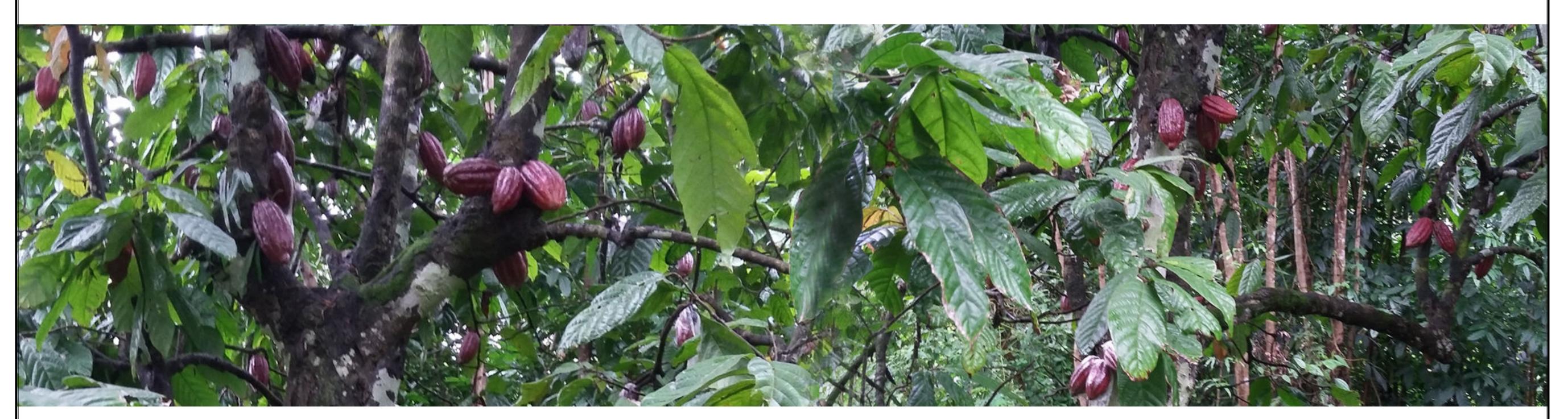
# LAND SUITABILITY MAP

# CACAO

# LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

## PROVINCE OF PALAWAN

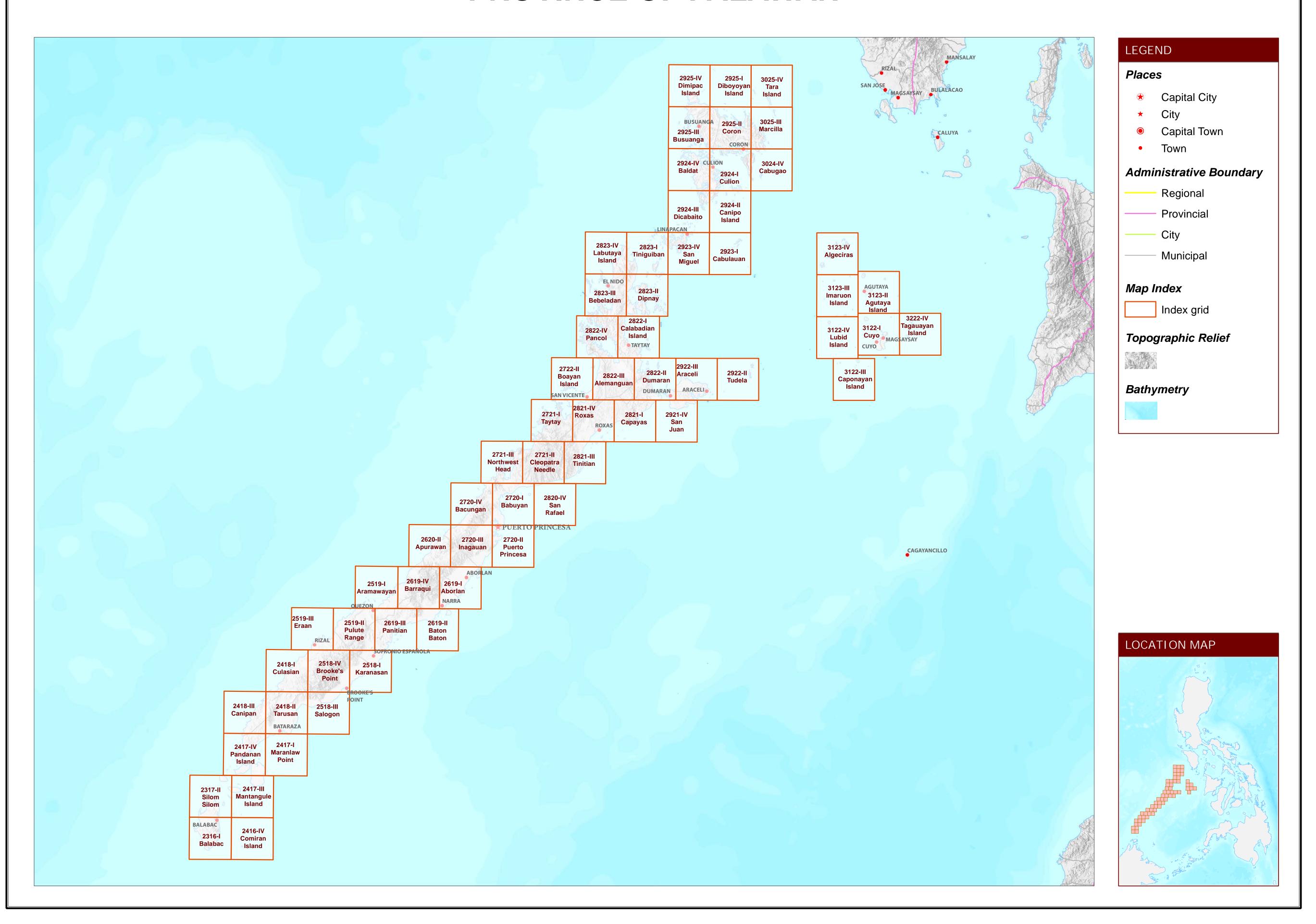




## MAP INDEX

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

## PROVINCE OF PALAWAN



# LAND SUITABILITY MAP FOR CACAO

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

## PALAWAN, REGION IV-B

#### **EXTENT OF SUITABILITY FOR CACAO PRODUCTION BY MUNICIPALITY**

					EXPANSION AREA (Ha)					CONFLICT RESOLUTION (Ha)				TOTAL			
MUNICIPALITY	EXIST	ING CACAO	O (Ha)	TOTAL EXISTING AREA (Ha)	Cocc	onut	Shrub unman	,	Grass unmar	, ,	Rice po non-irr		Coi	rn	Other	crops	POTENTIAL EXPANSION
	<b>S1</b>	<b>S2</b>	<b>S</b> 3		<b>S1</b>	<b>S2</b>	<b>S1</b>	<b>S2</b>	<b>S1</b>	<b>S2</b>	<b>S1</b>	S2	S1	<b>S2</b>	<b>S1</b>	<b>S2</b>	AREA (Ha)
ABORLAN	-	-	ı	-	14,186	1,202	2,897	2,444	338	46	4,372	283	2	-	-	-	25,772
AGUTAYA	-	-	-	-	96	74	-	-	1,656	99	-	-	-	-	-	-	1,924
ARACELI	-	-	-	-	4	159	300	3,399	66	584	721	1,154	-	14	-	-	6,402
BALABAC	-	-	-	-	16,565	-	1,877	43	765	7	26	-	-	-	-	-	19,283
BATARAZA	46	6	64	116	20,127	666	8,454	481	1,652	16	5,487	16	-	-	-	-	36,900
BROOKE'S POINT	22	10	29	61	19,256	835	2,051	474	-	-	8,041	27	-	-	-	-	30,684
