## LAND RESOURCES EVALUATION AND SUITABILITY **ASSESSMENT OF STRATEGIC PRODUCTION AREAS**

# **PROVINCE OF SARANGANI**





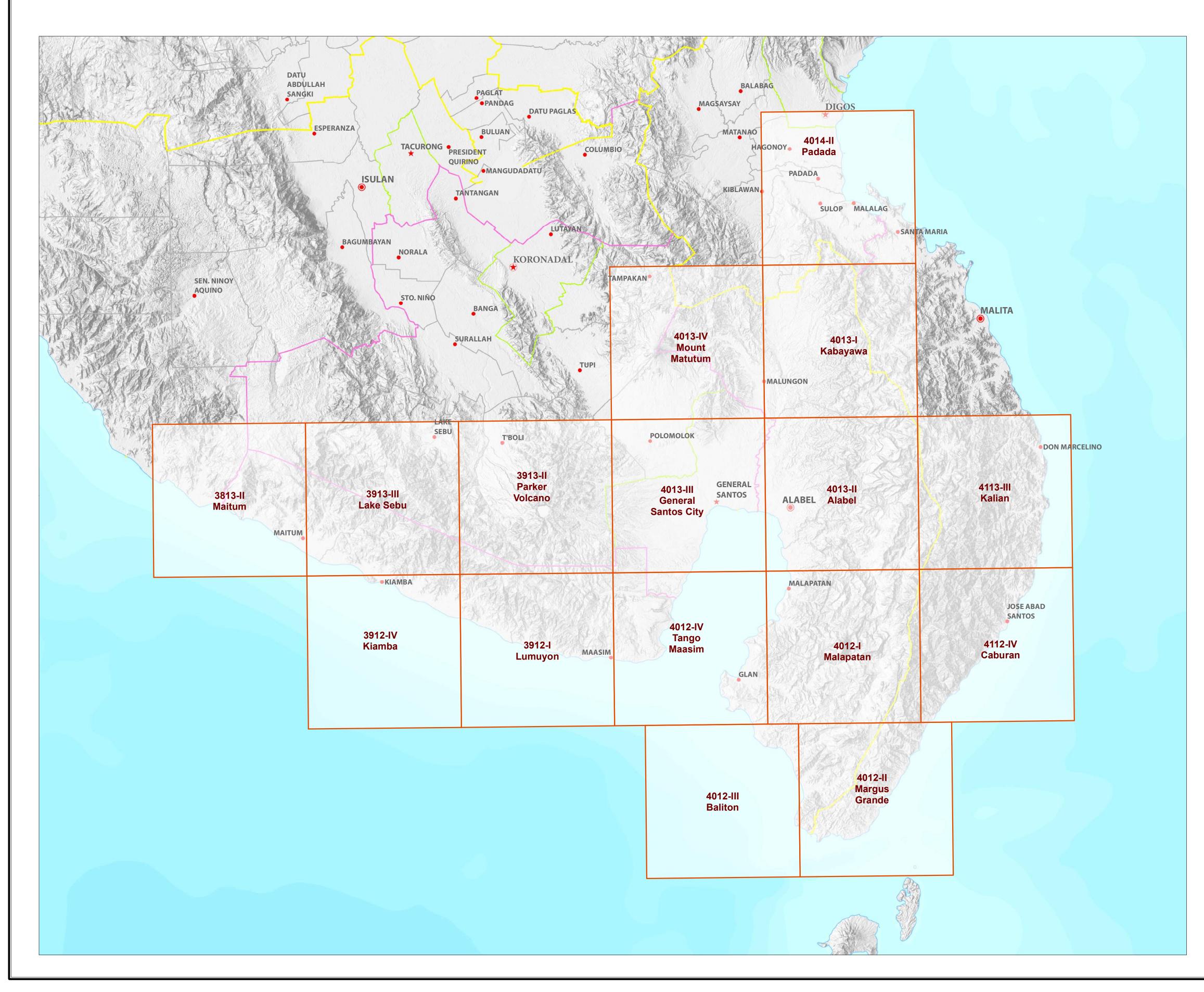
# LAND SUITABILITY MAP

# **ARABICA COFFEE**



REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE **BUREAU OF SOILS AND WATER MANAGEMENT** SRDC Bldg., Elliptical Road Cor. Visayas Avenue, Diliman, Quezon City 1101 Tel/Fax No.: (+632) 332-9534 E-mail: bswmclientcenter@yahoo.com

## LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS PROVINCE OF SARANGANI



## **MAP INDEX**

LEGEN	D							
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*	City							
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Topogra	Topographic Relief							
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## LAND SUITABILITY MAP FOR **ARABICA COFFEE**

## LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS **SARANGANI, REGION XII**

### **EXTENT OF SUITABILITY FOR ARABICA COFFEE PRODUCTION BY MUNICIPALITY**

						EX	PANSIO	NAREA (Ha	ı)				CONFLIC	T RESOI	LUTION A	REA (Ha)			TOTAL
MUNICIPALITY	EXISTING COFFEE (Ha)		TOTAL EXISTING AREA (Ha)	Coconut		onut Shrubland, unmanaged*		Grassland, unmanaged*		Corn		Sugarcane		Pineapple		Other crops		POTENTIAL EXPANSION	
	<b>S1</b>	<b>S2</b>	<b>S</b> 3		<b>S1</b>	<b>S</b> 2	<b>S1</b>	S2	<b>S1</b>	<b>S2</b>	<b>S1</b>	S2	<b>S1</b>	<b>S2</b>	<b>S1</b>	<b>S2</b>	<b>S1</b>	S2	AREA (Ha)
ALABEL	-	-	2	2	-	87	-	3	-	428	-		-		-	-			518
GLAN	-	-	5	5	-	246	-	33	-	1,317	-		-		-	-			1,597
КІАМВА	-	-	-	-	-	-	-	129	-	30	-		-		-	-			159
MAASIM	-	-	1	1	-	13	-	4	-	1,095	-		-		-	-	-		1,112
MAITUM	-	-	9	9	-	-	-	3	-	-	-		-		-	-	-	-	3
MALAPATAN	-	-	2	2	-	364	-	21	-	478	-		-		-	-			863
MALUNGON	_	5	28	33	-	11	-	40	-	271	_	599	-		-	-	-	-	921
TOTAL	-	5	47	52	-	722	-	233	-	3,620	-	599	-		-	-		-	5,174

Note: Delivery of arabica coffee planting materials must be started on the onset of rainy season. \*establishment of shade trees prior to planting of arabica coffee.

### **AGRONOMIC REQUIREMENT OF ARABICA COFFEE PRODUCTION**

LAND UTILIZATION TYPE	SUITABILITY RATING	SLOPE (%)	SOIL DEPTH (cm)	SOIL TEXTURE	SOIL DRAINAGE	SOIL REACTION (pH)	INHERENT FERTILITY	FLOODING CLASS	EROSION CLASS	ROCK OUTCROPS	ELEVATION (masl)	ANNUAL RAINFALL (mm)	CLIMATIC TYPE
	S1	<8	>100	CL, SiCL, SCL, SC, SiC, C, HC	WD,MWD	5.6 -7.2	high	none-slight	none-slight	none-few	1000-2000	2001-4500	I, III, IV
Coffee ( Arabica )	S2	8 - 30	30 - 100	FSL, L, SiL	SPD,PD	5.1 - 5.5 7.3 - 7.8	medium	moderate	moderate	common	500-1000 2000-2500	1000-2000	I, II
	S3	>30	<30	S, LS, CSL, SL	VPD,ED	<5.0 - > 7.9	low	severe	severe	many	<500 >2500	<1000 >4500	
SLOPE (%)			SOIL DRAIN	AGE		SOIL REACTIO	N (pH)		SOIL TEXT	URE			
- 3 - lev	el to gently slopin	5	ED - e	excessively drained		< 4.5 - ex	tremely acid		Coarse			Fine	
8 - 8 - ger	ntly sloping to und	ulating	WD - v	well drained		4.5 - 5.0 - ve	ry strongly acid		S	- sand		SC - s	andy clay
- 18 - und	dulating to rolling		MWD - I	moderately well drain	ed	5.1 - 5.5 - sti	rongly acid		LS	- loamy sand		SiC - s	silty clay
	ling to moderately	steep		somewhat poorly drain	ned		edium acid			- coarse sandy loam			clay
0 - 50 - ste	ep		-	poorly drained			ghtly acid			- sandy loam		HC - I	neavy clay
• 50 - ver	ry steep		VPD - v	very poorly drained			utral		Medium				
							ildly alkaline			- fine sandy loam			
OIL DEPTH (c	cm)		SURFACE IM	IPEDIMENT		7.9 - 8.4 - m	oderately alkaline		L	- loam			
	ry shallow		ROCK OUTCR			> 8.5 - str	rongly alkaline			- silt loam			
	allow			none - few						- clay loam			
	oderately deep			common						- silty clay loam			
· 100 - dee	ep to very deep		> 30% - 1	nany					SCL	- sandy clay loam			
	мітатілі	IS DESCO	Ιρτιον Δι	ND COMBINA	TIONS								
		IJ DLJUN											
	.000m or 2000 - 25 n or > 2500m	500m		I <b>NAGE</b> newhat poorly draine ry poorly drained or e:				o moderately dee ow (< 30cm)	p (30 - 100cm)		N rate erosion e erosion		

