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

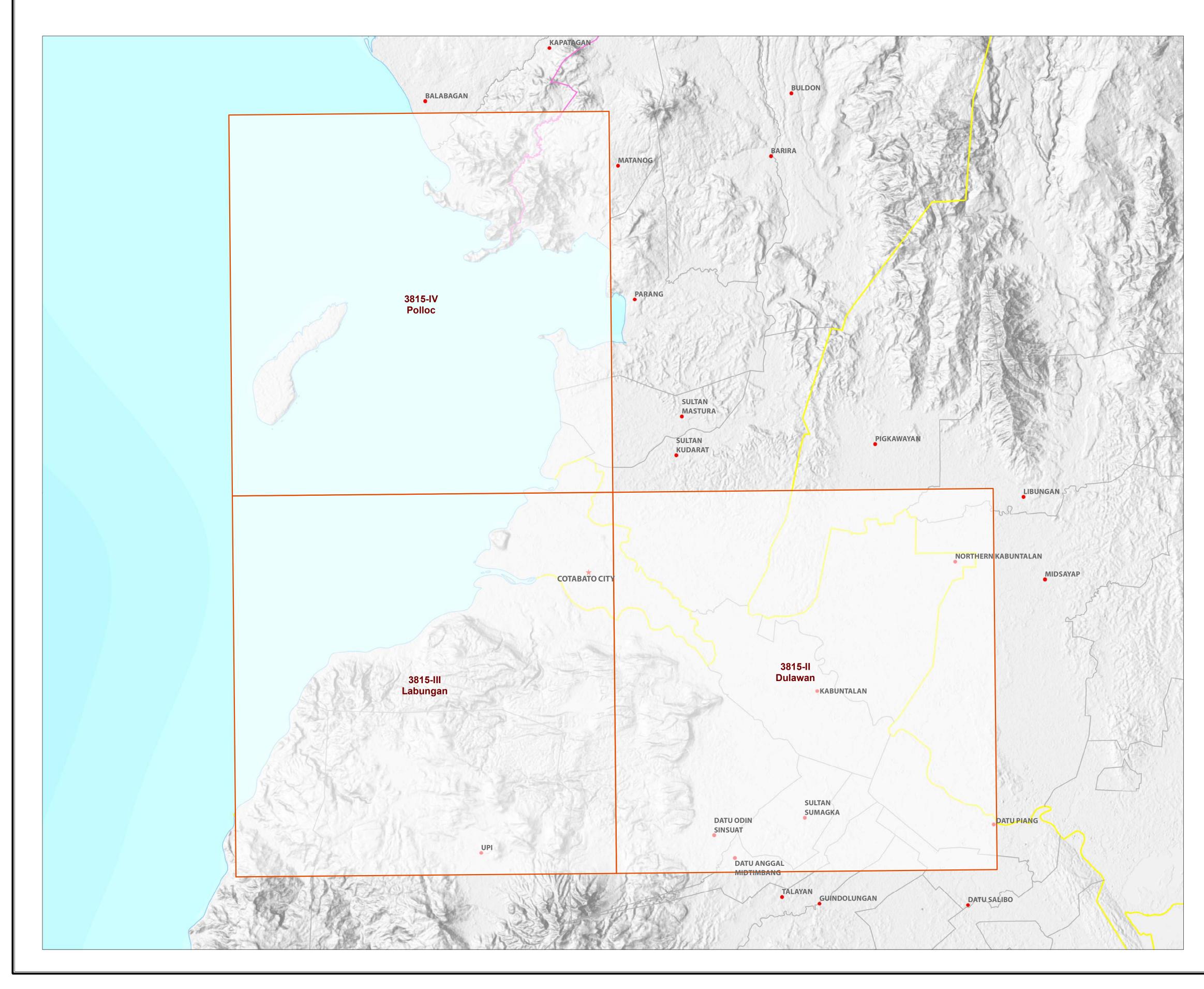


LAND SUITABILITY MAP

NATURAL RUBBER

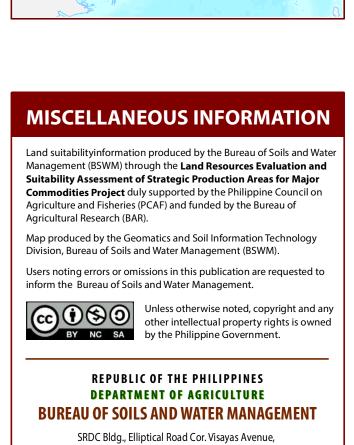
COTABATO CITY

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS COTABATO CITY



MAP INDEX

LEGEN	D
Places	
* •	Capital City City Capital Town Town
Adminis	strative Boundary
	 Regional Provincial City Municipal
Map Ind	lex
	Index grid
Topogra	aphic Relief
Bathym	etry
LOCAT	ION MAP



