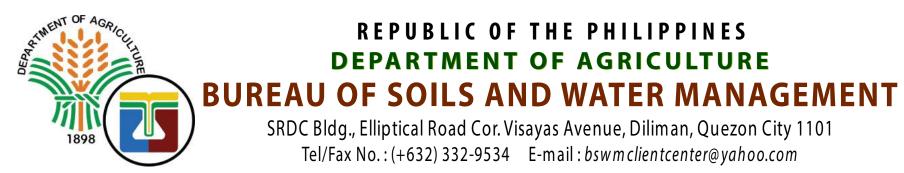
### LAND SUITABILITY MAP

### CASSAVA

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

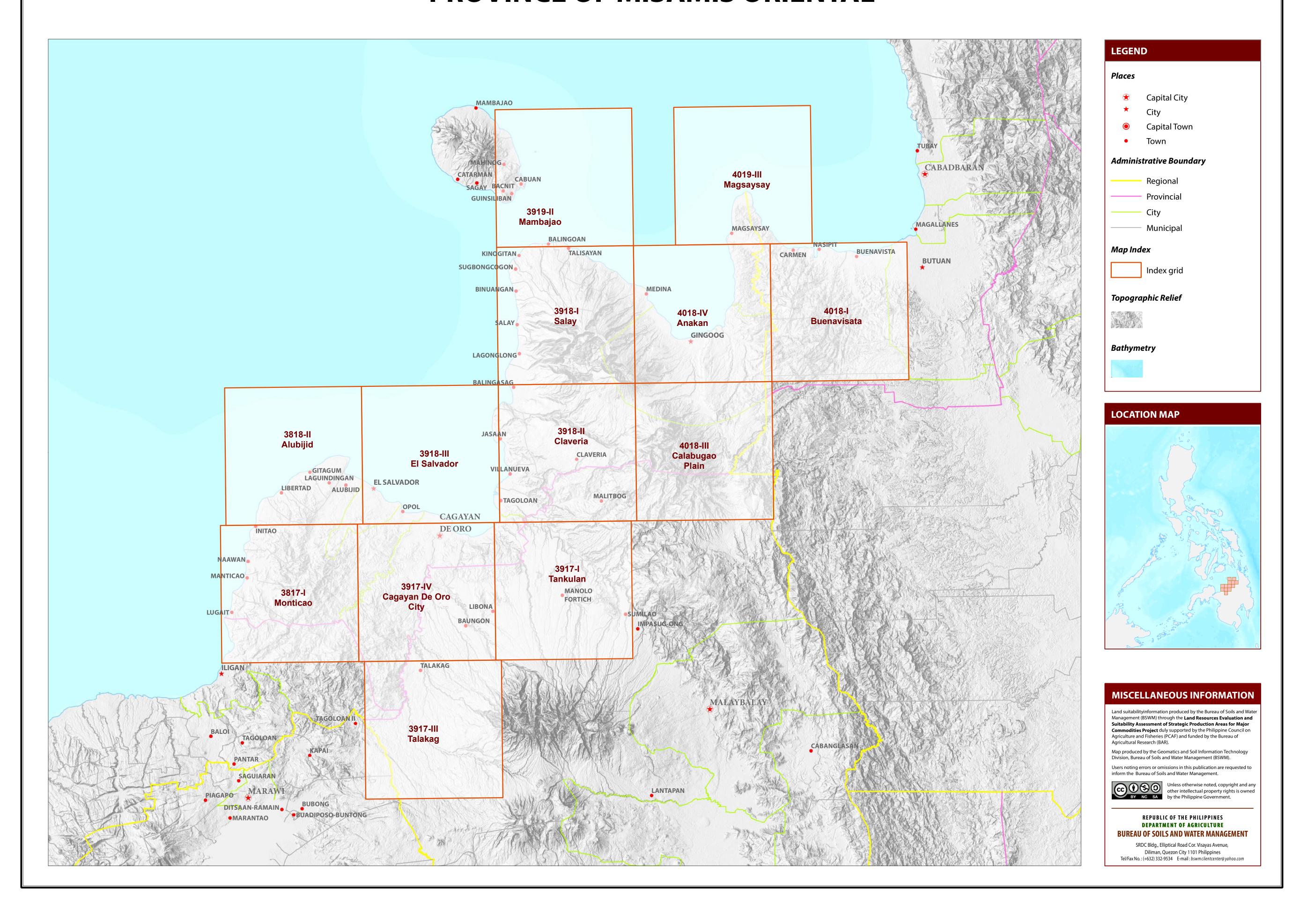
### PROVINCE OF MISAMIS ORIENTAL





### **MAP INDEX**

# LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS PROVINCE OF MISAMIS ORIENTAL



## LAND SUITABILITY MAP FOR **CASSAVA**

### LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS MISAMIS ORIENTAL, REGION X

#### EXTENT OF SHITABILITY FOR CASSAVA PRODUCTION BY MUNICIPALITY

		EXISTING CASSAVA (Ha)			EXPANSION AREA (Ha)							CONFLICT RESOLUTION AREA (Ha)					
MUNICIPALITY	EXISTIN				Coconut			Shrubland, Grass unmanaged* unman			Corn		Paddy rice, non-irrigated		Other crops		TOTAL POTENTIAL EXPANSION AREA (Ha)
	<b>S1</b>	<b>S2</b>	<b>S</b> 3		<b>S1</b>	S2	<b>S1</b>	S2	<b>S1</b>	S2	S1	<b>S2</b>	<b>S1</b>	S2	S1	S2	AKEA (Ha)
ALUBIJID	-	-	-	-	457	784	49	483	24	379	2,025	1,162	-	_	-	-	5,363
BALINGASAG	-	-	-	-	1,286	1,350	2	71	-	35	1,326	1,227	-	_	-	-	5,296
BALINGOAN	-	-	-	-	113	1,313	-	1	-	228	9	191	-	_	-	-	1,856
BINUANGAN	-	-	-	-	20	736	-	-	-	-	0	21	-	_	-	-	778
CAGAYAN DE ORO CITY	5	22	11	38	1,111	2,628	27	776	63	1,155	1,946	2,018	_	_	7	8	9,740
CITY OF EL SALVADOR	-	-	-	-	228	837	30	356	9	231	2,644	1,924	-	_	-	-	6,259
