

LAND SUITABILITY MAP

CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

PROVINCE OF DAVAO DEL NORTE



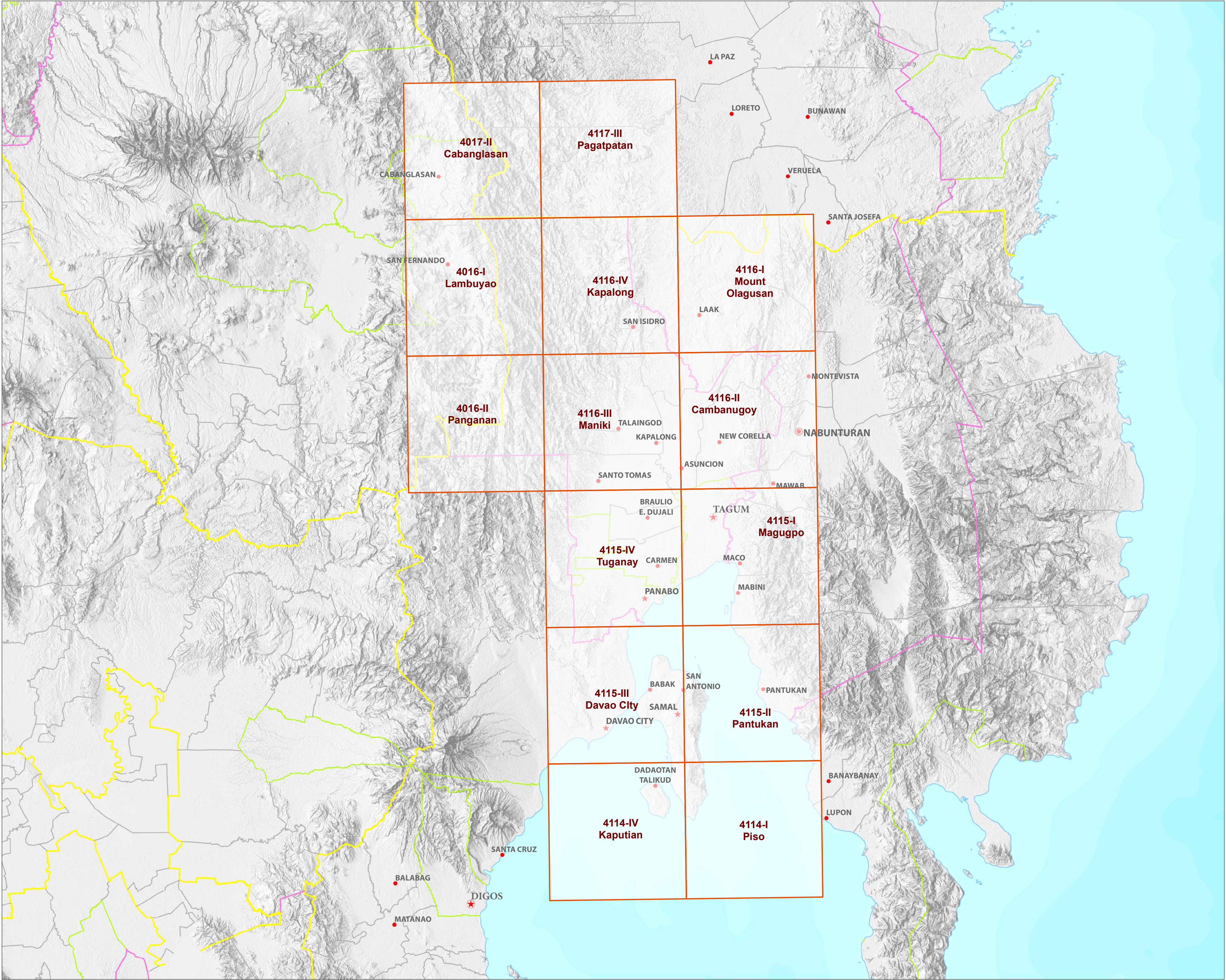
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BUREAU OF SOILS AND WATER MANAGEMENT

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

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LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

PROVINCE OF DAVAO DEL NORTE



LEGEND

Places

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

Administrative Boundary

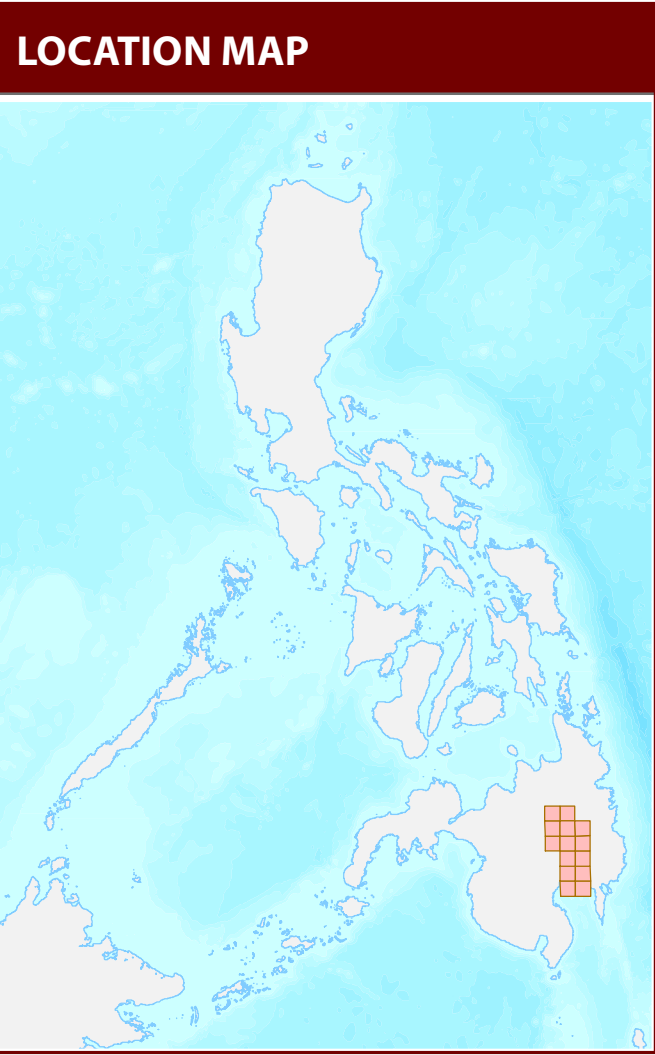
- Regional
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Topographic Relief

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).

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LAND SUITABILITY MAP FOR CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS DAVAO DEL NORTE, REGION XI

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*		Banana		Corn		Mango		Other crops		
	S1	S2	S3		S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	
ASUNCION	-	-	-	-	1,656	1,894	295	971	779	1,553	3,261	525	86	24	28	8	65	25	11,169
BRAULIO E. DUJALI	-	-	-	-	26	-	-	-	123	-	3,280	-	84	-	-	-	-	-	3,513
CARMEN	-	-	-	-	1,297	33	2	2	1,695	72	3,867	283	1,477	9	21	4	94	140	8,995
CITY OF PANABO	-	-	-	-	1,270	2,021	20	30	203	516	10,124	4,269	228	2	51	140	99	145	19,119
CITY OF TAGUM	-	-	-	-	7,670	1,772	-	-	402	58	1,811	95	10	8	-	-	87	13	11,927
ISLAND GARDEN CITY OF SAMAL	-	-	-	-	6,918	11,888	52	197	246	112	3	28	13	6	208	69	-	21	19,761
KAPALONG	-	-	-	-	61	9	244	2,936	617	4,252	5,519	775	99	82	504	47	1	2	15,147
NEW CORELLA	-	-	-	-	445	805	107	329	49	48	3,571	243	161	73	11	7	1,427	5,075	12,353
SAN ISIDRO	-	-	-	-	72	104	152	1,166	1,262	3,743	1	5	-	-	-	-	58	104	6,667
SANTO TOMAS	-	-	-	-	267	16	355	882	306	966	8,506	323	525	34	284	59	240	38	12,802
TALAINGOD	-	-	-	-	47	47	34	531	256	2,562	323	463	-	3	-	-	-	-	4,267
TOTAL	-	-	-	-	19,729	18,590	1,259	7,044	5,939	13,883	40,266	7,009	2,683	243	1,106	334	2,070	5,564	125,718

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> 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.	<div></div> Marginally Suitable (S3) Land having limitations which in aggregate are severe for sustained application of a given use and will so reduce productivity or benefits, or increase required inputs, that this expenditure will be only marginally justified.
<div></div> 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.	<div></div> Not Suitable / Not Relevant Land having limitations which may be surmountable in time but which cannot be corrected with existing knowledge at currently acceptable cost; the limitations are so severe as to preclude successful sustained use of the land in the given manner. Existing forest, shrubland greater than 18% slope, irrigated paddy rice and miscellaneous land types such as built up areas, roads, etc are considered as not relevant.

