

LAND SUITABILITY MAP

CACAO

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

PROVINCE OF MISAMIS ORIENTAL

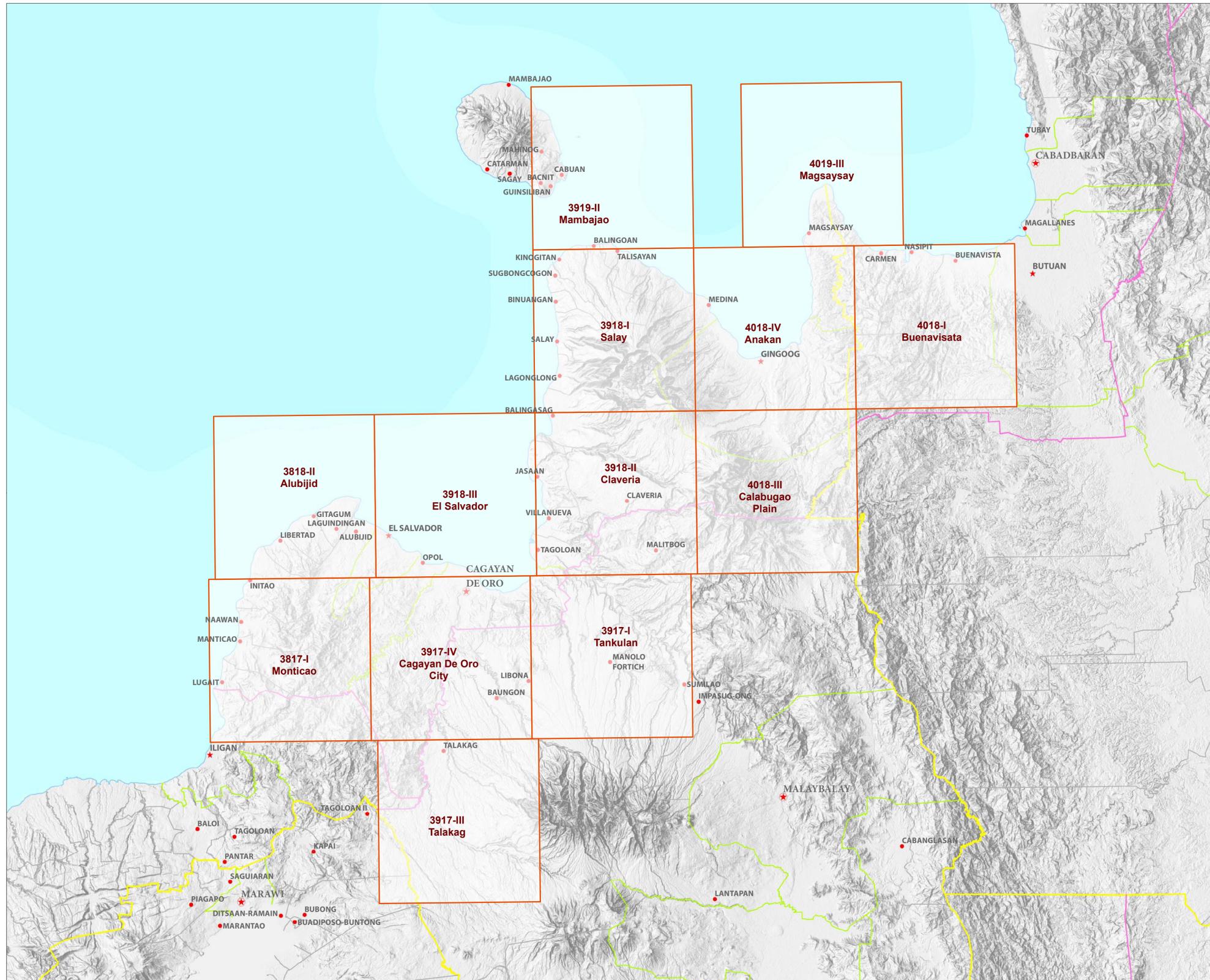


REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF AGRICULTURE
BUREAU OF SOILS AND WATER MANAGEMENT

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

MAP INDEX

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



LEGEND

Places

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

Administrative Boundary

- Regional
- Provincial
- City
- Municipal

Map Index

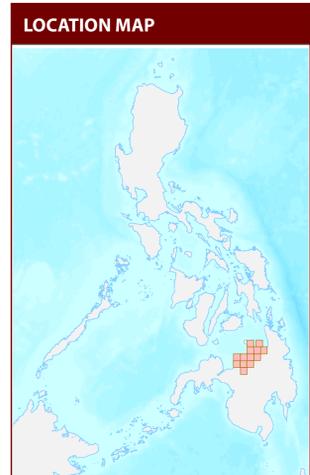
- Index grid

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 (PCAFA) 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. : (432) 332-9934 E-mail: bswmclientcenter@yahoo.com

LAND SUITABILITY MAP FOR CACAO

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

EXTENT OF SUITABILITY FOR CACAO PRODUCTION BY MUNICIPALITY

MUNICIPALITY	Existing Cacao (Ha)			TOTAL EXISTING AREA (Ha)	EXPANSION AREA (Ha)						CONFLICT RESOLUTION (Ha)						TOTAL POTENTIAL EXPANSION AREAS (Ha)
	S1	S2	S3		Coconut		Shrubland, unmanaged*		Grassland, unmanaged*		Corn		Mango		Other Crops		
					S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	
ALUBIJID	1	-	1	2	849	393	161	371	66	316	3,160	26	-	-	-	-	5,341
BALINGASAG	3	1	-	4	2,215	655	12	192	33	28	2,240	443	-	-	-	-	5,817
BALINGOAN	3	-	-	3	1,406	26	1	207	177	1,136	197	3	-	-	-	-	3,152
BINUANGAN	-	-	-	-	757	-	-	-	-	-	21	-	-	-	-	-	778
CAGAYAN DE ORO CITY	1	-	-	1	3,282	459	447	717	698	764	3,485	578	8	7	-	-	10,446
CITY OF EL SALVADOR	-	-	-	-	355	646	30	327	14	223	3,277	1,260	-	-	-	-	6,131
CLAVERIA	-	2	1	3	497	1,473	55	1,064	-	303	2,898	9,777	-	-	-	-	16,068
GINGOOG CITY	-	-	-	-	11,283	3,526	470	744	55	347	1,120	1,626	-	-	-	-	19,170
GITAGUM	-	-	-	-	345	-	42	-	-	2	2,444	-	-	-	-	-	2,833
INITAO	-	-	1	1	2,903	1,071	-	-	15	-	525	-	-	-	-	-	4,513
JASARAN	1	-	1	2	1,721	-	14	-	-	-	1,057	-	-	-	-	-	2,791
KINOGUITAN	2	-	-	2	2,295	107	-	21	3	314	222	48	-	-	-	-	3,010
LAGOGLONG	2	-	-	2	500	-	-	-	3	-	605	-	-	-	-	-	1,108
LAGUINDINGAN	1	-	-	1	125	-	-	-	276	-	2,561	-	-	-	-	-	2,961
LIBERTAD	-	-	-	-	822	-	-	-	40	8	826	-	-	-	-	-	1,696
LUGAIT	-	1	1	2	408	1,025	8	2	25	-	-	-	-	-	-	-	1,469
MAGSAYSAY	1	-	-	1	2,304	-	239	-	323	-	386	-	-	-	-	-	3,253
MANTICAO	1	1	-	2	1,407	1,523	7	51	85	19	60	6	-	-	-	-	3,158
MEDINA	-	-	-	-	1,311	1,045	-	54	-	82	2	1	-	-	-	-	2,495
NAAWAN	2	1	-	3	1,374	922	4	19	5	496	296,683	101	5	-	-	-	2,472
OPOL	-	1	1	2	424	174	65	469	302	2,654	893	543	-	-	-	-	5,524
SALAY	1	-	1	2	1,077	207	-	48	-	531	31	40	-	-	-	-	1,934
SUGBOGCOGON	3	-	-	3	1,320	341	-	-	-	376	58	49	-	-	-	-	2,145
TAGOLOAN	1	-	-	1	445	14	89	2	41	7	833	51	-	-	-	-	1,482
TALISAYAN	-	-	-	-	817	221	840	198	186	229	203	8	-	-	-	-	2,703
VILLANUEVA	-	1	1	2	442	19	12	-	9	2	566	208	-	-	-	-	1,259
TOTAL	22	7	7	36	40,681	13,846	2,498	4,485	2,400	7,341	27,772	14,671	8	7	-	-	113,709

