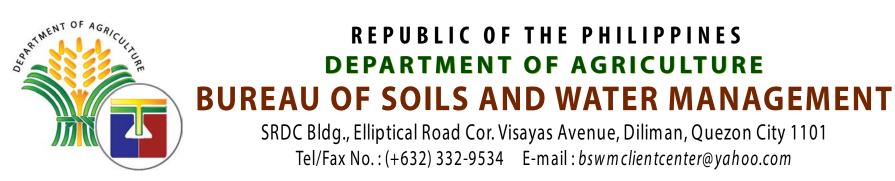
LAND SUITABILITY MAP

ARABICA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

PROVINCE OF QUIRINO

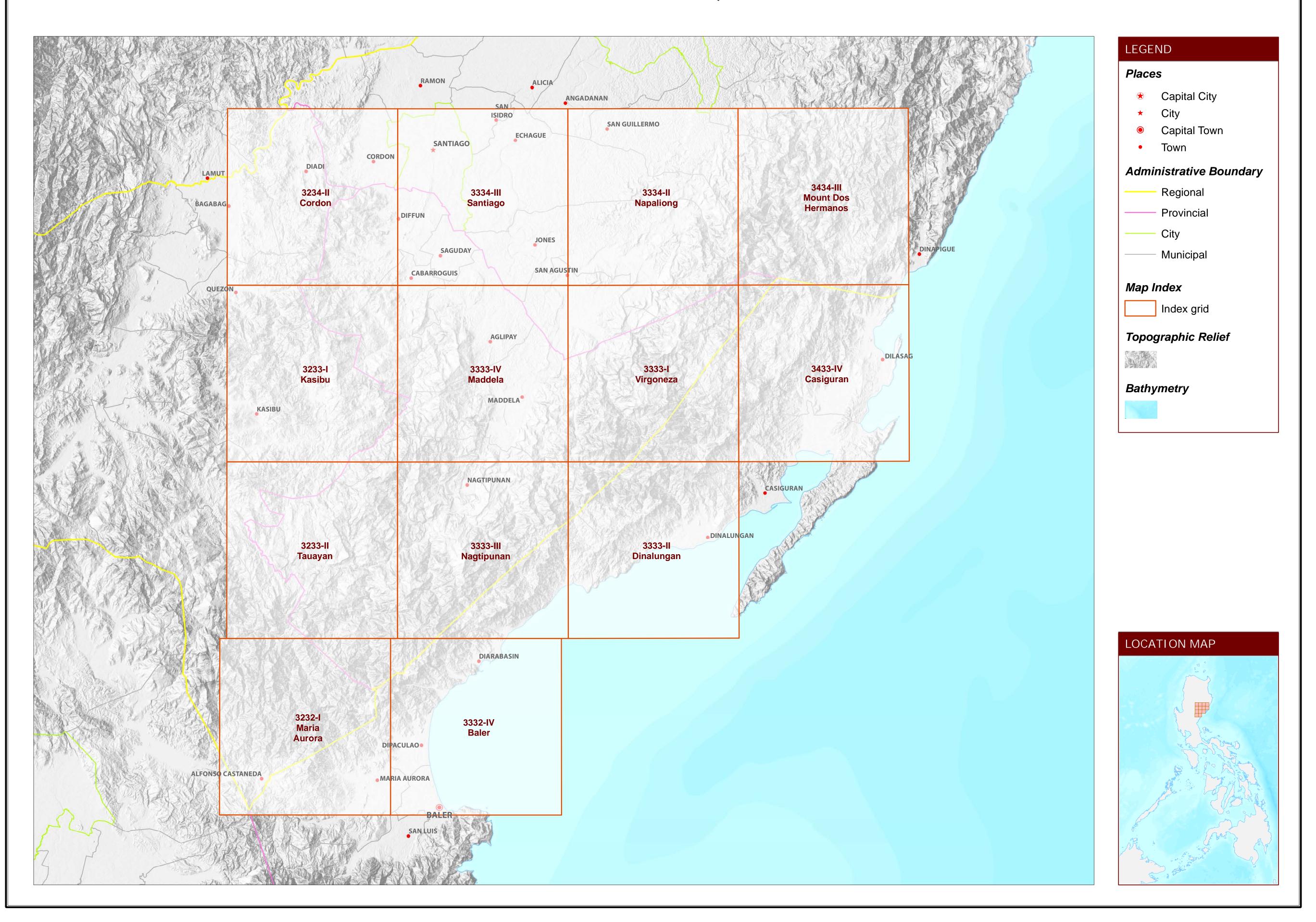




MAP INDEX

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

PROVINCE OF QUIRINO



LAND SUITABILITY MAP FOR ARABICA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

