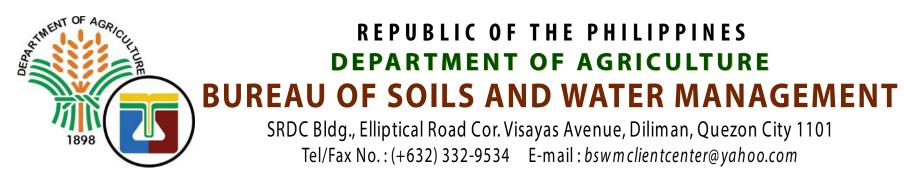
## LAND SUITABILITY MAP

### ARABICA COFFEE

# LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

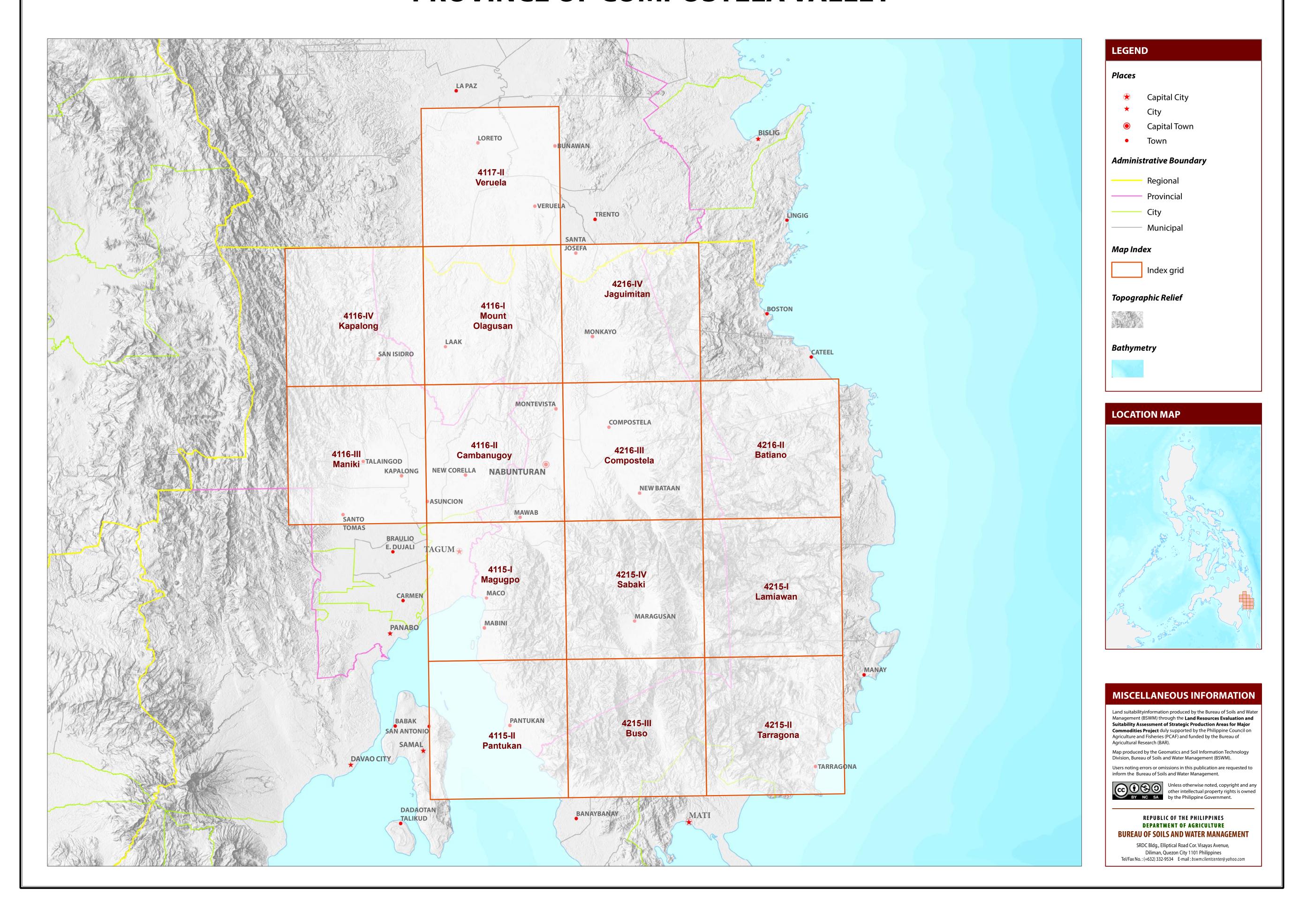
### PROVINCE OF COMPOSTELA VALLEY





#### **MAP INDEX**

# LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS PROVINCE OF COMPOSTELA VALLEY



## LAND SUITABILITY MAP FOR ARABICA COFFEE

### LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS COMPOSTELA VALLEY, REGION XI

#### EXTENT OF SUITABILITY FOR ARABICA COFFEE PRODUCTION BY MUNICIPALITY

	EXISTING COFFEE (Ha)			TOTAL EXISTING AREA (Ha)	EXPANSION AREA (Ha)							CONFLIC		TOTAL			
MUNICIPALITY					Coconut		Shrubland, unmanaged*		Grassland, unmanaged*		Banana		Paddy rice, non-irrigated		Other crops		POTENTIAL EXPANSION
	<b>S1</b>	S2	<b>S</b> 3		<b>S1</b>	<b>S2</b>	<b>S1</b>	S2	S1	S2	<b>S1</b>	<b>S2</b>	<b>S1</b>	S2	<b>S1</b>	S2	AREA (Ha)
COMPOSTELA	-	-	404	404	-	-	-	58	-	-	-	-	-	-	-	-	58
LAAK	-	24	4	28	-	1	-	-	-	-	-	-	-	-	-	-	1
MABINI	-	23	82	105	-	-	-	-	-	139	-	-	-	-	ı	-	139
MACO	-	-	4	4	-	-	-	25	-	83	-	-	-	-	•	-	108
MARAGUSAN	-	2,287	3,841	6,128	-	538	67	637	-	293	-	3,113	-	-	ı	61	4,708
MAWAB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	·	-	-
MONKAYO	-	222	422	644	-	-	-	-	-	-	-	-	-	-	-	-	-
MONTEVISTA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NABUNTURAN	-	-	-	-	-	-	-	-	-	11	-	-	-	-	-	-	11
