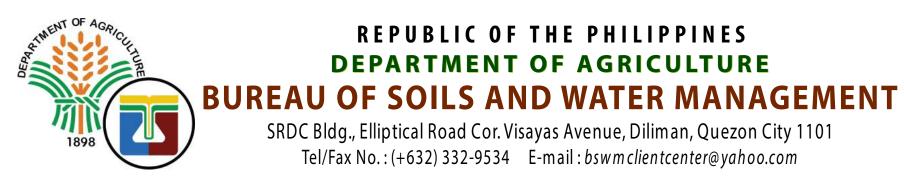
## LAND SUITABILITY MAP

## ROBUSTA, LIBERICA AND EXCELSA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

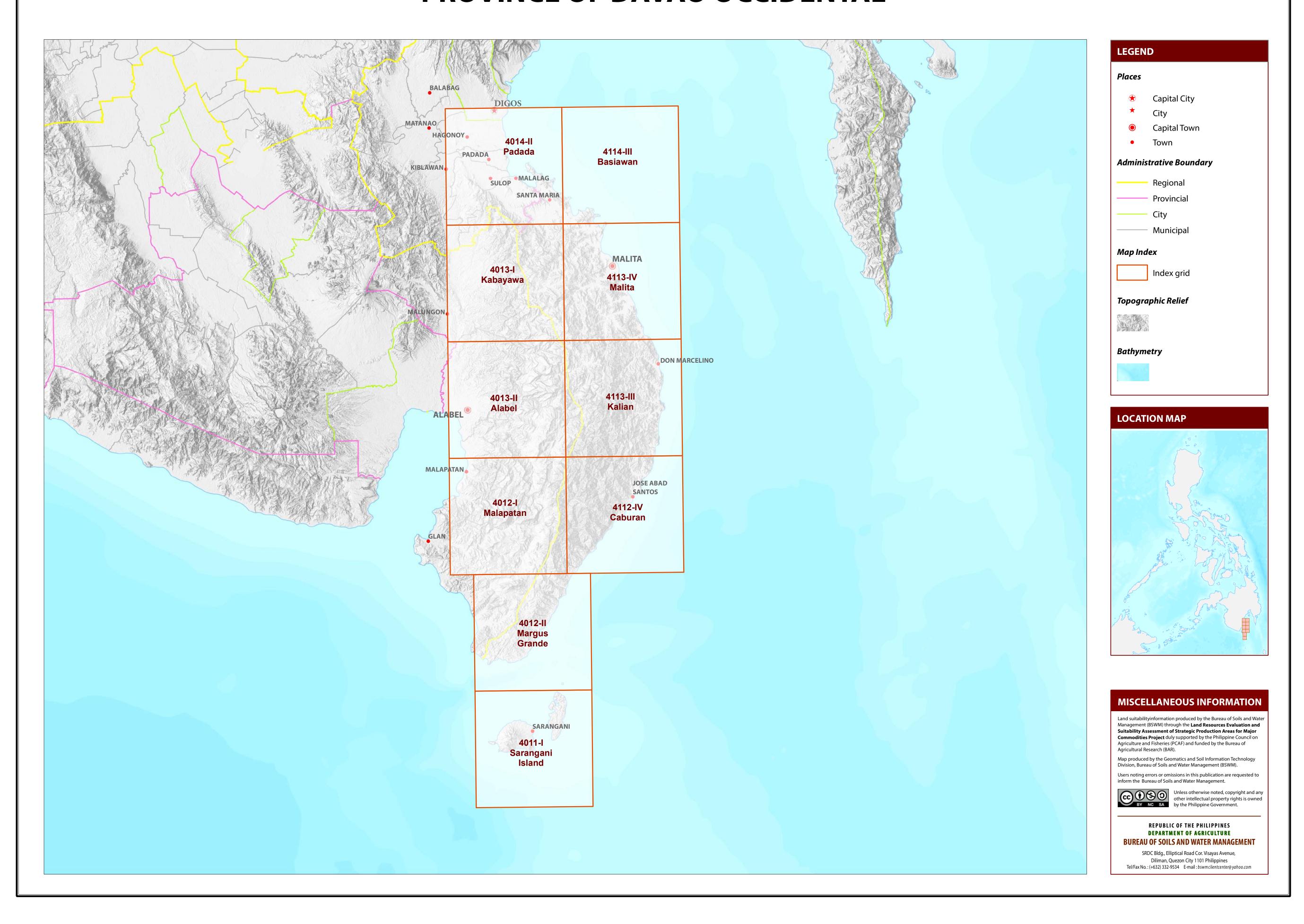
## PROVINCE OF DAVAO OCCIDENTAL





## MAP INDEX

# LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS PROVINCE OF DAVAO OCCIDENTAL



## LAND SUITABILITY MAP FOR ROBUSTA, LIBERICA AND EXCELSA COFFEE

## LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS DAVAO OCCIDENTAL, REGION XI

#### EXTENT OF SUITABILITY FOR ROBUSTA, LIBERICA AND EXCELSA COFFEE PRODUCTION BY MUNICIPALITY

				EXPANSION AREA (Ha)						CONFLICT RESOLUTION AREA (Ha)					TOTAL		
MUNICIPALITY	EXISTING COFFEE (Ha)		TOTAL EXISTING AREA (Ha)	EXISTING Coconut		Shrubland, unmanaged*		Grassland, unmanaged*		Banana		Corn		Other crops		POTENTIAL EXPANSION	
	<b>S1</b>	S2	<b>S</b> 3		<b>S1</b>	<b>S2</b>	<b>S1</b>	<b>S2</b>	<b>S1</b>	<b>S2</b>	S1	<b>S2</b>	<b>S1</b>	<b>S2</b>	S1	<b>S2</b>	AREA (Ha)
DON MARCELINO	-	-	_	-	969	481	-	-	122	1	40	41	-	-	-	-	1,653
JOSE ABAD SANTOS	-	-	_	-	2,794	212	1	4	720	-	1	-	21	-	1	-	3,754
MALITA	-	_	-	-	3,904	2,194	36	12	497	394	92	398	80	-	30	123	7,760
SANTA MARIA	-	-	-	-	5,127	-	-	-	361	7	-	-	-	-	17	-	5,512
SARANGANI	_	_	-	_	2,247	64	-	-	-	-	-	-	-	-	-	-	2,311
TOTAL	-	-	-	-	15,041	2,951	38	16	1,699	401	133	438	101	-	47	123	20,989

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

#### AGRONOMIC REQUIREMENT OF ROBUSTA, LIBERICA AND EXCELSA COFFEE PRODUCTION

LAND UTILIZAT TYPE	ION   S	UITABILITY RATING	SLOPE (%)	SOIL DEPTH (cm)	SOIL TEXTURE	SOIL DRAINAGE	SOIL REACTI (pH)	ION	INHERENT FERTILITY	FLOODING CLASS	EROSION CLASS	ROCK OUTCROPS	ELEVATION (masl)	ANNUA RAINFA (mm)	LL	CLIMATIC TYPE
