

LAND SUITABILITY MAP

ARABICA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

PROVINCE OF BATANGAS



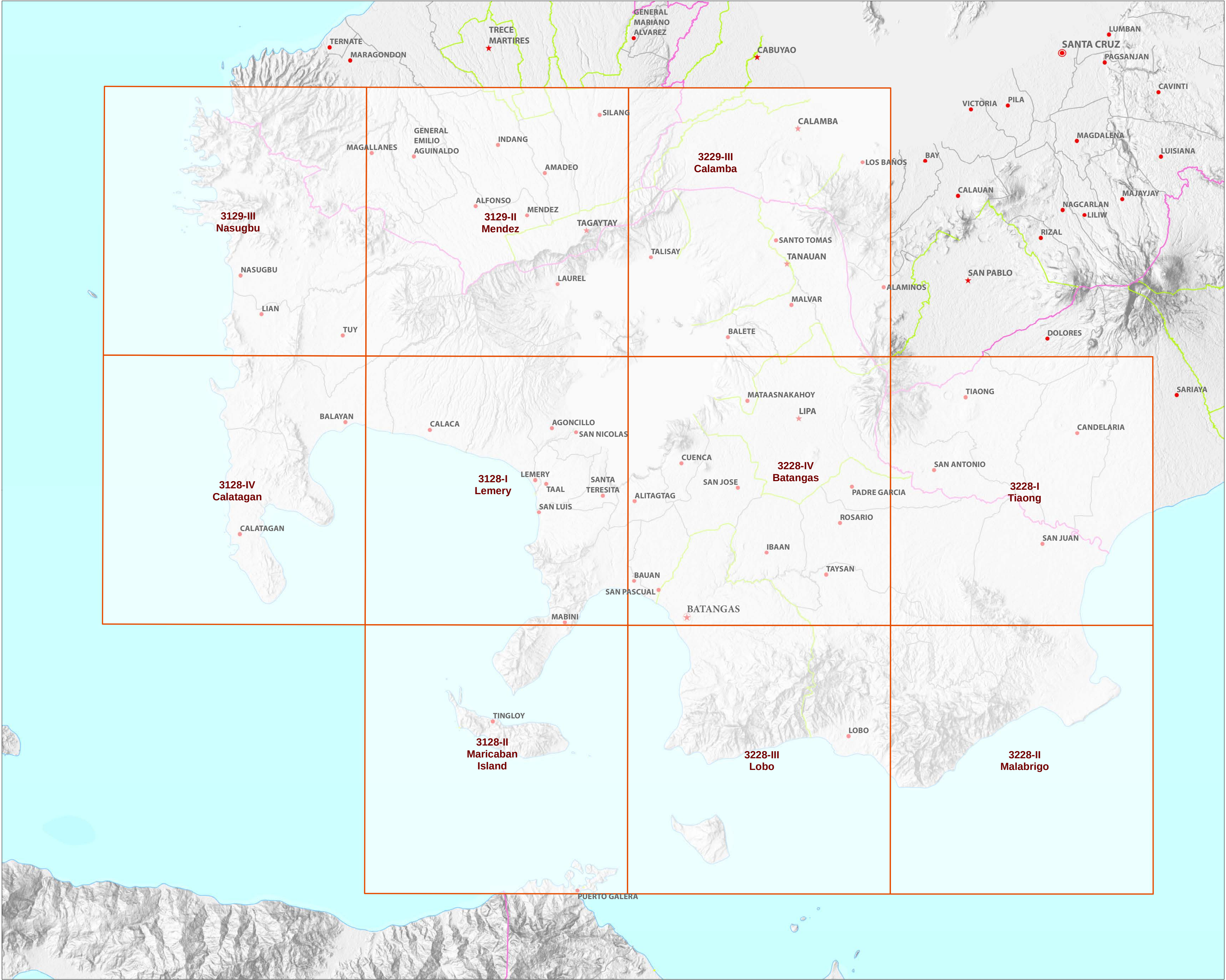
REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF AGRICULTURE
BUREAU OF SOILS AND WATER MANAGEMENT

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MAP INDEX

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

PROVINCE OF BATANGAS



LEGEND

Places

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

Administrative Boundary

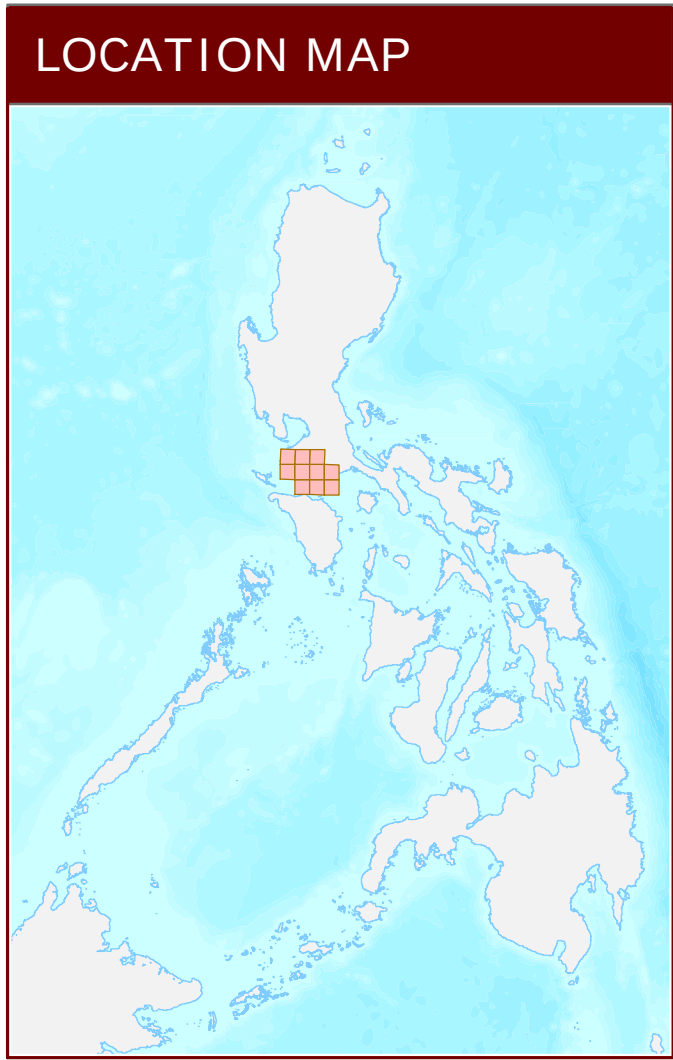
- Regional
- Provincial
- City
- Municipal