Diliman, Quezon City 1101 Philippines Tel/Fax No. : (+632) 332-9534 E-mail : bswmclientcenter@yahoo.com

LAND SUITABILITY MAP FOR **RUBBER**

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS **COTABATO CITY, REGION XII**

EXTENT OF SUITABILITY FOR RUBBER PRODUCTION BY MUNICIPALITY

EXISTING RUBBER (Ha)			EXPANSION AREA (Ha)				CONFLICT RESOLUTION AREA (Ha)				TOTAL					
		TOTAL EXISTING AREA (Ha)	Сосс	onut		•			Co	orn	-		Other	crops	POTENTIAL EXPANSION	
S1	S2	S 3		S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	AREA (Ha)
-	-	-	-	-	-	- 4	-					-	-	-	-	4
						4		_					_			4
				EXISTING RUBBER (Ha) EXISTING AREA (Ha)	EXISTING RUBBER (Ha) EXISTING Cocc AREA (Ha)	EXISTING RUBBER (Ha) EXISTING AREA (Ha)	EXISTING RUBBER (Ha) EXISTING AREA (Ha) TOTAL EXISTING Coconut Shrub unman	EXISTING RUBBER (Ha) TOTAL EXISTING AREA (Ha) Coconut Shrubland, unmanaged*	EXISTING RUBBER (Ha) TOTAL EXISTING AREA (Ha) TOTAL Coconut Shrubland, unmanaged* Shrubland, unmanaged*	EXISTING RUBBER (Ha) TOTAL EXISTING AREA (Ha) Coconut Shrubland, Grassland, unmanaged* Grassland,	EXISTING RUBBER (Ha) TOTAL EXISTING AREA (Ha) TOTAL Coconut Shrubland, unmanaged* Grassland, unmanaged*	EXISTING RUBBER (Ha) TOTAL EXISTING AREA (Ha) Coconut Shrubland, unmanaged* Grassland, unmanaged* Corn	EXISTING RUBBER (Ha) TOTAL EXISTING AREA (Ha) Coconut Shrubland, unmanaged* Grassland, unmanaged* Corn Paddy non-irr	EXISTING RUBBER (Ha) TOTAL Shrubland, Grassland, Corn Paddy rice, EXISTING AREA (Ha) Coconut Shrubland, unmanaged* Grassland, Corn Paddy rice,	EXISTING RUBBER (Ha)TOTAL EXISTING AREA (Ha)CoconutShrubland, unmanaged*Grassland, unmanaged*CornPaddy rice, non-irrigatedOther	EXISTING RUBBER (Ha) TOTAL Shrubland, Grassland, Paddy rice, Other crops EXISTING RUBBER (Ha) Coconut Shrubland, Grassland, Corn Paddy rice, Other crops

