

# **LAND SUITABILITY MAP**

## **CASSAVA**

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

### **PROVINCE OF SARANGANI**



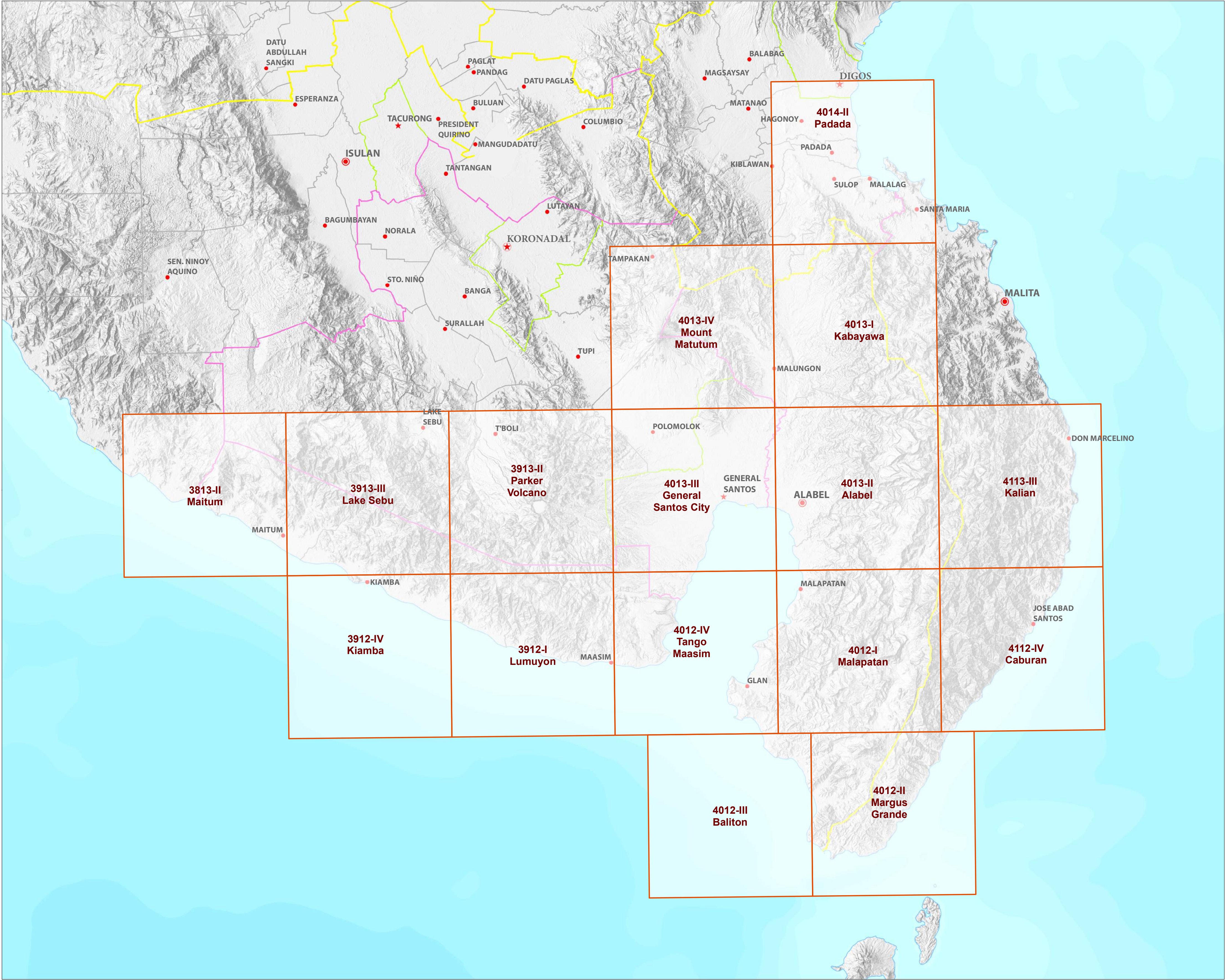
**REPUBLIC OF THE PHILIPPINES**  
**DEPARTMENT OF AGRICULTURE**  
**BUREAU OF SOILS AND WATER MANAGEMENT**

SRDC Bldg., Elliptical Road Cor. Visayas Avenue, Diliman, Quezon City 1101  
Tel/Fax No.: (+632) 332-9534 E-mail: [bswmclientcenter@yahoo.com](mailto:bswmclientcenter@yahoo.com)



# MAP INDEX

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



**LEGEND**

**Places**

- ★ Capital City
- ★ City
- Capital Town
- Town

**Administrative Boundary**

- Regional
- Provincial
- City
- Municipal

**Map Index**

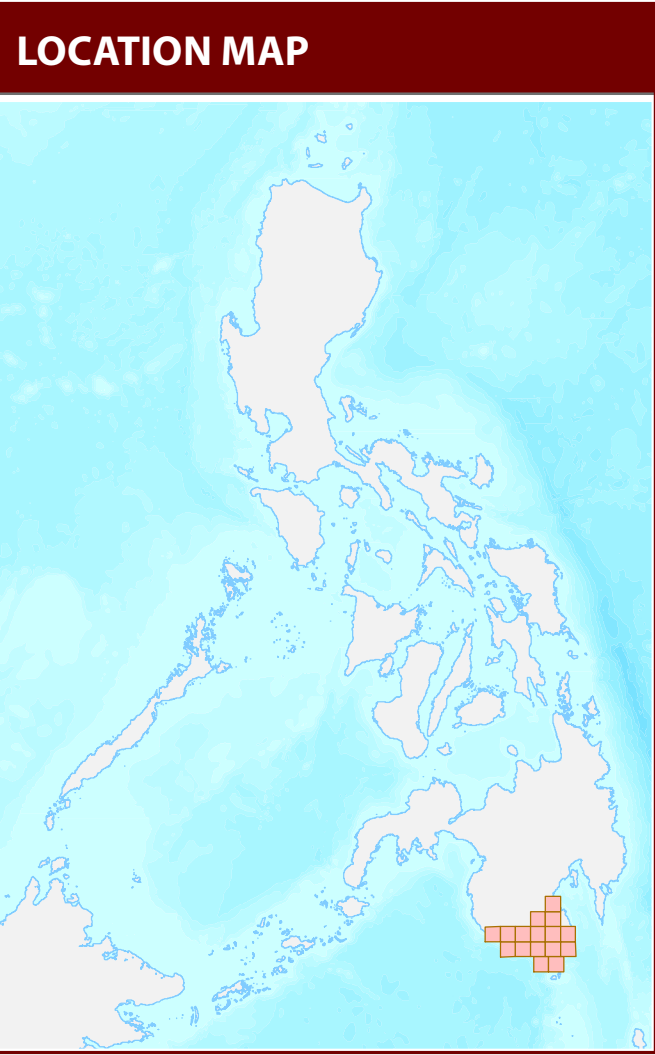
- Index grid

**Topographic Relief**

- 

**Bathymetry**

-



**MISCELLANEOUS INFORMATION**

Land suitability information produced by the Bureau of Soils and Water Management (BSWM) through the **Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Major Commodities Project** duly supported by the Philippine Council on Agriculture and Fisheries (PCAF) and funded by the Bureau of Agricultural Research (BAR).

Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM).

Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.

Unless otherwise noted, copyright and any other intellectual property rights is owned by the Philippine Government.

**REPUBLIC OF THE PHILIPPINES**  
**DEPARTMENT OF AGRICULTURE**  
**BUREAU OF SOILS AND WATER MANAGEMENT**  
SRDC Bldg., Elliptical Road Cor. Visayas Avenue,  
Diliman, Quezon City 1101 Philippines  
Tel/Fax No.: (+632) 332-9534 E-mail: [bswmclientcenter@yahoo.com](mailto:bswmclientcenter@yahoo.com)



# LAND SUITABILITY MAP FOR CASSAVA

## LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS SARANGANI, REGION XII

### EXTENT OF SUITABILITY FOR CASSAVA PRODUCTION BY MUNICIPALITY

MUNICIPALITY	EXISTING CASSAVA (Ha)			TOTAL EXISTING AREA (Ha)	EXPANSION AREA (Ha)						CONFLICT RESOLUTION AREA (Ha)						TOTAL POTENTIAL EXPANSION AREA (Ha)
					Coconut		Shrubland, unmanaged*		Grassland, unmanaged*		Corn		Paddy rice, non-irrigated		Other crops		
	S1	S2	S3		S1	S2	S1	S2	S1	S2	S1	S2	S1	S2			
ALABEL	-	-	-	-	4,029	2,193	337	308	718	3,748	710	161	-	-	3	-	12,207
GLAN	-	-	-	-	2,825	6,896	7	83	246	2,250	123	120	-	-	-	-	12,550
KIAMBA	-	-	-	-	3,694	1,611	283	126	62	93	1,283	127	-	-	-	-	7,277
MAASIM	-	-	-	-	1,804	3,560	117	286	388	2,006	34	48	-	-	-	-	8,244
MAITUM	-	-	-	-	2,122	1,491	64	96	22	121	1,347	165	-	-	-	-	5,428
MALAPATAN	-	-	-	-	1,982	3,693	2	61	91	1,073	14	18	-	-	-	-	6,934
MALUNGON	-	-	-	-	1,575	7,752	718	1,085	344	1,449	4,205	3,172	-	-	3	2	20,305
TOTAL	-	-	-	-	18,031	27,195	1,528	2,045	1,871	10,739	7,715	3,811	-	-	6	2	72,944

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:

<div></div> <b>Highly Suitable (S1)</b> 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.	<div></div> <b>Marginally Suitable (S3)</b> 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.
<div></div> <b>Moderately Suitable (S2)</b> 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.	<div></div> <b>Not Suitable / Not Relevant</b> 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	

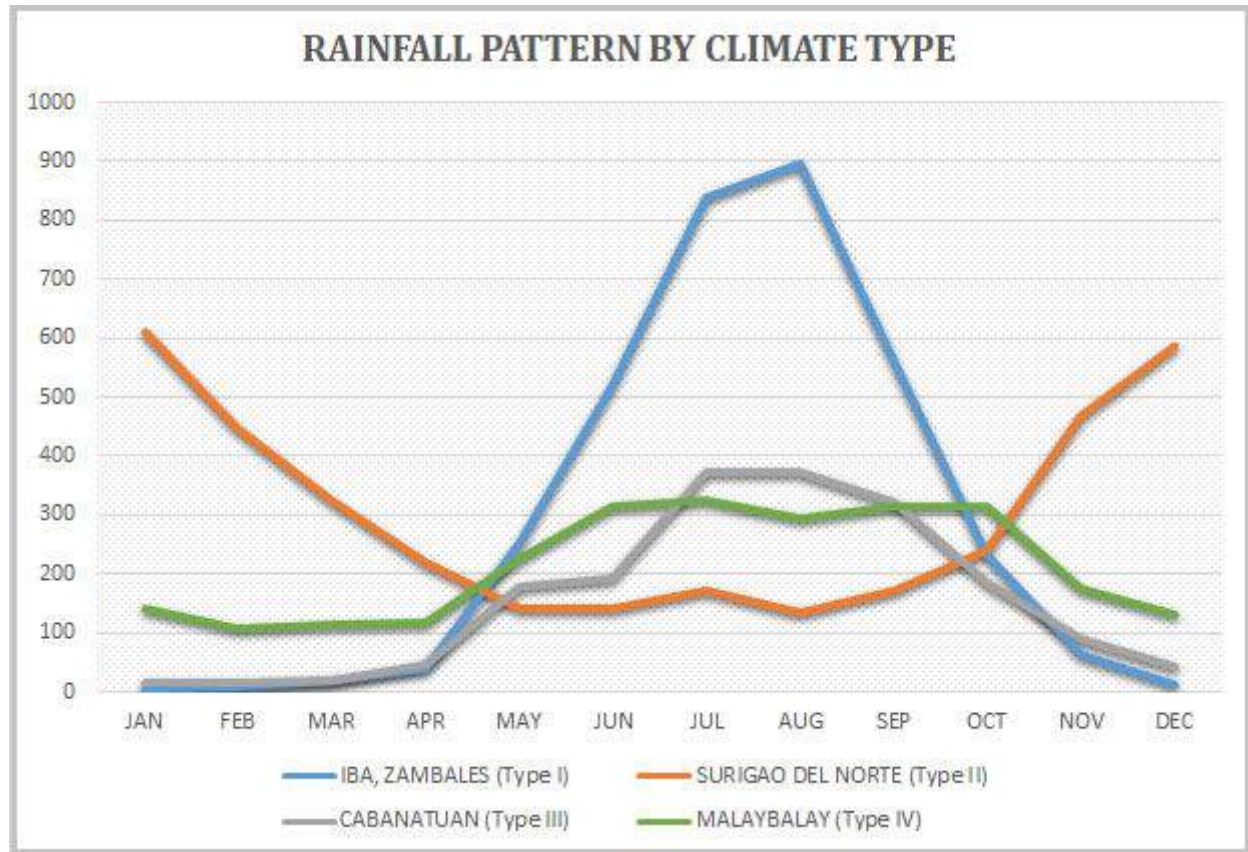
<b>SLOPE (%)</b> 0 - 3 - level to gently sloping 3 - 8 - gently sloping to undulating 8 - 18 - undulating to rolling 18 - 30 - rolling to moderately steep 30 - 50 - steep > 50 - very steep	<b>SOIL DRAINAGE</b> ED - excessively drained WD - well drained MWD - moderately well drained SPD - somewhat poorly drained PD - poorly drained VPD - very poorly drained	<b>SOIL REACTION (pH)</b> < 4.5 - extremely acid 4.5 - 5.0 - very strongly acid 5.1 - 5.5 - strongly acid 5.6 - 6.0 - medium acid 6.1 - 6.5 - slightly acid 6.6 - 7.2 - neutral 7.3 - 7.8 - mildly alkaline 7.9 - 8.4 - moderately alkaline > 8.5 - strongly alkaline	<b>SOIL TEXTURE</b> <b>Coarse</b> S - sand LS - loamy sand CSL - coarse sandy loam SL - sandy loam <b>Medium</b> FSL - fine sandy loam L - loam SIL - silt loam CL - clay loam SiCL - silty clay loam SCL - sandy clay loam	<b>Fine</b> SC - sandy clay SiC - silty clay C - clay HC - heavy clay
<b>SOIL DEPTH (cm)</b> 0 - 30 - very shallow 30 - 50 - shallow 50 - 100 - moderately deep > 100 - deep to very deep	<b>SURFACE IMPEDIMENT</b> ROCK OUTCROPS < 10% - none - few 10 - 30% - common > 30% - many			

### LAND LIMITATIONS DESCRIPTION AND COMBINATIONS

<b>ELEVATION</b> EI2 - 500 - 1000m or 2000 - 2500m EI3 - < 500m or > 2500m	<b>SOIL DRAINAGE</b> D2 - Somewhat poorly drained to poorly drained D3 - Very poorly drained or excessively drained	<b>SOIL DEPTH</b> Sh2 - Shallow to moderately deep (30 - 100cm) Sh3 - Very shallow (< 30cm)	<b>SOIL EROSION</b> E2 - Moderate erosion E3 - Severe erosion
<b>SLOPE/TOPOGRAPHY</b> T2 - Undulating to moderately steep T3 - Steep to very steep	<b>SOIL TEXTURE</b> Tc - Coarse texture	<b>ROCK OUTCROPS</b> Rc2 - Common Rc3 - Many	<b>FLOODING</b> F2 - Moderate seasonal flooding F3 - Severe seasonal flooding

CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION
1	EI2	11	T2-EI2-E3-Rc3	21	T3-E3-Sh2-Rc2	31	T3-EI2-E3-Sh3-Rc2	41	T3-E3-Rc3
2	EI2-E2-Sh2-Rc3	12	T2-EI2-E3-Sh2-Rc3	22	T3-E3-Sh2-Rc3	32	T3-EI2-E3-Sh3-Rc3	42	T3-E3-Sh3-Rc3
3	EI2-Rc2	13	T2-EI2-Sh2-Rc2	23	T3-E3-Sh3-Rc2	33	T3-EI3-E3-Rc3	43	T3-EI2
4	EI2-Sh2-Rc2	14	T2-EI3-Sh2-Rc2	24	T3-E3-Sh3-Rc3	34	T3-EI3-E3-Sh2-Rc2	44	T3-EI2-E3
5	F2-D2	15	T2-F2-D2	25	T3-EI2	35	T3-EI3-E3-Sh2-Rc3	45	T3-EI2-E3-Rc3
6	F3-D2	16	T2-F3-D2	26	T3-EI2-E3	36	T3-EI3-E3-Sh3-Rc2	46	T3-EI2-E3-Sh3-Rc3
7	Sh2-Rc2	17	T3	27	T3-EI2-E3-Rc2	37	T3-F2-D2	47	T3-EI3-E3-Sh3-Rc3
8	T2	18	T3-E3	28	T3-EI2-E3-Rc3	38	T3-F3-D2	48	T3-EI3
9	T2-E2-Sh2-Rc2	19	T3-E3-Rc2	29	T3-EI2-E3-Sh2-Rc2	39	T3	49	Tc
10	T2-EI2	20	T3-E3-Rc3	30	T3-EI2-E3-Sh2-Rc3	40	T3-E3		

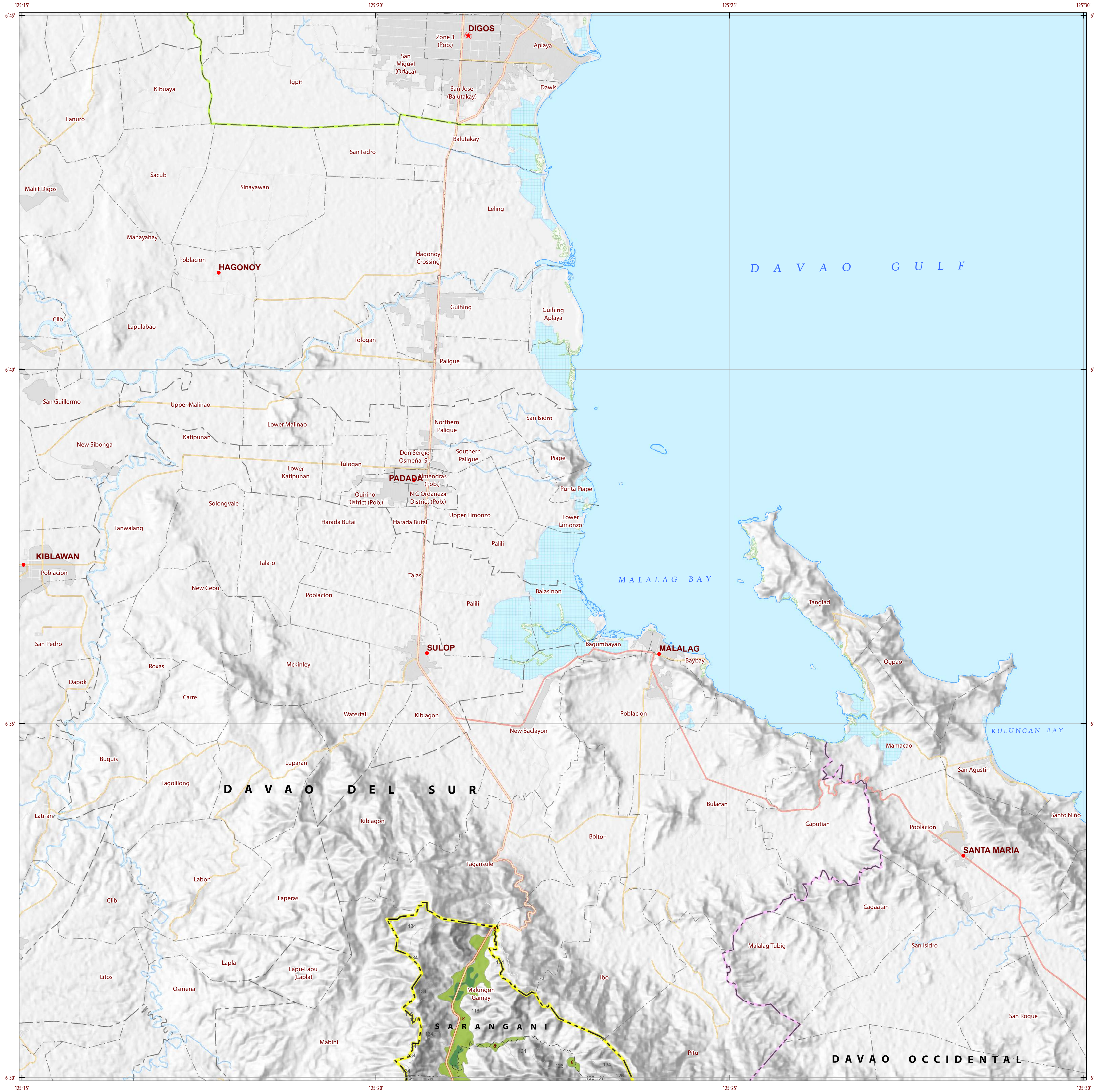
CODE	LANDUSE
4	Corn
81	Coffee
82	Cacao
85	Mango
91	Banana
105	Fruit trees, mixed
116	Coconut
126	Grassland
134	Shrubs, unmanaged



Source: PAGASA 2018, *Climatological Normals (Rainfall)*, Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), accessed 27 July 2018, <<https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>>.

Sarangani is classified as climatic Type IV.





LAND SUITABILITY MAP  
CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY  
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000



Universal Transverse Mercator Zone 51 N, PRS 1992 Datum  
DISCLAIMER : All political boundaries are not authoritative.

LEGEND

SUITABILITY CLASSES

- S1 Highly Suitable** - Land having no significant limitations 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.
- S2 Moderately Suitable** - Land having limitations which in aggregate are moderately severe for sustained application of a given use; the limitations 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.
- S3 Marginally Suitable** - 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.

Not Suitable/ Not Relevant

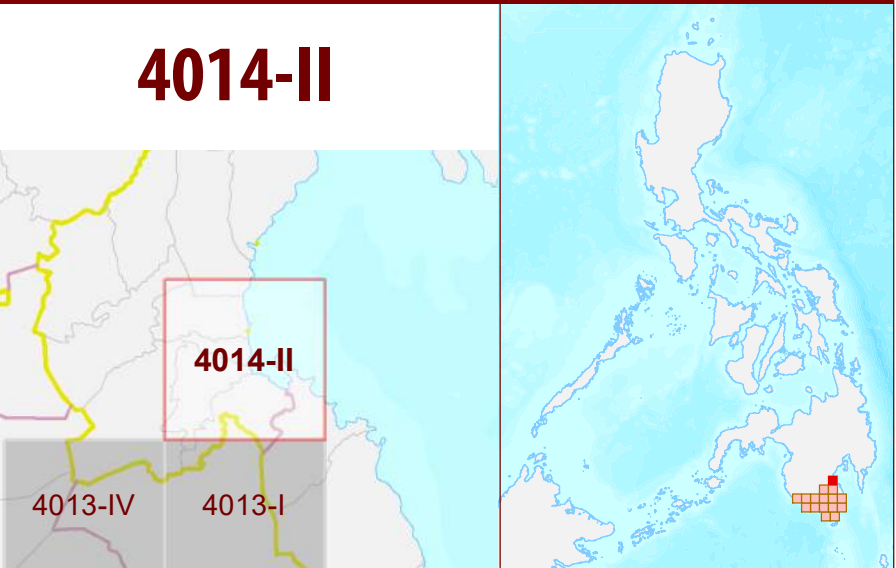
OTHER SIGNS

- NGP Areas  
Cacao  
Land limitation  
Land use

CONVENTIONAL SIGNS

- ROADS**  
Expressway  
Trunk line  
Primary  
Secondary  
Tertiary
- BOUNDARY**  
Region  
Province  
District  
Municipality  
Barangay
- HYDROLOGY**  
Sea / Shoreline  
Lakes / Rivers
- PLACES**  
Capital City / City  
Capital Town / Town
- LAND USE**  
Built-up  
Fishpond  
Mangrove

ADJOINING SHEETS



MISCELLANEOUS INFORMATION

**SOURCES OF INFORMATION** : Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soil Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from the Land Use System (FAO, 2015) and Philippine Rice Information System (PRISM) (IRRI, 2015). Data analysis and compilation through the **Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Major Commodities Project** implemented by BSWM (2017).

Project Leader : BERNARDO B. PASCUA  
GIS and Cartography : IRVIN K. SAMALCA  
Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)  
Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)  
: Department of Agriculture and Fisheries - ARMM, Department of Agriculture Regional Field Office of Region IX, X, XI, XII and XIII (Caraga)  
: Local Government Unit (LGU) of covered provinces and municipalities

Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM). Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.



This publication is licensed under a Creative Commons Attribution 4.0 International License. Unless otherwise noted, copyright and any other intellectual property rights, in this publication is owned by the Philippine Government. This publication should be attributed as:  
BSWM, 2019. Land Suitability Map Series for Cassava of the PROVINCE OF SARANGANI (50,000 Scale) . CC BY NC SA 4.0.

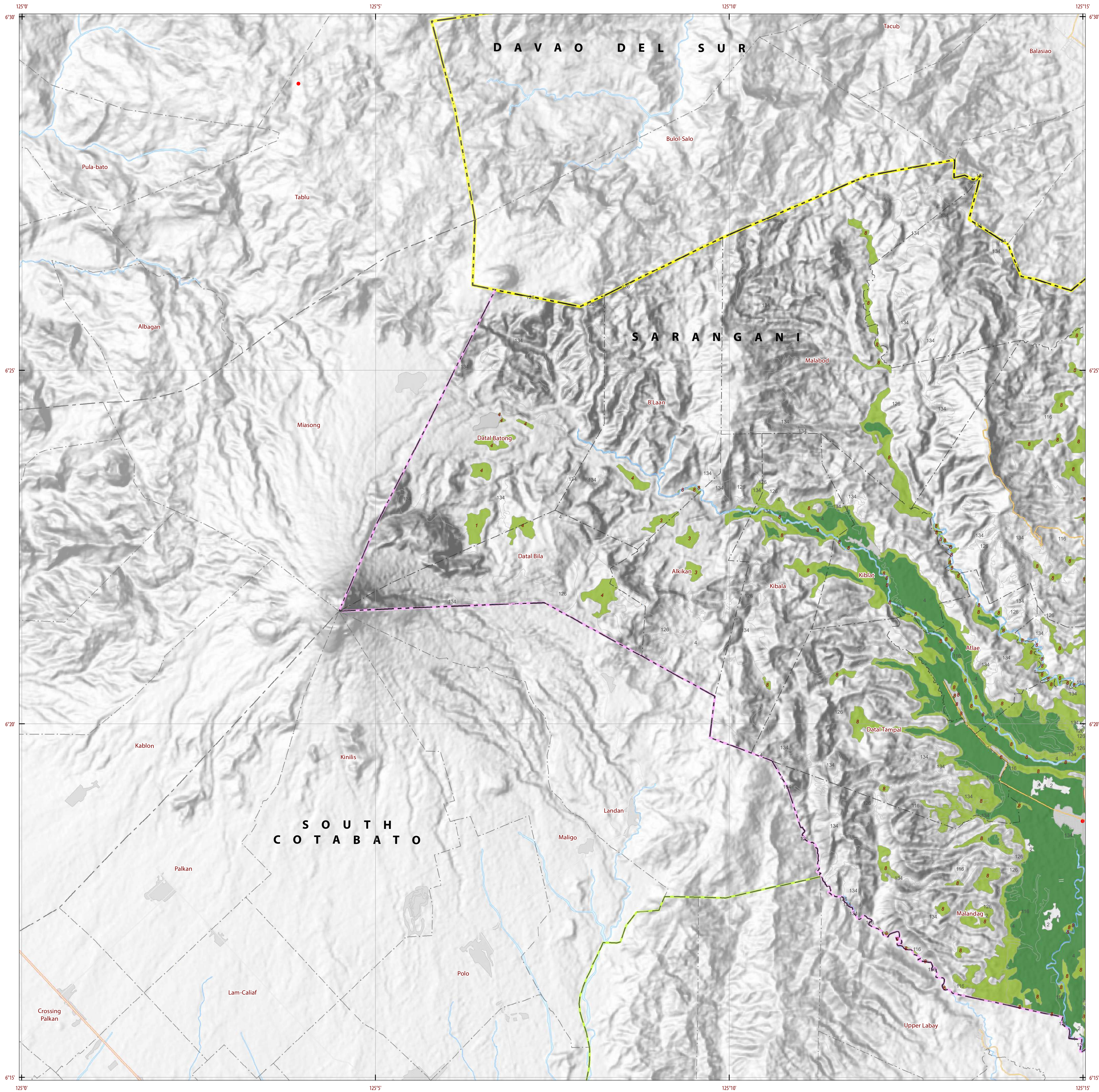
REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF AGRICULTURE  
BUREAU OF SOILS AND WATER MANAGEMENT  
SRDC Bldg., Elliptical Road Cor. Visayas Avenue, Diliiman, Quezon City 1101  
Tel/Fax No. : (+632) 332-9534 E-mail: bswmcenter@da.gov.ph



4013-IV

PROVINCE OF SARANGANI

Mount Matutum



LAND SUITABILITY MAP  
CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY  
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000



Universal Transverse Mercator Zone 51 N, PRS 1992 Datum  
DISCLAIMER : All political boundaries are not authoritative.