Map Index

- Index grid

Topographic Relief

Bathymetry



LAND SUITABILITY MAP FOR ARABICA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS BATANGAS, REGION IV-A

EXTENT OF SUITABILITY FOR ARABICA COFFEE PRODUCTION BY MUNICIPALITY

MUNICIPALITY	EXISTING COFFEE (Ha)			TOTAL EXISTING AREA (Ha)	EXPANSION AREA (Ha)						CONFLICT RESOLUTION (Ha)						TOTAL POTENTIAL EXPANSION AREA (Ha)
					Coconut		Shrubland, unmanaged*		Grassland, unmanaged*		Corn		Rice paddy, non-irrigated		Other Crops		
	\$1	\$2	\$3		\$1	\$2	\$1	\$2	\$1	\$2	\$1	\$2	\$1	\$2	\$1	\$2	
AGONCILLO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ALITAGTAG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BALAYAN	-	-	3	3	-	8	-	-	-	-	-	-	-	-	-	-	8
BALETE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BATANGAS CITY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BAUAN	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-
CALACA	-	5	58	63	-	16	-	-	-	-	-	-	-	-	-	4	20
CALATAGAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CITY OF TANAUAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CUENCA	-	-	1	1	-	6	-	-	-	-	-	-	-	-	-	-	6
IBAAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LAUREL	-	-	-	-	-	6	-	-	-	2	-	-	-	-	-	-	8
LEMERY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LIAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LIPA CITY	-	-	59	59	-	-	-	-	-	-	-	-	-	-	-	-	-
LOBO	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-
MABINI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MALVAR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MATAASNAKAOY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NASUGBU	-	-	11	11	-	284	-	7	-	-	-	63	-	22	-	-	376
PADRE GARCIA	-	-	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-
ROSARIO	-	-	9	9	-	-	-	-	-	-	-	-	-	-	-	-	-
SAN JOSE	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
SAN JUAN	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
SAN LUIS	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
SAN NICOLAS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SAN PASCUAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SANTA TERESITA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SANTO TOMAS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TAAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TALISAY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TAYSAN	-	-	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-
TINGLOY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TUY	-	-	-	-	-	-	-	14	-	14	-	-	-	-	-	-	28
TOTAL	-	5	164	169	-	320	-	21	-	16	-	63	-	22	-	4	447

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

AGRONOMIC REQUIREMENT OF ARABICA COFFEE 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
Coffee (Arabica)	S1	<8	>100	CL, SiCL, SCL, SC, SiC, C, HC	WD,MWD	5.6 -7.2	high	none-slight	none-slight	none-few	1000-2000	2001-4500	I, III, IV
	S2	8 - 30	30 - 100	FSL, L, SiL	SPD,PD	5.1 - 5.5 7.3 - 7.8	medium	moderate	moderate	common	500-1000 2000-2500	1000-2000	I, II
	S3	>30	<30	S, LS, CSL, SL	VPD,ED	<5.0 - > 7.9	low	severe	severe	many	<500 >2500	<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 EI2 - 500 - 1000m or 2000 - 2500m EI3 - < 500m or > 2500m	SOIL DRAINAGE D2 - Somewhat poorly drained to poorly drained D3 - Very poorly drained or excessively drained
--	---

SLOPE/TOPOGRAPHY T2 - Undulating to moderately steep T3 - Steep to very steep
--

SOIL TEXTURE Tc - Coarse texture
--

SOIL DEPTH Sh2 - Shallow to moderately deep (30 - 100cm) Sh3 - Very shallow (< 30cm)

ROCK OUTCROPS Rc2 - Common Rc3 - Many
--

SOIL EROSION E2 - Moderate erosion E3 - Severe erosion

FLOODING F2 - Moderate seasonal flooding F3 - Severe seasonal flooding

SUITABILITY CLASSES:

Highly Suitable (S1)
Land having no significant limitation to sustained application of a given use, or only minor limitations that will not significantly reduce productivity or benefits and will not raise inputs above an acceptable level.

Moderately Suitable (S2)
Land having limitation which in aggregate are moderately severe for sustained application of a given use; the limitation will reduce productivity or benefits and increase required inputs to the extent that the overall advantage to be gained from the use, although still attractive, will be appreciably inferior to that expected on class S1 land.

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.