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

ACRONOMIC REGULEREMENT OF RUBBER PRODUCTION

LAND TILIZATION TYPE	SUITABILITY RATING	SLOPE (%)	SOIL DEPTH (cm)	SOIL TEXTURE	SOIL DRAINAGE	SOIL REACTION (pH)	INHERENT FERTILITY	FLOOD ING CLASS	EROSION CLASS	ROCK OUTCROPS	ELEVATION (masl)	ANNUAI RAINFAL (mm)	
	S1	<8	>100	CL, SiCL, SCL, SC, SiC, C, HC	WD,MWD, SPD	5.6 -7.2	high	none-slight	none-slight	none-few	<500	1000-200	0 III, IV
Rubber Tree	S2	8 - 30	30 - 100	FSL, L, SiL, SL	PD,VPD	4.5 - 5.5 7.3 - 7.8	medium	moderate	moderate	common	500-1000	2001-450	0 I, II, III
	S3	>30	<30	S, LS, CSL	ED	<4.5 - > 7.9	low	severe	severe	many	>1000	<1000 >4500	
LOPE (%)			SOIL DRAINAG	GE		SOIL REACTI	ON (pH)		SOIL TEXT	TURE			
3 - leve	el to gently sloping	r.	ED - exe	cessively drained		< 4.5 - e	xtremely acid		Coarse			Fine	
	tly sloping to undu		WD - we	ell drained			ery strongly acid		S	- sand		SC -	sandy clay
0	ulating to rolling	-	MWD - mo	oderately well dra	ined		trongly acid		LS	- loamy sand			silty clay
	ing to moderately	steep		mewhat poorly dr			nedium acid			- coarse sandy loam			clay
- 50 - stee	ep		PD - po	orly drained		6.1 - 6.5 - sl	ightly acid		SL	- sandy loam		HC -	heavy clay
50 - very	y steep		VPD - vei	ry poorly drained		6.6 - 7.2 - n	eutral		Medium				
						7.3 - 7.8 - m	nildly alkaline		FSL	- fine sandy loam			
DIL DEPTH (ci	m)		SURFACE IMP	EDIMENT		7.9 - 8.4 - n	noderately alkaline		L	- loam			
- 30 - very	y shallow		ROCK OUTCRO	PS		> 8.5 - st	trongly alkaline		SiL	- silt loam			
) - 50 - shal	llow			ne - few						- clay loam			
0 - 100 - mod	derately deep		10 - 30% - co	mmon						- silty clay loam			
100 - deej	p to very deep		> 30% - ma	any					SCL	- sandy clay loam			
AND LIM	IITATION	S DESCRIP	TION ANI	D COMBIN	ATIONS								
LEVATION			SOIL DRAINA				SOIL DEPTH			SOIL EROSION			
	00m or 2000 - 250	0m		1 0	ed to poorly draine			moderately deep	(30 - 100cm)	E2 - Modera			
3 - < 500m o	or > 2500m		D3 - Very p	oorly drained or e	excessively drained	1	Sh3 - Very shallo	ow (< 30cm)		E3 - Severe e	rosion		
OPE/TOPOGI	RAPHY		SOIL TEXTUR	RE			ROCK OUTCROPS	:		FLOODING			
	ng to moderately s		Tc - Coarse				Rc2 - Common			F2 - Modera	e seasonal floodir		

T2 - Undulating to moderately steep T3 - Steep to very steep

CODE	LIMITATION	CODE	LIMITATION
1	F2-D2	11	T3-El3
2	F2-Tc		
3	F3-D2		
4	T2		
5	T2-F2-D2		
6	T2-F3-D2		
7	Т3		
8	T3-F2-D2		
9	T3-F3-D2		
10	T3-F3-D2		

CODE	LANDUSE
116	Coconut
134	Shrubs, unmanaged

Rc2 - Common Rc3 - Many

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.

Moderately Suitable (S2)

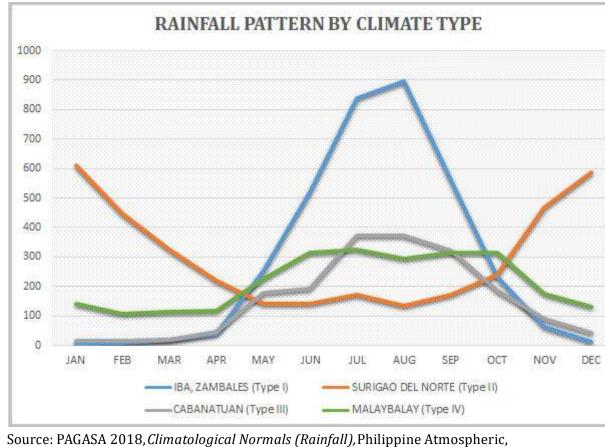
Land having limitation which in aggregate are moderately severe for sustained application of a given use; the limitation will reduce productivity or benefits and increase required inputs to the extent that the overall advantage to be gained from the use, although still attractive, will be appreciably inferior to that expected on class S1 land.