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

AGRONOMIC REQUIREMENT OF CACAO PRODUCTION

LAND UTILIZATION TYPE	SUITABILITY RATING	SLOPE (%)	SOIL DEPTH (cm)	SOIL TEXTURE	SOIL DRAINAGE	SOIL REACTION (pH)	INHERENT FERTILITY	FLOODING CLASS	EROSION CLASS	ROCK OUTCROPS	ELEVATION (masl)	ANNUAL RAINFALL (mm)	CLIMATIC TYPE
Cacao	S1	<8	>100	Cl, SiCl, SCL, SC, SiC, C, HC	WD,MWD	5.6-7.2	high	none-slight	none-slight	none-few	<1000	2001-4500	I, III, IV
	S2	8-30	50-100	FSL, L, SiL	SPD,PD	5.1-5.5 7.3-7.8	medium	moderate	moderate	common	1000-1500	1000-2000	I, II
	S3	>30	<50	S, LS, CSL, SL	VPD,ED	<5.0 - >7.9	low	severe	severe	many	>1500	<1000 >4500	

SLOPE (%) 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	SOIL DRAINAGE ED - excessively drained WD - well drained MWD - moderately well drained SPD - somewhat poorly drained PD - poorly drained VPD - very poorly drained	SOIL REACTION (pH) <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	SOIL TEXTURE Coarse S - sand LS - loamy sand CSL - coarse sandy loam SL - sandy loam Medium FSL - fine sandy loam L - loam SIL - silt loam CL - clay loam SiCL - silty clay loam SCL - sandy clay loam	Fine SC - sandy clay SiC - silty clay C - clay HC - heavy clay
SOIL DEPTH (cm) 0-30 - very shallow 30-50 - shallow 50-100 - moderately deep >100 - deep to very deep	SURFACE IMPEDIMENT ROCK OUTCROPS <10% - none - few 10-30% - common >30% - many			

LAND LIMITATIONS DESCRIPTION AND COMBINATIONS

ELEVATION E12 - 1000m - 1500m E13 - > 1500m	SOIL DRAINAGE D2 - Somewhat poorly drained to poorly drained D3 - Very poorly drained or excessively drained	SOIL DEPTH Sh2 - Moderately deep (50 - 100cm) Sh3 - Very shallow to shallow (< 50cm)	SOIL EROSION E2 - Moderate erosion E3 - Severe erosion
SLOPE/TOPOGRAPHY T2 - Undulating to moderately steep T3 - Steep to very steep	SOIL TEXTURE Tc - Coarse texture	ROCK OUTCROPS Rc2 - Common Rc3 - Many	FLOODING F2 - Moderate seasonal flooding F3 - Severe seasonal flooding

CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LIMITATION	CODE	LANDUSE
1	E2-Sh2-Rc2	11	E13-Sh2-Rc2	21	T2-E12	31	T3	41	T3-E12-E3-Sh3-Rc3	51	T3-E12-E3-Rc3	4	Corn
2	E12	12	F2-D2	22	T2-E12-E3	32	T3-E3	42	T3-E13	52	T3-E12-E3-Sh3-Rc3	51	Cassava
3	E12-E2-Rc3	13	F2-Tc	23	T2-E12-E3-Rc2	33	T3-E3-Sh3-Rc3	43	T3-E13-E3	53	T3-E13	81	Coffee
4	E12-E2-Sh2-Rc3	14	F3-D2	24	T2-E12-E3-Rc3	34	T3-E3-Sh3-Rc2	44	T3-E13-E3-Sh3-Rc2	54	T3-E13-E3-Sh3-Rc3	82	Cacao
5	E12-E3-Rc3	15	Sh2-Rc2	25	T2-E12-E3-Sh2-Rc2	35	T3-E3-Sh3-Rc3	45	T3-F3-D2	55	T3-E13	85	Mango
6	E12-E3-Sh2-Rc3	16	T2	26	T2-E12-E3-Sh2-Rc3	36	T3-E12	46	T3	56	Tc	116	Coconut
7	E12-Rc2	17	T2-E3	27	T2-E13	37	T3-E12-E3	47	T3-E3			126	Grassland
8	E12-Sh2-Rc2	18	T2-E3-Rc3	28	T2-E13-E3-Sh2-Rc2	38	T3-E12-E3-Rc2	48	T3-E3-Sh3-Rc3			134	Shrubs, unmanaged
9	E12-Sh2-Rc3	19	T2-E3-Sh2-Rc2	29	T2-F2-D2	39	T3-E12-E3-Sh2-Rc3	49	T3-E12				
10	E13	20	T2-E3-Sh2-Rc3	30	T2-F3-D2	40	T3-E12-E3-Sh3-Rc2	50	T3-E12-E3				

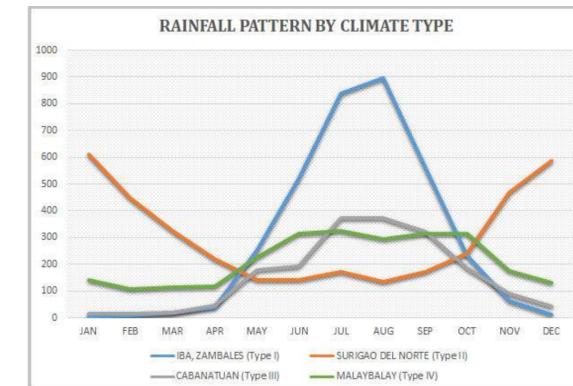
SUITABILITY CLASSES:

 Highly Suitable (S1) Land having no significant limitation to sustained application of a given use, or only minor limitations that will not significantly reduce productivity or benefits and will not raise inputs above an acceptable level.	 Marginally Suitable (S3) Land having limitations which in aggregate are severe for sustained application of a given use and will so reduce productivity or benefits, or increase required inputs, that this expenditure will be only marginally justified.
 Moderately Suitable (S2) Land having limitation which in aggregate are moderately severe for sustained application of a given use; the limitation will reduce productivity or benefits and increase required inputs to the extent that the overall advantage to be gained from the use, although still attractive, will be appreciably inferior to that expected on class S1 land.	 Not Suitable / Not Relevant Land having limitations which may be surmountable in time but which cannot be corrected with existing knowledge at currently acceptable cost; the limitations are so severe as to preclude successful sustained use of the land in the given manner. Existing forest, shrubland greater than 18% slope, irrigated paddy rice and miscellaneous land types such as built up areas, roads, etc are considered as not relevant.