AGRONOMIC REQUIREMENT OF CASSAVA PRODUCTION

LAND UTILIZATION TYPE	SUITABILITY RATING	SLOPE (%)	SOIL DEPTH (cm)	SOIL TEXTURE	SOIL DRAINAGE	SOIL REACTION (pH)	INHERENT FERTILITY	FLOODING CLASS	EROSION CLASS	ROCK OUTCROPS	ELEVATION (masl)	ANNUAL RAINFALL (mm)	CLIMATIC TYPE
Cassava	S1	<8	>50	FSL, L, SIL, CL, SICL, SCL, SC, SIC, C	WD,MWD	5.6 - 7.2	high	none-slight	none-slight	none-few	<500	1000-2000	I,II, III, IV
	S2	8 - 18	30 - 50	SL, HC	SPD, PD	5.1 - 5.5 7.3 - 7.8	medium	moderate	moderate	common	500-1500	2001-4500	II
	S3	18 - 30	<30	S, LS, CSL	VPD,ED	<5.0 - > 7.9	low	severe	severe	many	>1500	<1000 >4500	

SLOPE (%)		SOIL DRAINAGE		SOIL REACTION (pH)		SOIL TEXTURE	
0 - 3	- level to gently sloping	ED	- excessively drained	< 4.5	- extremely acid	Coarse	Fine
3 - 8	- gently sloping to undulating	WD	- well drained	4.5 - 5.0	- very strongly acid	S	SC
8 - 18	- undulating to rolling	MWD	- moderately well drained	5.1 - 5.5	- strongly acid	LS	SIC
18 - 30	- rolling to moderately steep	SPD	- somewhat poorly drained	5.6 - 6.0	- medium acid	CSL	C
30 - 50	- steep	PD	- poorly drained	6.1 - 6.5	- slightly acid	SL	HC
> 50	- very steep	VPD	- very poorly drained	6.6 - 7.2	- neutral	Medium	
				7.3 - 7.8	- mildly alkaline	FSL	- fine sandy loam
				7.9 - 8.4	- moderately alkaline	L	- loam
				> 8.5	- strongly alkaline	SIL	- silt loam
						CL	- clay loam
						SICL	- silty clay loam
						SCL	- sandy clay loam

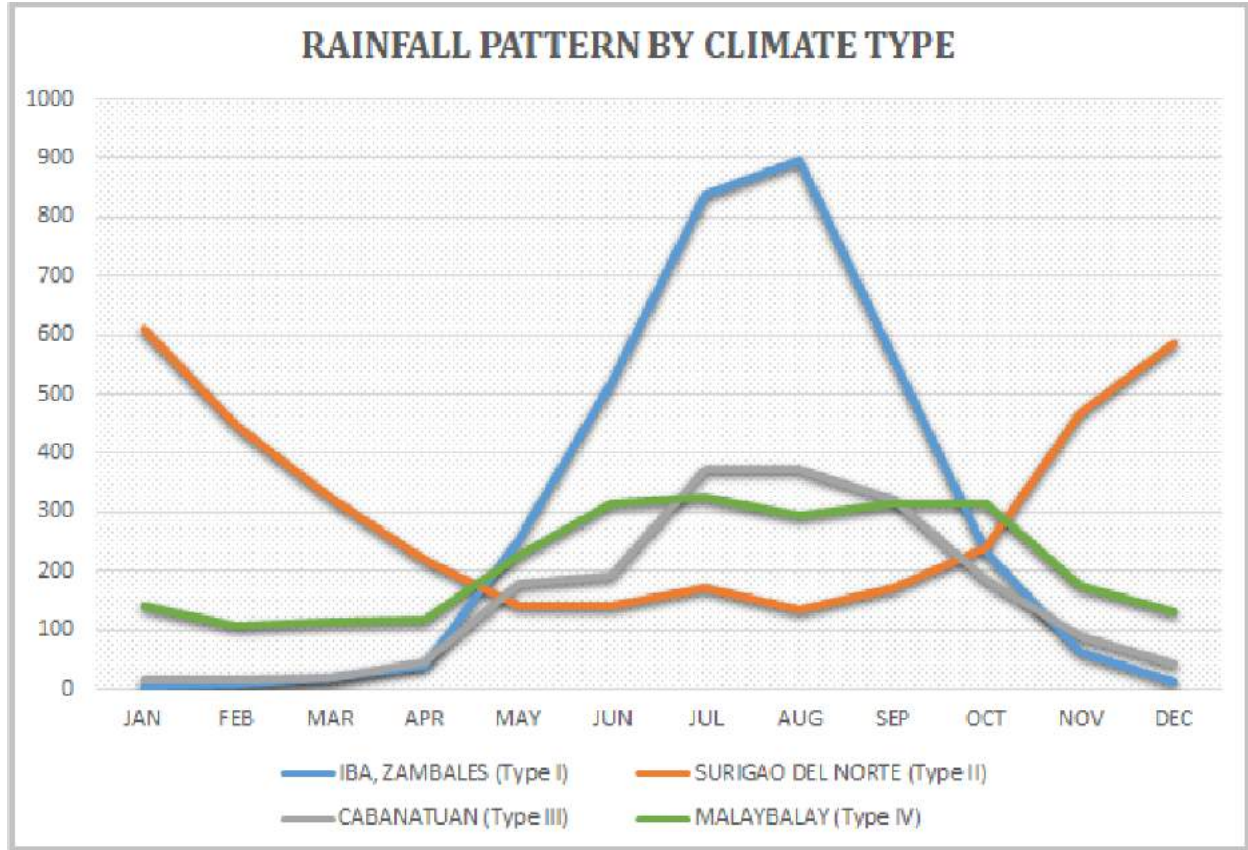
SOIL DEPTH (cm)		SURFACE IMPEDIMENT	
0 - 30	- very shallow	ROCK OUTCROPS	
30 - 50	- shallow	< 10%	- none - few
50 - 100	- moderately deep	10 - 30%	- common
> 100	- deep to very deep	> 30%	- many

LAND LIMITATIONS DESCRIPTION AND COMBINATIONS

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

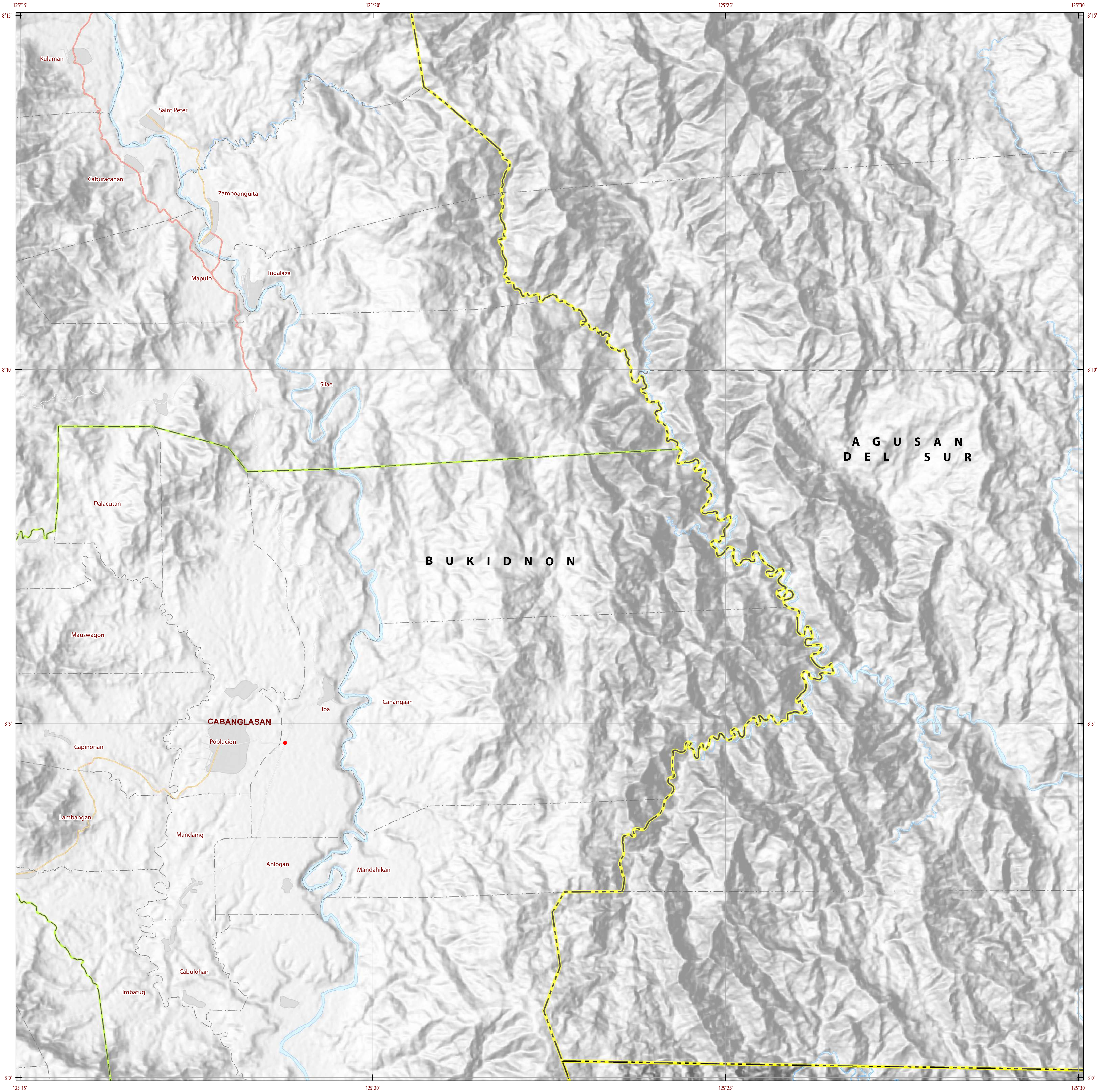
CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION
1	EI2-Sh2-Rc2	11	T2-EI2-Sh2-Rc3	21	T3-EI2	31	T3-EI2
2	F2-D2	12	T2-F2-D2	22	T3-EI2-E3-Rc2	32	T3-EI2-E3-Sh3-Rc3
3	F2-Tc	13	T2-F3-D2	23	T3-EI2-E3-Sh2-Rc2	33	T3-EI3
4	F3-D2	14	T3	24	T3-EI2-E3-Sh2-Rc3		
5	Sh2	15	T3-E3	25	T3-EI2-E3-Sh3-Rc2		
6	Sh2-Rc2	16	T3-E3-Rc3	26	T3-EI2-E3-Sh3-Rc3		
7	T2	17	T3-E3-Sh2-Rc2	27	T3-F3-D2		
8	T2-E2-Sh2-Rc2	18	T3-E3-Sh2-Rc3	28	T3		
9	T2-EI2	19	T3-E3-Sh3-Rc2	29	T3-E3		
10	T2-EI2-Sh2-Rc2	20	T3-E3-Sh3-Rc3	30	T3-E3-Sh3-Rc3		

CODE	LANDUSE	CODE	LANDUSE
4	Corn	134	Shrubs, unmanaged
47	Vegetable	137	Rubber (T)
81	Coffee		
85	Mango		
90	Pomelo		
91	Banana		
105	Fruit trees, mixed		
116	Coconut		
119	Oil palm		
126	Grassland		



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>>.

