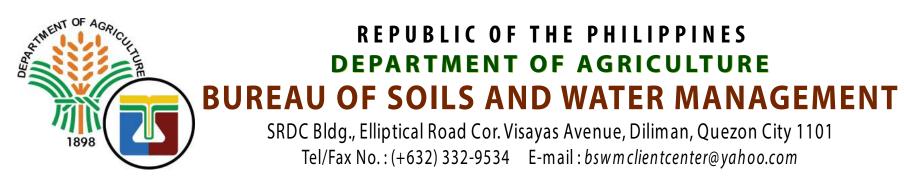
LAND SUITABILITY MAP

ROBUSTA, LIBERICA AND EXCELSA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS

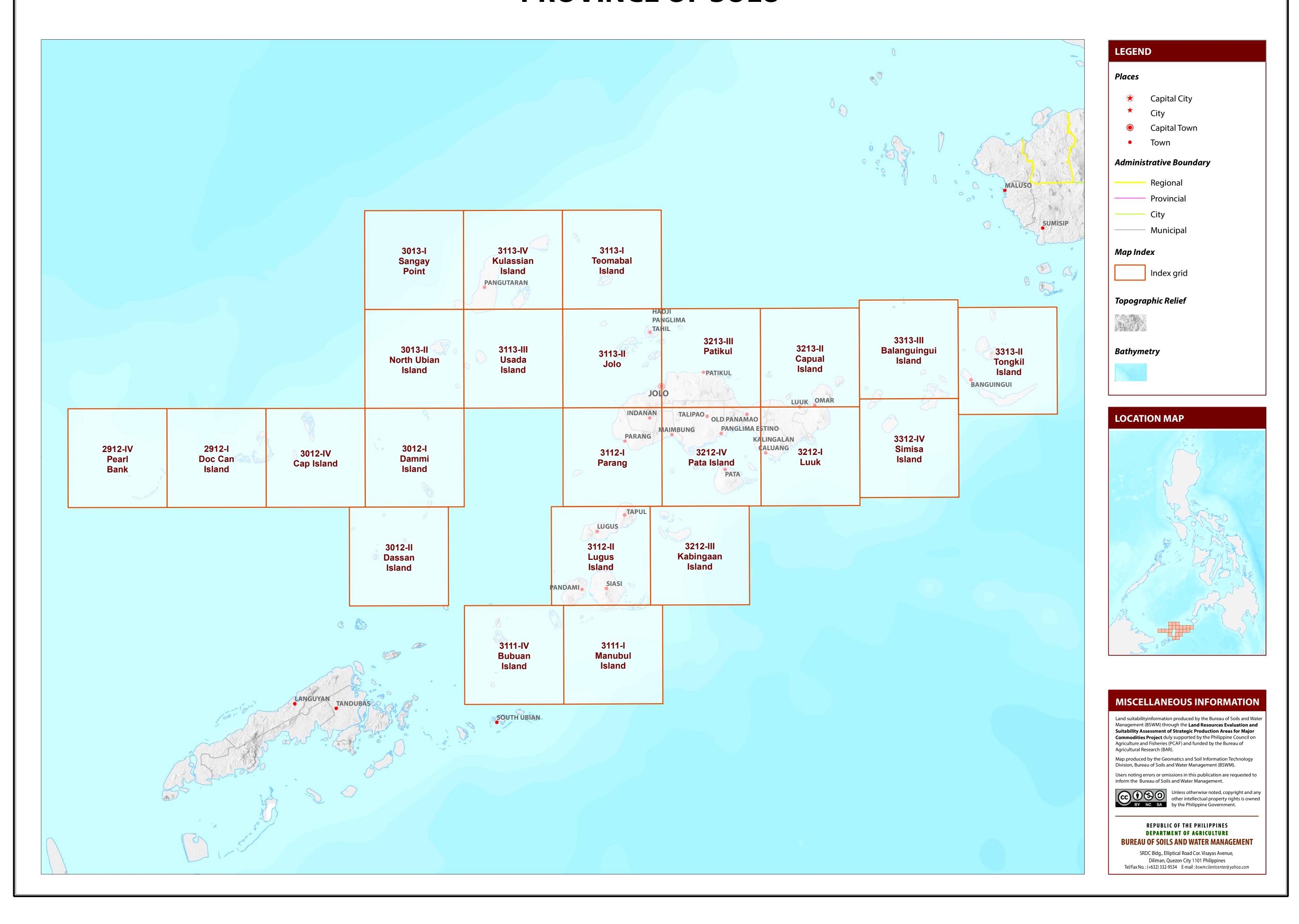
PROVINCE OF SULU





MAP INDEX

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS PROVINCE OF SULU



LAND SUITABILITY MAP FOR ROBUSTA, LIBERICA AND EXCELSA COFFEE

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS PROVINCE OF SULU, ARMM

EXTENT OF SUITABILITY FOR ROBUSTA, LIBERICA AND EXCELSA COFFEE PRODUCTION BY MUNICIPALITY

| | | | | | | EX | PANSION A | REA (H | a) | | | CONF | LICT RES | OLUTION | (Ha) | | тотат |
|----------------------|-----------|-----------|------------|--------------------------------|-----------|-----------|--------------------|-----------|-----------------|----|-----------|-----------|------------------|-----------|-----------|-----------|---------------------------|
| MUNICIPALITY | EXISTI | NG COFFI | ЕЕ (На) | TOTAL EXISTING AREA (Ha) | Cocor | nut | Shrubla unmanag | • | Grassl unman | | Co | rn | Paddy non-iri | | Other | crops | TOTAL POTENTIAL EXPANSION |
| | S1 | S2 | S 3 | | S1 | S2 | S1 | S2 | S1 | S2 | S1 | S2 | S1 | S2 | S1 | S2 | AREA (Ha) |
| HADJI PANGLIMA TAHIL | - | - | - | - | - | - | - | - | 64 | - | - | - | - | - | - | - | 64 |
| INDANAN | - | - | 1 | - | 6,447 | - | 6 | - | 860 | - | 146 | - | - | - | - | - | 7,459 |
| JOLO | - | - | 1 | - | 11 | - | - | - | - | - | - | - | - | - | - | - | 11 |
| KALINGALAN CALUANG | - | - | 1 | - | 3,565 | - | - | - | 1,846 | - | - | - | - | - | - | - | 5,411 |
| LUGUS | - | 1 | 1 | - | 1,666 | - | - | - | 1,112 | - | - | - | - | - | - | - | 2,779 |
| LUUK | - | - | - | - | 3,444 | - | - | - | 3,483 | - | - | - | - | - | - | - | 6,928 |
| MAIMBUNG | - | - | 1 | - | 2,863 | - | - | - | 287 | - | 912 | - | - | - | - | - | 4,062 |
| OLD PANAMAO | - | - | 1 | - | 3,720 | - | 31 | - | 1,422 | - | 533 | - | - | - | - | - | 5,706 |
| OMAR | - | - | - | - | 2,547 | - | 953 | - | 2,202 | - | 143 | - | - | - | - | - | 5,844 |
| PANDAMI | - | 1 | 1 | - | 1,964 | - | - | - | 410 | - | - | - | - | - | - | - | 2,374 |