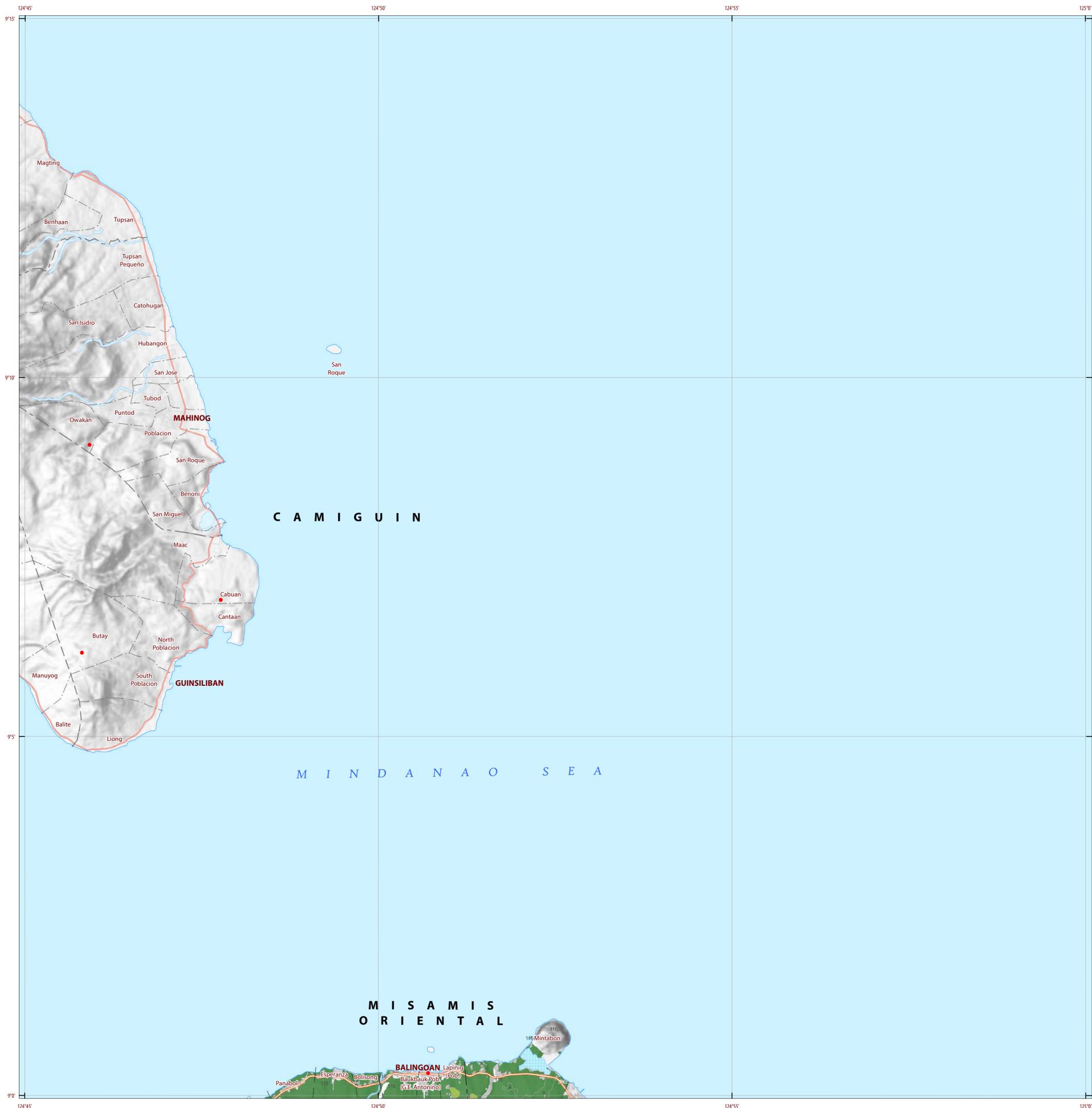
CLIMATE TYPE

TYPE I : Two pronounced season, dry from November to April and wet during the rest of the year. Maximum rain period is from June to September	TYPE II : No dry season with a very pronounced maximum rain period from December to February. There is not a single dry month. Maximum monthly rainfall occurs during the period from March to May.
TYPE III : No very pronounced maximum rain period, with a dry season lasting only from one to three months, either during the period from December to February or from March to May. This type resembles Type I since it has a short dry season.	TYPE IV : Rainfall is more or less evenly distributed throughout the year. This type resembles Type II since it has no dry season.

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

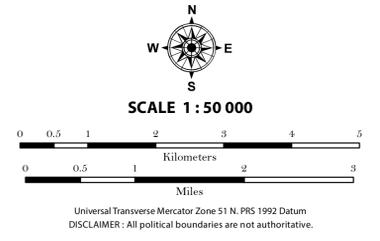


Source: PAGASA 2018, Climatological Normals (Rainfall), Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), accessed 27 July 2018, <https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>.



LAND SUITABILITY MAP CACAO

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.

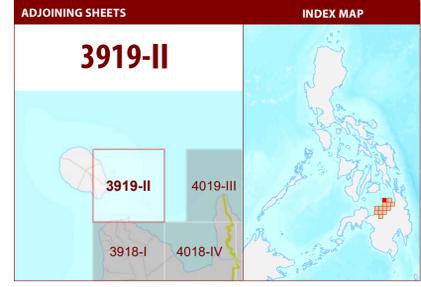
Not Suitable/ Not Relevant

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	PLACES
Secondary	Municipality	★ Capital City / City
Tertiary	Barangay	● 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).

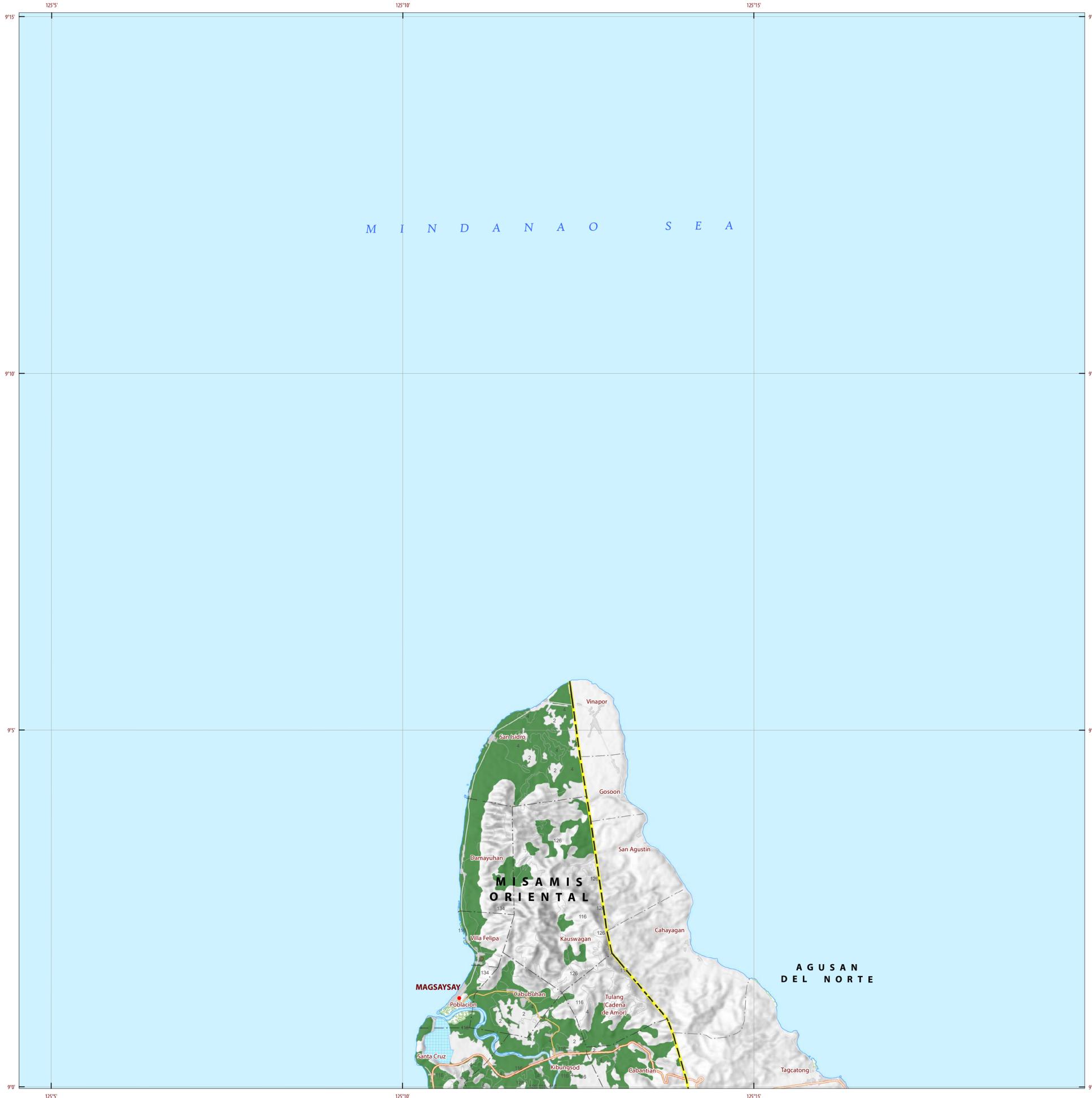
Project Leader : BERNARDO B. PASCUA
 GIS and Cartography : IRWIN K. SAMALCA

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.

