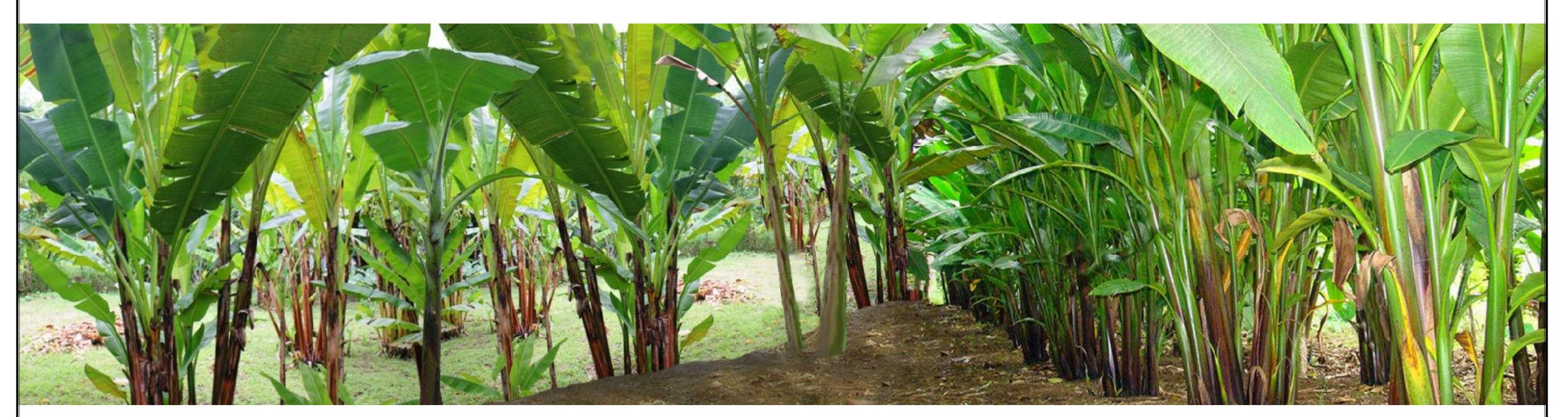
# LAND SUITABILITY MAP

## **ABACA**

# LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

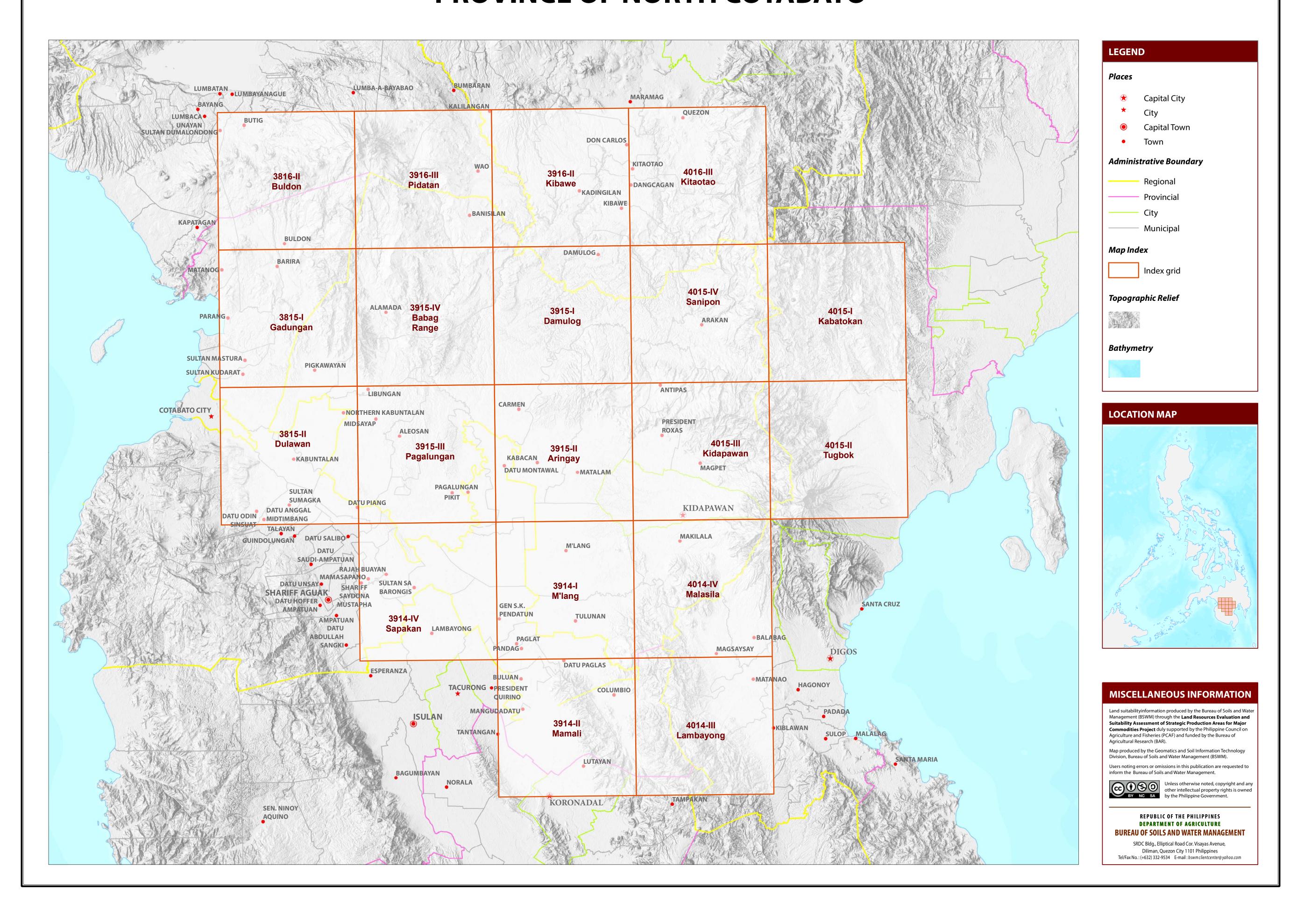
## PROVINCE OF NORTH COTABATO





### **MAP INDEX**

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



# LAND SUITABILITY MAP FOR **ABACA**

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

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

						EXF	PANSION A	REA (Ha	)				CONFLICT	resolut	TION AREA	A (Ha)			TOTAL
MUNICIPALITY	EXISTI	NG ABAC	A (Ha)	TOTAL EXISTING AREA (Ha)	Coco	nut	Shrubla unmana		Grassl unmana	-	Со	rn	Sugar	cane	Pineap	ople	Other c	rops	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>	<b>S2</b>	<b>S1</b>	<b>S2</b>	<b>S1</b>	<b>S2</b>	<b>S1</b>	<b>S2</b>	AREA (Ha)
ALAMADA	-	_	-	-	270	1,572	-	382	275	7,069	2,229	9,960	-	-	-	-	-	-	21,757
ALEOSAN	-	_	1	-	658	863	87	511	7	640	2,160	1,316	2,223	4,619	-	-	613	1,591	15,288
ANTIPAS	-	_	-	-	80	5,579	-	-	-	173	56	1,066	-	-	-	-	-	-	6,955
ARAKAN	-	-	-	-	6	5,031	-	118	23	1,967	-	5,317	-	37	-	-	-	1	12,501
BANISILAN	-	-	-	-	9	35	-	692	7	2,635	196	3,094	13	10,150	-	-	-	-	16,830