Coffee	<u> </u>	S1	<8	>100	CL, SiCL, SCL, SC, SiC, C, HC	WD,MWD	5.6 -7.	.2	high	none-slight	none-slight	none-few	<1000	2001-45	500	I, III, IV
(Robust Excelsa		S2	8 - 30	30 - 100	FSL, L, SiL	SPD,PD	5.1 - 5. 7.3 - 7.		medium	moderate	moderate	common	1000-2000	1000-2	000	I, II
Liberica	a)	S3	>30	<30	S, LS, CSL, SL	VPD,ED	<5.0 ->	7.9	low	severe	severe	many	>2000	<1000 >4500		
SLOPE (%) SOIL DRAINAGE					SOIL REACTION (pH)			SOIL TEXTURE								
0 - 3	0 - 3 - level to gently sloping ED -			excessively drained	< 4.5 - extremely acid			Coarse			Fine					
3-8	- gently	ntly sloping to undulating WD		WD -	O - well drained			4.5 - 5.0 - very strongly acid			S	- sand		SC	- sanc	dy clay
8 - 18	8 - 18 - undulating to rolling		MWD -	MWD - moderately well drained			5.1 - 5.5 - strongly acid			LS	- loamy sand		SiC	- silty	v clay	
18 - 30 - rolling to moderately steep		SPD -	SPD - somewhat poorly drained			5.6 - 6.0 - medium acid			CSL	<ul> <li>coarse sandy loam</li> </ul>	l	С	- clay	7		
30 - 50	- 50 - steep		PD -	O - poorly drained		6.1 - 6.5 - slightly acid			SL	- sandy loam		HC	- heav	vy clay		
> 50 - very steep		VPD -	/PD - very poorly drained		6.6 - 7.2 - neutral			Medium								
							7.3 - 7.8	- milo	dly 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 - strongly alkaline			SiL	- silt loam							
30 - 50 - shallow		< 10% - none - few							CL	- clay loam						
50 - 100	- moder	rately deep		10 - 30% -	10 - 30% - common						SiCL	- silty clay loam				
> 100	- deep to	o very deep		> 30% -	many						SCL	- sandy clay loam				