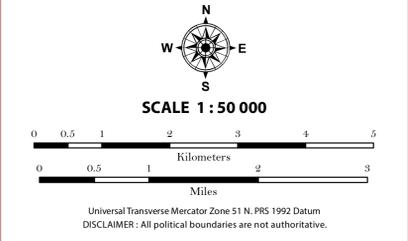
This publication is licensed under a Creative Commons Attribution 4.0 International License. Unless otherwise noted, copyright and any other intellectual property rights, in this publication is owned by the Philippine Government. This publication should be attributed as:
 BSWM, 2019. Land Suitability Map Series for Cacao of the PROVINCE OF MISAMIS ORIENTAL (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 CACAO

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

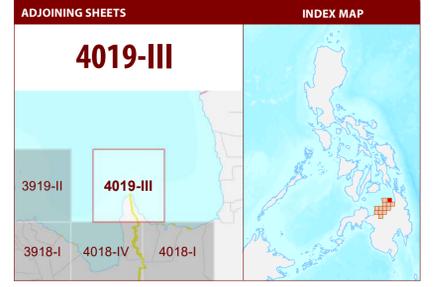
- NGP Areas
- Cacao
- Land limitation
- Land use

CONVENTIONAL SIGNS

ROADS	BOUNDARY	HYDROLOGY
Expressway	Region	Sea / Shoreline
Trunk line	Province	Lakes / Rivers
Primary	District	PLACES
Secondary	Municipality	★ Capital City / City
Tertiary	Barangay	● 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 : IRWIN 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

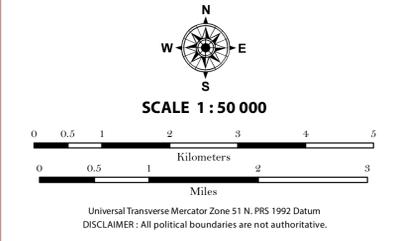
Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM).
 Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.

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 Cacao of the PROVINCE OF MISAMIS ORIENTAL (50,000 Scale) - CC BY NC SA 4.0.



LAND SUITABILITY MAP CACAO

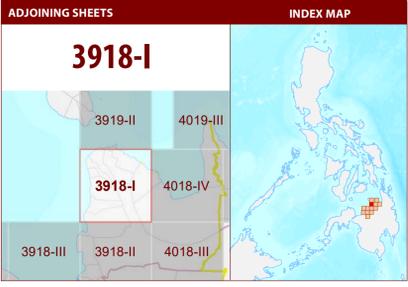
LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS



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 | PLACES |
| Secondary | Municipality | ★ Capital City / City |
| Tertiary | Barangay | ● 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).

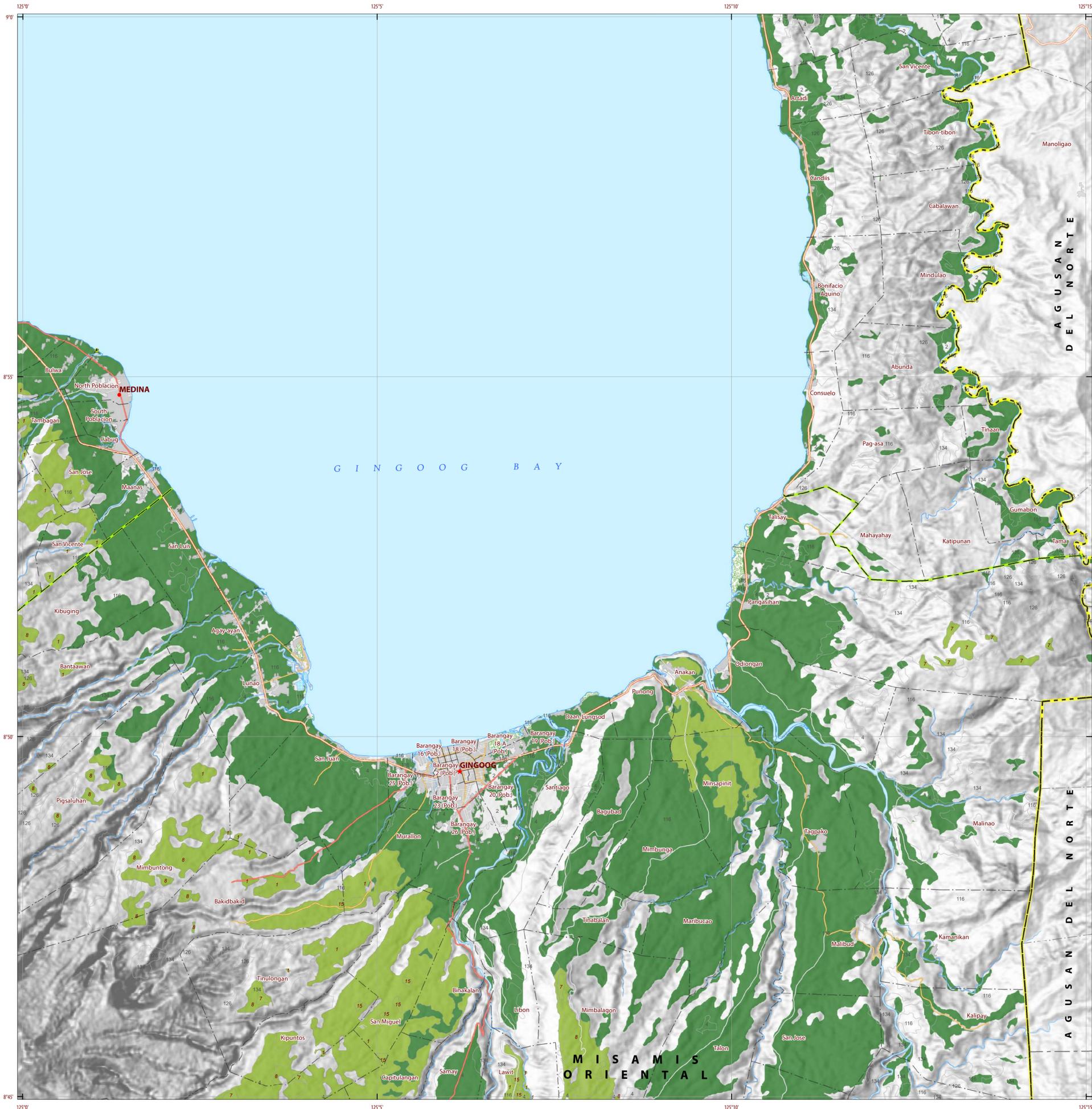
Project Leader : BERNARDO B. PASCUA
GIS and Cartography : IRWIN K. SAMALCA

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.