CLAVERIA	-	-	-	-	163	416	2	227	-	22	1,165	3,562	-	_	-	-	5,558
GINGOOG CITY	-	-	-	-	4,009	10,057	34	667	-	72	627	871	-	_	-	-	16,337
GITAGUM	-	-	-	-	171	174	-	42	-	2	1,428	1,015	-	_	-	-	2,833
INITAO	-	-	-	-	1,622	2,352	-	-	-	15	425	100	-	_	-	-	4,513
JASAAN	-	-	-	-	460	1,261	2	12	-	-	382	675	-	-	-	-	2,791
KINOGUITAN	-	-	-	-	576	1,735	-	-	-	18	65	159	_	_	-	-	2,553
LAGONGLONG	-	-	-	-	259	241	-	-	-	3	315	290	-	_	-	-	1,108
LAGUINDINGAN	-	-	-	-	36	89	-	-	243	58	1,748	814	-	_	-	-	2,987
LIBERTAD	-	-	-	-	209	613	-	-	-	48	496	330	-	_	-	-	1,696
LUGAIT	-	-	-	-	166	1,266	-	11	16	30	-	-	-	_	-	-	1,489
MAGSAYSAY	-	-	-	-	1,107	1,197	29	210	13	311	290	97	_	_	-	-	3,253
MANTICAO	-	-	-	-	1,319	1,610	-	59	-	104	57	9		_	-	-	3,158
MEDINA	-	-	-	-	508	1,802	-	5	-	-	-	3		_	-	-	2,317
NAAWAN	-	-	-	-	1,048	1,248	-	23	-	97	101	5	-	_	-	-	2,522
OPOL	-	-	-	-	200	400	-	534	3	2,955	609	827	-	_	-	-	5,527
SALAY	-	-	_	-	223	855	-	-	-	-	5	25	_	_	-	-	1,108
SUGBONGCOGON	-	-	_	-	285	1,048	-	-	-	18	13	45	_	_	-	-	1,410
TAGOLOAN	-	-	-	-	264	194	24	65	84	51	664	220	-	_	-	-	1,566
TALISAYAN	-	-	-	_	151	887	92	798	-	235	49	163	-	_	-	-	2,373
VILLANUEVA	-	-	-	_	163	289	1	10	9	-	364	331	-	_	-	-	1,167
TOTAL	5	22	11	38	16,153	35,379	292	4,349	464	6,070	16,754	16,084	-	_	7	8	95,561