BUSUANGA	-	-	-	-	14	25	2,353	2,604	3,808	2,999	729	514	4	2	-	-	13,054
CORON	-	-	-	-	37	95	1,793	3,693	5,501	4,962	494	294	-	-	-	-	16,869
CULION	-	-	-	-	5	9	517	2,373	2,090	5,448	1,538	775	41	21	-	-	12,818
CUYO	-	-	-	-	3,014	195	368	-	56	34	38	-	6	-	-	-	3,711
DUMARAN	-	-	-	-	87	99	556	2,905	1,715	4,637	3,079	1,710	-	1	-	-	14,789
EL NIDO	-	-	-	-	1,085	189	2,425	2,853	1,866	1,770	3,455	991	34	4	-	-	14,672
LINAPACAN	-	-	-	-	-	129	18	570	72	765	7	301	2	37	-	-	1,902
MAGSAYSAY	-	-	-	-	3,302	155	3	-	231	132	44	17	5	8	-	-	3,898
NARRA	-	-	-	-	6,317	501	6,286	3,045	1,484	102	16,330	195	8	-	-	-	34,267
PUERTO PRINCESA CITY	-	-	-	-	8,142	4,574	8,780	5,587	1,836	955	9,190	1,332	70	3	-	-	40,469
QUEZON	4	8	13	25	12,133	4,584	9,262	8,094	842	11	3,823	202	11	-	-	-	38,962
RIZAL	29	5	15	48	11,208	1,166	24,961	3,055	11	2	5,154	129	-	-	-	3	45,689
ROXAS	-	-	-	-	1,365	1,122	1,049	2,878	6,180	11,622	2,208	1,344	-	-	-	-	27,767
SAN VICENTE	-	-	-	-	130	418	87	741	1,600	3,604	2,063	1,135	75	31	-	-	9,884
SOFRONIO ESPAÑOLA	12	17	21	51	7,023	6,151	2,899	8,158	7	15	1,799	365	-	-	-	-	26,416
TAYTAY	-	-	-	-	680	226	3,247	4,381	5,136	5,649	9,097	1,424	66	33	-	-	29,939
TOTAL	113	46	142	301	124,777	22,574	80,184	57,779	36,913	43,460	77,695	12,206	325	154	-	3	456,069