**SLOPE/TOPOGRAPHY** 

T2 - Undulating to moderately steep T3 - Steep to very steep

**SOIL TEXTURE** Tc - Coarse texture **ROCK OUTCROPS** 

Rc2 - Common Rc3 - Many

CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION
1	El2	11	T2-E3-Rc3	21	T2-El3-E2-Sh2-Rc2	31	T3-E3-Sh2-Rc3	41	T3-El3-E3-Rc2	51	T3-El2-E3-Sh3-Rc3
•	El2-E2-Sh2-Rc3	12	T2-E3-Sh2-Rc2	22	T2-El3-E3	32	T3-E3-Sh3-Rc2	42	T3-El3-E3-Sh2-Rc3	52	T3-El3
	El2-Rc2	13	T2-El2	23	T2-El3-E3-Rc2	33	T3-El2	43	T3-El3-E3-Sh3-Rc2	53	T3-El3-E3
	El2-Sh2-Rc2	14	T2-El2-E3	24	T2-El3-E3-Rc3	34	T3-El2-E3	44	T3-El3-E3-Sh3-Rc3	54	T3-El3-E3-Rc3
5	El3	15	T2-El2-E3-Rc2	25	T2-El3-E3-Sh2-Rc2	35	T3-El2-E3-Rc2	45	T3-El3-F2-D2	55	T3-El3-E3-Sh3-Rc3
5	El3-F2-D2	16	T2-El2-E3-Rc3	26	T2-El3-E3-Sh2-Rc3	36	T3-El2-E3-Sh2-Rc3	46	T3-E3	56	T3-El3
7	El3-F3-D2	17	T2-El2-E3-Sh2-Rc2	27	T2-El3-F2-D2	37	T3-El2-E3-Sh3-Rc2	47	T3-E3-Sh3-Rc3		
	El3-Sh2-Rc2	18	T2-El2-E3-Sh2-Rc3	28	T2-El3-F3-D2	38	T3-El2-E3-Sh3-Rc3	48	T3-El2		
9	El3-Tc	19	T2-El2-Sh2-Rc2	29	T2-Sh2-Rc2	39	T3-El3	49	T3-El2-E3		
10	Sh2-Rc2	20	T2-El3	30	T3-E3	40	T3-El3-E3	50	T3-El2-E3-Rc3		

### **SUITABILITY CLASSES:**



Highly Suitable (S1) Land having no significant limitation to sustained application of a given use, or only minor limitations that will not significantly reduce productivity or benefits and will not raise inputs above an acceptable level.

### Moderately Suitable (S2)

Land having limitation which in aggregate are moderately severe for sustained application of a given use; the limitation will reduce productivity or benefits and increase required inputs to the extent that the overall advantage to be gained from the use, although still attractive, will be appreciably inferior to that expected on class S1 land.

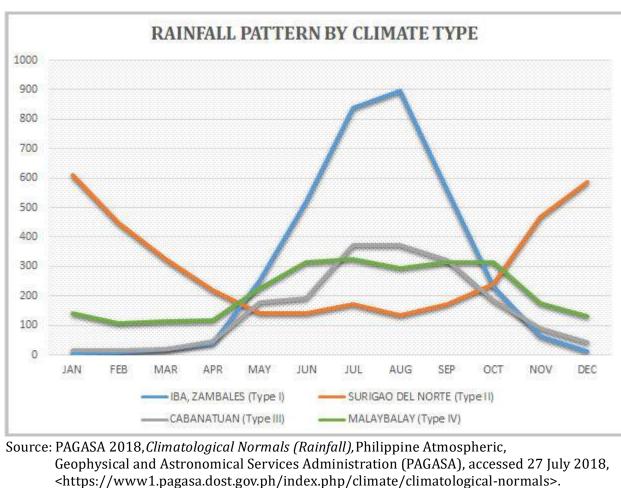
FLOODING

F2 - Moderate seasonal flooding F3 - Severe seasonal flooding

**CLIMATE TYPE** 

- **TYPE I** : Two pronouced season, dry from November to April and **TYPE II** : No dry season with a very pronounced maximum rain wet during the rest of the year. Maximum rain period is from June to September
- **TYPE III**: No very pronounced maximum rain period, with a dry season lasting only from one to three months, either during the period from December to February or from March to May. This type resembles Type I since it has a short dry season.

Sarangani is classified as climatic Type IV.