LEGEND

SUITABILITY CLASSES

- S1 Highly Suitable** - Land having no significant limitations 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.
- S2 Moderately Suitable** - Land having limitations which in aggregate are moderately severe for sustained application of a given use; the limitations 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.
- S3 Marginally Suitable** - 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.
- Not Suitable/ Not Relevant**

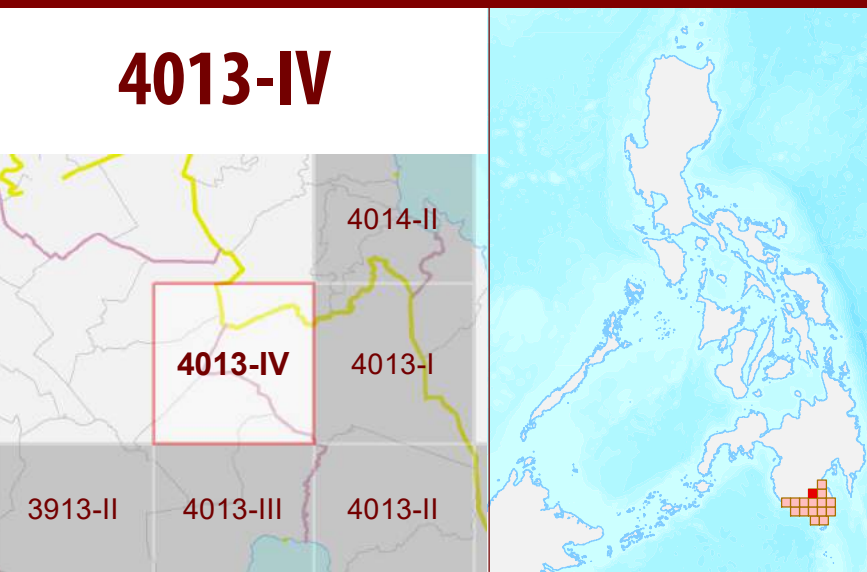
OTHER SIGNS

- NGP Areas  
Cacao  
Land limitation  
Land use

CONVENTIONAL SIGNS

- ROADS**  
Expressway  
Trunk line  
Primary  
Secondary  
Tertiary
- BOUNDARY**  
Region  
Province  
District  
Municipality  
Barangay
- HYDROLOGY**  
Sea / Shoreline  
Lakes / Rivers
- PLACES**  
Capital City / City  
Capital Town / Town
- LAND USE**  
Built-up  
Fishpond  
Mangrove

ADJOINING SHEETS



MISCELLANEOUS INFORMATION

**SOURCES OF INFORMATION** : Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soil Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from the Land Use System (FAO, 2015) and Philippine Rice Information System (PRISM) (IRRI, 2015). Data analysis and compilation through the **Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Major Commodities Project** implemented by BSWM (2017).

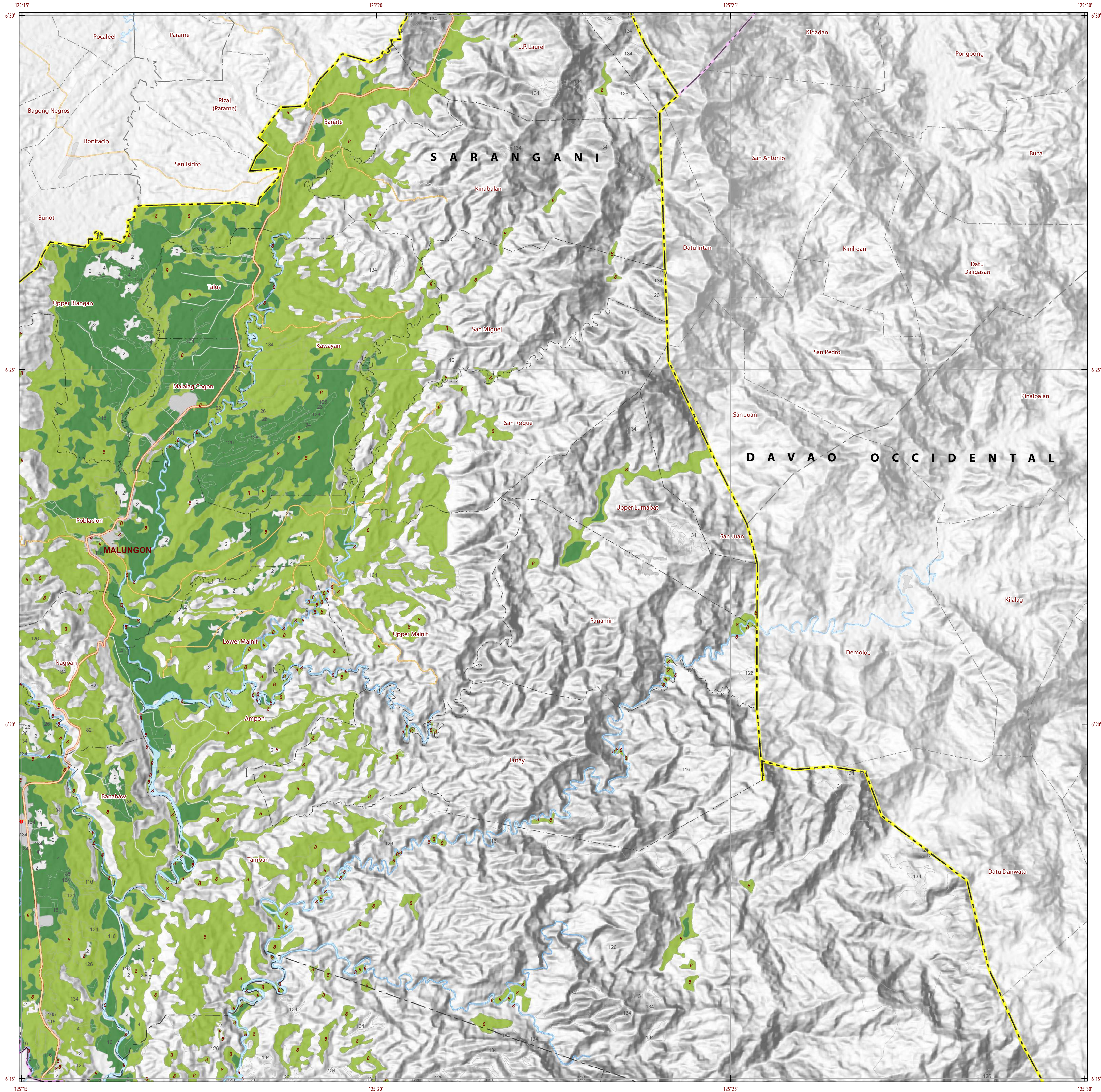
Project Leader : BERNARDO B. PASCUA  
GIS and Cartography : IRVIN K. SAMALCA  
Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)  
Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)  
: Department of Agriculture and Fisheries - ARMM, Department of Agriculture Regional Field Office of Region IX, X, XI, XII and XIII (Caraga)  
: Local Government Unit (LGU) of covered provinces and municipalities




Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM).  
Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.

This publication is licensed under a Creative Commons Attribution 4.0 International License. Unless otherwise noted, copyright and any other intellectual property rights, in this publication is owned by the Philippine Government. This publication should be attributed as :  
BSWM, 2019. *Land Suitability Map Series for Cassava of the PROVINCE OF SARANGANI (50,000 Scale)*. CC BY NC SA 4.0.

REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF AGRICULTURE  
BUREAU OF SOILS AND WATER MANAGEMENT  
SRDC Bldg, Elliptical Road Cor. Visayas Avenue, Diliman, Quezon City 1101  
Tel/Fax No. : (+632) 332-9534 E-mail : bswmclientcenter@da.gov.ph

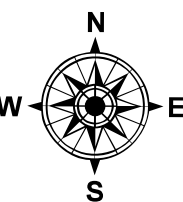








LAND SUITABILITY MAP  
CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY  
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000

  
0 0.5 1 2 3 4 5  
Kilometers

  
0 0.5 1 2 3  
Miles

Universal Transverse Mercator Zone 51 N, PRS 1992 Datum  
DISCLAIMER : All political boundaries are not authoritative.

LEGEND

SUITABILITY CLASSES

S1

**Highly Suitable** - Land having no significant limitations 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.

S2

**Moderately Suitable** - Land having limitations which in aggregate are moderately severe for sustained application of a given use; the limitations 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.

S3

**Marginally Suitable** - 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.

**Not Suitable/ Not Relevant**

OTHER SIGNS

 NGP Areas

 Cacao

 Land limitation

 Land use

CONVENTIONAL SIGNS

**ROADS**

 Expressway

 Trunk line

 Primary

 Secondary

 Tertiary

**BOUNDARY**

 Region

 Province

 District

 Municipality

 Barangay

**HYDROLOGY**

 Sea / Shoreline

 Lakes / Rivers

**PLACES**

 Capital City / City

 Capital Town / Town

**LAND USE**

 Built-up

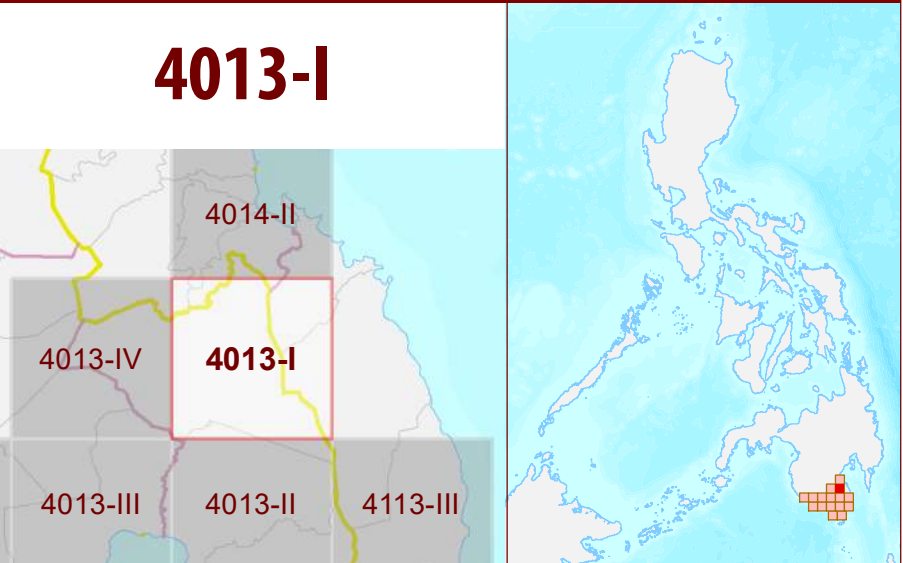
 Fishpond

 Mangrove

ADJOINING SHEETS

INDEX MAP

4013-I



MISCELLANEOUS INFORMATION

**SOURCES OF INFORMATION** : Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soil Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from the Land Use System (FAO, 2015) and Philippine Rice Information System (PRISM) (IRRI, 2015). Data analysis and compilation through the **Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Major Commodities Project** implemented by BSWM (2017).

Project Leader : BERNARDO B. PASCUA

GIS and Cartography : IRVIN K. SAMALCA

Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)

Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)

: Department of Agriculture and Fisheries - ARMM, Department of Agriculture Regional Field Office of Region IX, X, XI, XII and XIII (Caraga)

: Local Government Unit (LGU) of covered provinces and municipalities

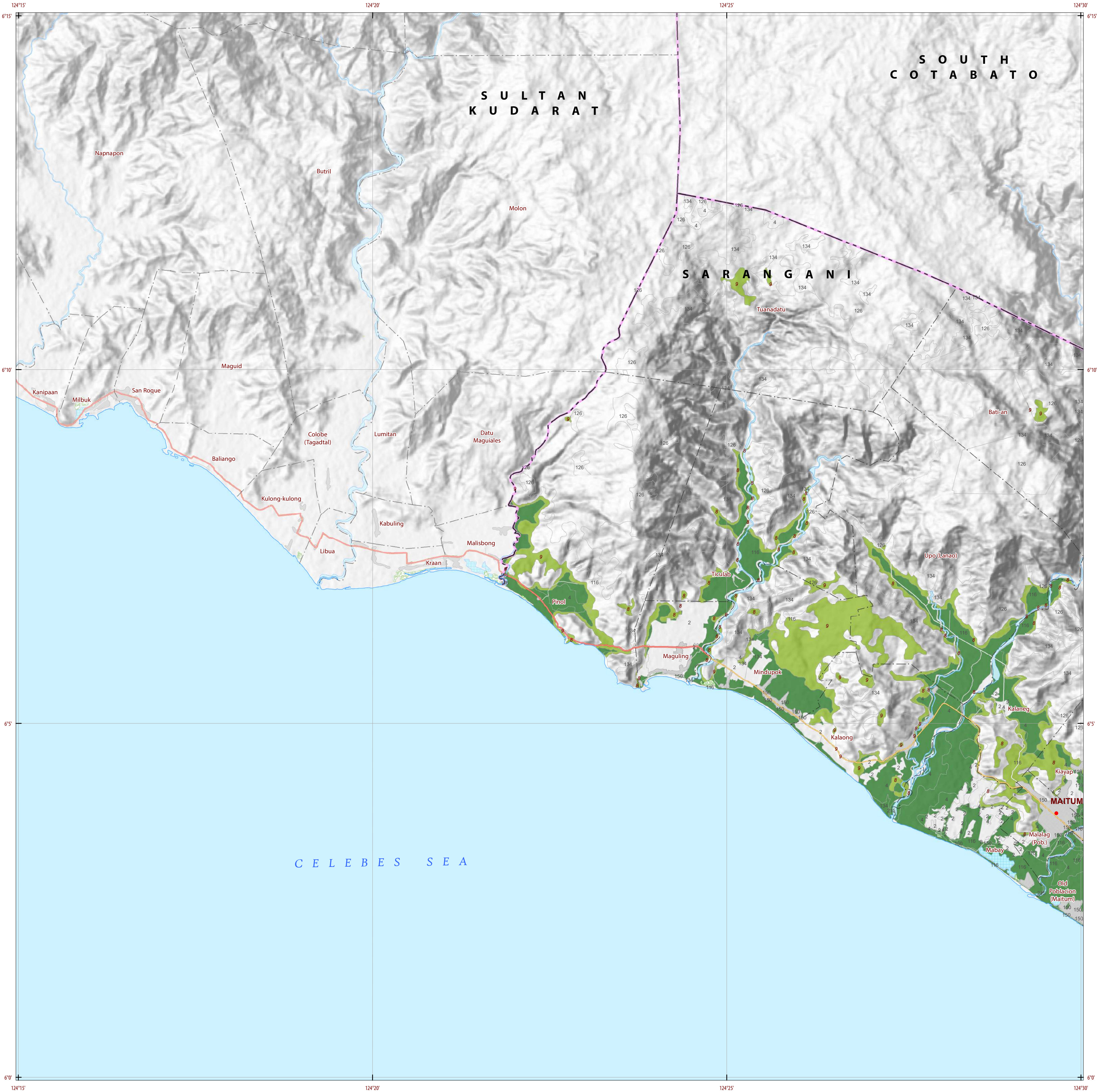
Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM).

Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.

 This publication is licensed under a Creative Commons Attribution 4.0 International License. Unless otherwise noted, copyright and any other intellectual property rights, in this publication is owned by the Philippine Government. This publication should be attributed as:  
BSWM, 2019. *Land Suitability Map Series for Cassava of the PROVINCE OF SARANGANI (50,000 Scale)*. CC BY NC SA 4.0.

**REPUBLIC OF THE PHILIPPINES**  
**DEPARTMENT OF AGRICULTURE**  
**BUREAU OF SOILS AND WATER MANAGEMENT**  
SRDC Bldg, Elliptical Road Cor. Visayas Avenue, Dilliman, Quezon City 1101  
Tel/Fax No.: (+632) 332-9534 E-mail: [bswmcenter@da.gov.ph](mailto:bswmcenter@da.gov.ph)





LAND SUITABILITY MAP  
CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY  
ASSESSMENT OF STRATEGIC PRODUCTION AREAS

SCALE 1 : 50 000

Universal Transverse Mercator Zone 51 N, PRS 1992 Datum  
DISCLAIMER : All political boundaries are not authoritative.

LEGEND

SUITABILITY CLASSES

S1

Highly Suitable - Land having no significant limitations 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.

S2

Moderately Suitable - Land having limitations which in aggregate are moderately severe for sustained application of a given use; the limitations 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.

S3

Marginally Suitable - 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.

