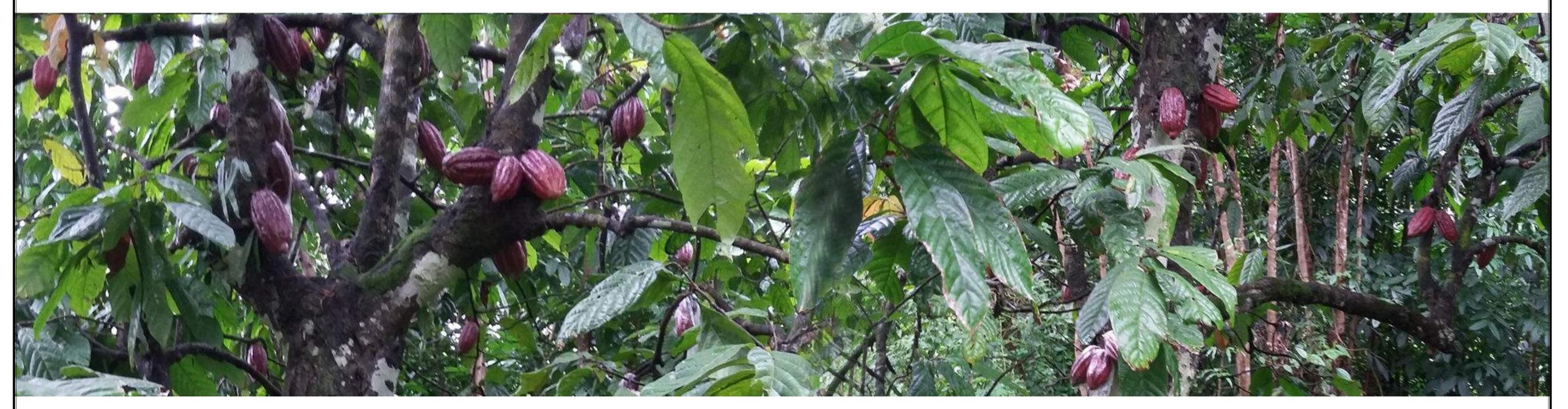
### LAND SUITABILITY MAP

### CACAO

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

### PROVINCE OF ZAMBOANGA SIBUGAY





### MAP INDEX

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



## LAND SUITABILITY MAP FOR **CACAO**

### LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS ZAMBOANGA SIBUGAY, REGION IX

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

						EXI	PANSION A	AREA (H	a)			CONFLIC	T RESOL	UTION AI	REA (Ha)		TOTAL
MUNICIPALITY	EXIST	EXISTING CACAO (Ha)		TOTAL EXISTING AREA (Ha)	Coco	nut	Shrubl unmana	·	Grassl unmana	- 1	Cor	'n	Paddy non-iri		Other	crops	POTENTIAL EXPANSION
	<b>S1</b>	S2	<b>S</b> 3		<b>S1</b>	<b>S2</b>	S1	<b>S2</b>	S1	<b>S2</b>	S1	<b>S2</b>	<b>S1</b>	<b>S2</b>	<b>S1</b>	<b>S2</b>	AREA (Ha)
ALICIA	8	-	5	14	3,644	1,029	422	-	402	19	1,691	271	-	-	-	-	7,479
BUUG	13	4	19	36	4,028	18	670	20	103	2	1,001	12	-	Ī	2	-	5,856
DIPLAHAN	1	-	2	3	849	-	436	-	214	-	1,849	-	-	-	3	-	3,351
IMELDA	16	-	13	29	3,008	-	73	-	355	-	690	-	-	-	1	-	4,128
IPIL (Capital)	_	-	-	-	4,673	725	337	-	178	37	2,688	16	-	-	4	-	8,657
KABASALAN	-	-	1	1	3,742	31	352	-	381	15	839	-	-	-	-	-	5,360
MABUHAY	_	-	-	-	1,237	200	-	52	-	-	675	184	-	-	-	-	2,348
MALANGAS	20	3	9	32	5,542	292	110	-	489	-	1,510	129	-	-	3	-	8,074
NAGA	-	-	-	-	4,648	1,662	28	12	130	13	832	87	-	-	-	-	7,412
OLUTANGA	_	-	-	-	139	64	-	23	-	-	9	22	-	-	-	-	256
PAYAO	14	-	4	18	4,942	238	578	-	33	-	2,071	148	-	-	57	-	8,066
ROSELLER LIM	3	-	3	7	5,668	63	128	-	1,016	12	2,174	-	-	-	-	-	9,061
SIAY	7	-	4	11	3,265	-	590	-	1,016	-	2,594	-	-	-	-	-	7,464
TALUSAN	-	-	-	-	151	477	18	113	-	-	132	454	-	-	-	-	1,344
TITAY	2	1	2	5	6,574	5,183	106	21	170	126	1,480	668	-	-	-	-	14,328
TUNGAWAN	5	-	3	8	9,547	-	371	-	5,652	-	2,831	-	-	-	-	-	18,402
ТОТА	AL 91	8	64	163	61,658	9,981	4,218	240	10,138	225	23,065	1,991	-	-	71	-	111,586