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

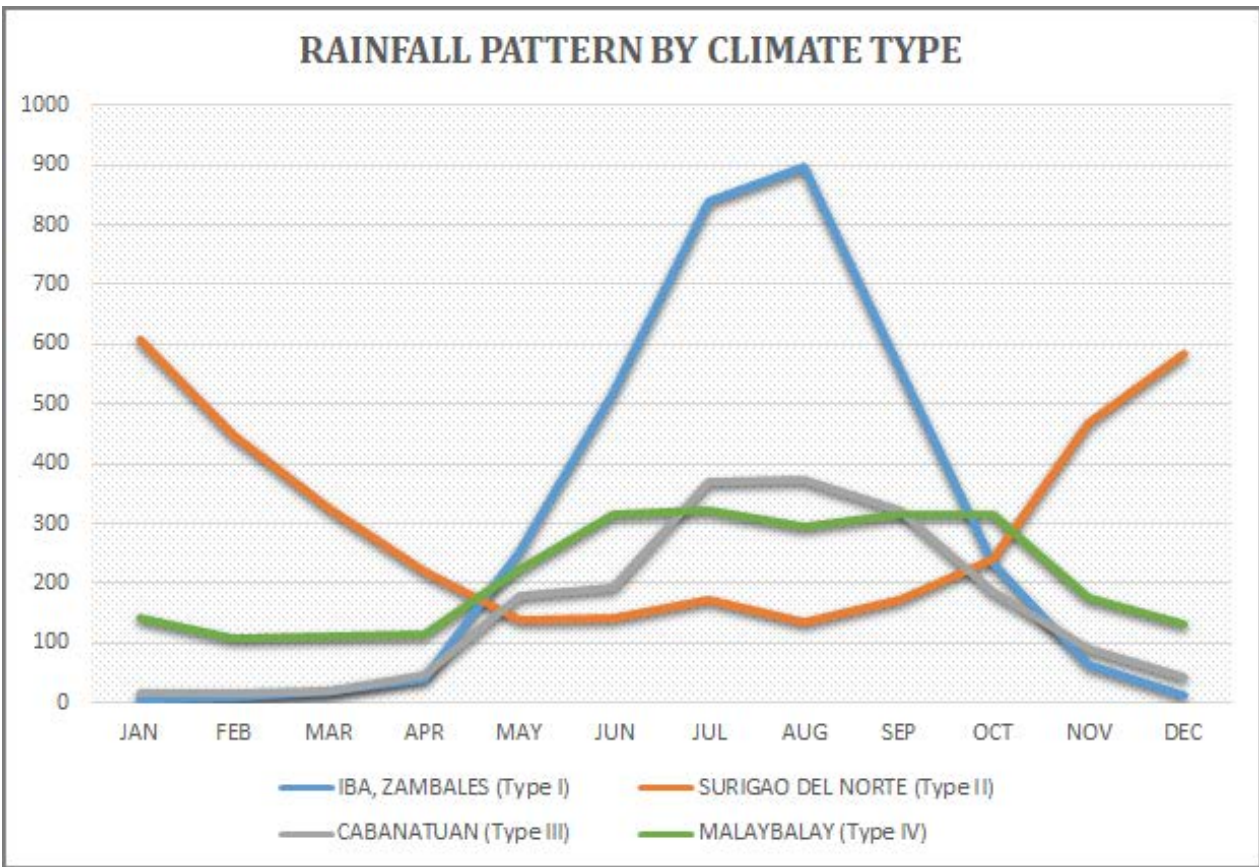
TYPE I : Two pronounced season, dry from November to April and wet during the rest of the year. Maximum rain period is from June to September

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 Batangas belongs to Type I climate classification and the rest on Eastern part belongs to Type III.



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>>.

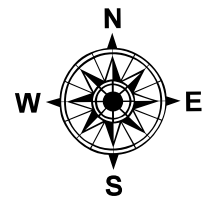
CODE	LAND LIMITATION	CODE	LAND LIMITATION	CODE	LAND LIMITATION
1	EI2	11	T2-EI2-E3-Sh2-Rc2	21	T3-EI2-E3-Sh3-Rc3
2	EI2-E2-Sh2-Rc2	12	T2-EI2-E3-Sh2-Rc3		
3	EI2-F2-D2	13	T2-EI2-F2-D2		
4	EI2-F3-D2	14	T2-EI2-F3-D2		
5	EI2-Sh2-Rc2	15	T3-E3-Sh3-Rc3		
6	EI2-Sh2-Rc3	16	T3-EI2		
7	EI2-Tc	17	T3-EI2-E3		
8	T2-EI2	18	T3-EI2-E3-Sh2-Rc3		
9	T2-EI2-E3	19	T3-EI2-E3-Sh3-Rc2		
10	T2-EI2-E3-Rc2	20	T3-EI2-E3-Sh3-Rc3		

CODE	LAND USE
2	Rice paddy, non-irrigated
4	Corn
34	Diversified crops
81	Coffee
112	Sugarcane
116	Coconut
126	Grassland
134	Shrubs, unmanaged

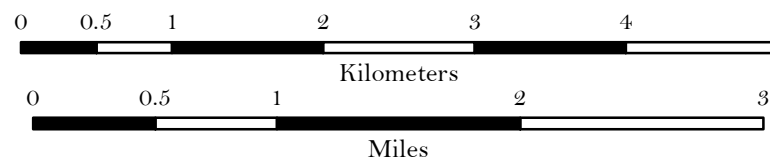


LAND SUITABILITY MAP ARABICA COFFEE

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

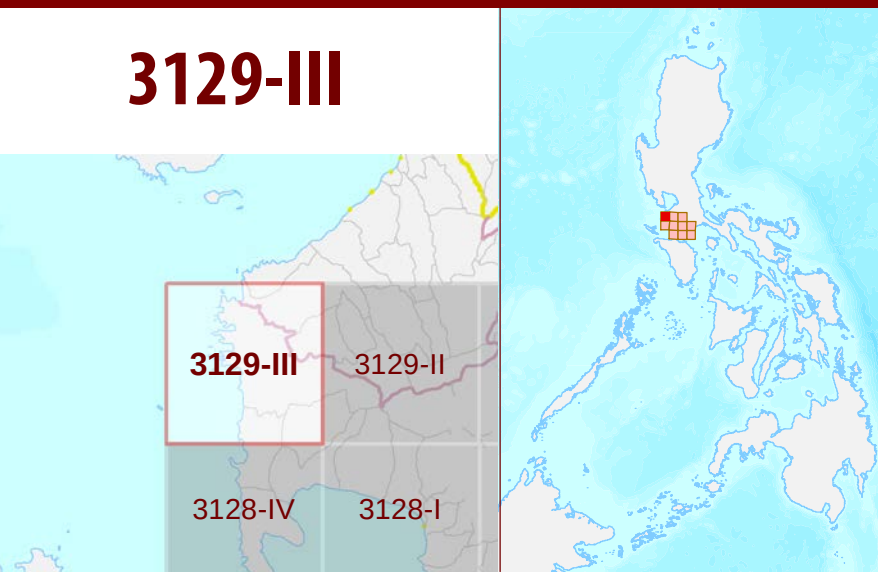
OTHER SIGNS

- NGP Areas
- Coffee
- 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 Coffee and Cacao Project** implemented by BSWM (2017).

