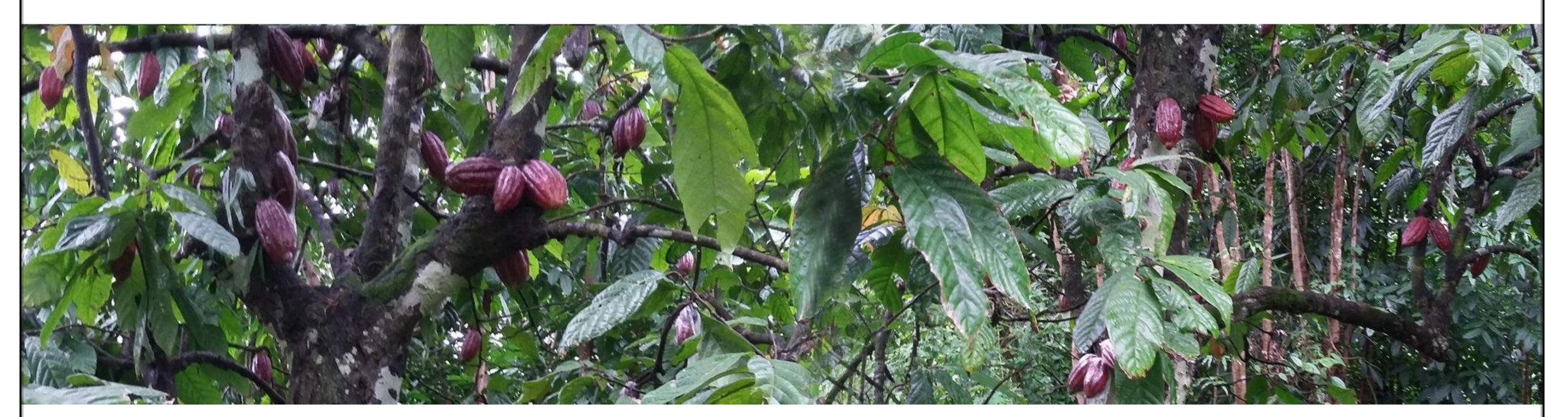
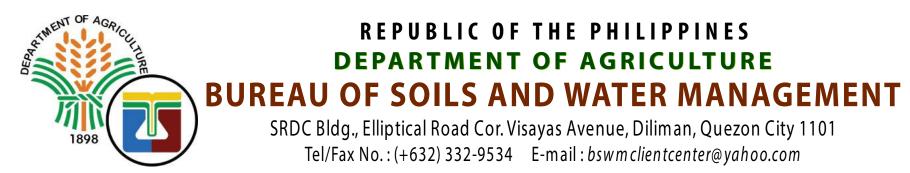
LAND SUITABILITY MAP