Davao Del Norte 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
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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

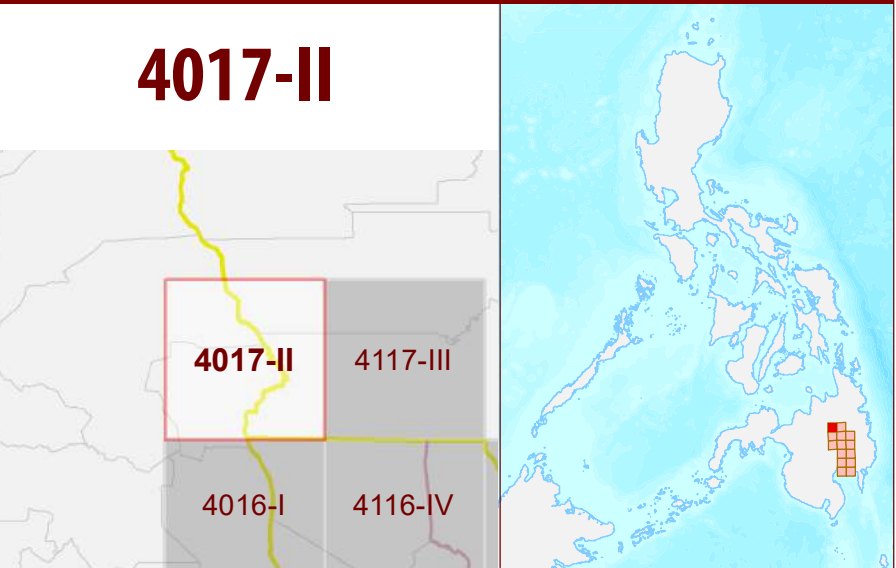
OTHER SIGNS

- 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

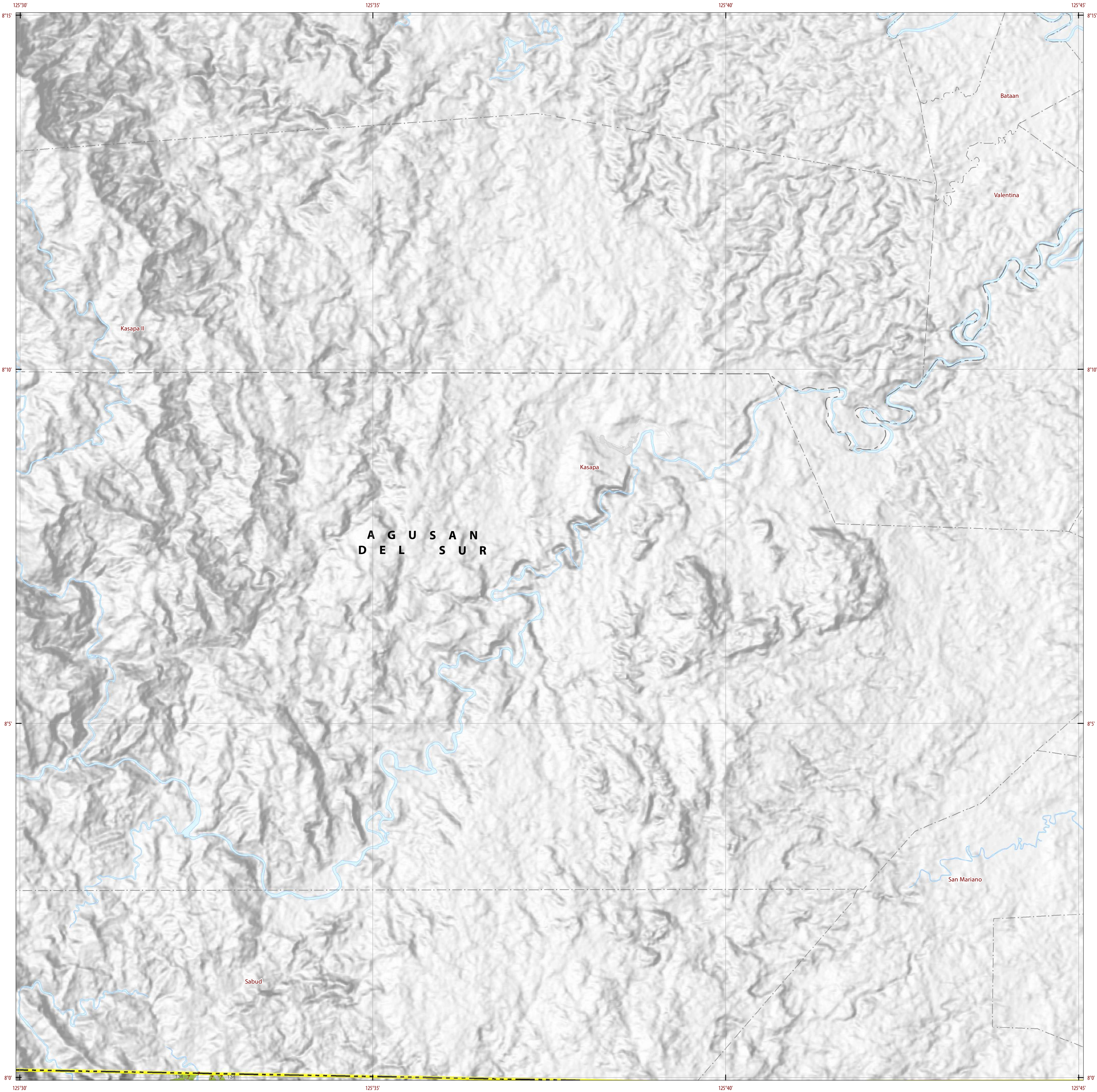
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LAND SUITABILITY MAP CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000



Universal Transverse Mercator Zone 51 N, PRS 1992 Datum
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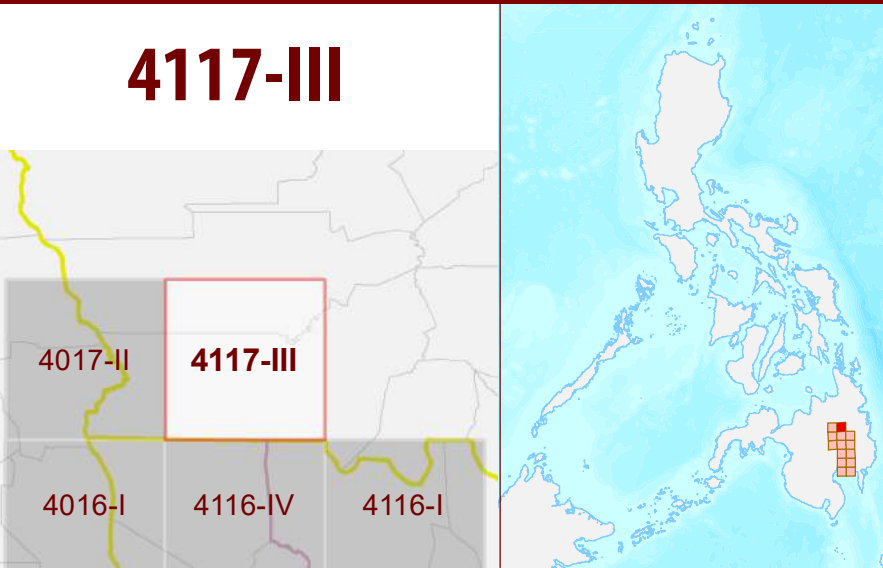
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- Land use

