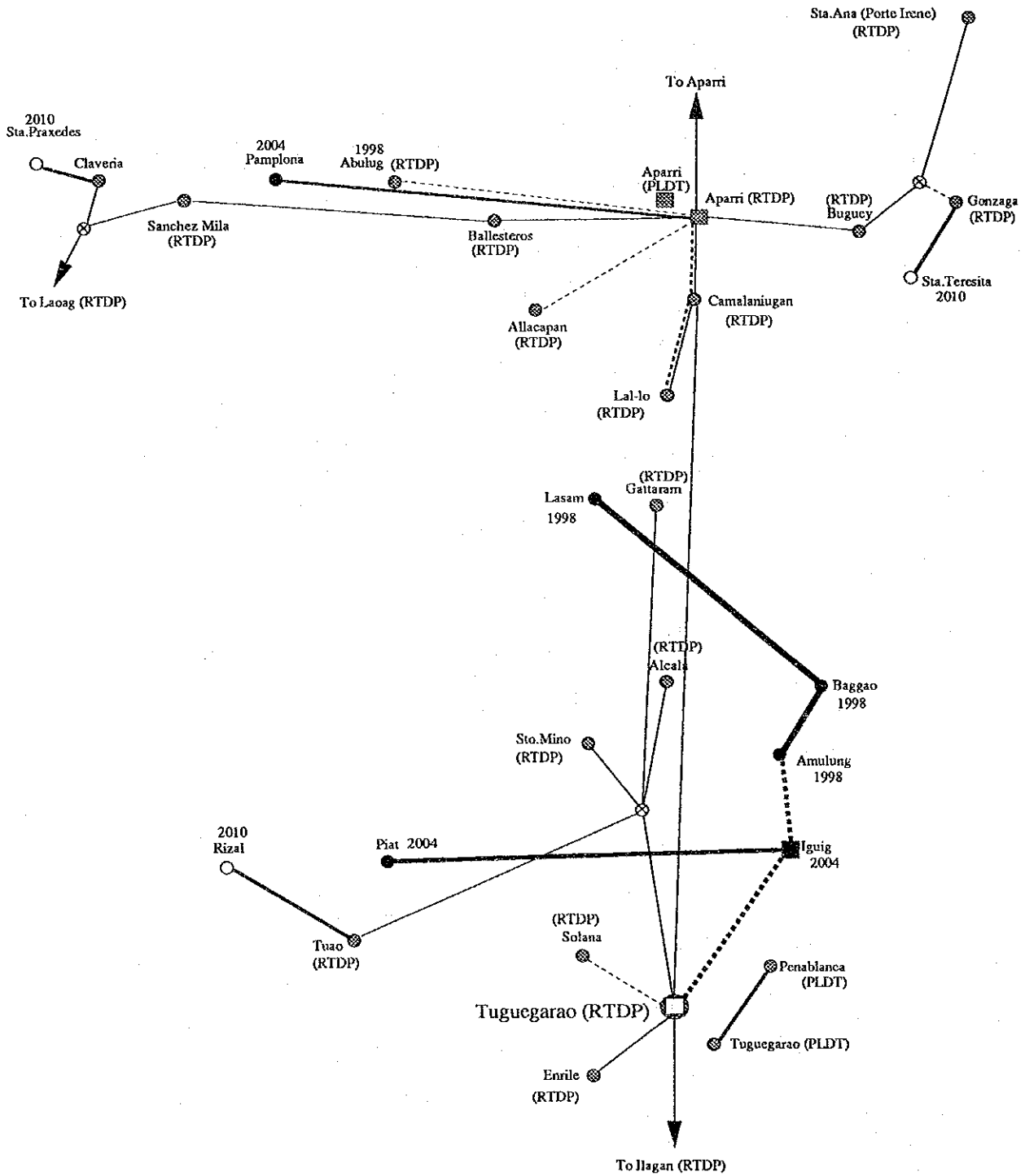
BATANES (Reg. 2) 8/73

Municipalities : 6



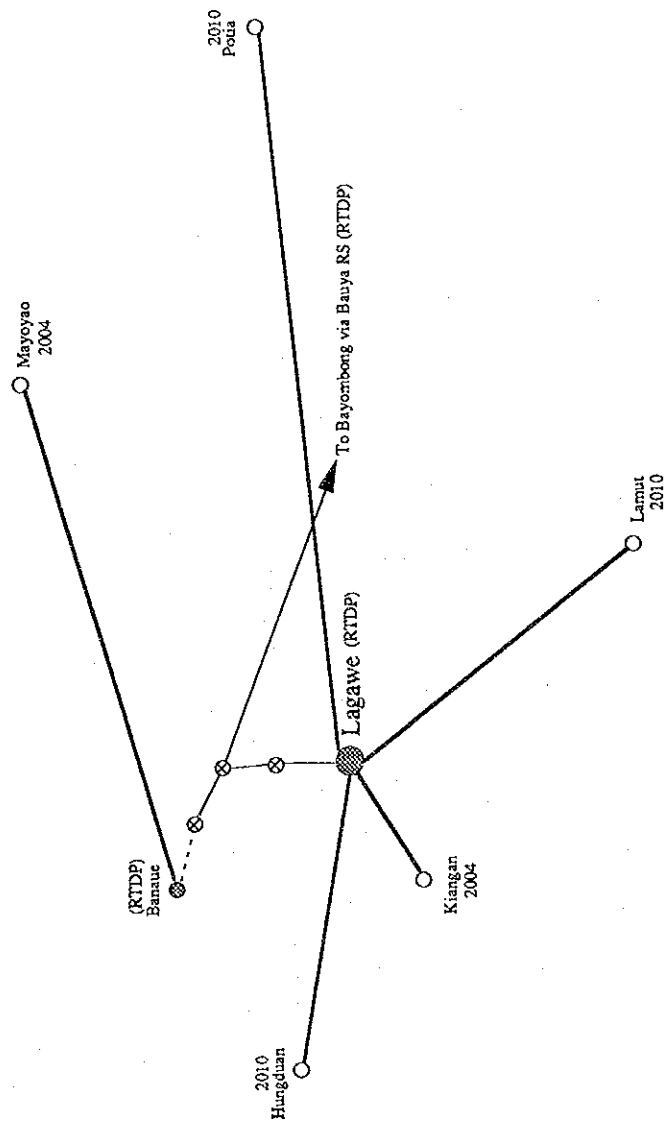
CAGAYAN VALLEY (Reg. 2) 9/73

Municipalities : 29



Calayan is not shown on the map.
2010

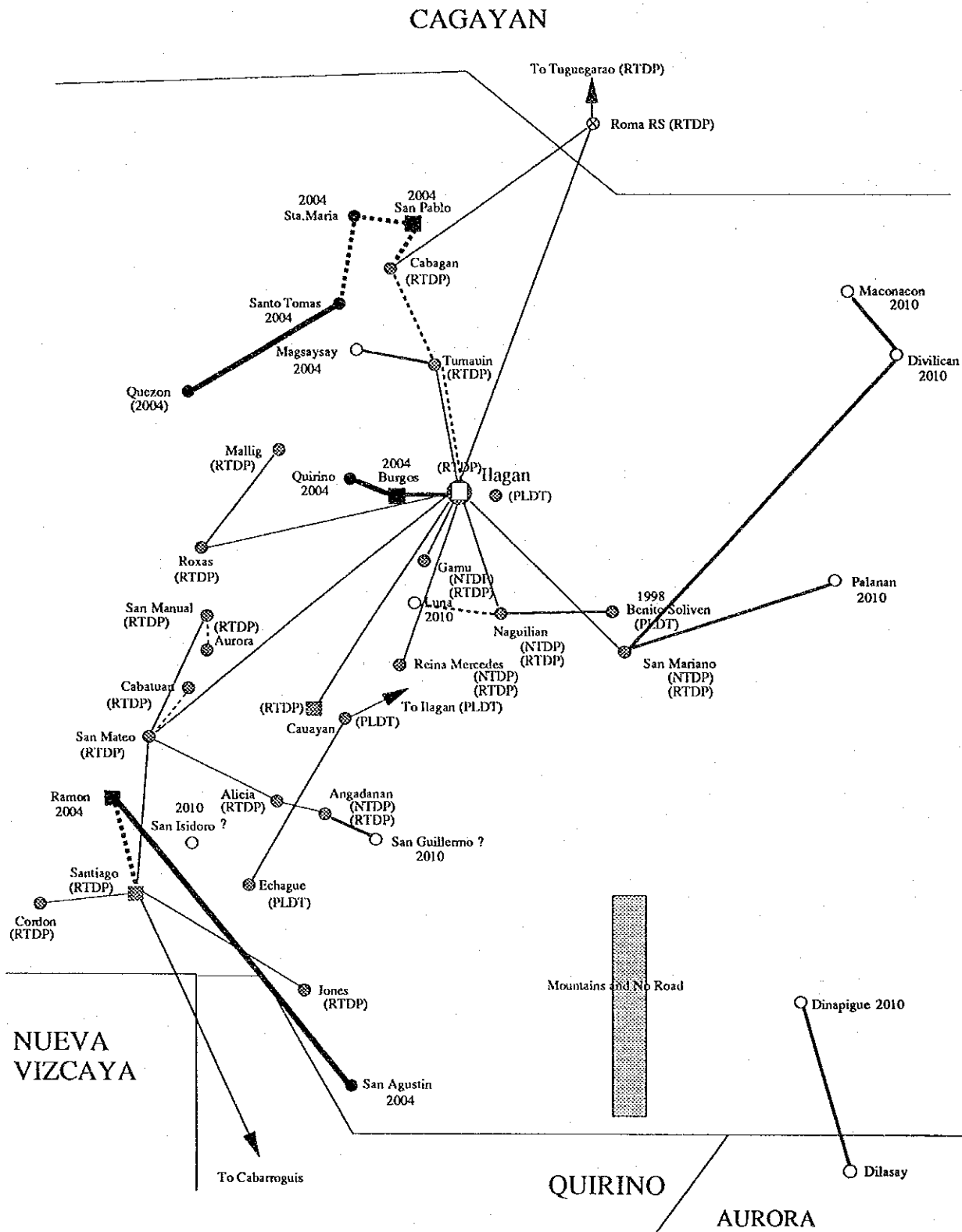
IFUGAO (CAR) 10/73
Municipalities : 10



Hingyon, Aquinaldo, Tines are not shown on the map.
2010 2004 2010

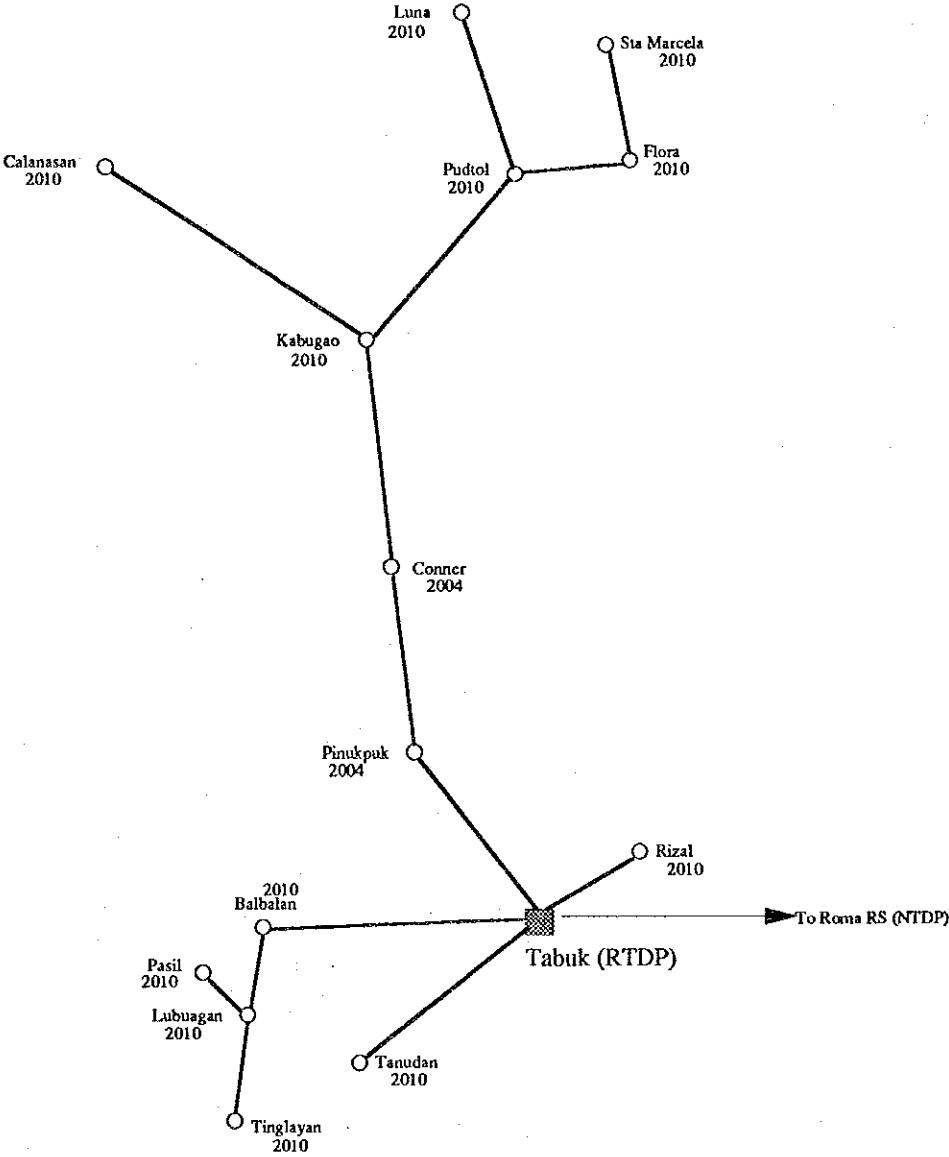
ISABELA (Reg. 2) 11/73

Municipalities : 37

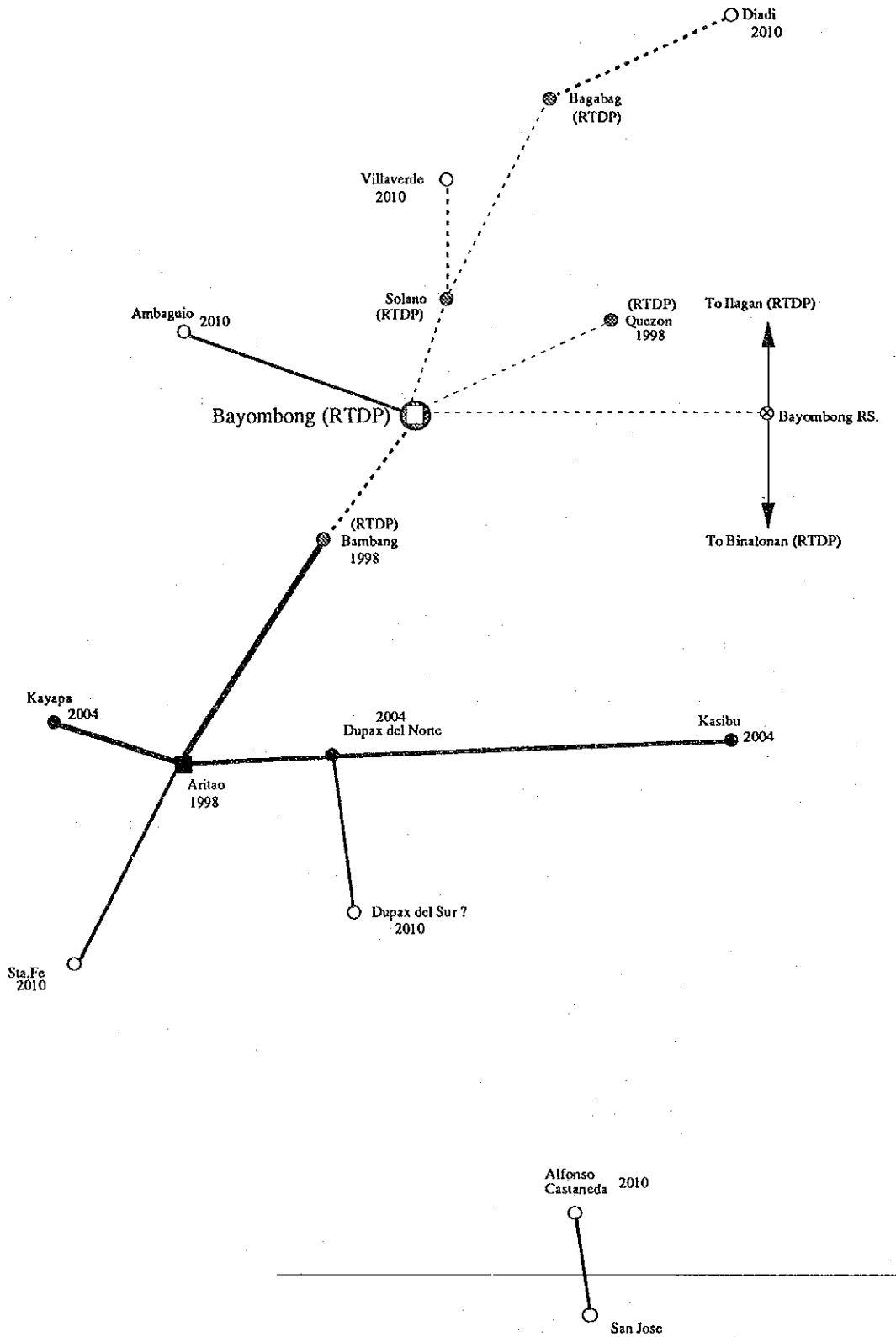


KALINGA APAYAO (CAR) 12/73

Municipalities : 15

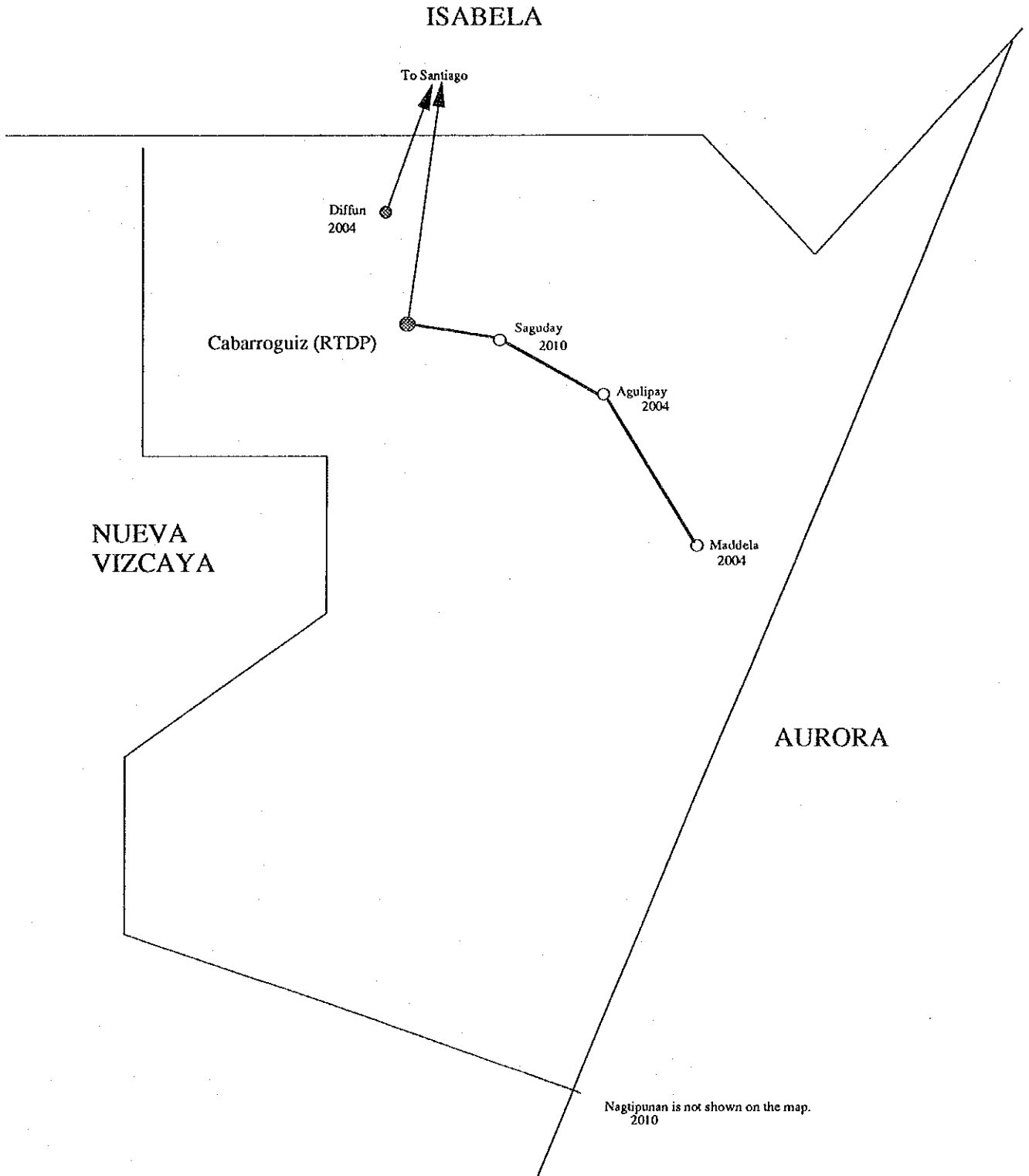


NUEVA VISCAYA (Reg. 2) 13/73
Municipalities : 15



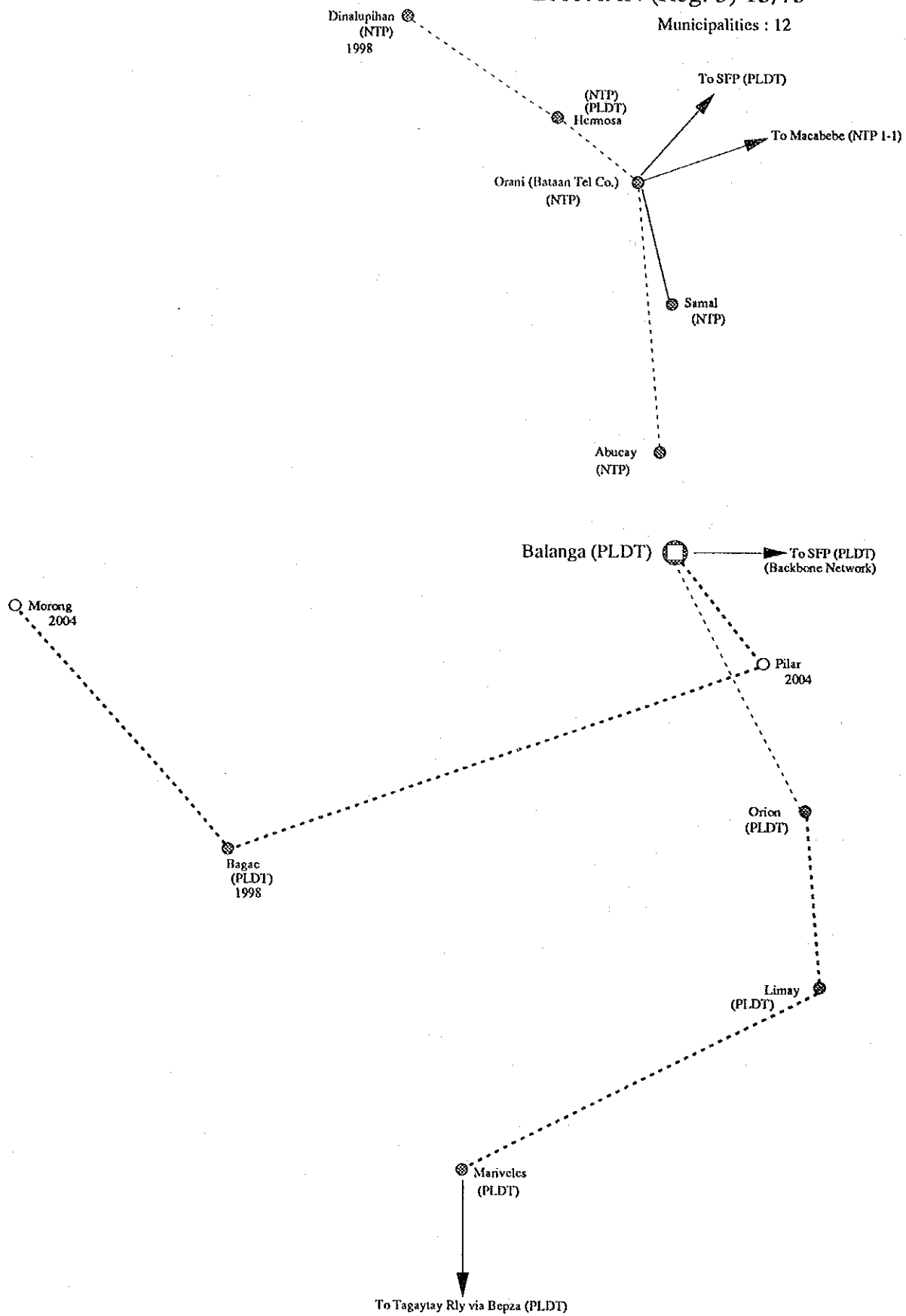
NUEVA ECIJA

QUIRINO (Reg. 2) 14/73
Municipalities : 6



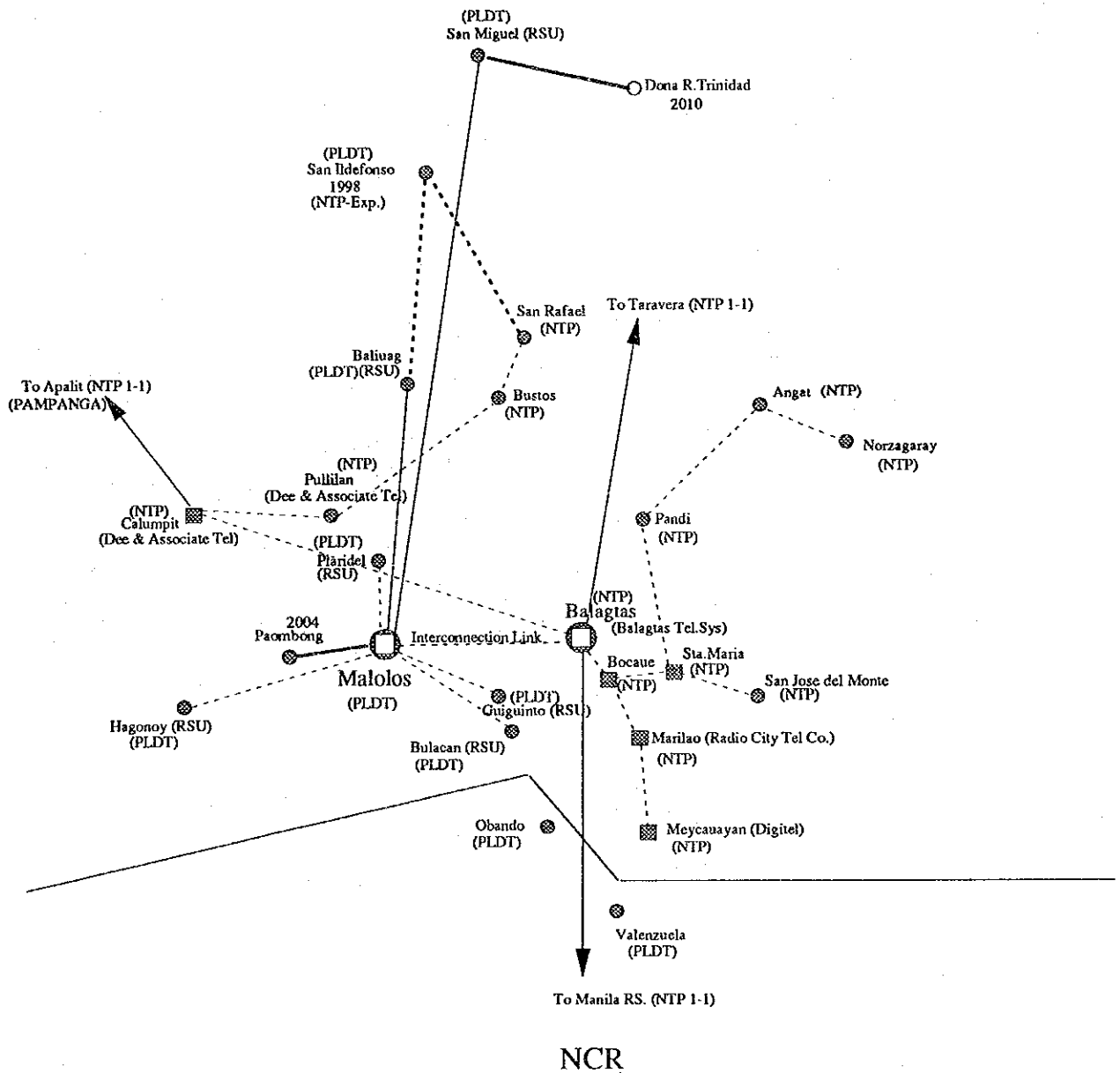
BATAAN (Reg. 3) 15/73

