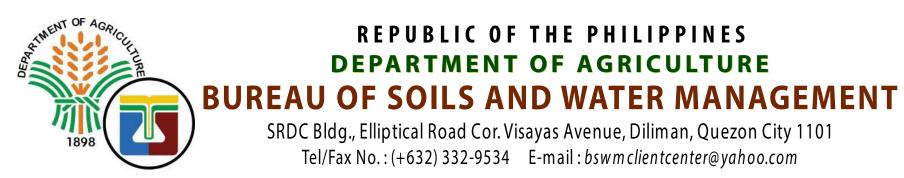
LAND SUITABILITY MAP

ARABICA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

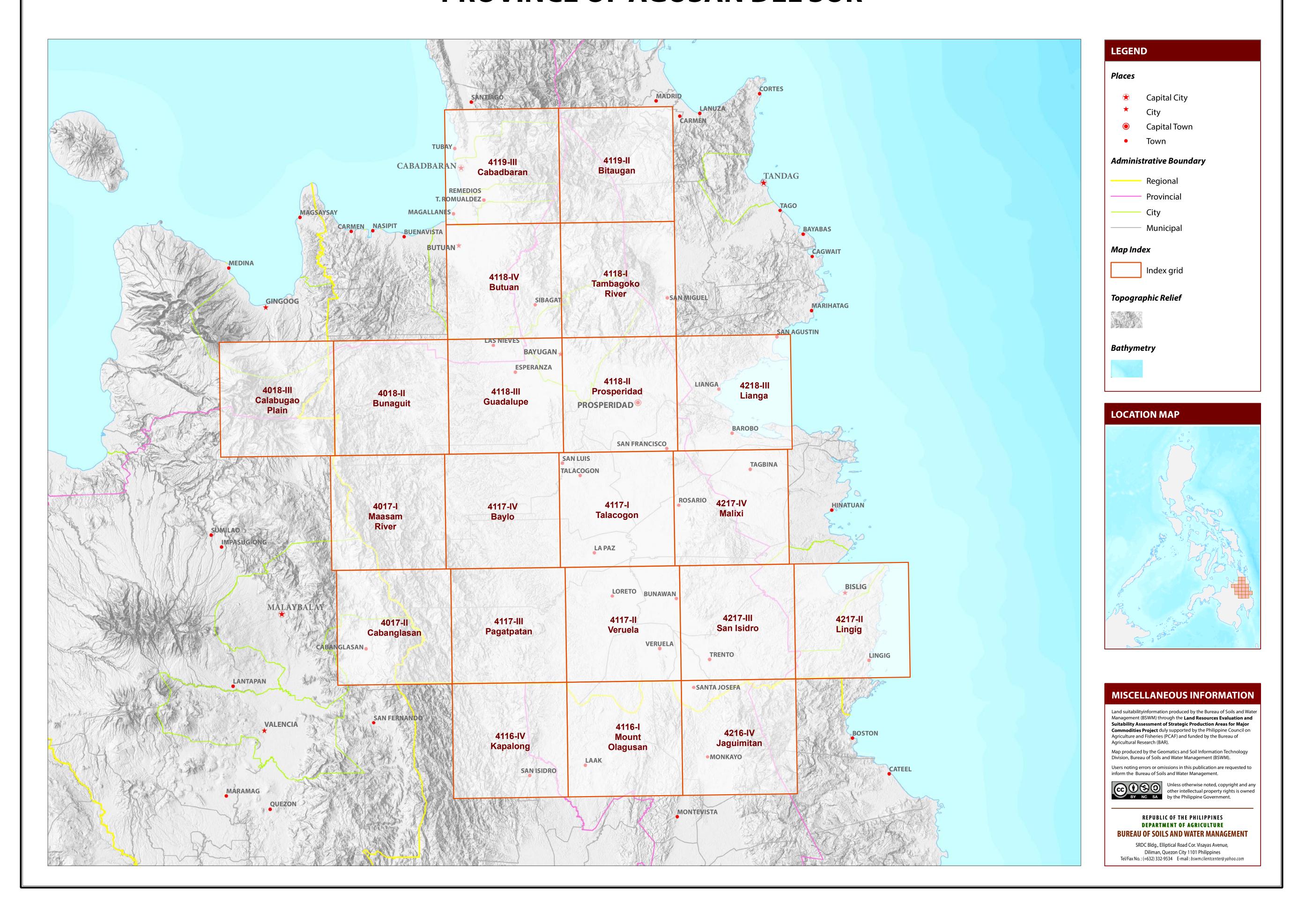
PROVINCE OF AGUSAN DEL SUR





MAP INDEX

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



LAND SUITABILITY MAP FOR ARABICA COFFEE

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

EXTENT OF SUITABILITY FOR ARABICA COFFEE PRODUCTION BY MUNICIPALITY

						EX	PANSION	N AREA (Ha	a)		CONFLICT RESOLUTION AREA (Ha)						TOTAL
MUNICIPALITY	EXISTING COFFEE (Ha)			TOTAL EXISTING AREA (Ha)	Coconut		Shrubland, unmanaged*		Grassland, unmanaged*		Corn		Oil Palm		Other crops		POTENTIAL EXPANSION
	S1	S2	S 3		S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	AREA (Ha)
BUNAWAN	_	. 7	9	16	-	84	-	-	-	-	-	-	-	_	-	_	84
CITY OF BAYUGAN	-	1	243	244	-	-	-	2	-	409	-	-	-	_	_	_	411
ESPERANZA	-	213	291	504	-	-	-	103	-	55	-	-	-	_	-	_	158
LA PAZ	-	48	81	129	-	-	-	-	-	-	-	-	-	_		_	-
LORETO	-	. 9	15	24	-	-	-	-	-	-	-	-	-	_	-	_	-
PROSPERIDAD	-	87	13	100	-	-	-	-	-	52	-	-	-	_		_	52
ROSARIO	_	-	-	-	-	33	-	19	-	-	-	-	-	_	-	_	52
SAN FRANCISCO	_	1	3	3	-	-	-	-	-	-	-	-	-	_		_	-
SAN LUIS	_	1	33	34	-	-	-	420	-	25	-	-	-	_		_	445
SANTA JOSEFA	_		-	-	-	-	-	-	-	-	-	-	-	_	-	_	-
SIBAGAT	-	27	386	413	-	-	-	13	-	1,152	-	-	-	_		_	1,164
TALACOGON	_	17		17							-					_	-
TRENTO	-	. 9	2	11	-	_	-	_	_	-	-						-
VERUELA	_	41	6	47	-	-	-	-	-	-	-	-	_	_		_	-
TOTAL	_	461	1,081	1,542	-	117	-	556	-	1,693	_	_	_	_	_	-	2,365

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