Not Suitable/ Not Relevant

OTHER SIGNS

NGP Areas

Cacao

Land limitation

Land use

CONVENTIONAL SIGNS

ROADS

Expressway

Trunk line

Primary

Secondary

Tertiary

BOUNDARY

Region

Province

District

Municipality

Barangay

HYDROLOGY

Sea / Shoreline

Lakes / Rivers

PLACES

Capital City / City

Capital Town / Town

LAND USE

Built-up

Fishpond

Mangrove

ADJOINING SHEETS

3813-II

3813-III

3912-IV

INDEX MAP

MISCELLANEOUS INFORMATION

SOURCES OF INFORMATION : Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soils Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from the Land Use System (FAO, 2015) and Philippine Rice Information System (PRISM) (IRRI, 2015). Data analysis and compilation through the Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Major Commodities Project implemented by BSWM (2017).

Project Leader : BERNARDO B. PASCUA

GIS and Cartography : IRVIN K. SAMALCA

Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)

Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)

: Department of Agriculture and Fisheries - ARMM, Department of Agriculture Regional Field Office of Region IX, X, XI, XII and XIII (Caraga)

: Local Government Unit (LGU) of covered provinces and municipalities

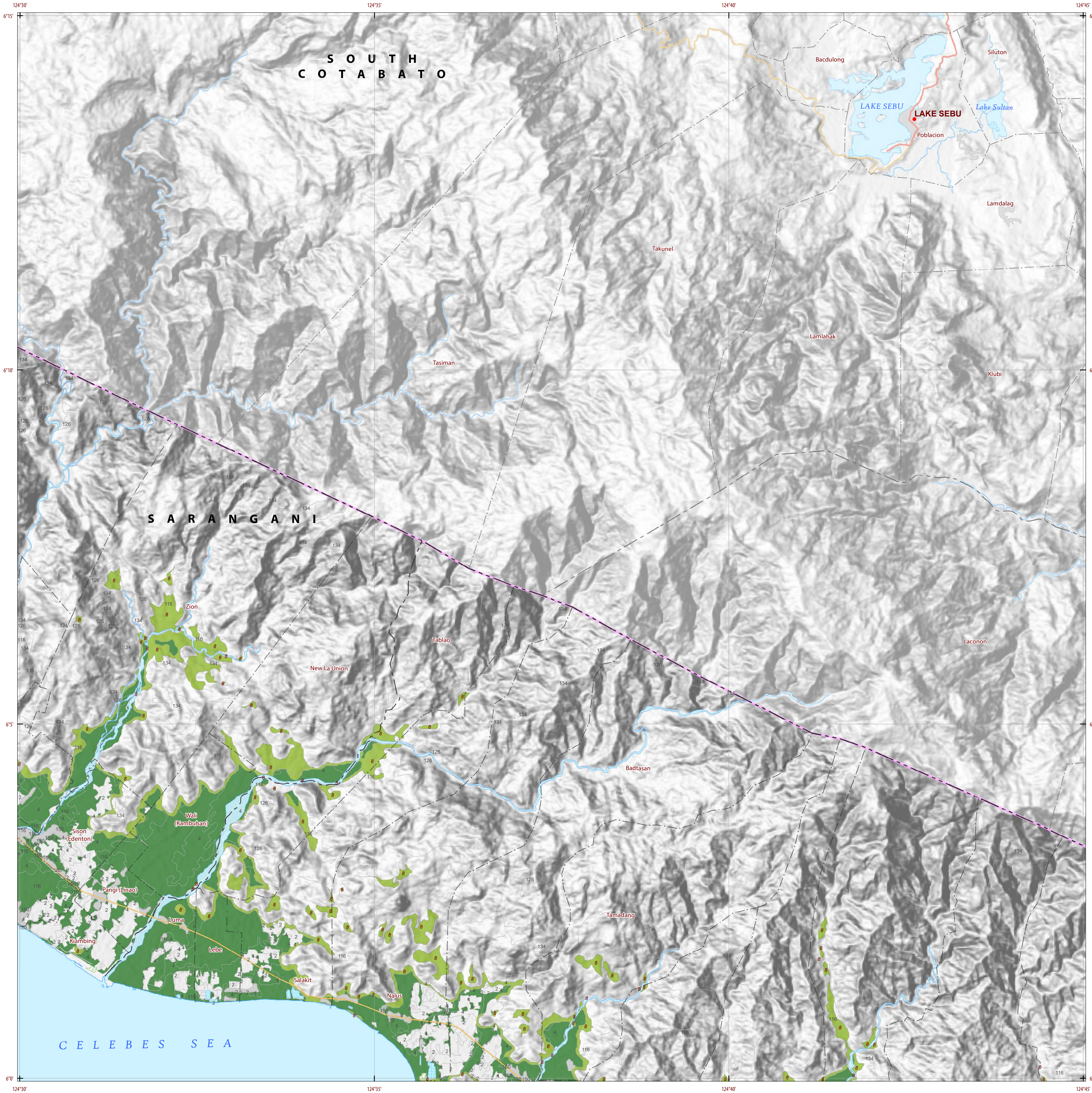
Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM).

Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.

This publication is licensed under a Creative Commons Attribution 4.0 International License. Unless otherwise noted, copyright and any other intellectual property rights, in this publication is owned by the Philippine Government. This publication should be attributed as : BSWM, 2019. Land Suitability Map Series for Cassava of the PROVINCE OF SARANGANI (50,000 Scale) . CC BY NC SA 4.0.

REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF AGRICULTURE  
BUREAU OF SOILS AND WATER MANAGEMENT  
SRDC Bldg., Elliptical Road Cor. Visayas Avenue, Diliman, Quezon City 1101  
Tel/Fax No. : (+632) 332-9534 E-mail : bswmclientcenter@yahoo.com





## LAND SUITABILITY MAP CASSAVA

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

**SCALE 1 : 50 000**

Universal Transverse Mercator Zone 51 N, PRS 1992 Datum  
DISCLAIMER : All political boundaries are not authoritative.

**LEGEND**

**SUITABILITY CLASSES**

- S1 Highly Suitable** - Land having no significant limitations 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.
- S2 Moderately Suitable** - Land having limitations which in aggregate are moderately severe for sustained application of a given use; the limitations 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.
- S3 Marginally Suitable** - 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.

**Not Suitable/ Not Relevant**

**OTHER SIGNS**

- NGP Areas
- Cacao
- Land limitation
- Land use

**CONVENTIONAL SIGNS**

<b>ROADS</b>	<b>BOUNDARY</b>	<b>HYDROLOGY</b>
Expressway	Region	Sea / Shoreline
Trunk line	Province	Lakes / Rivers
Primary	District	<b>PLACES</b>
Secondary	Municipality	Capital City / City
Tertiary	Barangay	Capital Town / Town

**LAND USE**

- Built-up
- Fishpond
- Mangrove

**ADJOINING SHEETS**

**3913-III**

**INDEX MAP**

**MISCELLANEOUS INFORMATION**

**SOURCES OF INFORMATION** : Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soils Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from the Land Use System (FAO, 2015) and Philippine Rice Information System (PRISM) (IRRI, 2015). Data analysis and compilation through the **Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Major Commodities Project** implemented by BSWM (2017).

Project Leader : BERNARDO B. PASCUA  
GIS and Cartography : IRVIN K. SAMALCA  
Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)  
Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)  
: Department of Agriculture and Fisheries - ARMM, Department of Agriculture Regional Field Office of Region IX, X, XI, XII and XIII (Caraga)  
: Local Government Unit (LGU) of covered provinces and municipalities

Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM).  
Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.

This publication is licensed under a Creative Commons Attribution 4.0 International License. Unless otherwise noted, copyright and any other intellectual property rights, in this publication is owned by the Philippine Government. This publication should be attributed as :  
BSWM, 2019. *Land Suitability Map Series for Cassava of the PROVINCE OF SARANGANI (50,000 Scale)* . CC BY NC SA 4.0.

**REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF AGRICULTURE  
BUREAU OF SOILS AND WATER MANAGEMENT**  
SRDC Bldg, Elliptical Road Cor. Visayas Avenue, Diliman, Quezon City 1101  
Tel/Fax No. : (+632) 332-9534 E-mail: bswmcenter@da.gov.ph

PROVINCE OF SARANGANI

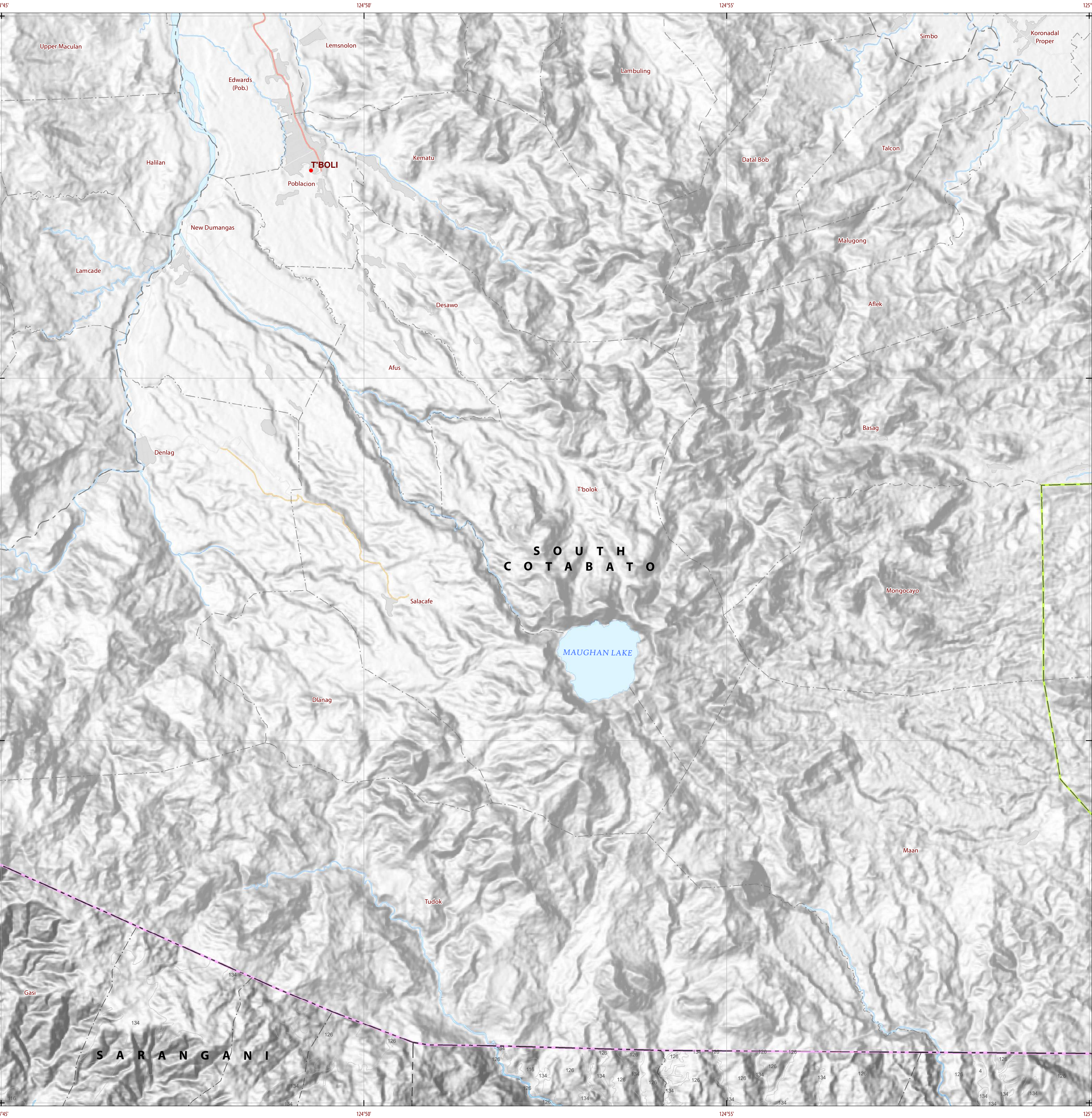
Sheet 5 of 16 Sheet No. 3913-III



3913-II

PROVINCE OF SARANGANI

Parker Volcano

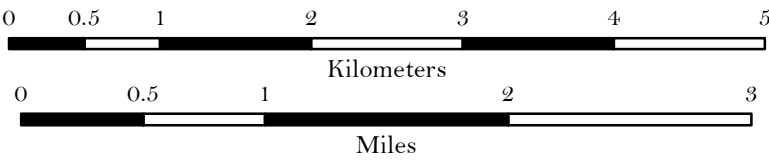


LAND SUITABILITY MAP  
CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY  
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000



Universal Transverse Mercator Zone 51 N, PRS 1992 Datum  
DISCLAIMER : All political boundaries are not authoritative.

LEGEND

SUITABILITY CLASSES

- S1 Highly Suitable** - Land having no significant limitations 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.
- S2 Moderately Suitable** - Land having limitations which in aggregate are moderately severe for sustained application of a given use; the limitations 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.
- S3 Marginally Suitable** - 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.

Not Suitable/ Not Relevant

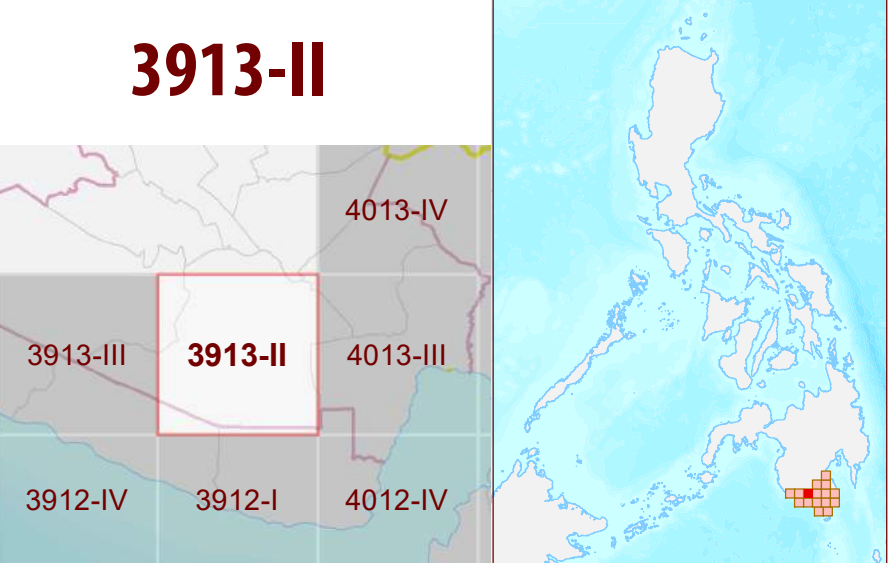
OTHER SIGNS

- NGP Areas
- Cacao
- Land limitation
- Land use

CONVENTIONAL SIGNS

- ROADS**
  - Expressway
  - Trunk line
  - Primary
  - Secondary
  - Tertiary
- BOUNDARY**
  - Region
  - Province
  - District
  - Municipality
  - Barangay
- HYDROLOGY**
  - Sea / Shoreline
  - Lakes / Rivers
- PLACES**
  - Capital City / City
  - Capital Town / Town
- LAND USE**
  - Built-up
  - Fishpond
  - Mangrove

ADJOINING SHEETS



MISCELLANEOUS INFORMATION

**SOURCES OF INFORMATION** : Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soils Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from the Land Use System (FAO, 2015) and Philippine Rice Information System (PRISM) (IRRI, 2015). Data analysis and compilation through the **Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Major Commodities Project** implemented by BSWM (2017).