| PANGLIMA ESTINO | - | - | - | - | 935 | - | 12 | - | 448 | - | 850 | - | - | - | - | - | 2,245 |
| PANGUTARAN | - | 1 | 1 | - | 9,085 | - | - | - | - | - | - | - | - | - | - | - | 9,085 |
| PARANG | - | - | 1 | - | 5,704 | - | - | - | 43 | - | 367 | - | - | - | - | - | 6,114 |
| PATA | - | - | - | - | 1,738 | - | - | - | 2,342 | - | - | - | - | - | - | - | 4,080 |
| PATIKUL | - | - | - | - | 7,494 | - | 121 | - | 2,380 | 37 | 498 | - | - | - | - | - | 10,529 |
| SIASI | - | - | - | - | 4,137 | - | - | - | 1,537 | - | - | - | - | - | - | - | 5,675 |
| TALIPAO | - | - | - | - | 8,905 | - | 54 | 5 | 1,521 | - | 4,409 | - | - | - | - | - | 14,892 |
| TAPUL | _ | - | _ | - | 980 | - | - | - | 838 | - | - | - | - | - | _ | - | 1,818 |
| TONGKIL | _ | - | _ | - | 656 | - | 140 | - | 26 | - | 52 | - | - | _ | _ | - | 873 |
| Total Area (Ha) | _ | - | - | - | 65,860 | - | 1,317 | 5 | 20,821 | 37 | 7,909 | - | - | - | - | - | 95,949 |

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

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 | 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 |
| (Robusta, Excelsa, | 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 |
| Liberica) | S3 | >30 | <30 | S, LS, CSL, SL | VPD,ED | <5.0 -> 7.9 | low | severe | severe | many | >2000 | <1000 >4500 | |
| SLOPE (%) | | | SOIL DRAINA | AGE | | SOIL REACTIO | N (pH) | , | SOIL TEXTU | RE | | | |
| | el to gently sloping | _ | | xcessively drained | | < 4.5 - ext | remely acid | | Coarse | and | | Fine | ndy clay |

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

- moderately alkaline - strongly alkaline

| 3 - 8 | - gently sloping to undulating | WD | - well drained |
|----------|--------------------------------|----------|---|
| 8 - 18 | - undulating to rolling | MWD | - moderately well drained |
| 18 - 30 | - rolling to moderately steep | SPD | - somewhat poorly drained |
| 30 - 50 | - steep | PD | - poorly drained |
| > 50 | - very steep | VPD | very poorly drained |
| | | | |
| SOIL DEP | TH (cm) | SURFACE | E IMPEDIMENT |
| 0 - 30 | - very shallow | ROCK OU' | TCROPS |
| 30 - 50 | - shallow | < 10% | - none - few |

