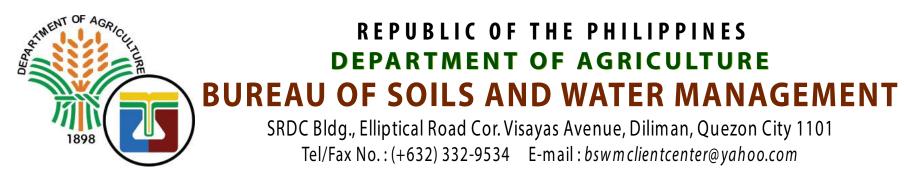
LAND SUITABILITY MAP

CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

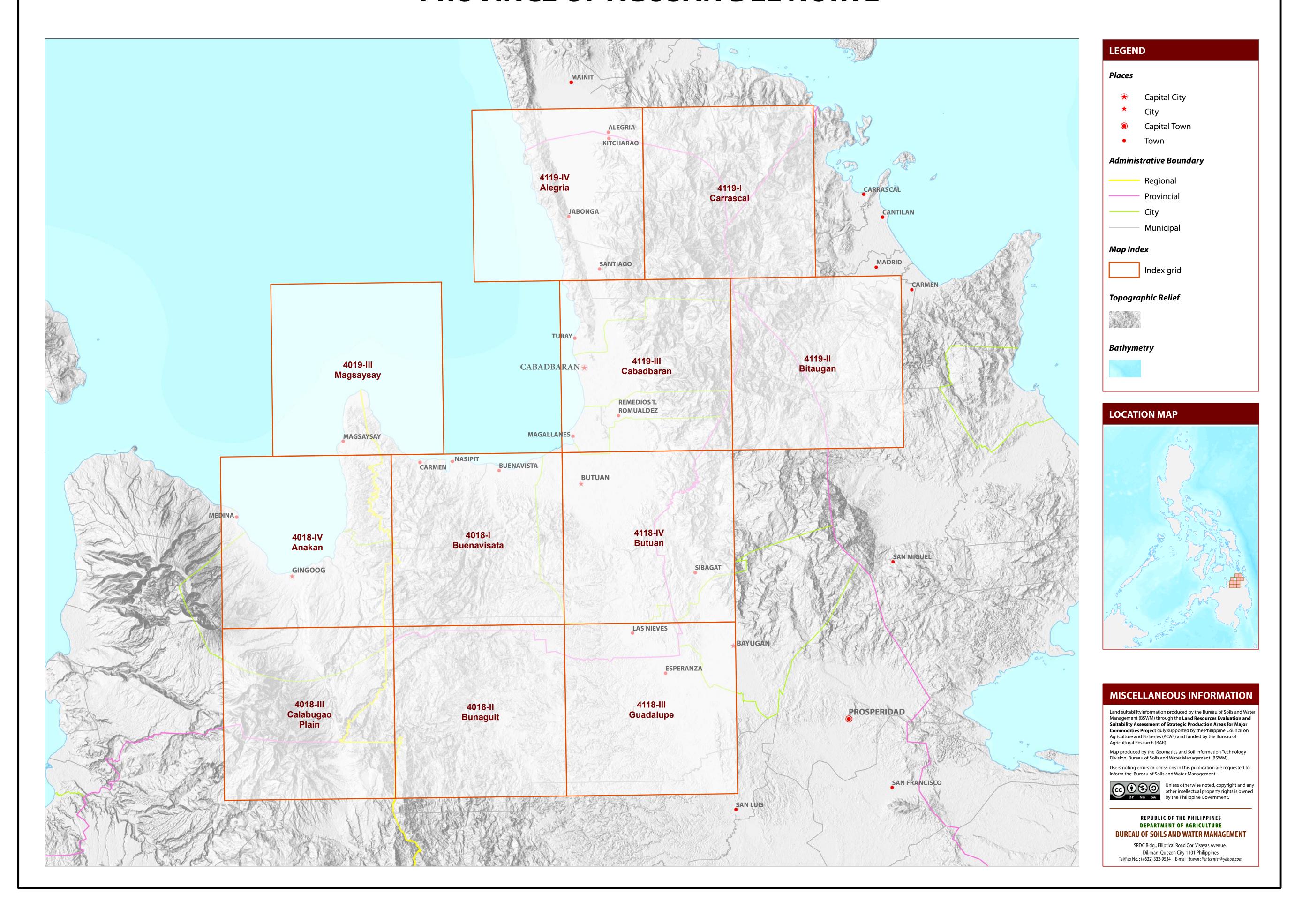
PROVINCE OF AGUSAN DEL NORTE





MAP INDEX

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



LAND SUITABILITY MAP FOR **CASSAVA**

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

EXTENT OF SUITABILITY FOR CASSAVA PRODUCTION BY MUNICIPALITY

							CONFLICT RESOLUTION AREA (Ha)						TOTAL				
MUNICIPALITY	EXISTING CASSAVA (Ha)			TOTAL EXISTING AREA (Ha)	Coconut		Shrubland, unmanaged*		Grassland, unmanaged*		Corn		Paddy rice, non-irrigated		Other crops		POTENTIAL EXPANSION
	S1	S2	S 3		S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	AREA (Ha)
BUENAVISTA	-	-	-	-	1,931	5,967	33	401	169	723	449	231	-	-	-	-	9,904
BUTUAN CITY	-	-	-	-	7,064	13,518	2	246	10	190	6,009	1,136	-	-	-	-	28,175
CARMEN	-	-	-	-	326	1,537	-	-	57	306	129	12	-	-	-	-	2,368
CITY OF CABADBARAN	-	-	-	-	3,142	561	-	-	113	86	2,913	61	-	-	-	-	6,876
JABONGA	-	-	-	-	645	620	-	-	24	101	812	9	-	-	-	-	2,210
KITCHARAO	-	-	-	-	444	594	-	15	-	31	297	10	-	-	-	-	1,390
LAS NIEVES	-	-	-	-	914	5,749	43	407	4	315	817	571	-	-	-	-	8,820
MAGALLANES	-	-	-	-	799	15	-	-	-	-	142	41	-	-	-	-	997
NASIPIT	-	-	-	-	458	724	-	-	198	447	173	247	-	-	-	-	2,246
REMEDIOS T. ROMUALDEZ	-	-	-	-	429	445	-	-	-	-	497	46	-	-	-	-	1,417
SANTIAGO	-	-	-	-	1,060	357	-	-	56	106	447	13	-	-	-	-	2,040
TUBAY	-	-	-	-	1,804	531	-	_	7	169	443	2	-	-	_	-	2,957
TOTAL	-	-	-	-	19,016	30,619	79	1,069	638	2,474	13,127	2,378	-	-	-	-	69,399

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

*establishment of shade trees prior to planting of cassava.

- deep to very deep