F3 - Severe seasonal flooding **CLIMATE TYPE**

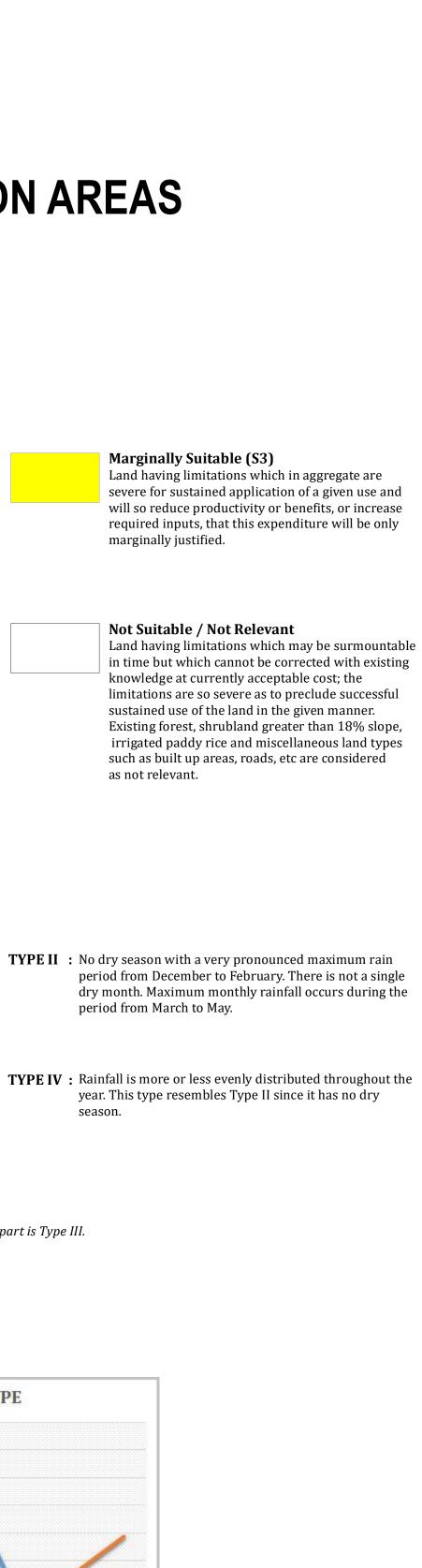
TYPE I : Two pronouced season, dry from November to April and **TYPE II** : No dry season with a very pronounced maximum rain wet during the rest of the year. Maximum rain period is from June to September

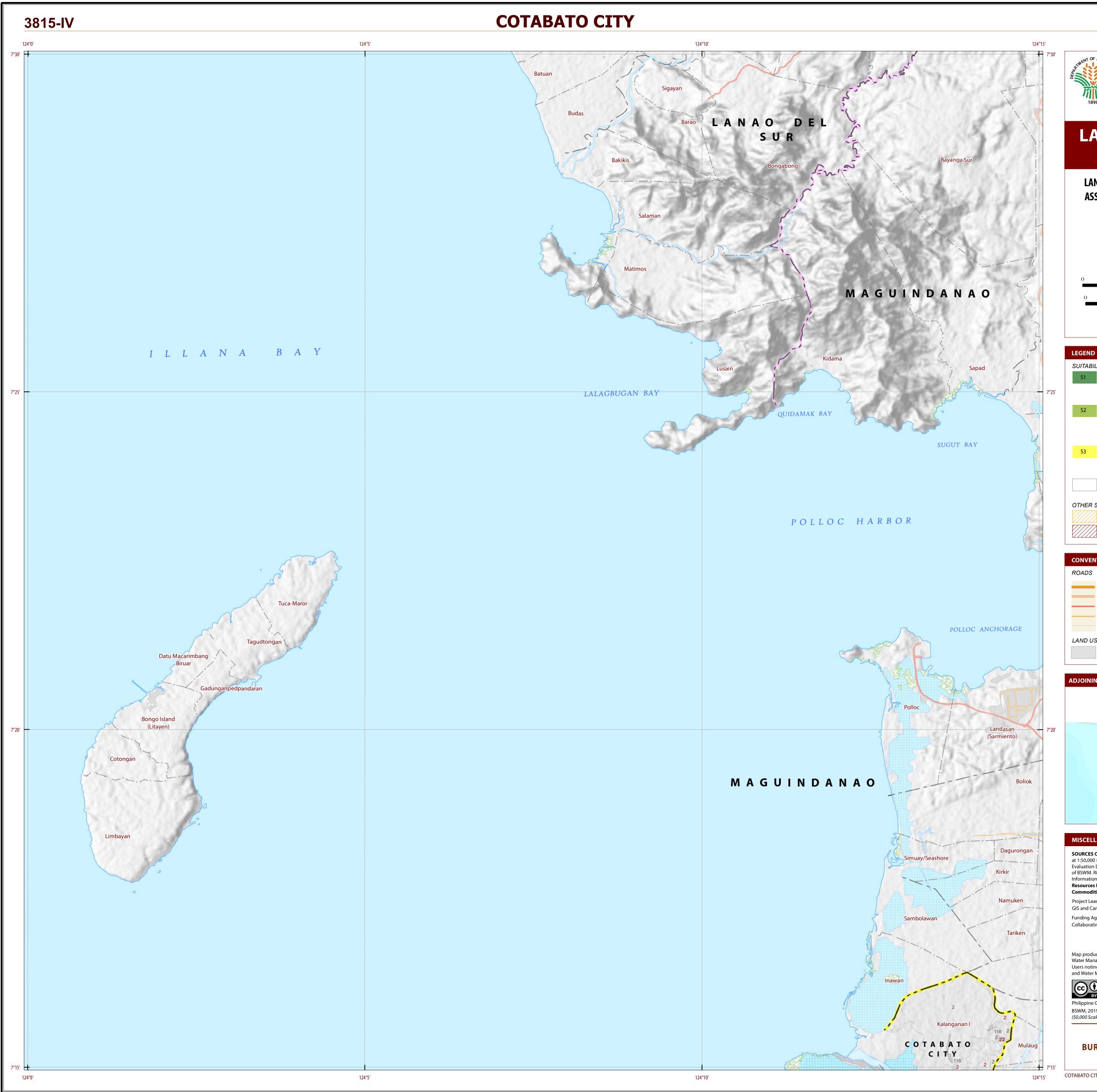
TYPE III: No very pronounced maximum rain period, with a dry season lasting only from one to three months, either during the period from December to February or from March to May. This type resembles Type I since it has a short dry season.