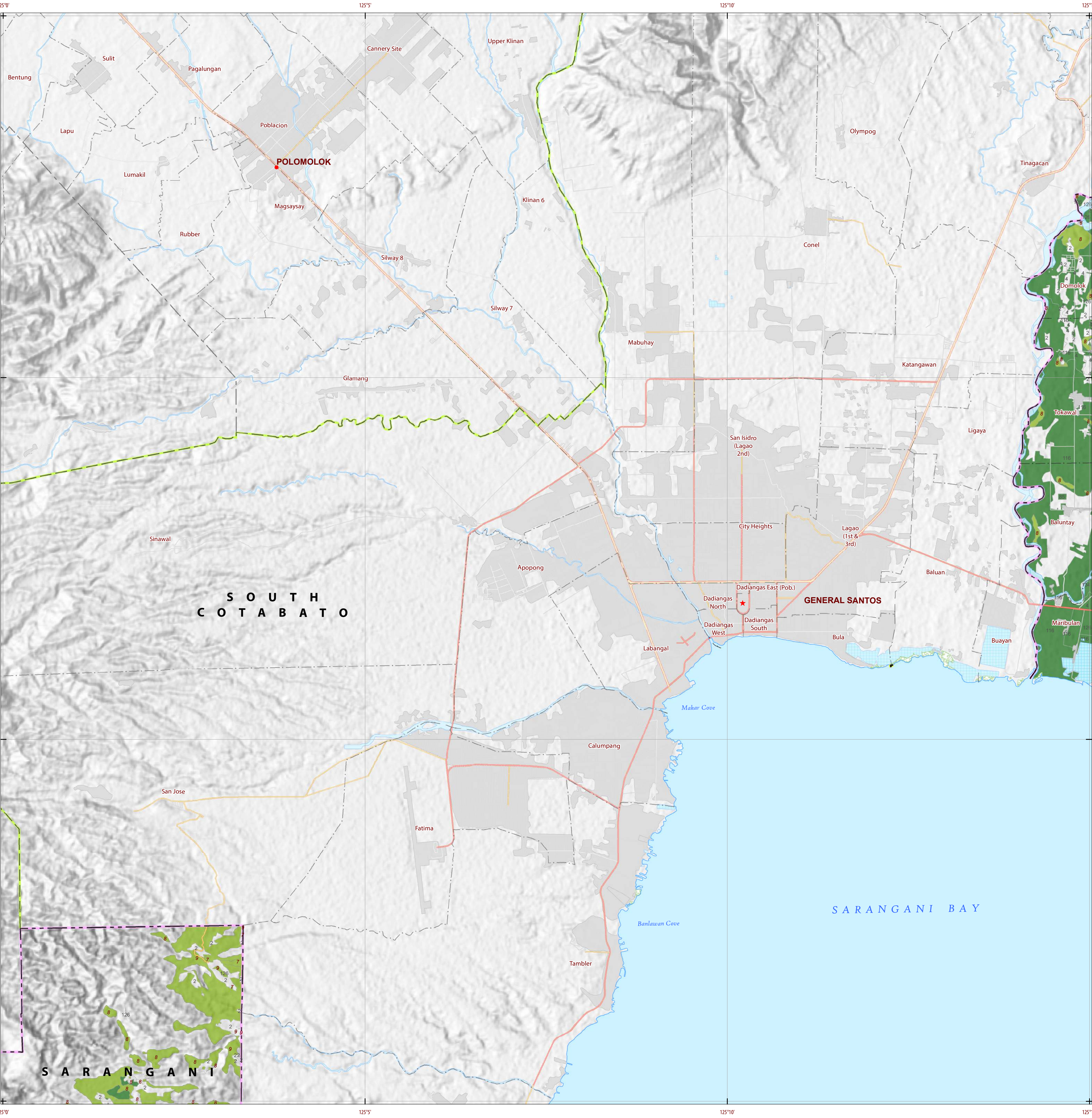
Project Leader : BERNARDO B. PASCUA  
GIS and Cartography : IRVIN K. SAMALCA  
Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)  
Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)  
: Department of Agriculture and Fisheries - ARMM, Department of Agriculture Regional Field Office of Region IX, X, XI, XII and XIII (Caraga)  
: Local Government Unit (LGU) of covered provinces and municipalities

Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM).  
Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.

This publication is licensed under a Creative Commons Attribution 4.0 International License. Unless otherwise noted, copyright and any other intellectual property rights, in this publication is owned by the Philippine Government. This publication should be attributed as :  
BSWM, 2019. *Land Suitability Map Series for Cassava of the PROVINCE OF SARANGANI (50,000 Scale)* . CC BY NC SA 4.0.

REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF AGRICULTURE  
BUREAU OF SOILS AND WATER MANAGEMENT  
SRDC Bldg, Elliptical Road Cor. Visayas Avenue, Diliman, Quezon City 1101  
Tel/Fax No. : (+632) 332-9534 E-mail : bswmcenter@da.gov.ph





## LAND SUITABILITY MAP CASSAVA

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



SCALE 1 : 50 000



Universal Transverse Mercator Zone 51 N, PRS 1992 Datum  
DISCLAIMER : All political boundaries are not authoritative.

#### LEGEND

##### SUITABILITY CLASSES

- S1 Highly Suitable** - Land having no significant limitations 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.
- S2 Moderately Suitable** - Land having limitations which in aggregate are moderately severe for sustained application of a given use; the limitations 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.
- S3 Marginally Suitable** - 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.

Not Suitable/ Not Relevant

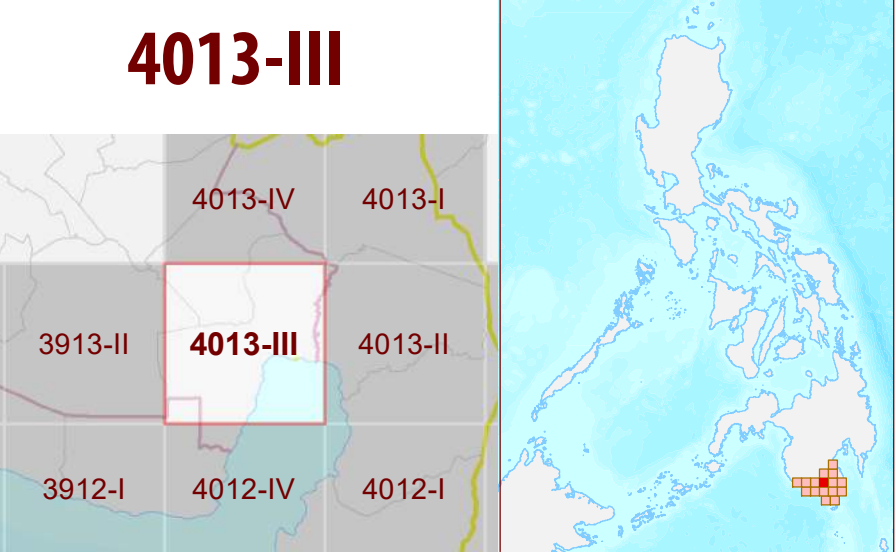
##### OTHER SIGNS

- NGP Areas
- Cacao
- Land limitation
- Land use

#### CONVENTIONAL SIGNS

- ROADS**
  - Expressway
  - Trunk line
  - Primary
  - Secondary
  - Tertiary
- BOUNDARY**
  - Region
  - Province
  - District
  - Municipality
  - Barangay
- HYDROLOGY**
  - Sea / Shoreline
  - Lakes / Rivers
- PLACES**
  - Capital City / City
  - Capital Town / Town
- LAND USE**
  - Built-up
  - Fishpond
  - Mangrove

#### ADJOINING SHEETS



#### MISCELLANEOUS INFORMATION

**SOURCES OF INFORMATION** : Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soils Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from the Land Use System (FAO, 2015) and Philippine Rice Information System (PRISM) (IRRI, 2015). Data analysis and compilation through the **Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Major Commodities Project** implemented by BSWM (2017).

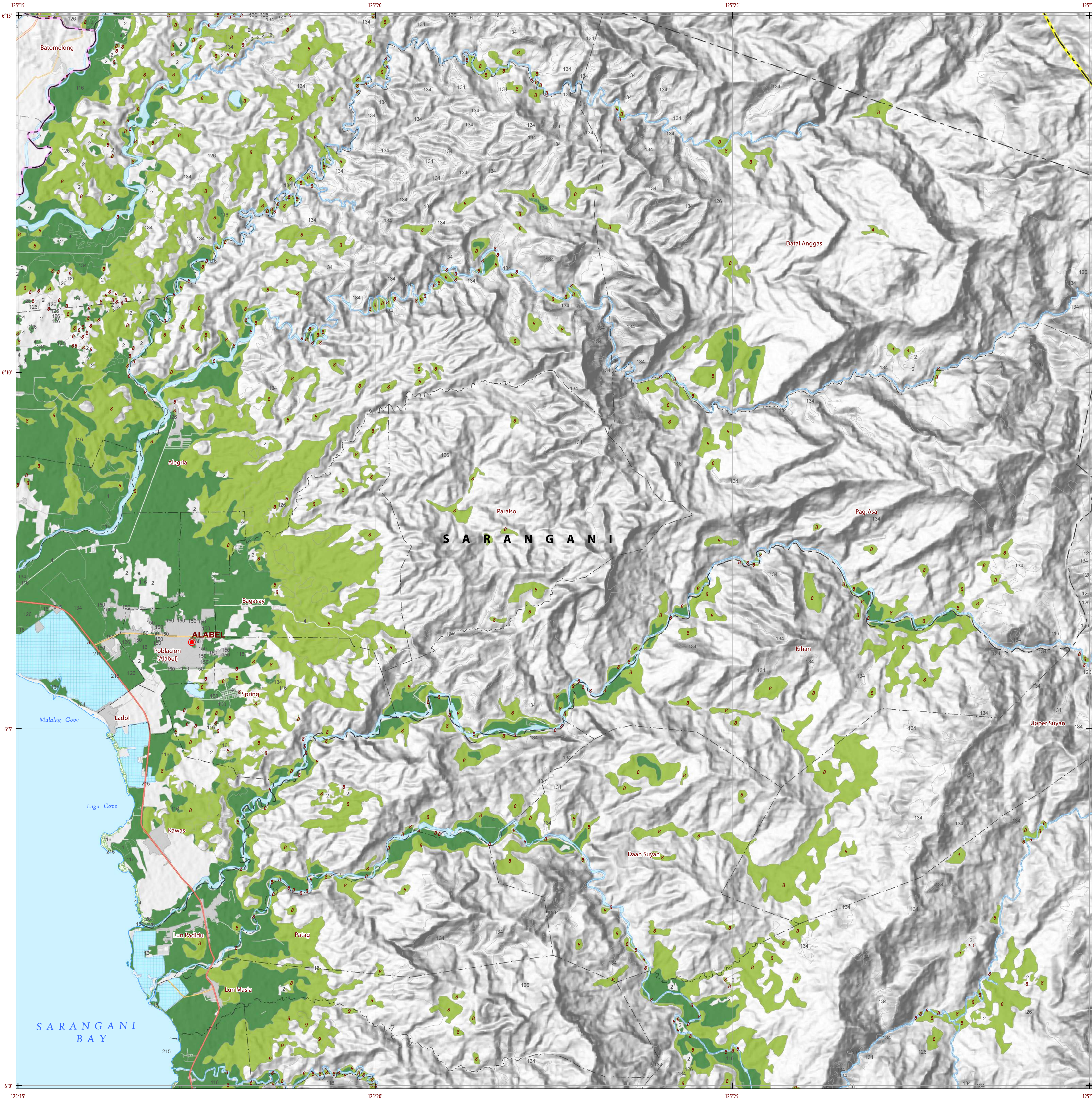
Project Leader : BERNARDO B. PASCUA  
GIS and Cartography : IRVIN K. SAMALCA  
Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)  
Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)  
: Department of Agriculture and Fisheries - ARMM, Department of Agriculture Regional Field Office of Region IX, X, XI, XII and XIII (Caraga)  
: Local Government Unit (LGU) of covered provinces and municipalities

Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM). Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.

This publication is licensed under a Creative Commons Attribution 4.0 International License. Unless otherwise noted, copyright and any other intellectual property rights, in this publication is owned by the Philippine Government. This publication should be attributed as : BSWM, 2019. *Land Suitability Map Series for Cassava of the PROVINCE OF SARANGANI (50,000 Scale)*. CC BY-NC-SA 4.0.

REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF AGRICULTURE  
BUREAU OF SOILS AND WATER MANAGEMENT  
SRDC Bldg., Elliptical Road Cor. Visayas Avenue, Diliman, Quezon City 1101  
Tel/Fax No. : (+632) 332-9534 E-mail : bswmcenter@da.gov.ph





LAND SUITABILITY MAP  
CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY  
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000



Universal Transverse Mercator Zone 51 N, PRS 1992 Datum  
DISCLAIMER : All political boundaries are not authoritative.

LEGEND

SUITABILITY CLASSES

- S1 Highly Suitable** - Land having no significant limitations 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.
- S2 Moderately Suitable** - Land having limitations which in aggregate are moderately severe for sustained application of a given use; the limitations 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.
- S3 Marginally Suitable** - 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.

Not Suitable/ Not Relevant

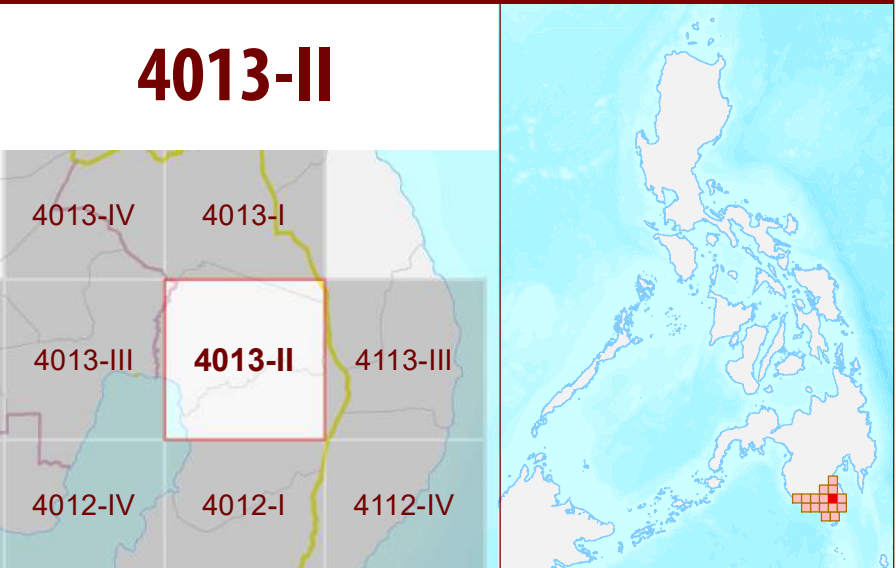
OTHER SIGNS

- NGP Areas
- Cacao
- Land limitation
- Land use

CONVENTIONAL SIGNS

- ROADS**
  - Expressway
  - Trunk line
  - Primary
  - Secondary
  - Tertiary
- BOUNDARY**
  - Region
  - Province
  - District
  - Municipality
  - Barangay
- HYDROLOGY**
  - Sea / Shoreline
  - Lakes / Rivers
- PLACES**
  - Capital City / City
  - Capital Town / Town
- LAND USE**
  - Built-up
  - Fishpond
  - Mangrove

ADJOINING SHEETS



MISCELLANEOUS INFORMATION

**SOURCES OF INFORMATION** : Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soil Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from the Land Use System (FAO, 2015) and Philippine Rice Information System (PRISM) (IRRI, 2015). Data analysis and compilation through the **Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Major Commodities Project** implemented by BSWM (2017).