NEW BATAAN	-		-	-		_	-	_	-	17	-		-	-	-	-	17
PANTUKAN	-	_	33	33	_	9	8	282	_	44	-	275	-	_	-	_	618
TOTAL	-	2,556	4,790	7,346	_	548	75	1,002		587		3,388	_	_	_	61	5,661

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

VPD

very poorly drained

LANI UTILIZA TYPI	TION SUITABILITY RATING	SLOPE (%)	SOIL DEPTH (cm)	SOIL TEXTURE	SOIL DRAINAGE	SOIL REACTION (pH)	INHERENT FERTILITY	FLOODING CLASS	EROSION CLASS	ROCK OUTCROPS	ELEVATION (masl)	ANNUAL RAINFALI (mm)	( LIMIATIC )
	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
Coffe ( Arabio	(2)	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 >2500	<1000 >4500	
SLOPE (%	b)		SOIL DRAINA	AGE		SOIL REACTION	N (pH)	•	SOIL TEXT	JRE	·		
0 - 3	- level to gently slopin	ng	ED - ε	xcessively drained		< 4.5 - extr	remely acid		Coarse			Fine	
3 - 8	- gently sloping to und	dulating	WD - v	vell drained		4.5 - 5.0 - ver	y strongly acid		S -	sand		SC -	sandy clay
8 - 18	- undulating to rolling	5	MWD - r	noderately well drain	ed	5.1 - 5.5 - stro	ongly acid		LS -	loamy sand		SiC -	silty clay
18 - 30	- rolling to moderatel	y steep	SPD -s	omewhat poorly drain	ned	5.6 - 6.0 - med	dium acid		CSL -	coarse sandy loam		С -	clay
30 - 50	- steep		PD - p	oorly drained		6.1 - 6.5 - slig	htly acid		SL -	sandy loam		HC -	heavy clay