AGRONOMIC REQUIREMENT OF ARABICA COFFEE 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)	ANNU RAINFA (mm	ALL	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	1000-2000	2001-4500		I, III, IV	
Coffee (Arabica)	S2	8 - 30	30 - 100	FSL, L, SiL SPD,PD		5.1 - 5.5 7.3 - 7.8	medium	moderate	moderate	common	500-1000 2000-2500	1000-2	000	I, II	
	S3	>30	<30	S, LS, CSL, SL	VPD,ED	<5.0 - > 7.9	low	severe	severe	many	<500 >2500	<1000 >4500			
SLOPE (%)			SOIL DRAINAGE			SOIL REACTIO	ON (pH)		SOIL TEXTURE						
0 - 3 - level to gently sloping		ED - excessively drained			< 4.5 - ex	tremely acid		Coarse			Fine				
3 - 8 - ger	3 - 8 - gently sloping to undulating		WD - well drained			4.5 - 5.0 - ve	ry strongly acid		S	- sand		SC	- sand	y clay	
8 - 18 - undulating to rolling		MWD - moderately well drained			5.1 - 5.5 - str	ongly acid		LS	- loamy sand		SiC	- silty	clay		
18 - 30 - rolling to moderately steep			SPD - somewhat poorly drained			5.6 - 6.0 - me	edium acid		CSL	- coarse sandy loam	L	С	- clay		
30 - 50 - steep			PD - poorly drained			6.1 - 6.5 - sli	ghtly acid		SL	- sandy loam		HC	- heav	y clay	
> 50 - very steep		VPD - very poorly drained			6.6 - 7.2 - ne	utral		Medium							
						7.3 - 7.8 - mi	ldly alkaline		FSL	- fine sandy loam					
SOIL DEPTH (cm)		SURFACE IMPEDIMENT			7.9 - 8.4 - moderately alkaline			L	- loam						
0 - 30 - very shallow			ROCK OUTCROPS			> 8.5 - str	ongly alkaline		SiL	- silt loam					
30 - 50 - sha	allow		< 10% - r	none - few					CL	- clay loam					
50 - 100 - mo	derately deep		10 - 30% - 0	common					SiCL	- silty clay loam					