Municipalities : 12



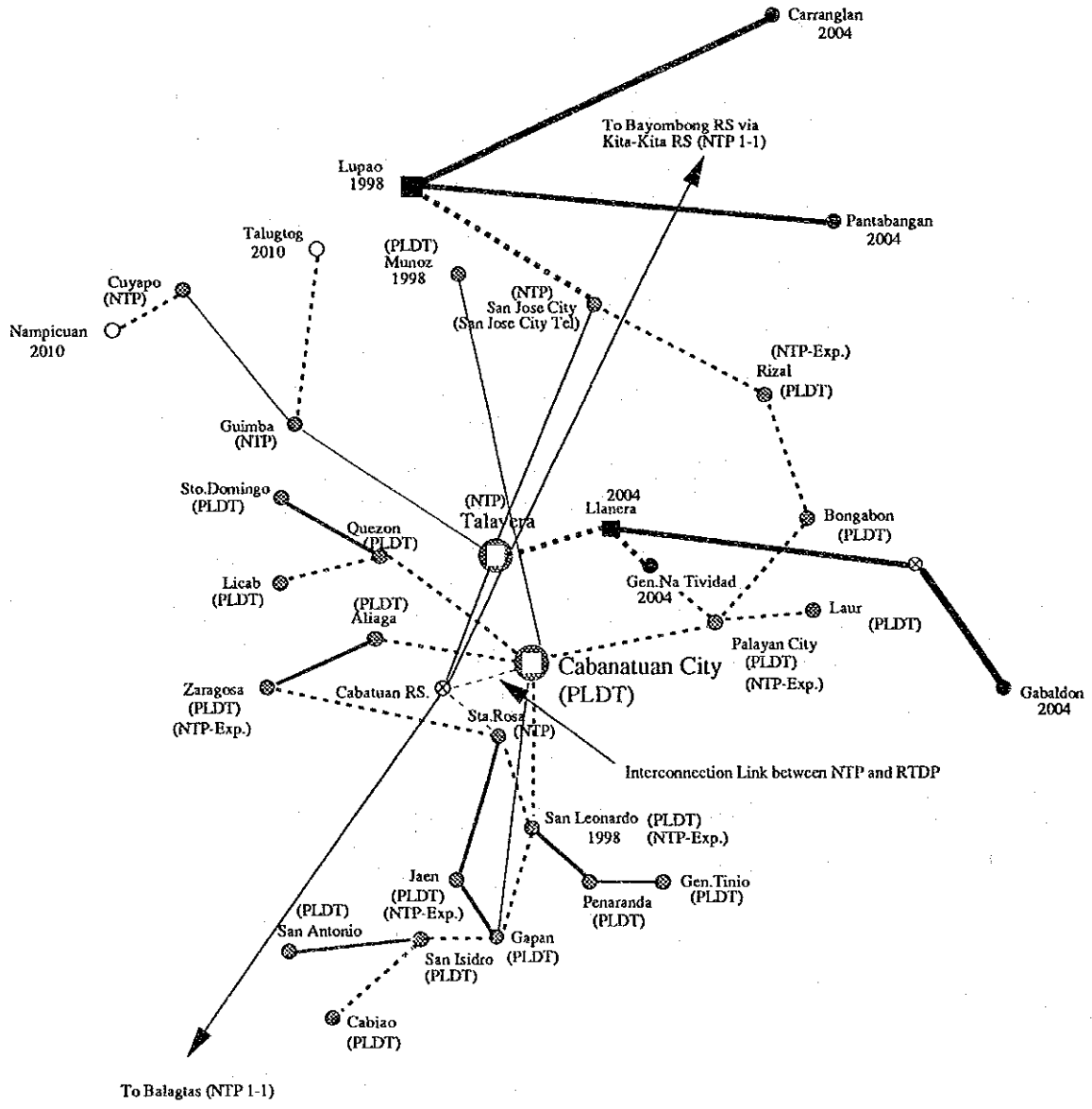
BULACAN (Reg. 3) 16/73

Municipalities : 24



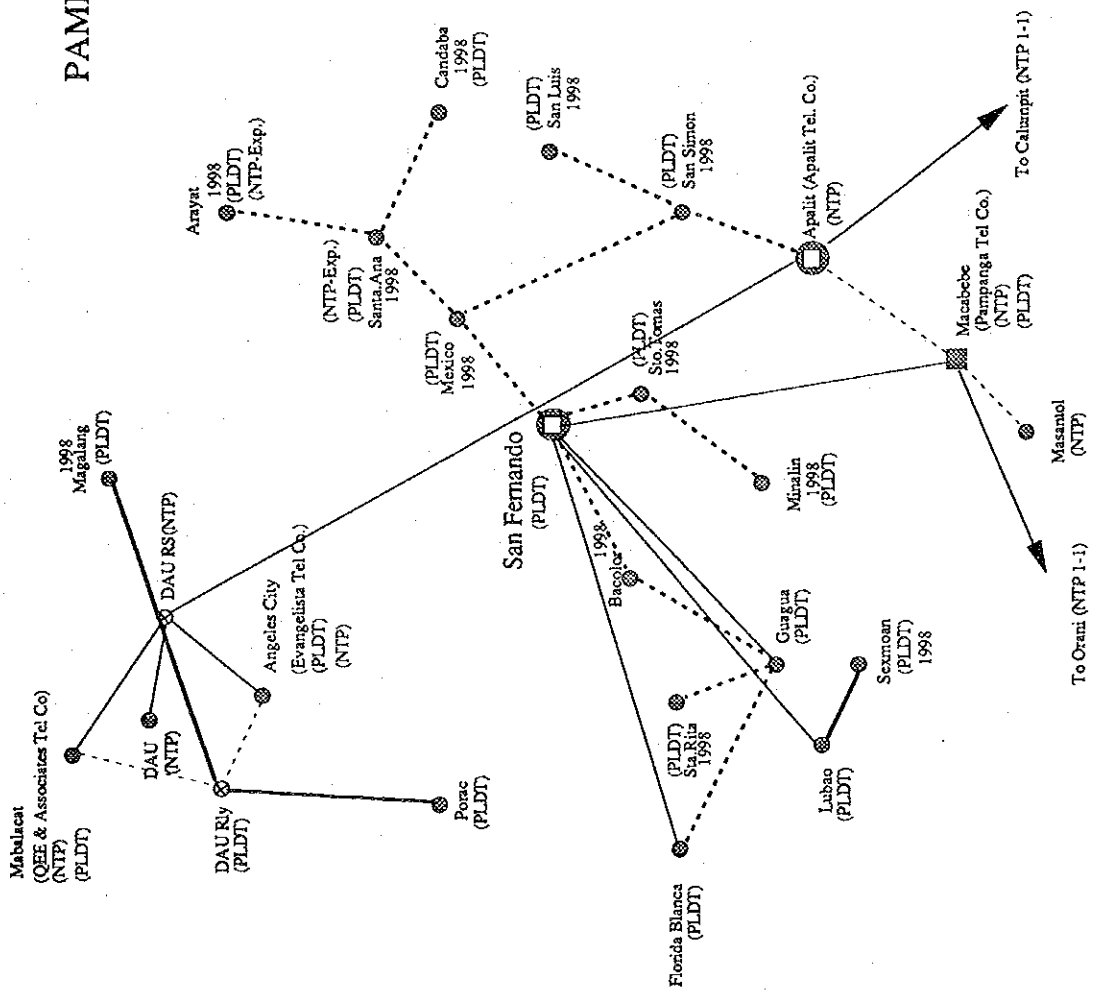
NUEVA ECIJA (Reg. 3) 17/73

Municipalities : 32



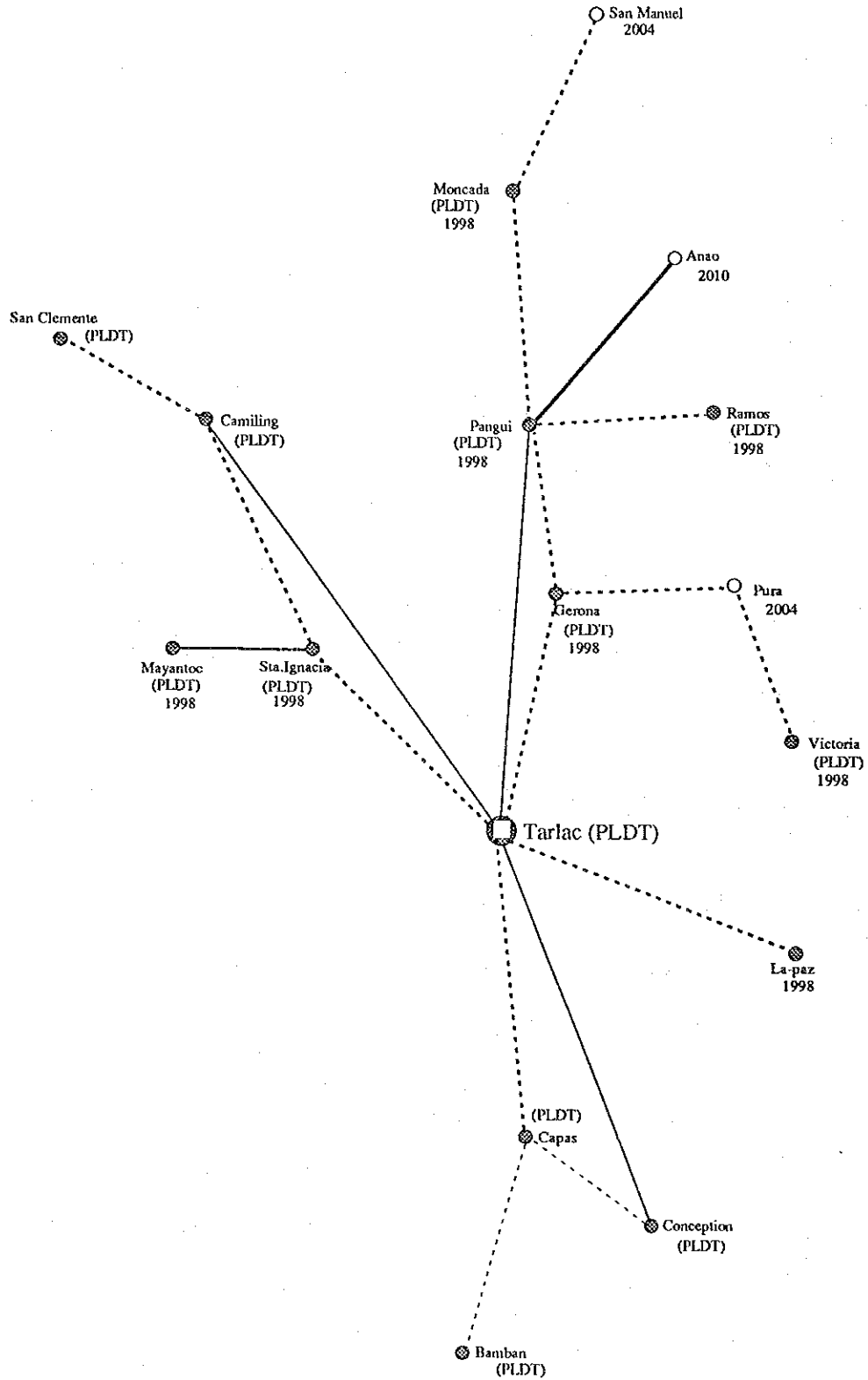
PAMPANGA (Reg. 3) 18/73

Municipalities : 22



TARLAC (Reg. 3)19/73

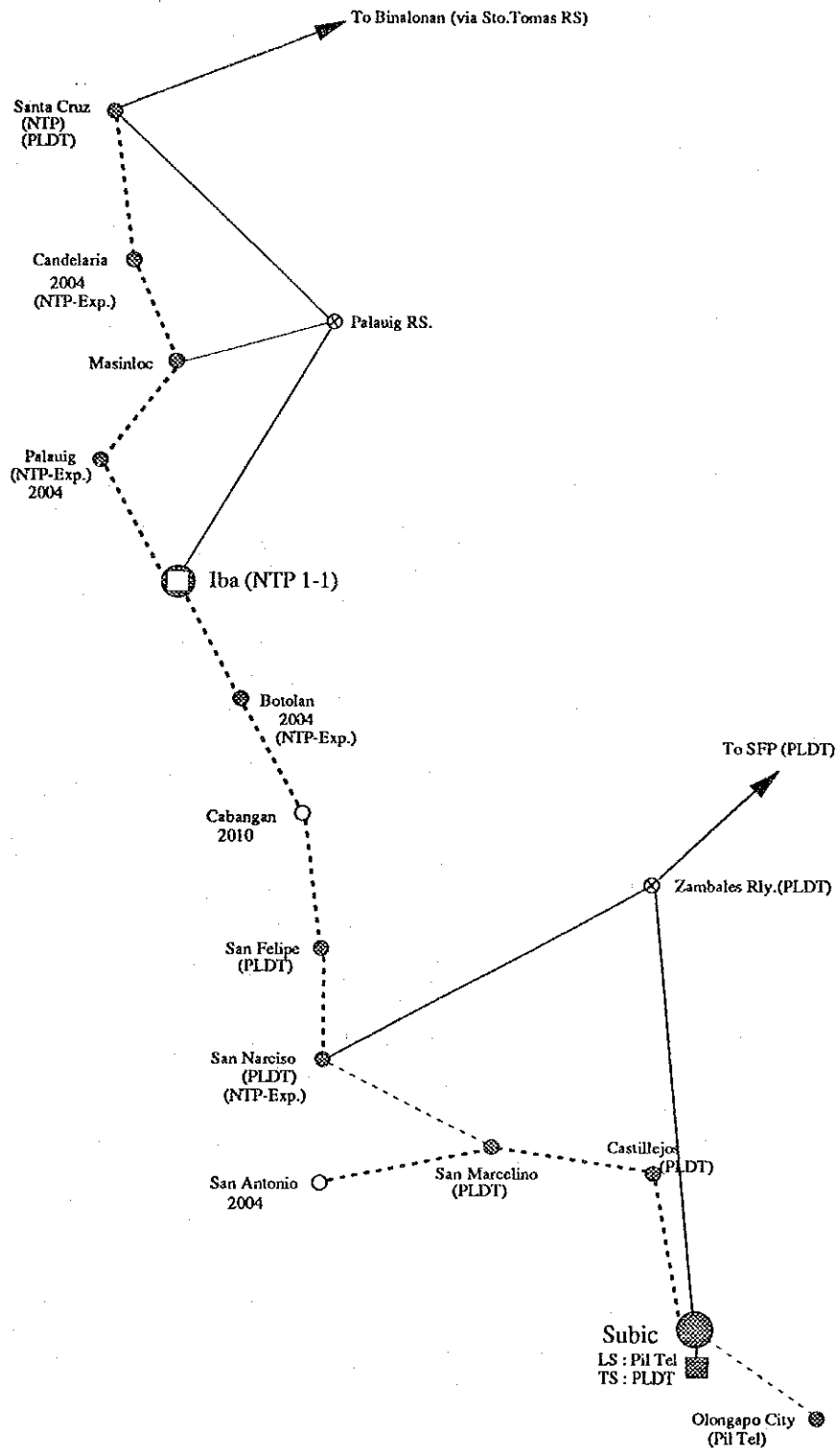
Municipalities : 18



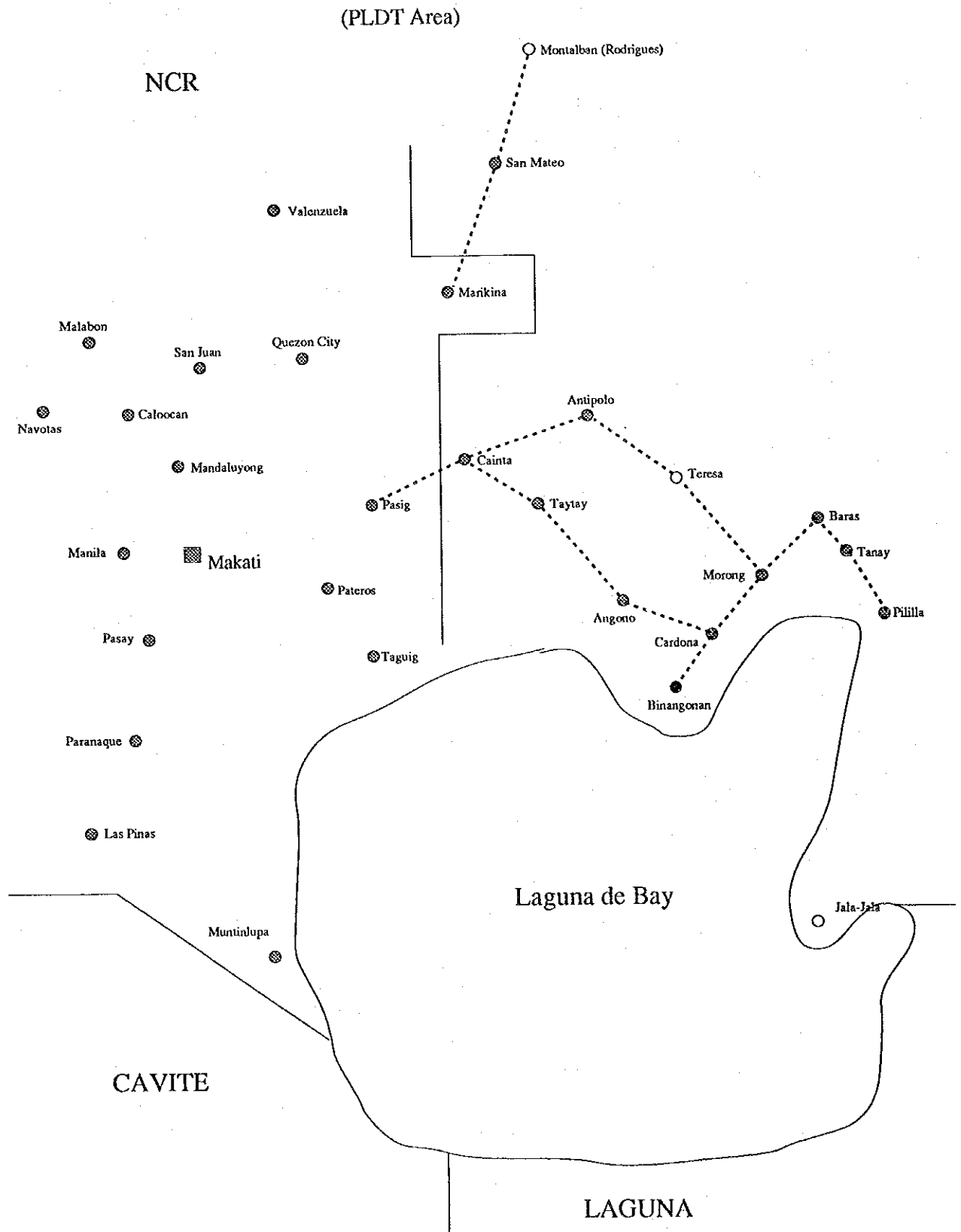
San Jose is not shown on the map.
2004

ZAMBALES (Reg. 3) 20/73

Municipalities : 14

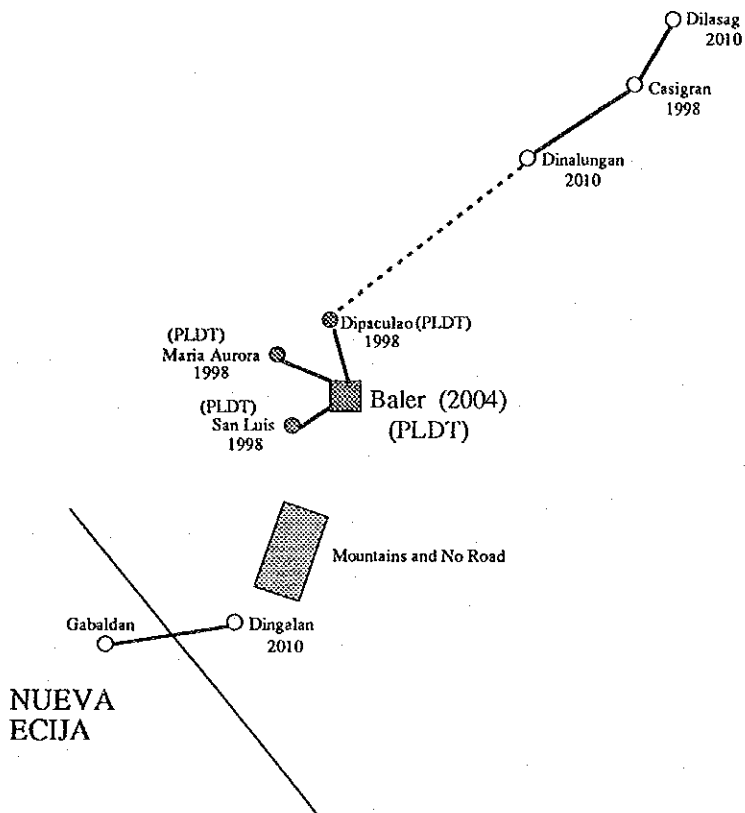


RIZAL (Reg. 4) 21/73
Municipalities : 14



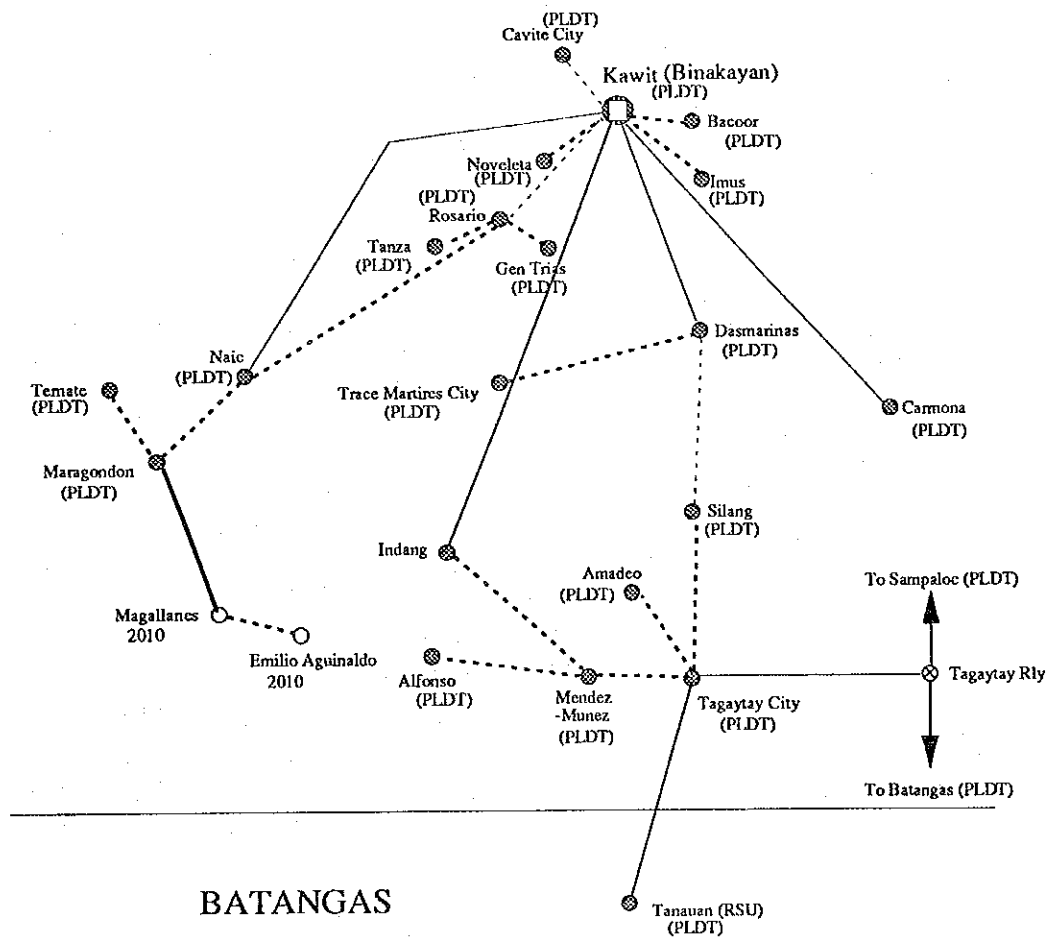
AURORA (Reg. 4) 22/73

Municipalities : 8



CAVITE (Reg 4) 24/73

Municipalities : 23



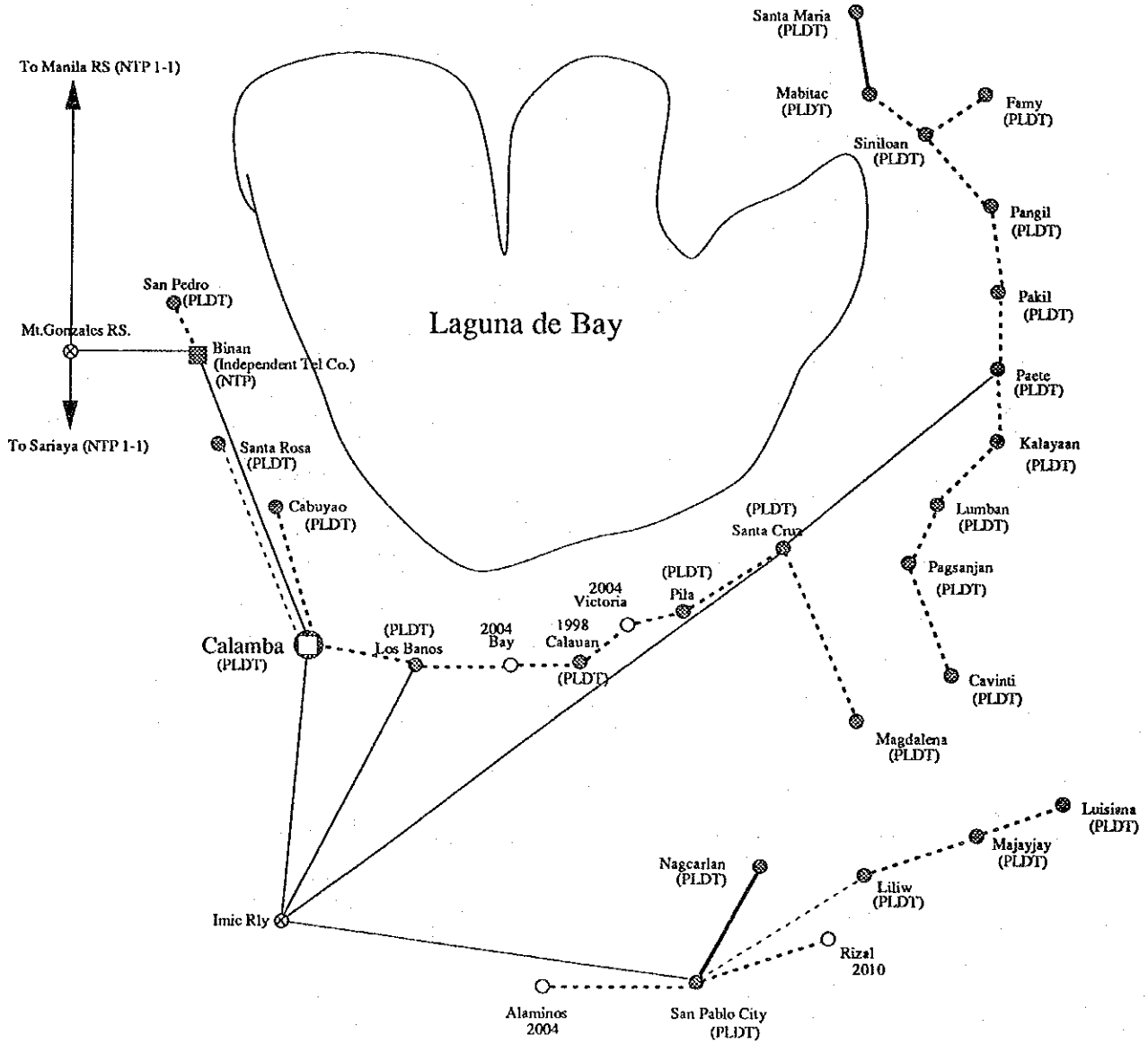
Gen. Alvarez is not shown on the map.
1998

