

LAND SUITABILITY MAP

ROBUSTA, LIBERICA AND EXCELSA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

MOUNTAIN PROVINCE



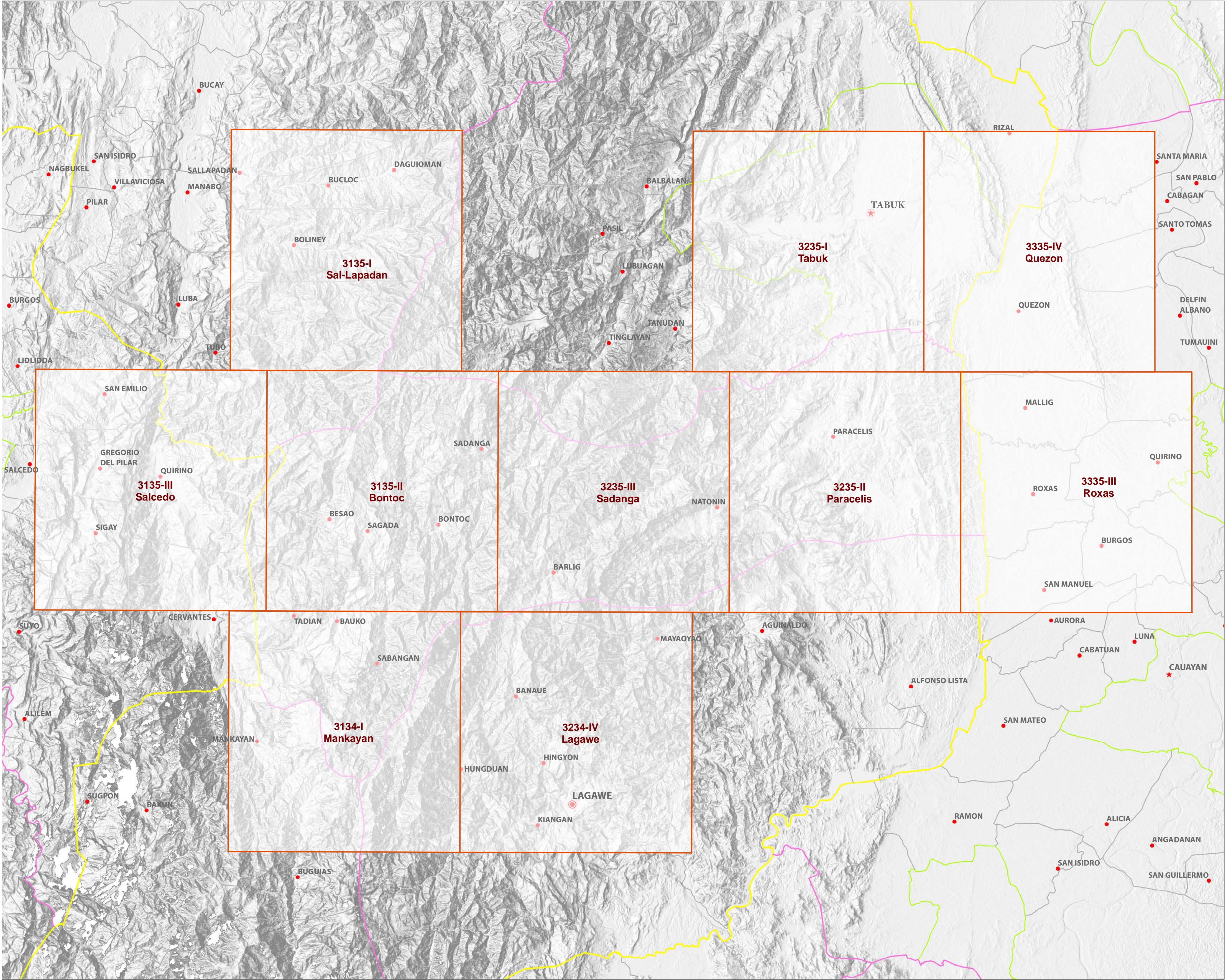
REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF AGRICULTURE
BUREAU OF SOILS AND WATER MANAGEMENT

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MAP INDEX

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

MOUNTAIN PROVINCE



LEGEND

Places

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

Administrative Boundary

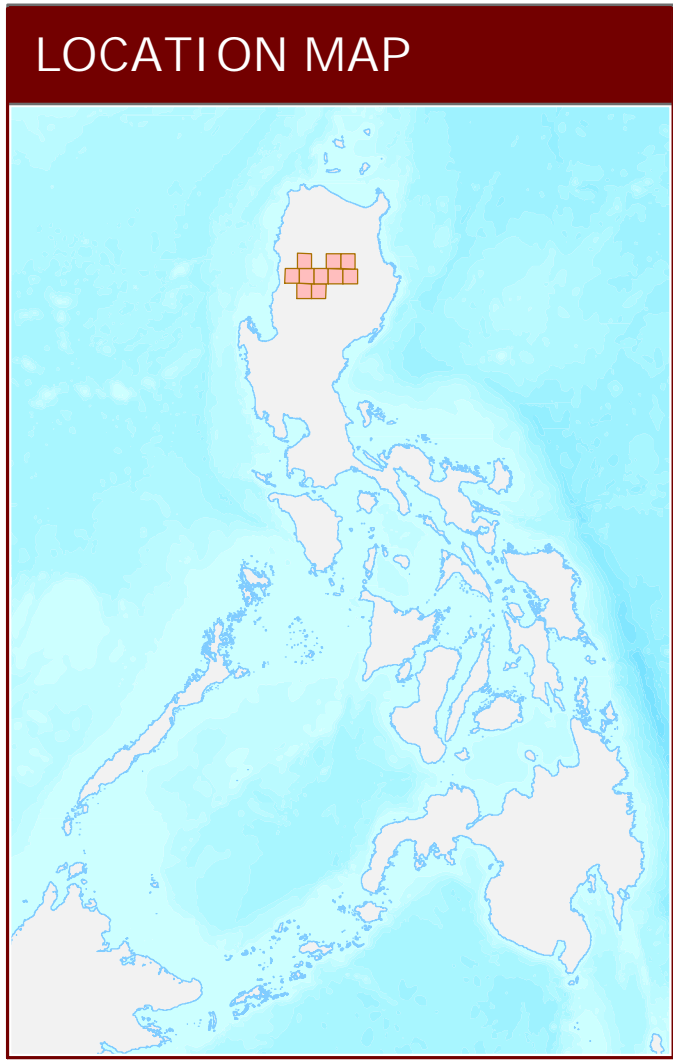
- Regional
- Provincial
- City
- Municipal

Map Index

- Index grid

Topographic Relief

Bathymetry



LAND SUITABILITY MAP FOR ROBUSTA, LIBERICA AND EXCELSA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS MOUNTAIN PROVINCE, CAR

EXTENT OF SUITABILITY FOR ROBUSTA, LIBERICA AND EXCELSA 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		
	S1	S2	S3		S1	S2	S1	S2	S1	S2	S1	S2	S1	S2			
BARLIG	-	-	41	41	-	-	-	1	-	4	-	-	-	-	-	-	4
BAUKO	-	-	104	104	-	-	-	44	-	103	-	212	-	1	-	-	360
BESAO	-	-	27	27	-	-	-	2	-	22	-	11	-	-	-	-	35
BONTOC	-	-	4	4	-	-	-	12	-	13	-	43	-	-	-	-	68
NATONIN	5	11	199	215	-	-	411	192	59	6	139	279	7	-	-	-	1,093
PARACELIS	36	-	30	66	385	-	3,284	53	4,235	78	6,097	99	2,050	49	-	-	16,331
SABANGAN	-	-	15	15	-	-	-	10	-	23	-	25	-	-	-	-	58
SADANGA	-	-	6	6	-	-	-	-	-	3	-	21	-	3	-	-	27
SAGADA	-	-	15	15	-	-	-	23	-	2	-	119	-	-	-	-	144
TADIAN	-	-	45	45	-	-	-	7	-	22	-	101	-	13	-	-	143
TOTAL	41	11	486	538	385	-	3,695	345	4,295	275	6,237	909	2,057	66	-	-	18,262

*establishment of shade trees prior to planting of coffee.

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.