AGRONOMIC REQUIREMENT OF CASSAVA PRODUCTION

UTILIZ	ND ZATION PE	SUITABILITY RATING	SLOPE (%)	SOIL DEPTH (cm)	SOIL TEXTURE	SOIL DRAINAGE	SOIL REACTIO (pH)	ON INHERENT FERTILITY	FLOODING CLASS	EROSION CLASS	ROCK OUTCROPS	ELEVATION (masl)	ANNUAL RAINFALL (mm)	CLIMATIC TYPE
		S1	<8	>50	FSL, L, SiL, CL, SiCL, SCL, SCL, SC, SiC, C	WD,MWD	5.6 -7.2	high	none-slight	none-slight	none-few	<500	1000-2000	I,II, III, IV
Cas	sava	S2	8 - 18	30 - 50	SL, HC	SPD, PD	5.1 - 5.5 7.3 - 7.8	medilim	moderate	moderate	common	500-1500	2001-4500	II
		S3	18 - 30	<30	S, LS, CSL	VPD,ED	<5.0 - > 7	.9 low	severe	severe	many	>1500	<1000 >4500	
SLOPE (%) SOII				SOIL DRAIN	AGE		SOIL REAC	CTION (pH)		SOIL TEXT	URE			
0 - 3	- leve	el to gently slopin	g	ED - 6	excessively drained		< 4.5	- extremely acid		Coarse			Fine	
3 - 8	- gent	tly sloping to und	ulating	WD - v	well drained		4.5 - 5.0	- very strongly acid		S	- sand		SC -:	sandy clay
8 - 18	- und	lulating to rolling		MWD - 1	moderately well drain	ed	5.1 - 5.5	- strongly acid		LS	- loamy sand		SiC -:	silty clay
18 - 30	- rolli	ing to moderately	steep	SPD - s	somewhat poorly drain	ned	5.6 - 6.0	- medium acid		CSL	- coarse sandy loam	1	C -	clay
30 - 50	- stee	ep		PD -ı	poorly drained		6.1 - 6.5	- slightly acid		SL	- sandy loam		HC -	neavy clay
> 50	- very	y steep		VPD - v	very poorly drained		6.6 - 7.2	- neutral		Medium				
							7.3 - 7.8	- mildly alkaline		FSL	- fine sandy loam			
SOIL D	EPTH (cı	m)		SURFACE IM	IPEDIMENT		7.9 - 8.4	- moderately alkaline		L	- loam			
0 - 30	- very	y shallow		ROCK OUTCR	OPS		> 8.5	- strongly alkaline		SiL	- silt loam			
30 - 50	- shal	•		< 10% - 1	none - few						- clay loam			
50 - 10) - mod	derately deep			common						- silty clay loam			