CARMEN	-	_	-	-	1,054	884	35	1,443	501	7,043	13,490	9,309	135	162	-	-	47	1	34,102
CITY OF KIDAPAWAN	-	-	1	-	12,993	6,447	-	-	-	-	1,956	526	-	-	1,204	325	-	-	23,451
KABACAN	-	_	-	-	635	3	10	528	450	2,352	5,281	795	-	-	-	-	-	-	10,055
LIBUNGAN	-	_	-	-	167	1,242	-	-	557	1,163	1,676	619	779	279	-	-	596	1,117	8,195
MAGPET	-	_	-	-	2,993	2,653	-	4	-	796	614	1,193	-	-	-	-	1	-	8,255
MAKILALA	-	_	-	-	3,211	6,181	18	375	71	568	2,475	657	-	-	2,496	1,868	-	-	17,920
MATALAM	-	-	-	-	705	4,754	11	298	133	3,320	11,284	5,523	-	-	-	-	-	-	26,027
MIDSAYAP	-	_	-	-	489	143	494	-	-	-	6,403	934	229	798	-	-	897	3,050	13,436
M'LANG	-	_	-	-	3,305	2,500	-	-	-	-	10,665	476	-	-	2,203	287	-	-	19,436
PIGKAWAYAN	-	_	-	-	2,932	2,181	-	147	304	1,561	1,672	264	-	-	-	-	171	48	9,279
PIKIT	-	_	-	-	3,629	405	218	674	44	1,220	9,454	623	10	49	-	-	-	-	16,326
PRESIDENT ROXAS	-	_	-	-	1,831	2,868	5	386	271	7,341	4,054	2,318	-	1	-	-	2	18	19,095
TULUNAN	-	_	-	-	1,788	724	1	18	260	3,676	6,652	917	-	-	523	178	-	-	14,737
TOTAL	_	_	_	_	36,757	44,065	877	5,577	2,903	41,523	80,318	44,908	3,387	16.096	6,425	2,658	2,326	5,826	293,645