AGRONOMIC REQUIREMENT OF ROBUSTA, LIBERICA AND EXCELSA 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 (Robusta, Excelsa, Liberica)	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	30 - 100	FSL, L, SiL	SPD,PD	5.1 - 5.5 7.3 - 7.8	medium	moderate	moderate	common	1000-2000	1000-2000	I, II
	S3	>30	<30	S, LS, CSL, SL	VPD,ED	<5.0 -> 7.9	low	severe	severe	many	>2000	<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 DEPTH (cm)

0 - 30 - very shallow
30 - 50 - shallow
50 - 100 - moderately deep
> 100 - deep to very deep

SOIL DRAINAGE

ED - excessively drained
WD - well drained
MWD - moderately well drained
SPD - somewhat poorly drained
PD - poorly drained
VPD - very poorly drained

SURFACE IMPEDIMENT

ROCK OUTCROPS
< 10% - none - few
10 - 30% - common
> 30% - many

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

LAND LIMITATIONS DESCRIPTION AND COMBINATIONS

ELEVATION

EI2 - 1000m - 2000m
EI3 - > 2000m

SOIL DRAINAGE

D2 - Somewhat poorly drained to poorly drained
D3 - Very poorly drained or excessively drained

SOIL DEPTH

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

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

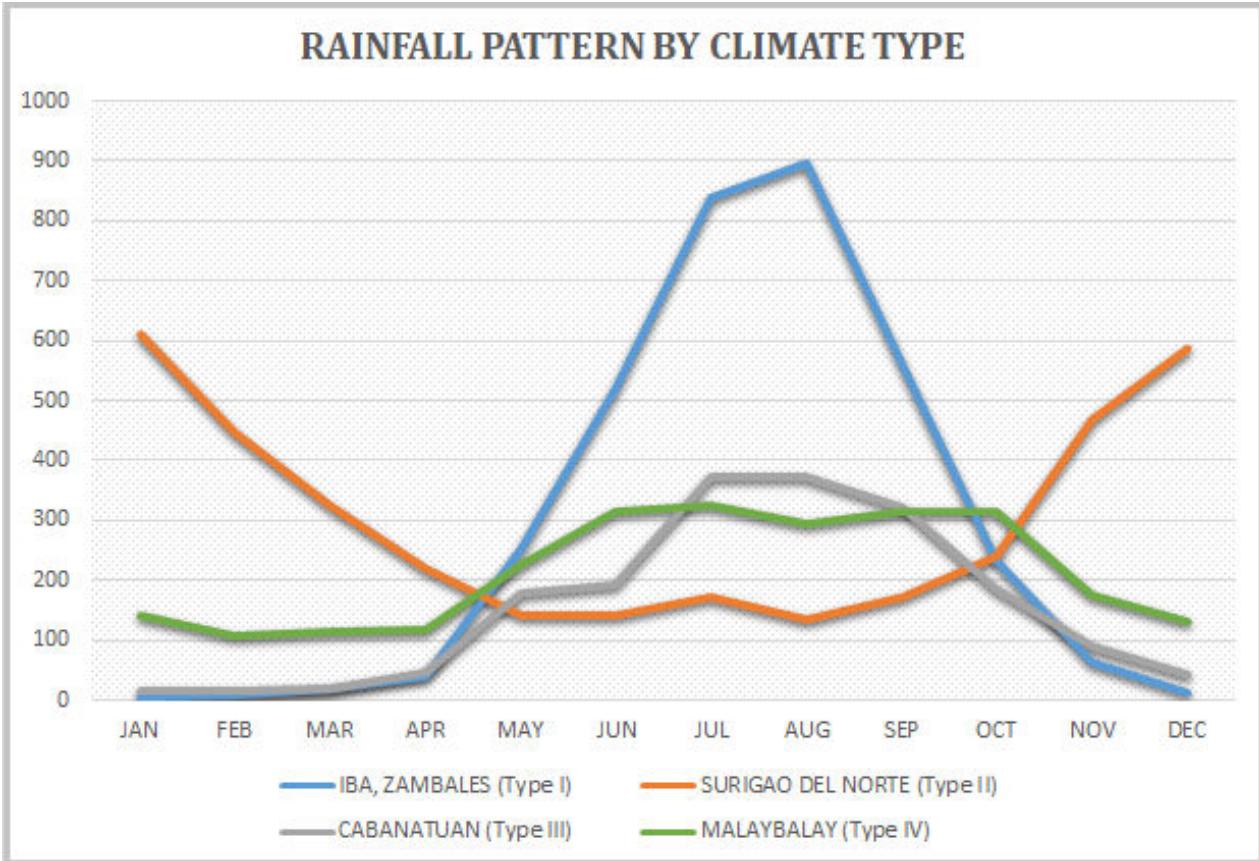
Rc2 - Common
Rc3 - Many

FLOODING

F2 - Moderate seasonal flooding
F3 - Severe seasonal flooding

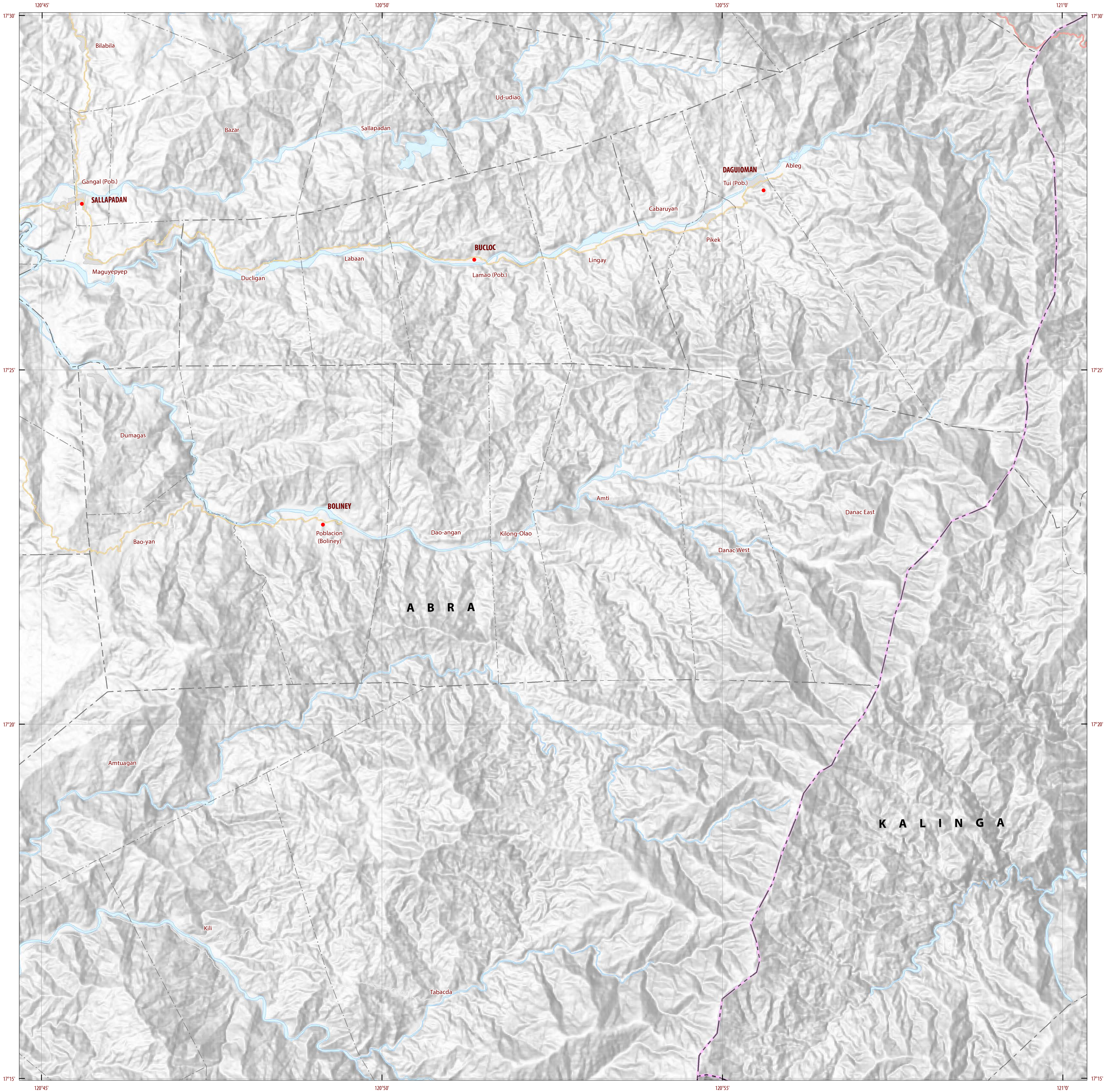
CODE	LAND LIMITATION	CODE	LAND LIMITATION	CODE	LAND LIMITATION	CODE	LAND LIMITATION	CODE	LAND LIMITATION
1	EI2	11	EI3-Sh2-Rc2	21	T2-E3-Sh3-Rc2	31	T2-EI3	41	T3-E3-Rc3
2	EI2-E3-Rc3	12	Rc2	22	T2-E3-Sh3-Rc3	32	T2-EI3-E3	42	T3-E3-Sh3-Rc3
3	EI2-E3-Sh2-Rc3	13	Sh2	23	T2-EI2	33	T2-EI3-E3-Rc2	43	T3-EI2
4	EI2-Rc2	14	Sh2-Rc2	24	T2-EI2-E3	34	T2-EI3-E3-Rc3	44	T3-EI2-E3
5	EI2-Sh2-Rc2	15	T2	25	T2-EI2-E3-Rc2	35	T2-EI3-E3-Sh2-Rc2	45	T3-EI2-E3-Rc3
6	EI2-Sh2-Rc3	16	T2-E3	26	T2-EI2-E3-Rc3	36	T2-EI3-E3-Sh2-Rc3	46	T3-EI2-E3-Sh3-Rc3
7	EI3	17	T2-E3-Rc2	27	T2-EI2-E3-Sh2-Rc2	37	T2-EI3-E3-Sh3-Rc2	47	T3-EI3
8	EI3-E3-Rc3	18	T2-E3-Rc3	28	T2-EI2-E3-Sh2-Rc3	38	T2-EI3-E3-Sh3-Rc3	48	T3-EI3-E3
9	EI3-E3-Sh2-Rc3	19	T2-E3-Sh2-Rc2	29	T2-EI2-E3-Sh3-Rc2	39	T3	49	T3-EI3-E3-Rc3
10	EI3-Rc2	20	T2-E3-Sh2-Rc3	30	T2-EI2-E3-Sh3-Rc3	40	T3-E3	50	T3-EI3-E3-Sh3-Rc3