- neutral

7.3 - 7.8 - mildly alkaline

6.6 - 7.2

**SURFACE IMPEDIMENT** - moderately alkaline - loam very shallow - strongly alkaline - silt loam 30 - 50 - none - few - clay loam - silty clay loam moderately deep 10 - 30% - common > 30% - sandy clay loam - deep to very deep

#### LAND LIMITATIONS DESCRIPTION AND COMBINATIONS

> 50

very steep

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

- fine sandy loam

F3 - Severe seasonal flooding

#### **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**

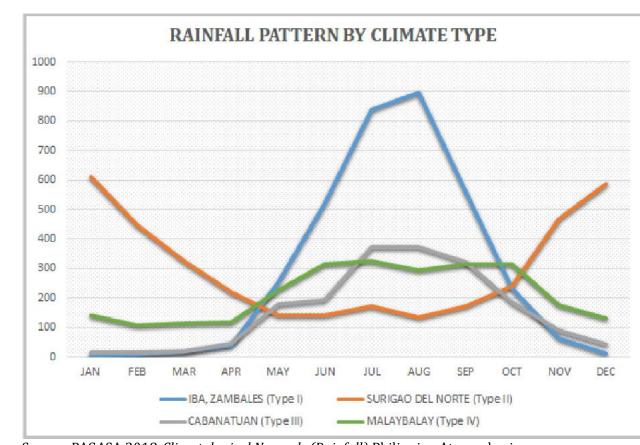
**TYPE I**: Two pronouced season, dry from November to April and **TYPE II**: No dry season with a very pronounced maximum rain wet during the rest of the year. Maximum rain period is from June to September

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

Compostella Valley is classified as climatic Type IV.



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>.

CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION
1	E2-Sh2-Rc3	11	T2-E3	21	T2-El2-Sh2-Rc2	31	T2-Rc2	41	T3-El2-E3	51	Т3-Е3	61	T3-El3-E3-Sh3-Rc3
2	El2	12	T2-E3-Rc2	22	T2-El2-Sh2-Rc3	32	T2-Sh2-Rc2	42	T3-El2-E3-Rc2	52	T3-E3-Rc3	62	T3-El3
3	El2-Sh2-Rc2	13	T2-E3-Sh2-Rc2	23	T2-El3	33	T2-Sh2-Rc3	43	T3-El2-E3-Sh3-Rc2	53	T3-E3-Sh3-Rc3		
4	El3	14	T2-E3-Sh2-Rc3	24	T2-El3-E2-Sh2-Rc2	34	Т3	44	T3-E12-E3-Sh3-Rc3	54	T3-El2		
5	El3-F2-D2	15	T2-El2	25	T2-El3-E3	35	Т3-Е3	45	T3-El3	55	T3-El2-E3		
6	El3-F3-D2	16	T2-El2-E3	26	T2-El3-E3-Rc2	36	T3-E3-Rc2	46	T3-El3-E3	56	T3-El2-E3-Rc3		
7	El3-Sh2	17	T2-El2-E3-Rc2	27	T2-El3-E3-Rc3	37	T3-E3-Sh2-Rc3	47	T3-El3-E3-Rc2	<i>57</i>	T3-El2-E3-Sh3-Rc3		
8	El3-Sh2-Rc2	18	T2-El2-E3-Sh2-Rc2	28	T2-El3-E3-Sh2-Rc2	38	T3-E3-Sh3-Rc2	48	T3-El3-E3-Sh3-Rc2	58	T3-El3		
9	Sh2-Rc2	19	T2-El2-E3-Sh2-Rc3	29	T2-El3-E3-Sh2-Rc3	39	T3-E3-Sh3-Rc3	49	T3-El3-E3-Sh3-Rc3	59	T3-El3-E3		
10	T2	20	T2-El2-Rc2	30	T2-El3-F2-D2	40	T3-El2	<i>50</i>	T3	60	T3-El3-E3-Rc3		

CODE	LANDUSE	CODE	LANDUSE
3	Upland rice	126	Grassland
4	Corn	127	Pasture
81	Coffee	134	Shrubs, unmanaged
82	Cacao	137	Rubber (T)
83	Citrus, calamansi	139	Falcata
85	Mango		
91	Banana		
105	Fruit trees, mixed		
116	Coconut		
119	Oil palm		