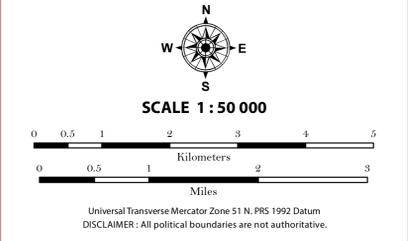
This publication is licensed under a Creative Commons Attribution 4.0 International License. Unless otherwise noted, copyright and any other intellectual property rights in this publication is owned by the Philippine Government. This publication should be attributed as:
BSWM, 2019. Land Suitability Map Series for Cacao of the PROVINCE OF MISAMIS ORIENTAL (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) 332-9334 E-mail: bswmcenter@da.gov.ph



LAND SUITABILITY MAP CACAO

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

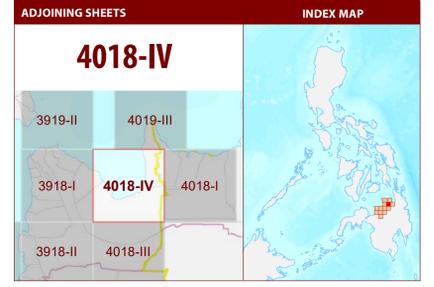
- NGP Areas
- Cacao
- Land limitation
- Land use

CONVENTIONAL SIGNS

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

LAND USE

- Built-up
- Fishpond
- Mangrove



MISCELLANEOUS INFORMATION

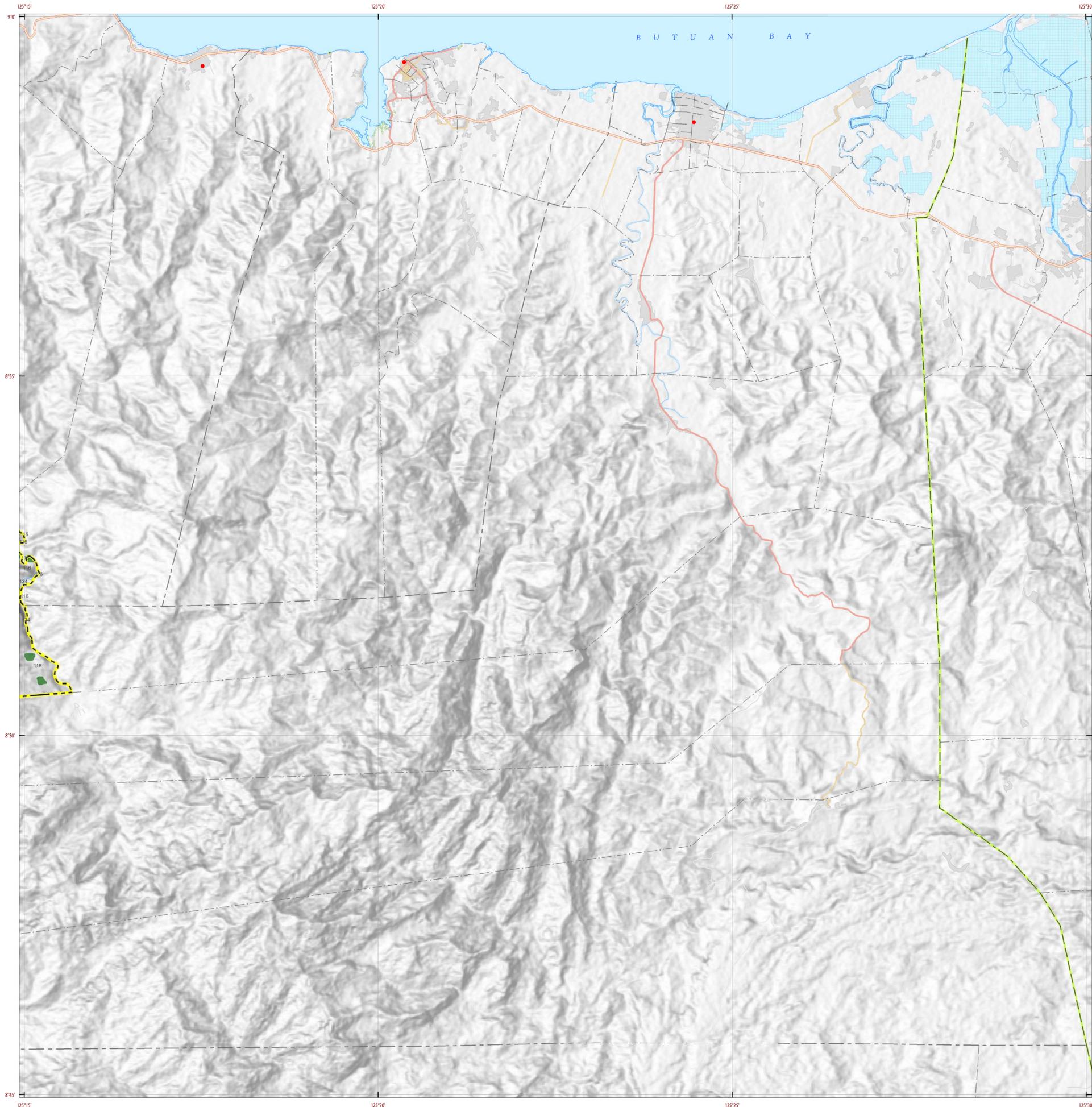
SOURCES OF INFORMATION : Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soils Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from 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, XII and XIII (Caraga)
: Local Government Unit (LGU) of covered provinces and municipalities

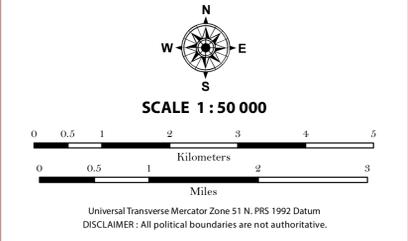
Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM).
Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.

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 Cacao of the PROVINCE OF MISAMIS ORIENTAL (50,000 Scale). CC BY-NC-SA 4.0.



LAND SUITABILITY MAP CACAO

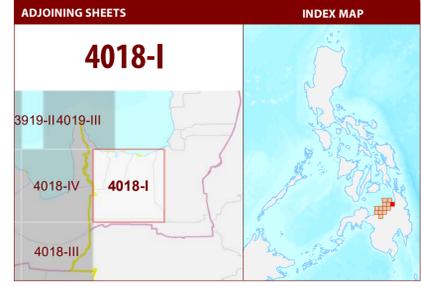
LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS



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 | PLACES |
| Secondary | Municipality | Capital City / City |
| Tertiary | Barangay | 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 : IRWIN 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 Cacao of the PROVINCE OF MISAMIS ORIENTAL (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 CACAO

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

LAND USE

- Built-up
- Fishpond
- Mangrove

ADJOINING SHEETS

3818-II

3918-I, 3818-III, 3817-I, 3917-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 : IRWIN 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 Cacao of the PROVINCE OF MISAMIS ORIENTAL (50,000 Scale). CC BY NC SA 4.0.

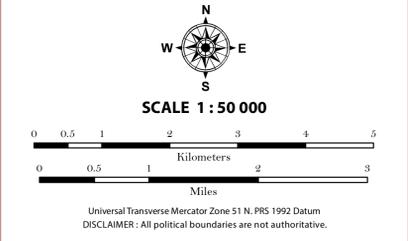
**REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF AGRICULTURE
BUREAU OF SOILS AND WATER MANAGEMENT**
SRDC Bldg., Elliptical Road Cor. Visayas Avenue, Diliman, Quezon City 1101
Tel/Fax No. +(632) 332-9534 E-mail: bswmcenter@da.gov.ph

PROVINCE OF MISAMIS ORIENTAL Sheet 6 of 13 Sheet No. 3818-II



LAND SUITABILITY MAP CACAO

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

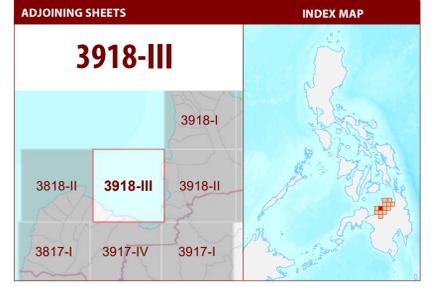
- NGP Areas
- Cacao
- Land limitation
- Land use