QUIRINO, REGION II

EXTENT OF SUITABILITY FOR ARABICA COFFEE PRODUCTION BY MUNICIPALITY

				TOTAL EXISTING AREA (Ha)	EXPANSION AREA (Ha)						CONFLICT RESOLUTION (Ha)					TOTAL	
MUNICIPALITY	EXISTING COFFEE (Ha)		Coconut		Shrubland, unmanaged*		Grassland, unmanaged*	Corn		Rice paddy, non-irrigated		Other crops		TOTAL POTENTIAL EXPANSION			
	S1	S2	S 3		S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	AREA (Ha)
AGLIPAY	-	3	-	3	-	869	-	3	-	59	-	48	-	-	-	_	979
CABARROGUIS	-	21	65	86	-	1,086	-	-	-	7	-	14	-	-	-	_	1,107
DIFFUN	-	22	75	97	-	782	-	-	-	4	-	31	-	3	-	_	819
MADDELA	-	10	117	127	72	5,612	-	8	-	24	-	22	-	-	-	-	5,738
NAGTIPUNAN	-		1	1	6	860	-	73	-	545	-	106	-	-	-	-	1,590
SAGUDAY	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-	12
TOTAL	-	56	258	314	-	9,221	-	84	-	638	-	222	-	3	-	_	10,167

^{*}establishment of shade trees prior to planting of 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)	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	1000-2000	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	1000-2000	I, II
	S3	>30	<30	S, LS, CSL, SL	VPD,ED	<5.0 - > 7.9	low	severe	severe	many	<500	<1000	
	33	730	\30	J, LJ, GJL, JL	VI D,LD	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	TOW	Severe	Severe	Illally	>2500	>4500	
SLOPE (%)			SOIL DRAINA	AGE		SOIL REACTION	N (pH)		SOIL TEXTU	RE			

	S3	>30	<30	S, LS, CSL, SL	VPD,ED	<5.0 - >	7.9 low	severe	severe	many	>2500	>450	
SLOPE (%	6)		SOIL DR	AINAGE		SOIL REA	CTION (pH)	'	SOIL TEX	KTURE			·
0 - 3	- level to gently sloping	5	ED	- excessively drained		< 4.5	- extremely acid		Coarse			Fine	
3 - 8	- gently sloping to und	ulating	WD	- well drained		4.5 - 5.0	 very strongly acid 		S	- sand		SC	- sandy clay
8 - 18	- undulating to rolling		MWD	- moderately well draine	ed	5.1 - 5.5	- strongly acid		LS	- loamy sand		SiC	- silty clay
18 - 30	- rolling to moderately	steep	SPD	- somewhat poorly drain	ned	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 clay
> 50	- very steep		VPD	 very poorly drained 		6.6 - 7.2	- neutral		Medium	L			
						7.3 - 7.8	 mildly alkaline 		FSL	- fine sandy loam			
SOIL DEP	ТН (ст)		SURFACI	E IMPEDIMENT		7.9 - 8.4	- moderately alkaline		L	- loam			
0 - 30	- very shallow		ROCK OU	TCROPS		> 8.5	- strongly alkaline		SiL	- silt loam			
30 - 50	- shallow		< 10%	- none - few					CL	- clay loam			
50 - 100	- moderately deep		10 - 30%	- common					SiCL	- silty clay loam			
> 100	- deep to very deep		> 30%	- many					SCL	- sandy clay loam			

LAND LIMITATIONS DESCRIPTION AND COMBINATIONS

LAND LIMITATIONS DESCR	If HON AND COMDINATIONS		
ELEVATION	SOIL DRAINAGE	SOIL DEPTH	SOIL EROSION
El2 - 500 - 1000m or 2000 - 2500m	D2 - Somewhat poorly drained to poorly drained	Sh2 - Shallow to moderately deep (30 - 100cm)	E2 - Moderate erosion
El3 $-<500$ m or >2500 m	D3 - 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	Tc - Coarse texture	Rc2 - Common	F2 - Moderate seasonal flooding
T3 - Steep to very steep		Rc3 - Many	F3 - Severe seasonal flooding

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

LAND USE 2 Rice paddy, non-irrigated 4 Corn 81 Coffee 82 Cacao 116 Coconut 126 Grassland 134 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

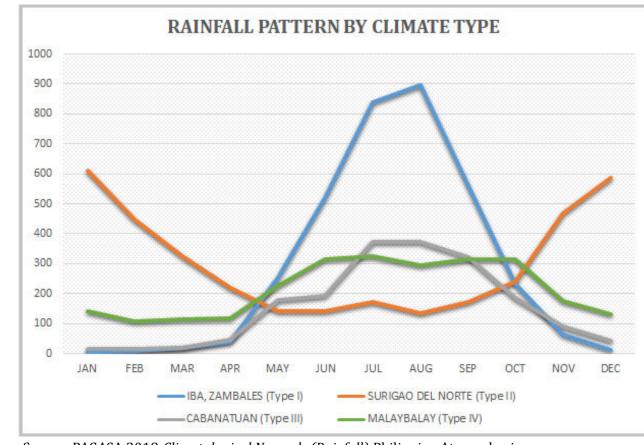
TYPE I: Two pronouced season, dry from November to April and **TYPE II**: No dry season with a very pronounced maximum rain wet during the rest of the year. Maximum rain period is from June to September

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

The whole part of Quirino classified as climatic Type III.



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.

