LAND SUITABILITY MAP

NATURAL RUBBER

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

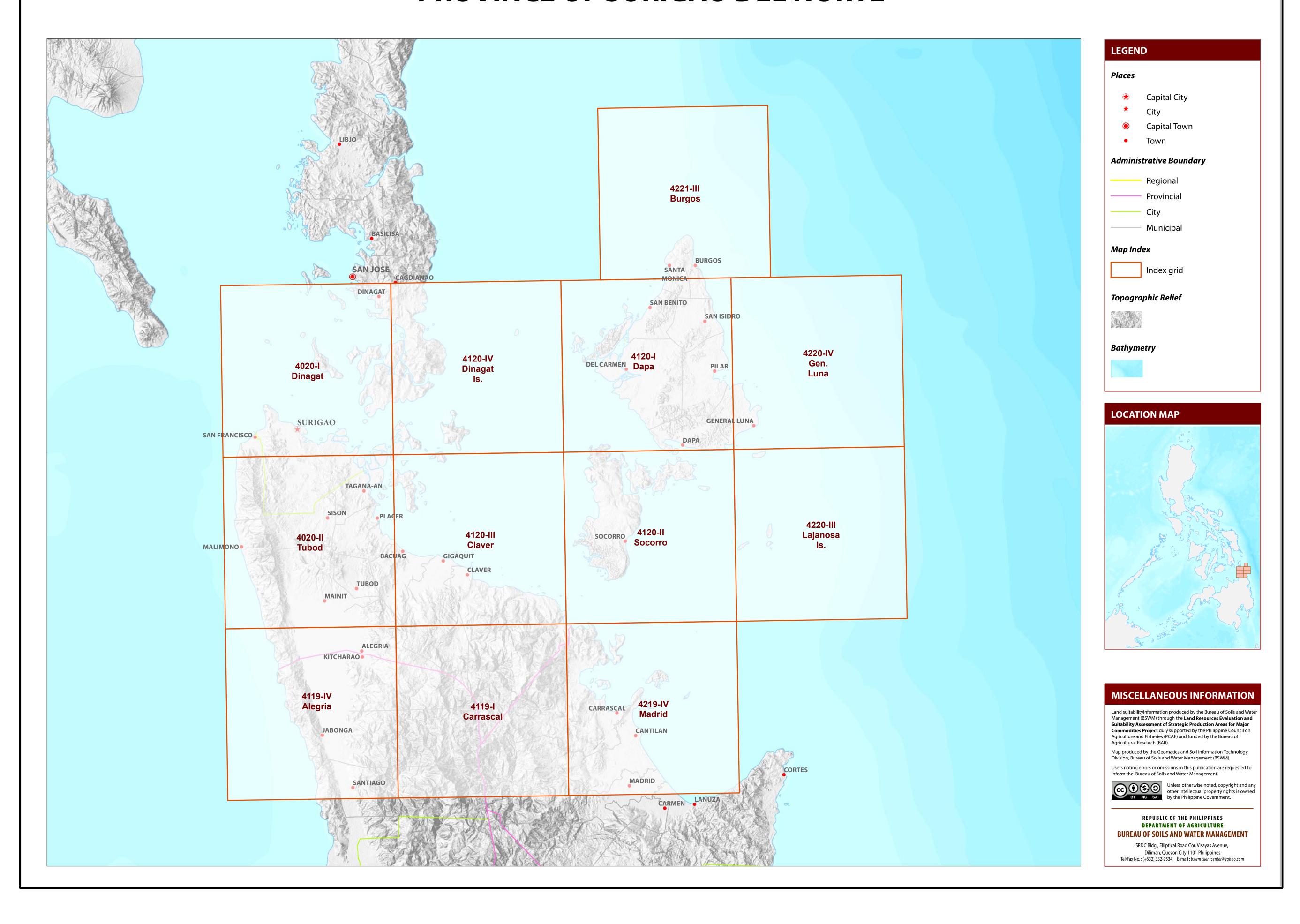
PROVINCE OF SURIGAO DEL NORTE





MAP INDEX

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS PROVINCE OF SURIGAO DEL NORTE



LAND SUITABILITY MAP FOR RUBBER

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS SURIGAO DEL NORTE, REGION XIII