Western part of Cotabato City is classified as climatic Type IV and Eastern part is Type III.

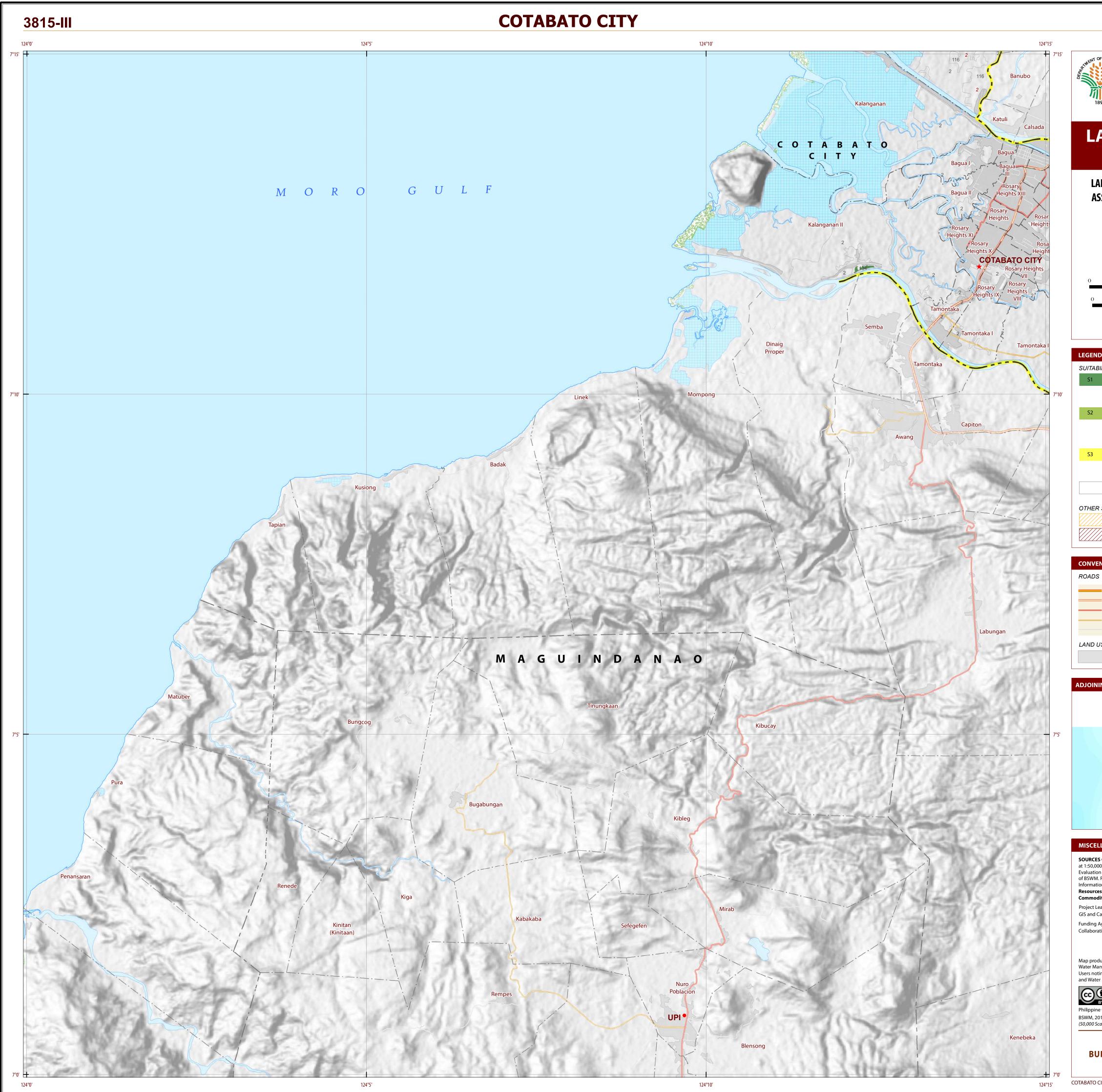


Geophysical and Astronomical Services Administration (PAGASA), accessed 27 July 2018, https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>.