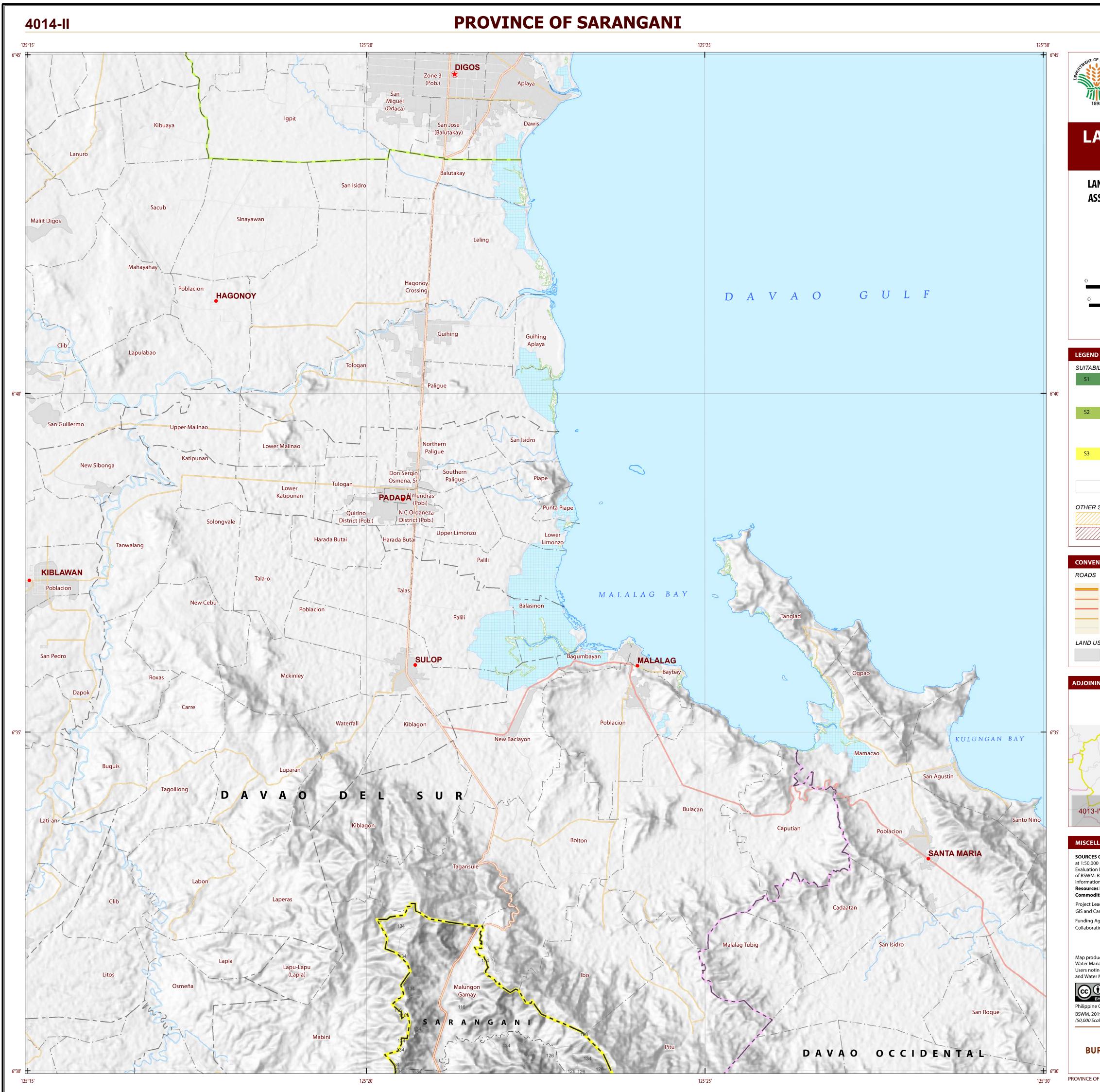




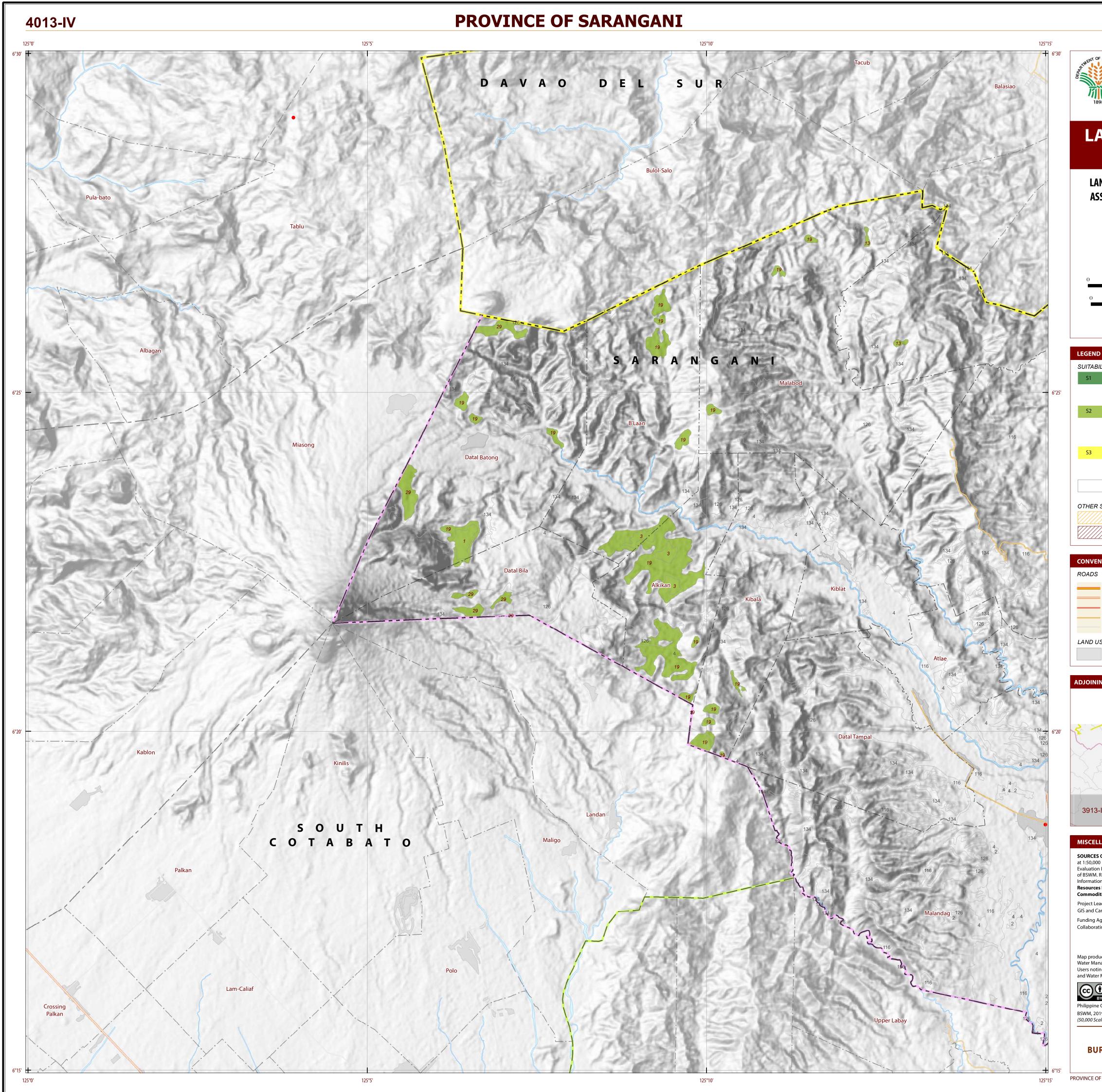
Marginally Suitable (S3) Land having limitations which in aggregate are severe for sustained application of a given use and will so reduce productivity or benefits, or increase required inputs, that this expenditure will be only marginally justified.

Not Suitable / Not Relevant Land having limitations which may be surmountable in time but which cannot be corrected with existing knowledge at currently acceptable cost; the limitations are so severe as to preclude successful sustained use of the land in the given manner. Existing forest, shrubland greater than 18% slope, irrigated paddy rice and miscellaneous land types such as built up areas, roads, etc are considered as not relevant.

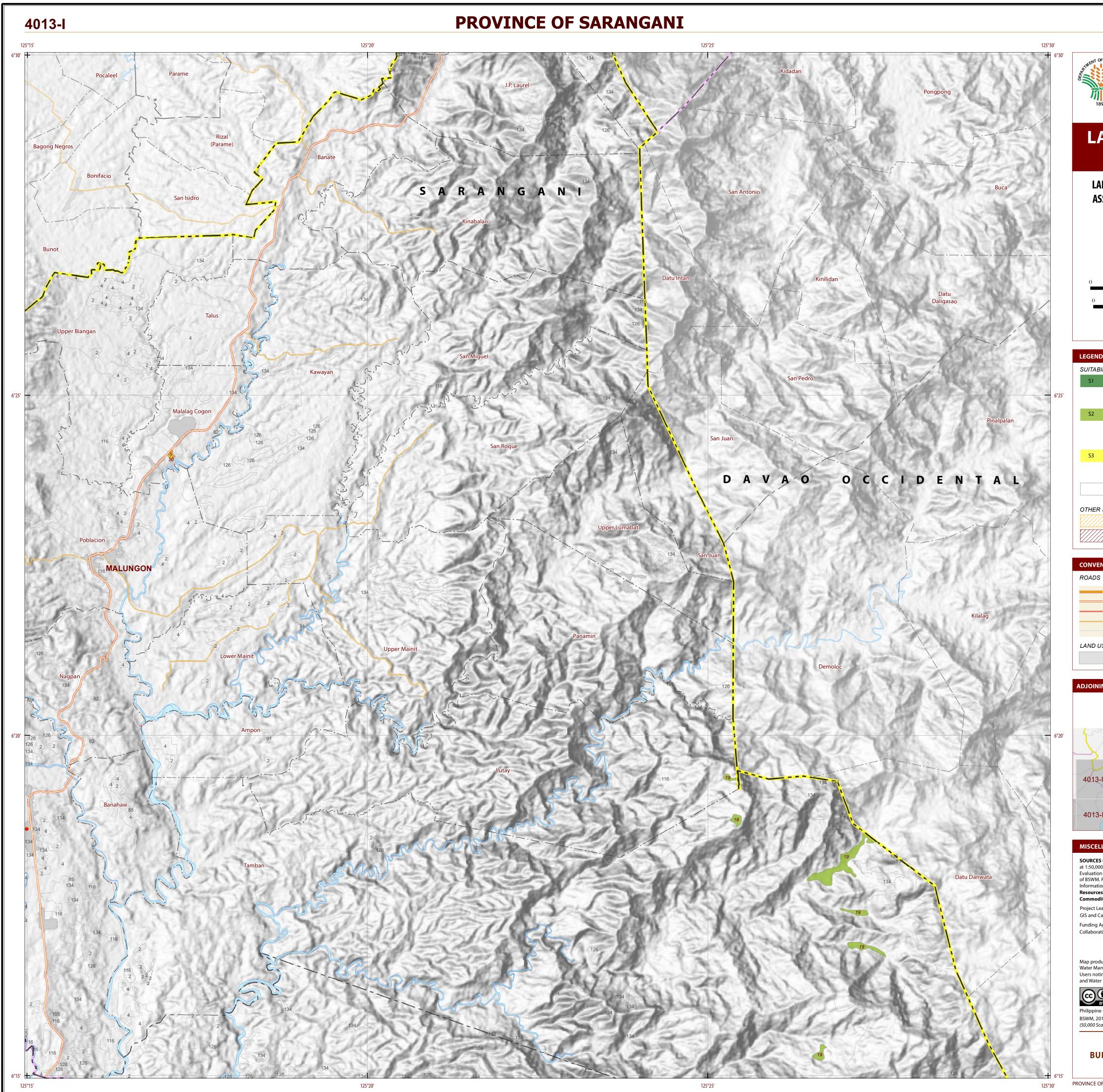
- period from December to February. There is not a single dry month. Maximum monthly rainfall occurs during the period from March to May.
- **TYPE IV** : Rainfall is more or less evenly distributed throughout the year. This type resembles Type II since it has no dry season.