CODE	LAND USE
2	Rice paddy, non-irrigated
4	Corn
81	Coffee
82	Cacao
116	Coconut
126	Grassland
134	Shrubland, unmanaged



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

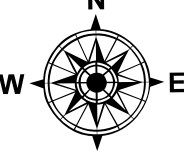
Western part of Mountain Province belongs to Type I climate classification and the rest on Eastern part belongs to Type III.





LAND SUITABILITY MAP
ROBUSTA, LIBERICA
AND EXCELSA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000

0 0.5 1 2 3 4 5
Kilometers

0 0.5 1 2 3
Miles

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

LEGEND

SUITABILITY CLASSES

S1

Highly Suitable

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

S2

Moderately Suitable

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

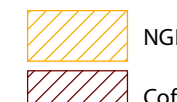
S3


Marginally Suitable


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

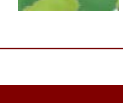
Not Suitable/ Not Relevant

OTHER SIGNS

 NGP Areas


 Coffee

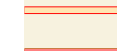
 Land limitation


 Land use


CONVENTIONAL SIGNS


ROADS

 Expressway


 Trunk line


 Primary


 Secondary

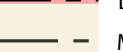
 Tertiary

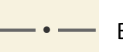
BOUNDARY

 Region


 Province


 District

 Municipality


 Barangay


HYDROLOGY

 Sea / Shoreline

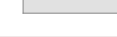
 Lakes / Rivers

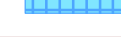
PLACES


 Capital City / City

 Capital Town / Town

LAND USE

 Built-up

 Fishpond

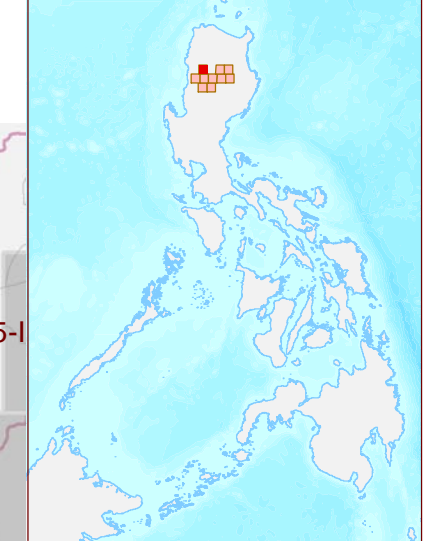
 Mangrove

ADJOINING SHEETS

3135-I

3135-II 3135-III 3235-I 3235-II 3235-III

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MISCELLANEOUS INFORMATION

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

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GIS and Cartography : IRVIN K. SAMALCA

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


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

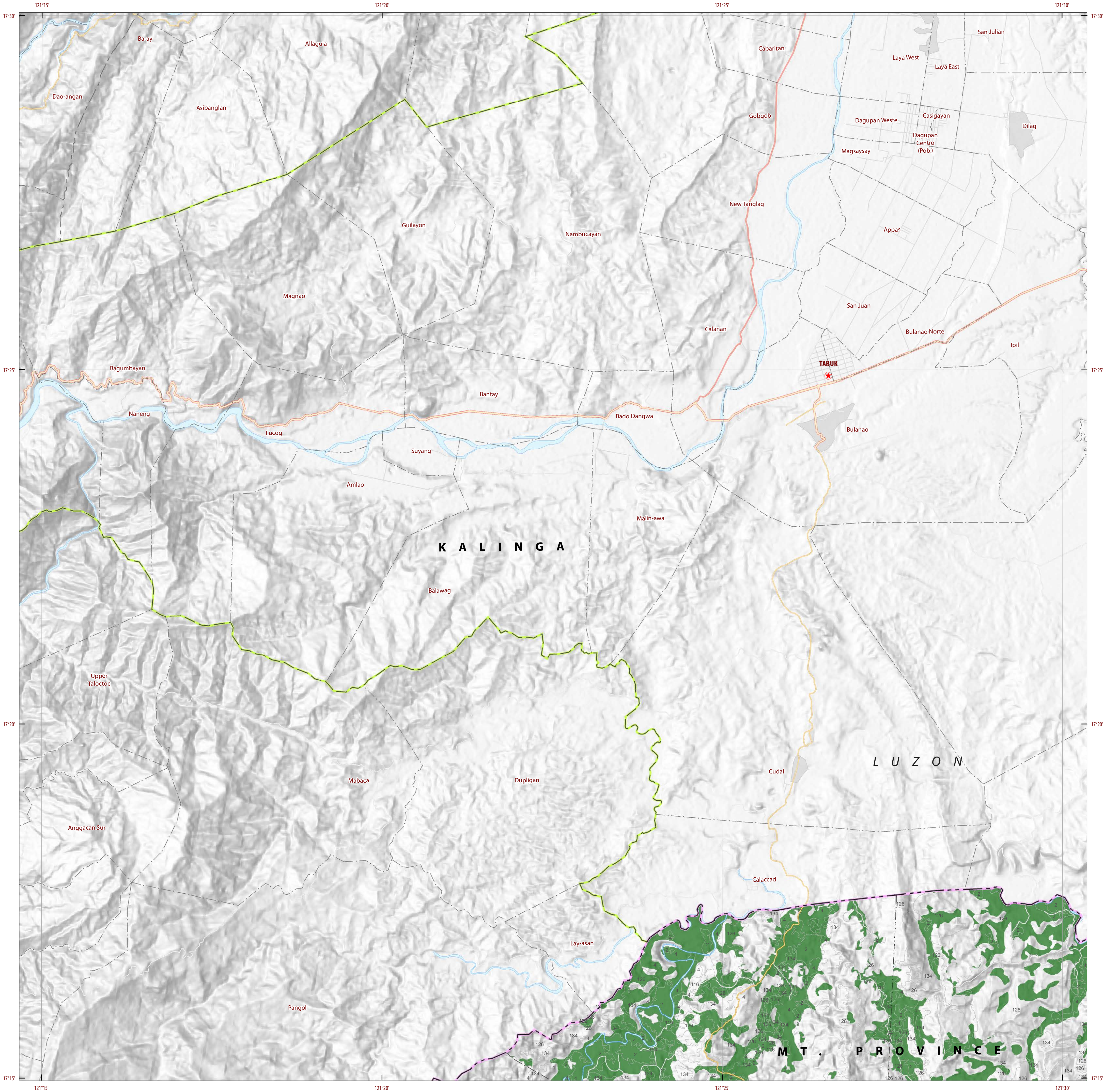
: Local Government Unit (LGU) of covered provinces and municipalities