CONVENTIONAL SIGNS

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 - Fishpond
 - Mangrove

ADJOINING SHEETS



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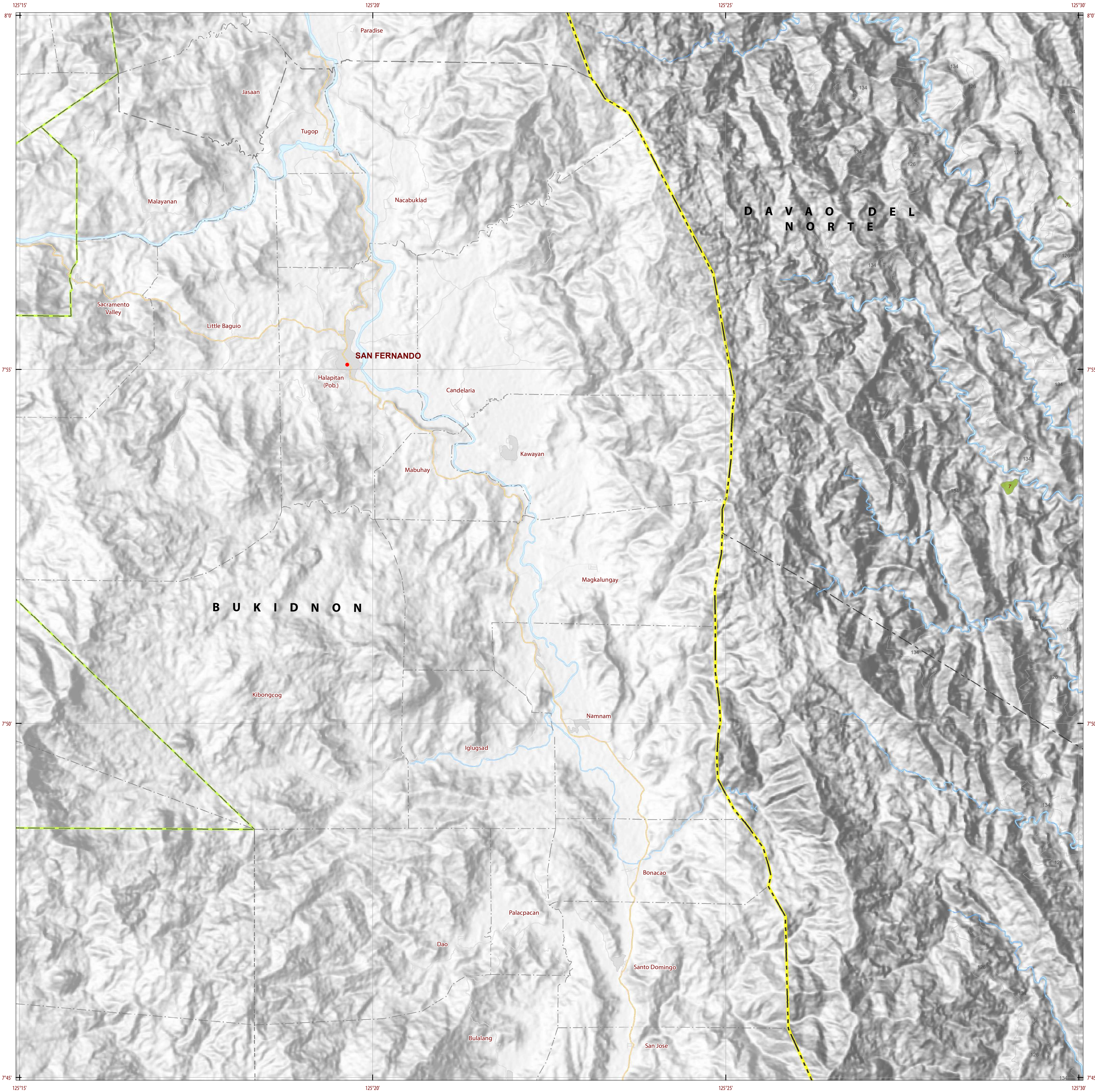
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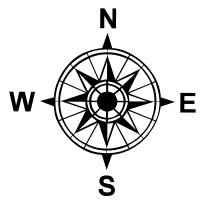
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ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000

00.512345

Kilometers

00.5123

Miles

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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.

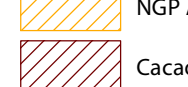
S3


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

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 NGP Areas

 Cacao

 Land limitation

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HYDROLOGY

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ADJOINING SHEETS

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4016-II

4116-III

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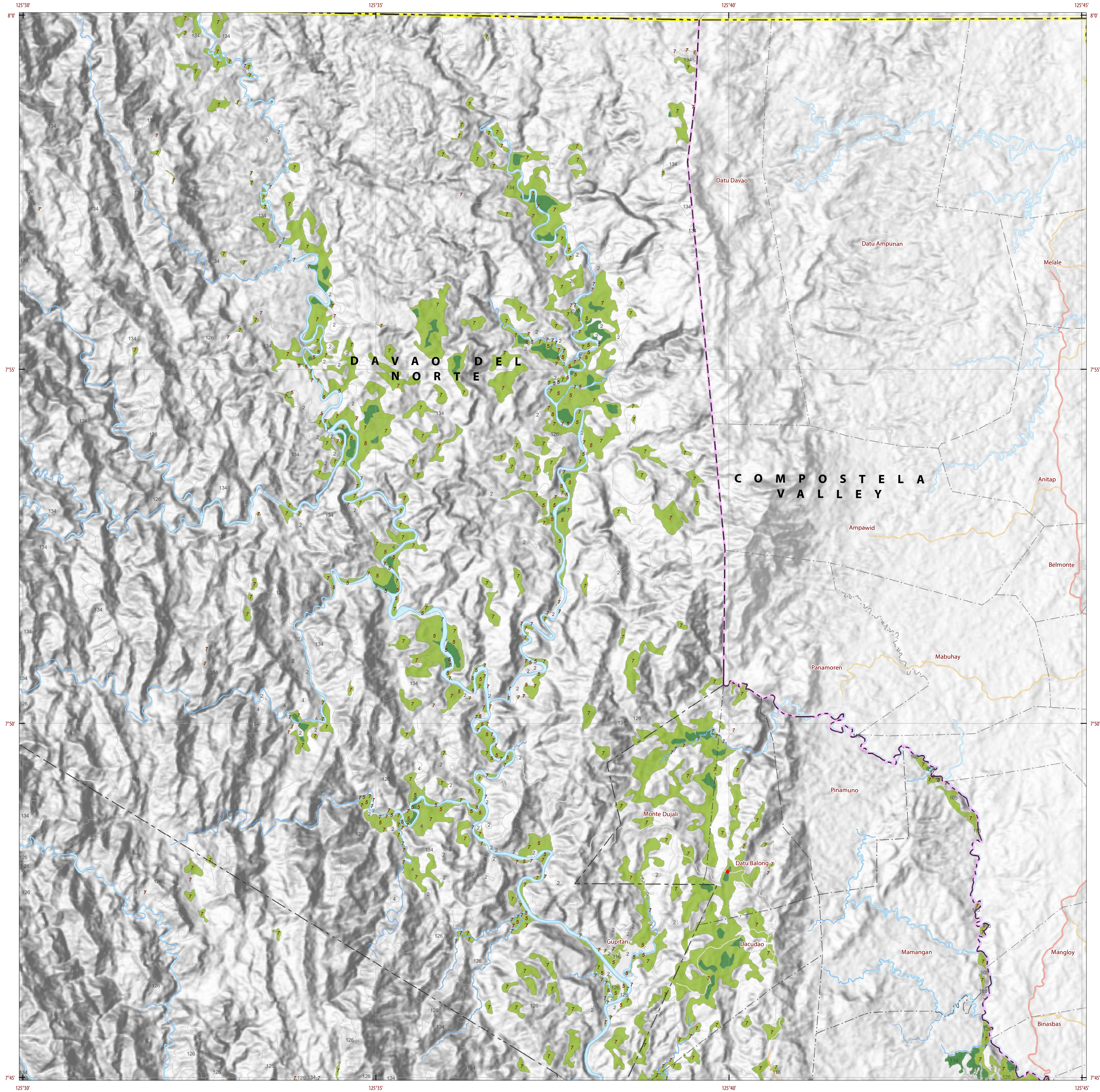
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PROVINCE OF DAVAO DEL NORTE

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Sheet No. 4016-I



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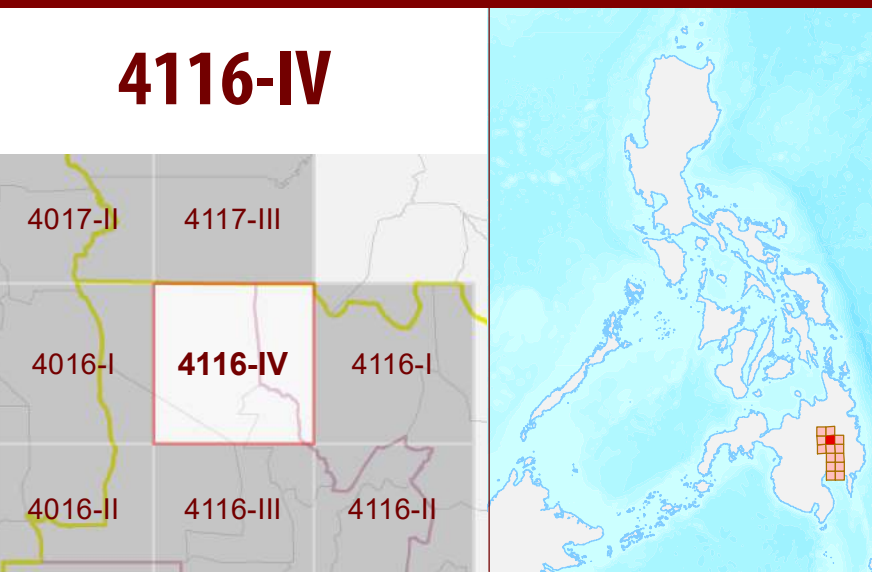
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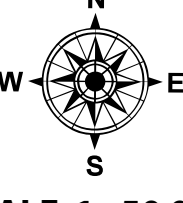
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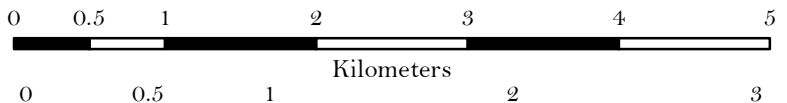


LAND SUITABILITY MAP
CASSAVA

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.