EXTENT OF SUITABILITY FOR RUBBER PRODUCTION BY MUNICIPALITY

						EX	PANSION A	AREA (H	a)		(CONFLIC	T RESOLI	UTION AR	EA (Ha)		TOTAL
MUNICIPALITY	EXISTI	NG RUBB	ER (Ha)	TOTAL EXISTING AREA (Ha)	Coco	nut	Shrubl unmana	, ,	Grassl unmana		Cor	n	Paddy non-irr		Other	crops	POTENTIAL EXPANSION
	S1	S2	S 3		S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	AREA (Ha)
ALEGRIA	-	-	-	-	558	820	-	28	6	-	374	8	-	-	-	-	1,793
BACUAG	-	-	-	-	324	1,029	-	71	139	242	460	74	-	-	-		2,339
BURGOS	-	-	-	-	288	574	54	137	-	-	118	89	-	-	-	-	1,258
CLAVER	-	-	-	-	84	1,166	8	214	40	1,486	176	280	-	-	-	-	3,455
DAPA	-	-	-	-	1,204	1,127	31	165	63	284	88	216	-	-	-	-	3,179
DEL CARMEN	-	-	-	-	2,848	1,402	556	350	121	126	1,245	189	-	-	-		6,839
GENERAL LUNA	-	-	-	-	681	660	201	604	-	-	820	486	-	-	-		3,453
GIGAQUIT	-	-	-	-	213	1,485	-	226	47	16	529	307	-	-	-		2,822
MAINIT	-	-	-	-	998	3,252	-	52	45	102	1,154	146	-	-	-	-	5,749
MALIMONO	-	-	-	-	260	639	-	12	14	189	35	20	-	-	-	-	1,169
PILAR	-	-	-	-	1,721	676	161	267	1	17	1,017	551	-	-	-		4,411
PLACER	-	-	-	-	319	2,262	-	19	23	206	122	141	-	-	-	-	3,092
SAN BENITO	-	-	-	-	523	627	303	218	-	10	69	19	-	-	-	-	1,770
SAN FRANCISCO	-	-	-	-	254	408	-	-	29	32	133	14	-	-	-	-	871
SAN ISIDRO	-	-	-	-	1,506	475	361	284	-	-	1,087	197	-	-	-		3,910
SANTA MONICA	-	-	-	-	646	1,074	20	48	-	4	206	174	-	-	-		2,173
SISON	=	-	-	-	357	3,099	-	62	59	151	327	285	-	-	-	-	4,341
SOCORRO	-	-	-	-	44	813	1	650	5	1,695	61	1,604	-	-	-		4,872
SURIGAO CITY	-	_	-	-	318	4,481	18	516	185	2,938	1,475	1,441	-	-	-	-	11,372
TAGANA-AN	-	_	-	-	205	1,654	-	7	3	29	76	80	-	-	-	-	2,053
TUBOD	-	-	-	-	178	1,069	-	47	4	16	208	108	-	-	-	-	1,630
TOTAL	_	_	_	-	13,525	28,792	1,713	3,978	786	7,543	9,783	6,432	-	_	_		72,552