Project Leader : BERNARDO B. PASCUA  
GIS and Cartography : IRVIN K. SAMALCA

Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)  
Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)  
: Department of Agriculture and Fisheries - ARMM, Department of Agriculture Regional Field Office of Region IX, X, XI, XII and XIII (Caraga)  
: Local Government Unit (LGU) of covered provinces and municipalities

Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM).  
Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.

This publication is licensed under a Creative Commons Attribution 4.0 International License. Unless otherwise noted, copyright and any other intellectual property rights, in this publication is owned by the Philippine Government. This publication should be attributed as:  
BSWM, 2019. Land Suitability Map Series for Cassava of the PROVINCE OF SARANGANI (50,000 Scale). CC BY NC SA 4.0.

REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF AGRICULTURE  
BUREAU OF SOILS AND WATER MANAGEMENT  
SRDC Bldg, Elliptical Road Cor. Visayas Avenue, Diliman, Quezon City 1101  
Tel/Fax No. : (+632) 332-9534 E-mail: bswmcenter@da.gov.ph





LAND SUITABILITY MAP  
CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY  
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000



Universal Transverse Mercator Zone 51 N, PRS 1992 Datum  
DISCLAIMER : All political boundaries are not authoritative.

LEGEND

SUITABILITY CLASSES

- S1 Highly Suitable** - Land having no significant limitations 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.
- S2 Moderately Suitable** - Land having limitations which in aggregate are moderately severe for sustained application of a given use; the limitations 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.
- S3 Marginally Suitable** - 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.

Not Suitable/ Not Relevant

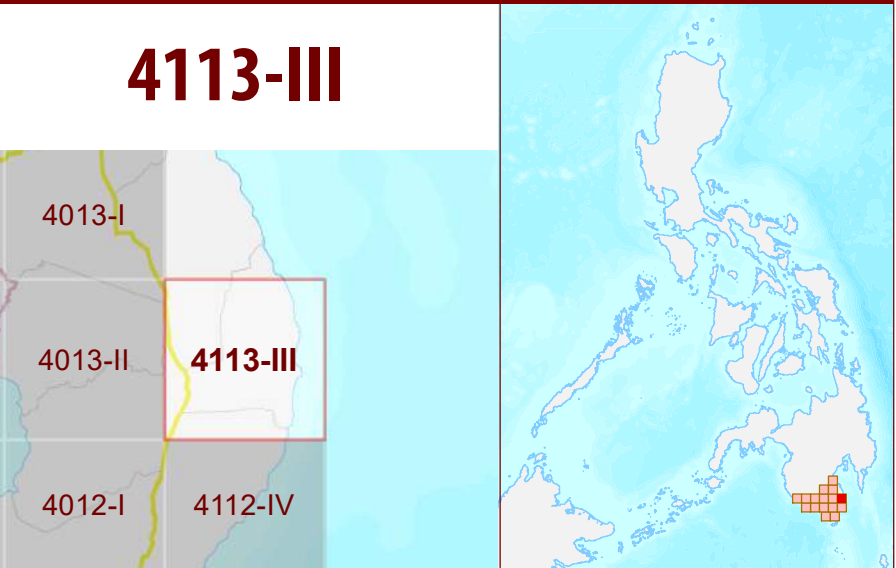
OTHER SIGNS

- NGP Areas
- Cacao
- Land limitation
- Land use

CONVENTIONAL SIGNS

- ROADS**
  - Expressway
  - Trunk line
  - Primary
  - Secondary
  - Tertiary
- BOUNDARY**
  - Region
  - Province
  - District
  - Municipality
  - Barangay
- HYDROLOGY**
  - Sea / Shoreline
  - Lakes / Rivers
- PLACES**
  - Capital City / City
  - Capital Town / Town
- LAND USE**
  - Built-up
  - Fishpond
  - Mangrove

ADJOINING SHEETS



MISCELLANEOUS INFORMATION

**SOURCES OF INFORMATION** : Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soils Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from the Land Use System (FAO, 2015) and Philippine Rice Information System (PRISM) (IRRI, 2015). Data analysis and compilation through the **Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Major Commodities Project** implemented by BSWM (2017).

Project Leader : BERNARDO B. PASCUA  
GIS and Cartography : IRVIN K. SAMALCA  
Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)  
Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)  
: Department of Agriculture and Fisheries - ARMM, Department of Agriculture Regional Field Office of Region IX, X, XI, XII and XIII (Caraga)  
: Local Government Unit (LGU) of covered provinces and municipalities

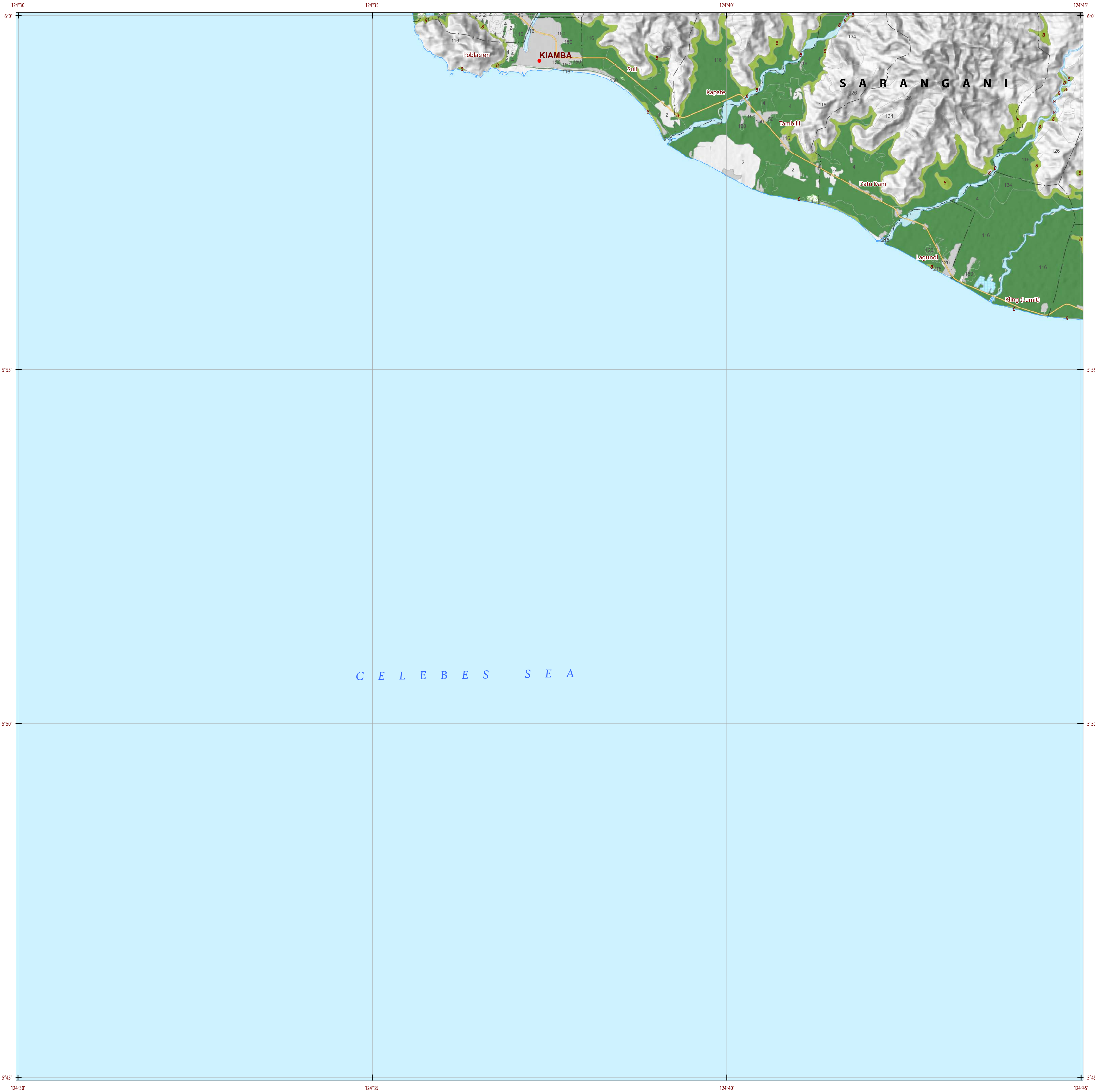
Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM).  
Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.



This publication is licensed under a Creative Commons Attribution 4.0 International License. Unless otherwise noted, copyright and any other intellectual property rights, in this publication is owned by the Philippine Government. This publication should be attributed as :  
BSWM, 2019. *Land Suitability Map Series for Cassava of the PROVINCE OF SARANGANI* (50,000 Scale) . CC BY NC SA 4.0.

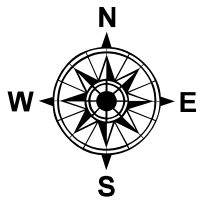
REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF AGRICULTURE  
BUREAU OF SOILS AND WATER MANAGEMENT  
SRDC Bldg, Elliptical Road Cor. Visayas Avenue, Diliman, Quezon City 1101  
Tel/Fax No. : (+632) 332-9534 E-mail: bswmcenter@da.gov.ph





LAND SUITABILITY MAP  
CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY  
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000



Universal Transverse Mercator Zone 51 N, PRS 1992 Datum  
DISCLAIMER : All political boundaries are not authoritative.

LEGEND

SUITABILITY CLASSES

- S1 Highly Suitable** - Land having no significant limitations 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.
- S2 Moderately Suitable** - Land having limitations which in aggregate are moderately severe for sustained application of a given use; the limitations 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.
- S3 Marginally Suitable** - 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.

**Not Suitable/ Not Relevant**

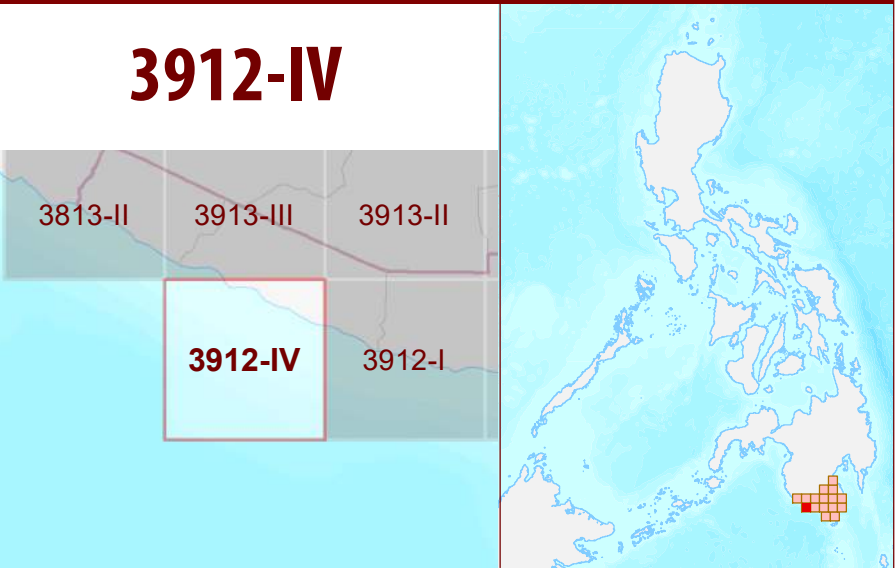
OTHER SIGNS

- NGP Areas
- Cacao
- Land limitation
- Land use

CONVENTIONAL SIGNS

- ROADS**
  - Expressway
  - Trunk line
  - Primary
  - Secondary
  - Tertiary
- BOUNDARY**
  - Region
  - Province
  - District
  - Municipality
  - Barangay
- HYDROLOGY**
  - Sea / Shoreline
  - Lakes / Rivers
- PLACES**
  - Capital City / City
  - Capital Town / Town
- LAND USE**
  - Built-up
  - Fishpond
  - Mangrove

ADJOINING SHEETS



MISCELLANEOUS INFORMATION

**SOURCES OF INFORMATION** : Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soils Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from the Land Use System (FAO, 2015) and Philippine Rice Information System (PRISM) (IRRI, 2015). Data analysis and compilation through the **Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Major Commodities Project** implemented by BSWM (2017).

Project Leader : BERNARDO B. PASCUA  
GIS and Cartography : IRVIN K. SAMALCA  
Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)  
Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)  
: Department of Agriculture and Fisheries - ARMM, Department of Agriculture Regional Field Office of Region IX, X, XI, XII and XIII (Caraga)  
: Local Government Unit (LGU) of covered provinces and municipalities




Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM).  
Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.

This publication is licensed under a Creative Commons Attribution 4.0 International License. Unless otherwise noted, copyright and any other intellectual property rights, in this publication is owned by the Philippine Government. This publication should be attributed as :  
BSWM, 2019. *Land Suitability Map Series for Cassava of the PROVINCE OF SARANGANI (50,000 Scale)*. CC BY NC SA 4.0.

REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF AGRICULTURE  
BUREAU OF SOILS AND WATER MANAGEMENT  
SRDC Bldg., Elliptical Road Cor. Visayas Avenue, Diliman, Quezon City 1101  
Tel/Fax No.: (+632) 332-9534 E-mail: bswmclientcenter@yahoo.com

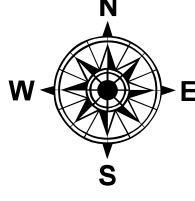





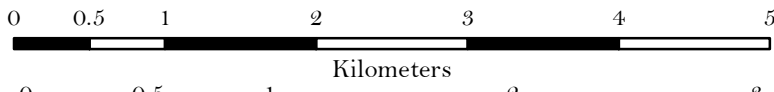


LAND SUITABILITY MAP  
CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY  
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000



Universal Transverse Mercator Zone 51 N, PRS 1992 Datum  
DISCLAIMER : All political boundaries are not authoritative.

SUITABILITY CLASSES

S1

**Highly Suitable** - Land having no significant limitations 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.

S2


**Moderately Suitable** - Land having limitations which in aggregate are moderately severe for sustained application of a given use; the limitations 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.


S3


**Marginally Suitable** - 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.


**Not Suitable/ Not Relevant**

OTHER SIGNS

 NGP Areas

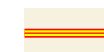
 Cacao

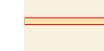
 Land limitation

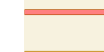
 Land use

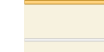
CONVENTIONAL SIGNS


**ROADS**

 Expressway


 Trunk line


 Primary


 Secondary

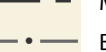
 Tertiary


**BOUNDARY**

 Region


 Province


 District

 Municipality


 Barangay


**HYDROLOGY**

 Sea / Shoreline


 Lakes / Rivers


**PLACES**


 Capital City / City

 Capital Town / Town

**LAND USE**

 Built-up

 Fishpond

 Mangrove

ADJOINING SHEETS

3912-I



MISCELLANEOUS INFORMATION

**SOURCES OF INFORMATION** : Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soils Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from the Land Use System (FAO, 2015) and Philippine Rice Information System (PRISM) (IRRI, 2015). Data analysis and compilation through the **Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Major Commodities Project** implemented by BSWM (2017).

Project Leader : BERNARDO B. PASCUA  
GIS and Cartography : IRVIN K. SAMALCA

Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)  
Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)  
: Department of Agriculture and Fisheries - ARMM, Department of Agriculture Regional Field Office of Region IX, X, XI and XIII (Caraga)  
: Local Government Unit (LGU) of covered provinces and municipalities

Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM).  
Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.