\*establishment of shade trees prior to planting of abaca.

- deep to very deep

### AGRONOMIC REQUIREMENT OF ABACA PRODUCTION

> 30%

UTILIZAT TYPE	CION SUITABILITY	SLOPE (%)	SOIL DEPTH (cm)	SOIL TEXTURE	SOIL DRAINAGE	REACTI( (pH)	ON INHERENT FERTILITY	FLOODING CLASS	EROSION CLASS	ROCK OUTCROPS	ELEVATION (masl)	RAINFA (mm	ALL CLIMATIC TYPE
	S1	<8	>50	CL, SiCL, SCL, SC, SiC, C, HC	WD,MWD, SPD	5.6 -7.2	high	none-slight	none-slight	t none-few	<500	2001-4	500 II, III, IV
Abaca	S2	8 - 30	30 - 50	FSL, L, SiL, SL	PD,VPD	5.1 - 5.5 7.3 - 7.8	mediiim	moderate	moderate	common	500-1500	1000-20	000 I, II
	S3	>30	< 30	S, LS, CSL	ED	<5.0 - > 7	'.9 low	severe	severe	many	>1500	<100 >450	
SLOPE (%	SLOPE (%) SOIL DRAINAGE					SOIL REAC	CTION (pH)		SOIL TEXT	ΓURE			
0 - 3	- level to gently slopin	ng	ED - e	xcessively drained		< 4.5	- extremely acid		Coarse			Fine	
3 - 8	- gently sloping to und	lulating	WD - w	vell drained		4.5 - 5.0	- very strongly acid		S	- sand		SC	- sandy clay
8 - 18	- undulating to rolling	_	MWD - n	noderately well drair	ned	5.1 - 5.5	- strongly acid		LS	- loamy sand		SiC	- silty clay
18 - 30	- rolling to moderately	y steep	SPD - se	omewhat poorly dra	ined	5.6 - 6.0	- medium acid		CSL	- coarse sandy loam		С	- clay
30 - 50	- steep		PD - p	oorly drained		6.1 - 6.5	- slightly acid		SL	- sandy loam		HC	- heavy clay
> 50	- very steep		VPD - v	ery poorly drained		6.6 - 7.2	- neutral		Medium				
						7.3 - 7.8	- mildly alkaline		FSL	- fine sandy loam			
SOIL DEP	SOIL DEPTH (cm)		SURFACE IMPEDIMENT			7.9 - 8.4 - moderately alkaline			L	- loam			
0 - 30	- very shallow		ROCK OUTCR	OPS		> 8.5	- strongly alkaline		SiL	- silt loam			
30 - 50	- shallow		< 10% - n	one - few					CL	- clay loam			
50 - 100	- moderately deep		10 - 30% - c	ommon					SiCL	- silty clay loam			