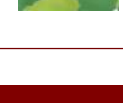
Not Suitable/ Not Relevant

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

4116-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

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

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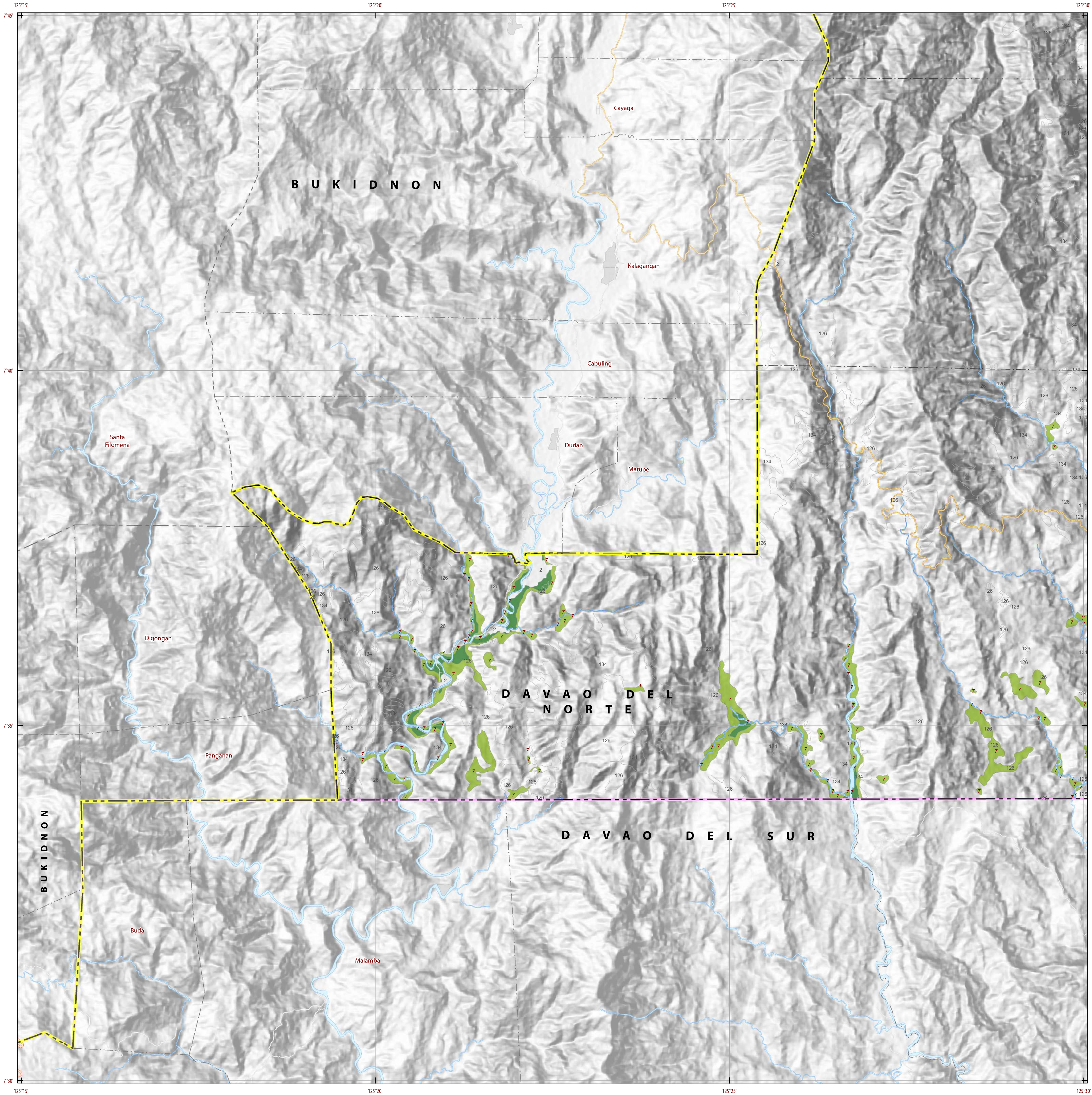
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DEPARTMENT OF AGRICULTURE

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



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

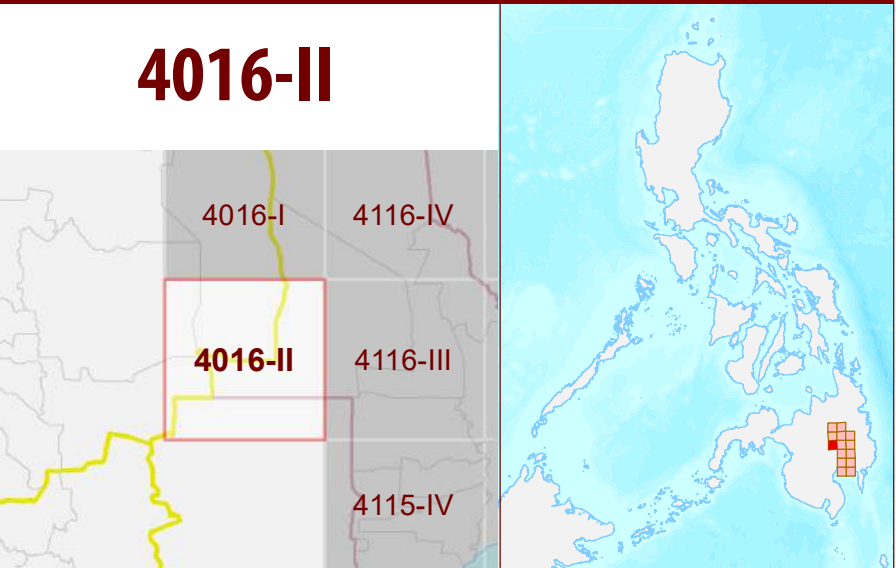
OTHER SIGNS

- 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).

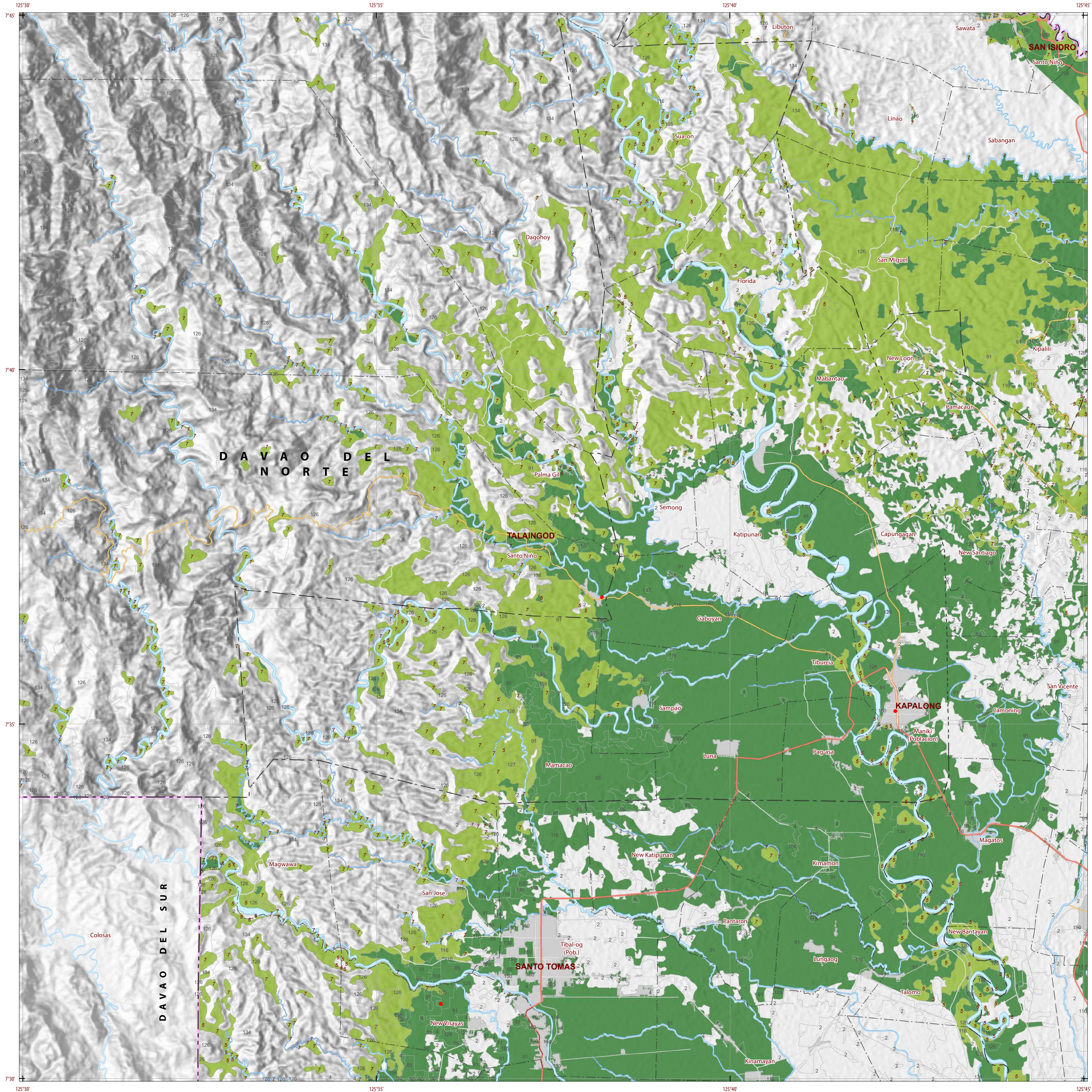
Project Leader : BERNARDO B. PASCUA
GIS and Cartography : IRVIN K. SAMALCA
Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)
Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)
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Tel/Fax 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
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LEGEND