 This publication is licensed under a Creative Commons Attribution 4.0 International License. Unless otherwise noted, copyright and any other intellectual property rights, in this publication is owned by the Philippine Government. This publication should be attributed as :  
BSWM, 2019. *Land Suitability Map Series for Cassava of the PROVINCE OF SARANGANI (50,000 Scale)* . CC BY-NC-SA 4.0.

REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF AGRICULTURE  
BUREAU OF SOILS AND WATER MANAGEMENT  
SRDC Bldg., Elliptical Road Cor. Visayas Avenue, Diliman, Quezon City 1101  
Tel/Fax No. : (+632) 332-9534 E-mail: [bswmcenter@da.gov.ph](mailto:bswmcenter@da.gov.ph)

PROVINCE OF SARANGANI

Sheet 11 of 16

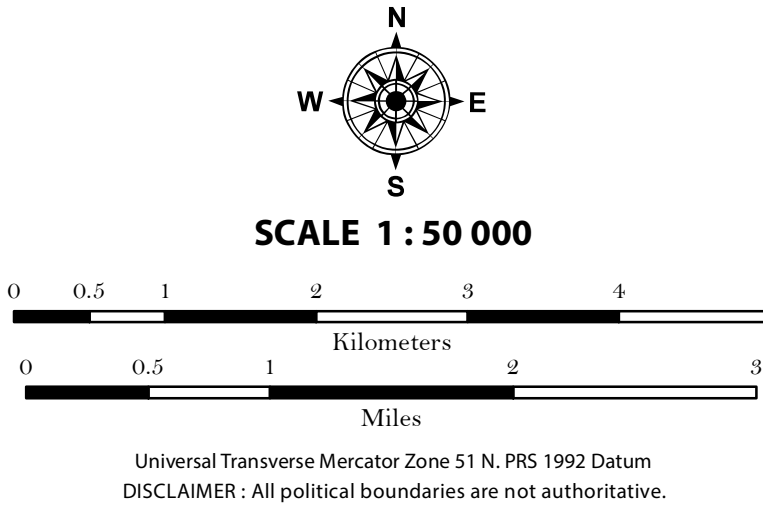
Sheet No. 3912-I





LAND SUITABILITY MAP  
CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY  
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



**LEGEND**

**SUITABILITY CLASSES**

- S1 Highly Suitable** - Land having no significant limitations 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.
- S2 Moderately Suitable** - Land having limitations which in aggregate are moderately severe for sustained application of a given use; the limitations 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.
- S3 Marginally Suitable** - 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.

**Not Suitable/ Not Relevant**

**OTHER SIGNS**

- NGP Areas
- Cacao
- Land limitation
- Land use

**CONVENTIONAL SIGNS**

ROADS	BOUNDARY	HYDROLOGY
Expressway	Region	Sea / Shoreline
Trunk line	Province	Lakes / Rivers
Primary	District	
Secondary	Municipality	<b>PLACES</b>
Tertiary	Barangay	Capital City / City
		Capital Town / Town

**LAND USE**

- Built-up
- Fishpond
- Mangrove

**ADJOINING SHEETS**

**4012-IV**

3913-II 4013-III 4013-II

3912-I 4012-I

4012-III 4012-II

**INDEX MAP**

**MISCELLANEOUS INFORMATION**

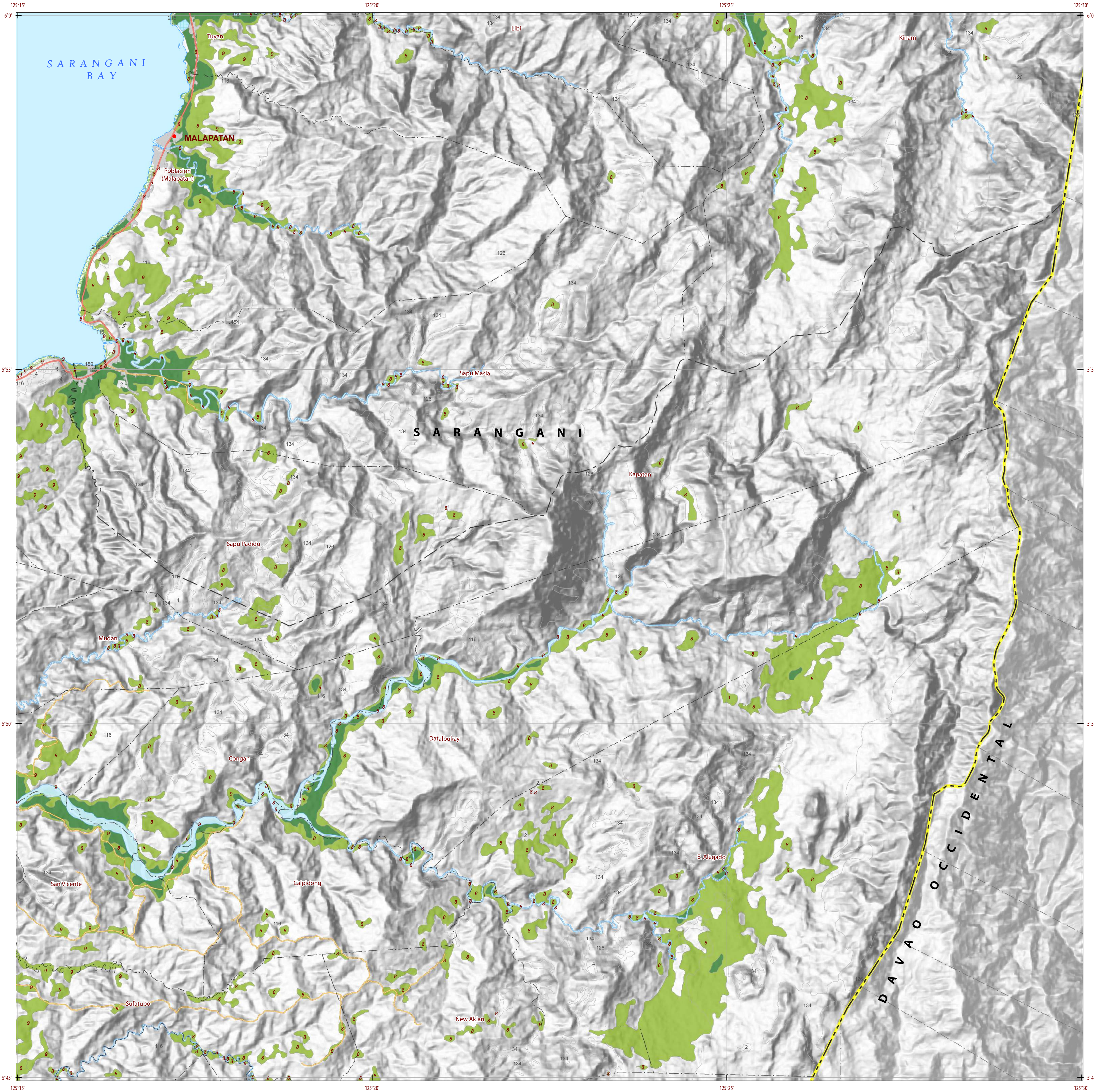
**SOURCES OF INFORMATION** : Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soils Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from the Land Use System (FAO, 2015) and Philippine Rice Information System (PRISM) (IRRI, 2015). Data analysis and compilation through the **Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Major Commodities Project** implemented by BSWM (2017).




Project Leader : BERNARDO B. PASCUA  
GIS and Cartography : IRVIN K. SAMALCA  
Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)  
Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)  
: Department of Agriculture and Fisheries - ARMM, Department of Agriculture Regional Field Office of Region IX, X, XI, XII and XIII (Caraga)  
: Local Government Unit (LGU) of covered provinces and municipalities

Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM). Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.

This publication is licensed under a Creative Commons Attribution 4.0 International License. Unless otherwise noted, copyright and any other intellectual property rights, in this publication is owned by the Philippine Government. This publication should be attributed as :  
BSWM, 2019. *Land Suitability Map Series for Cassava of the PROVINCE OF SARANGANI (50,000 Scale)* . CC BY NC SA 4.0.

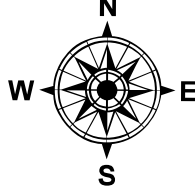








LAND SUITABILITY MAP  
CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY  
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000



Universal Transverse Mercator Zone 51 N, PRS 1992 Datum  
DISCLAIMER : All political boundaries are not authoritative.

LEGEND

SUITABILITY CLASSES

S1

Highly Suitable

- Land having no significant limitations 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.

S2

Moderately Suitable

- Land having limitations which in aggregate are moderately severe for sustained application of a given use; the limitations 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.

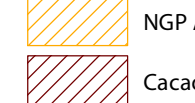
S3


Marginally Suitable

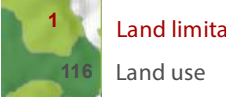
- Land having limitations which in aggregate are severe for sustained application of a given use and will so reduce productivity or benefits, or increase required inputs, that this expenditure will be only marginally justified.


Not Suitable/ Not Relevant

OTHER SIGNS

 NGP Areas

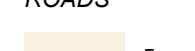
 Cacao


 Land limitation


 Land use


CONVENTIONAL SIGNS

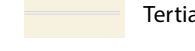
ROADS

 Expressway

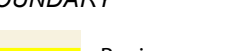
 Trunk line

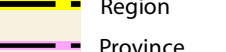
 Primary

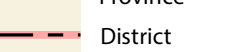
 Secondary


 Tertiary

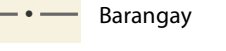
BOUNDARY

 Region

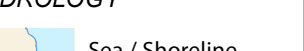
 Province

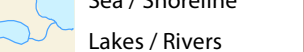
 District

 Municipality


 Barangay


HYDROLOGY

 Sea / Shoreline

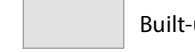
 Lakes / Rivers


PLACES


 Capital City / City

 Capital Town / Town

LAND USE

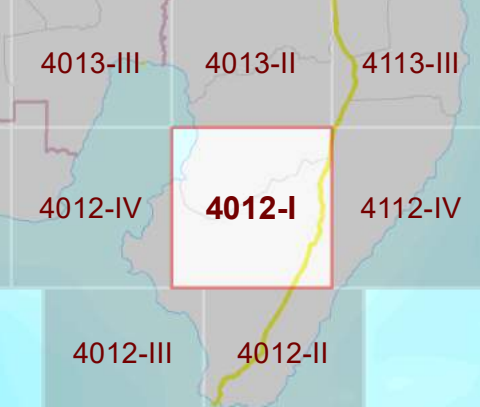
 Built-up

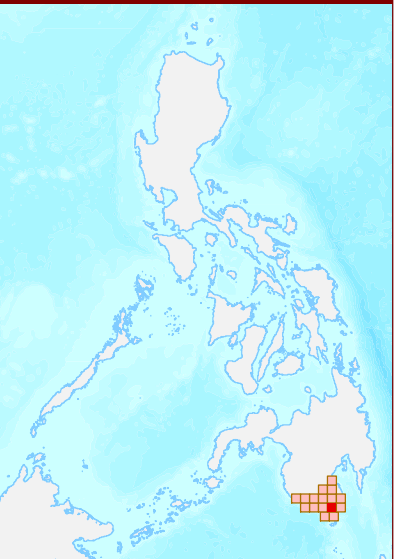
 Fishpond

 Mangrove

ADJOINING SHEETS

4012-I





MISCELLANEOUS INFORMATION

SOURCES OF INFORMATION

: Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soils Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from the Land Use System (FAO, 2015) and Philippine Rice Information System (PRISM) (IRRI, 2015). Data analysis and compilation through the Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Major Commodities Project implemented by BSWM (2017).

Project Leader

: BERNARDO B. PASCUA

GIS and Cartography

: IRVIN K. SAMALCA

Funding Agency


: Department of Agriculture - Bureau of Agricultural Research (DA-BAR)

Collaborating Agencies

: Philippine Council on Agriculture and Fisheries (PCAF)  
: Department of Agriculture and Fisheries - ARMM, Department of Agriculture Regional Field Office of Region IX, X, XI, XII and XIII (Caraga)  
: Local Government Unit (LGU) of covered provinces and municipalities

Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM).

Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.

 This publication is licensed under a Creative Commons Attribution 4.0 International License. Unless otherwise noted, copyright and any other intellectual property rights, in this publication is owned by the Philippine Government. This publication should be attributed as:  
BSWM, 2019. Land Suitability Map Series for Cassava of the PROVINCE OF SARANGANI (50,000 Scale) . CC BY NC SA 4.0.

REPUBLIC OF THE PHILIPPINES

DEPARTMENT OF AGRICULTURE

BUREAU OF SOILS AND WATER MANAGEMENT

SRDC Bldg., Elliptical Road Cor. Visayas Avenue, Diliman, Quezon City 1101

tel/Fax No.: (+632) 332-9534 E-mail: bswmclientcenter@yahoo.com



PROVINCE OF SARANGANI

Sheet 13 of 16

Sheet No. 4012-I

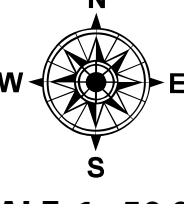





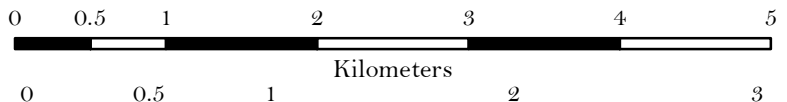


LAND SUITABILITY MAP  
CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY  
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000



Universal Transverse Mercator Zone 51 N, PRS 1992 Datum  
DISCLAIMER : All political boundaries are not authoritative.

LEGEND

SUITABILITY CLASSES

S1

Highly Suitable

Land having no significant limitations 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.

S2

Moderately Suitable

Land having limitations which in aggregate are moderately severe for sustained application of a given use; the limitations 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.

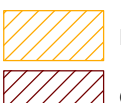
S3


Marginally Suitable


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.

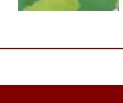
Not Suitable/ Not Relevant

OTHER SIGNS

 NGP Areas

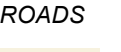
 Cacao


 Land limitation

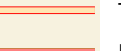
 Land use


CONVENTIONAL SIGNS


ROADS

 Expressway


 Trunk line


 Primary


 Secondary


 Tertiary


BOUNDARY

 Region


 Province


 District

 Municipality


 Barangay


HYDROLOGY

 Sea / Shoreline


 Lakes / Rivers


PLACES


 Capital City / City

 Capital Town / Town

LAND USE

 Built-up

 Fishpond

 Mangrove

ADJOINING SHEETS

4112-IV

4013-II

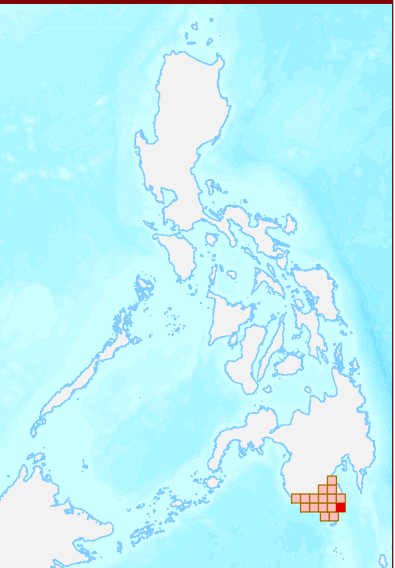
4113-III

4012-I

4112-IV

4012-II

INDEX MAP



MISCELLANEOUS INFORMATION

SOURCES OF INFORMATION : Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soils Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from the Land Use System (FAO, 2015) and Philippine Rice Information System (PRISM) (IRRI, 2015). Data analysis and compilation through the Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Major Commodities Project implemented by BSWM (2017).