LAGUNA (Reg. 4) 25/73

Municipalities : 30

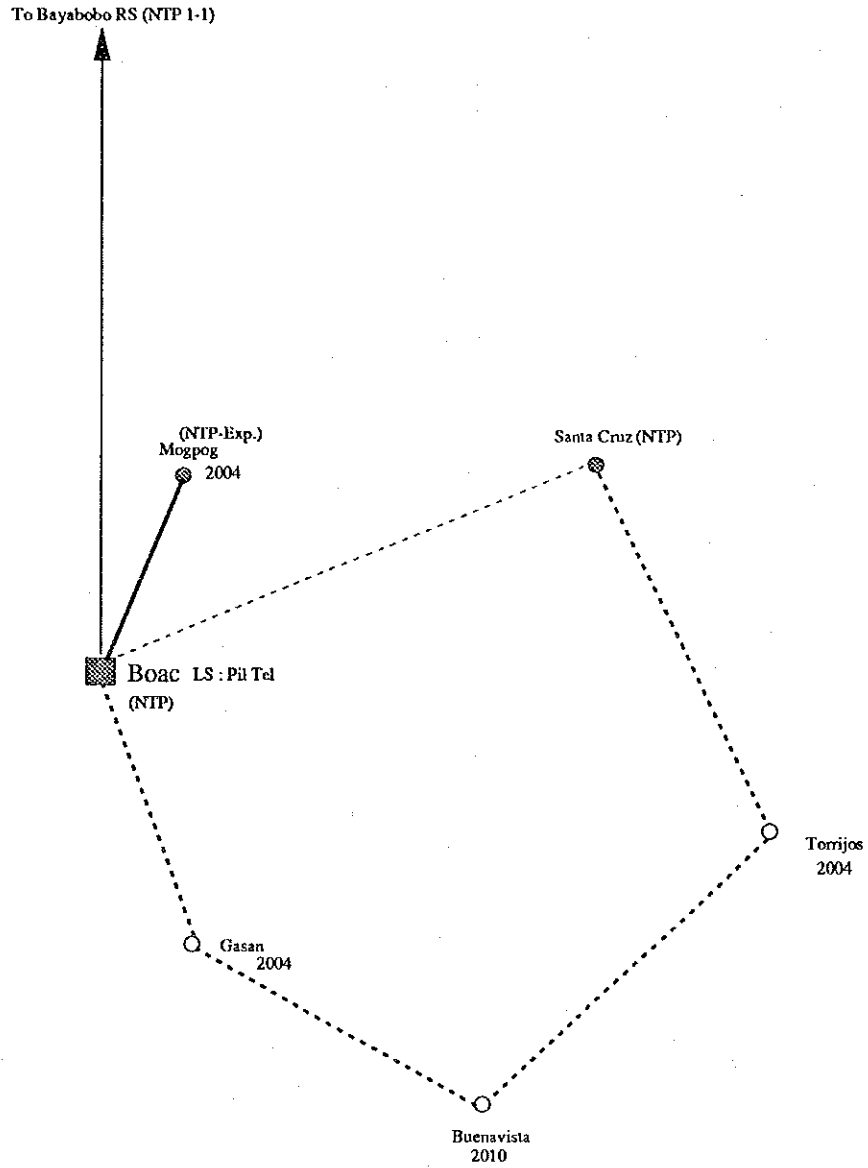
NCR

RIZAL



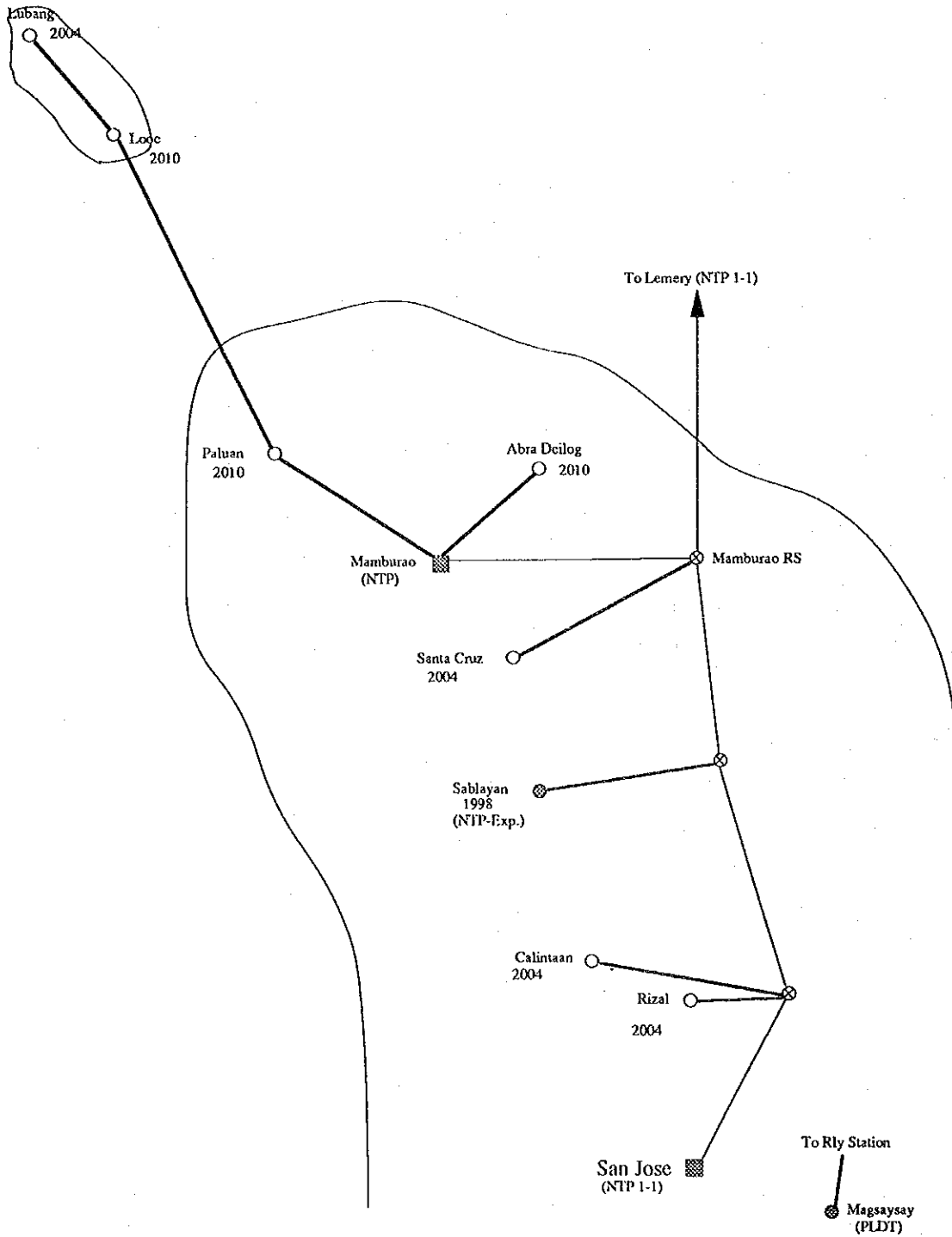
MARINDUQUE (Reg. 4) 26/73

Municipalities : 6



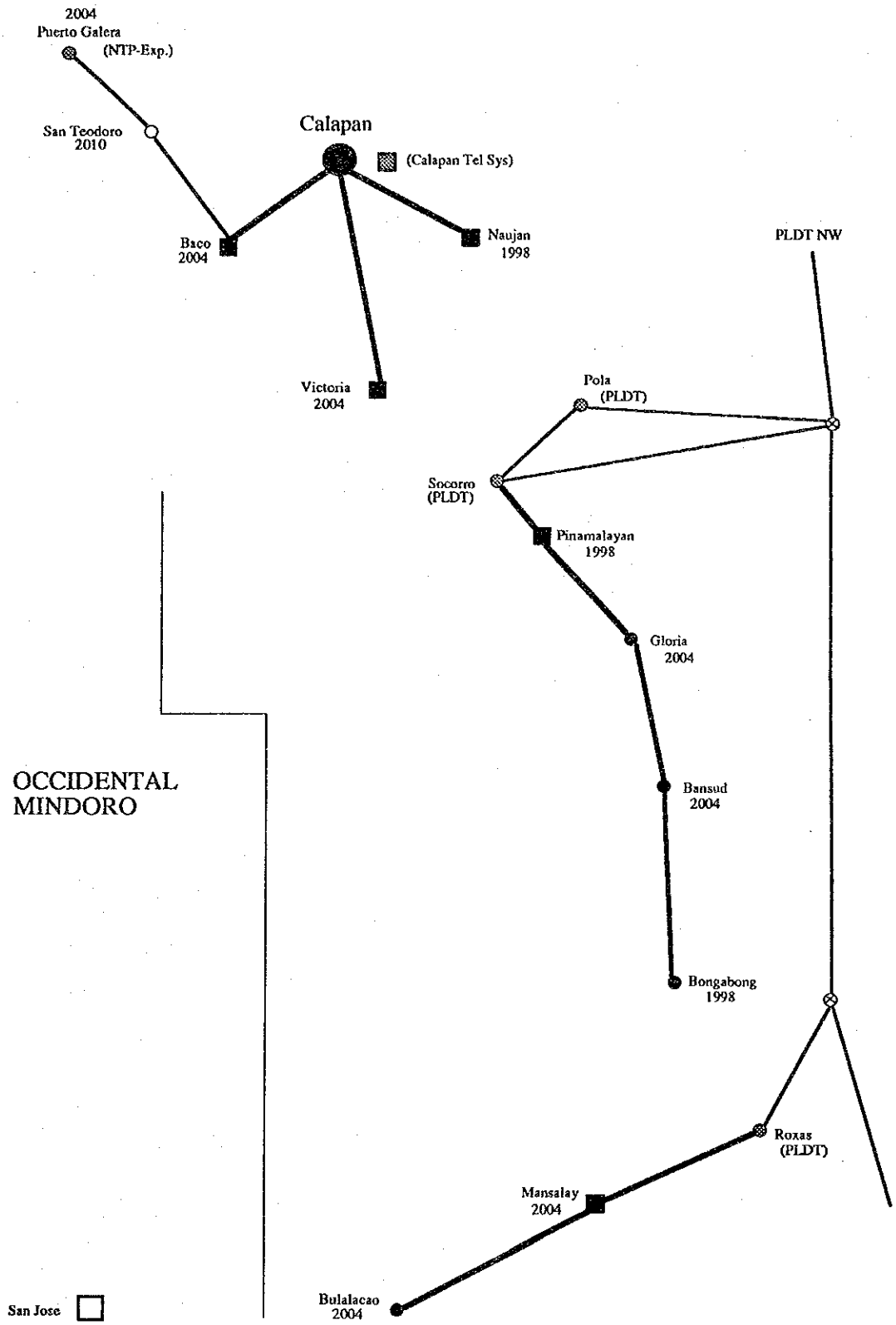
OCCIDENTAL MINDORO (Reg. 4) 27/73

Municipalities : 11



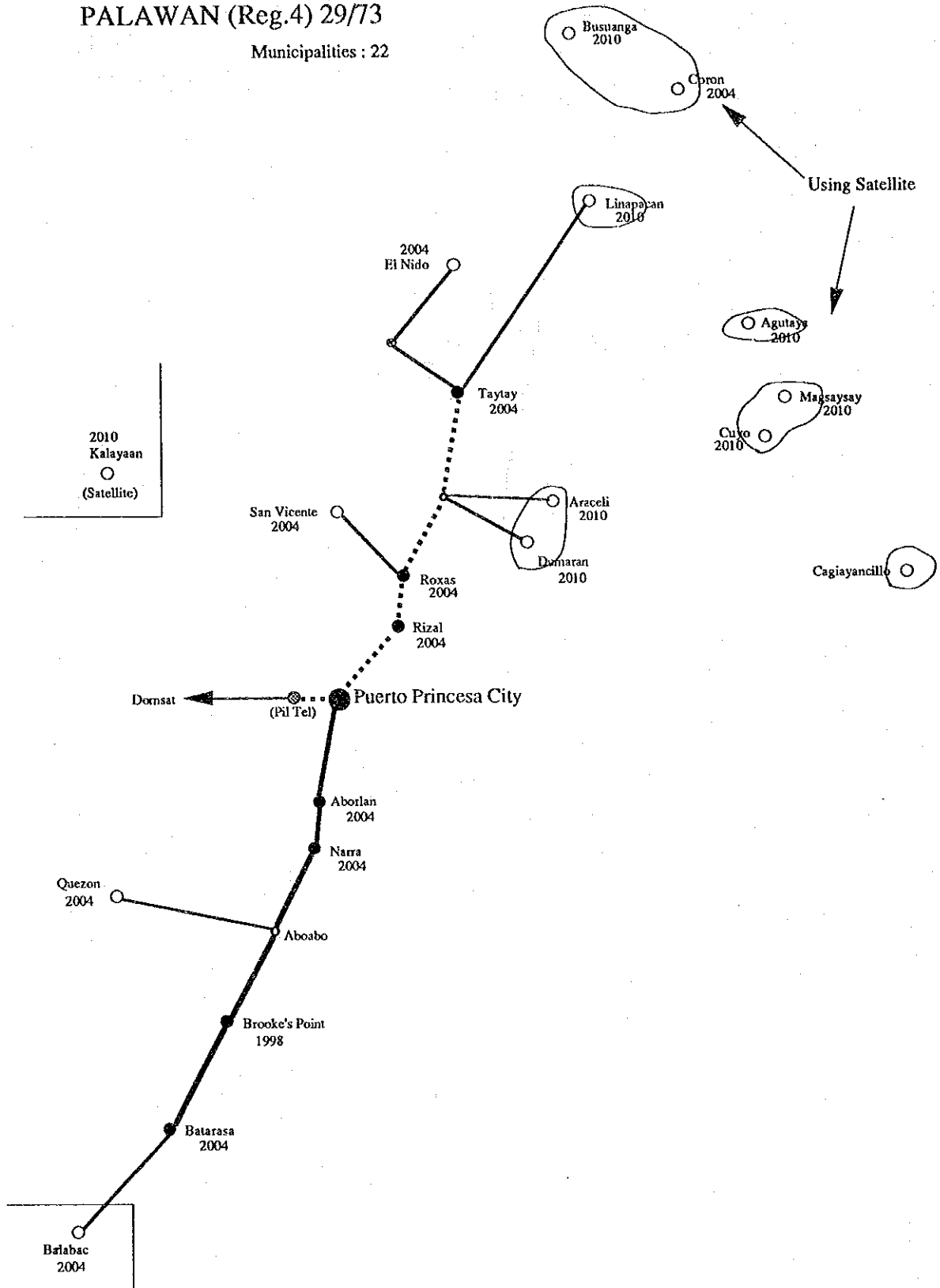
ORIENTAL MINDORO (Reg. 4) 28/73

Municipalities : 15



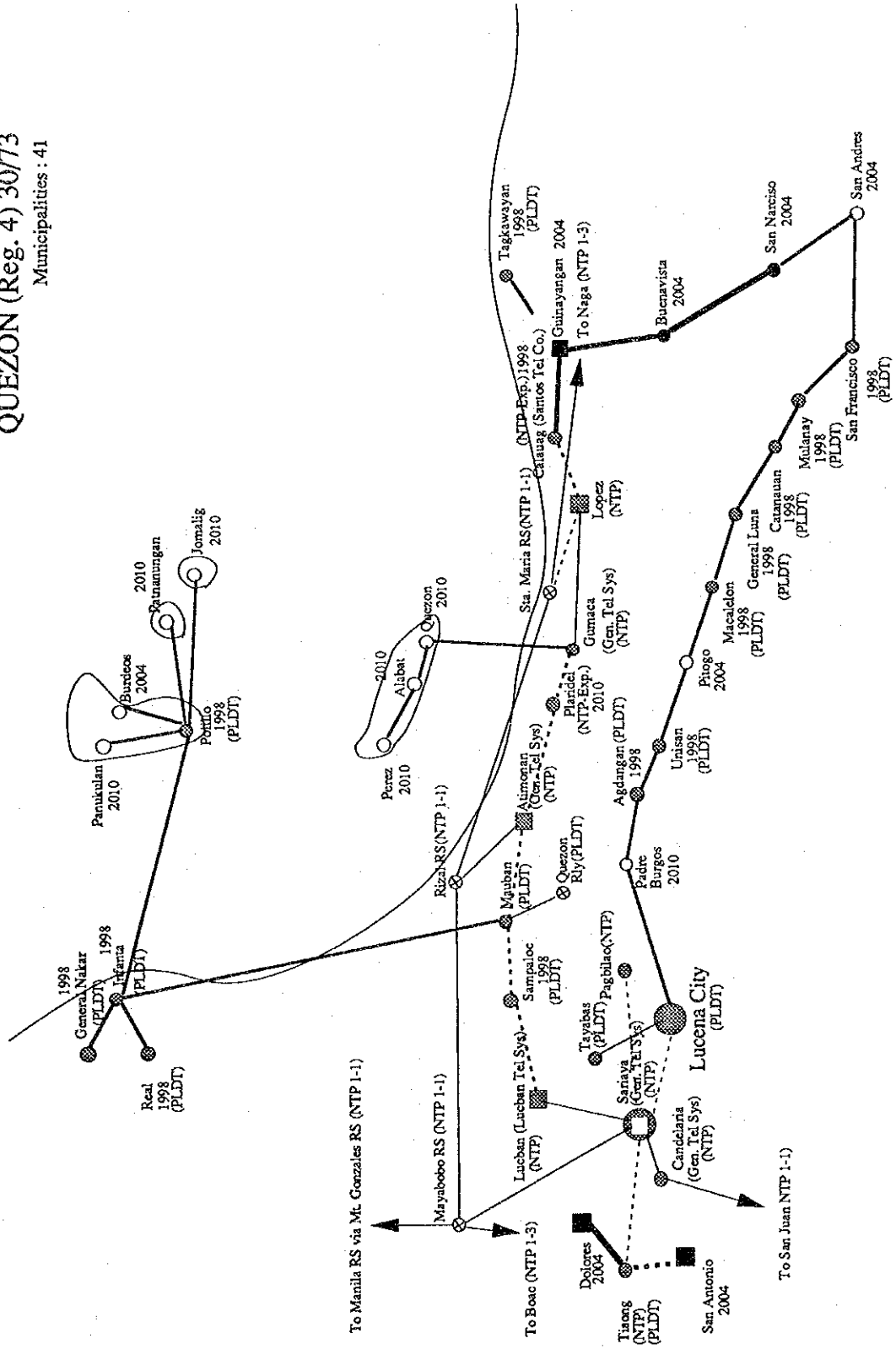
PALAWAN (Reg.4) 29/73

Municipalities : 22



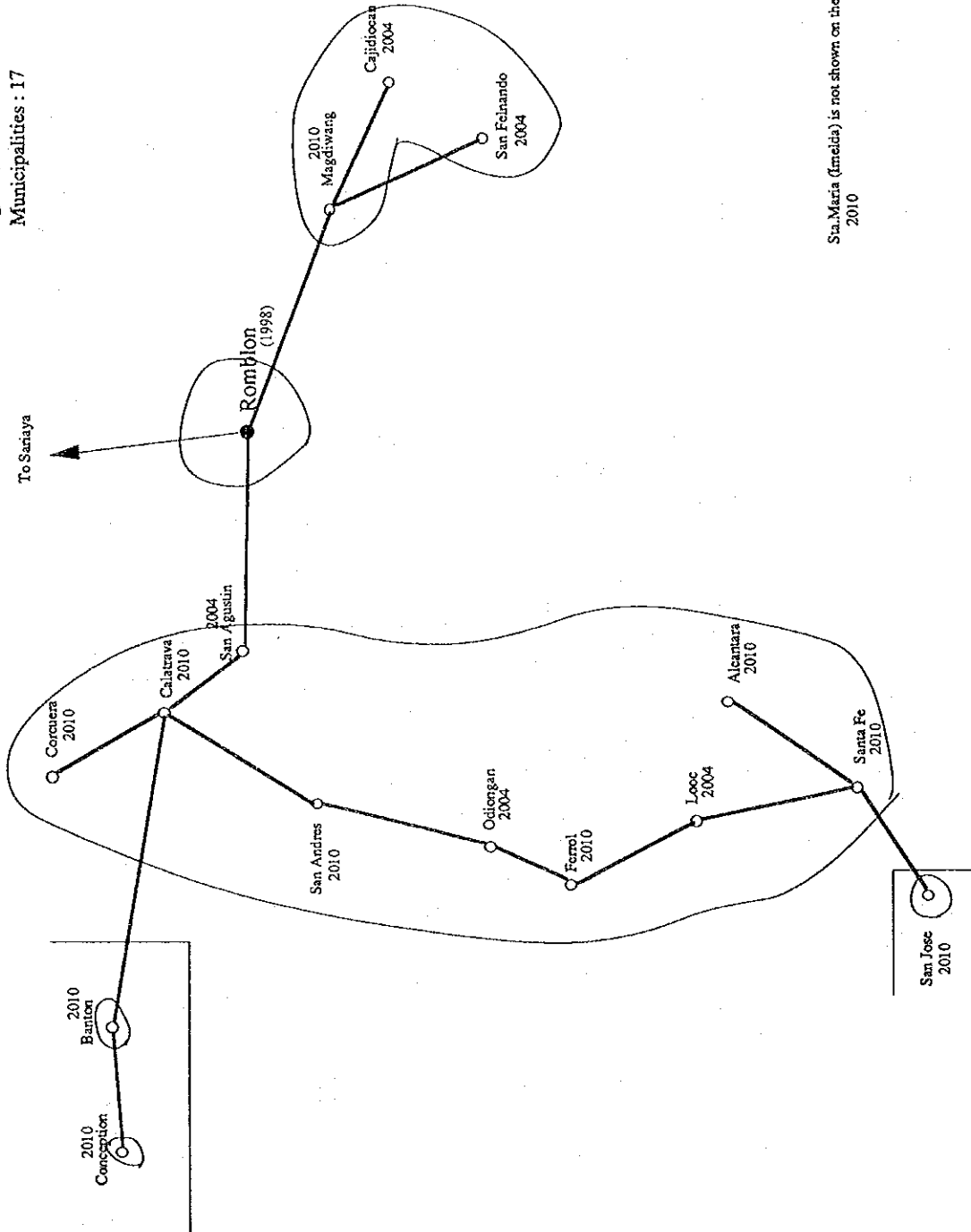
QUEZON (Reg. 4) 30/73

Municipalities : 41



Romblon (Reg. 4) 31/73

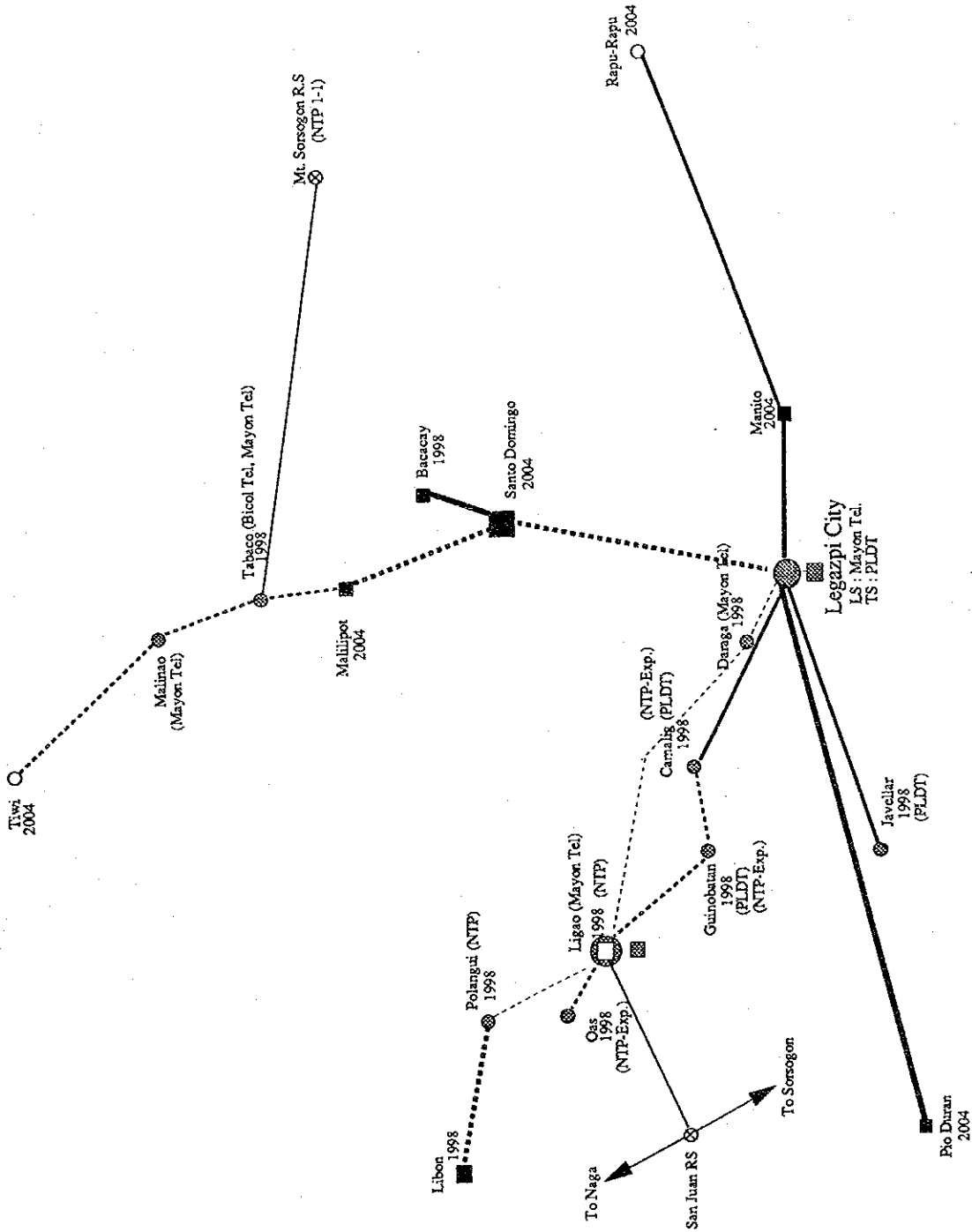
Municipalities : 17



Sra. Maria (Imelda) is not shown on the map.
2010

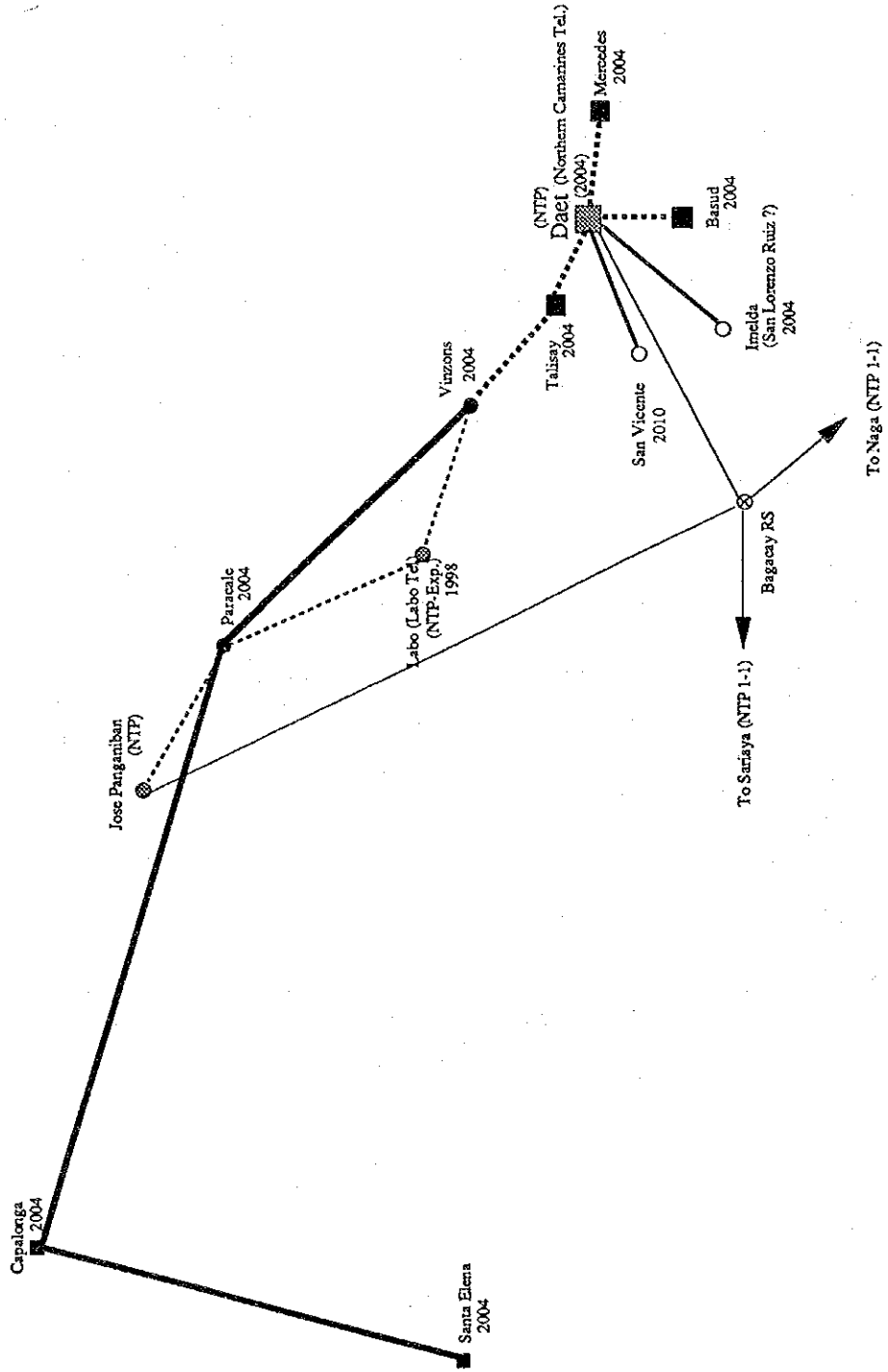
ALBAY (Reg. 5) 32/73

Municipalities : 18