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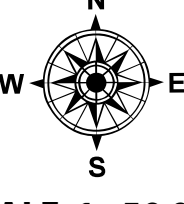
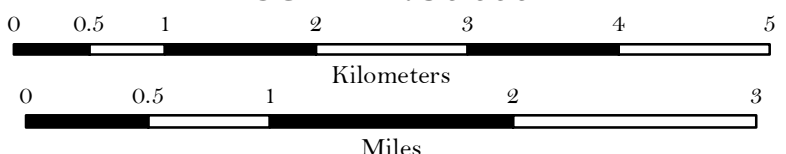
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ROBUSTA, LIBERICA
AND EXCELSA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY
ASSESSMENT OF STRATEGIC PRODUCTION AREAS


SCALE 1 : 50 000

Universal Transverse Mercator Zone 51 N, PRS 1992 Datum
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LEGEND

SUITABILITY CLASSES

S1

Highly Suitable

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

S2

Moderately Suitable

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


S3


Marginally Suitable


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

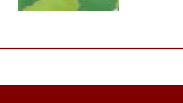
Not Suitable/ Not Relevant

OTHER SIGNS

 NGP Areas


 Coffee

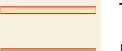
 Land limitation


 Land use


CONVENTIONAL SIGNS

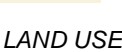
ROADS

 Expressway


 Trunk line


 Primary


 Secondary


 Tertiary


BOUNDARY

 Region


 Province


 District

 Municipality

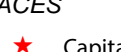
 Barangay

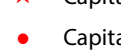
HYDROLOGY

 Sea / Shoreline


 Lakes / Rivers


PLACES


 Capital City / City

 Capital Town / Town

LAND USE

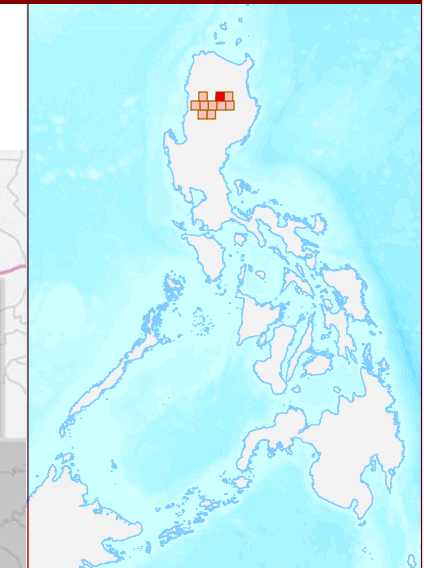
 Built-up

 Fishpond

 Mangrove

ADJOINING SHEETS

3235-I



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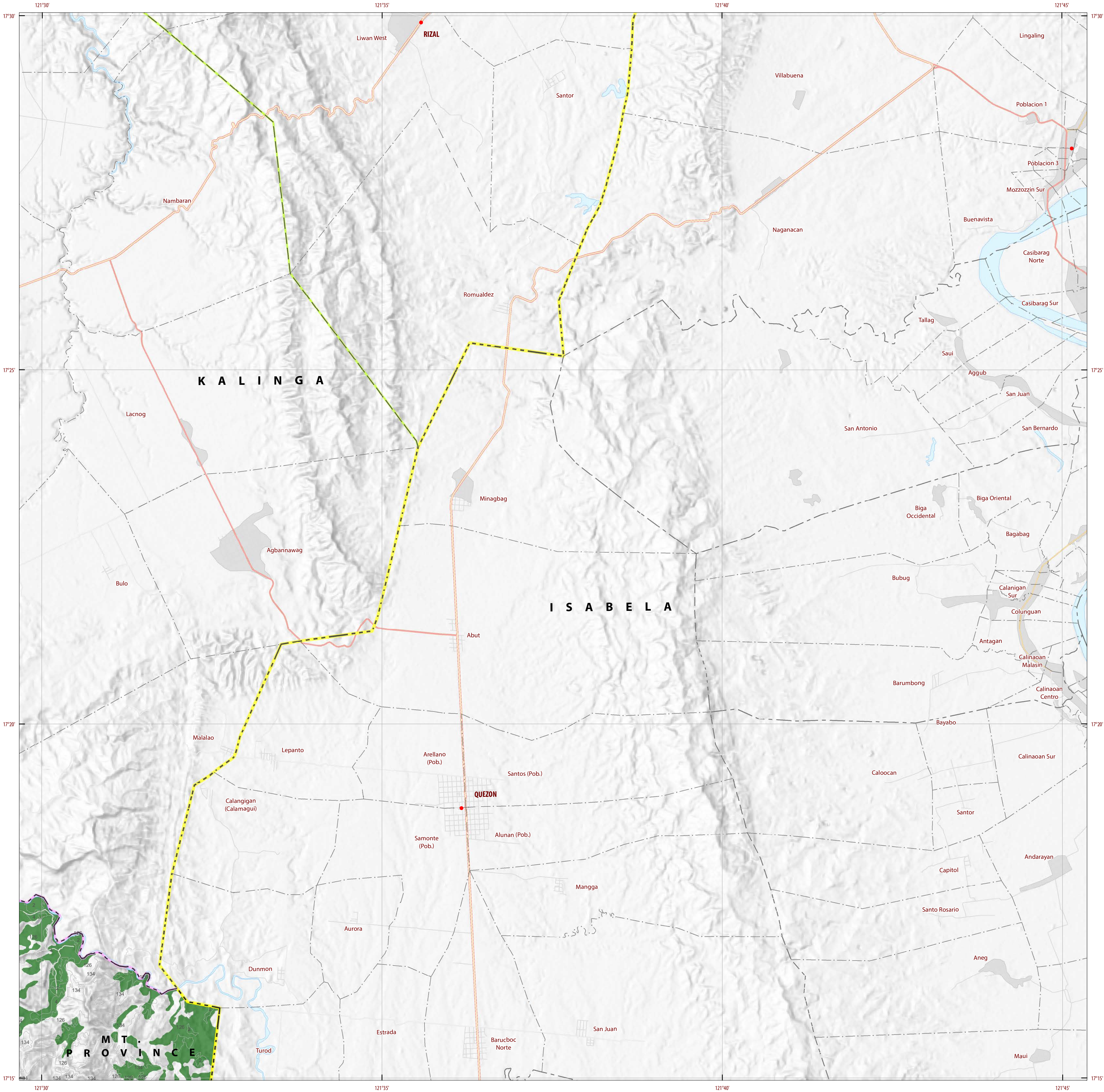
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MOUNTAIN PROVINCE

Sheet 2 of 10

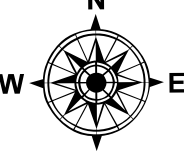
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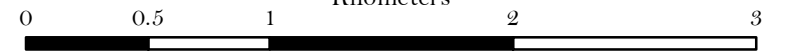


N
W E
S

SCALE 1 : 50 000



0 0.5 1 2 3 4 5
Kilometers



0 0.5 1 2 3
Miles

Universal Transverse Mercator Zone 51 N, PRS 1992 Datum
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LEGEND

SUITABILITY CLASSES

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Moderately Suitable

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S3


Marginally Suitable

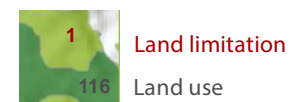
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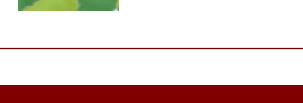
Not Suitable/ Not Relevant