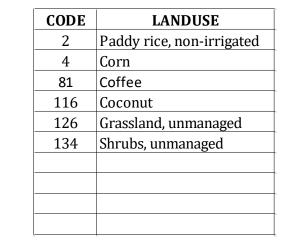
 shallow - none - few 50 - 100 - moderately deep 10 - 30% - common > 30% - deep to very deep - many

| SOIL TEXT | ΓURE | | |
|-----------|---------------------|------|--------------|
| Coarse | | Fine | |
| S | - sand | SC | - sandy clay |
| LS | - loamy sand | SiC | - silty clay |
| CSL | - coarse sandy loam | C | - clay |
| SL | - sandy loam | HC | - heavy clay |
| Medium | | | |
| FSL | - fine sandy loam | | |
| L | - loam | | |
| SiL | - silt loam | | |
| CL | - clay loam | | |
| SiCL | - silty clay loam | | |
| SCL | - sandy clay loam | | |
| | | | |

LAND LIMITATIONS DESCRIPTION AND COMBINATIONS

| ELEVATION | SOIL DRAINAGE | SOIL DEPTH | SOIL EROSION |
|-------------------------------------|---|---|---------------------------------|
| El2 - 1000m - 2000m | D2 - Somewhat poorly drained to poorly drained | Sh2 - Shallow to moderately deep (30 - 100cm) | E2 - Moderate erosion |
| El3 -> 2000m | D3 - Very poorly drained or excessively drained | Sh3 - Very shallow (< 30cm) | E3 - Severe erosion |
| SLOPE/TOPOGRAPHY | SOIL TEXTURE | ROCK OUTCROPS | FLOODING |
| T2 - Undulating to moderately steep | Tc - Coarse texture | Rc2 - Common | F2 - Moderate seasonal flooding |
| T3 - Steep to very steep | Te Godi Se texture | Rc3 - Many | F3 - Severe seasonal flooding |
| 15 - Steep to very steep | | ics - Many | 15 - Severe seasonal moduling |

| CODE | LIMITATION | CODE | LIMITATION |
|----------|---------------|------|---------------|
| 1 | F2-Tc | 11 | T3-F3-D2 |
| 2 | F3-D2 | 12 | T3 |
| 3 | Sh2-Rc2 | 13 | Т3-Е3 |
| 4 | T2 | 14 | T3-E3-Sh3-Rc3 |
| <i>5</i> | T2-E3 | 15 | T3-El3 |
| 6 | T2-E3-Sh2-Rc2 | 16 | Tc |
| 7 | T2-F3-D2 | | |
| 8 | T3 | | |
| 9 | T3-E3 | | _ |
| 10 | T3-E3-Sh3-Rc2 | | |



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 justified. **Not Suitable / Not Relevant**

Moderately Suitable (S2) Land having limitations which may be surmountable Land having limitation which in aggregate are in time but which cannot be corrected with existing moderately severe for sustained application of a knowledge at currently acceptable cost; the given use; the limitation will reduce productivity or limitations are so severe as to preclude successful benefits and increase required inputs to the extent sustained use of the land in the given manner. that the overall advantage to be gained from the Existing forest, shrubland greater than 18% slope, use, although still attractive, will be appreciably irrigated paddy rice and miscellaneous land types inferior to that expected on class S1 land. such as built up areas, roads, etc are considered as not relevant.

CLIMATE TYPE

TYPE I: Two pronouced season, dry from November to April and TYPE II: No dry season with a very pronounced maximum rain wet during the rest of the year. Maximum rain period is from June to September

period from December to February. There is not a single dry month. Maximum monthly rainfall occurs during the period from March to May.

Marginally Suitable (S3)

Land having limitations which in aggregate are

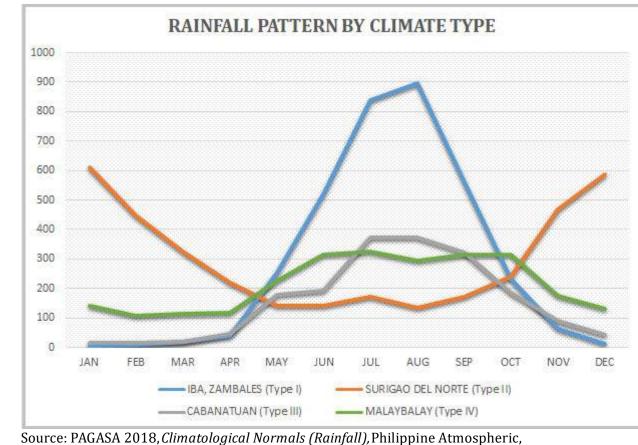
severe for sustained application of a given use and

will so reduce productivity or benefits, or increase required inputs, that this expenditure will be only

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

Province of Sulu is classified as climate type IV



Geophysical and Astronomical Services Administration (PAGASA), accessed 27 July 2018, https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals.