- sandy clay loam

LAND LIMITATIONS DESCRIPTION AND COMBINATIONS

> 30% - many

ELEVATION El2 - 500 - 1000m or 2000 - 2500m El3 - < 500m or > 2500m	SOIL DRAINAGE D2 - Somewhat poorly drained to poorly drained D3 - Very poorly drained or excessively drained	SOIL DEPTH Sh2 - Shallow to moderately deep (30 - 100cm) Sh3 - Very shallow (< 30cm)	SOIL EROSIONE2 - Moderate erosionE3 - Severe erosion
SLOPE/TOPOGRAPHY T2 - Undulating to moderately steep T3 - Steep to very steep	SOIL TEXTURE Tc - Coarse texture	ROCK OUTCROPS Rc2 - Common Rc3 - Many	FLOODINGF2 - Moderate seasonal floodingF3 - Severe seasonal flooding

CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION
1	El2-E2-Rc3	11	T2-El2	21	Т3-Е3	31	T3-El2-E3-Sh2-Rc2	41	T3-F3-D2	51	T3-El3
2	El2-Sh2-Rc2	12	T2-El2-E3-Rc3	22	T3-E3-Rc3	32	T3-El2-E3-Sh2-Rc3	42	T3		
3	F2-D2	13	T2-El2-E3-Sh2-Rc3	23	T3-E3-Sh2-Rc2	33	T3-El2-E3-Sh3-Rc2	43	T3-E3		
4	F2-Tc	14	T2-El2-Rc2	24	T3-E3-Sh2-Rc3	34	T3-El2-E3-Sh3-Rc3	44	T3-E3-Sh3-Rc3		
5	F3-D2	15	T2-El2-Sh2-Rc2	<i>25</i>	T3-E3-Sh3-Rc2	<i>35</i>	T3-El3-E3-Rc2	45	T3-E12		
6	Sh2	16	T2-El3-E3-Rc3	26	T3-E3-Sh3-Rc3	36	T3-El3-E3-Rc3	46	T3-E12-E3		
7	Sh2-Rc2	17	T2-El3-Sh2-Rc2	27	T3-El2	<i>37</i>	T3-El3-E3-Sh2-Rc2	47	T3-El2-E3-Rc3		
8	T2	18	T2-F2-D2	<i>28</i>	T3-El2-E3	38	T3-El3-E3-Sh2-Rc3	48	T3-El2-E3-Sh3-Rc3		
9	T2-E2	19	T2-F3-D2	<i>2</i> 9	T3-El2-E3-Rc2	39	T3-El3-E3-Sh3-Rc2	49	T3-El3		
10	T2-E2-Sh2-Rc2	20	T3	30	T3-El2-E3-Rc3	40	T3-F2-D2	50	T3-El3-E3-Sh3-Rc3		

CODE	LANDUSE
4	Corn
81	Coffee
82	Cacao
116	Coconut
126	Grassland
130	Bare areas, 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.

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.

Marginally Suitable (S3)

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

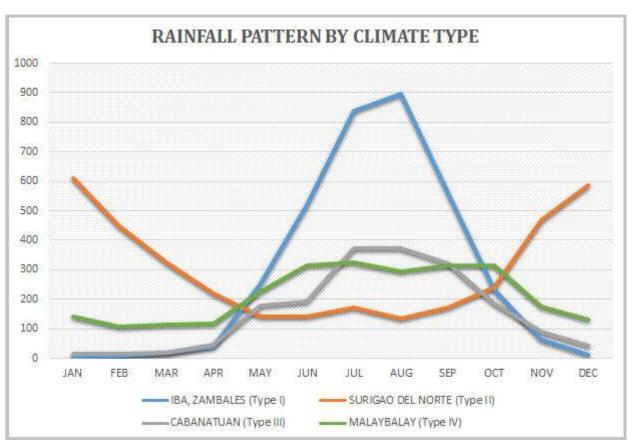
TYPE I: Two pronouced season, dry from November to April and **TYPE II**: No dry season with a very pronounced maximum rain wet during the rest of the year. Maximum rain period is from June to September

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.

Western part of Agusan Del Norte is classified as climatic Type IV and North Eastern part is 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.