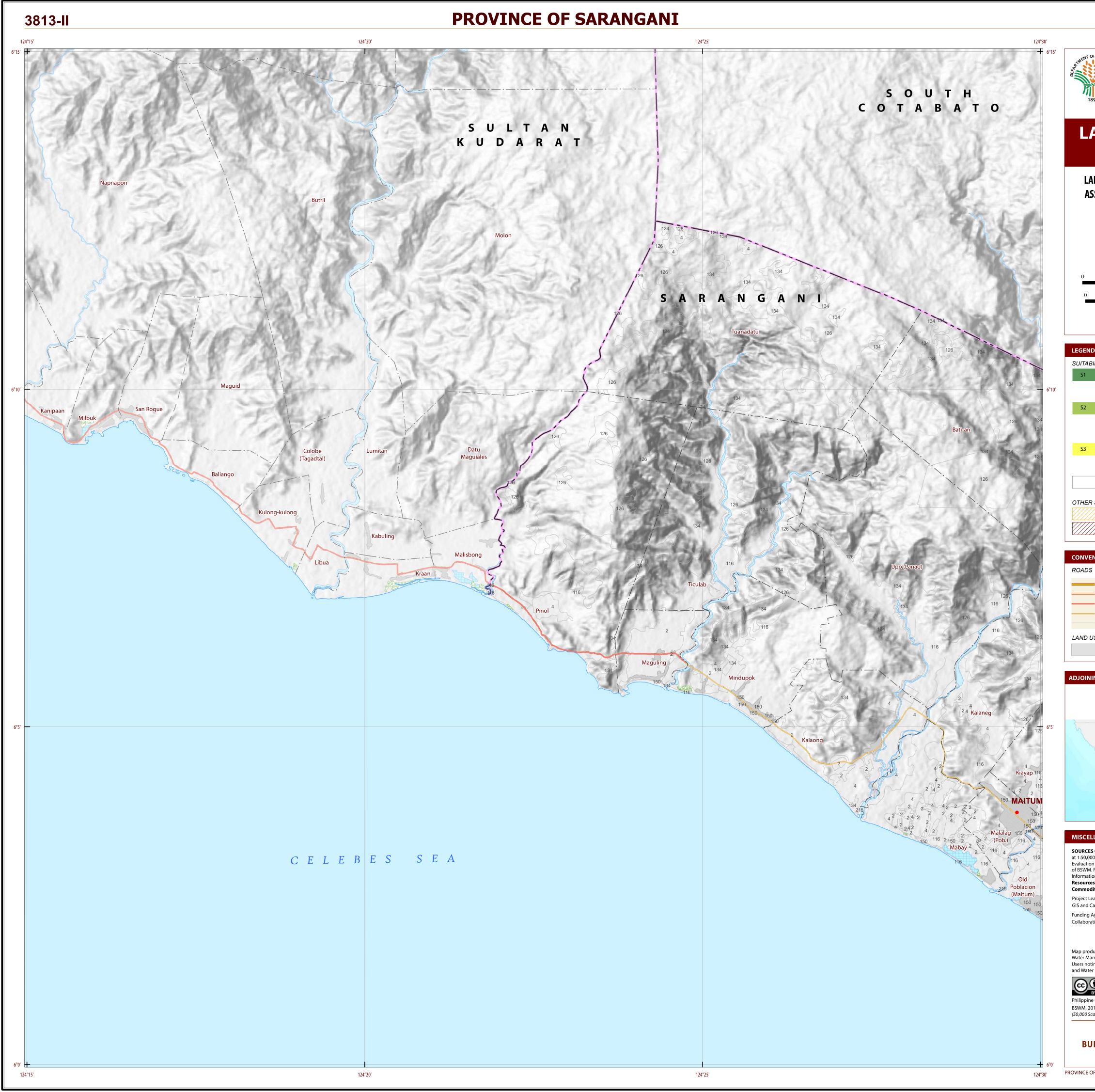
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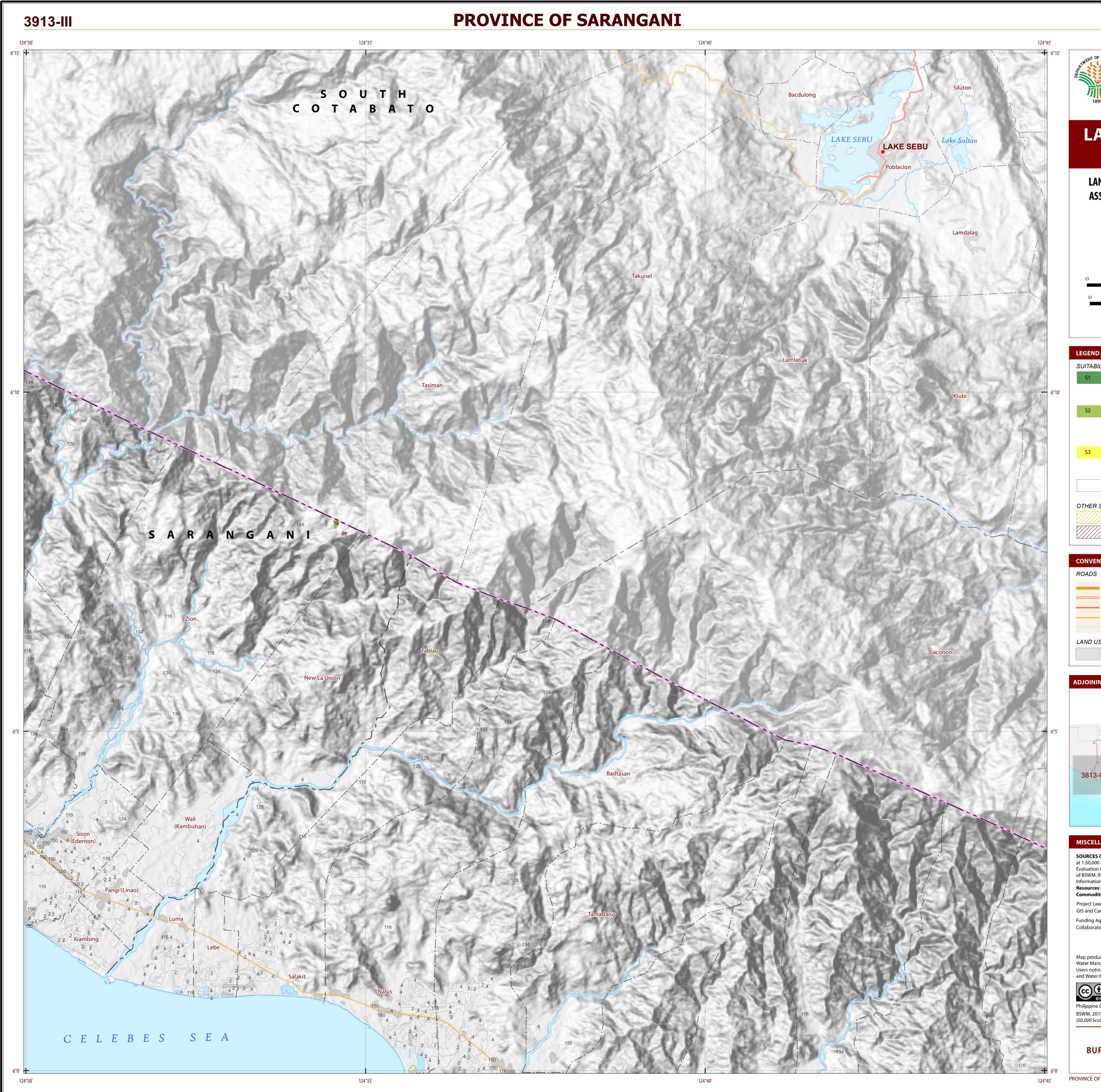
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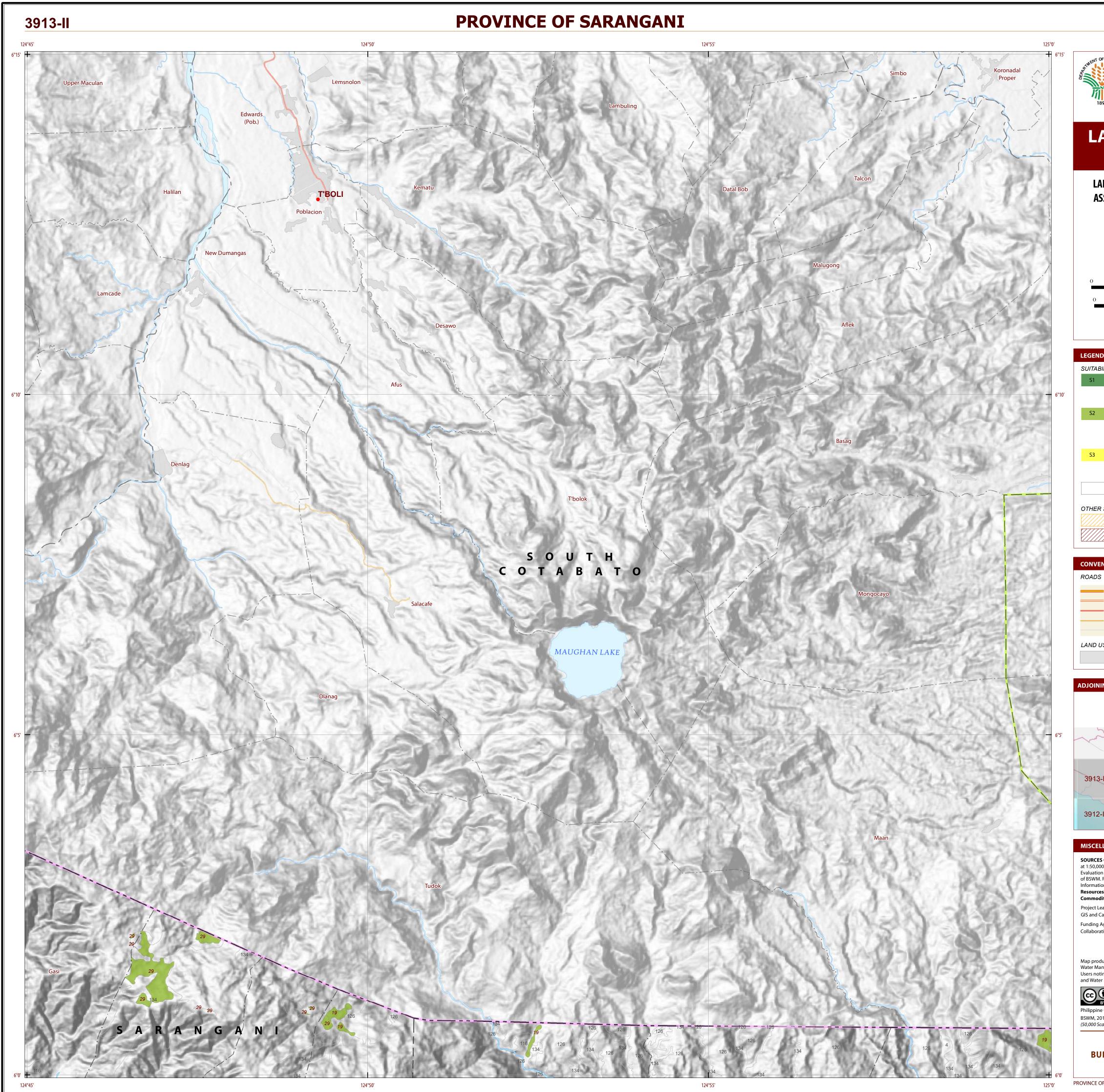