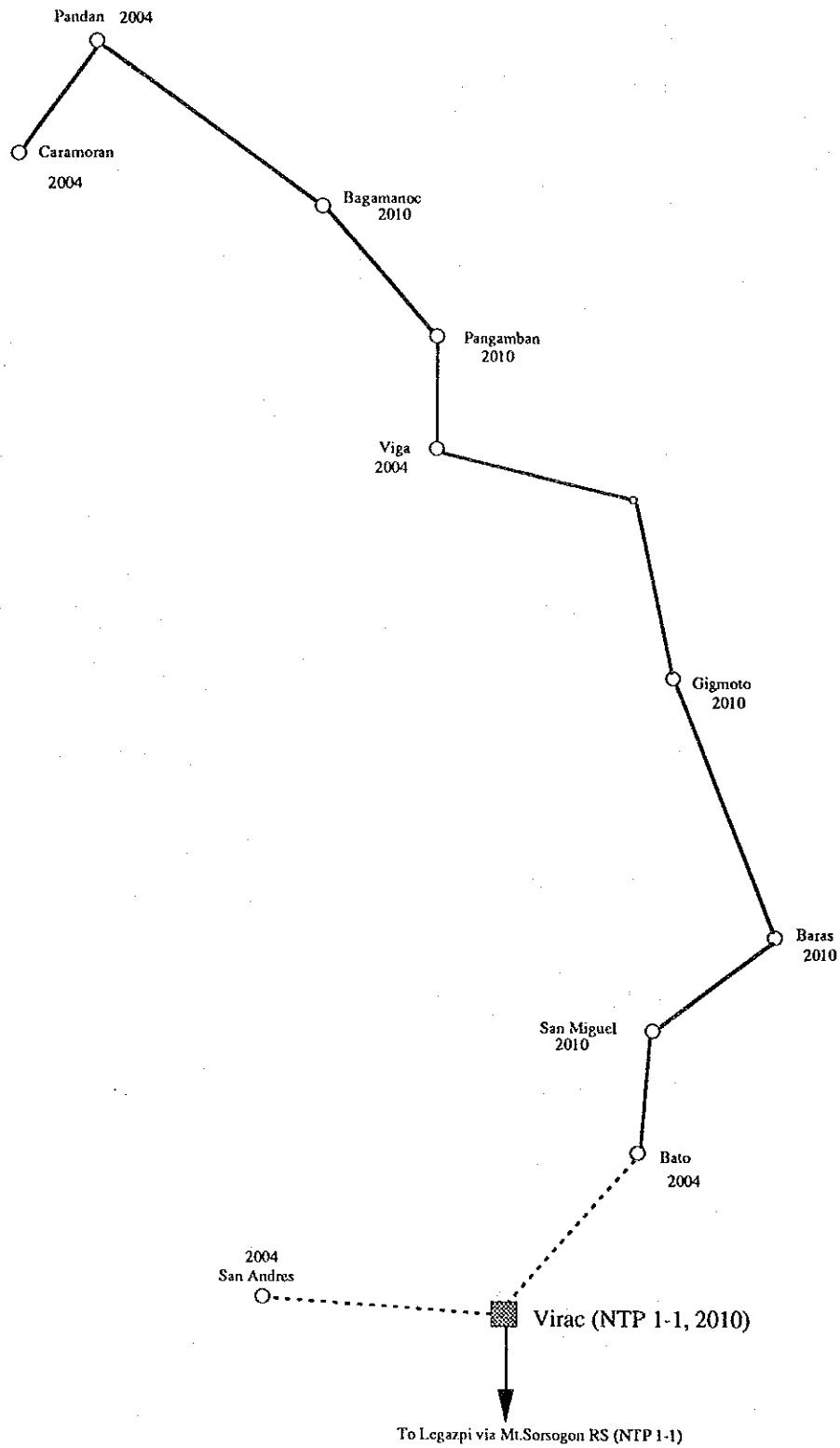
CAMARINES NORTE (Reg. 5) 33/73

Municipalities: 12



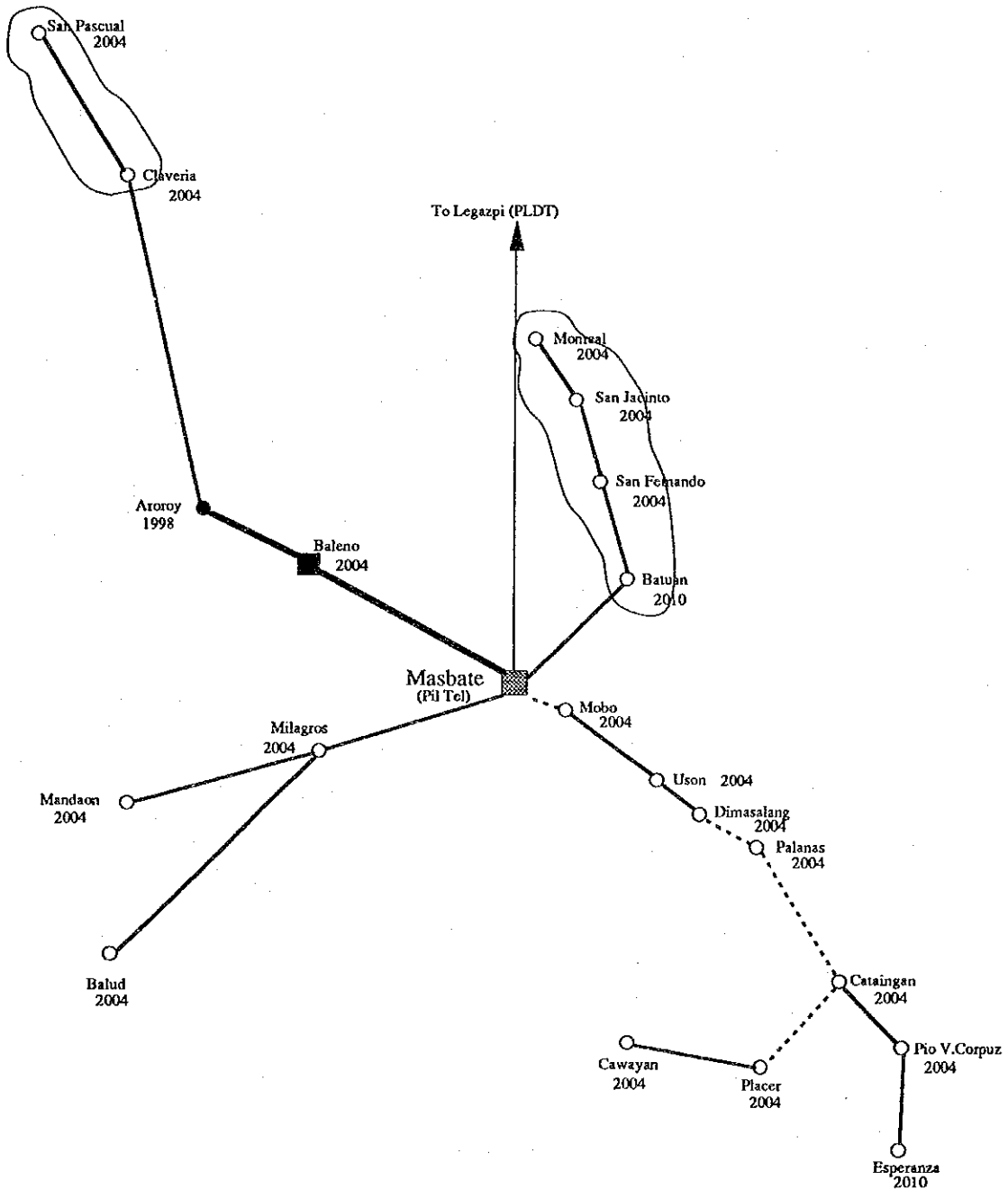
CATANDUANES (Reg. 5) 35/73

Municipalities : 11

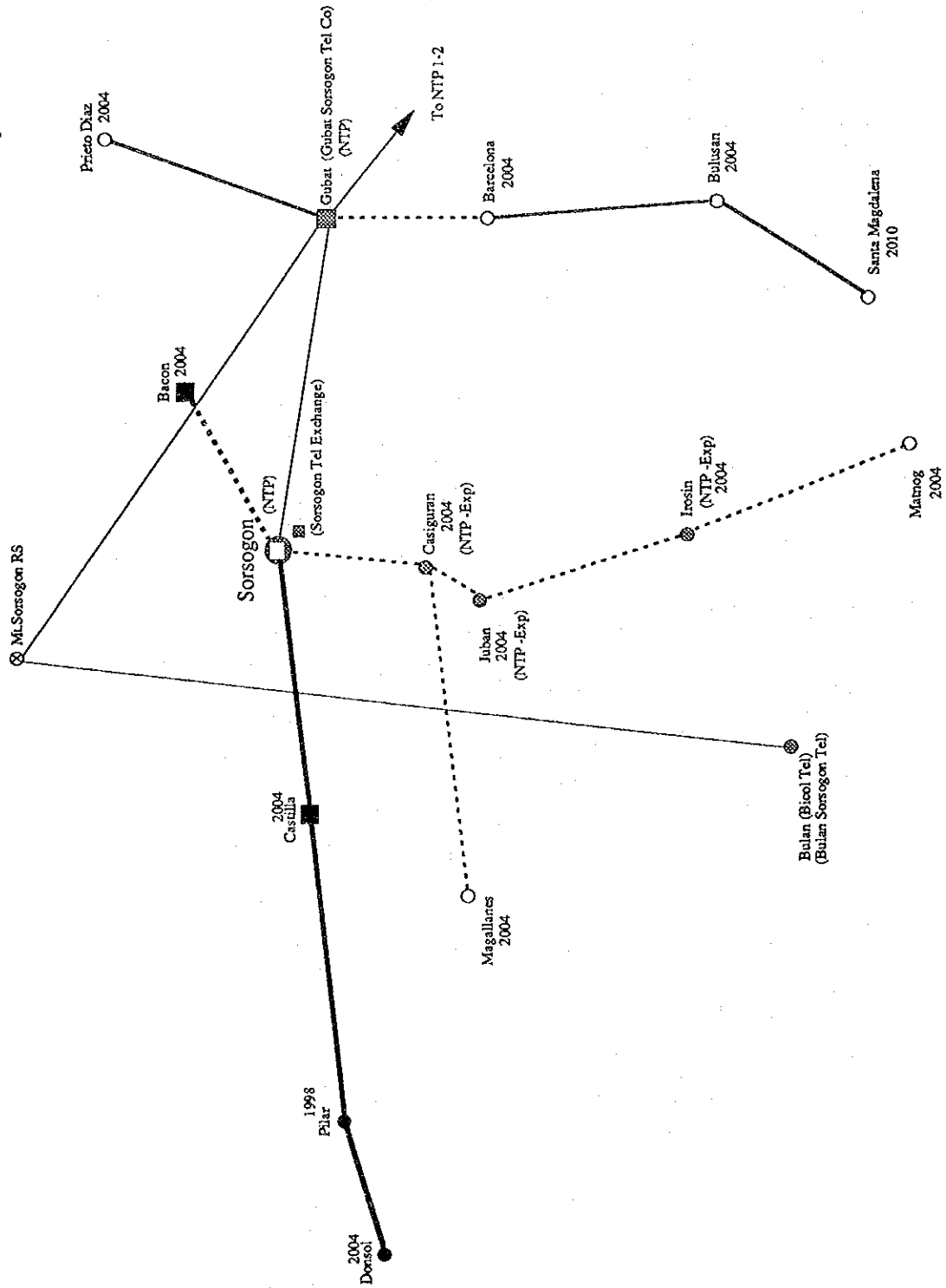


MASBATE (Reg. 5) 36/73

Municipalities : 21

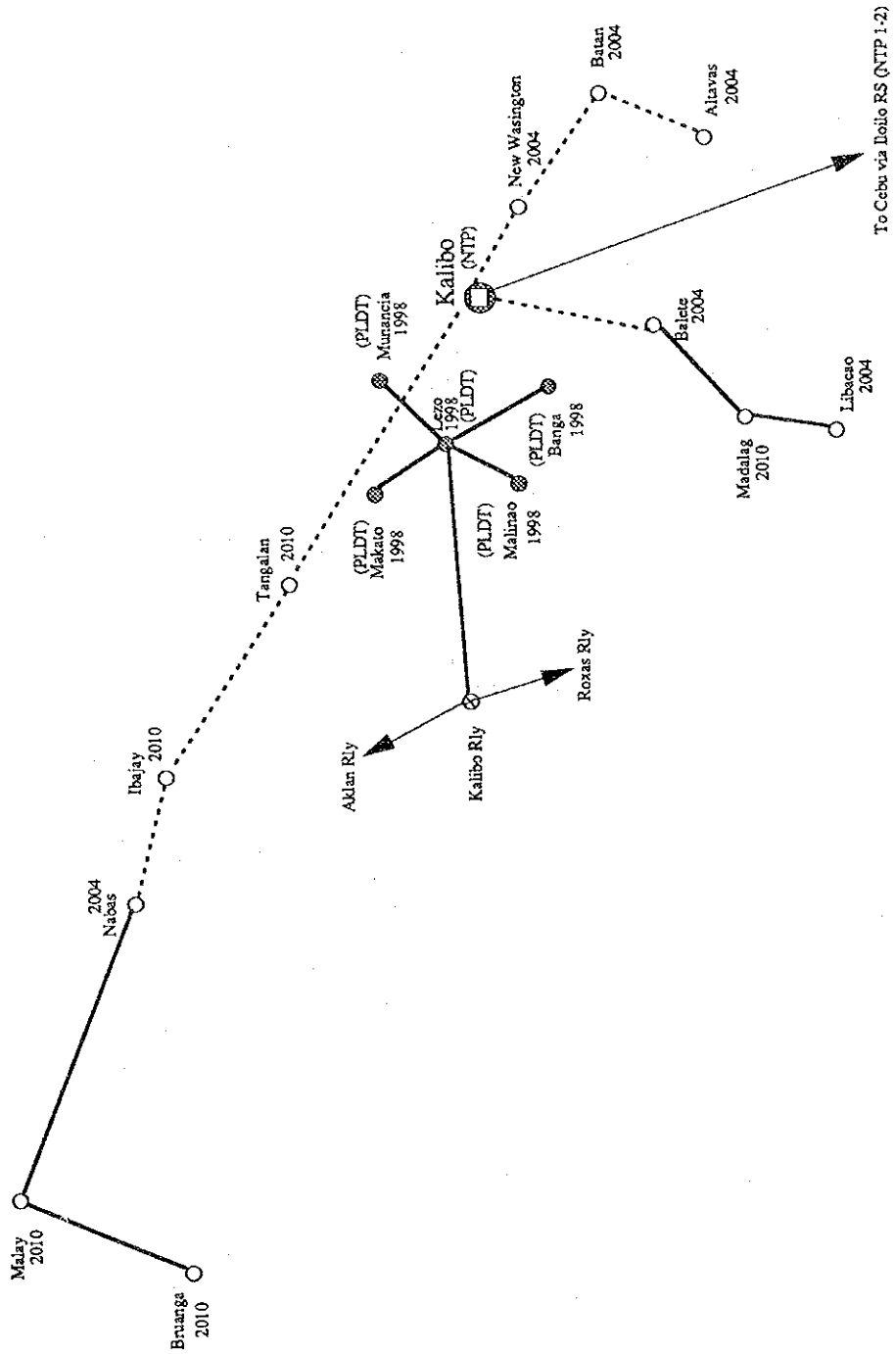


SORSOGON (Reg. 5) 37/73
Municipalities : 16

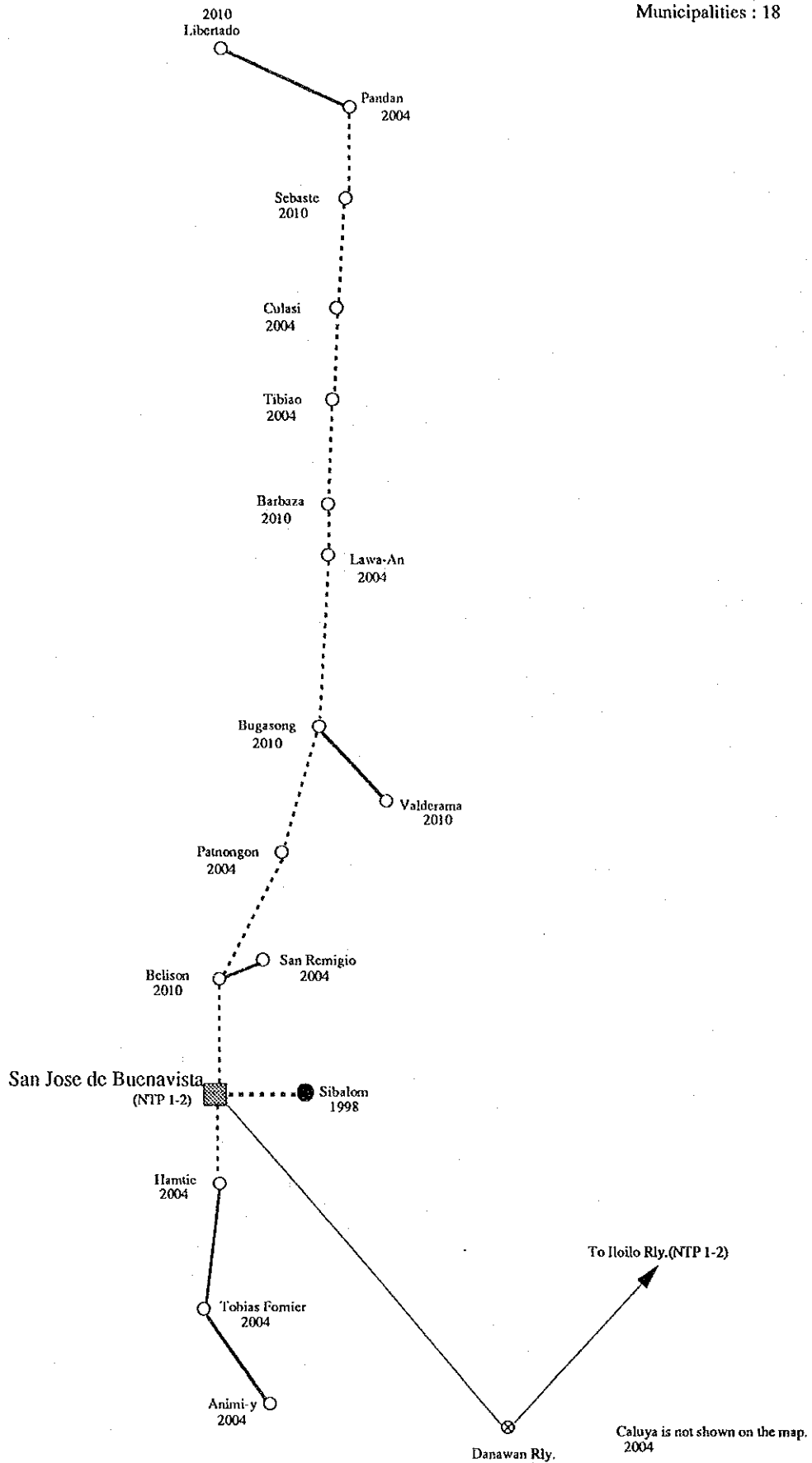


AKLAN (Reg. 6) 38/73

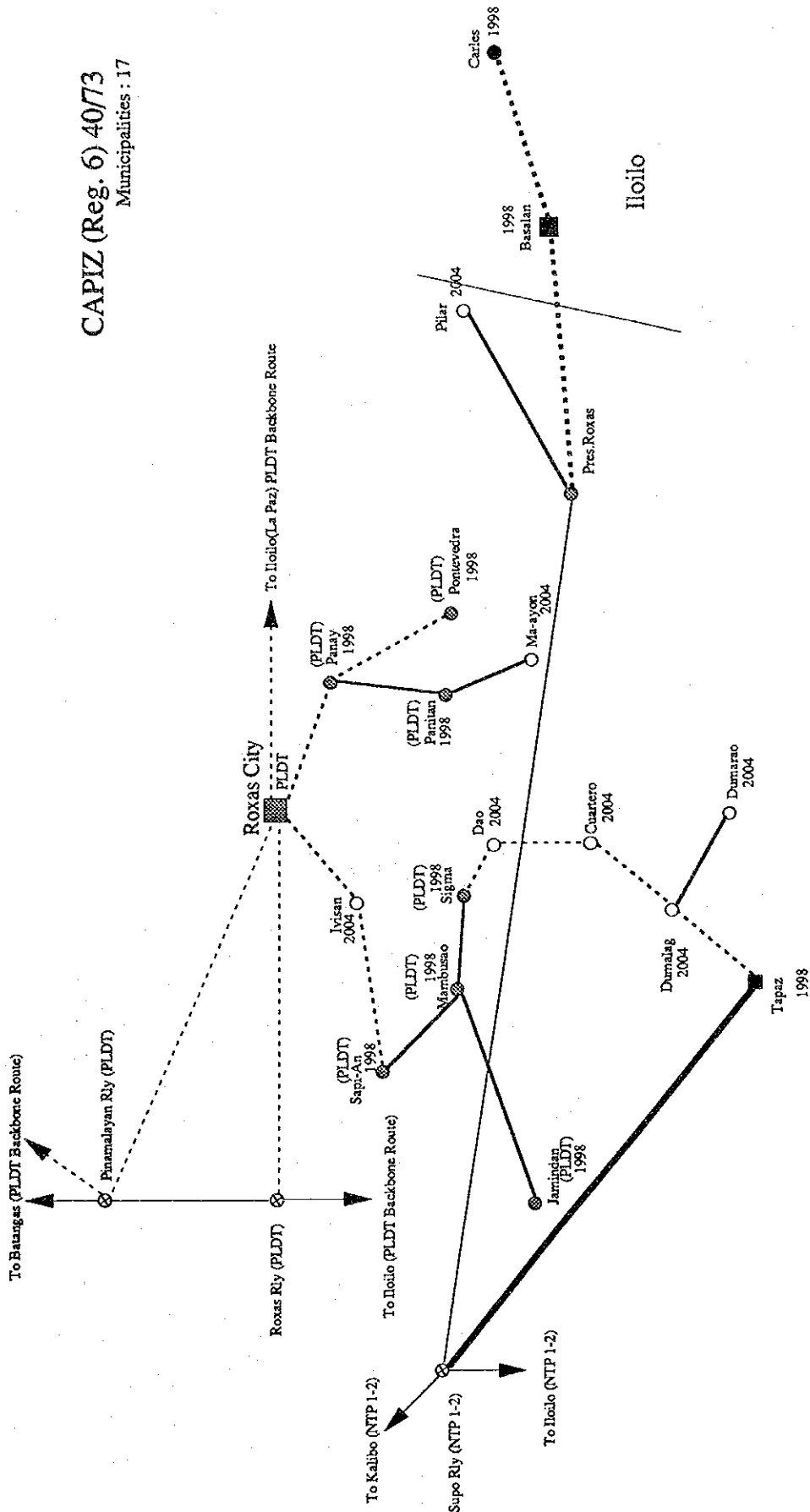
Municipalities : 17



ANTIQUE (Reg. 6) 39/73
Municipalities : 18

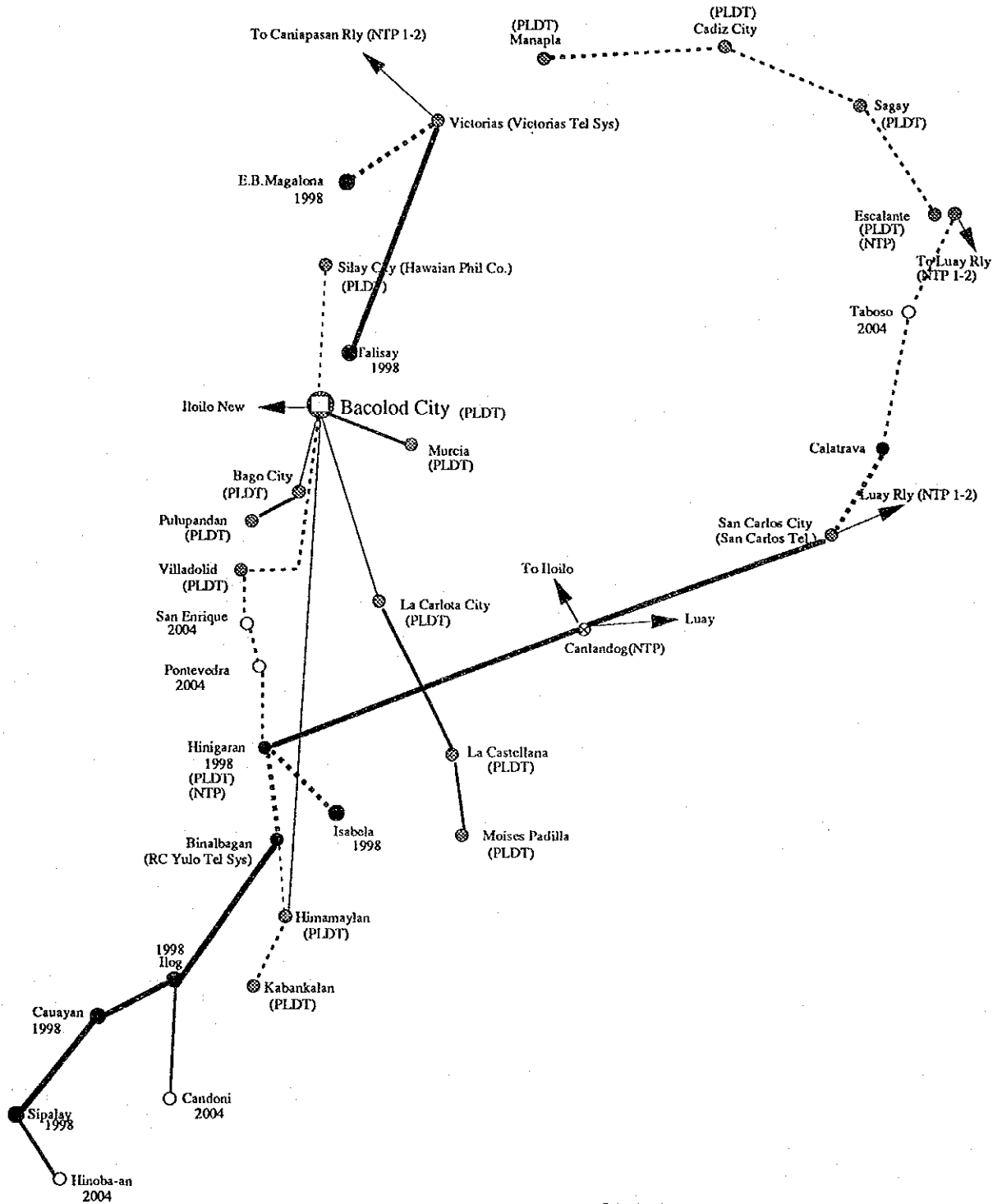


CAPIZ (Reg. 6) 40/73
Municipalities : 17



NEGROS OCCIDENTAL (Reg. 6) 42/73

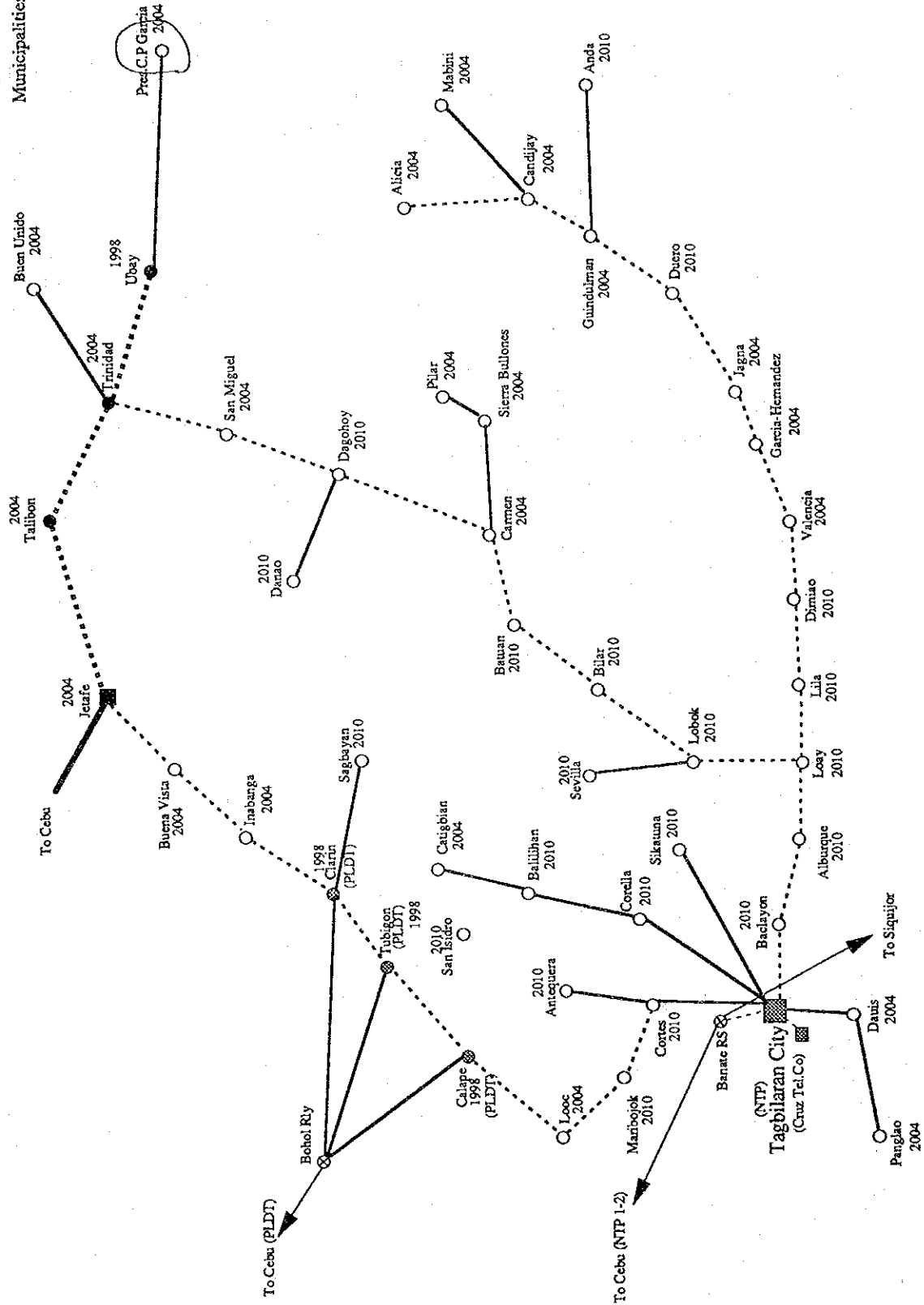
Municipalities : 32



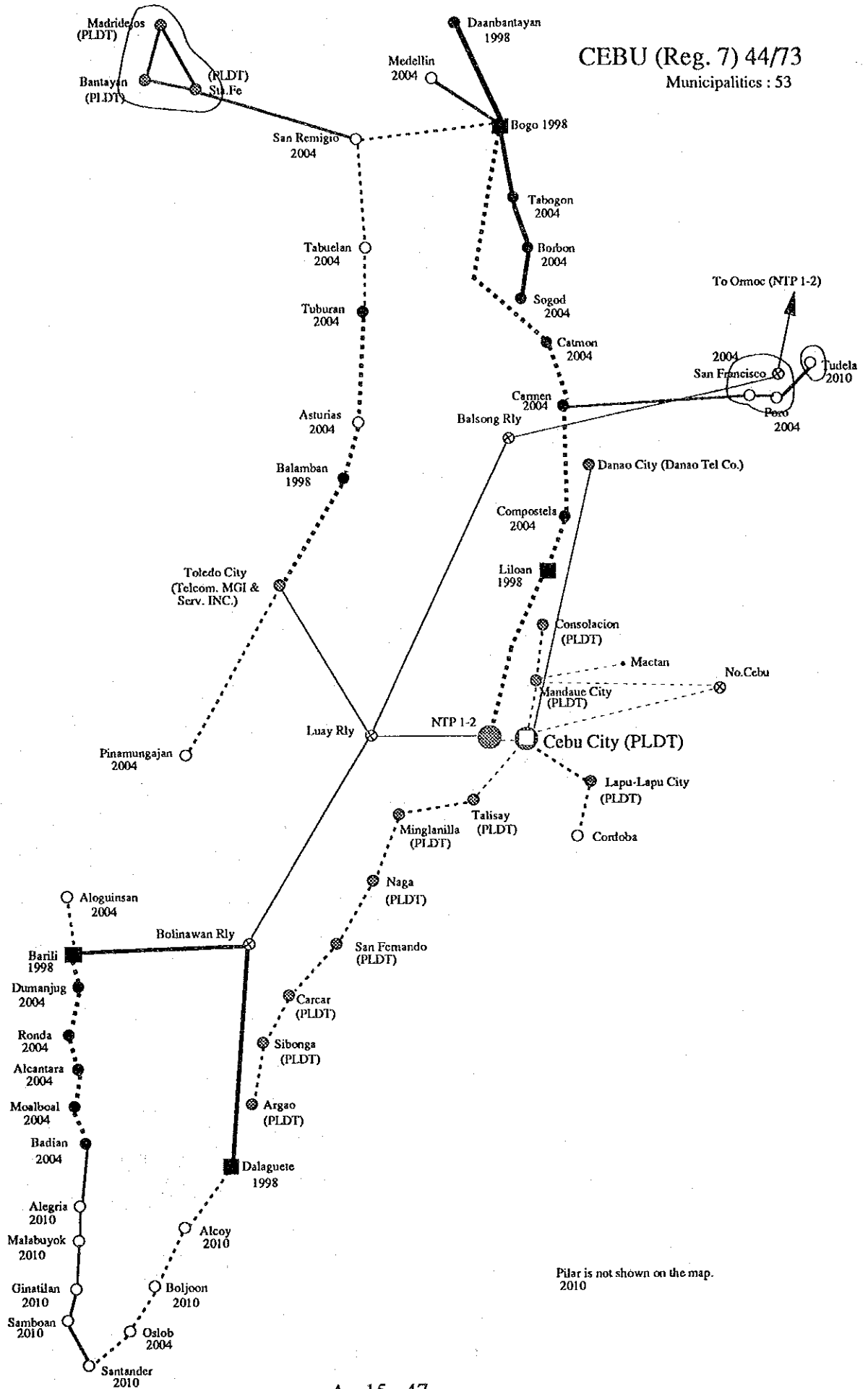
Salvador Benedicto is not shown on the map.
2010