CONVENTIONAL SIGNS

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

LAND USE

- Built-up
- Fishpond
- Mangrove



MISCELLANEOUS INFORMATION

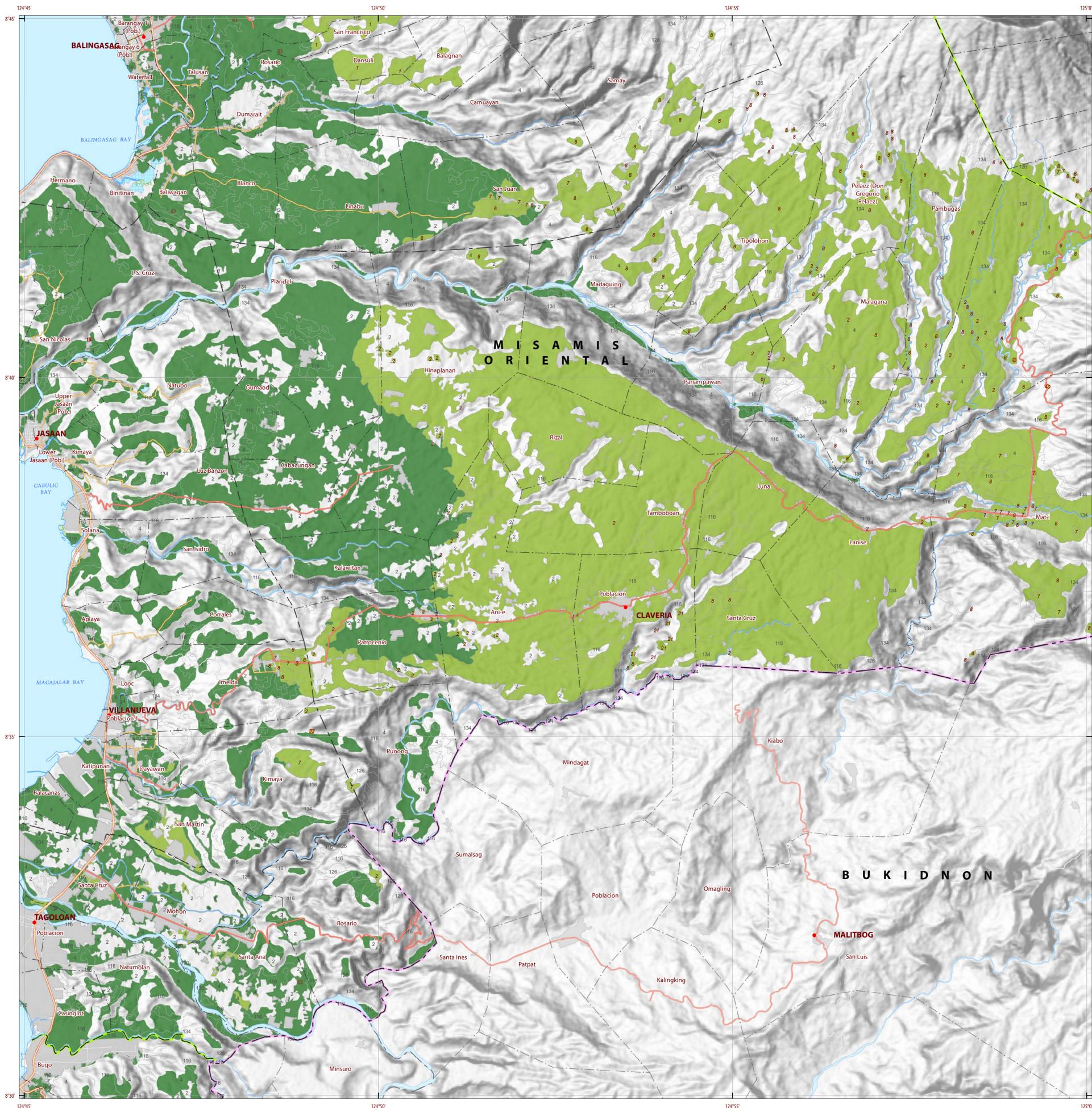
SOURCES OF INFORMATION : Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soils Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from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

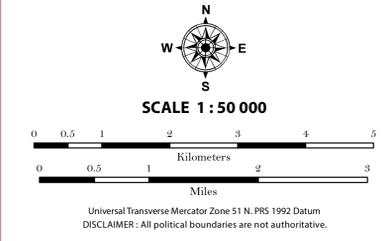
Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM).
 Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.

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 Cacao of the PROVINCE OF MISAMIS ORIENTAL (50,000 Scale). CC BY NC SA 4.0.



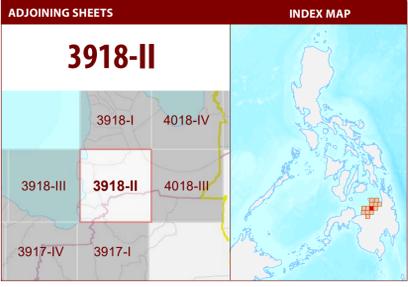
LAND SUITABILITY MAP CACAO

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).

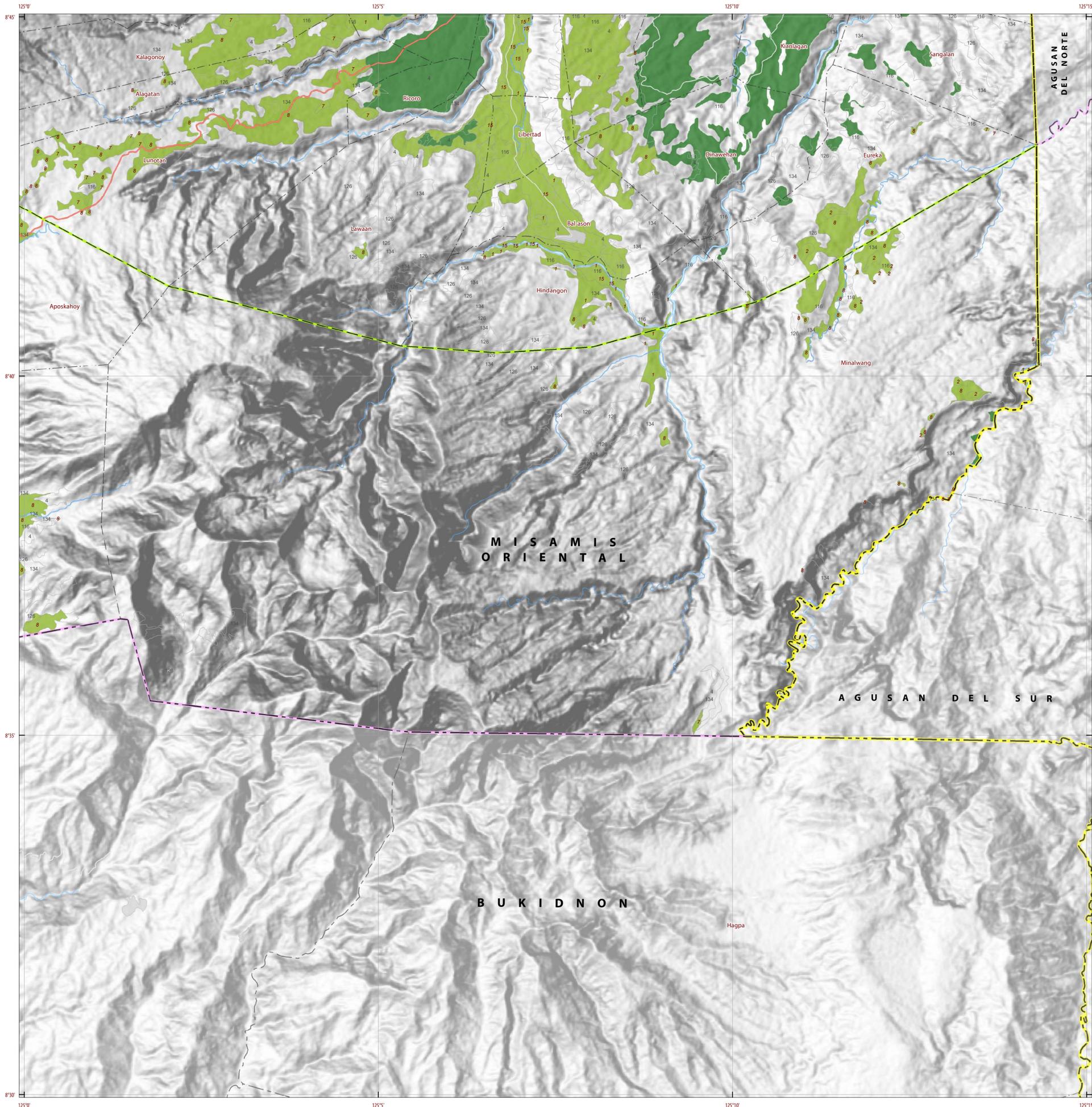
Project Leader : BERNARDO B. PASCUA
GIS and Cartography : IRWIN K. SAMALCA

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, 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.