### LAND LIMITATIONS DESCRIPTION AND COMBINATIONS

SLOPE/TOPOGRAPHY SOIL TEXTURE ROCK OUTCROPS FLOODIN	
	<ul><li>Moderate seasonal flooding</li><li>Severe seasonal flooding</li></ul>

CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION
1	E2-Sh2-Rc2	11	Т2-Е3	21	Т3	31	T3-F3-D1
2	E3-Rc3	12	T2-E3-Rc2	22	T3-E3	32	Т3
3	El2-E3-Rc3	13	T2-E3-Rc3	23	T3-E3-Rc2	33	Т3-Е3
4	El2-Sh2-Rc2	14	T2-E3-Sh2-Rc2	24	T3-E3-Sh2-Rc3	34	T3-E3-Rc3
5	F2-D1	15	T2-E3-Sh2-Rc3	25	T3-E3-Sh3-Rc2	35	T3-E3-Sh3-Rc3
6	F2-Tc	16	T2-El2-E3	26	T3-E3-Sh3-Rc3	36	T3-El2-E3
7	F3-D1	17	T2-E12-E3-Rc3	27	T3-El2-E3	37	T3-El2-E3-Sh3-Rc3
8	Sh2	18	T2-E12-E3-Sh2-Rc2	28	T3-El2-E3-Sh2-Rc3	38	T3-El3
9	Sh2-Rc2	19	T2-F2-D1	29	T3-El2-E3-Sh3-Rc2	39	Тс
10	T2	20	T2-F3-D1	30	T3-F2-D1		

CODE	LANDUSE
4	Corn
34	Diversified crops
85	Mango
89	Durian
91	Banana
107	Abaca
116	Coconut
126	Grassland
134	Shrubs, unmanaged
137	Rubber (T)

#### **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**

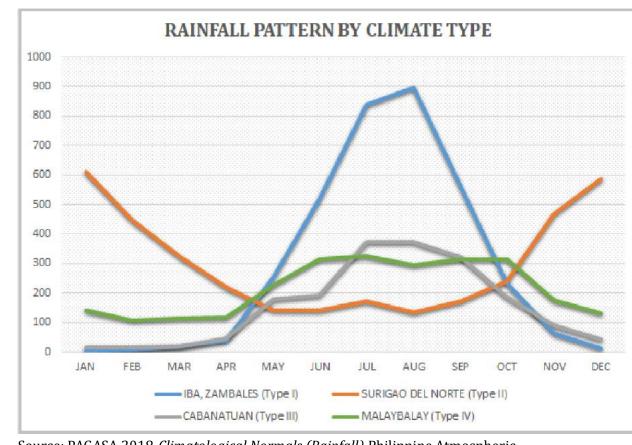
wet during the rest of the year. Maximum rain period is from June to September

**TYPE I**: Two pronouced season, dry from November to April and **TYPE II**: No dry season with a very pronounced maximum rain 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

Davao Occidental 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>.