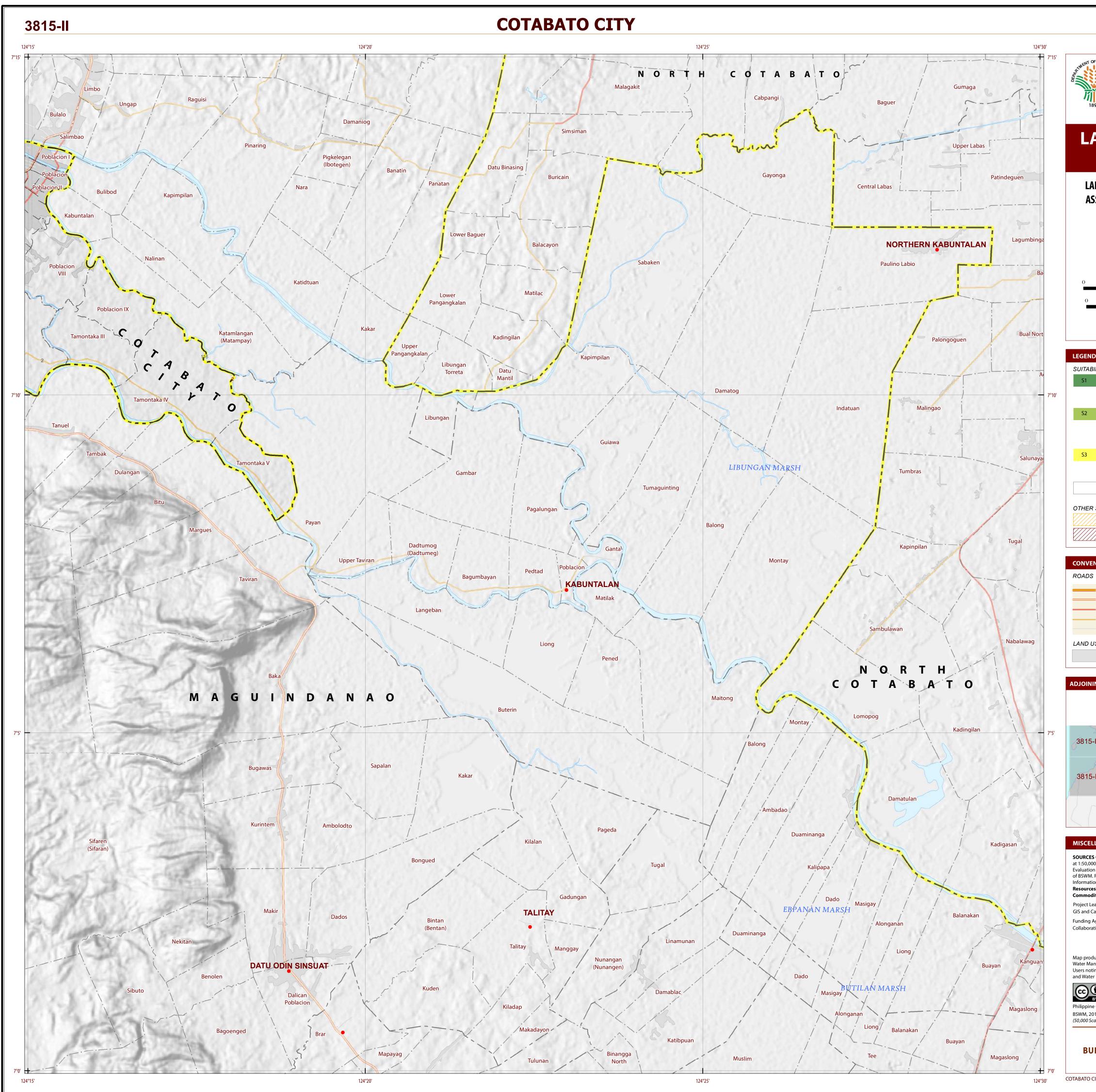




			Polloc
PAGRICULUE 1998	BORNENT OF AGA, CULL	DEPARY	I898
AND S	UITABI RUBBE		MAP
	CES EVALUATIO OF STRATEGIC P		
	w - S	E	
0.5 1	SCALE 1:50 2 3 Kilometers		3
Universal Tra	Miles Insverse Mercator Zone 5 All political boundaries		ım
D			
application of a cantly reduce pr an acceptable le Moderately Su moderately seve will reduce proc extent that the attractive, will b Marginally Suit severe for sustai	itable - Land having lin ere for sustained applie ductivity or benefits an overall advantage to be re appreciably inferior t table - Land having lin ined application of a g s, or increase required justified.	or limitations th and will not rais mitations which cation of a giver d increase requi e gained from th to that expected nitations which iven use and wil	at will not signifi- se inputs above in aggregate are use; the limitations ired inputs to the ne use, although still d on class S1 land. in aggregate are I so reduce produc-
SIGNS NGP Areas Cacao	Land limit Land use	tation	
NTIONAL SIGNS			
	BOUNDARY Region Province District Municipalit Barangay		GY Sea / Shoreline Lakes / Rivers pital City / City pital Town / Town
Built-up	Fishpond	Mang	Irove
ING SHEETS 3815-	5	IND	EX MAP
3815-111	3815-11		Contraction of the second
	Topographic information		
0 scale. Land resource n Division (ALMED), So Rice areas obtained fi on System (PRISM) (IRI es Evaluation and Sui lities Project impleme eader : BERN	es information from the Ago bils Survey Division (SSD) rom the Land Use System RI, 2015). Data analysis an tability Assessment of S ented by BSWM (2017). IARDO B. PASCUA	gricultural Land M and Laboratory Se (FAO, 2015) and P d compilation thre	anagement and rvices Division (LSD) hilippine Rice bugh the Land
Agency : Dep ting Agencies : Phil : Dep Agr : Loc luced by the Geomatic nagement (BSWM).	VK. SAMALCA partment of Agriculture - I ippine Council on Agricul partment of Agriculture ar iculture Regional Field Of al Government Unit (LGU) cs and Soil Information Te s in this publication are re	ture and Fisheries nd Fisheries - ARM fice of Region IX, 3) of covered provin chnology Division	(PCAF) M, Department of K, XI, XII and XIII (Caraga) nces and municipalities , Bureau of Soils and
r Management. This DODO BY NC SA Covernment. This pu	publication is licensed un national License. Unless o lectual property rights, in iblication should be attrib ap Series for Rubber of COT	der a Creative Cor otherwise noted, c this publication is outed as :	nmons Attribution 4.0 opyright and any other
DEPAR REAU OF SC SRDC Bldg., Elliptical	BLIC OF THE PHI TMENT OF AGR DILS AND WAT Road Cor. Visayas Avenue, 12) 332-9534 E-mail: bswmc	ICULTURE ER MANAC Diliman, Quezon Ci	ty 1101
CITY		Sheet 1 of	3 Sheet No. 3815-IV



	Labungan
PAGROLITINA BOR	1898
AND SUITABILIT RUBBER	Γ Υ ΜΑΡ