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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

4116-III

4016-I

4116-IV

4116-I

4016-II

4116-III

4116-II

4115-IV

4115-I

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), 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

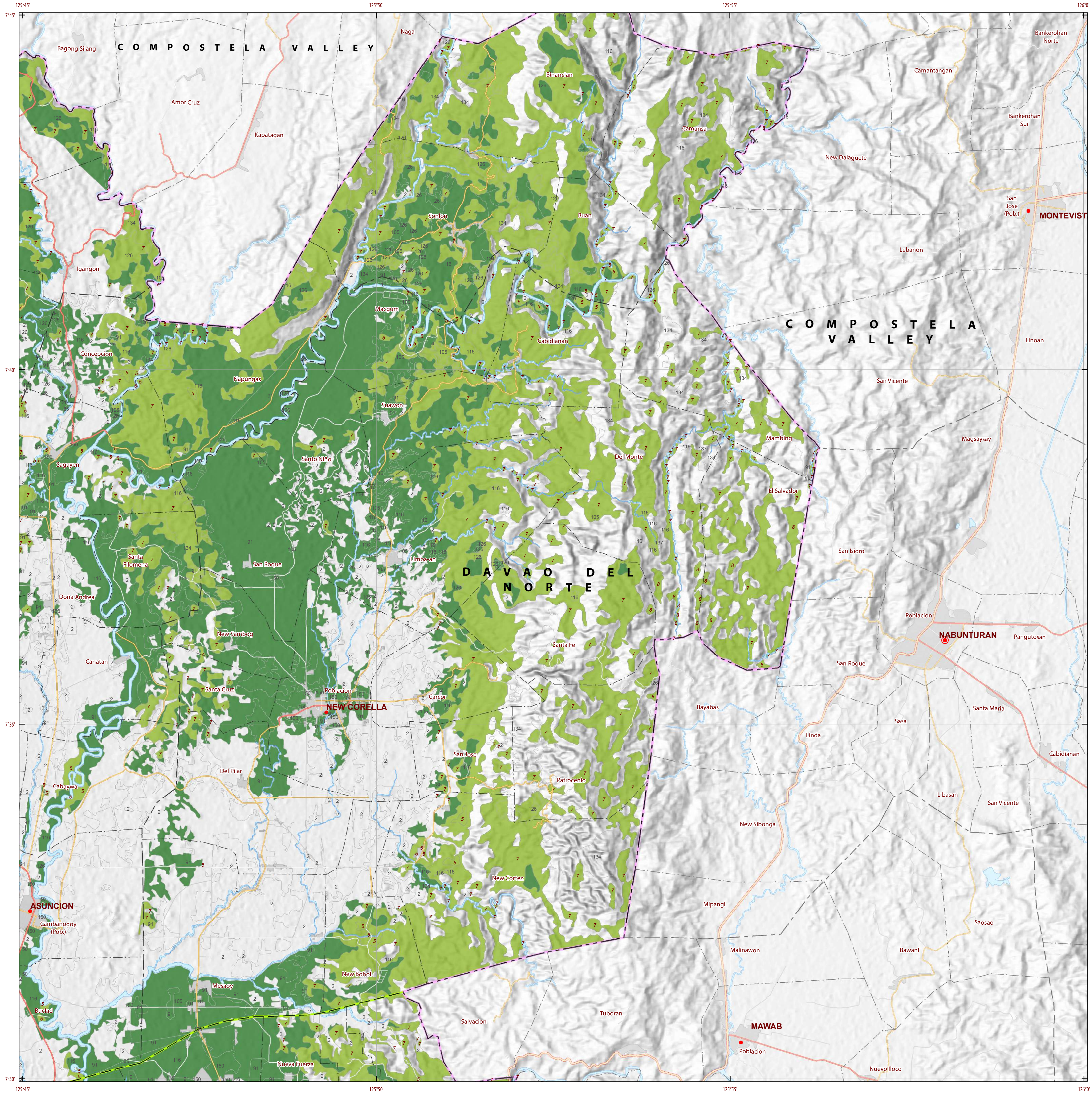
Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)




Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)
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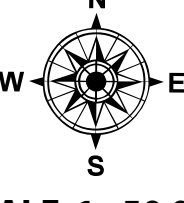
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Tel/Fax No. : (+632) 332-9534 E-mail : bswmcenter@da.gov.ph





LAND SUITABILITY MAP
CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000

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
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LEGEND

SUITABILITY CLASSES

S1

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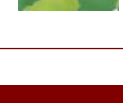
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OTHER SIGNS

 NGP Areas

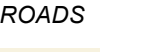
 Cacao


 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

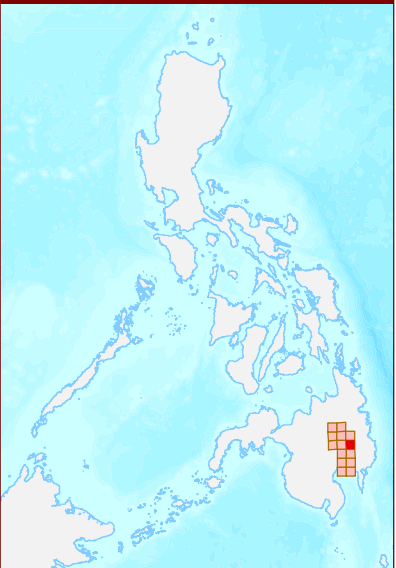
 Mangrove

ADJOINING SHEETS

4116-II

4116-IV 4116-I
4116-III 4116-II
4115-IV 4115-I

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)

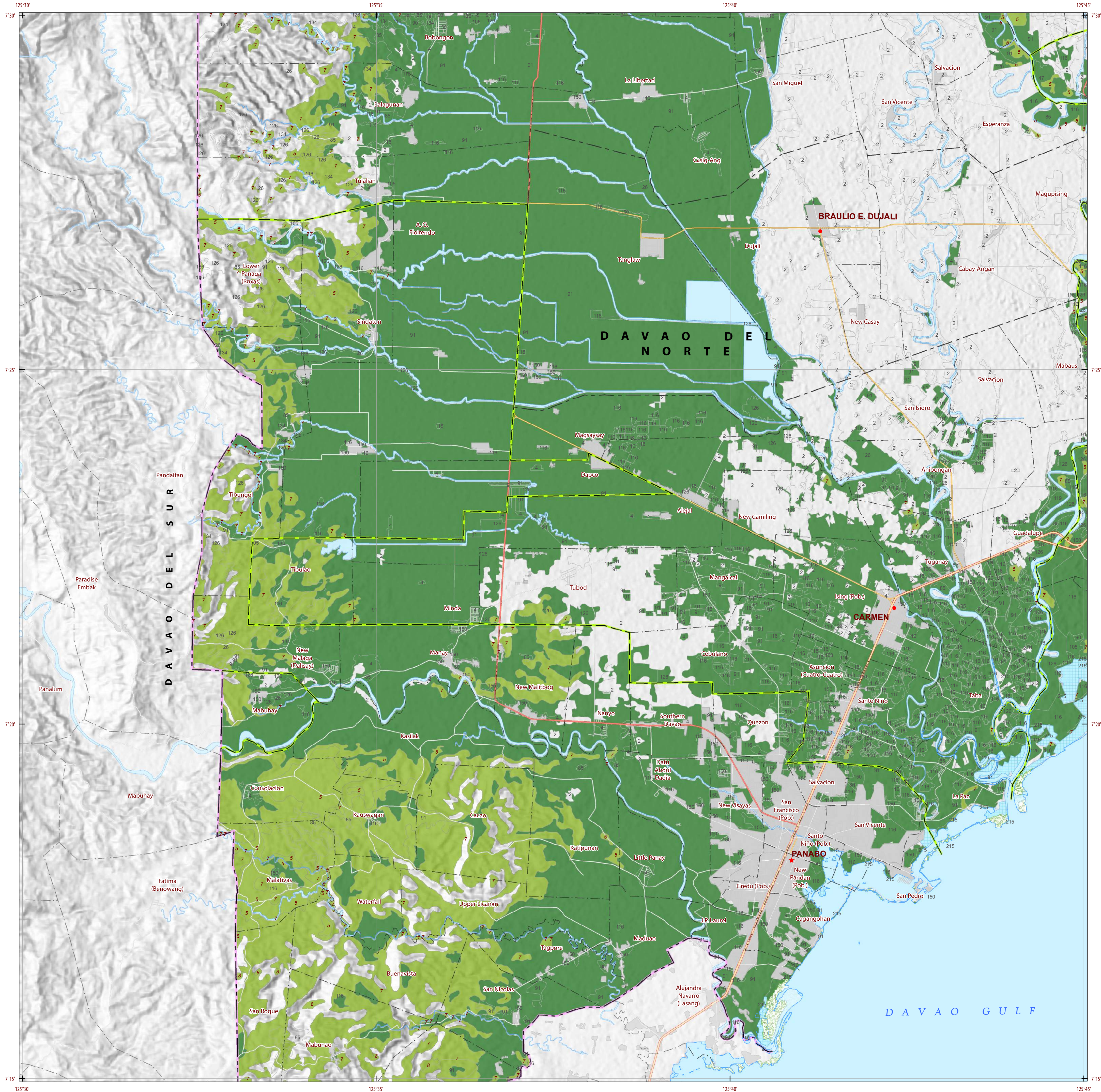
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SRDC Bldg, Elliptical Road Cor. Visayas Avenue, Dilliman, Quezon City 1101
Tel/Fax No. : (+632) 332-9534 E-mail : bswmclientcenter@yahoo.com

