### LAND SUITABILITY MAP

### CASSAVA

## LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

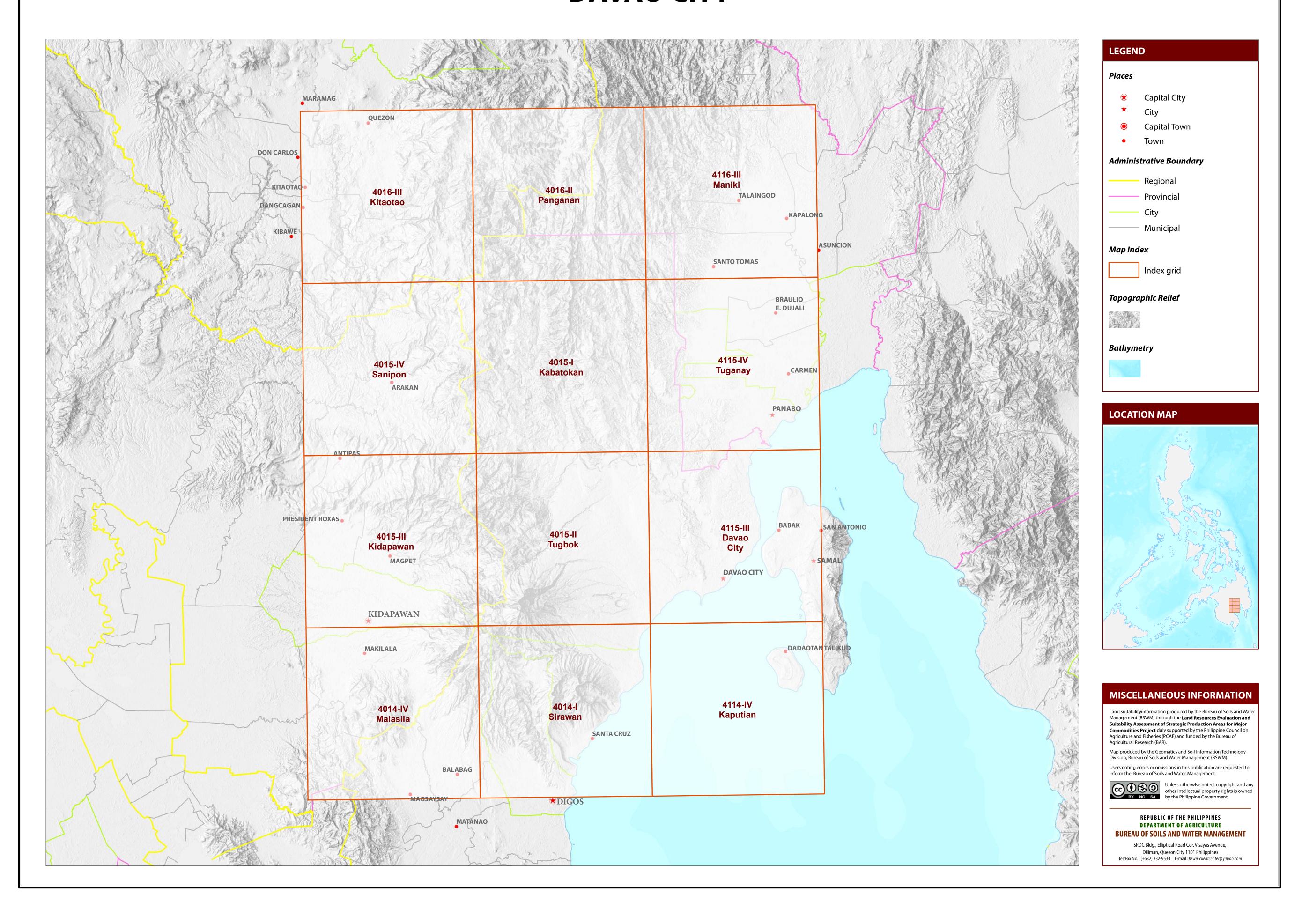
### **DAVAO CITY**





#### MAP INDEX

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



### LAND SUITABILITY MAP FOR **CASSAVA**

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

#### **EXTENT OF SUITABILITY FOR CASSAVA PRODUCTION BY MUNICIPALITY**

MUNICIPALITY		-	-	TOTAL EXISTING AREA (Ha)	EXPANSION AREA (Ha)					CONFLICT RESOLUTION AREA (Ha)									TOTAL		
	EXISTIN	NG CASSA	.VA (Ha)		Coconut			Shrubland, unmanaged*		Grassland, unmanaged*		Banana				Pineapple		Sugarcane		rops	TOTAL POTENTIAL EXPANSION
	<b>S1</b>	S2	<b>S</b> 3		S1	S2	S1	<b>S2</b>	<b>S1</b>	<b>S2</b>	S1	S2	<b>S1</b>	<b>S2</b>	<b>S1</b>	<b>S2</b>	<b>S1</b>	<b>S2</b>	<b>S1</b>	<b>S2</b>	AREA (Ha)
DAVAO CITY	-	-		_	26,225	20,943	348	2,173	1,106	7,638	1,436	1,612	677	510	653	638	3	88	273	262	64,585
ΤΩΤΔΙ	_	_		_	26 225	20.943	3/18	2 173	1 106	7 638	1 436	1 612	677	510	653	638	3	ΩΩ	273	262	64.585

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

\*establishment of shade trees prior to planting of cassava.