AND RESOURCES EVALUATION AND SSESSMENT OF STRATEGIC PRODU	
S 0.5 1 2 3 Kilometers 0.5 1 2	4 5
Miles Universal Transverse Mercator Zone 51 N. PRS 1 DISCLAIMER : All political boundaries are not a	
D	
BILITY CLASSES Highly Suitable - Land having no significant li application of a given use, or only minor limita cantly reduce productivity or benefits and will an acceptable level.	tions that will not signifi-
Moderately Suitable - Land having limitation moderately severe for sustained application of will reduce productivity or benefits and increa extent that the overall advantage to be gained attractive, will be appreciably inferior to that e	a given use; the limitations se required inputs to the I from the use, although still
Marginally Suitable - Land having limitations severe for sustained application of a given use tivity or benefits, or increase required inputs, to only marginally justified.	which in aggregate are and will so reduce produc-
Not Suitable/ Not Relevant	
SIGNS NGP Areas Cacao Land limitation Land use	
NTIONAL SIGNS	
Expressway Region Trunk line Province	DROLOGY Sea / Shoreline Lakes / Rivers CES Capital City / City Capital Town / Town
ING SHEETS	INDEX MAP
3815-III	
LANEOUS INFORMATION 5 OF INFORMATION : Topographic information taken fro 20 scale. Land resources information from the Agricultura 21 n Division (ALMED), Soils Survey Division (SSD) and Labo 22 Rice areas obtained from the Land Use System (FAO, 201 23 on System (PRISM) (IRRI, 2015). Data analysis and compile 25 Evaluation and Suitability Assessment of Strategic I 20 lities Project implemented by BSWM (2017).	I Land Management and ratory Services Division (LSD) 5) and Philippine Rice ation through the Land
eader : BERNARDO B. PASCUA Cartography : IRVIN K. SAMALCA Agency : Department of Agriculture - Bureau of titing Agencies : Philippine Council on Agriculture and Fisheri Agriculture Regional Field Office of Reg : Local Government Unit (LGU) of covere duced by the Geomatics and Soil Information Technology nagement (BSWM).	Fisheries (PCAF) es - ARMM, Department of gion IX, X, XI, XII and XIII (Caraga) ed provinces and municipalities Division, Bureau of Soils and
ing errors or omissions in this publication are requested in r Management. This publication is licensed under a Creat International License. Unless otherwise intellectual property rights, in this public e Government. This publication should be attributed as : 019. Land Suitability Map Series for Rubber of COTABATO C	ative Commons Attribution 4.0 noted, copyright and any other ication is owned by the
REPUBLIC OF THE PHILIPPIN DEPARTMENT OF AGRICULT REAU OF SOILS AND WATER MA SRDC Bldg., Elliptical Road Cor. Visayas Avenue, Diliman, Q Tel/Fax No.: (+632) 332-9534 E-mail: bswmclientcenter	URE ANAGEMENT Juezon City 1101
	eet 2 of 3 Sheet No. 3815-III