OTHER SIGNS

 NGP Areas


 Coffee


 Land limitation


 Land use


CONVENTIONAL SIGNS


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 Expressway


 Trunk line


 Primary

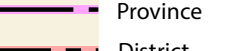
 Secondary

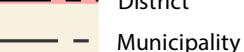
 Tertiary


BOUNDARY

 Region


 Province

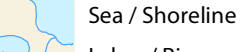
 District

 Municipality


 Barangay

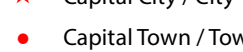
HYDROLOGY

 Sea / Shoreline

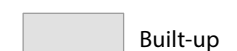
 Lakes / Rivers


PLACES


 Capital City / City

 Capital Town / Town

LAND USE

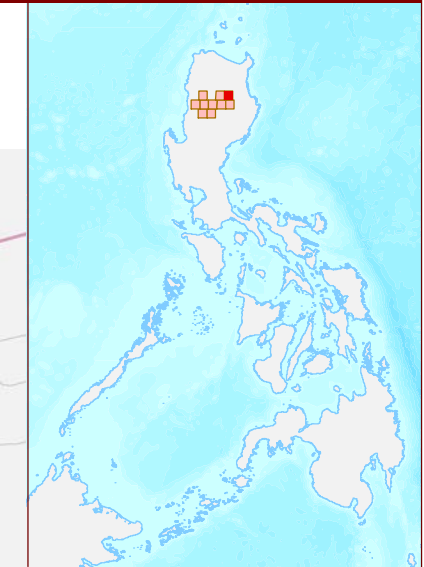
 Built-up

 Fishpond

 Mangrove

ADJOINING SHEETS

3335-IV



INDEX MAP

MISCELLANEOUS INFORMATION

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

Project Leader : BERNARDO B. PASCUA

GIS and Cartography : IRVIN K. SAMALCA

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


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

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

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

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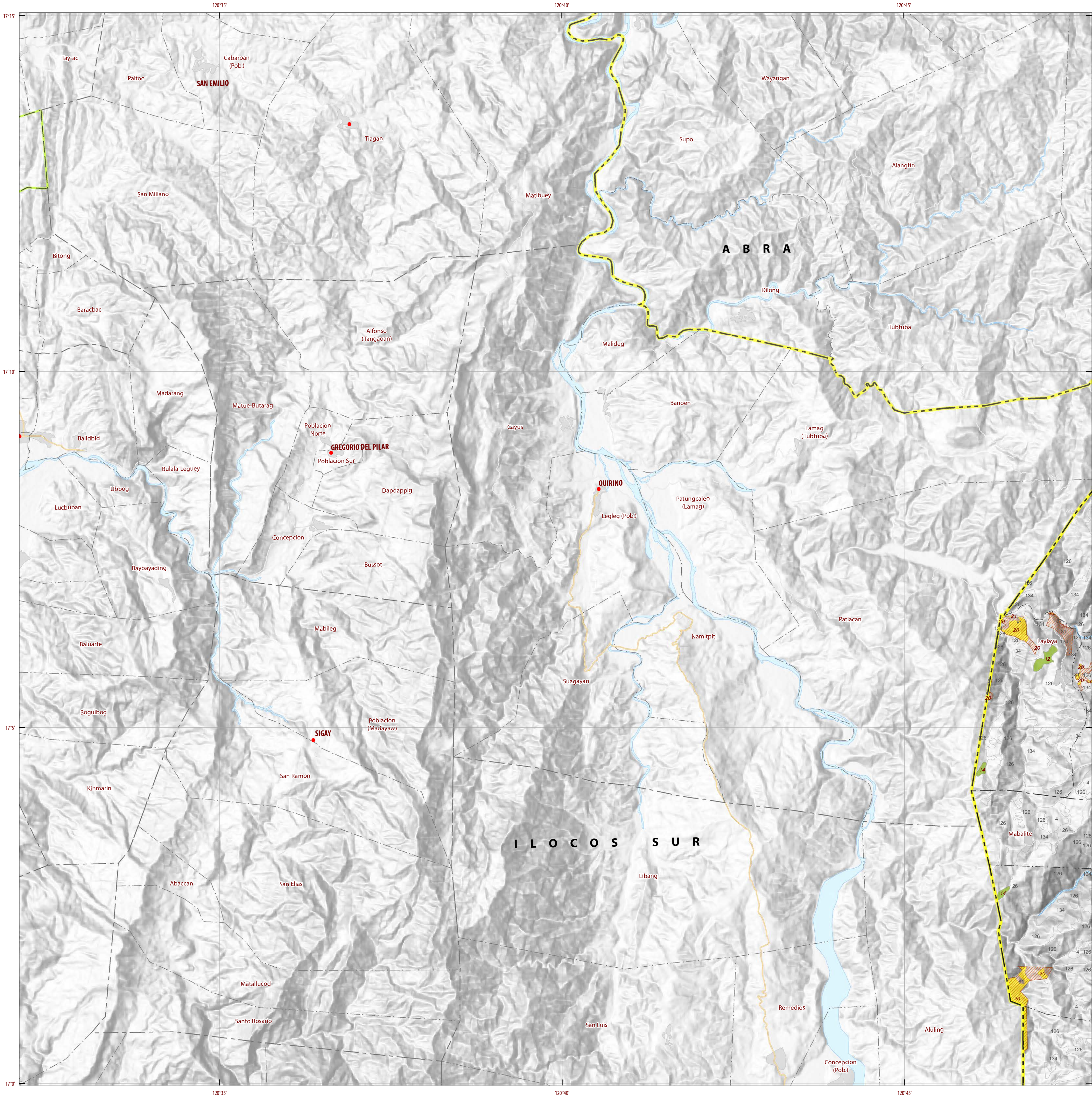
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BUREAU OF SOILS AND WATER MANAGEMENT

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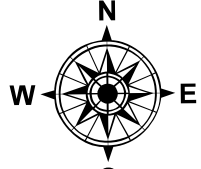
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LAND SUITABILITY MAP
ROBUSTA, LIBERICA
AND EXCELSA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000

0 0.5 1 2 3 4 5
Kilometers

0 0.5 1 2 3
Miles

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

LEGEND

SUITABILITY CLASSES

S1

Highly Suitable

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

S2

Moderately Suitable

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


S3


Marginally Suitable

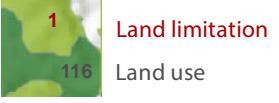
Land having limitations which in aggregate are severe for sustained application of a given use and will so reduce productivity or benefits, or increase required inputs, that this expenditure will be only marginally justified.


Not Suitable/ Not Relevant

OTHER SIGNS

NGP Areas

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

3135-III

3135-I

3135-II

3134-I

INDEX MAP

MISCELLANEOUS INFORMATION

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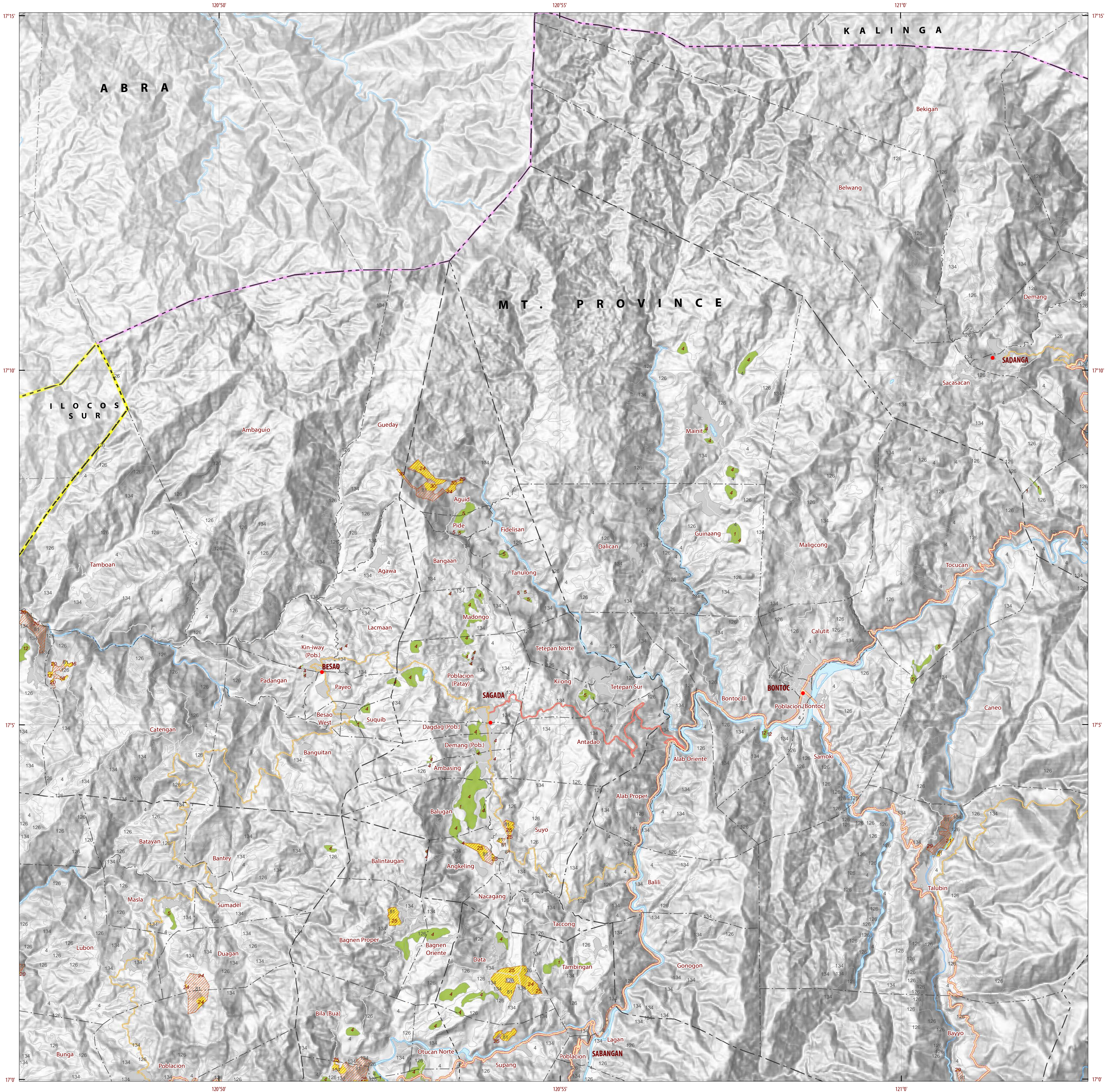
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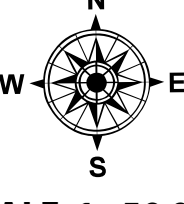
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LAND SUITABILITY MAP
ROBUSTA, LIBERICA
AND EXCELSA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000