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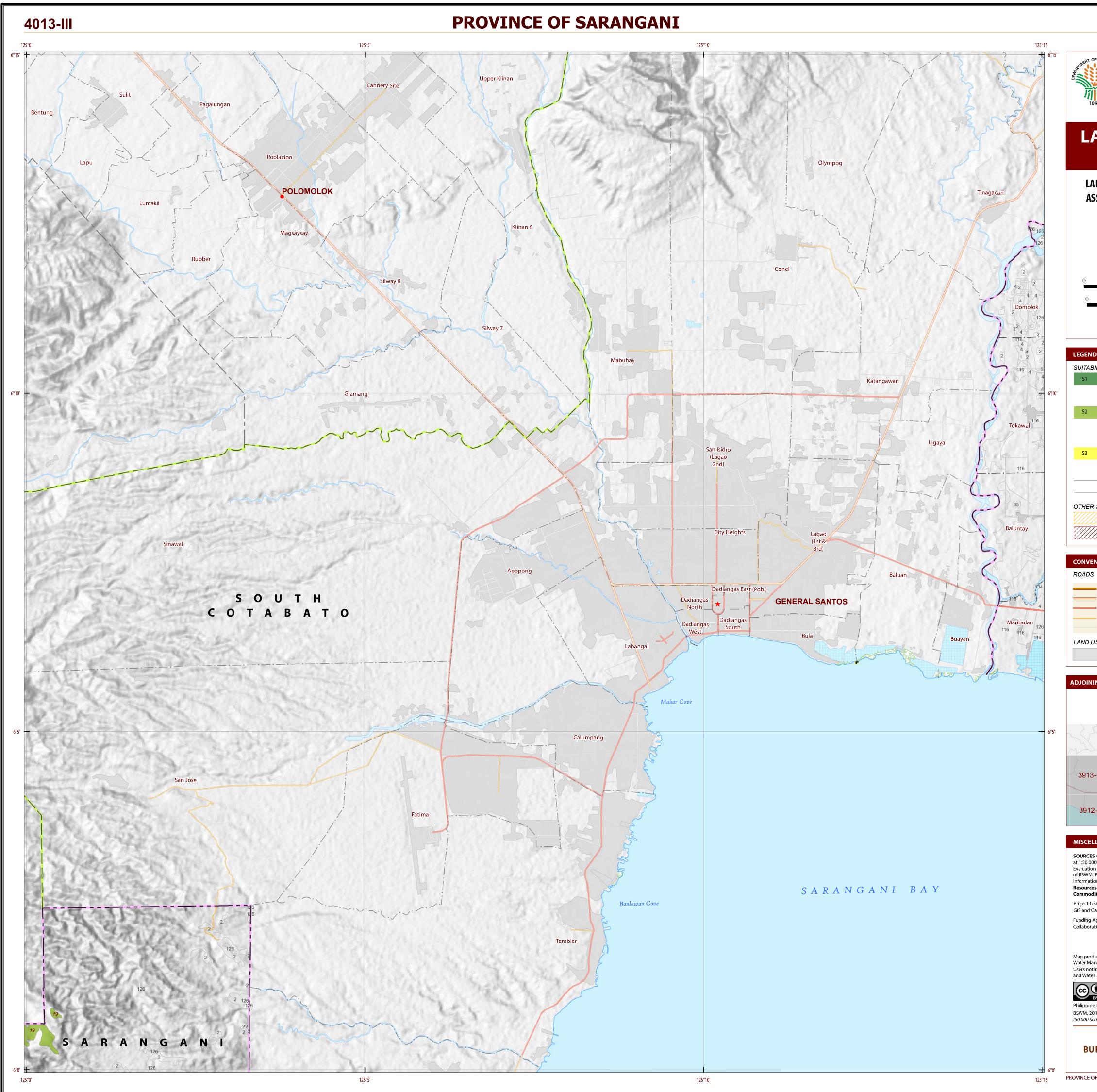
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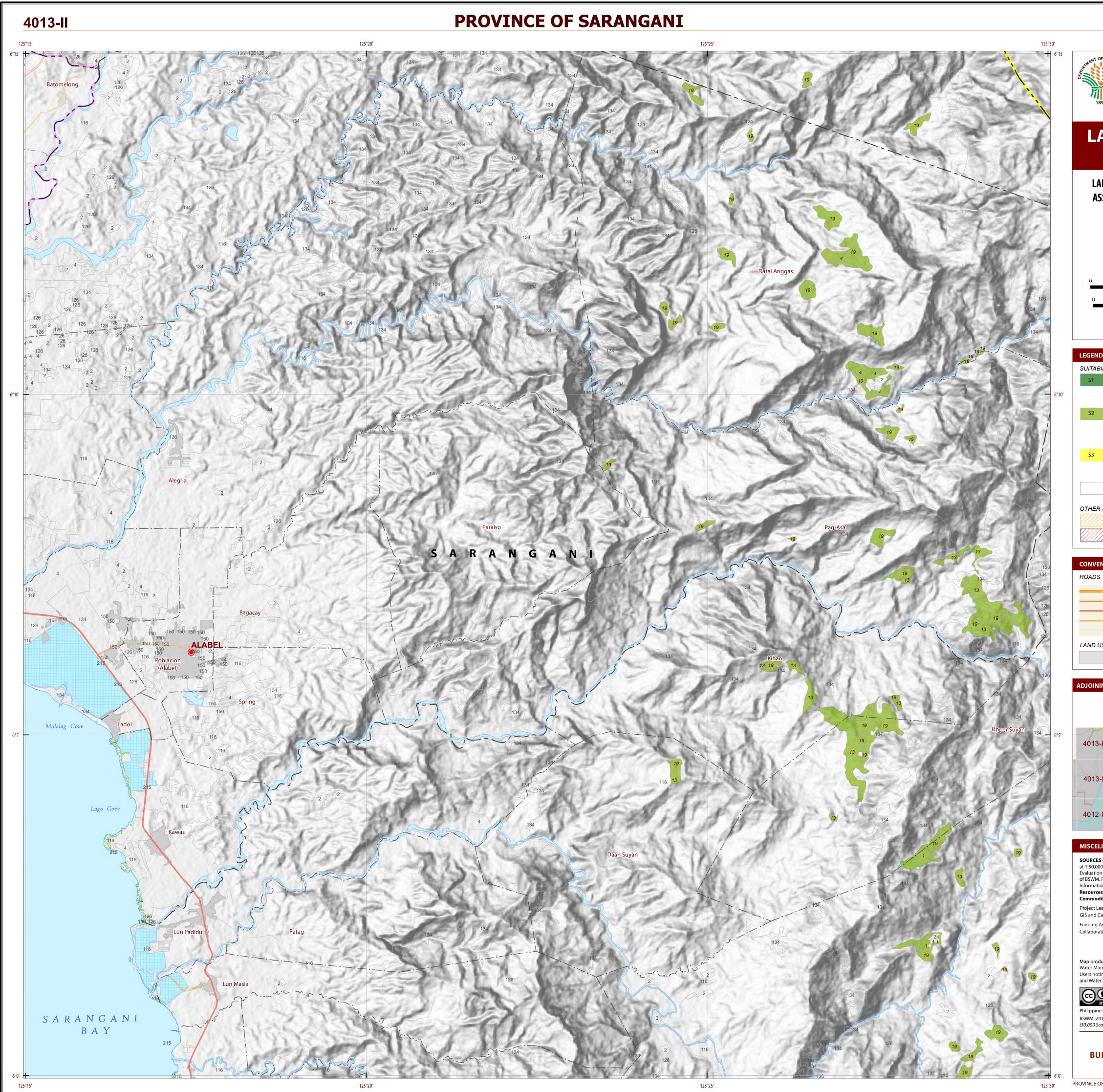
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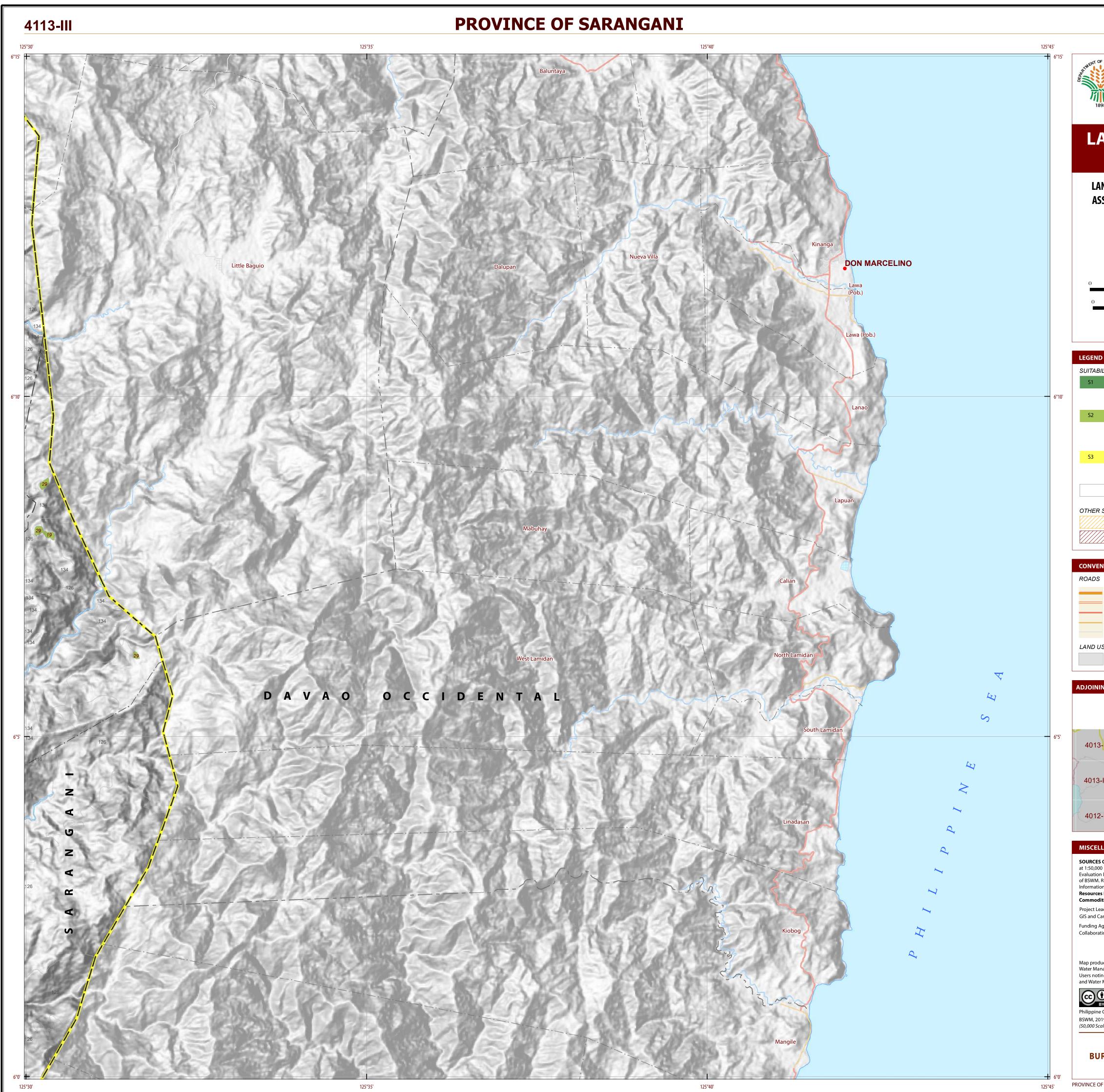