CACAO

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

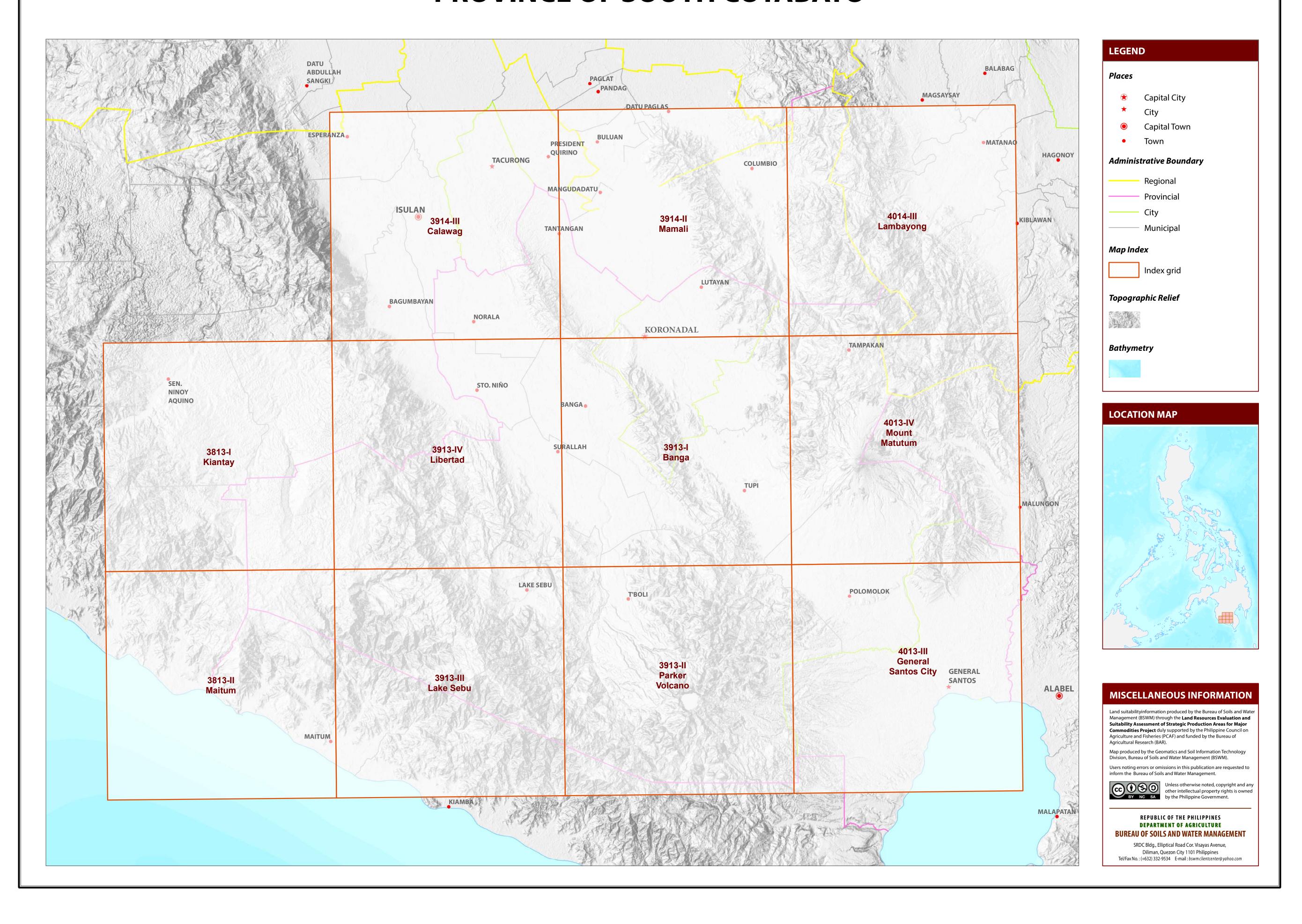
PROVINCE OF SOUTH COTABATO





MAP INDEX

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS PROVINCE OF SOUTH COTABATO



LAND SUITABILITY MAP FOR **CACAO**

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS SOUTH COTABATO, REGION XII

EXTENT OF SUITABILITY FOR CACAO PRODUCTION BY MUNICIPALITY

						EXF	PANSION .	AREA (H	a)				CC	NFLICT A	AREA (Ha	a)			TOTAL
MUNICIPALITY	EXISTI	ING CACA	0 (Ha)	TOTAL EXISTING AREA (Ha)	Coco	nut	Shrubl unmana		Grassl unmana	-	Cor	'n	Pinea	pple	Ban	ana	Other	crops	POTENTIAL EXPANSION AREA (Ha)
	S1	S2	S 3		S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	АКЕА (Па)
BANGA	-	-	-	-	623	93	-	-	468	1,246	9,697	395	-	-	5	-	-	-	12,526
CITY OF KORONADAL	-	-	-	-	2,546	70	73	67	692	764	6,413	192	-	-	-	-	-	-	10,817
LAKE SEBU	-	-	-	-	6	516	20	154	755	2,525	1,155	2,827	-	-	-	1	-	-	7,961
NORALA	_	-	-	-	387	120	-	-	380	338	2,071	34	-	-	-	-	-	-	3,329
POLOMOLOK	-	-	-	-	843	769	2	389	11	1,030	8,824	2,407	3,519	4,056	-	-	-	-	21,850
SANTO NIÑO	-	-	-	-	50	-	-	-	19	-	1,875	-	-	-	-	-	-	-	1,944
SURALLAH	-	-	-	-	819	7	99	-	642	219	11,641	153	-	-	-	-	4	-	13,584
TAMPAKAN	-	-	-	-	1,884	-	-	119	384	769	2,990	-	2	-	-	-	-	-	6,148
TANTANGAN	-	-	-	-	588	23	11	8	2,153	726	3,691	85	2	-	4	-	-	-	7,291
T'B0LI	-	_	-	-	93	51	-	158	444	4,594	2,436	2,190	-	-	1	1	-	-	9,968
TUPI	-	_	_	-	3,758	369	_	39	350	1,641	1,931	1,726	4,061	914	-	_	-	-	14,790
TOTAL	-	-	_	-	11,597	2,017	205	935	6,298	13,852	52,724	10,009	7,585	4,971	9	3	4	-	110,208

Note: Delivery of cacao planting materials must be started on the onset of rainy season.

*establishment of shade trees prior to planting of cacao.