BU

			Dulaw	an
PAGP COLUMN	de annent OF AGA, CUI	COLITURAL RESPONSE	1898	GALULTURE
AND S	UITAB RUBBI		Y MAI	Ρ
	CES EVALUATIO DF STRATEGIC I		••••••	
	w-	►E		
0.5 1	SCALE 1:50	3 000	4	5
	Kilometers 1 Miles ansverse Mercator Zone : All political boundarie		Datum	3
 application of a cantly reduce p an acceptable le Moderately Su moderately seven will reduce proceed extent that the attractive, will b Marginally Suise severe for susta 	itable - Land having ere for sustained app ductivity or benefits a overall advantage to be appreciably inferio table - Land having li ined application of a s, or increase required justified.	inor limitation is and will not limitations w lication of a g and increase r be gained fro r to that expe imitations wh given use and	ns that will not sign raise inputs abo hich in aggregate iven use; the lim equired inputs to om the use, althou cted on class S1 ich in aggregate d will so reduce p	gnifi- ve e are itations o the ugh still land. are produc-
SIGNS NGP Areas Cacao	Land lim Land use			
NTIONAL SIGNS	BOUNDARY	HYDRO	DLOGY	
 Expressway Trunk line Primary Secondary Tertiary 	Region Province District Municipal Barangay	PLACE	Sea / Shoreli Lakes / River	ity
JSE Built-up	Fishpond	N	langrove	
ING SHEETS 3815-			NDEX MAP	
	Topographic informatio			
n Division (ALMED), So Rice areas obtained f on System (PRISM) (IR is Evaluation and Sui lities Project implement eader : BERN Cartography : IRVIN Agency : Dep ting Agencies : Phil : Dep Agr : Loc luced by the Geomatin nagement (BSWM).	es information from the <i>i</i> bils Survey Division (SSD rom the Land Use Syster RI, 2015). Data analysis a itability Assessment of ented by BSWM (2017). NARDO B. PASCUA N K. SAMALCA bartment of Agriculture lippine Council on Agric bartment of Agriculture riculture Regional Field C cal Government Unit (LG cs and Soil Information T is in this publication are	 and Laborato m (FAO, 2015) a and compilation Strategic Proo Strategic Proof Strategic Proof<	ry Services Division nd Philippine Rice n through the Land duction Areas for I eries (PCAF) ARMM, Departmen n IX, X, XI, XII and XII rovinces and muni ision, Bureau of Soi	n (LSD) I Major (DA-BAR) II (Caraga) cipalities ils and
BY NC SA Inter BY NC SA Inter e Government. This pu	publication is licensed u national License. Unless lectual property rights, i ublication should be attr <i>ap Series for Rubber of CC</i>	otherwise noto in this publicati ibuted as :	ed, copyright and a	ny other
DEPAR REAU OF SC SRDC Bldg., Elliptica	BLIC OF THE PH TMENT OF AG DILS AND WAT I Road Cor. Visayas Avenue 32) 332-9534 E-mail: bswr	RICULTUI FER MAN e, Diliman, Quezo	R E IAGEMENT on City 1101	,
CITY		Sheet	3 of 3 Sheet N	o. 3815-ll