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

AGRONOMIC REQUIREMENT OF RUBBER PRODUCTION

U	LAND FILIZATIO TYPE	N SUITABILITY RATING	SLOPE (%)	SOIL DEPTH (cm)	SOIL TEXTURE	SOIL DRAINAGE	SOIL REACTION (pH)	INHERENT FERTILITY	FLOODING CLASS	EROSION CLASS	ROCK OUTCROPS	ELEVATION (masl)	ANNU RAINF (mn	ALL CLIMATIC TYPE
		S1	<8	>100	CL, SiCL, SCL, SC, SiC, C, HC	WD,MWD, SPD	5.6 -7.2	high	none-slight	none-slight	none-few	<500	1000-2	2000 III, IV
R	lubber Tree	e S2	8 - 30	30 - 100	FSL, L, SiL, SL	PD,VPD	4.5 - 5.5 7.3 - 7.8	medium	moderate	moderate	common	500-1000	2001-4	1, II, III
		S3	>30	<30	S, LS, CSL	ED	<4.5 - > 7.9	low	severe	severe	many	>1000	<100 >450	
SL	OPE (%)			SOIL DRAINA	GE		SOIL REACTION	ON (pH)		SOIL TEXT	URE			
0 -	3 - le	evel to gently slopin	g	ED - ex	cessively drained		< 4.5 - ex	xtremely acid		Coarse			Fine	
3 -	8 - ge	ently sloping to und	lulating	WD - w	_			4.5 - 5.0 - very strongly acid			- sand		SC	- sandy clay
8 -	18 - u	ndulating to rolling		MWD - moderately well drained			5.1 - 5.5 - strongly acid			LS	- loamy sand		SiC	- silty clay
18	- 30 - ro	olling to moderately	steep	SPD - somewhat poorly drained			5.6 - 6.0 - medium acid			CSL	- coarse sandy loam		С	- clay
30	- 50 - st	teep		PD - poorly drained			6.1 - 6.5 - slightly acid			SL	- sandy loam		HC	- heavy clay
> 5	50 - vo	ery steep	steep		VPD - very poorly drained		6.6 - 7.2 - neutral			Medium				
							7.3 - 7.8 - m	ildly alkaline		FSL	- fine sandy loam			
SO	OIL DEPTH	(cm)		SURFACE IMPEDIMENT			7.9 - 8.4 - moderately alkaline			L	- loam			
0 -	30 - ve	ery shallow		ROCK OUTCRO)PS		> 8.5 - st	rongly alkaline		SiL	- silt loam			
30	- 50 - sł	hallow		< 10% - no	one - few					CL	- clay loam			
50	- 100 - m	noderately deep		10 - 30% - co	ommon					SiCL	- silty clay loam			
> 1	100 - de	eep to very deep		> 30% - m	any					SCL	- sandy clay loam			