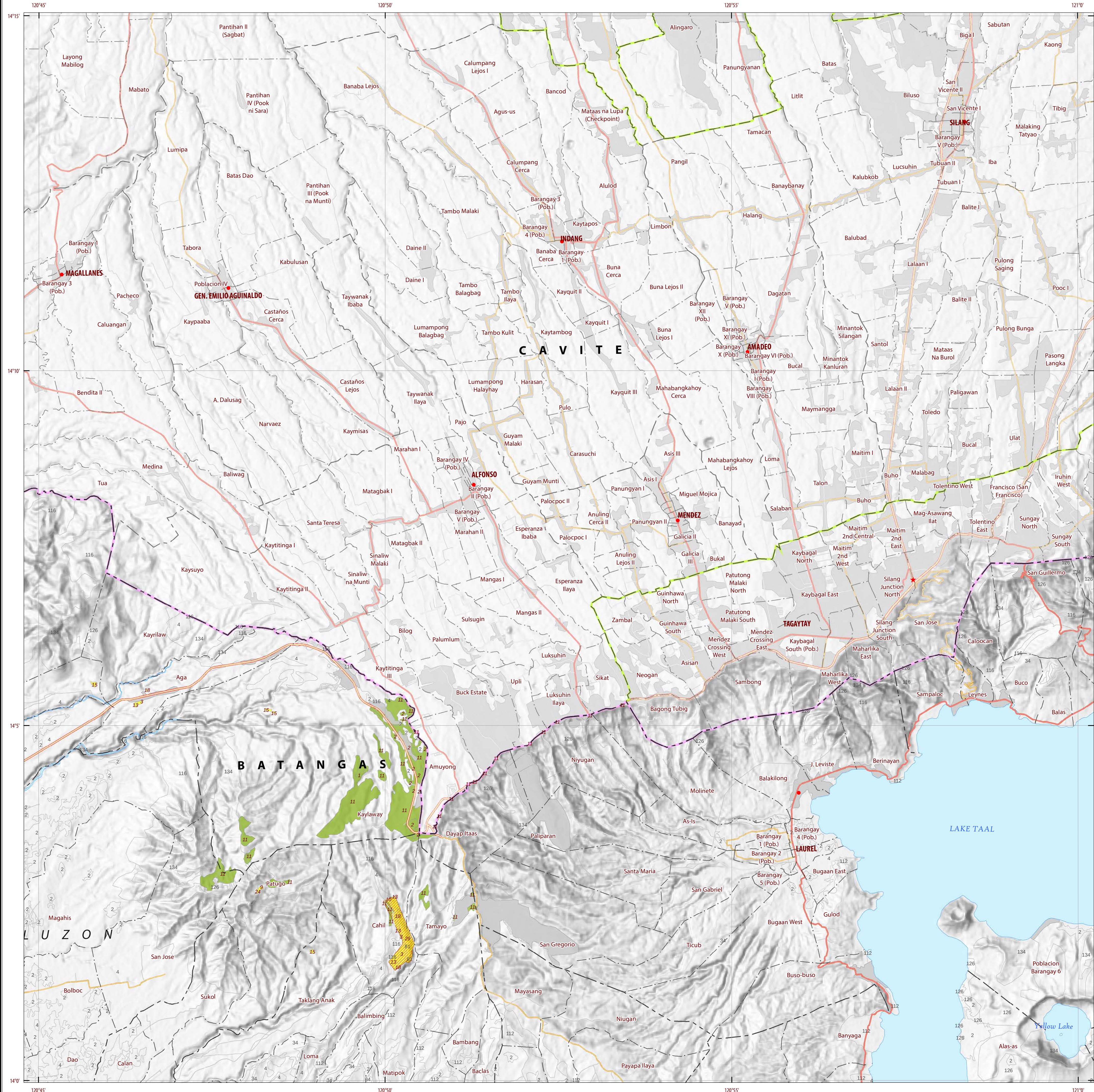
Project Leader : BERNARDO B. PASCUA
GIS and Cartography : IRWIN K. SAMALCA

Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)
Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)
Department of Agriculture Regional Field Office of CAR, Region II, IV-A, IV-B, VI, VII, VIII, IX, X, XI, XII and CARAGA(XIII)
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).
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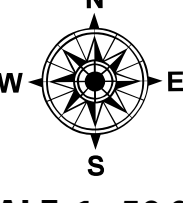
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ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000



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LEGEND

SUITABILITY CLASSES

S1

Highly Suitable

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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.

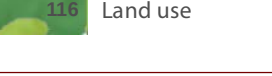
Not Suitable/ Not Relevant

OTHER SIGNS

 NGP Areas

 Coffee

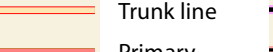
 Land limitation

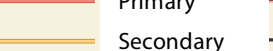
 Land use

CONVENTIONAL SIGNS

ROADS

 Expressway

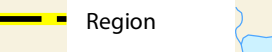
 Trunk line

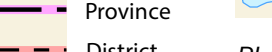
 Primary

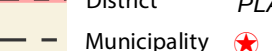
 Secondary

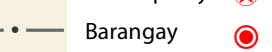
 Tertiary

BOUNDARY

 Region

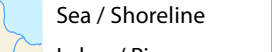
 Province

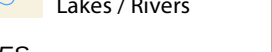
 District

 Municipality

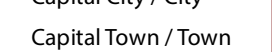
 Barangay

HYDROLOGY

 Sea / Shoreline

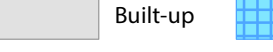
 Lakes / Rivers

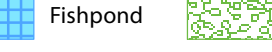
PLACES

 Capital City / City

 Capital Town / Town

LAND USE

 Built-up

 Fishpond

 Mangrove

ADJOINING SHEETS

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3128-I

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SOURCES OF INFORMATION

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PROVINCE OF BATANGAS

Sheet 2 of 10

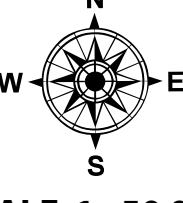
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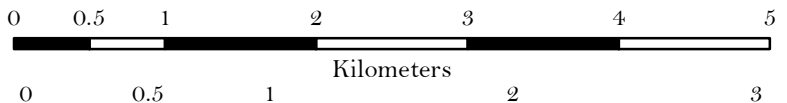


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ARABICA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000



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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

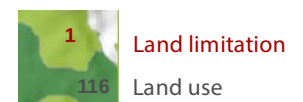
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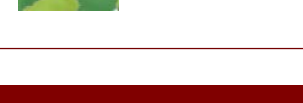
Not Suitable/ Not Relevant