BOHOL (Reg. 7) 43/73

Municipalities : 48



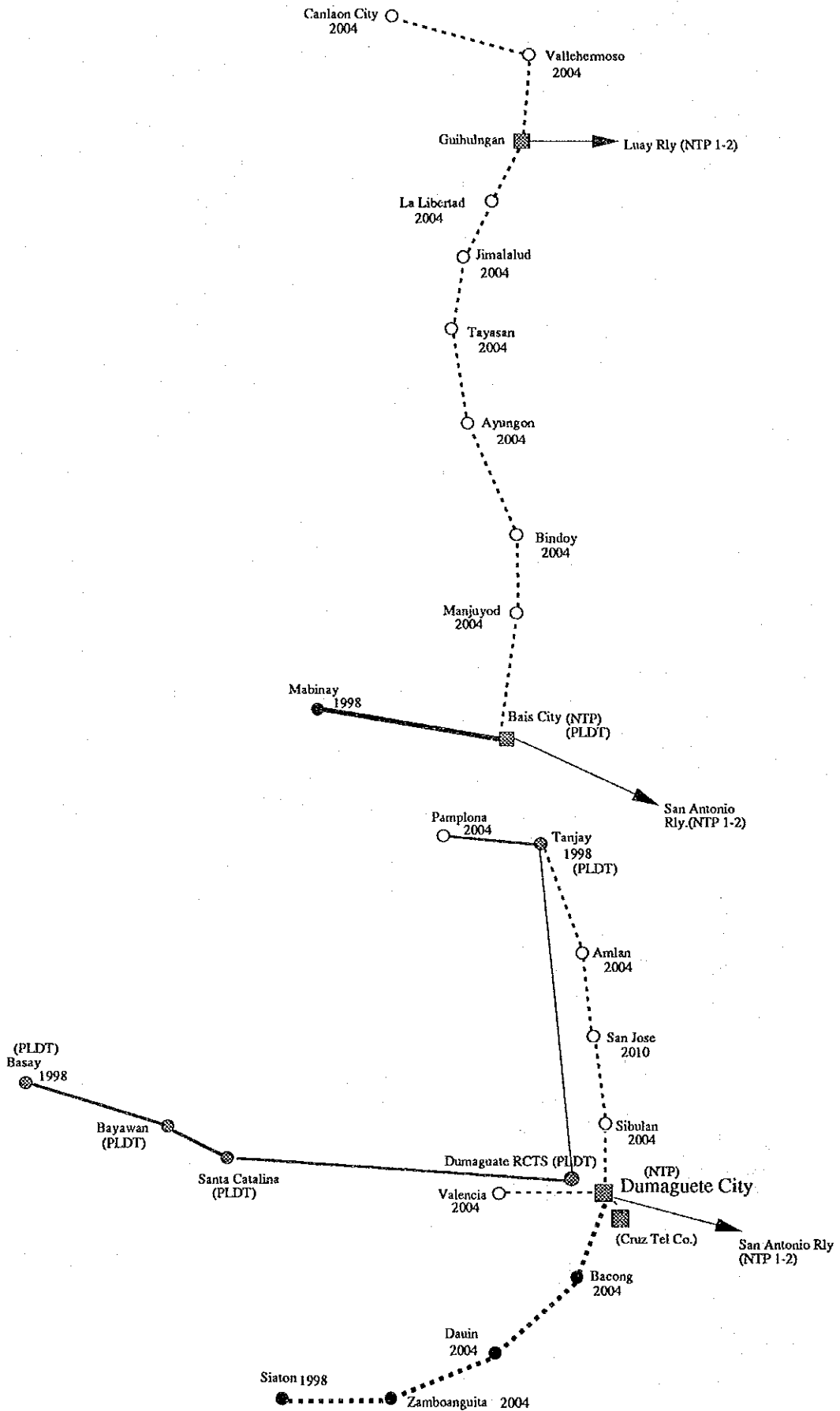
CEBU (Reg. 7) 44/73
Municipalities : 53



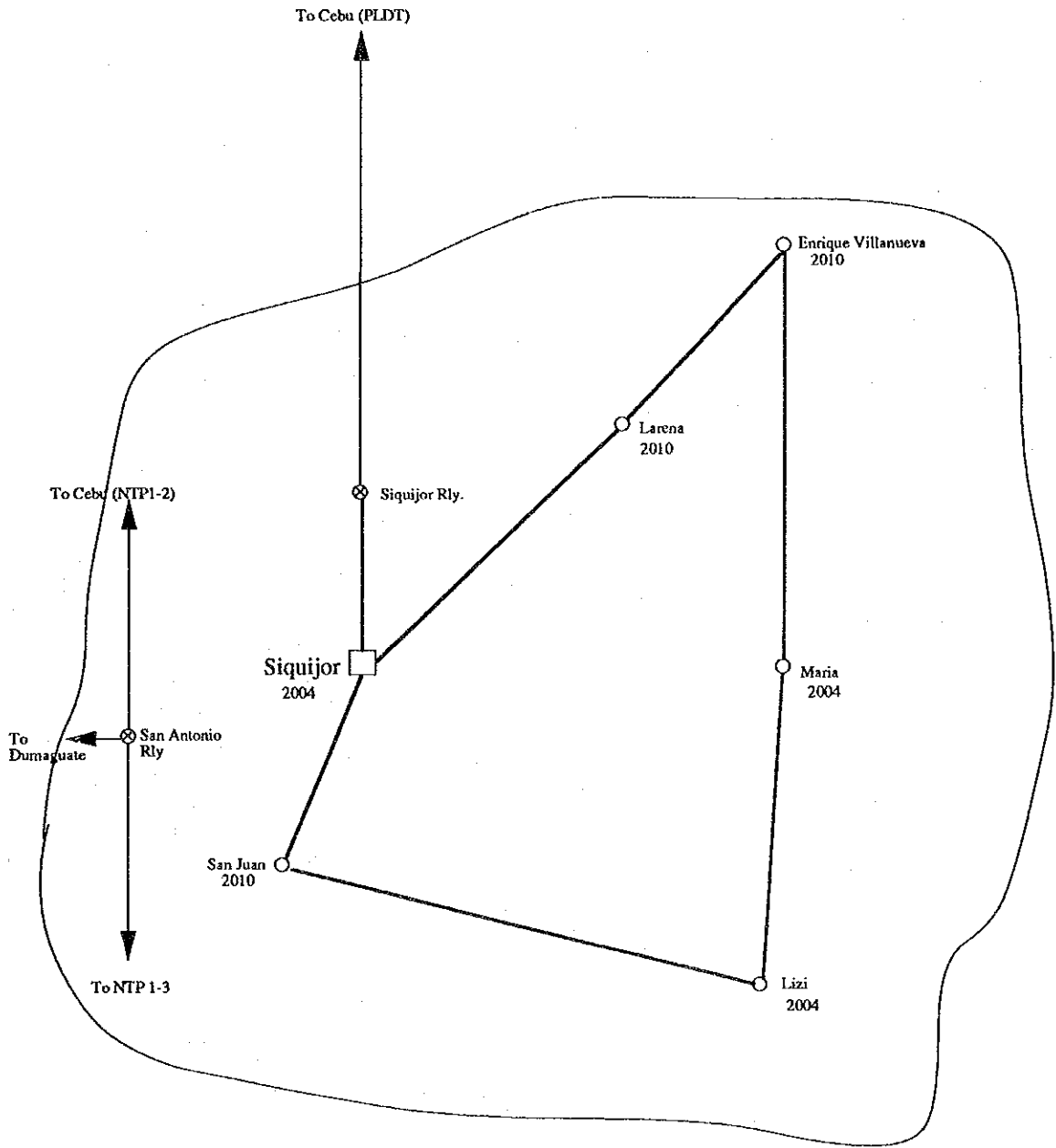
Pilar is not shown on the map.
2010

NEGROS ORIENTAL (Reg.7) 45/73

Municipalities : 25

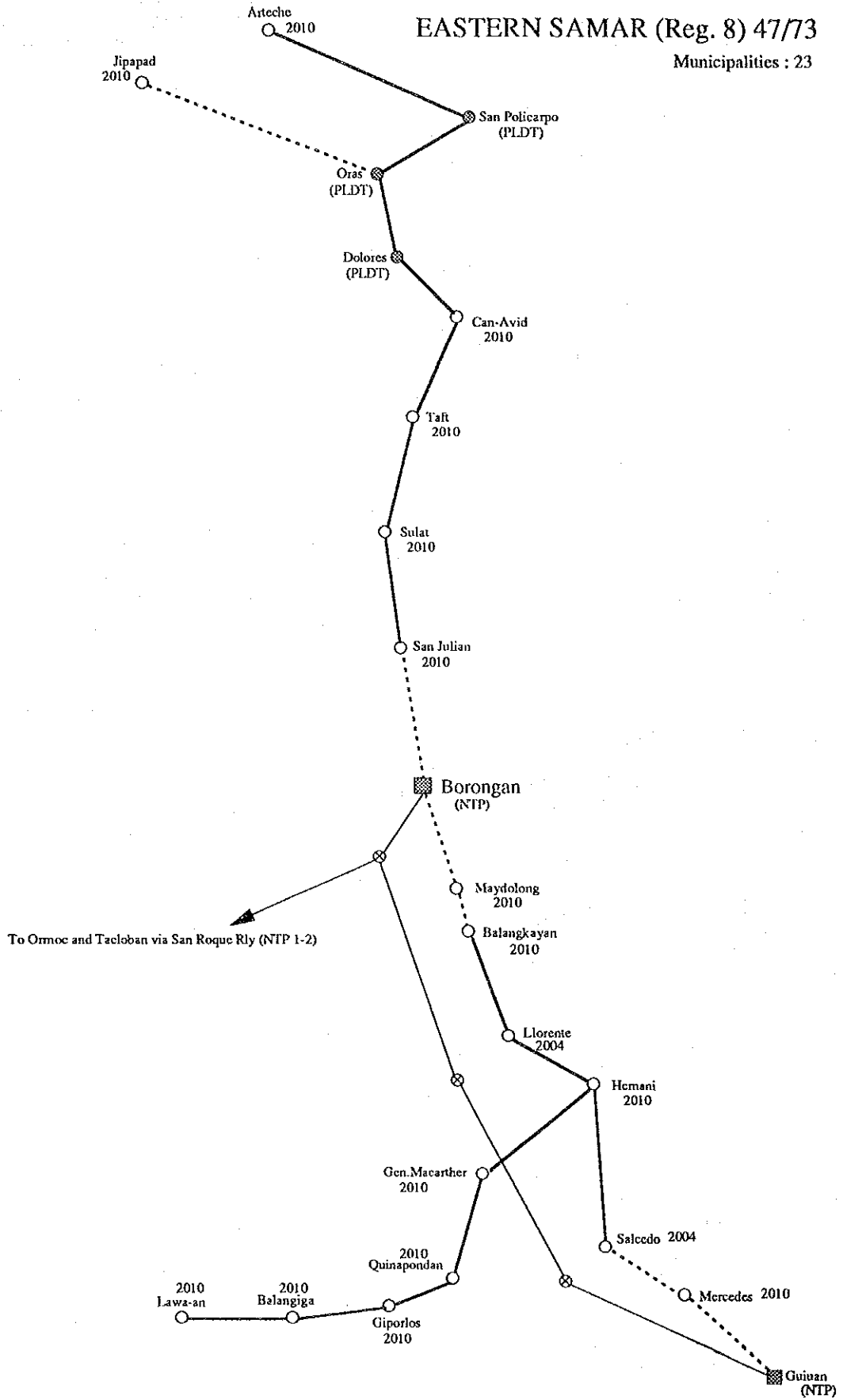


SIQUIJOR (Reg. 7) 46/73
Municipalities : 6



EASTERN SAMAR (Reg. 8) 47/73

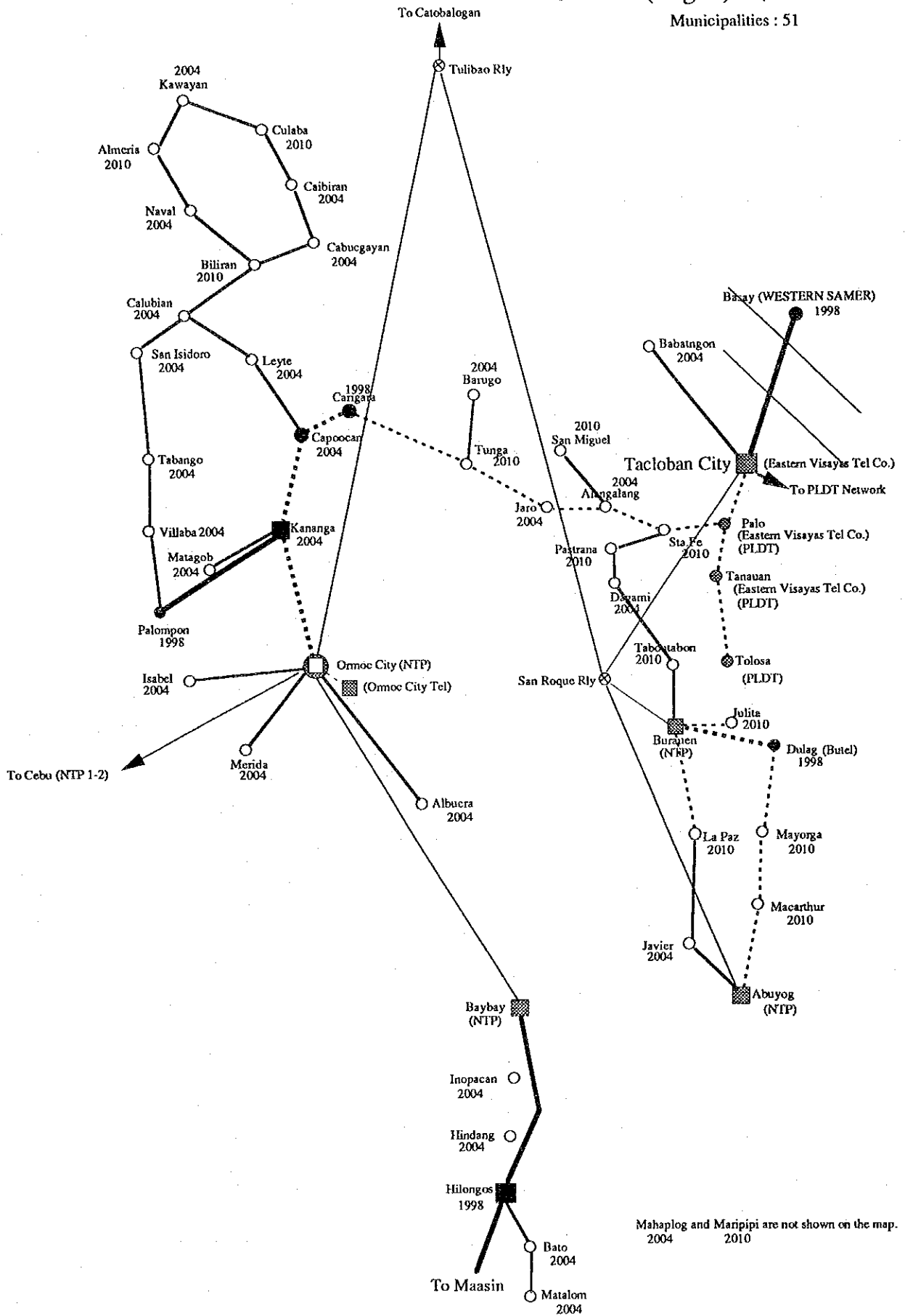
Municipalities : 23



Maslog is not shown on the map.
2010

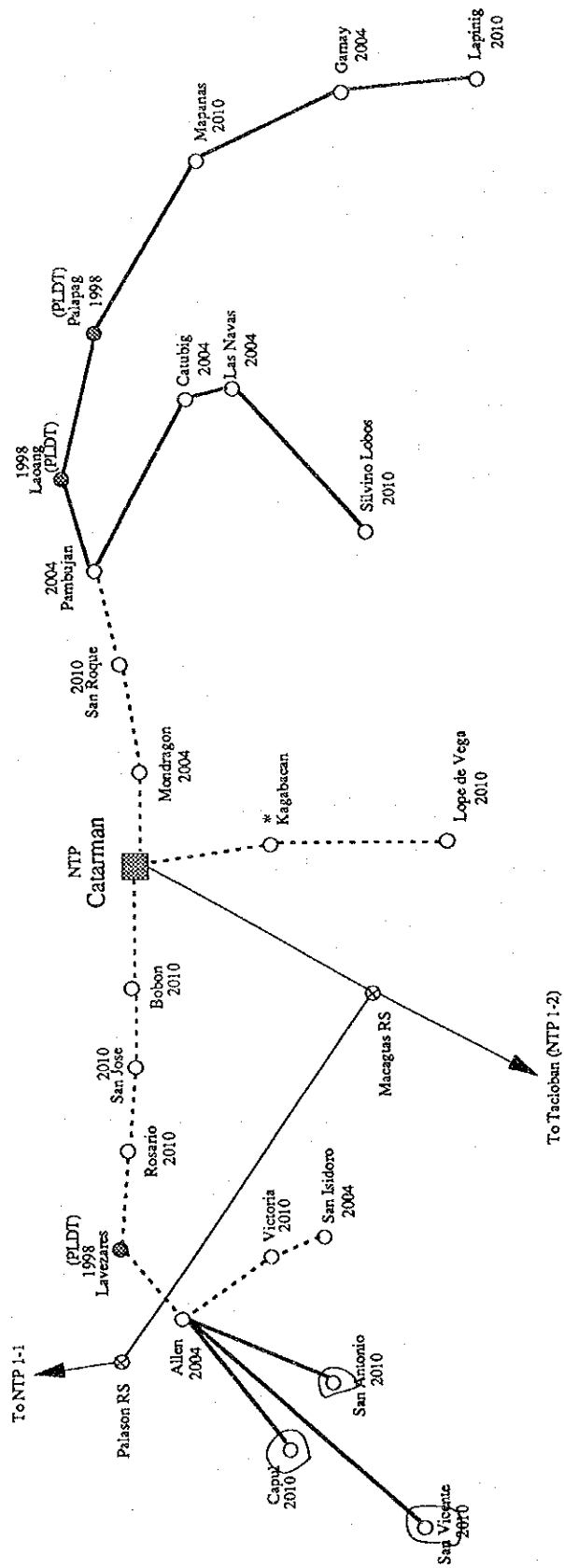
LEYTE (Reg. 8) 48/73

Municipalities : 51



NORTHERN SAMAR (Reg. 8) 49/73

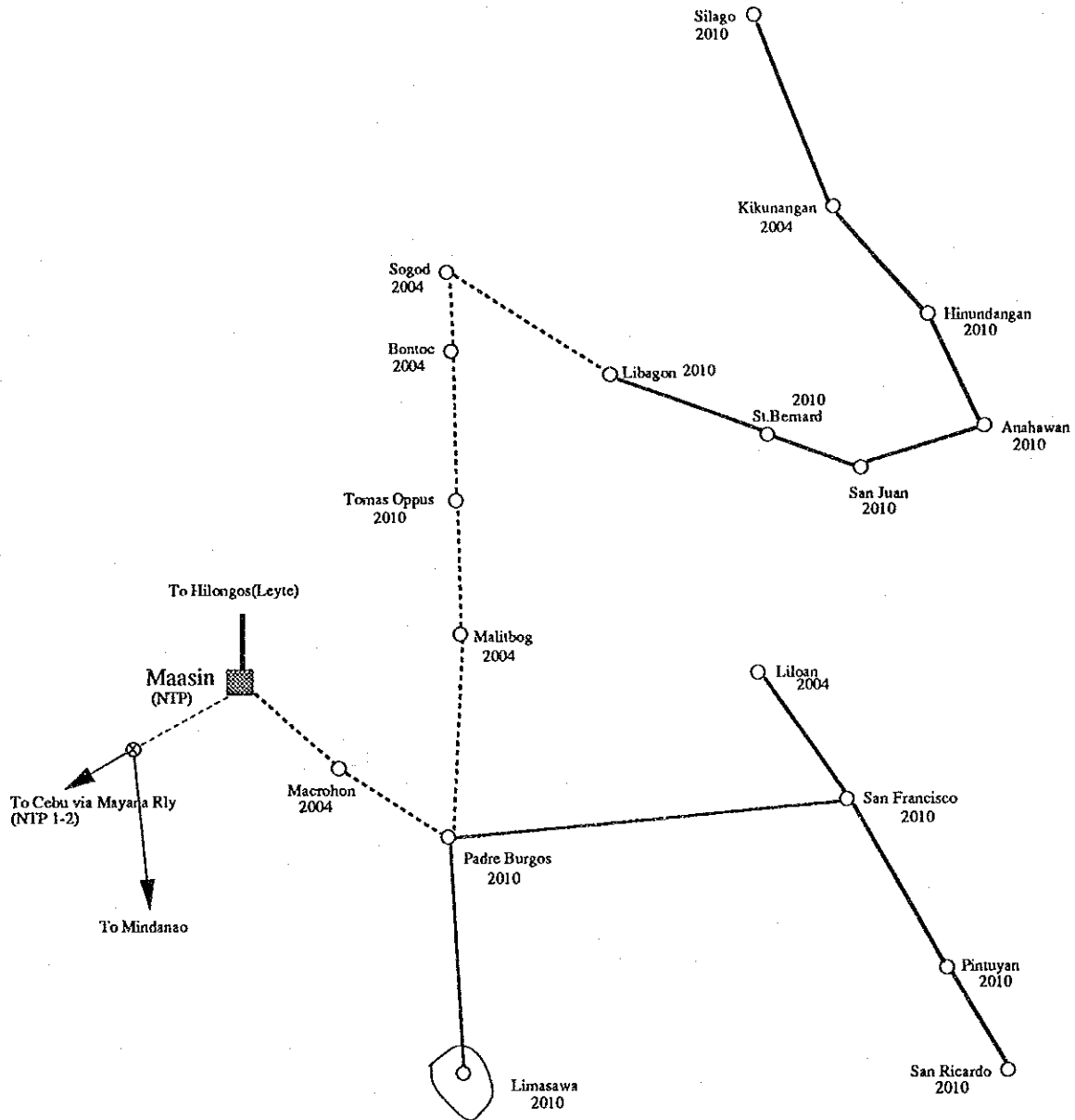
Municipalities : 24



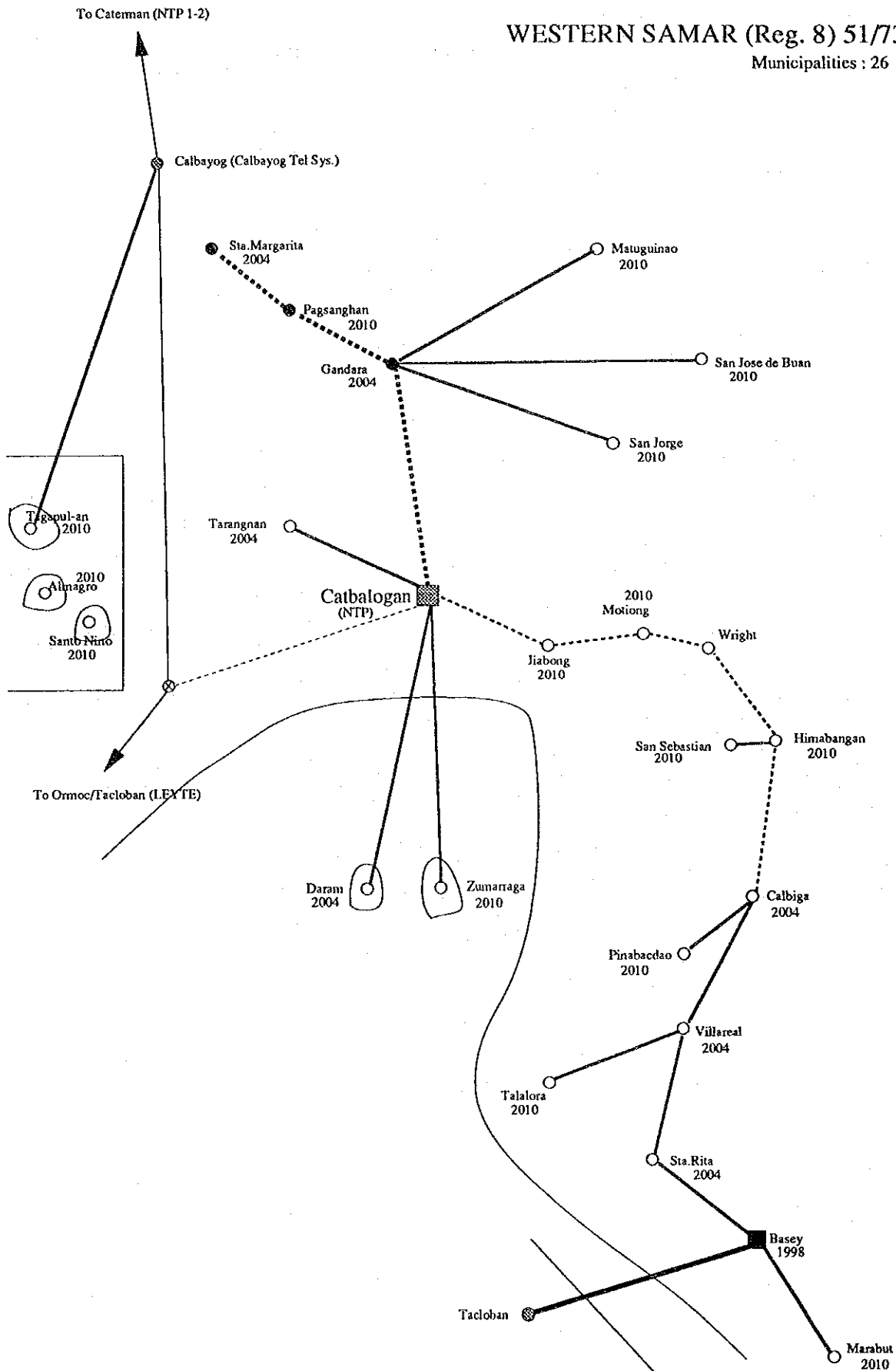
Biri is not shown on the map.