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

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

#### 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
	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
Cassava	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	

,								71300	
SLOPE (%	<b>%)</b>	SOIL DR	AINAGE	SOIL REA	ACTION (pH)	SOIL TEXT	ΓURE		
0 - 3	- level to gently sloping	ED	- excessively drained	< 4.5	- extremely acid	Coarse		Fine	
3 - 8	- gently sloping to undulating	WD	- well drained	4.5 - 5.0	- very strongly acid	S	- sand	SC -	sandy clay
8 - 18	- undulating to rolling	MWD	- moderately well drained	5.1 - 5.5	- strongly acid	LS	- loamy sand	SiC -	silty clay
18 - 30	- rolling to moderately steep	SPD	- somewhat poorly drained	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	<ul> <li>very poorly drained</li> </ul>	6.6 - 7.2	- neutral	Medium			
				7.3 - 7.8	- mildly alkaline	FSL	- fine sandy loam		
SOIL DEF	РТН (ст)	SURFAC	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

ELEV	ATION		SOIL DE	RAINAGE			SOIL DE	PTH			<b>SOIL EROSION</b>			
El2	- 500 - 1000m or 2000 - 25	500m	D2 -	Somewhat	poorly drained to poorly	drained	Sh2 - S	hallow to	moderately deep (30 - 1	100cm)	E2 - Moderate ero	osion		
El3	- < 500 m or > 2500 m		D3 -	Very poorly	drained or excessively	drained	Sh3 - V	ery shallo	w (< 30cm)		E3 - Severe erosio	on		
SLOPI	E/TOPOGRAPHY		SOIL TE	XTURE			ROCK O	JTCROPS			FLOODING			
T2	- Undulating to moderatel	y steep	Tc -	Coarse text	ure		Rc2 - 0	ommon			F2 - Moderate sea	asonal flo	oding	
Т3	- Steep to very steep						Rc3 - M	lany			F3 - Severe seaso	nal floodi	ing	
												Ti I	2007	
CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	⊥	CODE	LAND
1	Elo	11	TЭ	21	T2 E2 D2	21	TO E10 E0	11	TO E10 E2 Ch2 Da2	51	тэ гіэ		4	C

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

CODE	LANDUSE
4	Corn
51	Cassava
81	Coffee
82	Cacao
85	Mango
116	Coconut
126	Grassland
134	Shrubs, unmanaged

#### **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**

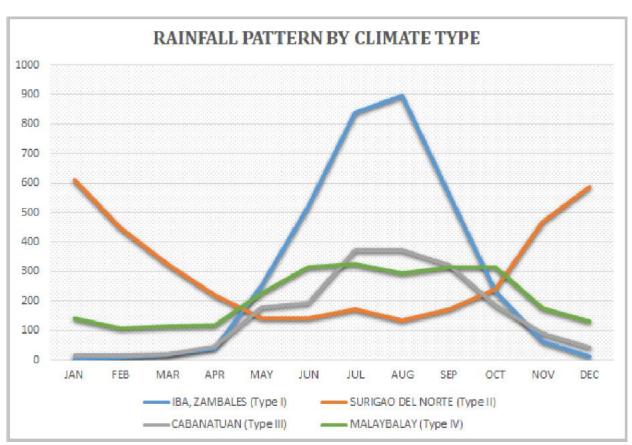
wet during the rest of the year. Maximum rain period is from June to September

**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

Western part of Misamis Oriental is classified as climatic Type III and North Eastern part is 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>.