OTHER SIGNS

 NGP Areas

 Coffee

 Land limitation

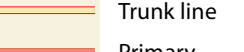
 Land use

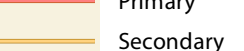
CONVENTIONAL SIGNS

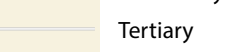
ROADS

 Expressway

 Trunk line

 Primary

 Secondary

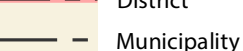
 Tertiary

BOUNDARY

 Region

 Province

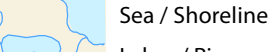
 District

 Municipality

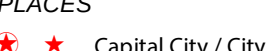
 Barangay

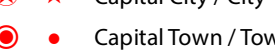
HYDROLOGY

 Sea / Shoreline

 Lakes / Rivers

PLACES

 Capital City / City

 Capital Town / Town

LAND USE

 Built-up

 Fishpond

 Mangrove

ADJOINING SHEETS

3229-III

3129-II 3229-III 3128-I 3228-IV 3228-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 Coffee and Cacao 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

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: Department of Agriculture Regional Field Office of CAR, Region II, IV-A, IV-B, VI, VII, VIII, IX, X, XI, XII and CARAGA(XIII)
: Local Government Unit (LGU) of covered provinces and municipalities

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DEPARTMENT OF AGRICULTURE

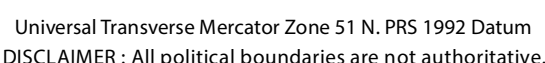
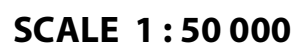
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LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SUITABILITY CLASSES

- ☐
- Not Suitable/ Not Relevant

 NGP

ROADS	BOUNDARY	HYDROLOGY
-------	----------	-----------

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

 Built-up Fishpond Mangrove

INDEX MAP

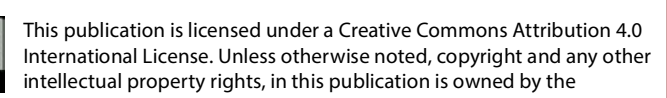
SOURCES OF INFORMATION : Topographic information taken from NAMRIA Topographic Map

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. Remote sensing data from the Remote Sensing Use System (FAS, 2015) and Philippines Rice Information System (PRISM) (IRRI, 2015). Data analysis and compilation through the **Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Coffee and Cacao Project** implemented by BSWM (2017).

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Local Government Unit (LGU) of various provinces and municipalities

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BUREAU OF SOILS AND WATER MANAGEMENT

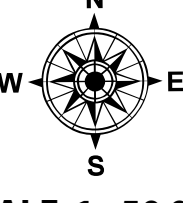
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Tel/Fax No.: (+632) 332-9534 E-mail: bswmclntcenter@yahoo.com



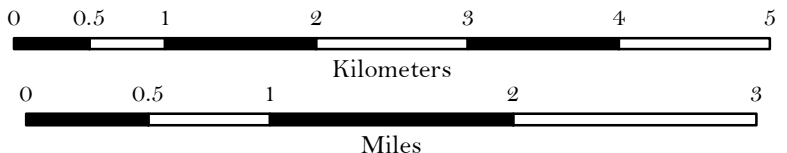


LAND SUITABILITY MAP
ARABICA COFFEE

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
- Coffee
- Land limitation
- Land use

CONVENTIONAL SIGNS

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

LAND USE

- Built-up
- Fishpond
- Mangrove

ADJOINING SHEETS

INDEX MAP

3128-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 Coffee and Cacao Project** implemented by ISWM (2017).

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

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: Department of Agriculture Regional Field Office of CAR, Region II, IV-A, IV-B, VI, VII, VIII, IX, X, XI, XII and CARAGA(XIII)
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PROVINCE OF BATANGAS

Sheet 5 of 10

Sheet No. 3128-I

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000


Kilometers


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. |

OTHER SIGNS

-  NGP Areas
 Coffee
 Land limitation
 Land use

CONVENTIONAL SIGNS

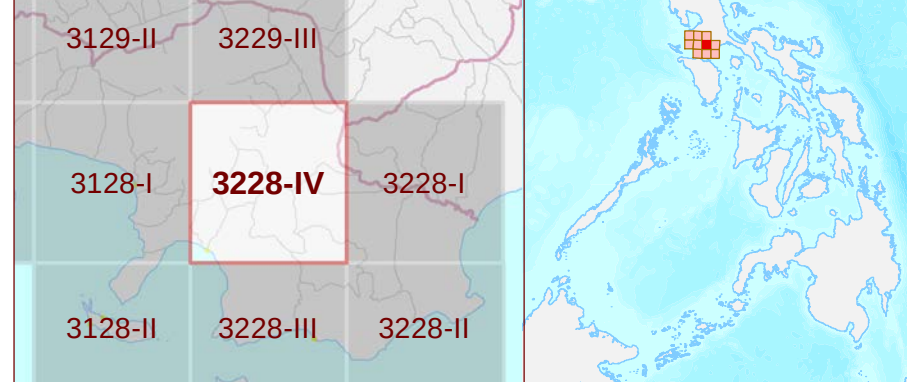
- | ROADS | BOUNDARY | HYDROLOGY |
|--|--|---|
|  Expressway |  Region |  Sea / Shoreline |
|  Trunk line |  Province |  Lakes / Rivers |
|  Primary |  District | PLACES |
|  Secondary |  Municipality |  Capital City / City |
|  Tertiary |  Barangay |  Capital Town / Town |

