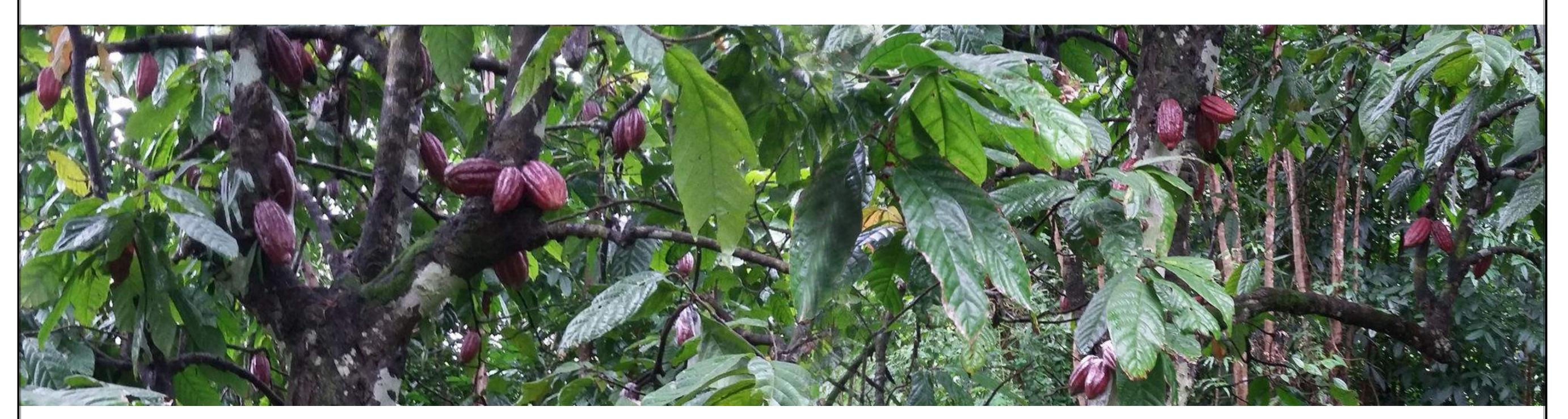
### LAND SUITABILITY MAP

### CACAO

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

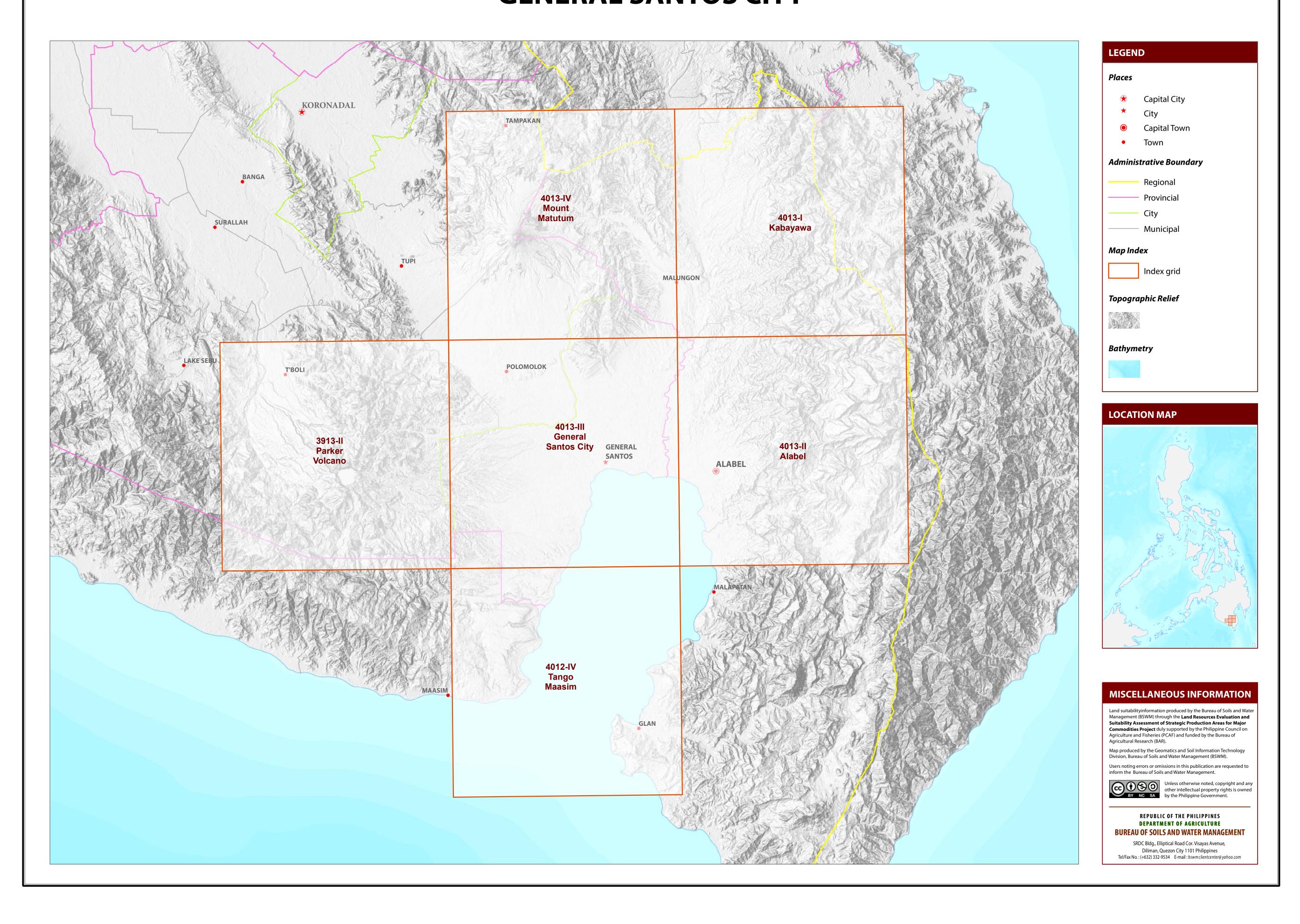
### GENERAL SANTOS CITY





### MAP INDEX

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



## LAND SUITABILITY MAP FOR **CACAO**

### LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS GENERAL SANTOS CITY, REGION XII

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

		-	-			EXF	PANSION	AREA (Ha	)			CONFLICT	RESOLU	TION ARE	EA (Ha)		TOTAL
MUNICIPALITY	EXISTI	NG CACA	O (Ha)	TOTAL EXISTING AREA (Ha)	Coco	onut	Shrub unman	,	Grassl unmana	·	Coi	rn	Pinea	pple	Other	crops	POTENTIAL EXPANSION
	<b>S1</b>	S2	<b>S</b> 3		<b>S1</b>	S2	<b>S1</b>	<b>S2</b>	<b>S1</b>	S2	S1	S2	<b>S1</b>	<b>S2</b>	<b>S1</b>	S2	AREA (Ha)
GENERAL SANTOS CITY	-	-	-	-	2,785	51	593	29	4001	3,388	7,296	1,826	99	12	3		20,084
TOTAL	-	-	-	-	2.785	51	593	29	4001	3.388	7.296	1.826	99	12	3		20.084

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

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

#### AGRONOMIC REQUIREMENT OF CACAO 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	2001-4500	I, III, IV
Cacao	S2	8 - 30	50 - 100	FSL, L, SiL	SPD,PD	5.1 - 5.5 7.3 - 7.8	medium	moderate	moderate	common	1000-1500	1000-2000	I, II
	S3	>30	<50	S, LS, CSL, SL	VPD,ED	<5.0 - > 7.9	low	severe	severe	many	>1500	<1000 >4500	

						24300
SLOPE (%	<b>%)</b>	SOIL DRAINAGE	SOIL REACTION (pH)	SOIL TEXTURE		
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 - very poorly drained	6.6 - 7.2 - neutral	Medium		
			7.3 - 7.8 - mildly alkaline	FSL - fine sandy loam		