PROVINCE OF DAVAO DEL NORTE Sheet 8 of 14 Sheet No. 4116-II



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
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LEGEND

SUITABILITY CLASSES

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- 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

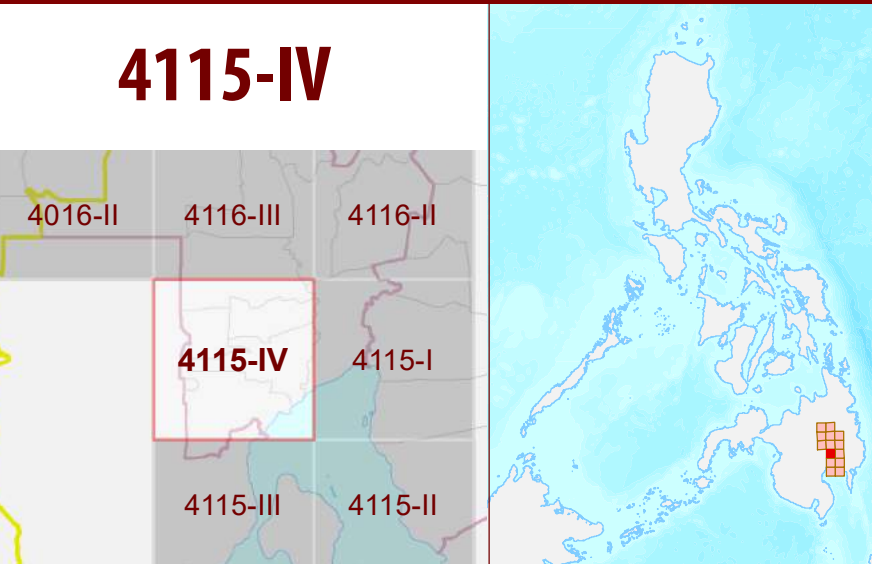
OTHER SIGNS

- 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

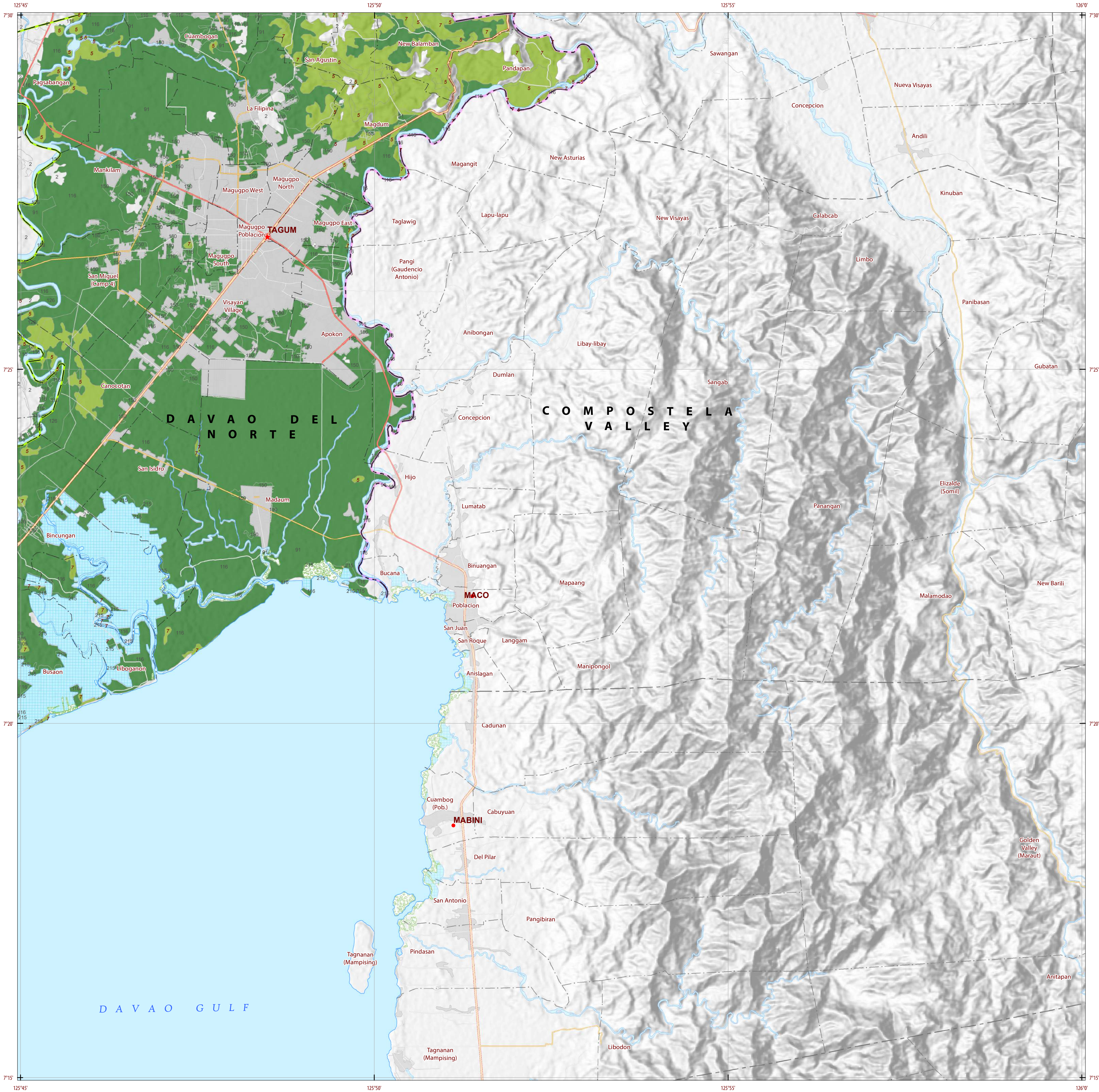
SOURCES OF INFORMATION : Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soils Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from 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).




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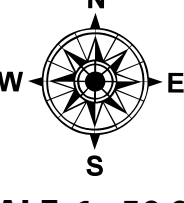
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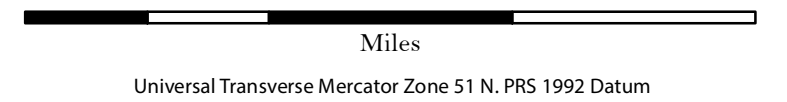
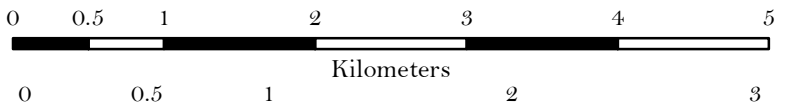


LAND SUITABILITY MAP
CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000



Universal Transverse Mercator Zone 51 N, PRS 1992 Datum
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SUITABILITY CLASSES

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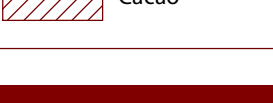
S3

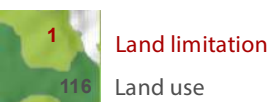
Marginally Suitable - Land having limitations which in aggregate are severe for sustained application of a given use and will so reduce productivity or benefits, or increase required inputs, that this expenditure will be only marginally justified.


Not Suitable/ Not Relevant

OTHER SIGNS

 NGP Areas


 Cacao


 Land limitation

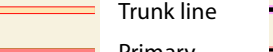
 Land use

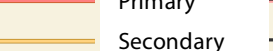
CONVENTIONAL SIGNS


ROADS

 Expressway


 Trunk line


 Primary

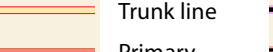
 Secondary

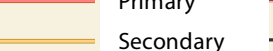
 Tertiary


BOUNDARY

 Region


 Province

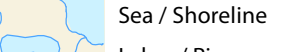
 District

 Municipality

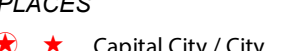
 Barangay

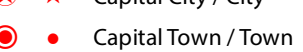
HYDROLOGY

 Sea / Shoreline


 Lakes / Rivers

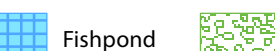
PLACES


 Capital City / City

 Capital Town / Town

LAND USE

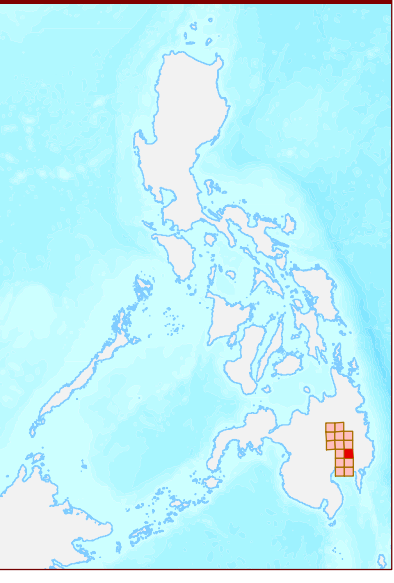
 Built-up

 Fishpond

 Mangrove

ADJOINING SHEETS

4115-I



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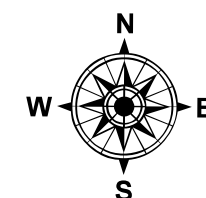
Tel/Fax No. : (+632) 332-9534 E-mail: bswmidentcenter@da.gov.ph