#### **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.

#### AGRONOMIC REQUIREMENT OF CASSAVA 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
Cassava	S1	<8	>50	FSL, L, SiL, CL, SiCL, SCL, SC, SiC, C	WD,MWD	5.6 - 7.2	high	none-slight	none-slight	none-few	<500	1000-2000	I,II, III, IV
	S2	8 - 18	30 - 50	SL, HC	SPD, PD	5.1 - 5.5 7.3 - 7.8	medium	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	

	S3	18 - 30	<30	S, LS, CSL	VPD,ED	<5.0 - > 7	'.9 low	severe	severe	many	>1500	>4500	
SLOPE (%	<b>/6)</b>		SOIL DRA	INAGE		SOIL REA	CTION (pH)		SOIL TEX	TURE		7 1300	<u> </u>
0 - 3	- level to gently slopin	ıg	ED	- excessively drained		< 4.5	- extremely acid		Coarse			Fine	
3 - 8	- gently sloping to und	lulating	WD	- well drained		4.5 - 5.0	- very strongly acid		S	- sand		SC	- sandy clay
8 - 18	- 18 - undulating to rolling			MWD - moderately well drained			- strongly acid		LS	- loamy sand		SiC	- silty clay
18 - 30	- rolling to moderately	y steep	SPD	- somewhat poorly drai	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	50 - very steep			VPD - very poorly drained			- neutral		Medium				
						7.3 - 7.8	- mildly alkaline		FSL	- fine sandy loam			
SOIL DEF	РТН (ст)		SURFACE	IMPEDIMENT		7.9 - 8.4	- moderately alkaline		L	- loam			
0 - 30	- very shallow		ROCK OUT	CROPS		> 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			

#### **CLIMATE TYPE**

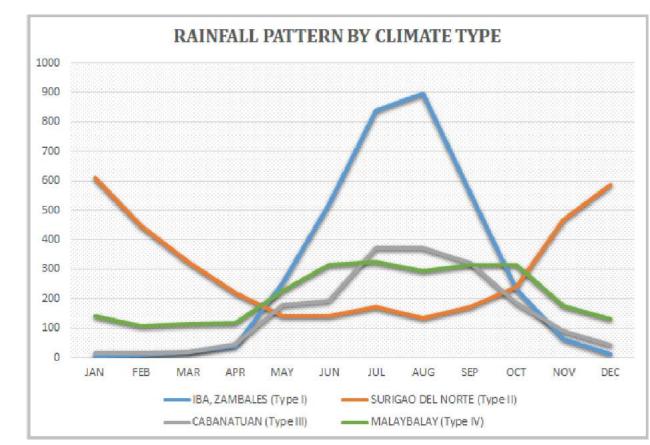
wet during the rest of the year. Maximum rain period is from June to September

**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 season.

Davao City 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>.

#### LAND LIMITATIONS DESCRIPTION AND COMBINATIONS

14 T2-El2-Sh2-Rc2

15 T2-El2-Sh2-Rc3

17 T2-El3-Sh2-Rc2

18 T2-F2-D2

19 T2-F3-D2

**20** T2-Rc2

16 T2-El3-E3-Sh2-Rc3

24 T3-E3-Sh2-Rc3

25 T3-E3-Sh3-Rc2

26 T3-E3-Sh3-Rc3

29 T3-El2-E3-Rc2

30 T3-El2-E3-Rc3

**27** T3-El2

**28** T3-El2-E3

**4** El3

**5** F2-D2

6 F3-D2

8 Sh2-Rc2

10 T2-E2-Sh2-Rc2

7 Sh2

9 T2

	<b>TION</b> - 500 - 1000m or 2000 - 2 - < 500m or > 2500m	500m		mewhat	poorly drained to poorly y drained or excessively			Shallow to	o moderately deep (30 - 100 ow (< 30cm)						
T2 -	/TOPOGRAPHY - Undulating to moderate - Steep to very steep	ly steep	SOIL TEX Tc - Co	TURE parse text	ure		Rc2 -	<b>UTCROP</b> Common Many		<b>FL</b> F2 F3	OODING - Moderate seasonal flo - Severe seasonal floodi	J			
CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LANDUSE	CODE	LANDUSE		
1	El2	11	T2-El2	21	Т3	31	T3-El2-E3-Sh2-Rc2	41	T3-E3	4	Corn	134	Shrubs, unmanaged		
2	El2-E2-Sh2-Rc3	12	T2-E12-E3-Sh2-Rc3	22	T3-E3	32	T3-El2-E3-Sh2-Rc3	42	T3-E3-Sh3-Rc3	34	Diversified crops				
3	El2-Sh2-Rc2	13	T2-El2-Rc2	23	T3-E3-Sh2-Rc2	33	T3-El2-E3-Sh3-Rc2	43	T3-El2	84	Pineapple				

34 T3-El2-E3-Sh3-Rc3

37 T3-El3-E3-Sh2-Rc2

38 T3-El3-E3-Sh2-Rc3

39 T3-El3-E3-Sh3-Rc2

35 T3-El3

36 T3-El3-E3

**44** T3-El2-E3

**47** T3-El3

*50* T3-El3

48 T3-El3-E3

45 T3-El2-E3-Rc3

46 T3-El2-E3-Sh3-Rc3

49 T3-El3-E3-Sh3-Rc3

85 Mango

91 Banana

112 Sugarcane

116 Coconut 126 Grassland

131 ipil ipil

Fruit trees, mixed