LAND USE	
 Built-up	 Fishpond
 Mangrove	 Mangrove

ADJOINING SHEETS

INDEX MAP

3228-IV



MISCELLANEOUS INFORMATION

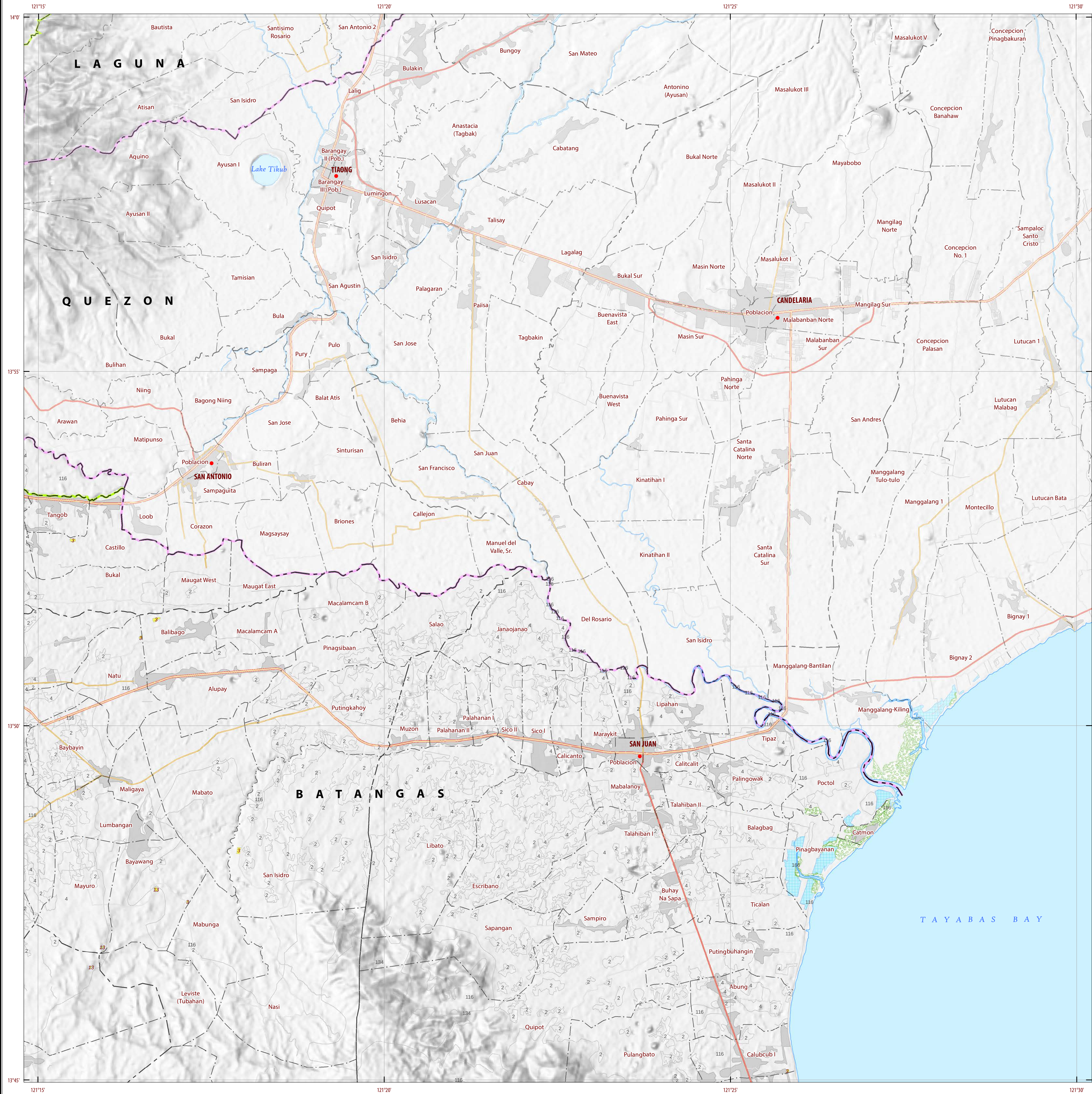
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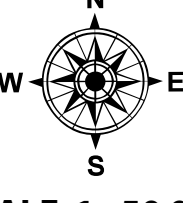
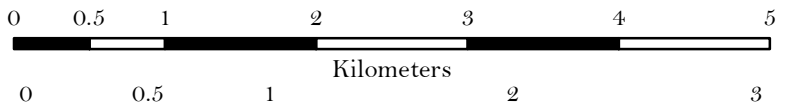
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LAND SUITABILITY MAP
ARABICA COFFEE

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

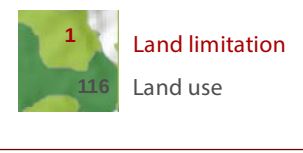
- Land having limitations which in aggregate are severe for sustained application of a given use and will so reduce productivity or benefits, or increase required inputs, that this expenditure will be only marginally justified.

Not Suitable/ Not Relevant

OTHER SIGNS

 NGP Areas

 Coffee

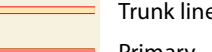
 Land limitation

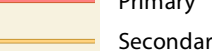
 Land use

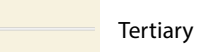
CONVENTIONAL SIGNS

ROADS

 Expressway

 Trunk line

 Primary

 Secondary

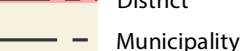
 Tertiary

BOUNDARY

 Region

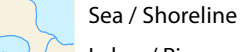
 Province

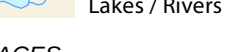
 District

 Municipality

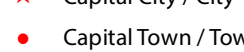
 Barangay

HYDROLOGY

 Sea / Shoreline

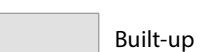
 Lakes / Rivers

PLACES

 Capital City / City

 Capital Town / Town

LAND USE

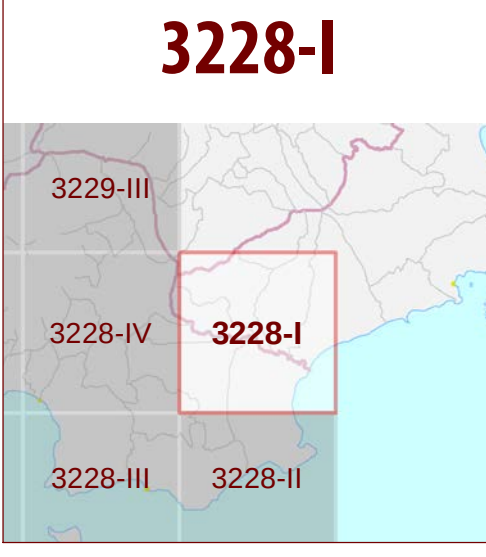
 Built-up

 Fishpond

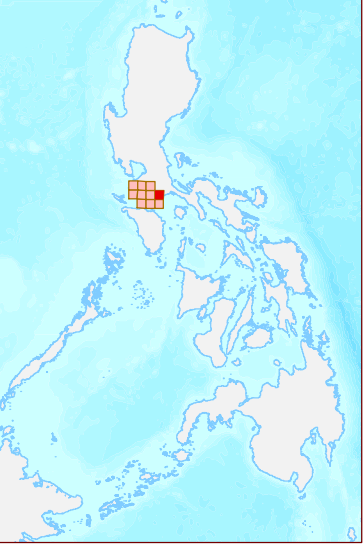
 Mangrove

ADJOINING SHEETS

3228-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 Coffee and Cacao Project implemented by BSWM (2017).