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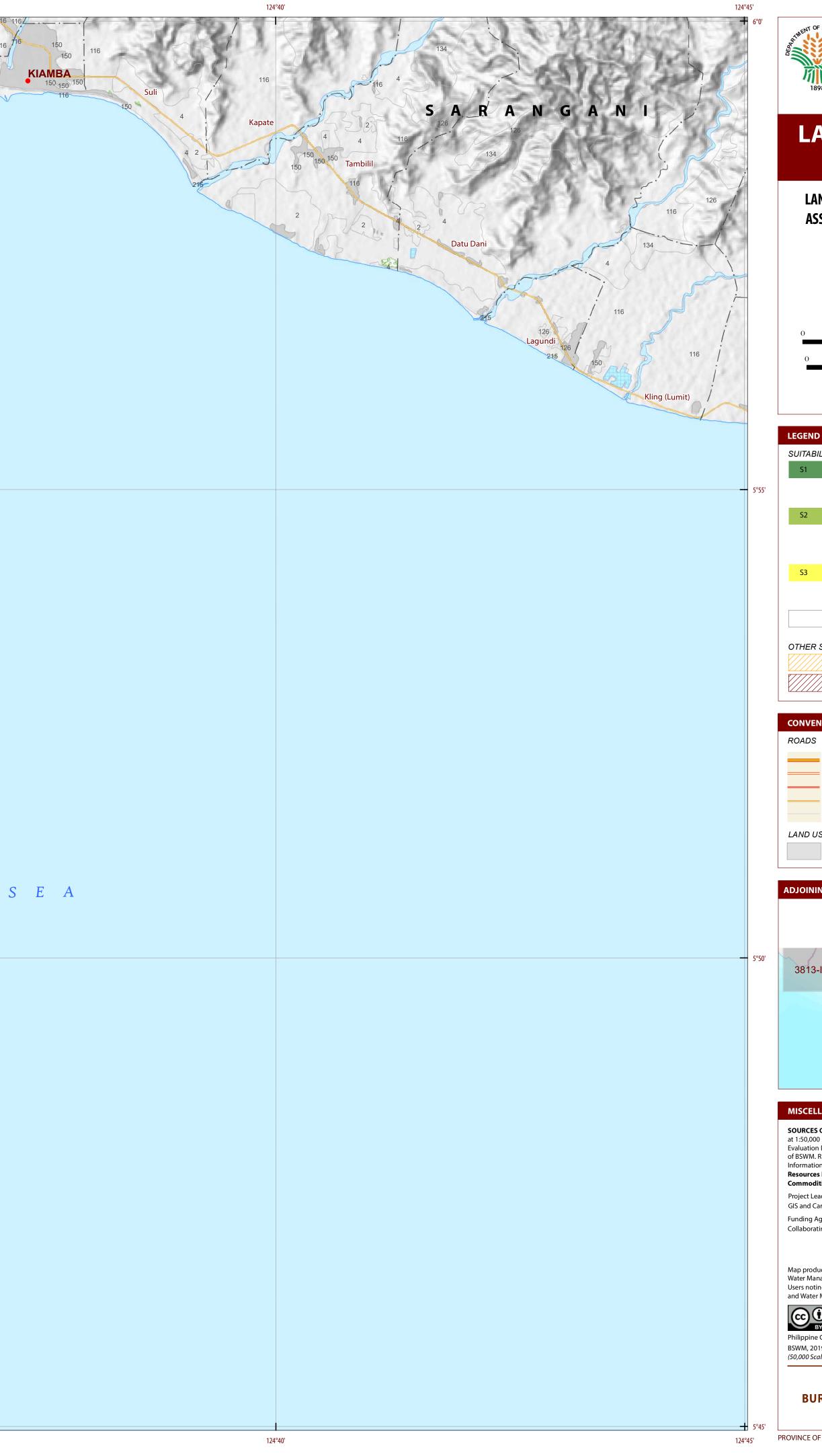
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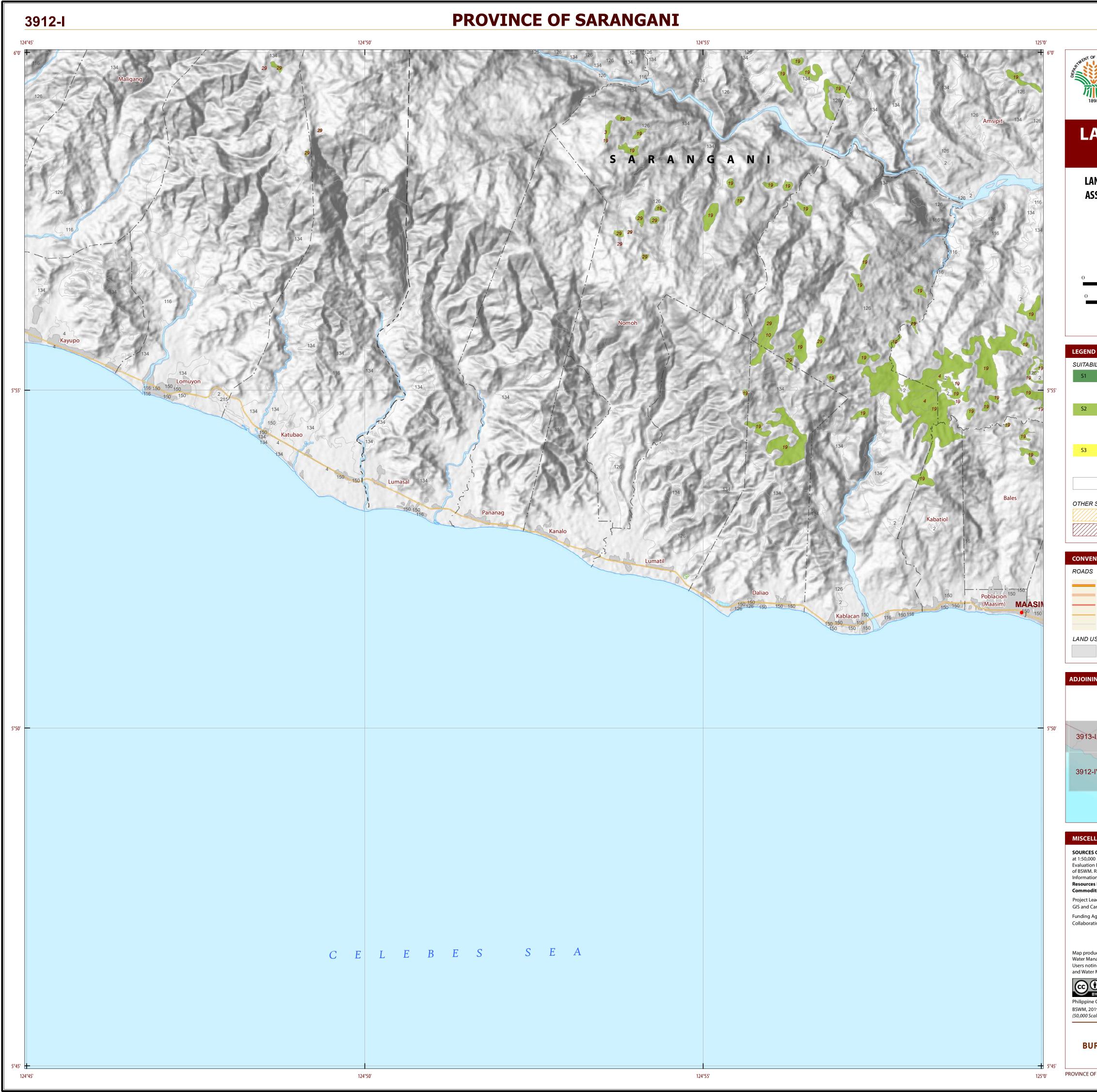