0 0.5 1 2 3 4 5
Kilometers

0 0.5 1 2 3
Miles

Universal Transverse Mercator Zone 51 N, PRS 1992 Datum
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LEGEND

SUITABILITY CLASSES

S1

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S3

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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

3135-II

3135-I

3235-I

3135-III

3135-II

3235-III

3134-I

3234-IV

INDEX MAP

MISCELLANEOUS INFORMATION

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Project Leader

BERNARDO B. PASCUA

GIS and Cartography

IRVIN K. SAMALCA

Funding Agency

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

Collaborating Agencies

Philippine Council on Agriculture and Fisheries (PCAF)
Department of Agriculture and Fisheries - ARMM, Department of Agriculture Regional Field Office of Region IX, X, XI, XII and XIII (Caraga)
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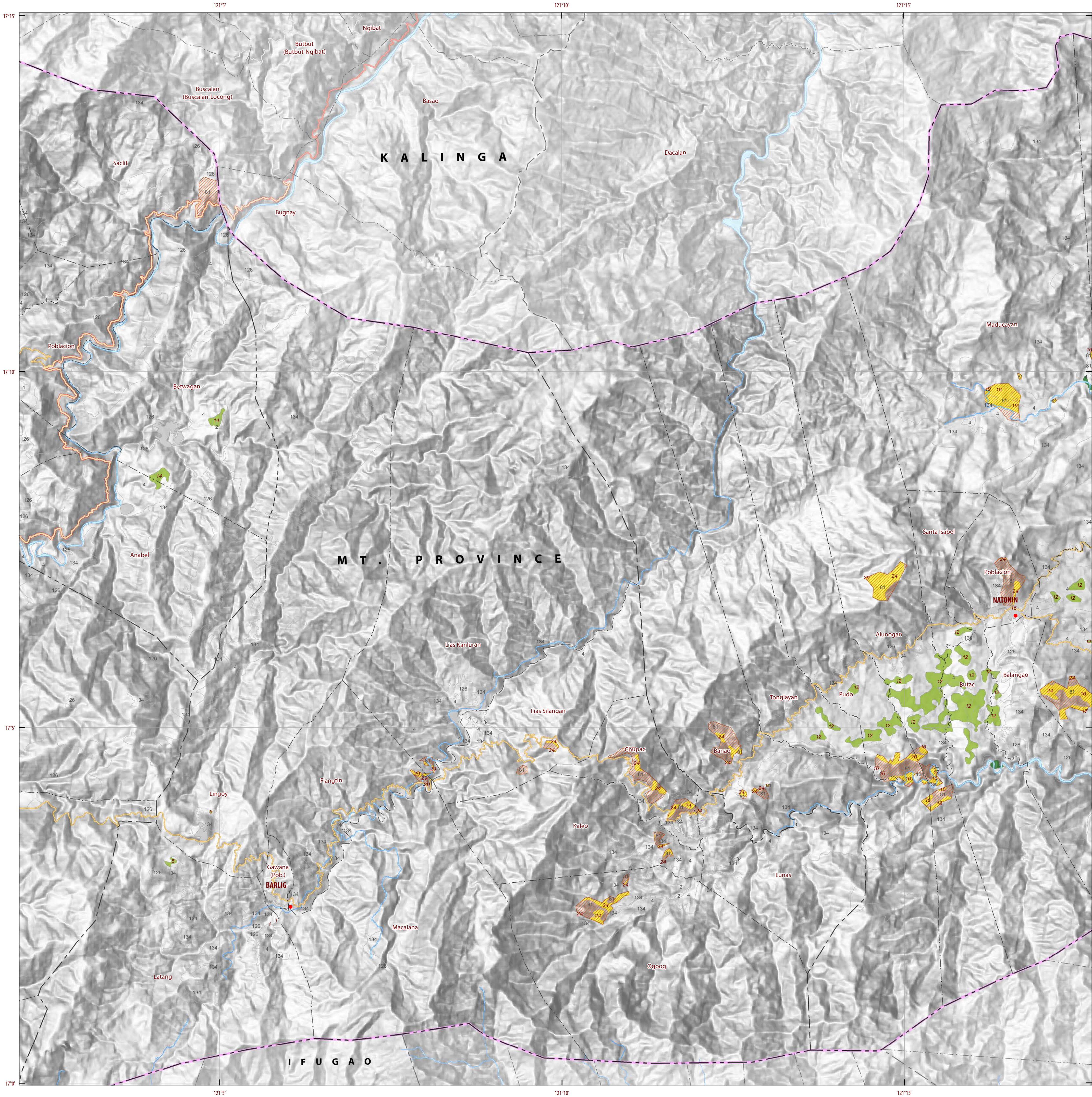
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DEPARTMENT OF AGRICULTURE

BUREAU OF SOILS AND WATER MANAGEMENT

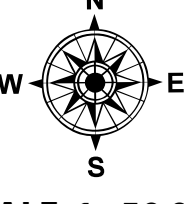
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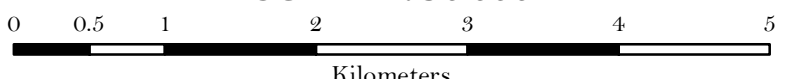
LAND SUITABILITY MAP
ROBUSTA, LIBERICA
AND EXCELSA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY
ASSESSMENT OF STRATEGIC PRODUCTION AREAS




N
W E
S

SCALE 1 : 50 000



0 0.5 1 2 3 4 5
Kilometers



0 0.5 1 2 3
Miles

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

LEGEND

SUITABILITY CLASSES

S1

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

S2


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


S3

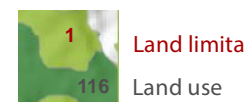
Marginally Suitable - Land having limitations which in aggregate are severe for sustained application of a given use and will so reduce productivity or benefits, or increase required inputs, that this expenditure will be only marginally justified.