Project Leader

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GIS and Cartography

: IRVIN K. SAMALCA

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PROVINCE OF BATANGAS

Sheet 7 of 10

Sheet No. 3228-I

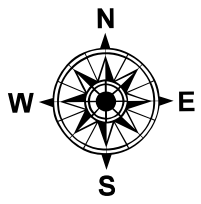




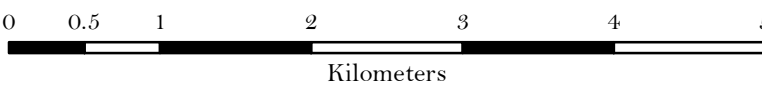
LAND SUITABILITY MAP

ARABICA COFFEE

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

Coffee

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

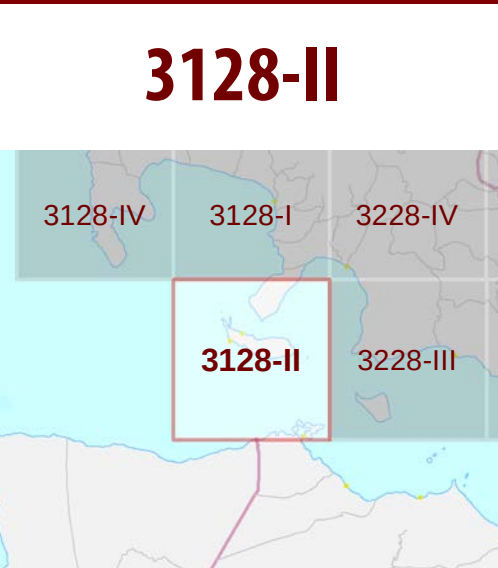
LAND USE

Built-up

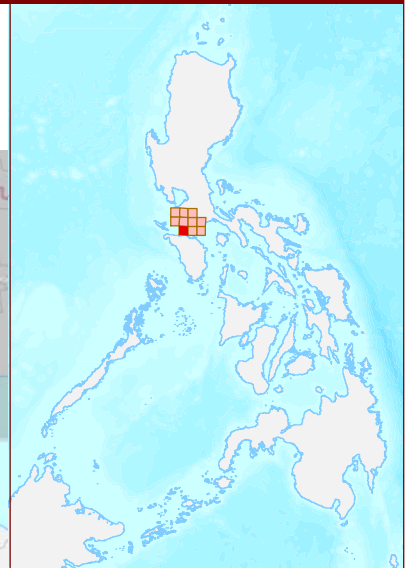
Fishpond

Mangrove

ADJOINING SHEETS



INDEX MAP



MISCELLANEOUS INFORMATION

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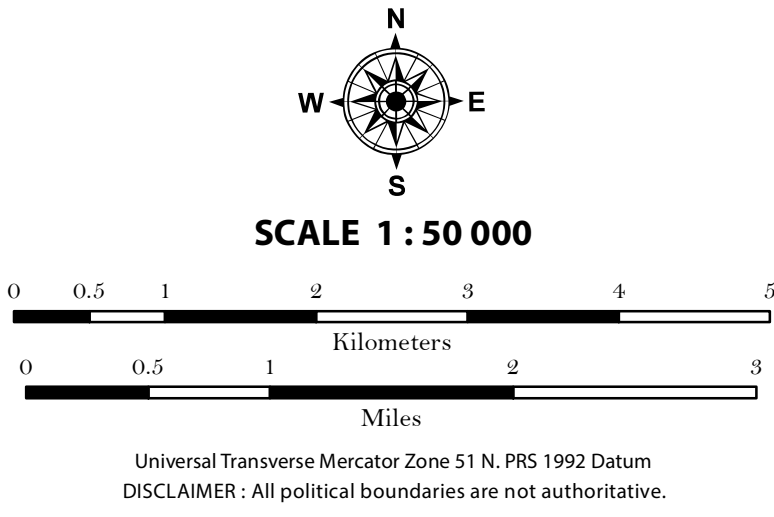
PROVINCE OF BATANGAS

Sheet 8 of 10 Sheet No. 3128-II



LAND SUITABILITY MAP
ARABICA COFFEE

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.
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Not Suitable/ Not Relevant