Project Leader : BERNARDO B. PASCUA

GIS and Cartography : IRVIN K. SAMALCA

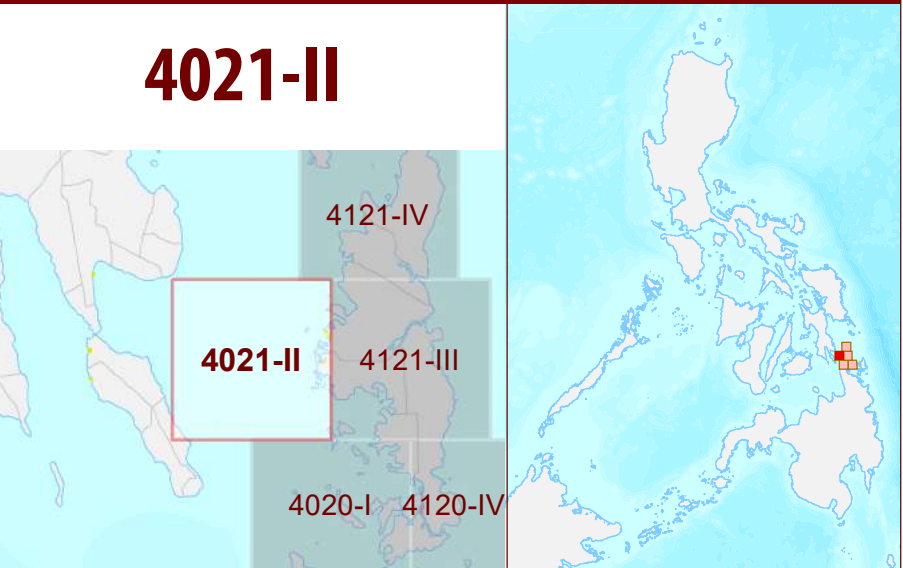
Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)

Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)

: Department of Agriculture and Fisheries - ARMM, Department of Agriculture Regional Field Office of Region IX, X, XI, XII and XIII (Caraga)

: Local Government Unit (LGU) of covered provinces and municipalities

Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM). Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.



This publication is licensed under a Creative Commons Attribution 4.0 International License. Unless otherwise noted, copyright and any other intellectual property rights, in this publication is owned by the Philippine Government. This publication should be attributed as : BSWM, 2019. Land Suitability Map Series for Cassava of the PROVINCE OF SARANGANI (50,000 Scale) . CC BY NC SA 4.0.

REPUBLIC OF THE PHILIPPINES

DEPARTMENT OF AGRICULTURE

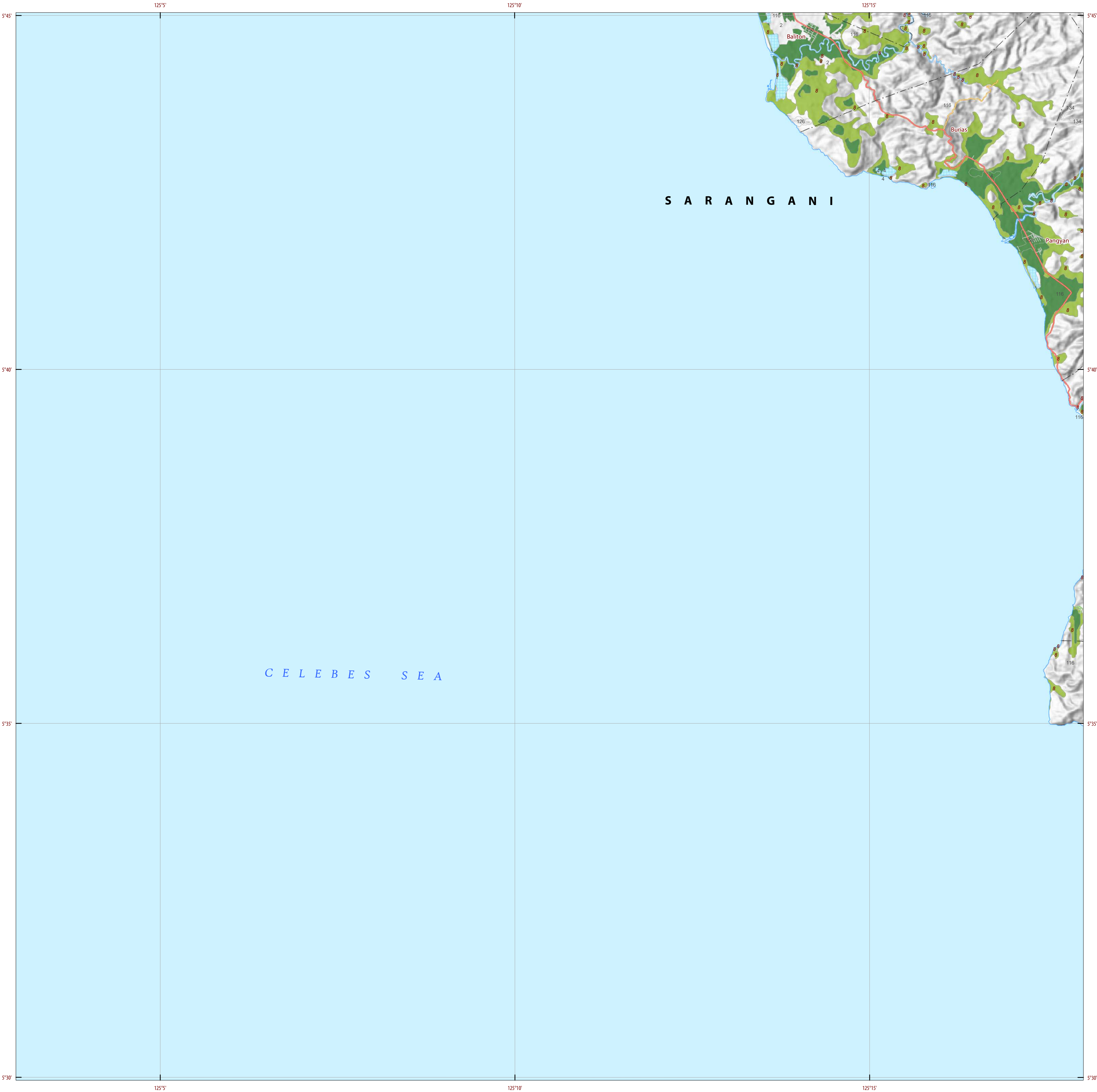
BUREAU OF SOILS AND WATER MANAGEMENT

SRDC Bldg., Elliptical Road Cor. Visayas Avenue, Diliman, Quezon City 1101

Tel/Fax No. : (+632) 332-9534 E-mail : bswmclientcenter@da.gov.ph

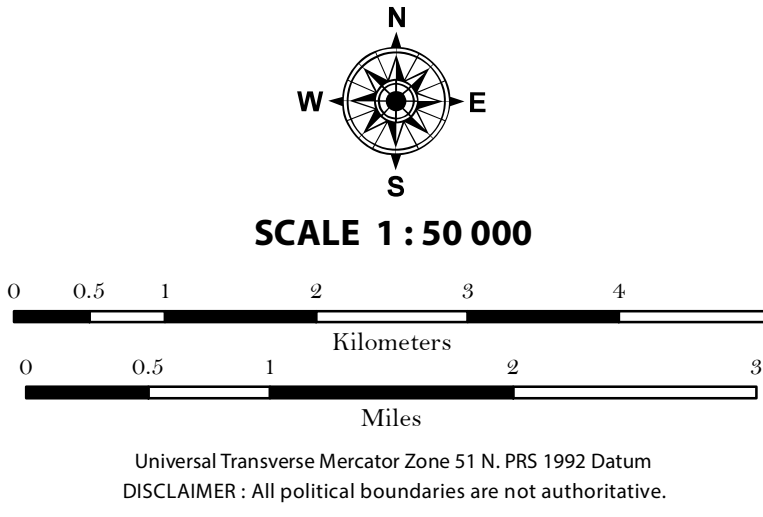
PROVINCE OF SARANGANI Sheet 14 of 16 Sheet No. 4112-IV





LAND SUITABILITY MAP  
CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY  
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



**LEGEND**

**SUITABILITY CLASSES**

- S1 Highly Suitable** - Land having no significant limitations 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.
- S2 Moderately Suitable** - Land having limitations which in aggregate are moderately severe for sustained application of a given use; the limitations 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.
- S3 Marginally Suitable** - 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.

**Not Suitable/ Not Relevant**

**OTHER SIGNS**

- NGP Areas
- Cacao
- Land limitation
- Land use

**CONVENTIONAL SIGNS**

**ROADS**

- Expressway
- Trunk line
- Primary
- Secondary
- Tertiary

**BOUNDARY**

- Region
- Province
- District
- Municipality
- Barangay

**HYDROLOGY**

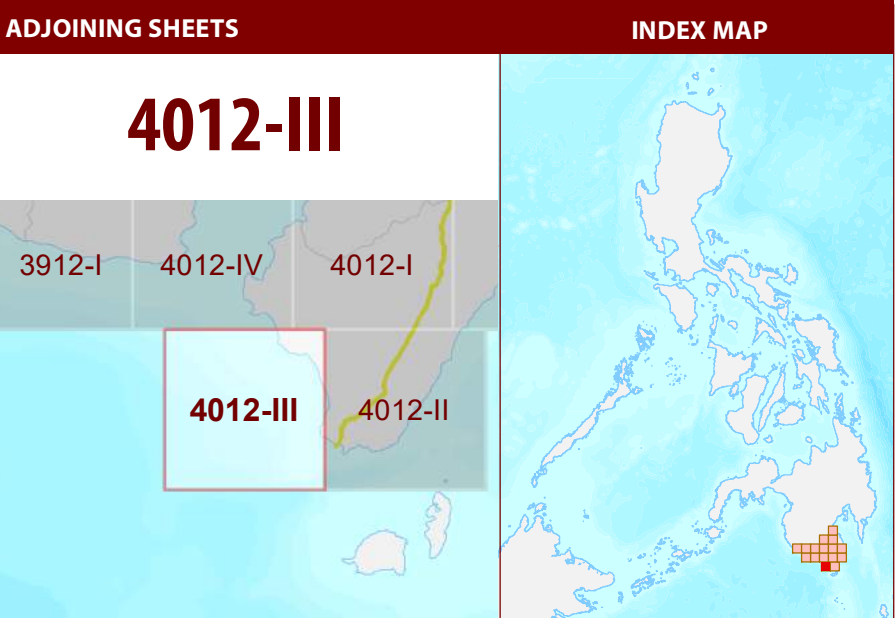
- Sea / Shoreline
- Lakes / Rivers

**PLACES**

- Capital City / City
- Capital Town / Town

**LAND USE**

- Built-up
- Fishpond
- Mangrove



**MISCELLANEOUS INFORMATION**

**SOURCES OF INFORMATION** : Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soils Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from the Land Use System (FAO, 2015) and Philippine Rice Information System (PRISM) (IRRI, 2015). Data analysis and compilation through the **Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Major Commodities Project** implemented by BSWM (2017).

Project Leader : BERNARDO B. PASCUA  
GIS and Cartography : IRVIN K. SAMALCA




Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)  
Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)  
: Department of Agriculture and Fisheries - ARMM, Department of Agriculture Regional Field Office of Region IX, X, XI, XII and XIII (Caraga)  
: Local Government Unit (LGU) of covered provinces and municipalities

Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM).  
Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.

This publication is licensed under a Creative Commons Attribution 4.0 International License. Unless otherwise noted, copyright and any other intellectual property rights, in this publication is owned by the Philippine Government. This publication should be attributed as :  
BSWM, 2019. *Land Suitability Map Series for Cassava of the PROVINCE OF SARANGANI (50,000 Scale)* . CC BY NC SA 4.0.

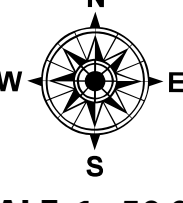






## LAND SUITABILITY MAP CASSAVA

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



**SCALE 1 : 50 000**

00.512345

Kilometers

00.5123

Miles

Universal Transverse Mercator Zone 51 N, PRS 1992 Datum  
DISCLAIMER : All political boundaries are not authoritative.

#### LEGEND

##### SUITABILITY CLASSES

S1

**Highly Suitable** - Land having no significant limitations 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.

S2

**Moderately Suitable** - Land having limitations which in aggregate are moderately severe for sustained application of a given use; the limitations 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.

S3


**Marginally Suitable** - 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.

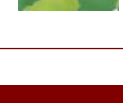
**Not Suitable/ Not Relevant**

##### OTHER SIGNS

NGP Areas

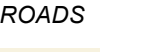
Cacao


Land limitation


Land use


#### CONVENTIONAL SIGNS


##### ROADS

Expressway


Trunk line


Primary


Secondary


Tertiary


##### BOUNDARY

Region


Province


District

Municipality


Barangay


##### HYDROLOGY

Sea / Shoreline


Lakes / Rivers


##### PLACES


Capital City / City

Capital Town / Town

##### LAND USE

Built-up

Fishpond

Mangrove

#### ADJOINING SHEETS

4012-IV

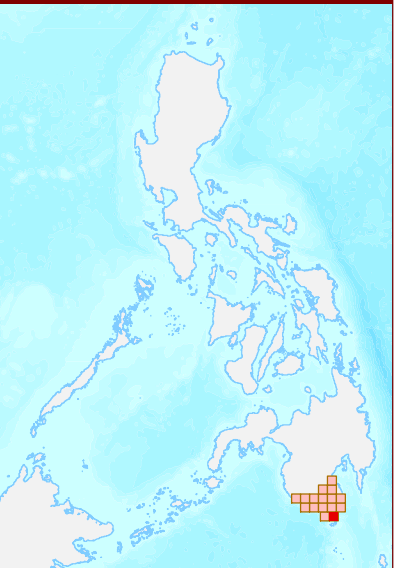
4012-I

4112-IV

4012-III

**4012-II**

#### INDEX MAP



#### MISCELLANEOUS INFORMATION

**SOURCES OF INFORMATION :** Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soils Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from the Land Use System (FAO, 2015) and Philippine Rice Information System (PRISM) (IRRI, 2015). Data analysis and compilation through the **Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Major Commodities Project** implemented by BSWM (2017).

Project Leader : BERNARDO B. PASCUA  
GIS and Cartography : IRVIN K. SAMALCA

Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)  
Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)  
: Department of Agriculture and Fisheries - ARMM, Department of Agriculture Regional Field Office of Region IX, X, XI, XII and XIII (Caraga)  
: Local Government Unit (LGU) of covered provinces and municipalities

Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM).  
Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.



This publication is licensed under a Creative Commons Attribution 4.0 International License. Unless otherwise noted, copyright and any other intellectual property rights, in this publication is owned by the Philippine Government. This publication should be attributed as :  
BSWM, 2019. *Land Suitability Map Series for Cassava of the PROVINCE OF SARANGANI (50,000 Scale)*. CC BY NC SA 4.0.

**REPUBLIC OF THE PHILIPPINES**  
**DEPARTMENT OF AGRICULTURE**  
**BUREAU OF SOILS AND WATER MANAGEMENT**  
SRDC Bldg, Elliptical Road Cor. Visayas Avenue, Diliman, Quezon City 1101  
Tel/Fax No. : (+632) 332-9534 E-mail : bswmcenter@da.gov.ph

PROVINCE OF SARANGANI

Sheet 16 of 16 Sheet No. 4012-II