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
	\$3	>30	<50	S, LS, CSL, SL	VPD,ED	<5.0 - > 7.9	low	severe	severe	many	>1500	<1000 >4500	

									1000
SLOPE (%)	SOIL DI	RAINAGE	SOIL REA	ACTION (pH)	SOIL TE	XTURE		
0-3	- level to gently sloping	ED	- excessively drained	< 4.5	- extremely acid	Coarse		Fine	
3 - 8	- gently sloping to undulating	WD	- well drained	4.5 - 5.0	- very strongly acid	S	- sand	SC	- sandy clay
8 - 18	- undulating to rolling	MWD	- moderately well drained	5.1 - 5.5	- strongly acid	LS	- loamy sand	SiC	- silty clay
18 - 30	- rolling to moderately 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	НС	- heavy clay
> 50	- very steep	VPD	- very poorly drained	6.6 - 7.2	- neutral	Mediun	n		
				7.3 - 7.8	- mildly alkaline	FSL	- fine sandy loam		
SOIL DE	PTH (cm)	SURFA	CE IMPEDIMENT	7.9 - 8.4	- moderately alkaline	L	- loam		
0 - 30	- very shallow	ROCK O	UTCROPS	> 8.5	- strongly alkaline	SiL	- silt loam		
30 - 50	- shallow	< 10%	- none - few			CL	- clay loam		
50 - 100	- moderately deep	10 - 30%	o - common			SiCL	- silty clay loam		
> 100	- deep to very deep	> 30%	- many			SCL	- sandy clay loam		

14 T2-E3-Sh2-Rc2

15 T2-E3-Sh2-Rc3

18 T2-El2-E3-Rc2

19 T2-El2-E3-Sh2-Rc2 29 T3-El2

20 T2-El2-E3-Sh2-Rc3 30 T3-El2-E3

16 T2-El2

17 T2-El2-E3

24 T3

25 T3-E3

26 T3-E3-Rc2

27 T3-E3-Sh3-Rc2

28 T3-E3-Sh3-Rc3

4 El2-E3-Sh2-Rc3

5 El2-F2-D2

7 El2-Sh2-Rc2

8 El3-Sh2-Rc2

6 El2-Rc2

9 F2-D2

10 Sh2-Rc2

LAN	D LIMITATIO	NS DE	SCRIPTION A	ND CO	MBINATION	S					
ELEVA	ΓΙΟΝ		SOIL DR.	AINAGE			SOIL	DEPTH		SOI	L EROSION
El2 -	1000m - 1500m		D2 - S	omewhat	poorly drained to poorly	y drained	Sh2	- Moderatel	y deep (50 - 100cm)	E2	- Moderate erosion
El3 -	> 1500m		D3 - V	ery poorly	y drained or excessively	drained	Sh3	- Very shall	ow to shallow (< 50cm)	E3	- Severe erosion
SLOPE/	TOPOGRAPHY		SOIL TEX	KTURE			ROCE	K OUTCROPS	5	FLC	OODING
T2 -	Undulating to moderate	ely steep	Tc - C	oarse text	ure		Rc2	- Common		F2	- Moderate seasonal floodin
T3 -	Steep to very steep						Rc3	- Many		F3	- Severe seasonal flooding
CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LANDUSE
1	E2-Sh2-Rc2	11	T2	21	T2-El2-F2-D2	31	T3-El2-E3-Rc2	41	T3-El2	4	Corn
2	El2	12	T2-E3	22	T2-El3-E3	32	T3-El2-E3-Sh3-Rc2	42	T3-El2-E3	81	Coffee
3	El2-E2-Sh2-Rc3	13	T2-E3-Rc2	23	T2-El3-E3-Sh2-Rc2	33	T3-El2-E3-Sh3-Rc3	43	T3-El2-E3-Rc3	82	Cacao

34 T3-El2-F2-D2

36 T3-El3-E3-Sh3-Rc2

35 T3-El3-E3

39 T3-E3-Rc3

40 T3-E3-Sh3-Rc3

37 T3

38 T3-E3

44 T3-El2-E3-Sh3-Rc3

46 T3-El3-E3-Sh3-Rc3

45 T3-El3-E3

CODE	LANDUSE
4	Corn
81	Coffee
82	Cacao
85	Mango
91	Banana
105	Fruit trees, mixed
116	Coconut
126	Grassland
134	Shrubs, unmanaged
134	Shrubs, unmanaged

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

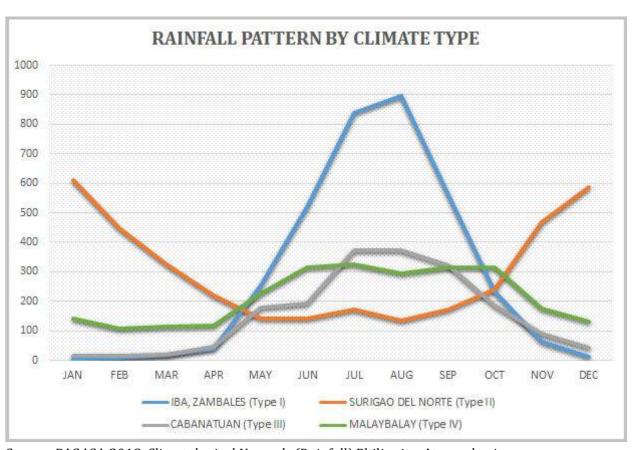
TYPE I: Two pronouced season, dry from November to April and **TYPE II**: No dry season with a very pronounced maximum rain wet during the rest of the year. Maximum rain period is from June to September

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.

Small part in the Northern side of South Cotabato is classified as climatic Type III and in the Southern side is Type IV.



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.