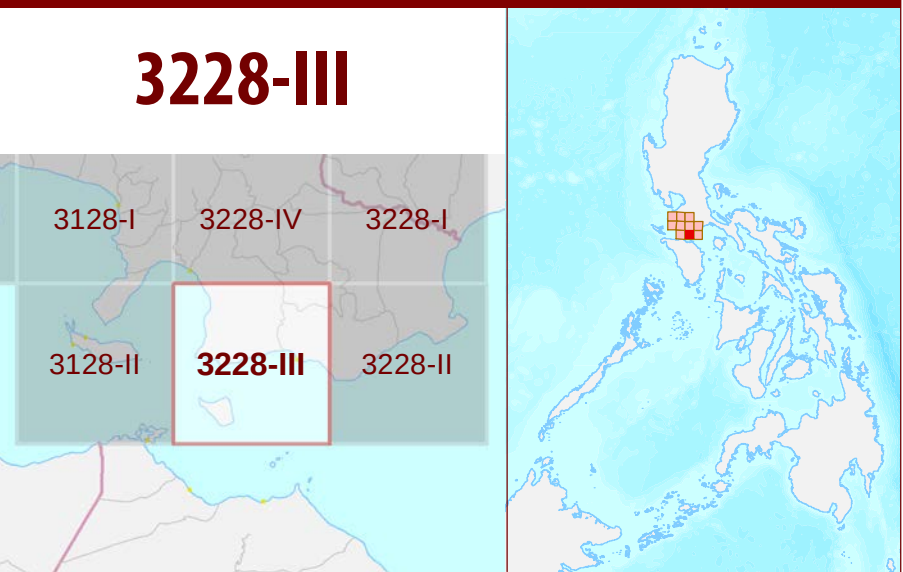
OTHER SIGNS

- NGP Areas
- Coffee
- 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

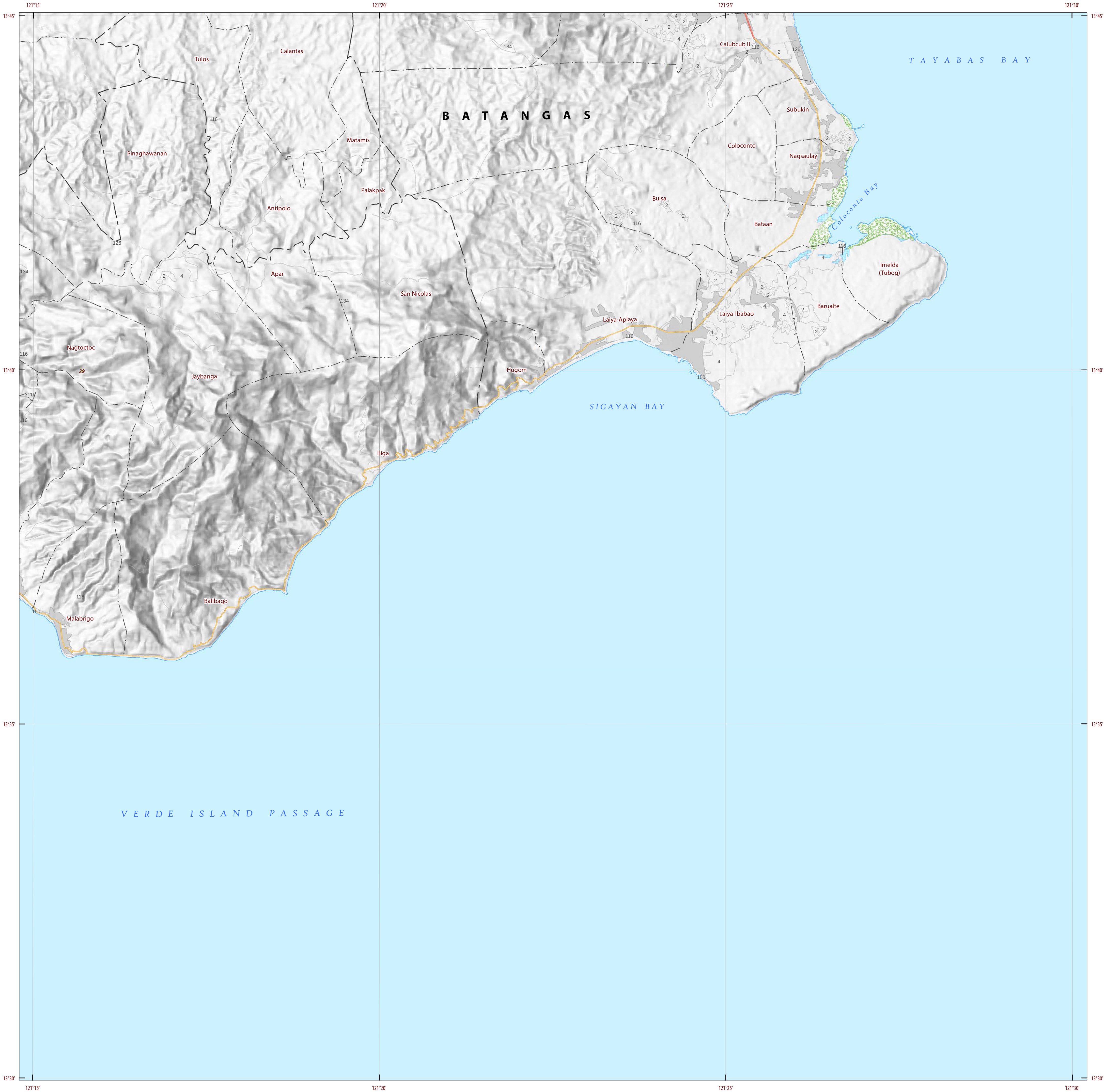
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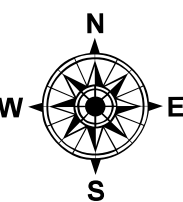
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LAND SUITABILITY MAP ARABICA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000

00.512345

Kilometers

00.5123

Miles

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

LEGEND

SUITABILITY CLASSES

S1

Highly Suitable - Land having no significant limitations to sustained application of a given use, or only minor limitations that will not significantly reduce productivity or benefits and will not raise inputs above an acceptable level.

S2

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

S3

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

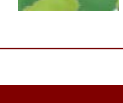
Not Suitable/ Not Relevant

OTHER SIGNS

NGP Areas

Coffee

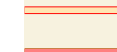
Land limitation

Land use

CONVENTIONAL SIGNS

ROADS

Expressway

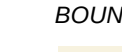
Trunk line

Primary

Secondary

Tertiary

BOUNDARY

Region

Province

District

Municipality

Barangay

HYDROLOGY

Sea / Shoreline

Lakes / Rivers

PLACES

Capital City / City

Capital Town / Town

LAND USE

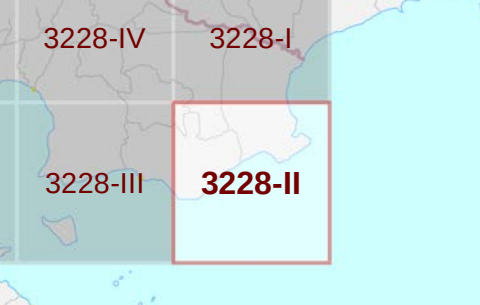
Built-up

Fishpond

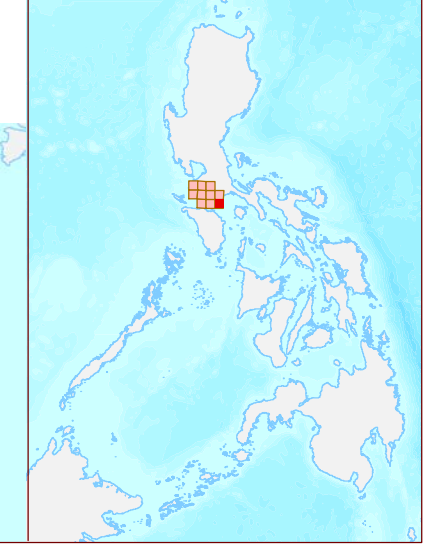
Mangrove

ADJOINING SHEETS

3228-II



INDEX MAP



MISCELLANEOUS INFORMATION

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

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: Department of Agriculture Regional Field Office of CAR, Region II, IV-A, IV-B, VI, VII, VIII, IX, X, XI, XII and CARAGA(XIII)
: 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).
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