**EROSION** 

- sandy clay loam

**ELEVATION** 

CLIMATIC

ELEVA	ATION		SOIL DE	AINAGE			SOIL D	EPTH		SOIL F	EROSION
El2 ·	- 500 - 1000m or 2000 - 25	500m	D2 -:	Somewhat	poorly drained to poorl	y drained	Sh2	- Shallow to	moderately deep (30 - 100cm)	E2	- Moderate erosion
El3 ·	- < 500m or > 2500m		D3 - '	ery poorl	y drained or excessively	drained	Sh3	- Very shallo	ow (< 30cm)	E3	- Severe erosion
SLOPE	/TOPOGRAPHY		SOIL TE	XTURE			ROCK	OUTCROPS	3	FLOO	DING
Г2 -	- Undulating to moderately	y steep	Tc -	Coarse text	ture		Rc2	- Common		F2	- Moderate seasonal flooding
Т3 -	- Steep to very steep						Rc3	- Many		F3	- Severe seasonal flooding
CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LANDUSE
CODE  1	LIMITATION E2-Sh2-Rc3	<b>CODE</b> 11	LIMITATION T2-E3-Rc2	<b>CODE</b> 21	LIMITATION T2-El2-Sh2-Rc3	<b>CODE</b> 31	LIMITATION T3-E3-Sh2-Rc3	<b>CODE 41</b>	LIMITATION T3-E3	CODE 4	<b>LANDUSE</b> Corn
2 CODE 1 2										_	
1	E2-Sh2-Rc3	11	T2-E3-Rc2	21	T2-El2-Sh2-Rc3	31	T3-E3-Sh2-Rc3	41	Т3-Е3	4	Corn
1 2	E2-Sh2-Rc3 El2	11 12	T2-E3-Rc2 T2-E3-Rc3	21 22	T2-El2-Sh2-Rc3 T2-El3-E3-Sh2-Rc2	31 32	T3-E3-Sh2-Rc3 T3-E3-Sh3-Rc2	41 42	T3-E3 T3-E3-Rc3	4 34	Corn Diversified crops
1 2	E2-Sh2-Rc3 El2 El2-E2-Sh2-Rc3	11 12 13	T2-E3-Rc2 T2-E3-Rc3 T2-E3-Sh2-Rc2	21 22 23	T2-El2-Sh2-Rc3 T2-El3-E3-Sh2-Rc2 T2-El3-Sh2-Rc2	31 32 33	T3-E3-Sh2-Rc3 T3-E3-Sh3-Rc2 T3-E3-Sh3-Rc3	41 42 43	T3-E3 T3-E3-Rc3 T3-E3-Sh3-Rc3	4 34 84	Corn Diversified crops Pineapple
1 2 3 4	E2-Sh2-Rc3 E12 E12-E2-Sh2-Rc3 E12-Sh2-Rc2	11 12 13 14	T2-E3-Rc2 T2-E3-Rc3 T2-E3-Sh2-Rc2 T2-E3-Sh2-Rc3	21 22 23 24	T2-El2-Sh2-Rc3 T2-El3-E3-Sh2-Rc2 T2-El3-Sh2-Rc2 T2-F3-D2	31 32 33 34	T3-E3-Sh2-Rc3 T3-E3-Sh3-Rc2 T3-E3-Sh3-Rc3 T3-E12	41 42 43 44	T3-E3 T3-E3-Rc3 T3-E3-Sh3-Rc3 T3-E12-E3-Rc3	4 34 84 91	Corn Diversified crops Pineapple Banana