ELEVA	TION		SOIL DRA	AINAGE			SOIL D	DEPTH		SOI	IL EROSION
El2 -	500 - 1000m or 2000 - 2	2500m	D2 - Se	omewhat	poorly drained to poorly	y drained	Sh2	- Shallow to	moderately deep (30 - 100cm)	E2	- Moderate erosion
El3 -	$< 500 \mathrm{m} \mathrm{or} > 2500 \mathrm{m}$		D3 - V	ery poorl	y drained or excessively	drained	Sh3	- Very shall	ow (< 30cm)	E3	- Severe erosion
SLOPE	/TOPOGRAPHY		SOIL TEX	TURE			ROCK	OUTCROP	S	FLO	OODING
T2 -	Undulating to moderate	ely steep	Tc - C	oarse text	ure		Rc2	- Common		F2	- Moderate seasonal flooding
Т3 -	Steep to very steep						Rc3	- Many		F3	- Severe seasonal flooding
	T		I	1	I	1	I				
CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LANDUSE
CODE 1	LIMITATION E12	CODE 11	LIMITATION T2-E3	CODE 21	LIMITATION T2-F2-D2	CODE 31	LIMITATION T3-E12-E3-Sh3-Rc2	CODE 41	LIMITATION T3-El3	CODE 4	LANDUSE Corn
1 2			_						-	CODE 4 81	
1	El2	11	T2-E3	21	T2-F2-D2	31	T3-El2-E3-Sh3-Rc2	41	T3-El3	4	Corn
1 2	El2 El2-Sh2-Rc2	11 12	T2-E3 T2-E3-Rc2	21 22	T2-F2-D2 T2-F3-D2	31 32	T3-El2-E3-Sh3-Rc2 T3-F2-D2	41	T3-El3	4 81	Corn Coffee
1 2 3	El2 El2-Sh2-Rc2 F2-D2	11 12 13	T2-E3 T2-E3-Rc2 T2-E3-Rc3	21 22 23	T2-F2-D2 T2-F3-D2 T3	31 32 33	T3-El2-E3-Sh3-Rc2 T3-F2-D2 T3-F3-D2	41	T3-El3	4 81 82	Corn Coffee Cacao
1 2 3 4	E12 E12-Sh2-Rc2 F2-D2 F2-Tc	11 12 13 14	T2-E3 T2-E3-Rc2 T2-E3-Rc3 T2-E3-Sh2-Rc2	21 22 23 24	T2-F2-D2 T2-F3-D2 T3 T3-E3	31 32 33 34	T3-E12-E3-Sh3-Rc2 T3-F2-D2 T3-F3-D2 T3	41	T3-El3	4 81 82 116	Corn Coffee Cacao Coconut
1 2 3 4 5	El2 El2-Sh2-Rc2 F2-D2 F2-Tc F3-D2	11 12 13 14 15	T2-E3 T2-E3-Rc2 T2-E3-Rc3 T2-E3-Sh2-Rc2 T2-E3-Sh2-Rc3	21 22 23 24 25	T2-F2-D2 T2-F3-D2 T3 T3-E3 T3-E3-Rc2	31 32 33 34 35	T3-El2-E3-Sh3-Rc2 T3-F2-D2 T3-F3-D2 T3 T3-E3	41	T3-El3	4 81 82 116 126	Corn Coffee Cacao Coconut Grassland
1 2 3 4 5	El2 El2-Sh2-Rc2 F2-D2 F2-Tc F3-D2 Sh2	11 12 13 14 15 16	T2-E3 T2-E3-Rc2 T2-E3-Rc3 T2-E3-Sh2-Rc2 T2-E3-Sh2-Rc3 T2-E12	21 22 23 24 25 26	T2-F2-D2 T2-F3-D2 T3 T3-E3 T3-E3-Rc2 T3-E3-Sh2-Rc3	31 32 33 34 35 36	T3-El2-E3-Sh3-Rc2 T3-F2-D2 T3-F3-D2 T3 T3-E3 T3-E3	41	T3-El3	4 81 82 116 126	Corn Coffee Cacao Coconut Grassland
1 2 3 4 5 6 7	E12 E12-Sh2-Rc2 F2-D2 F2-Tc F3-D2 Sh2 Sh2-Rc2	11 12 13 14 15 16 17	T2-E3 T2-E3-Rc2 T2-E3-Rc3 T2-E3-Sh2-Rc2 T2-E3-Sh2-Rc3 T2-E12 T2-E12-E3	21 22 23 24 25 26 27	T2-F2-D2 T2-F3-D2 T3 T3-E3 T3-E3-Rc2 T3-E3-Sh2-Rc3 T3-E3-Sh3-Rc2	31 32 33 34 35 36 37	T3-El2-E3-Sh3-Rc2 T3-F2-D2 T3-F3-D2 T3 T3-E3 T3-E3 T3-E3-Rc3 T3-E3-Sh3-Rc3	41	T3-El3	4 81 82 116 126	Corn Coffee Cacao Coconut Grassland

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.

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.

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.

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.

CLIMATE TYPE

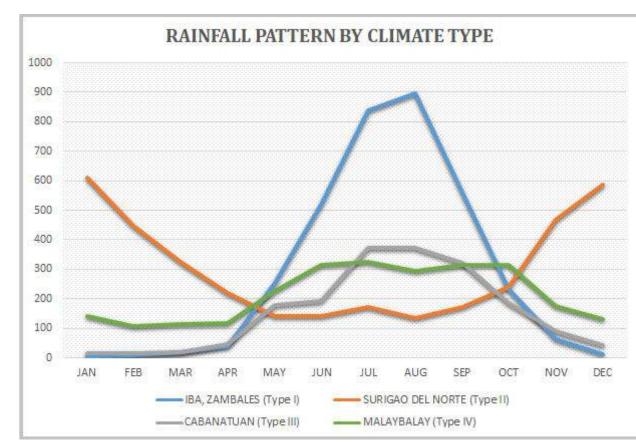
TYPE I: Two pronouced season, dry from November to April and **TYPE II**: No dry season with a very pronounced maximum rain wet during the rest of the year. Maximum rain period is from June to September

period from December to February. There is not a single dry month. Maximum monthly rainfall occurs during the period from March to May.

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.

TYPE IV: Rainfall is more or less evenly distributed throughout the year. This type resembles Type II since it has no dry season.

Surigao Del Norte is classified as climatic Type II



Source: PAGASA 2018, Climatological Normals (Rainfall), Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), accessed 27 July 2018, https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals.