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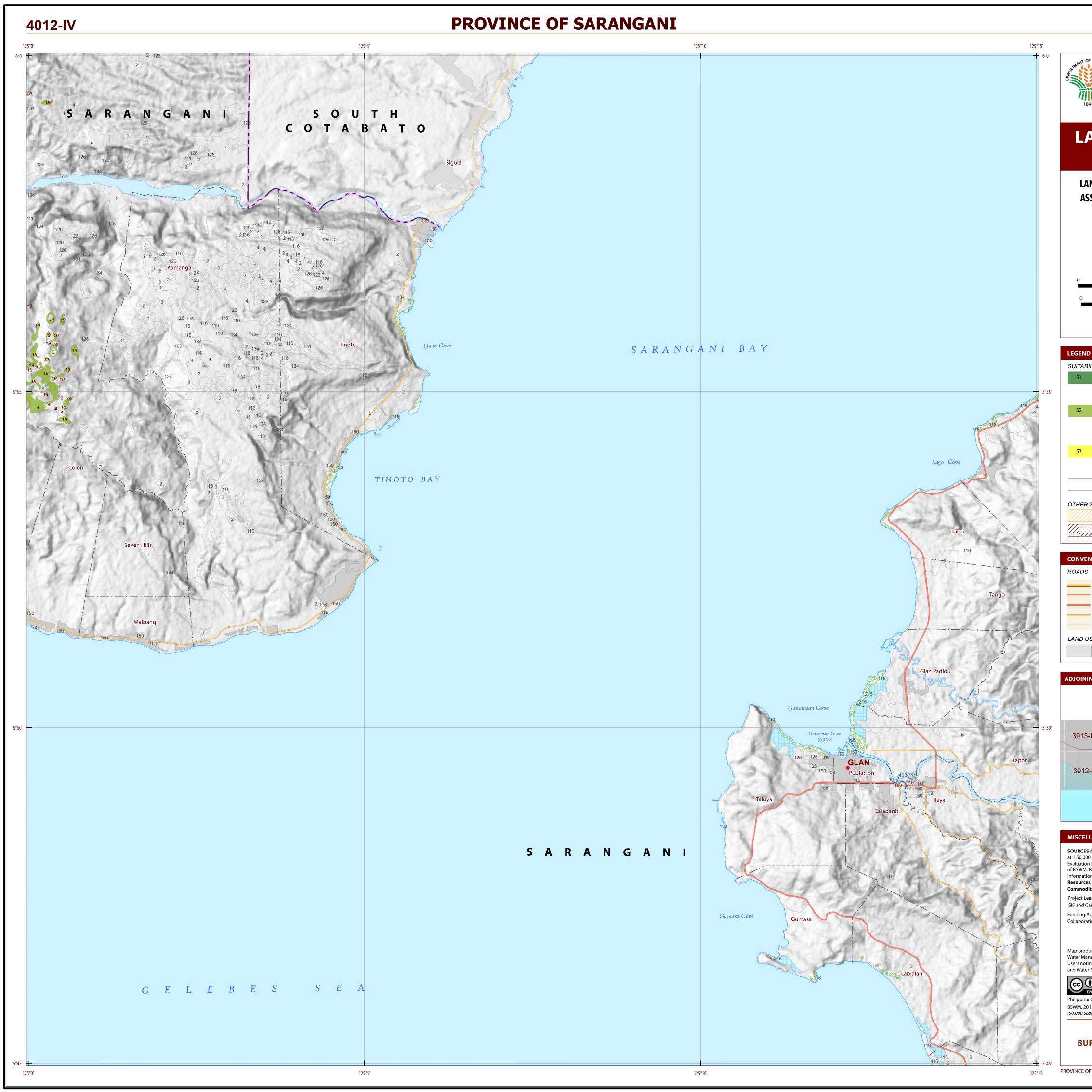
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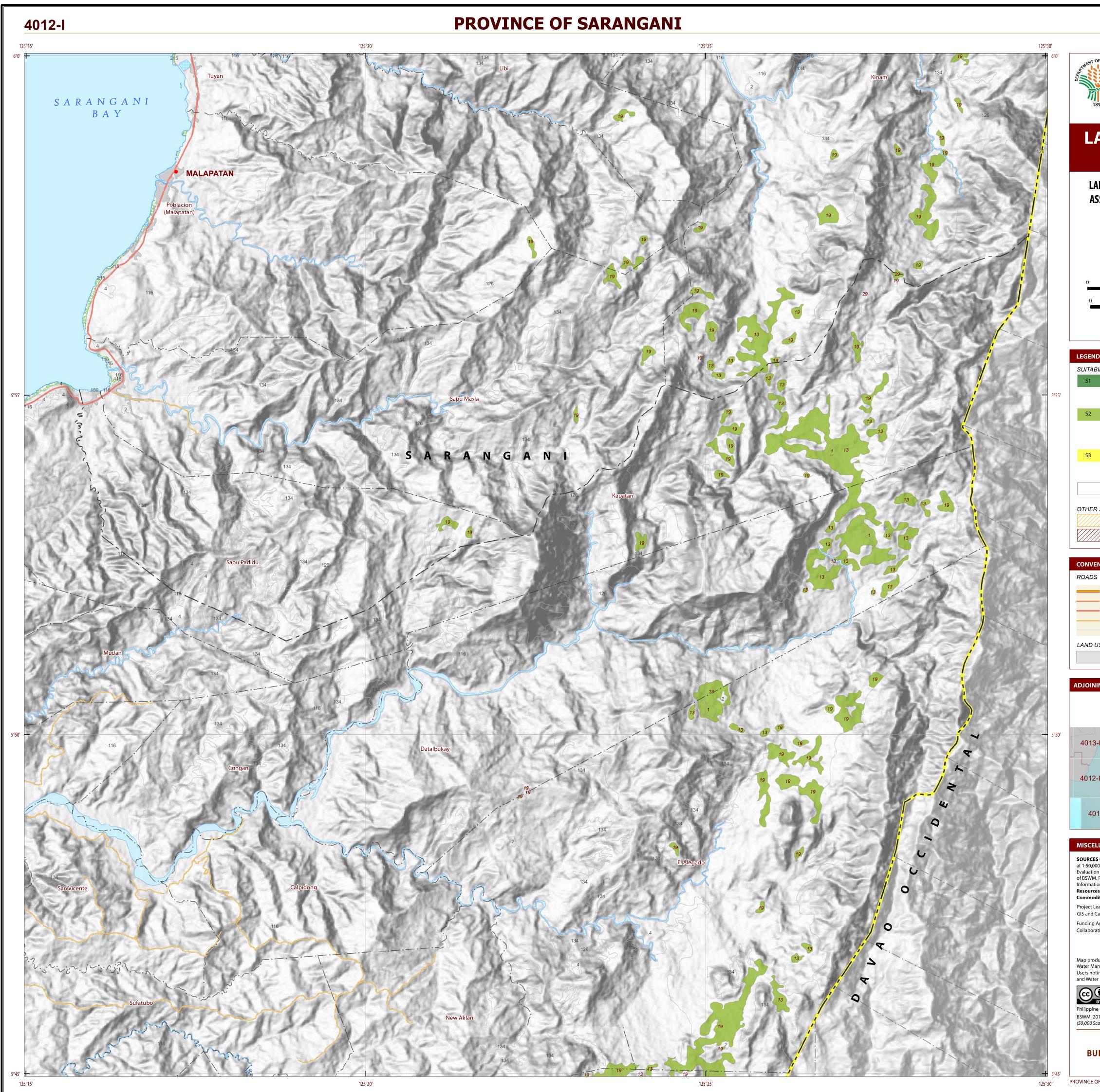
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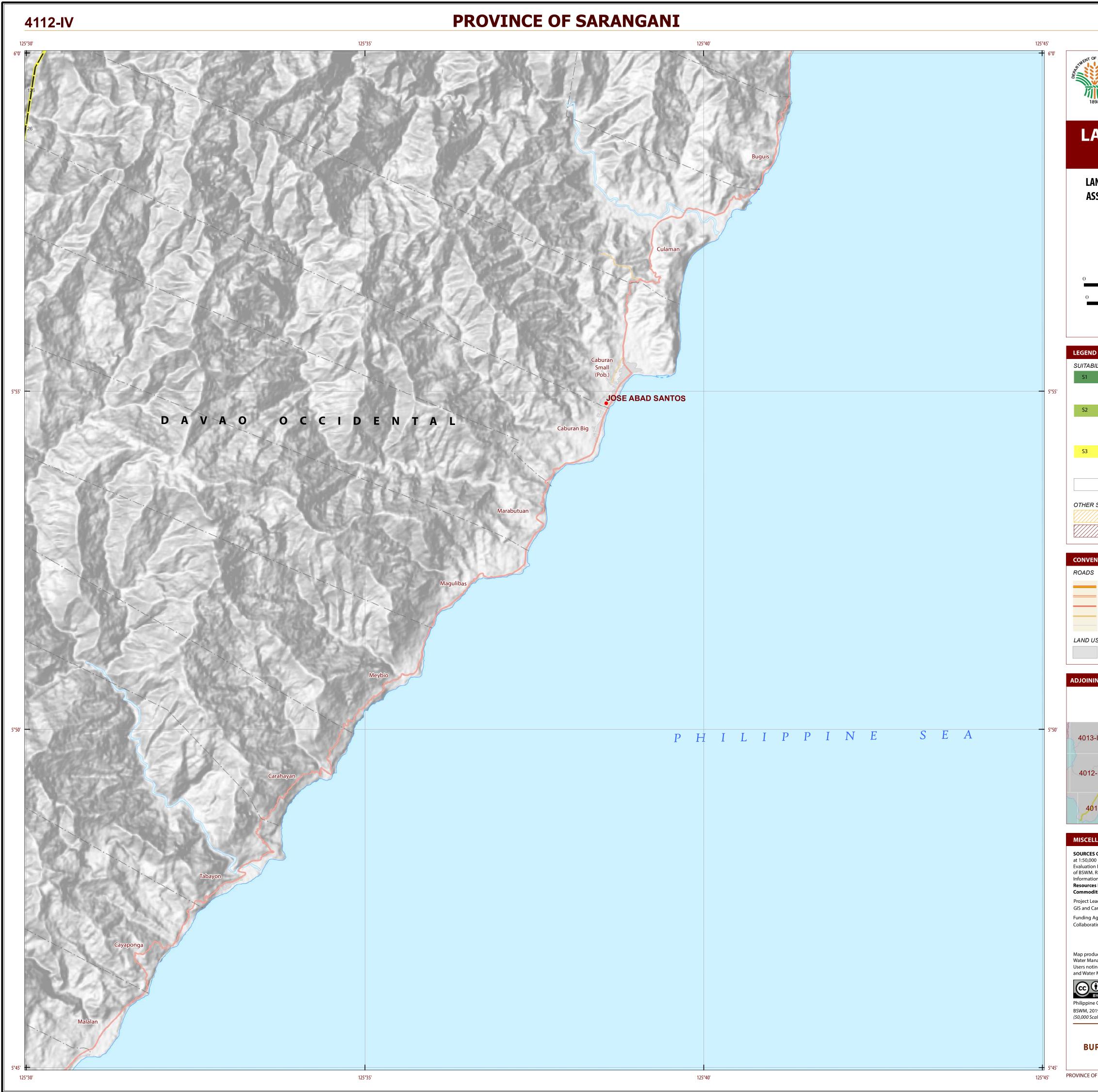