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

**SUITABILITY** 

- deep to very deep

El2 - 1000m - 1500m

SLOPE/TOPOGRAPHY

El3 -> 1500m

12 Sh2-Rc2

UTILIZATION

#### AGRONOMIC REQUIREMENT OF CACAO PRODUCTION

	TYPE	RATING	SLOPE (%)	(cm)	SOIL TEXTURE	DRAINAGE	REACTION (pH)	FERTILITY	CLASS	CLASS	OUTCROPS	(masl)	(mm)	ТҮРЕ
		S1	<8	>100	CL, SiCL, SCL, SC, SiC, C, HC	WD,MWD	5.6 -7.2	high	none-slight	none-slight	none-few	<1000	2001-4500	I, III, IV
	Cacao	S2	8 - 30	50 - 100	FSL, L, SiL	SPD,PD	5.1 - 5.5 7.3 - 7.8	medium	moderate	moderate	common	1000-1500	1000-2000	I, II
		S3	>30	<50	S, LS, CSL, SL	VPD,ED	<5.0 - > 7.9	low	severe	severe	many	>1500	<1000 >4500	
SLOPE (%)				SOIL DRAINA	AGE		SOIL REACTION (pH)			SOIL TEXTURE			,	
	0 - 3	- level to gently slopin	ng	ED - e	xcessively drained		< 4.5 - extre	mely acid		Coarse		F	ine	
	3 - 8	gently sloping to und	dulating	WD - w	vell drained		4.5 - 5.0 - very	strongly acid		S - sand	d	So	C - sandy c	lay
	8 - 18	- undulating to rolling	<u> </u>	MWD - n	noderately well drained		5.1 - 5.5 - stron	ıgly acid		LS - loan	ny sand	Si	C - silty cla	ıy
	18 - 30	- rolling to moderately	y steep	SPD - se	omewhat poorly drained	d	5.6 - 6.0 - medi	um acid		CSL - coar	rse sandy loam	C	- clay	
	30 - 50	- steep		PD - p	oorly drained		6.1 - 6.5 - slight	tly acid		SL - sand	dy loam	Н	C - heavy o	alay
	> 50	- very steep		VPD - v	ery poorly drained		6.6 - 7.2 - neutr	ral		Medium				
							7.3 - 7.8 - mildl	y alkaline		FSL - fine	sandy loam			
SOIL DEPTH (cm)			SURFACE IM	PEDIMENT		7.9 - 8.4 - moderately alkaline			L -loan	n				
0 - 30 - very shallow		ROCK OUTCRO	OPS		> 8.5 - stron	ıgly alkaline		SiL - silt l	loam					
	30 - 50	- shallow		< 10% - n	one - few					CL - clay	loam			
	50 - 100	- moderately deep		10 - 30% - c	ommon					SiCL - silty	clay loam			