2010

SOUTHERN LEYTE (Reg. 8) 50/73

Municipalities : 19

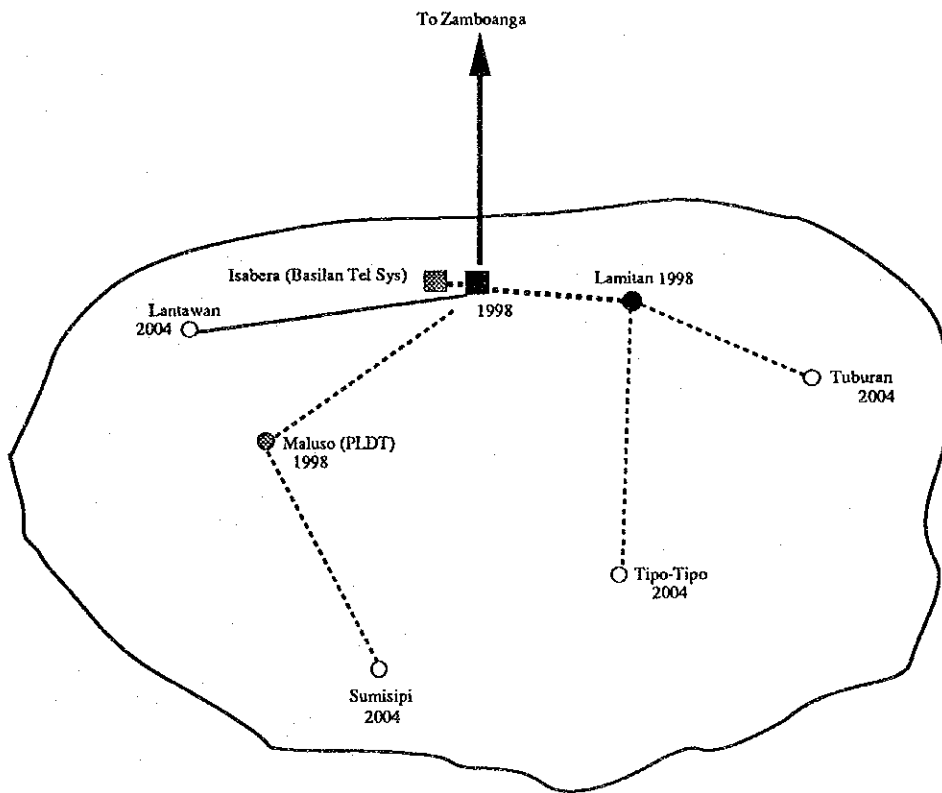


WESTERN SAMAR (Reg. 8) 51/73
Municipalities : 26

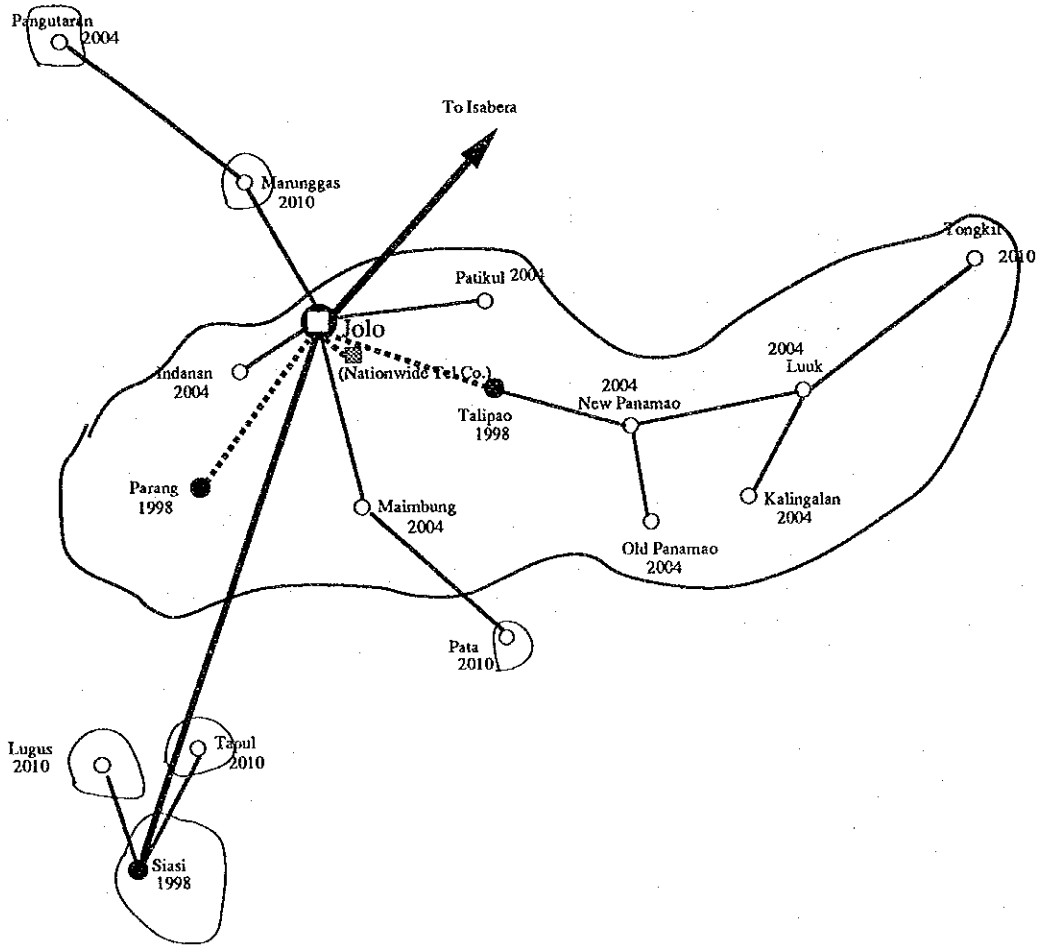


BASILAN (Reg. 9) 52/73

Municipalities : 7



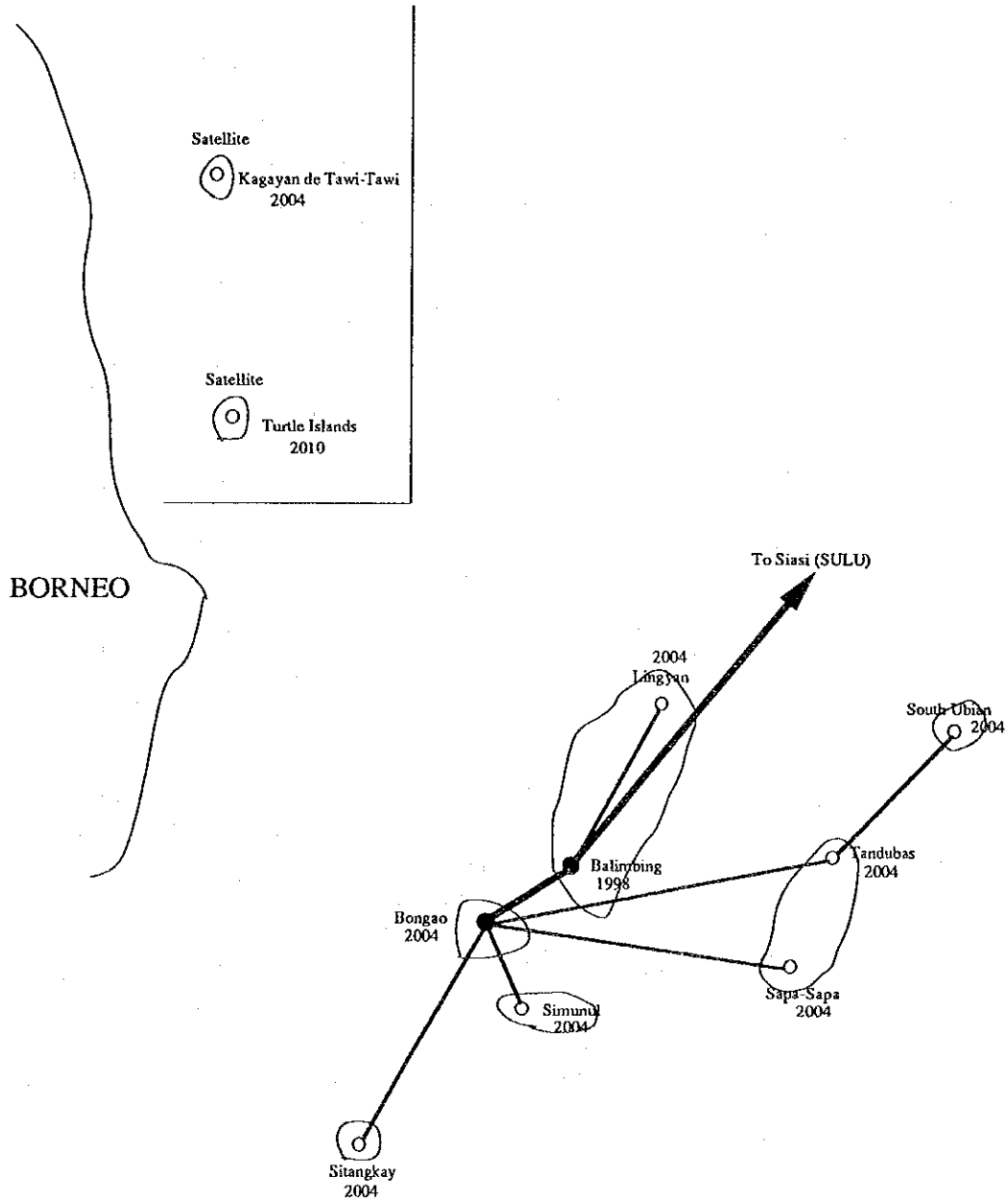
SULU (ARMM) 53/73
Municipalities : 18



Pandani is not shown on the map.
2004

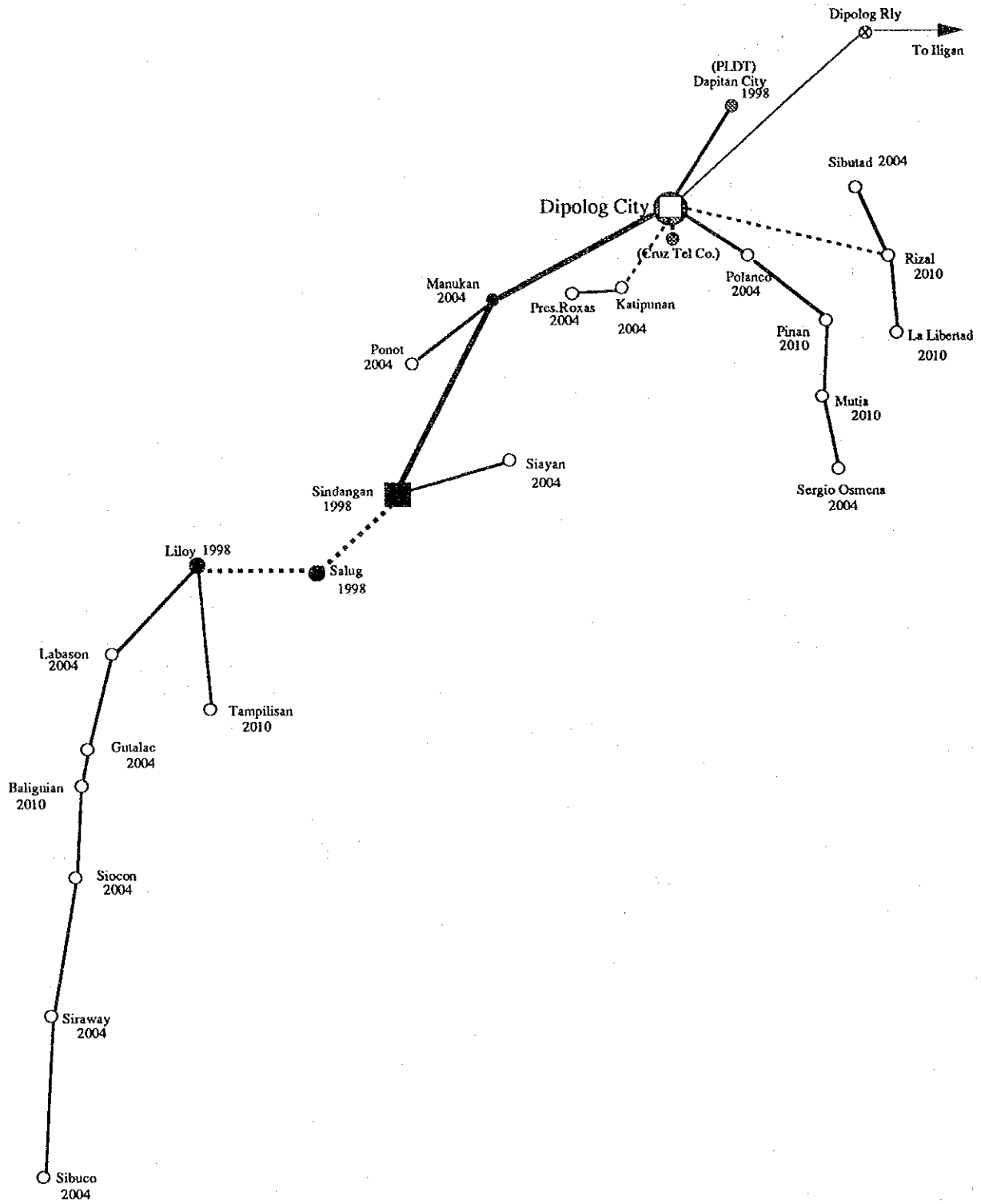
TAWI-TAWI (ARMM) 54/73

Municipalities : 10



ZAMBOANGA DEL NORTE (Reg. 9) 55/73

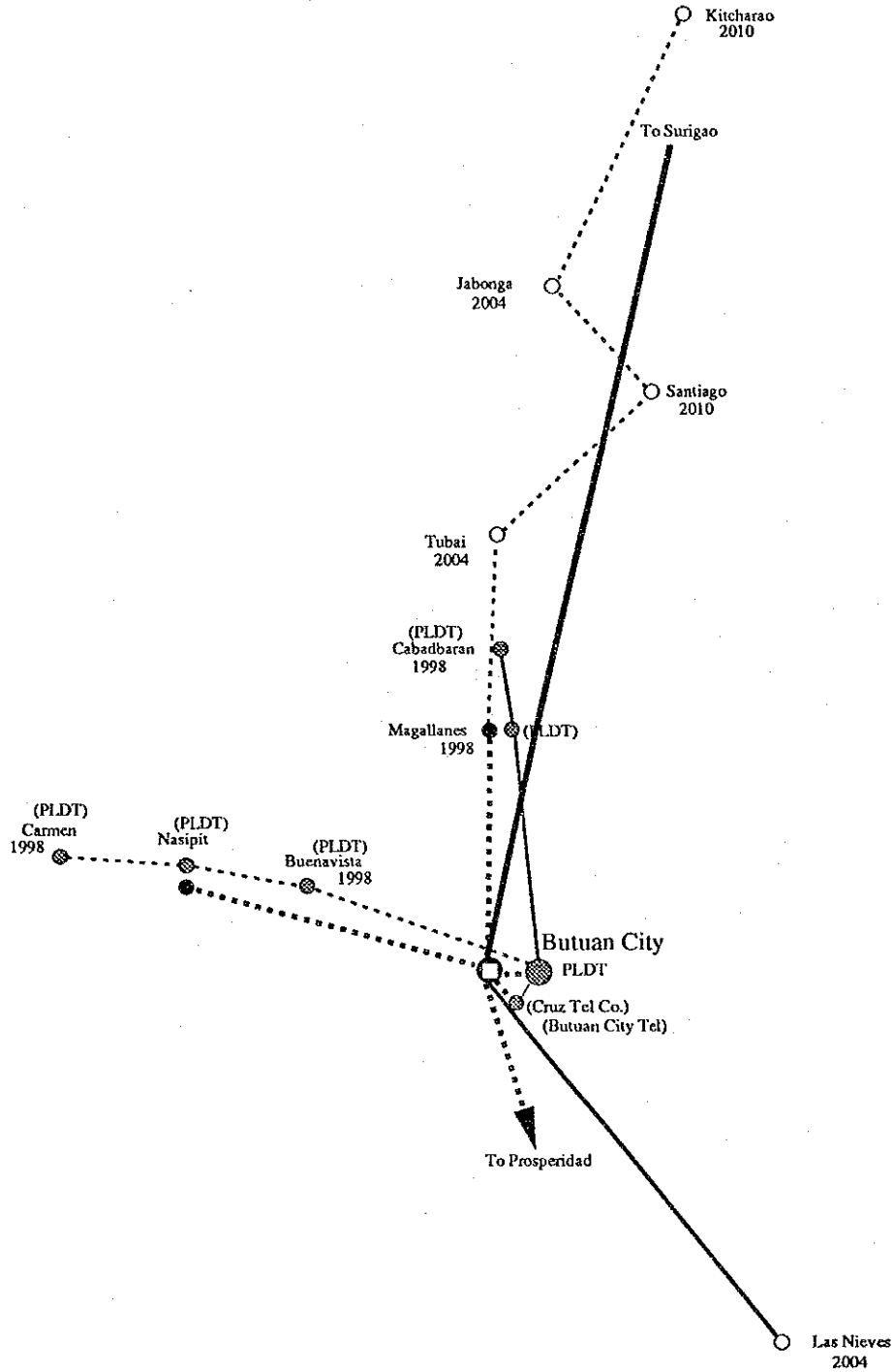
Municipalities : 27



Bacungan, Godod and Kalawit are not shown on the map.
2010 2010 2010

AGUSAN DEL NORTE (Reg. 10) 57/73

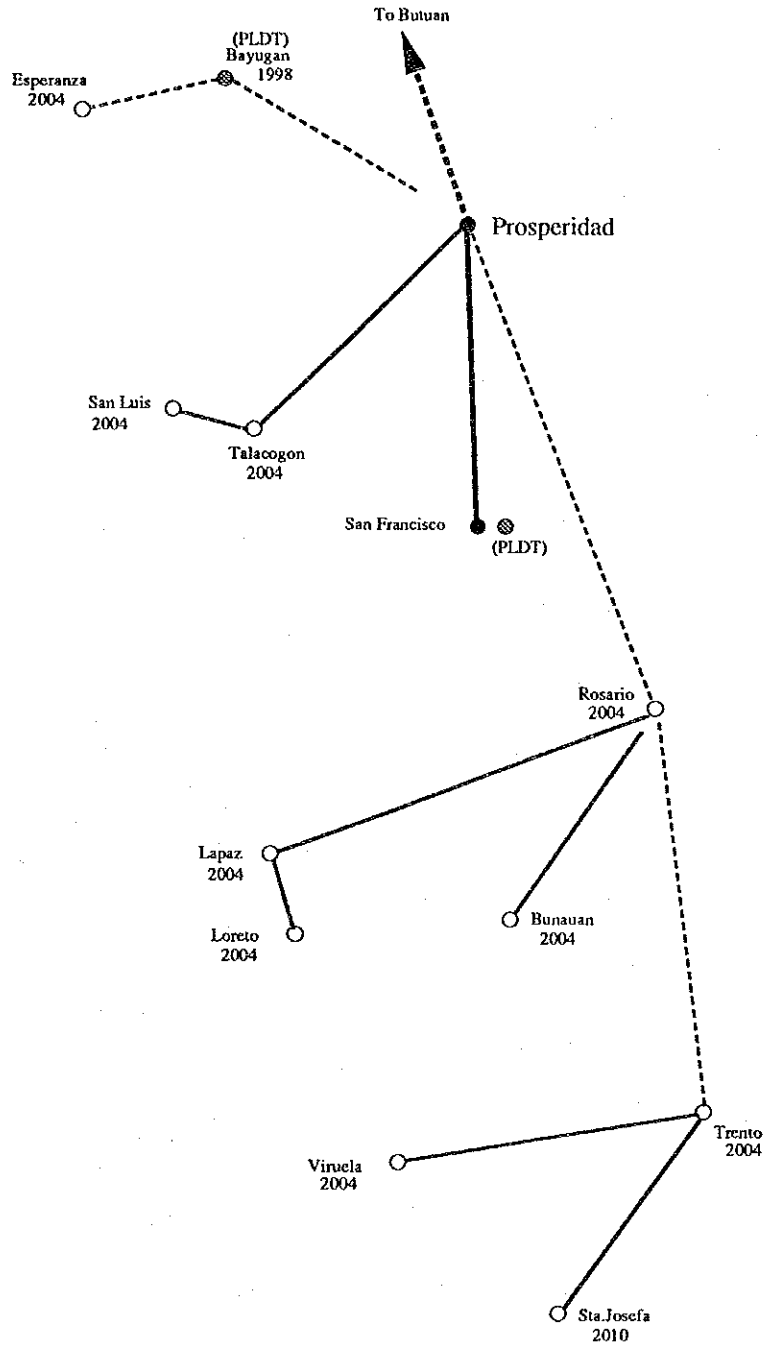
Municipalities : 12