1 2 3 4 5	E2-Sh2-Rc3 El2 El2-E2-Sh2-Rc3 El2-Sh2-Rc2 F2-D2	11 12 13 14 15	T2-E3-Rc2 T2-E3-Rc3 T2-E3-Sh2-Rc2 T2-E3-Sh2-Rc3 T2-E12	21 22 23 24 25	T2-El2-Sh2-Rc3 T2-El3-E3-Sh2-Rc2 T2-El3-Sh2-Rc2 T2-F3-D2 T2-Rc2	31 32 33 34 35	T3-E3-Sh2-Rc3 T3-E3-Sh3-Rc2 T3-E3-Sh3-Rc3 T3-E12 T3-E12-E3	41 42 43 44 45	T3-E3 T3-E3-Rc3 T3-E3-Sh3-Rc3 T3-E12-E3-Rc3 T3-E12-E3-Sh3-Rc3	4 34 84 91 105	Corn Diversified crops Pineapple Banana Fruit trees, mixed
1 2 3 4 5	E2-Sh2-Rc3 El2 El2-E2-Sh2-Rc3 El2-Sh2-Rc2 F2-D2 F3-D2	11 12 13 14 15 16	T2-E3-Rc2 T2-E3-Rc3 T2-E3-Sh2-Rc2 T2-E3-Sh2-Rc3 T2-E12 T2-E12-E3-Rc2	21 22 23 24 25 26	T2-El2-Sh2-Rc3 T2-El3-E3-Sh2-Rc2 T2-El3-Sh2-Rc2 T2-F3-D2 T2-Rc2 T2-Sh2-Rc2	31 32 33 34 35 36	T3-E3-Sh2-Rc3 T3-E3-Sh3-Rc2 T3-E3-Sh3-Rc3 T3-E12 T3-E12-E3 T3-E12-E3-Rc2	41 42 43 44 45	T3-E3 T3-E3-Rc3 T3-E3-Sh3-Rc3 T3-E12-E3-Rc3 T3-E12-E3-Sh3-Rc3	4 34 84 91 105 112	Corn Diversified crops Pineapple Banana Fruit trees, mixed Sugarcane
3 4 5 6 7	E2-Sh2-Rc3 E12 E12-E2-Sh2-Rc3 E12-Sh2-Rc2 F2-D2 F3-D2 Sh2-Rc2	11 12 13 14 15 16 17	T2-E3-Rc2 T2-E3-Rc3 T2-E3-Sh2-Rc2 T2-E3-Sh2-Rc3 T2-E12 T2-E12-E3-Rc2 T2-E12-E3-Rc2	21 22 23 24 25 26 27	T2-El2-Sh2-Rc3 T2-El3-E3-Sh2-Rc2 T2-El3-Sh2-Rc2 T2-F3-D2 T2-Rc2 T2-Sh2-Rc2 T2-Sh2-Rc3	31 32 33 34 35 36 37	T3-E3-Sh2-Rc3 T3-E3-Sh3-Rc2 T3-E3-Sh3-Rc3 T3-E12 T3-E12-E3 T3-E12-E3-Rc2 T3-E12-E3-Sh3-Rc2	41 42 43 44 45	T3-E3 T3-E3-Rc3 T3-E3-Sh3-Rc3 T3-E12-E3-Rc3 T3-E12-E3-Sh3-Rc3	4 34 84 91 105 112 116	Corn Diversified crops Pineapple Banana Fruit trees, mixed Sugarcane Coconut

### **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**

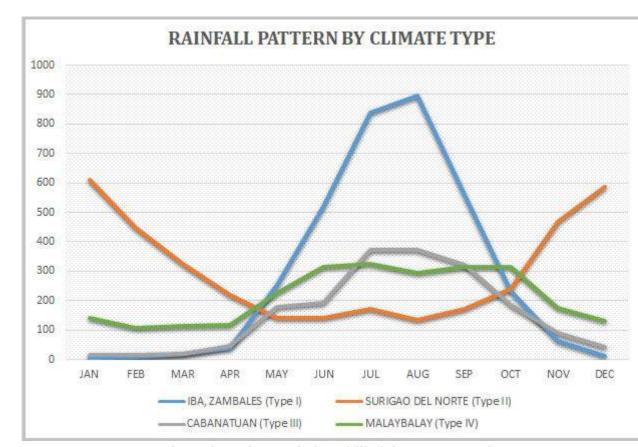
**TYPE I**: Two pronouced season, dry from November to April and **TYPE II**: No dry season with a very pronounced maximum rain wet during the rest of the year. Maximum rain period is from June to September

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

North Cotabato is mostly classified as climatic Type III and partly Type IV in the Eastern part.



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>.