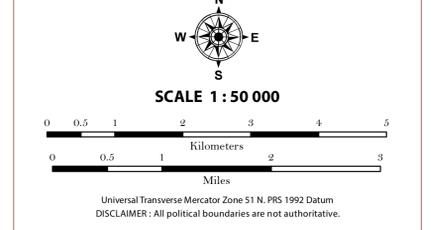
This publication is licensed under a Creative Commons Attribution 4.0 International License. Unless otherwise noted, copyright and any other intellectual property rights, in this publication is owned by the Philippine Government. This publication should be attributed as:
BSWM, 2019. Land Suitability Map Series for Cacao of the PROVINCE OF MISAMIS ORIENTAL (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 CACAO

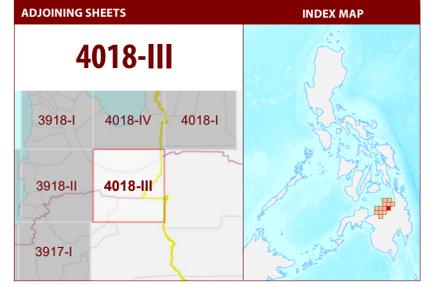
LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS



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 | PLACES |
| Secondary | Municipality | Capital City / City |
| Tertiary | Barangay | 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).

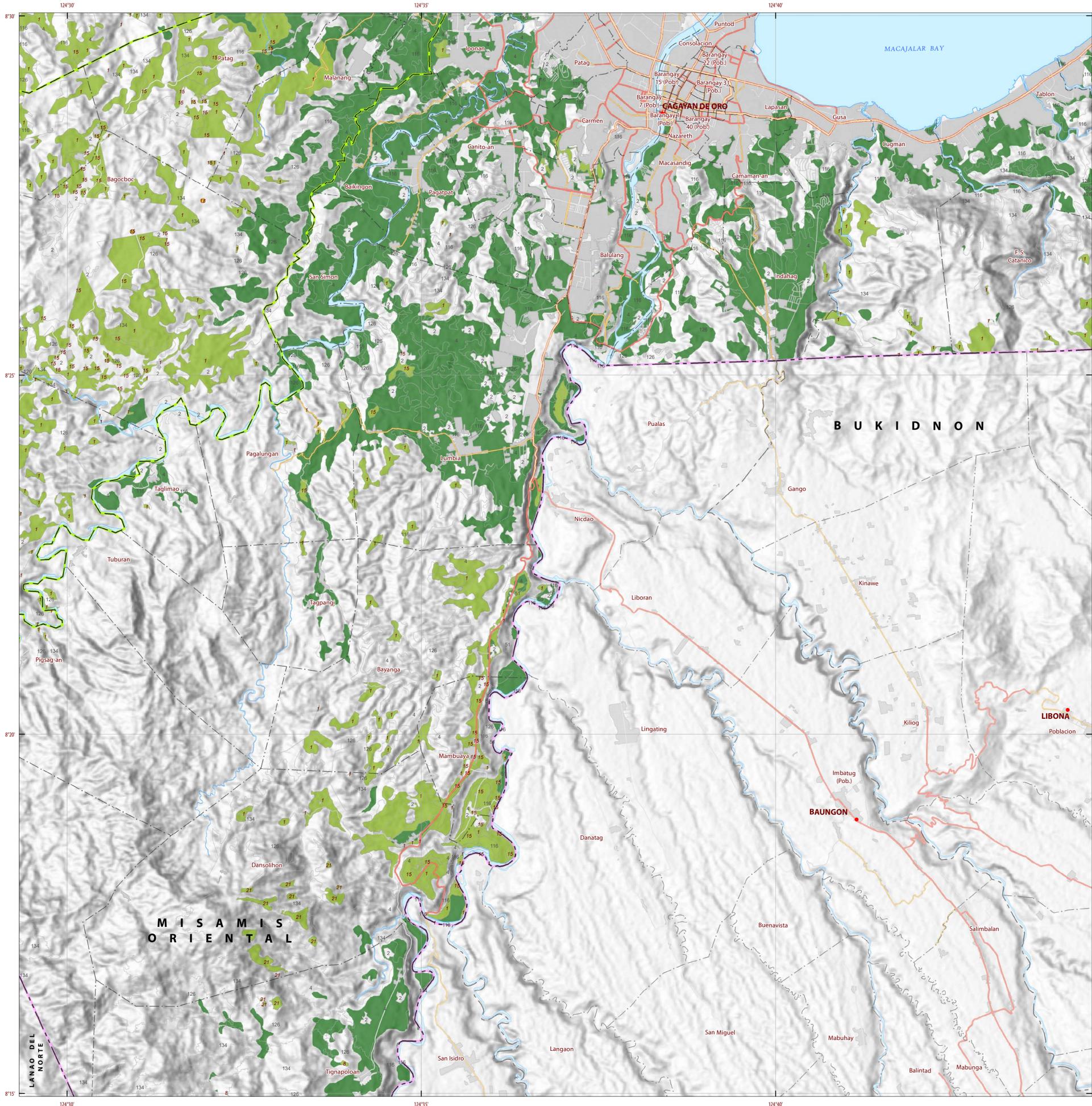
Project Leader : BERNARDO B. PASCUA
 GIS and Cartography : IRWIN K. SAMALCA

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 Cacao of the PROVINCE OF MISAMIS ORIENTAL (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 CACAO

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000

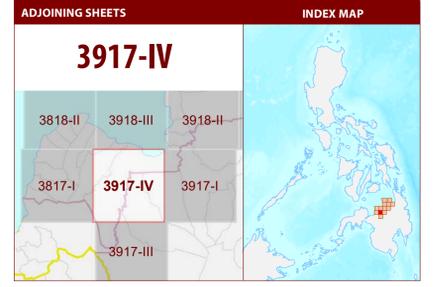


Universal Transverse Mercator Zone 51 N, PRS 1992 Datum
DISCLAIMER: All political boundaries are not authoritative.