- sandy clay loam

CLIMATIC

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

Northeastern part of Agusan Del Sur is classified as climatic Type II while the rest, specifically, the southwestern is climatic Type IV.

LAND LIMITATIONS DESCRIPTION AND COMBINATIONS

- deep to very deep

> 30% - many

SOIL DRAINAGE **SOIL EROSION ELEVATION** El2 - 500 - 1000m or 2000 - 2500m D2 - Somewhat poorly drained to poorly drained Sh2 - Shallow to moderately deep (30 - 100cm) Moderate erosion El3 -<500 m or > 2500 mD3 - Very poorly drained or excessively drained Sh3 - Very shallow (< 30cm) E3 - Severe erosion SLOPE/TOPOGRAPHY **SOIL TEXTURE** ROCK OUTCROPS **FLOODING** T2 - Undulating to moderately steep F2 - Moderate seasonal flooding Tc - Coarse texture Rc2 - Common F3 - Severe seasonal flooding T3 - Steep to very steep Rc3 - Many

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>.

CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION
1	El2	11	T2-E3	21	T2-El2-E3-Sh2-Rc3	31	T2-El3-E3-Sh2-Rc3	41	T3-E3-Sh3-Rc3	51	T3-El3-E3-Sh2-Rc3	61	T3-E13	4	Corn	119	Oil palm
2	El2-E2-Sh2-Rc3	12	T2-E3-Rc2	22	T2-El2-Rc2	32	T2-El3-F2-D2	42	T3-El2	52	T3-El3-E3-Sh3-Rc2	62	T3-El3-E3	81	Coffee	126	Grassland
3	El2-Sh2-Rc2	13	T2-E3-Rc3	23	T2-El2-Sh2-Rc2	33	T2-El3-F3-D2	43	T3-El2-E3	53	T3-El3-E3-Sh3-Rc3	63	T3-El3-E3-Rc3	82	Cacao	131	Ipil-ipil
4	El3	14	T2-E3-Sh2-Rc2	24	T2-El2-Sh2-Rc3	34	T2-Rc2	44	T3-El2-E3-Rc2	54	Т3	64	T3-El3-E3-Sh3-Rc3	85	Mango	134	Shrubs, unmanaged
5	El3-F2-D2	15	T2-E3-Sh2-Rc3	25	T2-El3	35	T2-Sh2-Rc2	45	T3-El2-E3-Sh2-Rc3	55	T3-E3-Rc3			91	Banana	137	Rubber
6	El3-F3-D2	16	T2-El2	26	T2-El3-E2-Sh2-Rc2	36	T2-Sh2-Rc3	46	T3-El2-E3-Sh3-Rc2	56	T3-E3-Sh3-Rc3			98	Rambutan	139	Falcata
7	El3-Sh2	17	T2-El2-E3	27	T2-El3-E3	37	Т3	47	T3-El2-E3-Sh3-Rc3	<i>57</i>	T3-El2			105	Fruit trees, mixed		
8	El3-Sh2-Rc2	18	T2-El2-E3-Rc2	28	T2-El3-E3-Rc2	38	T3-E3-Rc2	48	T3-El3	<i>58</i>	T3-El2-E3			107	Abaca		
9	Sh2-Rc2	19	T2-El2-E3-Rc3	29	T2-El3-E3-Rc3	39	T3-E3-Sh2-Rc3	49	T3-El3-E3	<i>59</i>	T3-El2-E3-Rc3			115	Mixed crops		
<i>10</i>	T2	20	T2-El2-E3-Sh2-Rc2	30	T2-El3-E3-Sh2-Rc2	40	T3-E3-Sh3-Rc2	<i>50</i>	T3-El3-E3-Rc2	60	T3-El2-E3-Sh3-Rc3			116	Coconut		