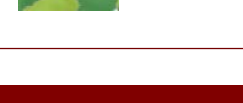
Not Suitable/ Not Relevant

OTHER SIGNS

 NGP Areas


 Coffee


 Land limitation


 Land use

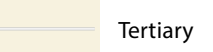
CONVENTIONAL SIGNS


ROADS

 Expressway

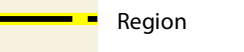
 Trunk line

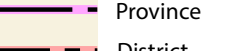
 Primary

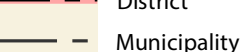
 Secondary


 Tertiary


BOUNDARY

 Region

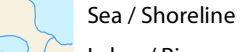
 Province

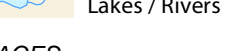
 District

 Municipality


 Barangay

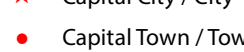
HYDROLOGY

 Sea / Shoreline

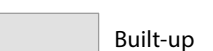
 Lakes / Rivers


PLACES

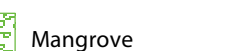
 Capital City / City

 Capital Town / Town

LAND USE

 Built-up

 Fishpond

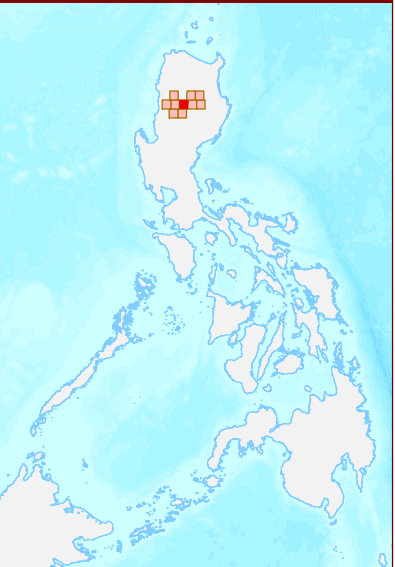
 Mangrove

ADJOINING SHEETS

3235-III

3135-I 3235-I
3135-II 3235-II
3134-I 3234-IV

INDEX MAP



MISCELLANEOUS INFORMATION

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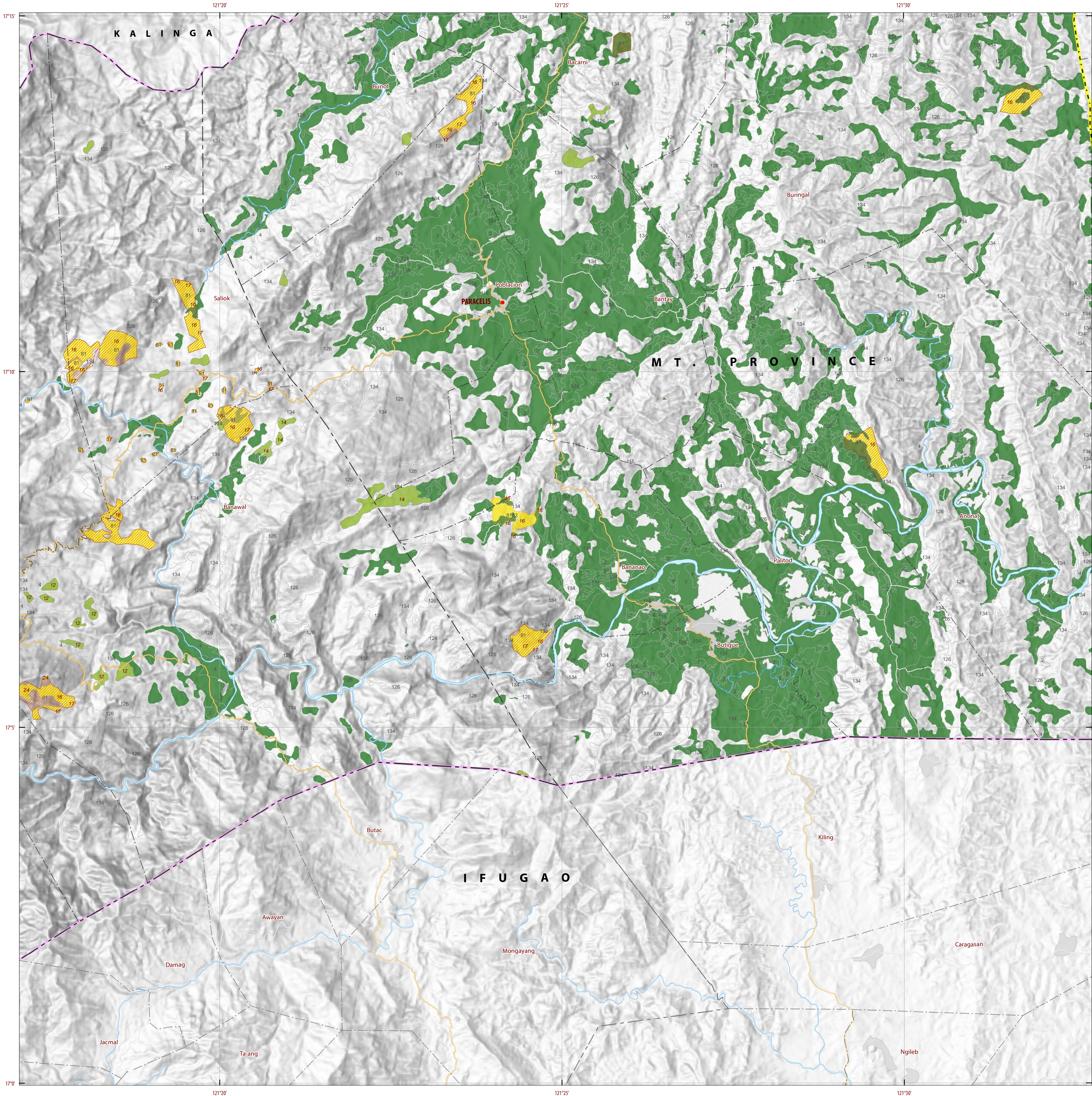
Project Leader : BERNARDO B. PASCUA
GIS and Cartography : IRVIN K. SAMALCA

Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)
Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)
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LAND SUITABILITY MAP
ROBUSTA, LIBERICA
AND EXCELSA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY
ASSESSMENT OF STRATEGIC PRODUCTION AREAS

SCALE 1 : 50 000

0 0.5 1 2 3 4 5
Kilometers

0 0.5 1 2 3
Miles

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

LEGEND

SUITABILITY CLASSES

- S1 Highly Suitable** - Land having no significant limitations to sustained application of a given use, or only minor limitations that will not significantly reduce productivity or benefits and will not raise inputs above an acceptable level.
- S2 Moderately Suitable** - Land having limitations which in aggregate are moderately severe for sustained application of a given use; the limitations will reduce productivity or benefits and increase required inputs to the extent that the overall advantage to be gained from the use, although still attractive, will be appreciably inferior to that expected on class S1 land.
- S3 Marginally Suitable** - Land having limitations which in aggregate are severe for sustained application of a given use and will so reduce productivity or benefits, or increase required inputs, that this expenditure will be only marginally justified.

Not Suitable/ Not Relevant

OTHER SIGNS

- NGP Areas
- 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

3235-II

MISCELLANEOUS INFORMATION

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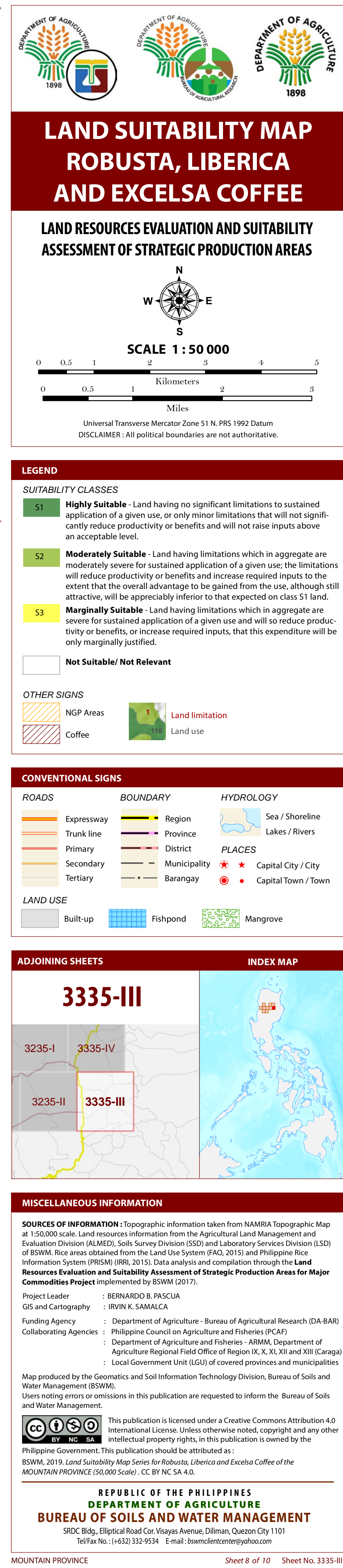
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GIS and Cartography : IRVIN K. SAMALCA