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



MISCELLANEOUS INFORMATION

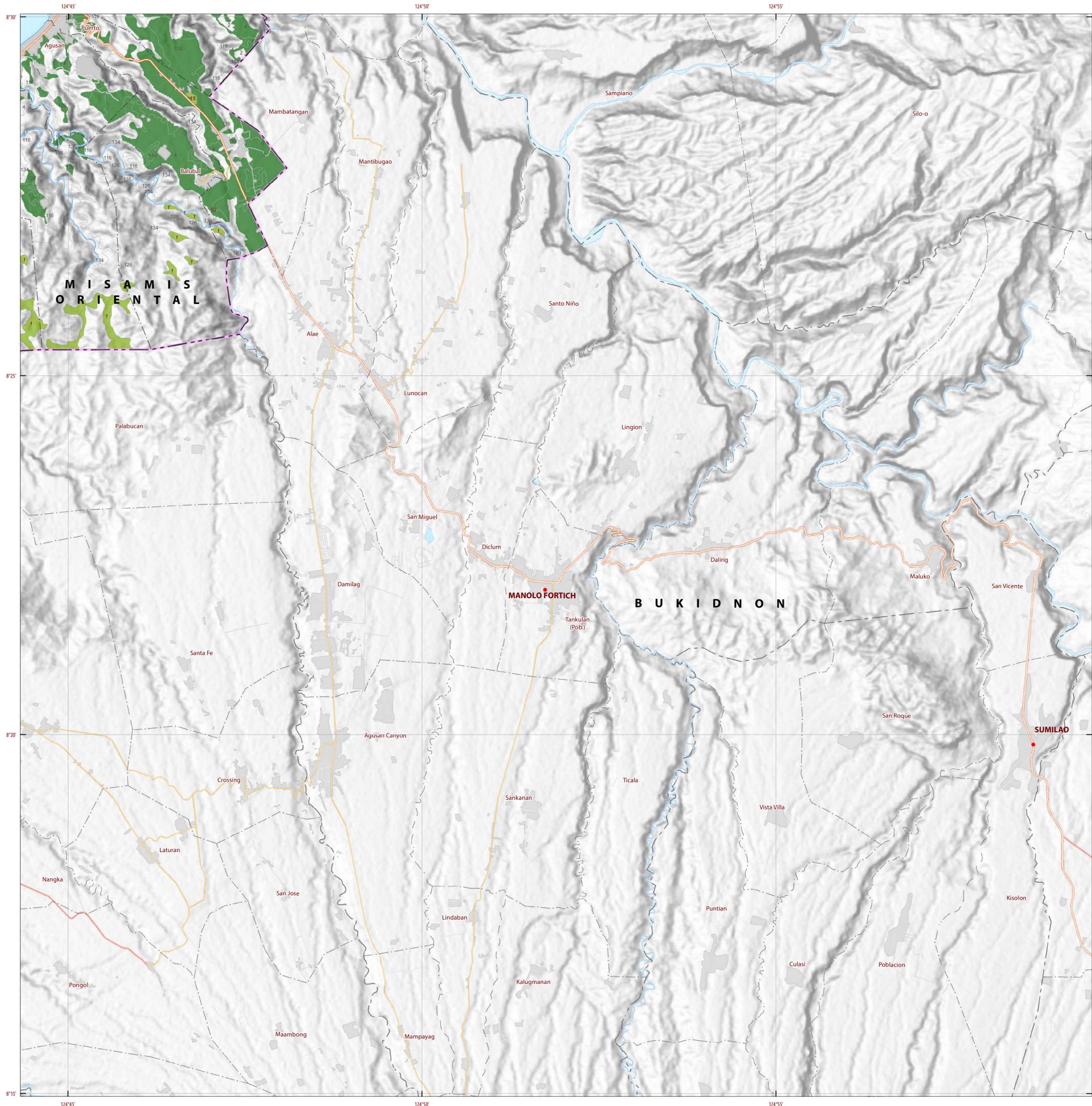
SOURCES OF INFORMATION : Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soils Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from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

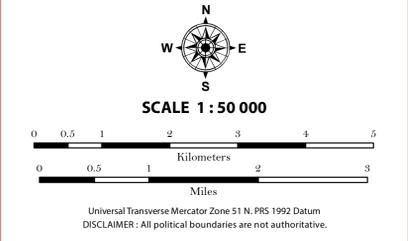
Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM).
Users noting errors or omissions in this publication are requested to inform the Bureau of Soils and Water Management.

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 Cacao of the PROVINCE OF MISAMIS ORIENTAL (50,000 Scale). CC BY NC SA 4.0.



LAND SUITABILITY MAP CACAO

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

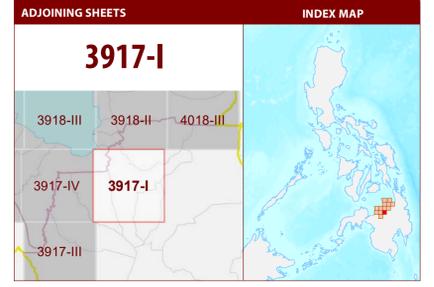
- NGP Areas
- Cacao
- Land limitation
- Land use

CONVENTIONAL SIGNS

ROADS	BOUNDARY	HYDROLOGY
Expressway	Region	Sea / Shoreline
Trunk line	Province	Lakes / Rivers
Primary	District	PLACES
Secondary	Municipality	★ Capital City / City
Tertiary	Barangay	● 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).

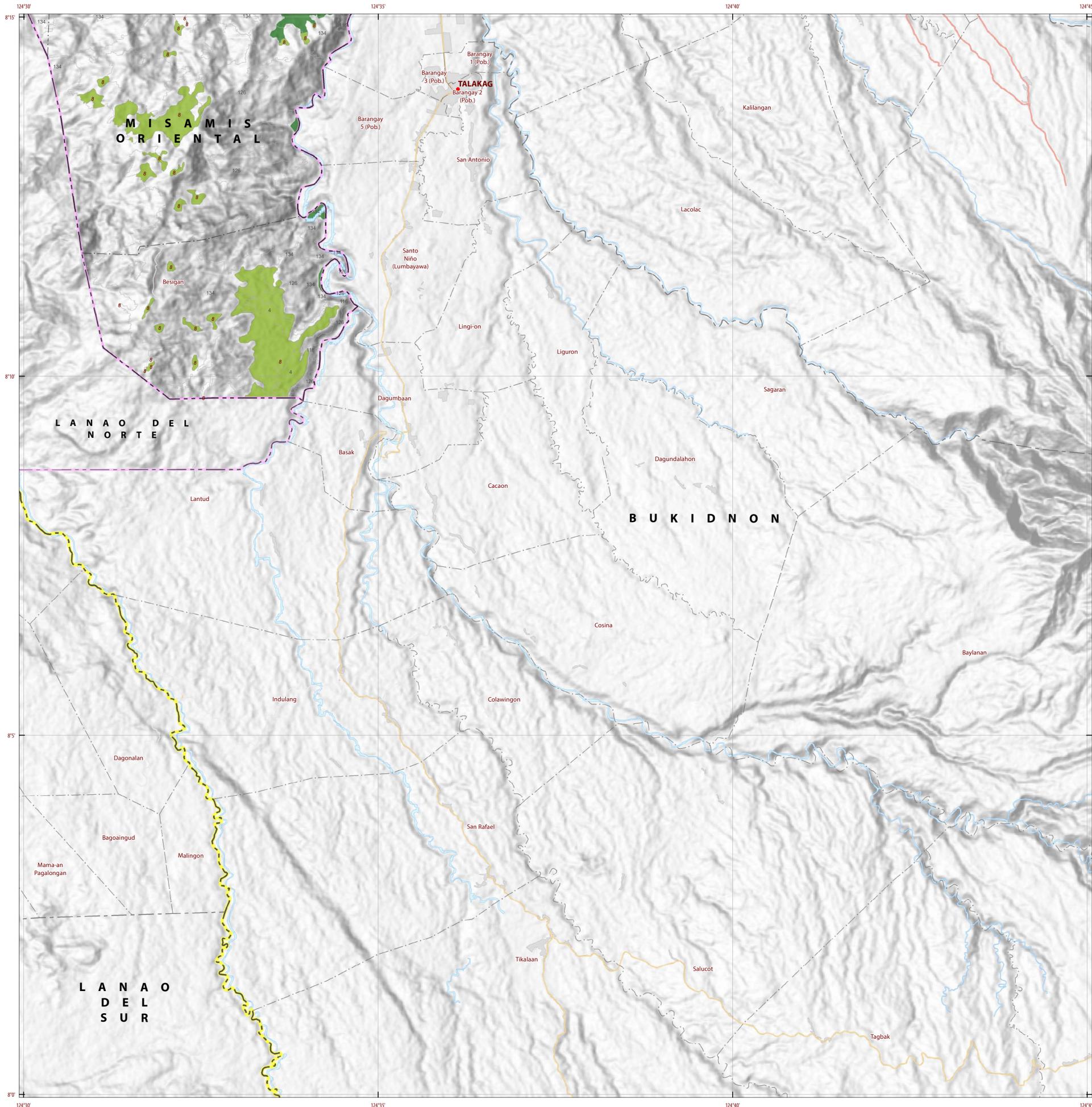
Project Leader : BERNARDO B. PASCUA
 GIS and Cartography : IRWIN K. SAMALCA

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 Cacao of the PROVINCE OF MISAMIS ORIENTAL (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 CACAO

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.

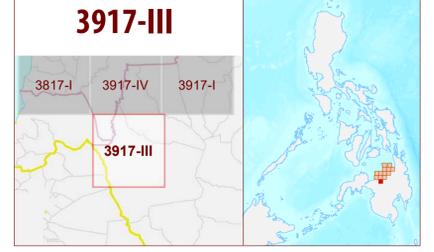
LEGEND

- 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 : IRWIN 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 Cacao of the PROVINCE OF MISAMIS ORIENTAL (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