PROVINCE OF DAVAO DEL NORTE

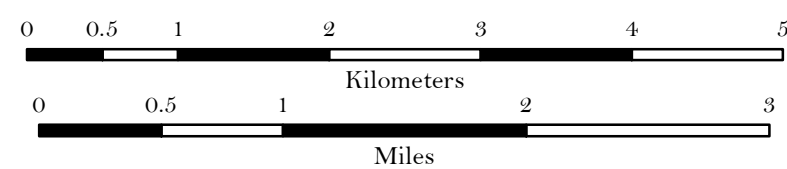
Sheet 10 of 14

Sheet No. 4115-I

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 agriculture 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 agriculture 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 positive, will be appreciably inferior to that expected on class S1 land. |
| S3 | Marginally Suitable - Land having limitations which in aggregate are severe for sustained agriculture of a given use and will 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

- Region
 Province
-  Sea / Shoreline
 Lakes / Rivers

PLACES

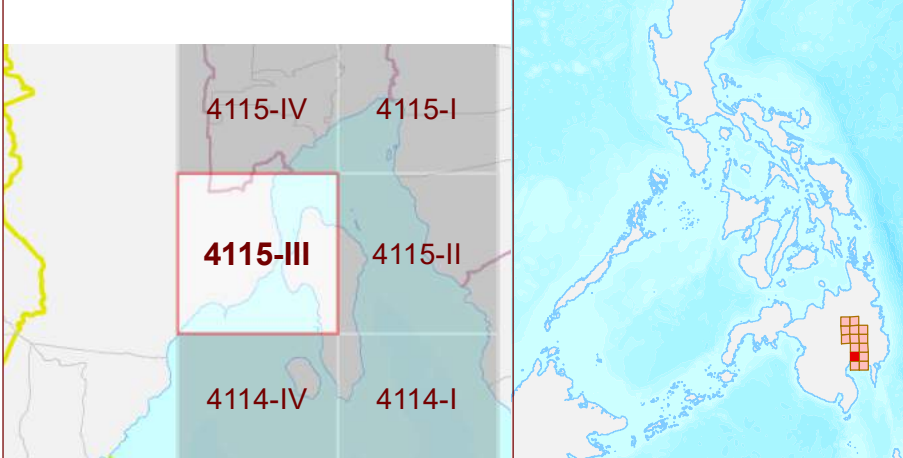
- ★ Capital City / City
● Capital Town / Town

LAND USE

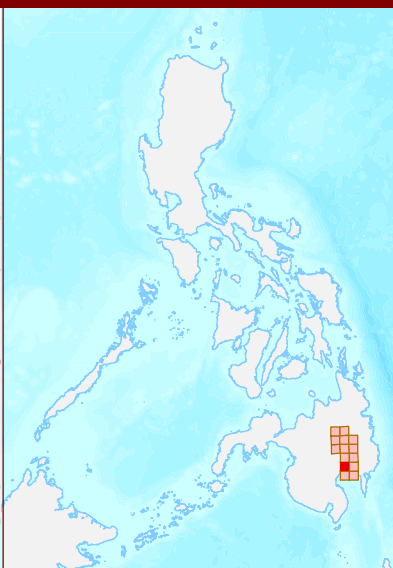
- Legend: Built-up Fishpond Mangrove

ADJOINING SHEETS

4115-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 data from the Land Use System (FAO, 2015) and Philippine Rice Information System (PRISM) (IRR, 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

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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

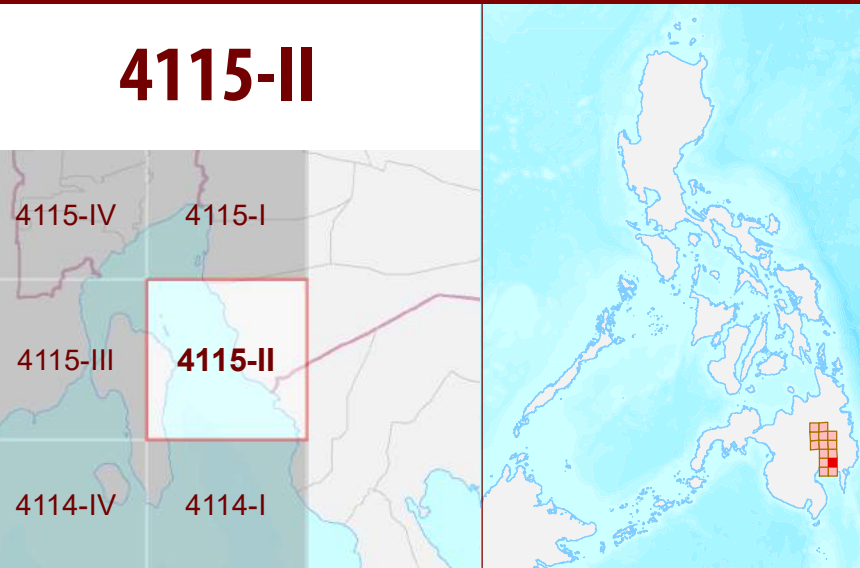
OTHER SIGNS

- NGP Areas
- Cacao
- Land limitation
- Land use

CONVENTIONAL SIGNS

- 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




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

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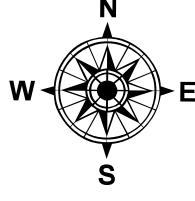
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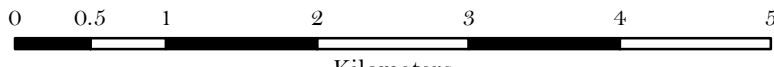
LAND SUITABILITY MAP
CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY
ASSESSMENT OF STRATEGIC PRODUCTION AREAS

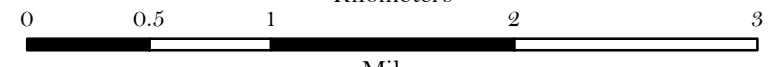


N
W E
S

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

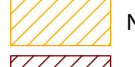
Moderately Suitable - Land having limitations which in aggregate are moderately severe for sustained application of a given use; the limitations will reduce productivity or benefits and increase required inputs to the extent that the overall advantage to be gained from the use, although still attractive, 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

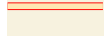
 Land use


CONVENTIONAL SIGNS

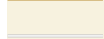
ROADS

 Expressway

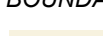
 Trunk line


 Primary

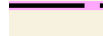
 Secondary

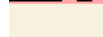
 Tertiary


BOUNDARY

 Region


 Province

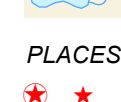
 District

 Municipality


 Barangay


HYDROLOGY

 Sea / Shoreline

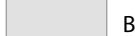
 Lakes / Rivers


PLACES


 Capital City / City

 Capital Town / Town

LAND USE

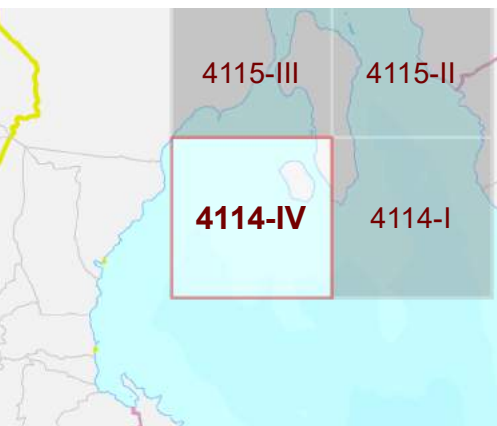
 Built-up

 Fishpond

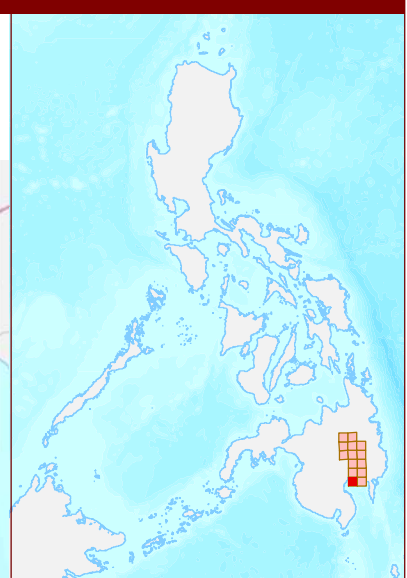
 Mangrove

ADJOINING SHEETS

4114-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)


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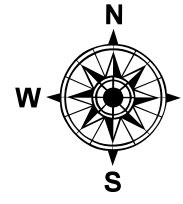
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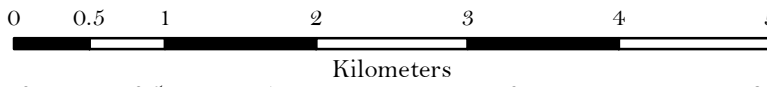


LAND SUITABILITY MAP
CASSAVA

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

INDEX MAP

4114-I

4115-III

4115-II

4114-IV

4114-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).

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PROVINCE OF DAVAO DEL NORTE

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Sheet No. 4114-I