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

#### AGRONOMIC REQUIREMENT OF CACAO 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	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 I	DRAINAGE	SOIL REA	ACTION (pH)	SOIL T	EXTURE		
0 - 3 - level to gently slo	ping ED	- excessively drained	< 4.5	- extremely acid	Coarse		Fine	
3 - 8 - gently sloping to	ındulating WD	- well drained	4.5 - 5.0	- very strongly acid	S	- sand	SC	- sandy clay
8 - 18 - undulating to roll	ng MWD	- moderately well drained	5.1 - 5.5	- strongly acid	LS	- loamy sand	SiC	- silty clay
18 - 30 - rolling to modera	tely steep SPD	- somewhat poorly drained	5.6 - 6.0	- medium acid	CSL	- coarse sandy loam	С	- clay
30 - 50 - steep	PD	- poorly drained	6.1 - 6.5	- slightly acid	SL	- sandy loam	HC	- heavy cla
> 50 - very steep	VPD	<ul> <li>very poorly drained</li> </ul>	6.6 - 7.2	- neutral	Mediu	m		
			7.3 - 7.8	- mildly alkaline	FSL	- fine sandy loam		
SOIL DEPTH (cm)	SURFA	ACE IMPEDIMENT	7.9 - 8.4	- moderately alkaline	L	- loam		
0 - 30 - very shallow	ROCK	OUTCROPS	> 8.5	- strongly alkaline	SiL	- silt loam		
30 - 50 - shallow	< 10%	- none - few			CL	- clay loam		
50 - 100 - moderately deep	10 - 30	0% - common			SiCL	- silty clay loam		
> 100 - deep to very deep	> 30%	- many			SCL	- sandy clay loam		

**SOIL DEPTH** 

#### LAND LIMITATIONS DESCRIPTION AND COMBINATIONS

**ELEVATION** 

El2 - 1000m - 1500m El3 -> 1500m	<ul><li>D2 - Somewhat poorly drained to poorly drained</li><li>D3 - Very poorly drained or excessively drained</li></ul>	Sh2 - Moderately deep (50 - 100cm) Sh3 - Very shallow to shallow (< 50cm)	<ul><li>E2 - Moderate erosion</li><li>E3 - Severe erosion</li></ul>
SLOPE/TOPOGRAPHY	SOIL TEXTURE	ROCK OUTCROPS	FLOODING
T2 - Undulating to moderately steep	Tc - Coarse texture	Rc2 - Common	F2 - Moderate seasonal flooding
T3 - Steep to very steep		Rc3 - Many	F3 - Severe seasonal flooding

CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION
1	E2-Sh2-Rc2	11	T2-E3-Rc3	21	T3-E3-Rc2	31	T3-E3-Rc3
2	El2	12	T2-E3-Sh2-Rc2	22	T3-E3-Sh2-Rc3	32	T3-E3-Sh3-Rc3
3	El2-Sh2-Rc2	13	T2-E3-Sh2-Rc3	23	T3-E3-Sh3-Rc2	33	T3-El2-E3
4	El2-Sh2-Rc3	14	T2-El2	24	T3-E3-Sh3-Rc3	34	T3-El2-E3-Sh3-Rc3
5	F2-D2	15	T2-E12-E3	25	T3-E12	35	T3-El3
6	F3-D2	16	T2-El2-E3-Sh2-Rc2	26	T3-E12-E3		
7	Sh2-Rc2	17	T2-El2-E3-Sh2-Rc3	27	T3-El2-E3-Sh3-Rc2		
8	T2	18	T2-F2-D2	28	T3-El2-E3-Sh3-Rc3		
9	T2-E3	19	Т3	29	Т3		
10	T2-E3-Rc2	20	Т3-Е3	30	T3-E3		

**SOIL DRAINAGE** 

CODE	LANDUSE	CODE	LANDUSE
4	Corn	137	Rubber
81	Coffee	139	Falcata
82	Cacao		
85	Mango		
91	Banana		
105	Fruit trees, mixed		
115	Mixed crops		
116	Coconut		
126	Grassland		
134	Shrubs, unmanaged		

**SOIL EROSION** 

#### **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**

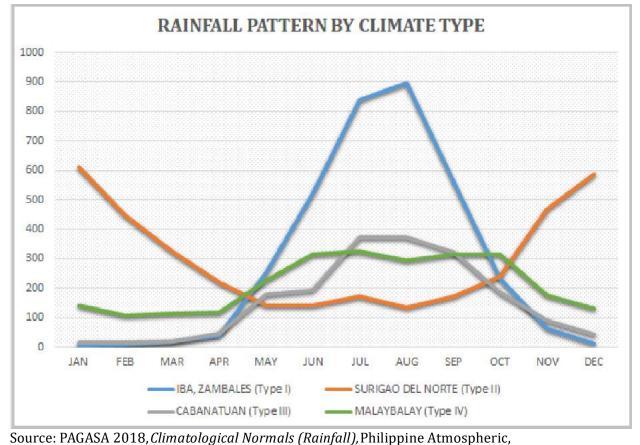
**TYPE I**: Two pronouced season, dry from November to April and **TYPE II**: No dry season with a very pronounced maximum rain wet during the rest of the year. Maximum rain period is from June to September

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

Western part of Zamboaga Sibugay is classified as climatic Type III and Eastern part is Type IV.



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>.