SOIL DEF	РТН (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	- 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

**ELEVATION** 

**SOIL DRAINAGE** 

El2 El3	- 1000m - 1500m - > 1500m	D2 D3	<ul> <li>Somewhat poorly drained to poorly drain</li> <li>Very poorly drained or excessively drain</li> </ul>
SLO	PE/TOPOGRAPHY	SOIL	TEXTURE
T2	- Undulating to moderately steep	Tc	- Coarse texture
Т3	- Steep to very steep		
1			

CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION
1	E2-Sh2-Rc2	11	T2-E3-Sh2-Rc3	21	T3-E3-Sh3-Rc3
2	El2	12	T2-El2	22	T3-El2-E3-Sh3-Rc3
3	El2-Rc2	13	T2-El2-E3-Sh2-Rc2	23	T3-El3
4	El2-Sh2-Rc2	14	T3	24	Tc
<i>5</i>	F2-D2	15	T3-E3		
6	F3-D2	16	T3-E3-Sh3-Rc2		
7	Sh2-Rc2	17	T3-E3-Sh3-Rc3		
8	T2	18	T3-El2		
9	T2-E3	19	T3-El2-E3-Sh3-Rc2		
10	T2-E3-Sh2-Rc2	20	Т3-Е3		

	Rc3 - Many
CODE	LANDUSE
4	Corn
51	Cassava
84	Pineapple
85	Mango
116	Coconut
126	Grassland
134	Shrubs, unmanaged

SOIL DEPTH

ROCK OUTCROPS

Rc2 - Common

Sh2 - Moderately deep (50 - 100cm)

Sh3 - Very shallow to shallow (< 50cm)

**SOIL EROSION** 

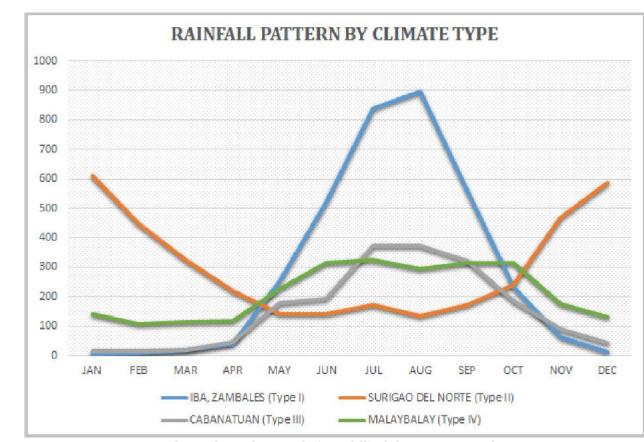
**FLOODING** 

E2 - Moderate erosion

F2 - Moderate seasonal flooding

F3 - Severe seasonal flooding

E3 - Severe erosion



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>.

#### **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.

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.

Marginally Suitable (S3)

Land having limitations which in aggregate are

#### **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 season.

General Santos City is classified as climatic Type IV.