REACTION

INHERENT

**FLOODING** 

**EROSION** 

ROCK

- sandy clay loam

**SOIL EROSION** 

**FLOODING** 

E2 - Moderate erosion

F2 - Moderate seasonal flooding

F3 - Severe seasonal flooding

E3 - Severe erosion

**ELEVATION** 

RAINFALL

CLIMATIC

#### LAND LIMITATIONS DESCRIPTION AND COMBINATIONS **ELEVATION SOIL DRAINAGE**

> 30%

**SOIL TEXTURE** 

36 T3-El2-E3

D2 - Somewhat poorly drained to poorly drained

D3 - Very poorly drained or excessively drained

T2	<ul> <li>Undulating to mode</li> </ul>	erately s	steep	Tc -	Coarse texture		
	- Steep to very steep	•	1				
CODE	LAND LIMITATION	CODE	LAND LIMITATION	CODE	LAND LIMITATION	CODE	LAND LIMITAT
1	E2	13	T2	25	T2-El3-E3-Rc3	37	T3-El2-E3-Rc2
2	E2-Sh2-Rc2	14	T2-E3	26	T2-F2-D2	38	T3-El2-E3-Rc3
3	El2	15	T2-E3-Rc2	27	T2-F3-D2	39	T3-El2-E3-Sh2
4	El2-E3-Rc3	16	T2-E3-Rc3	28	T3	40	T3-El2-E3-Sh3
5	El2-Rc2	17	T2-E3-Sh2-Rc2	29	T3-E3	41	T3-El3
6	El2-Sh2-Rc2	18	T2-E3-Sh2-Rc3	30	T3-E3-Rc2	42	T3-El3-E3
7	El3	19	T2-El2	31	T3-E3-Rc3	43	T3-El3-E3-Sh2
8	El3-E3-Rc3	20	T2-El2-E3	32	T3-E3-Sh2-Rc3	44	T3-El3-E3-Sh3
9	F2-D1	21	T2-El2-E3-Rc2	33	T3-E3-Sh3-Rc2	45	T3-F3-D2
10	F3-D1	22	T2-El2-E3-Rc3	34	T3-E3-Sh3-Rc3	46	Тс
11	Sh2	23	T2-El2-E3-Sh2-Rc3	35	T3-El2		

**24** T2-El3-E3

SOIL DEPTH Sh2 - Moderately deep (50 - 100cm) Sh3 - Very shallow to shallow (< 50cm)

ROCK OUTCROPS Rc2 - Common Rc3 - Many

> CODE LAND USE 2 Rice paddy, non-irrigated 81 Coffee 82 Cacao 116 Coconut 126 Grassland 134 Shrubland, unmanaged 137 Rubber

**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.

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.

#### **CLIMATE TYPE**

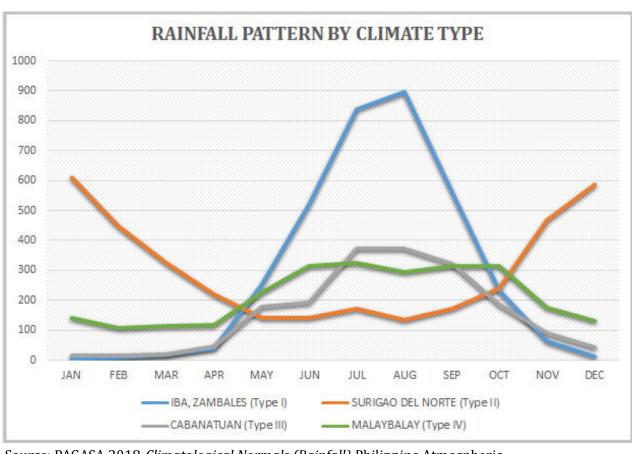
**TYPE I**: Two pronouced season, dry from November to April and wet during the rest of the year. Maximum rain period is from June to September

**TYPE II**: No dry season with a very pronounced maximum rain 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

Northwestern part of Palawan belongs to climatic Type I and southeast part of the island is Type III.



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