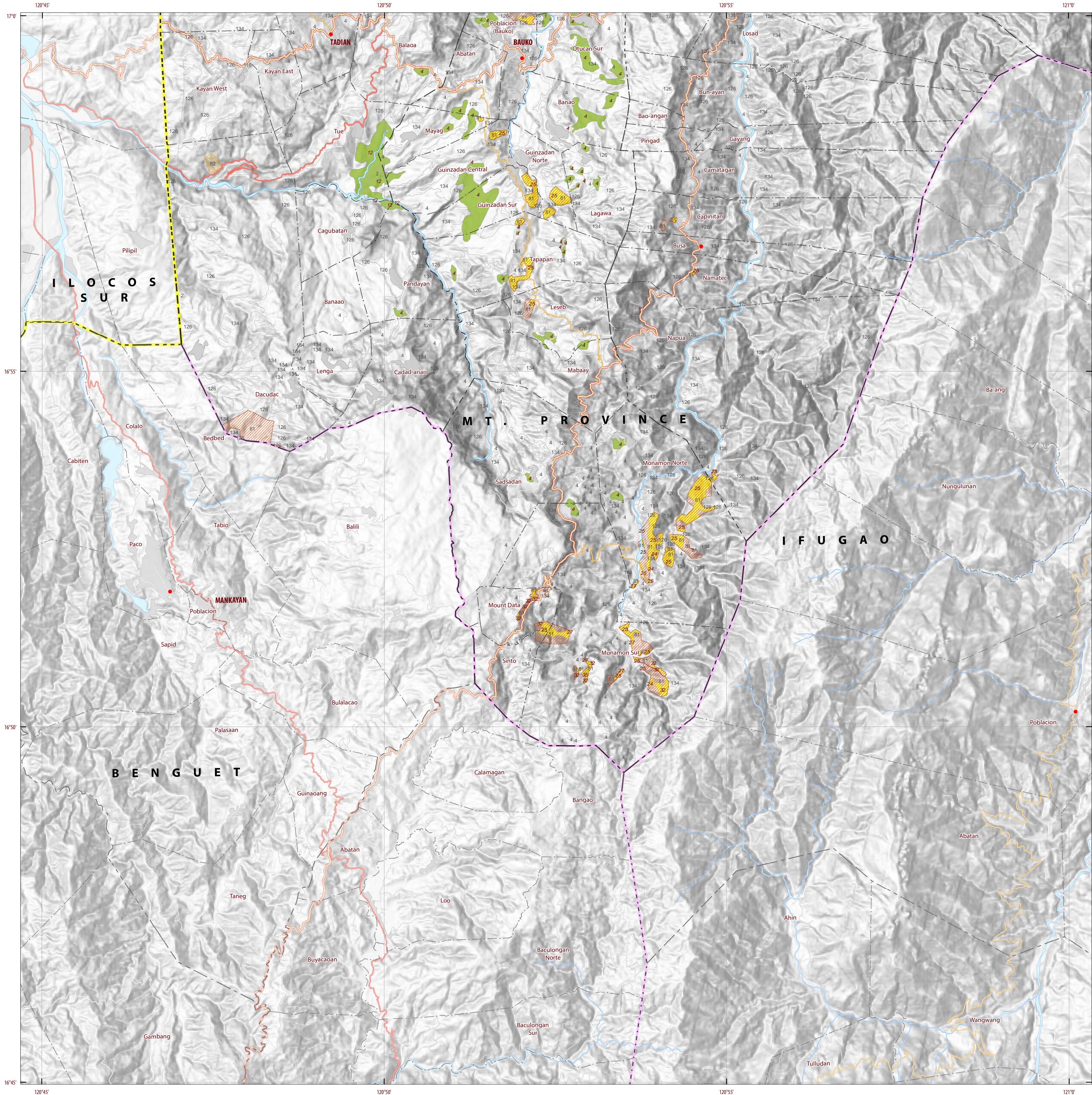
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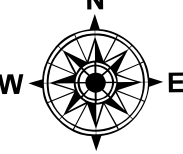






LAND SUITABILITY MAP
ROBUSTA, LIBERICA
AND EXCELSA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



SCALE 1 : 50 000

0 0.5 1 2 3 4 5
Kilometers

0 0.5 1 2 3
Miles

Universal Transverse Mercator Zone 51 N, PRS 1992 Datum
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LEGEND

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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

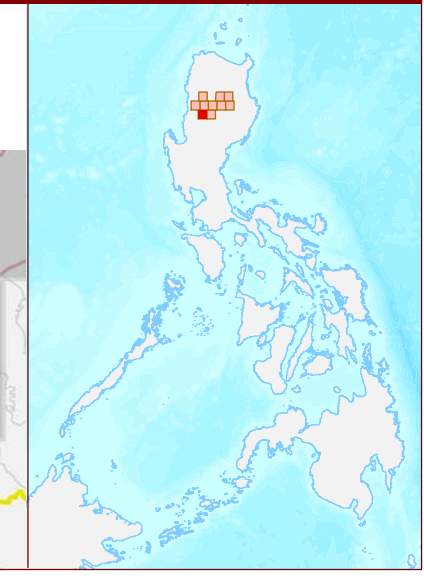
ADJOINING SHEETS

3134-I

3135-III 3135-II 3235-III

3134-II 3234-IV

INDEX MAP



MISCELLANEOUS INFORMATION

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GIS and Cartography

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BUREAU OF SOILS AND WATER MANAGEMENT

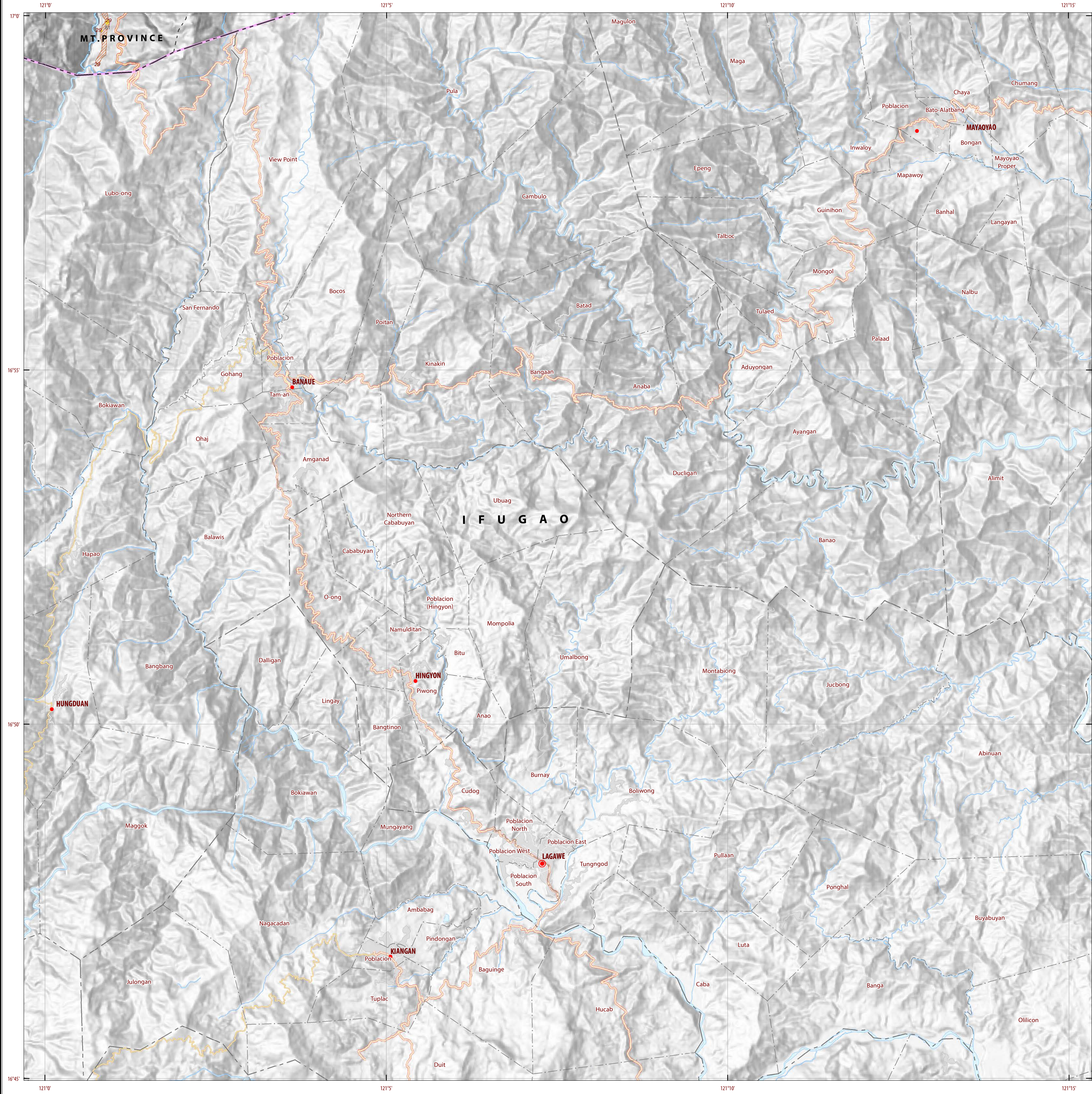
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MOUNTAIN PROVINCE

Sheet 9 of 10

Sheet No. 3134-I



LAND SUITABILITY MAP ROBUSTA, LIBERICA AND EXCELSA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

SCALE 1 : 50 000

0 0.5 1 2 3 4 5
Kilometers

0 0.5 1 2 3
Miles

Universal Transverse Mercator Zone 51 N, PRS 1992 Datum
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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	PLACES
Secondary	Municipality	Capital City / City
Tertiary	Barangay	Capital Town / Town

LAND USE

Built-up	Fishpond	Mangrove
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ADJOINING SHEETS

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MISCELLANEOUS INFORMATION

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

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

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MOUNTAIN PROVINCE

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