R.T. Romualdez is not shown on the map.
2010

AGUSAN DEL SUR (Reg. 10) 58/73

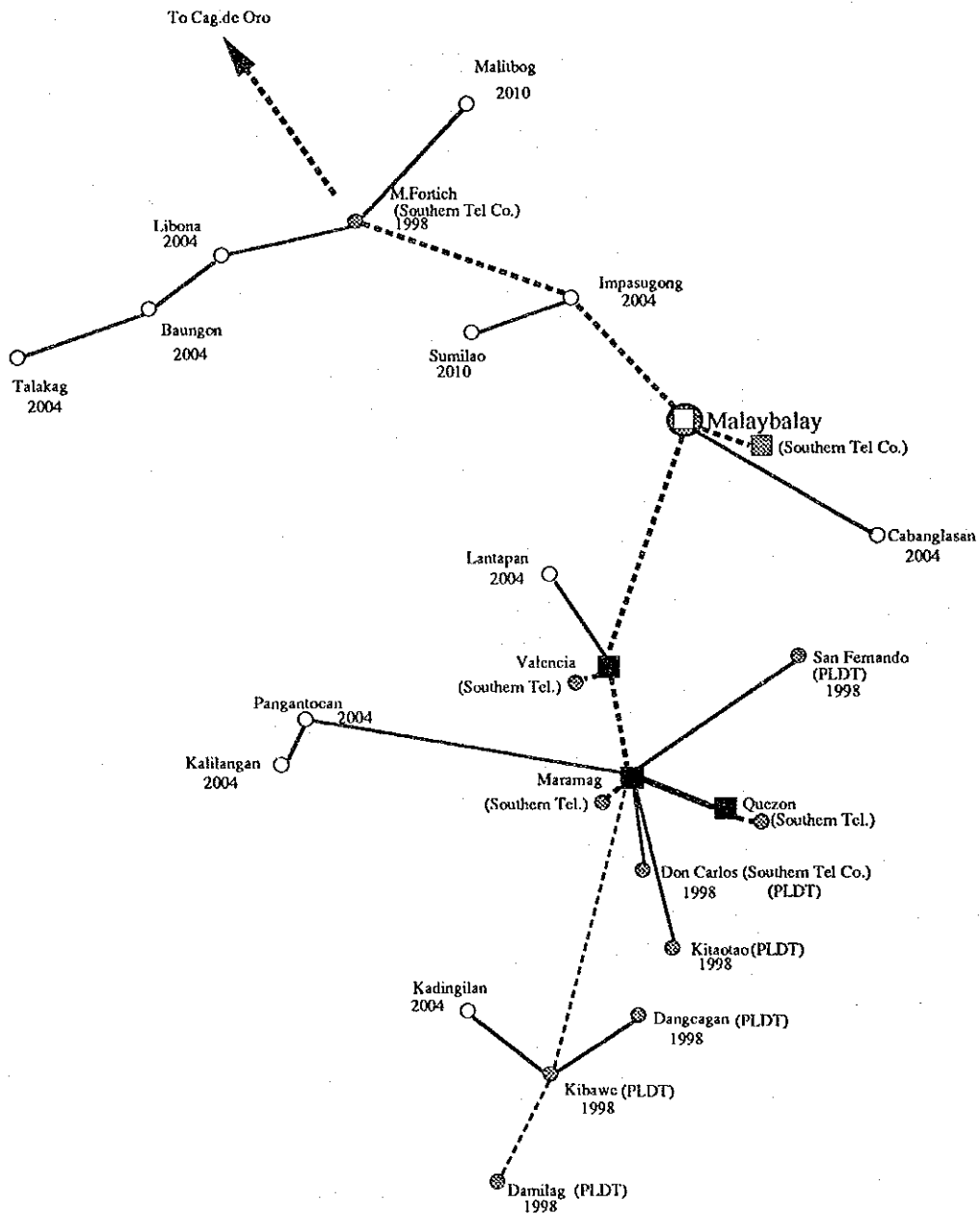
Municipalities : 14



Sibagat is not shown on the map.
2004

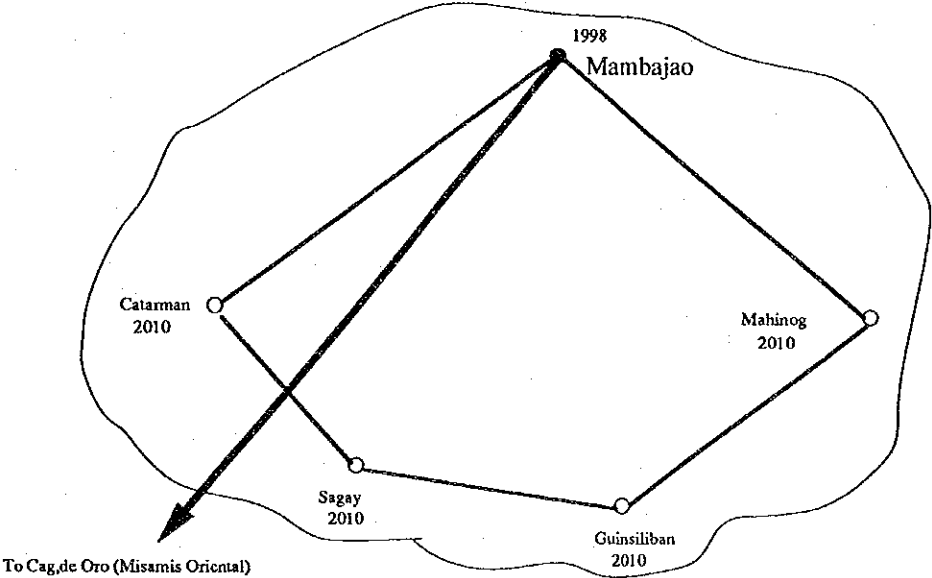
BUKIDNON (Reg. 10) 59/73

Municipalities : 22



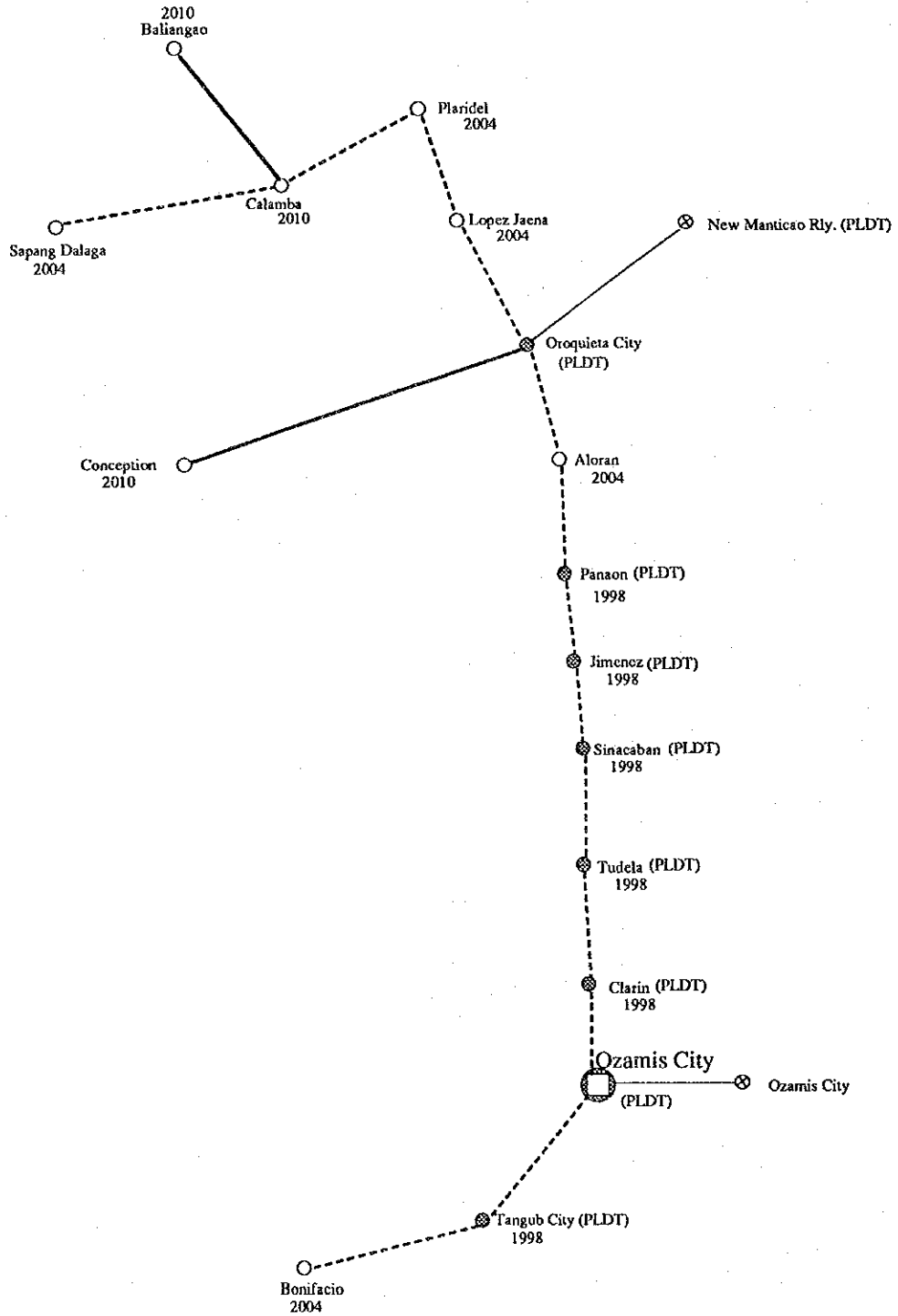
CAMINGAN (Reg. 10) 60/73

Municipalities : 5



MISAMIS OCCIDENTAL (Reg. 10) 61/73

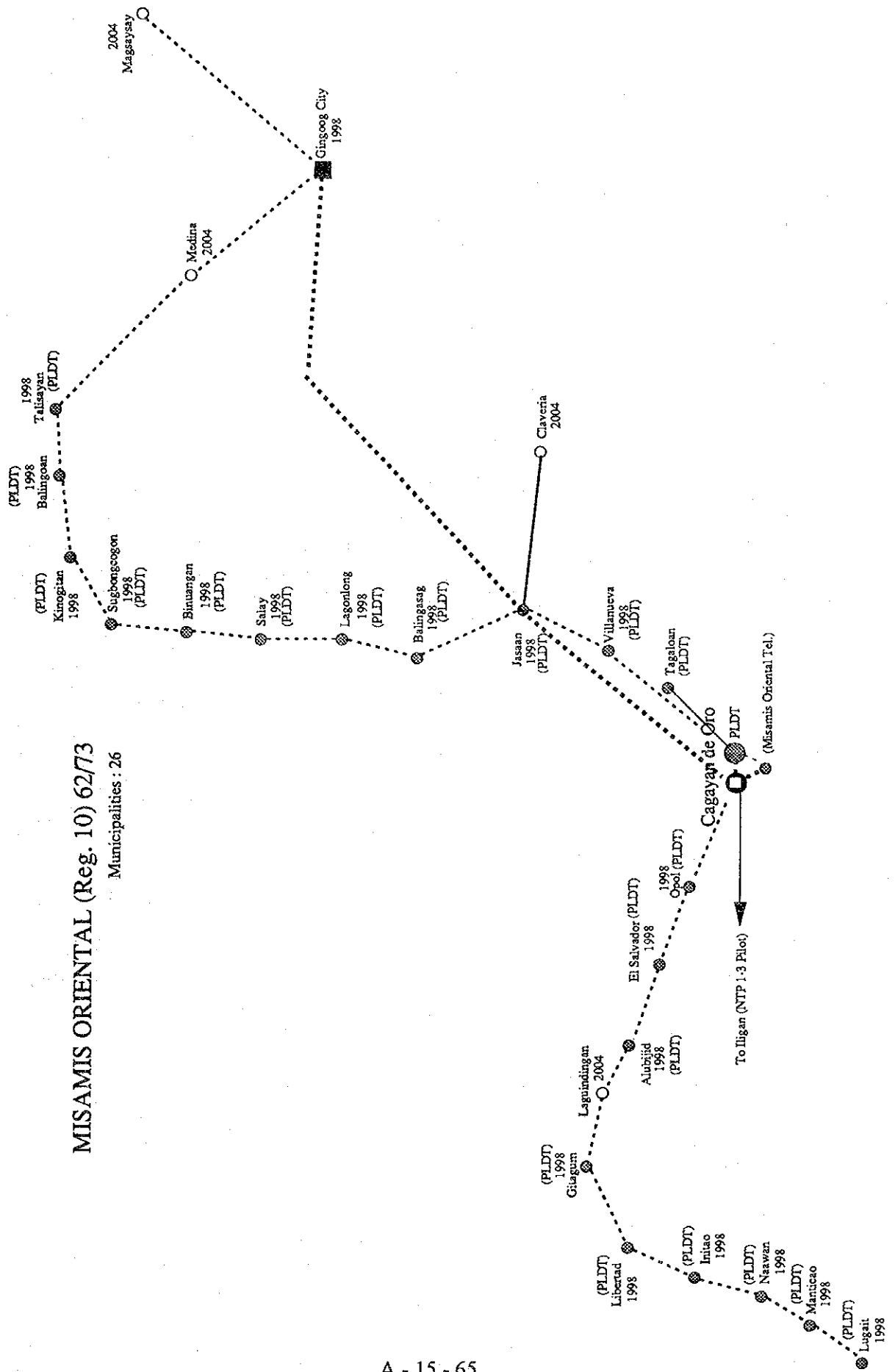
Municipalities : 17



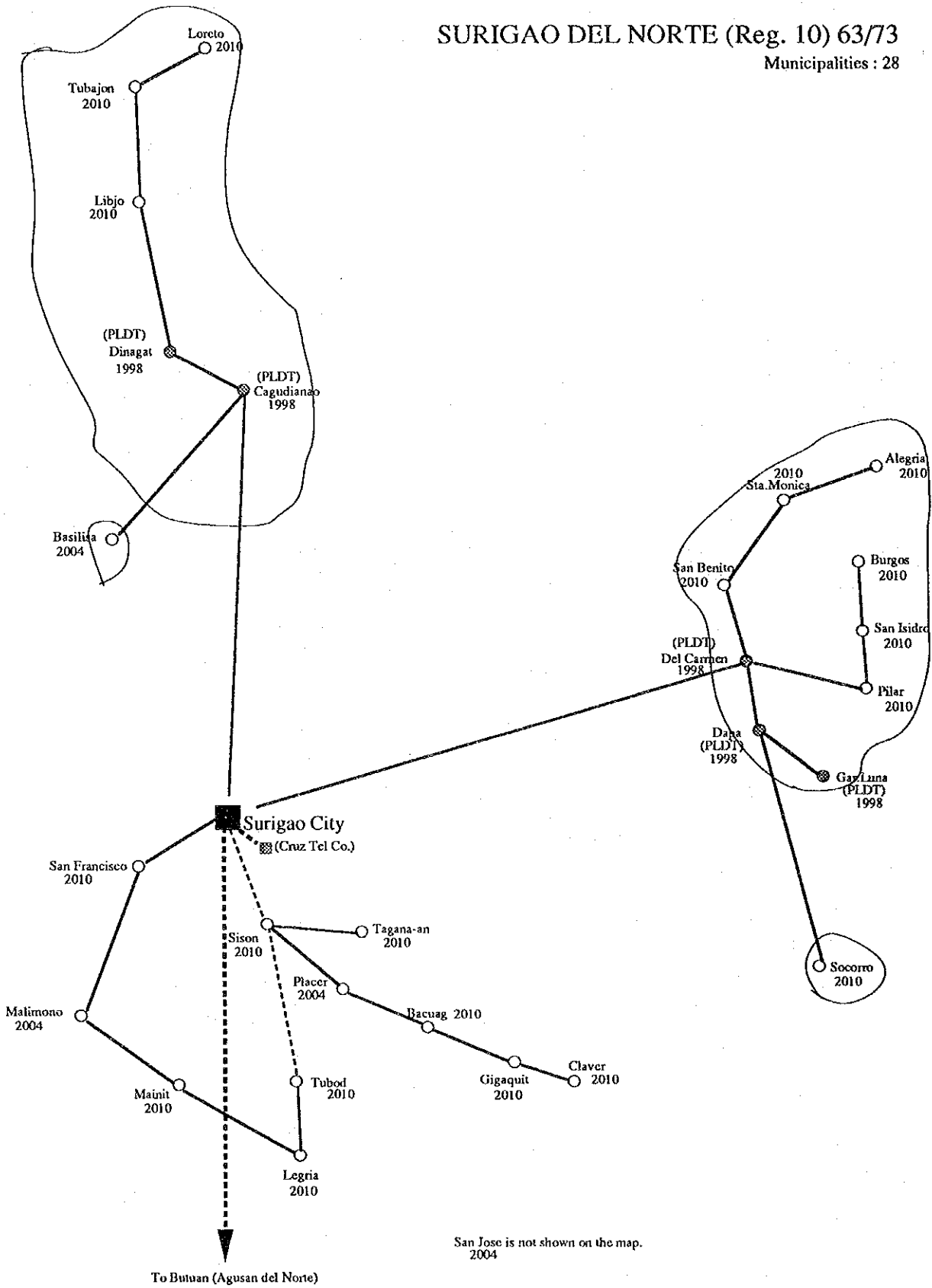
Don Victoriano Chiongbian is not shown on the map.
2010

MISAMIS ORIENTAL (Reg. 10) 62/73

Municipalities : 26



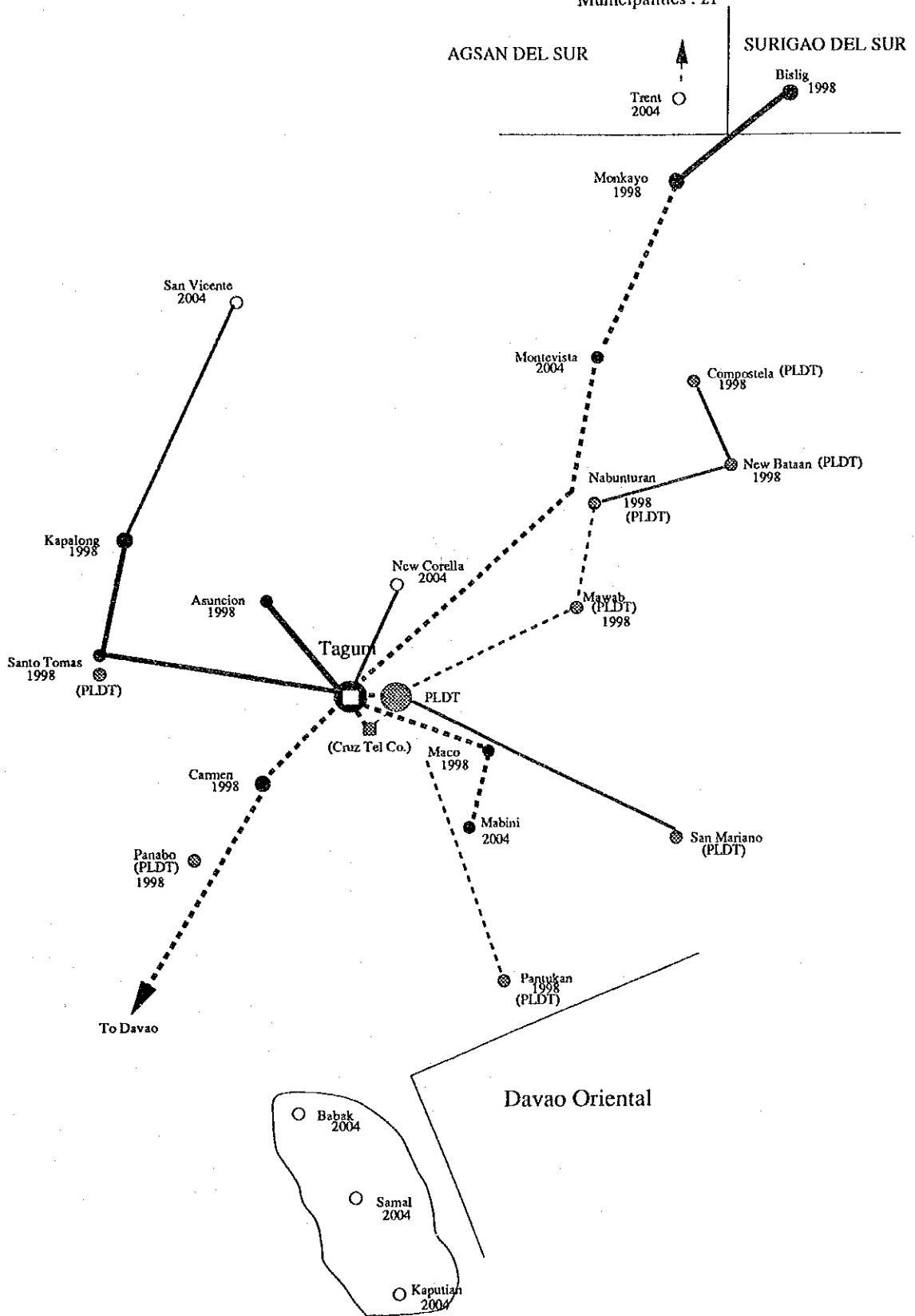
SURIGAO DEL NORTE (Reg. 10) 63/73
Municipalities : 28