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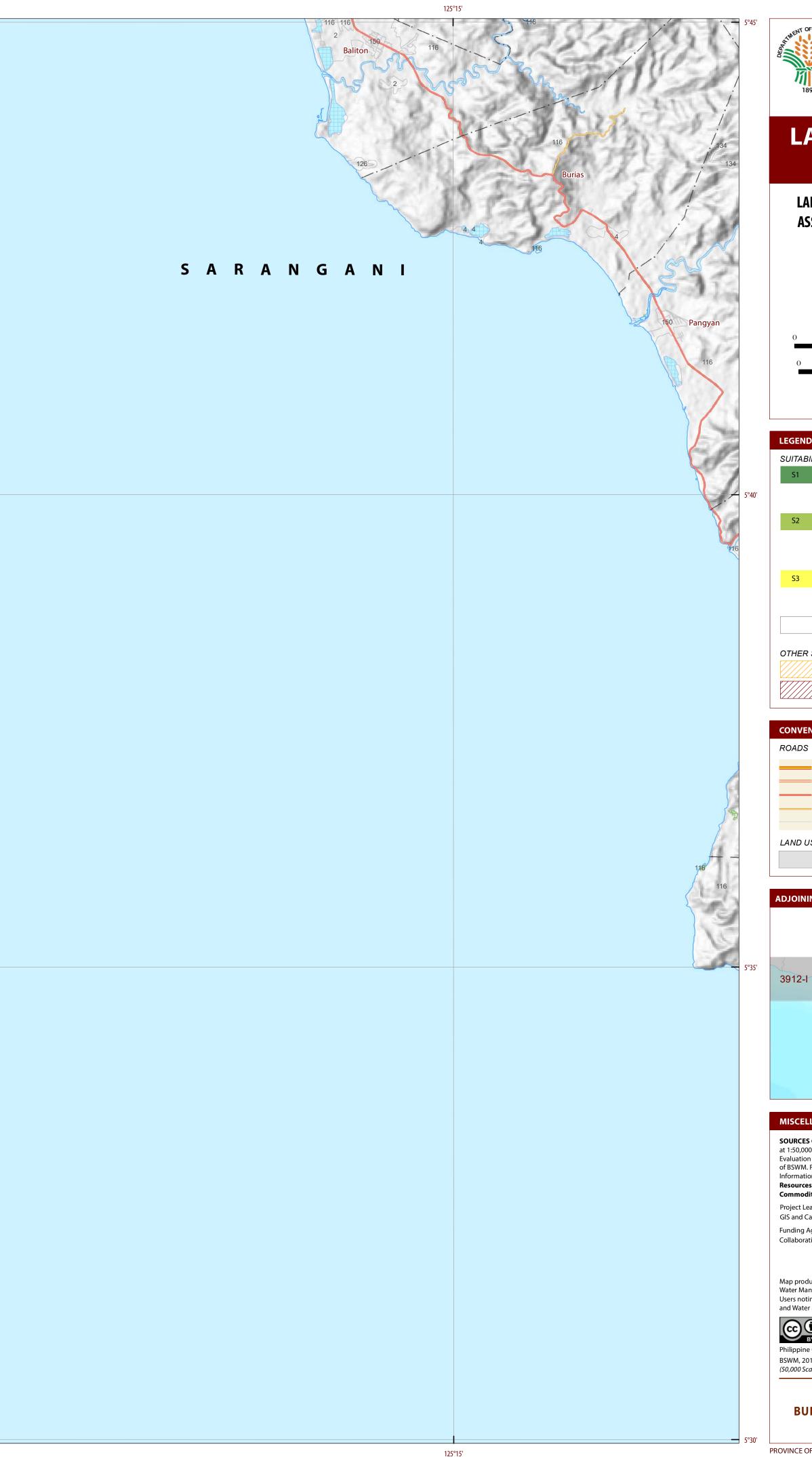
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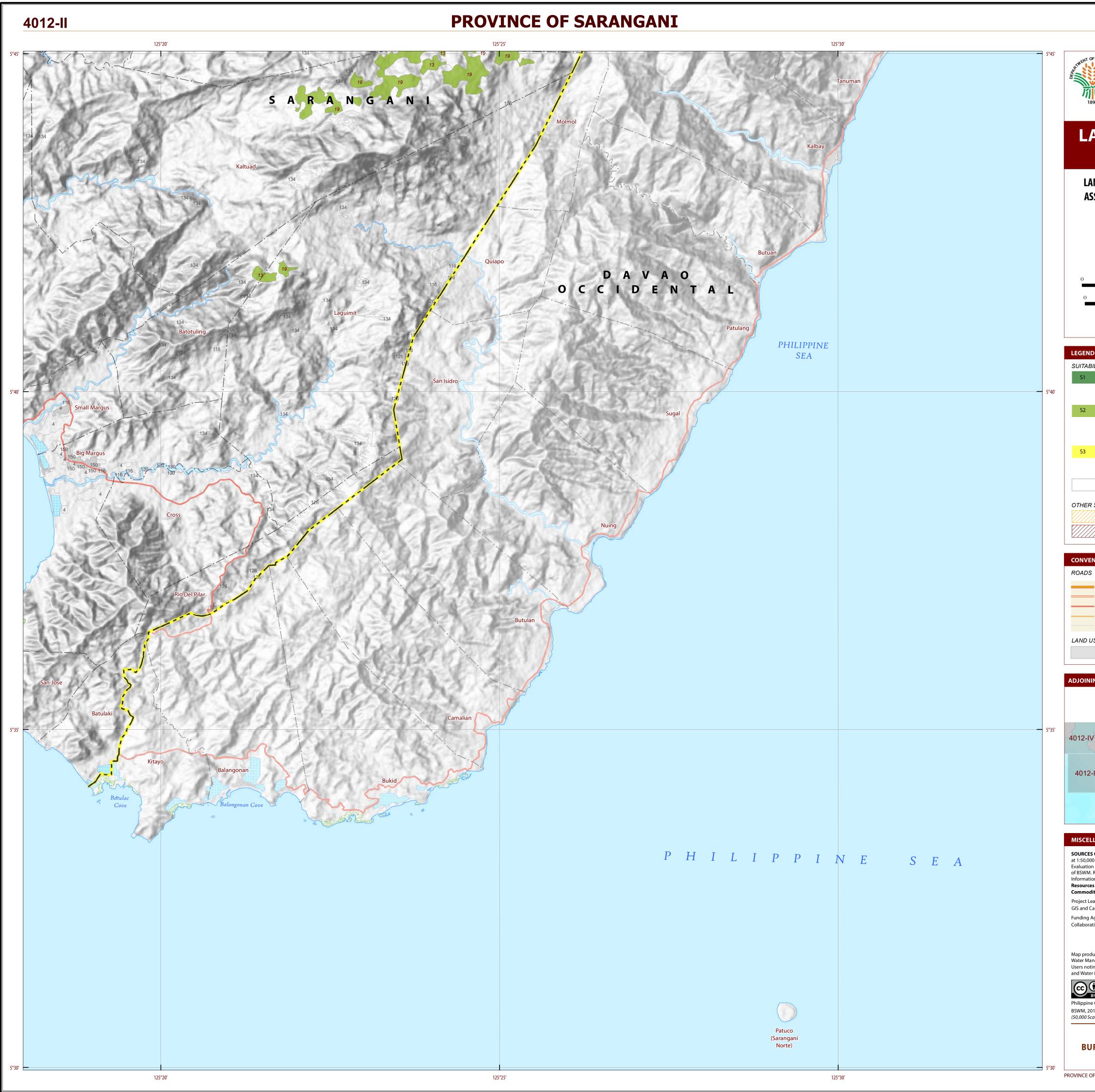
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