San Jose is not shown on the map.
2004

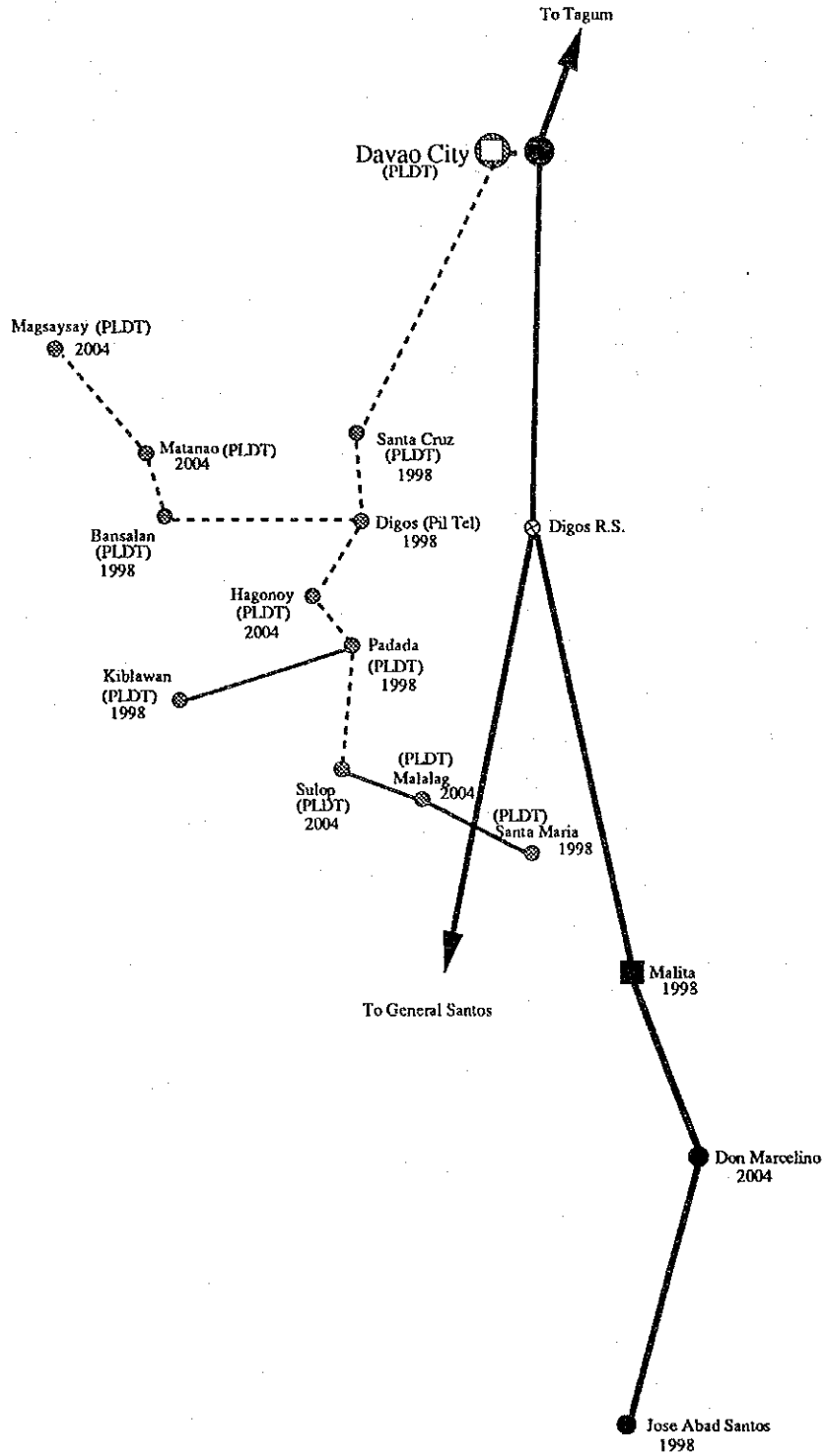
DAVAO DEL NORTE (Reg. 11) 64/73

Municipalities : 21



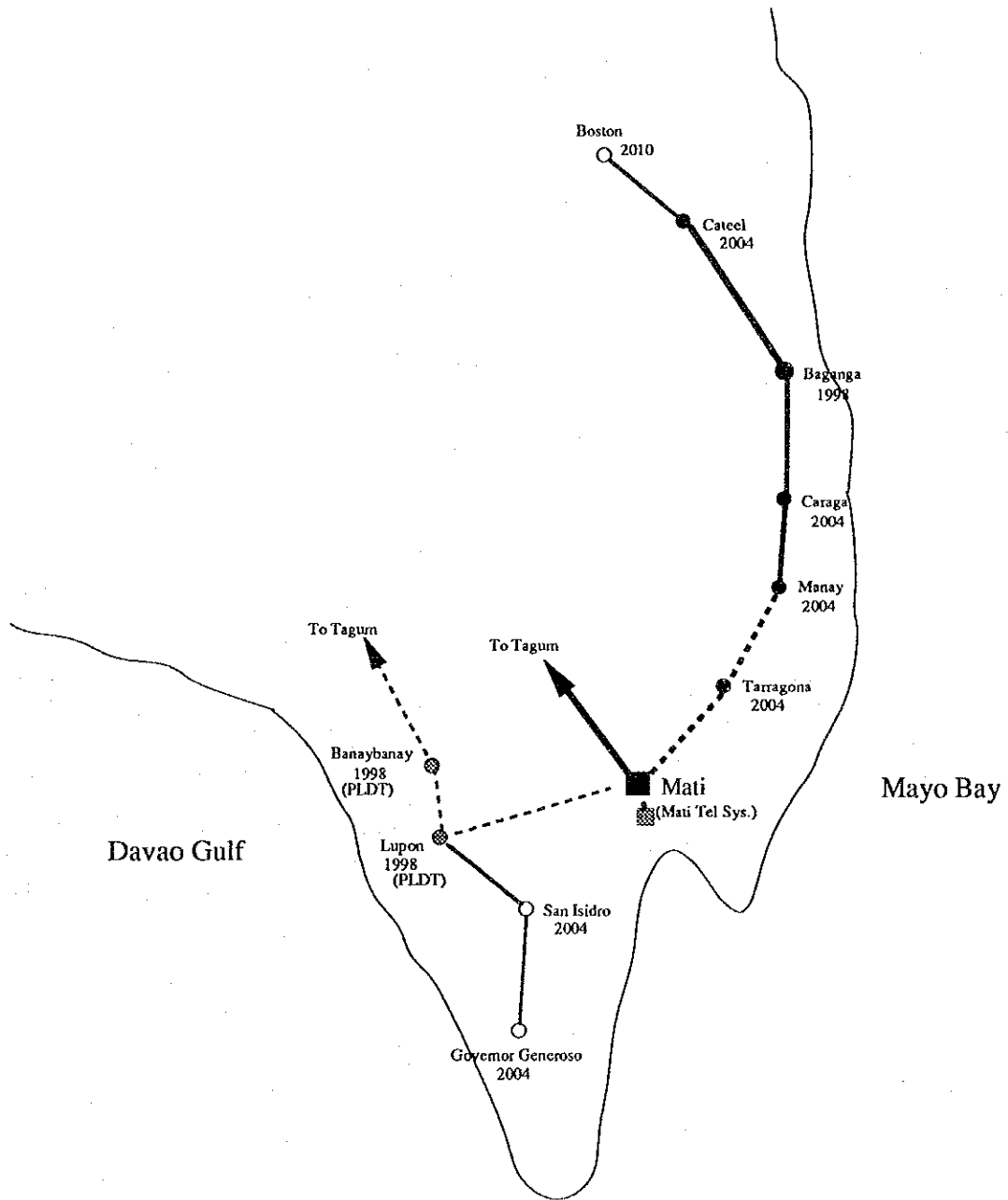
DAVAO DEL SUR (Reg. 11) 65/73

Municipalities : 16



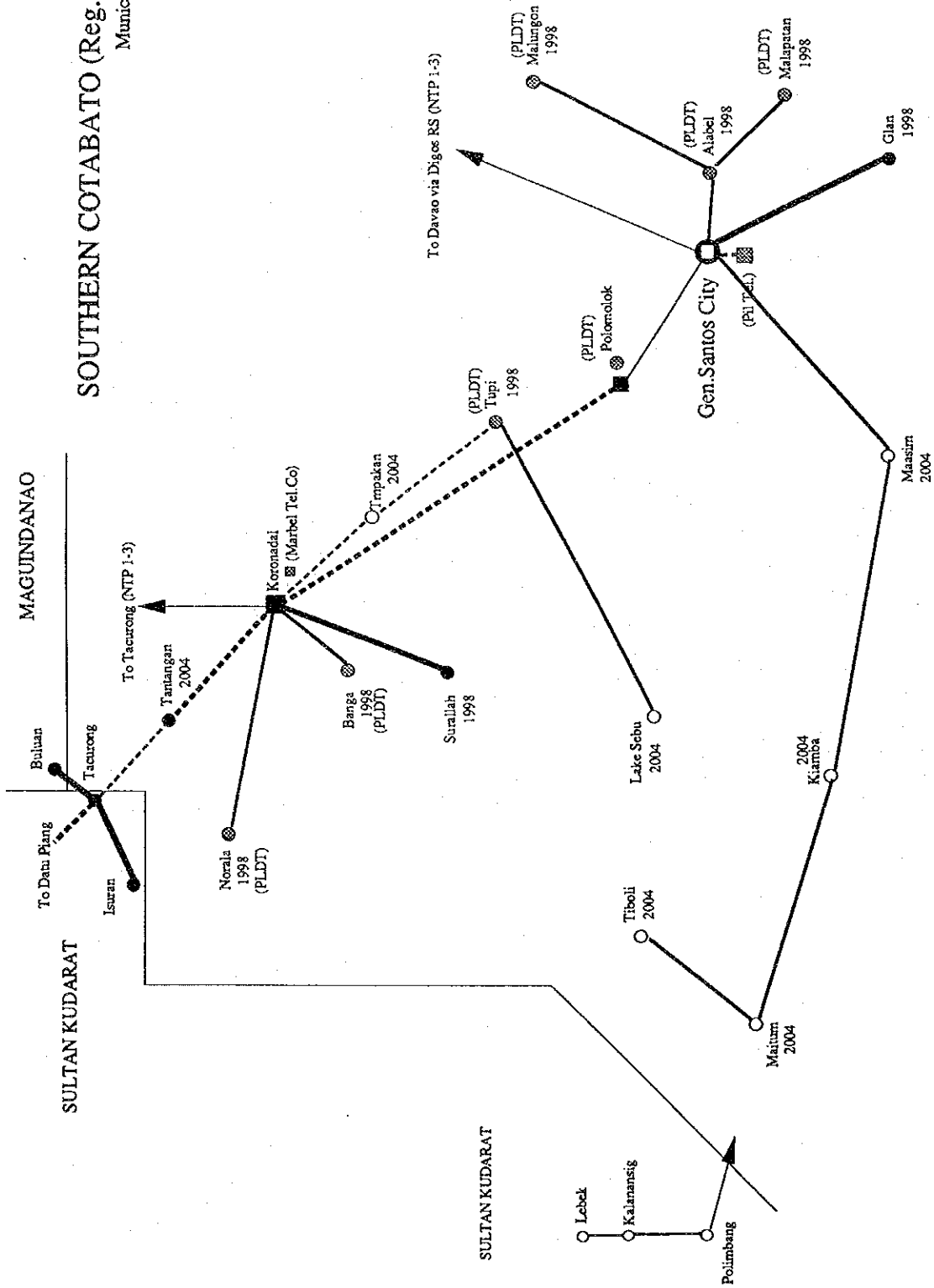
Sarangani is not shown on the map.
2010

DAVAO ORIENTAL (Reg. 11) 66/73
Municipalities : 11



SOUTHERN COTABATO (Reg. 11) 67/73

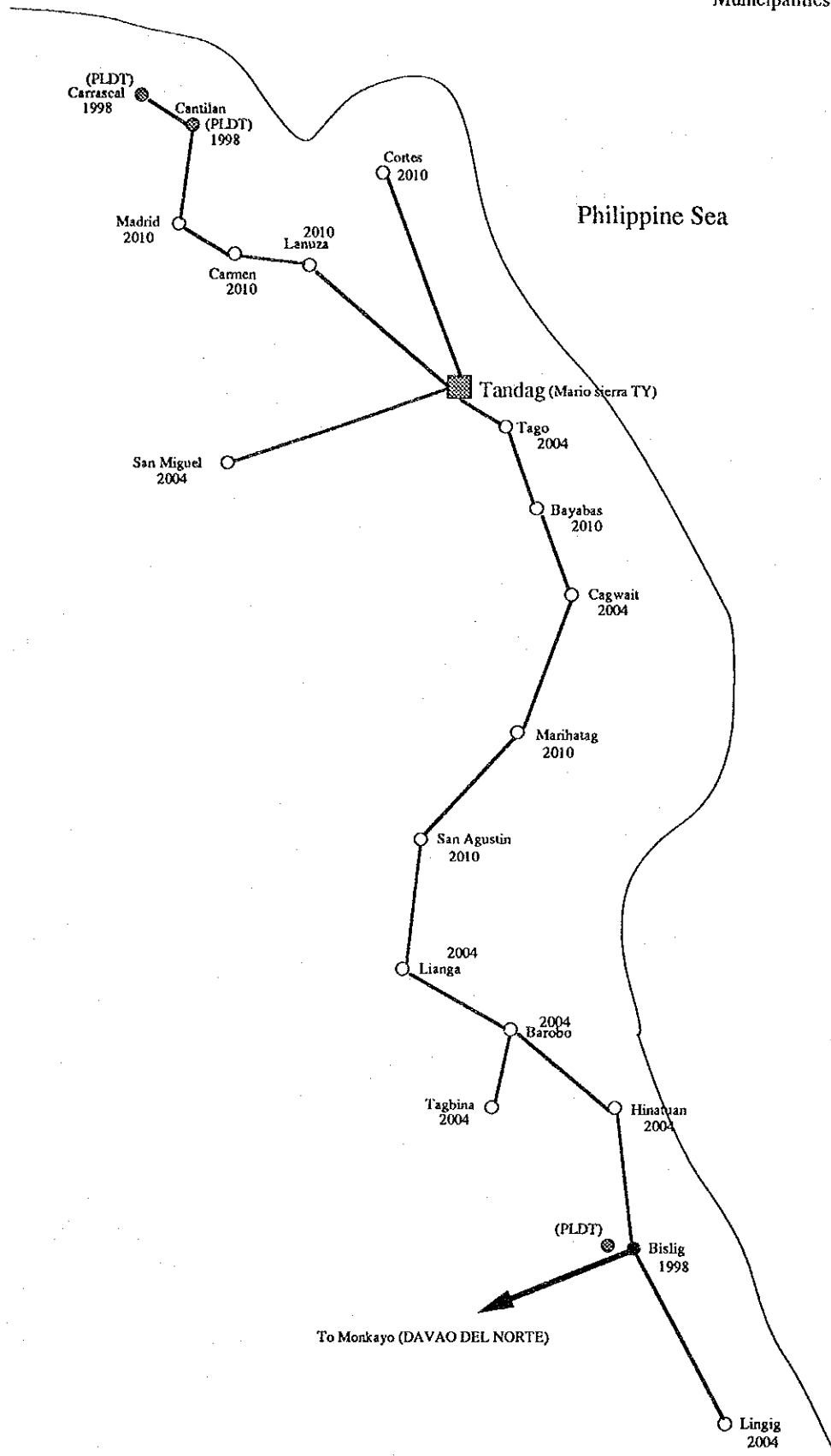
Municipalities : 19



Santo Nino is not shown on the map.
2004

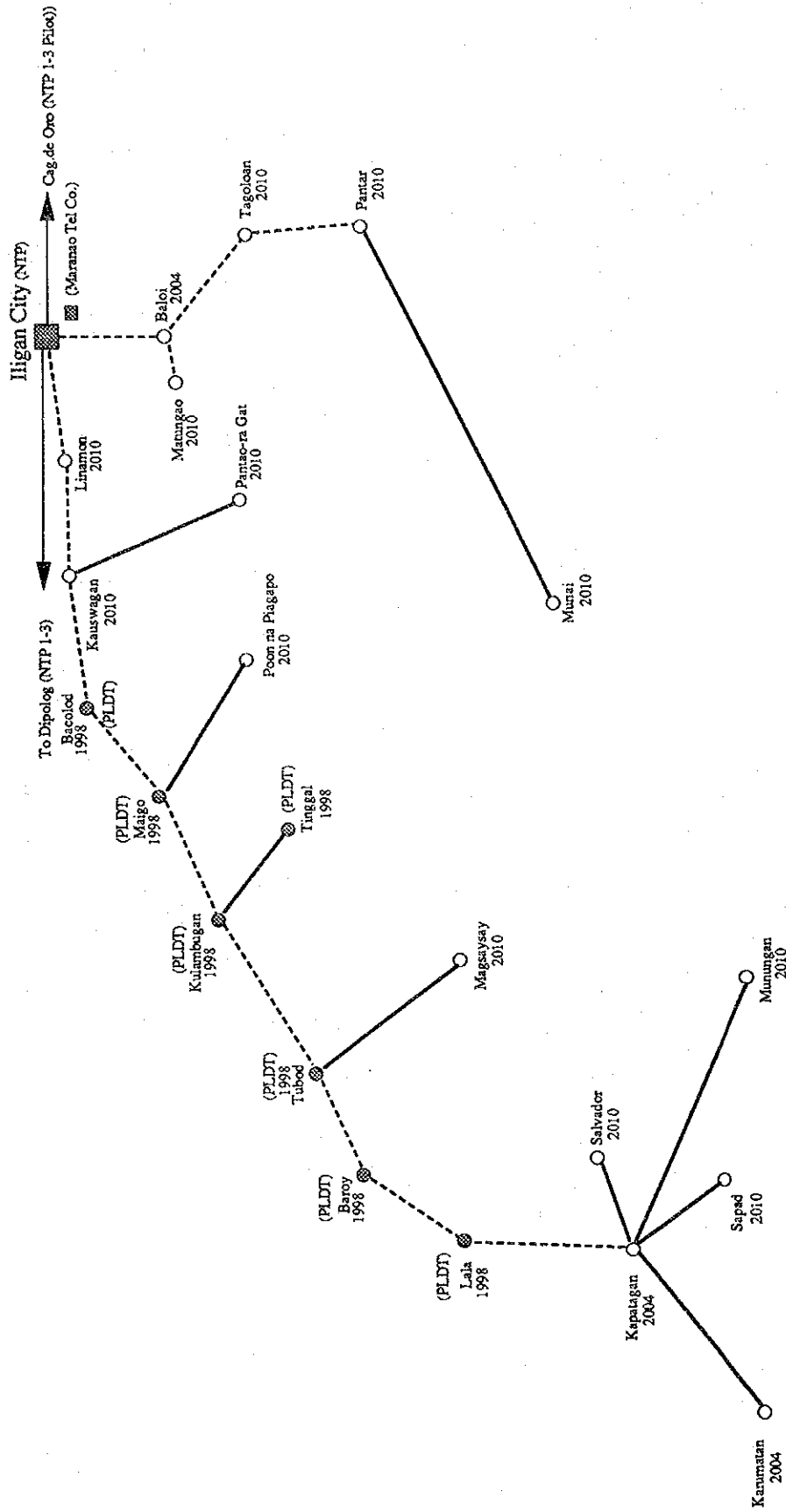
SURIGAO DEL SUR (Reg. 11) 68/73

Municipalities : 19



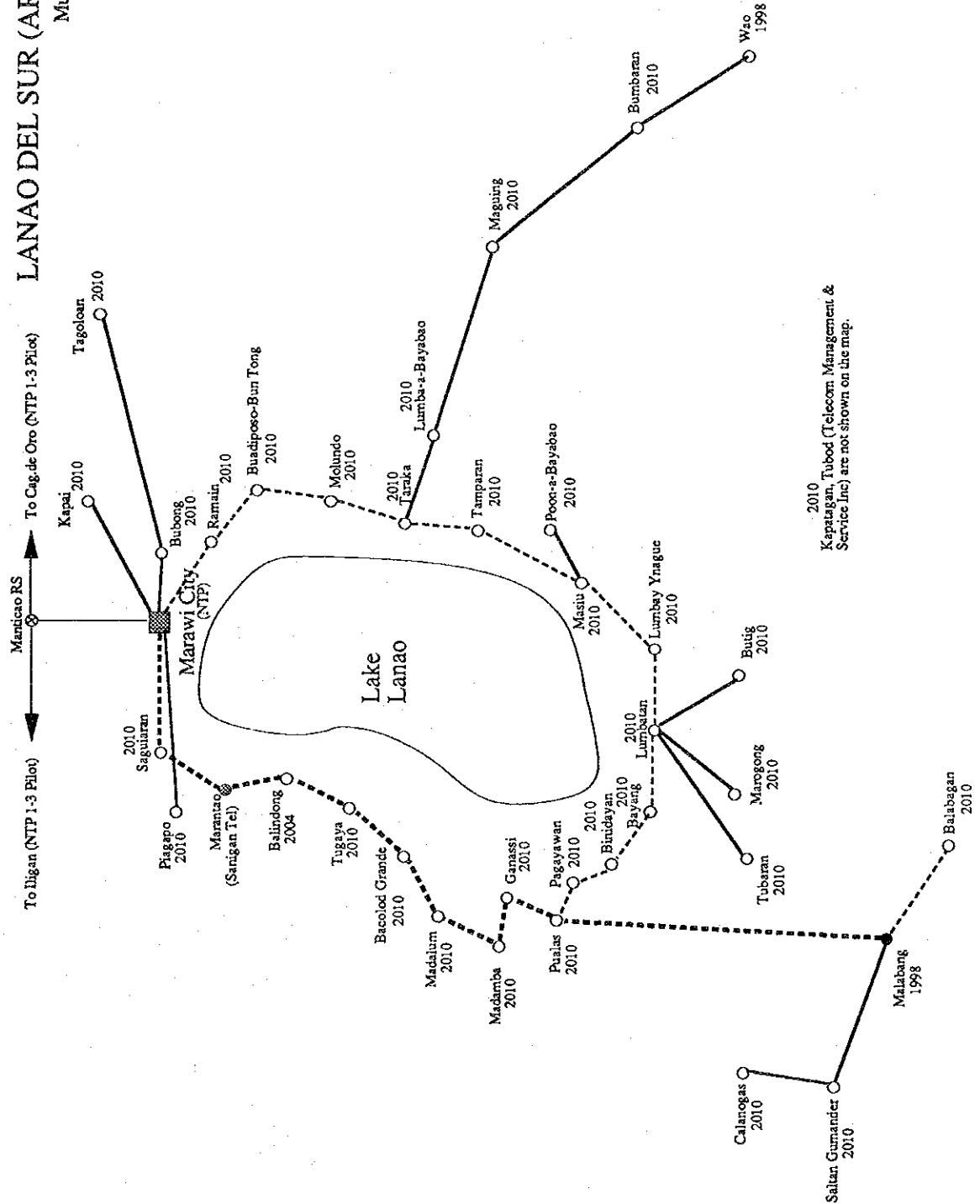
LANAO DEL NORTE (Reg. 12) 69/73

Municipalities : 23



LANAO DEL SUR (ARMM) 70/73

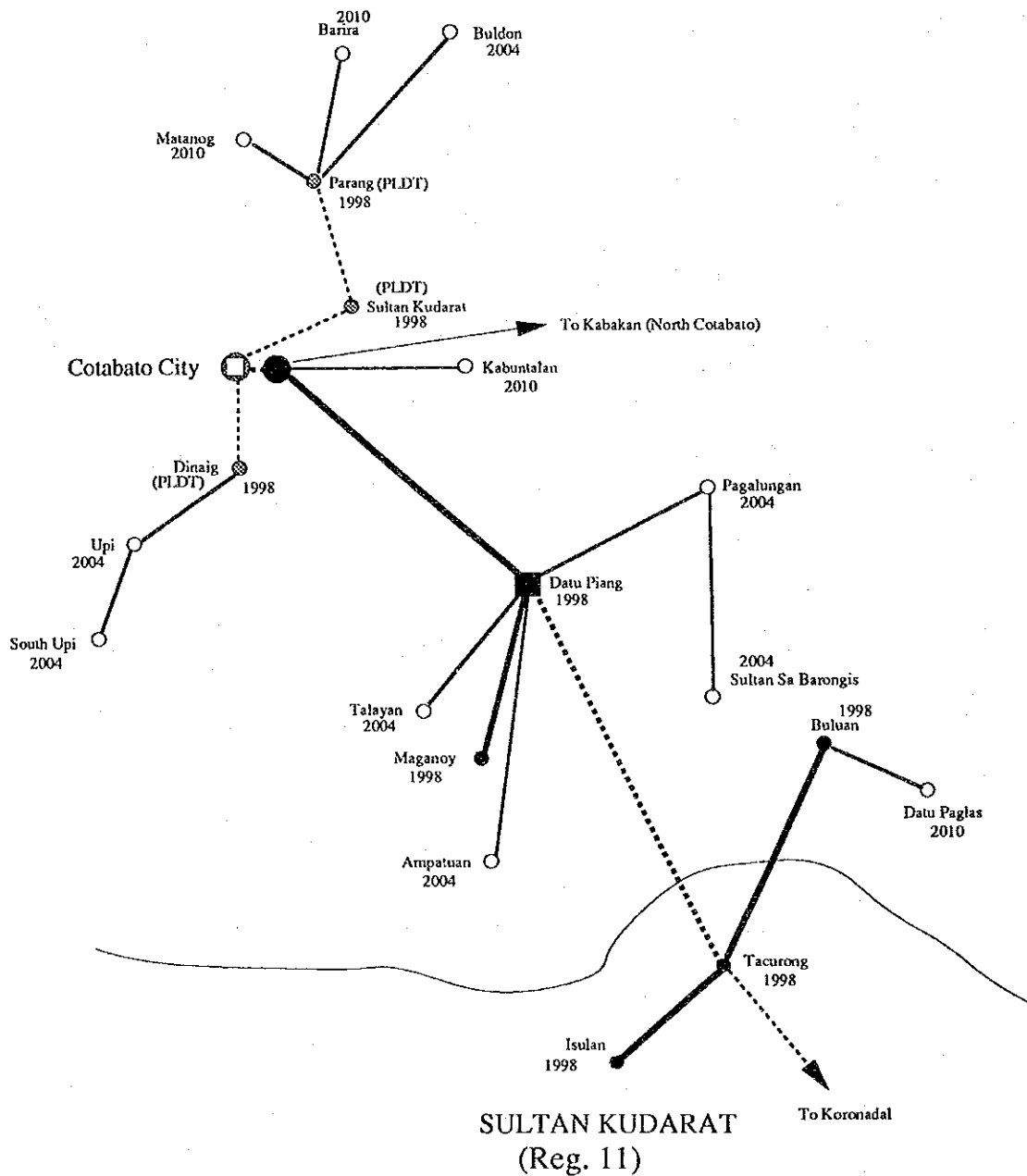
Municipalities : 38



2010
 Kapatagan, Tubod (Telecom Management & Service Inc) are not shown on the map.

MAGUINDANAO (ARMM) 71/73

Municipalities : 18



APPENDIX 16

RECOMMENDATIONS

JICA