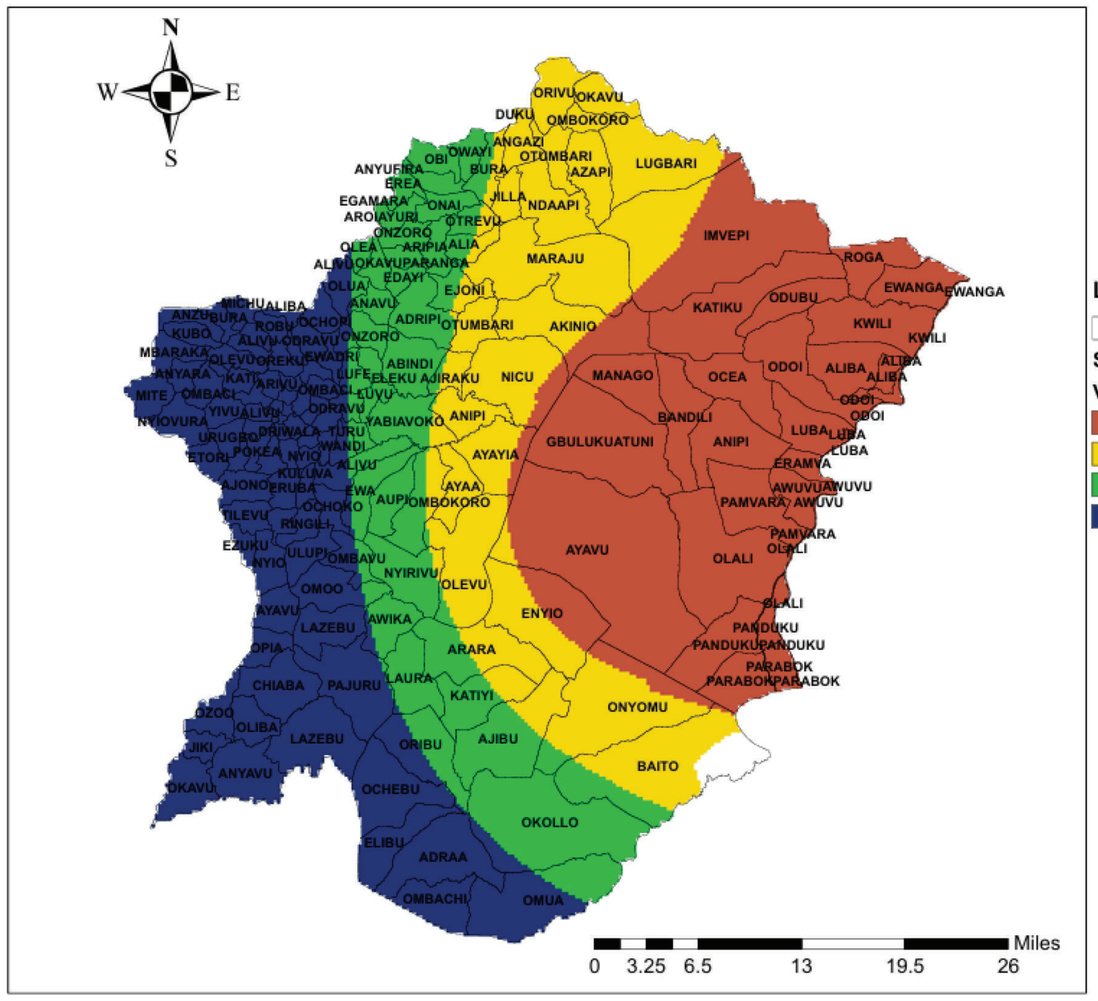
TREE PLANTING SUITABILITY MAP TO GUIDE TREE AND SHRUB PLANTING IN ARUA DISTRICT
INITIATIVE BY TSEVETT AGRO SERVICES UNDER FROM YOUTH 4 CLIMATE

TREE AND SHRUB PLANTING SUITABILITY MAP FOR GREATER ARUA



Legend

- Aruaparishes

SUITABILITY CLASSES

Value

- Class 4 (Dryland & Restoration Vegetation Zone
- Class 3 (Semi-Dry Fruit & Fodder Vegetation Zone
- Class 2(Agroforestry & Mixed Vegetation Zone)
- Class 1(Moist Forest Vegetation Zone)

Color & Class	Tree Group Name	Ecological Zone Description	Common Tree Species (6+)	Suitable Shrubs (4)
Class 1	**Mvule-Class Trees** *Moist Indigenous Forest & Agroforestry*	**Very suitable** – river valleys, wetlands, forest edges; deep, moist, fertile soils; high rainfall & humidity	1. *Milicia excelsa* **(Mvule)** 2. *Maesopsis eminii* **(Musizi)** 3. *Ficus natalensis* **(Mutuba)** 4. *Markhamia lutea* **(Lusambya)** 5. *Lovoa trichilioides* **(Nkalati)** 6. *Tectona grandis* **(Teak)** *Grevillea robusta* – tolerates similar conditions	1. *Vernonia amygdalina* (Bitter leaf) 2. *Acalypha wilkesiana* 3. *Croton macrostachyus* 4. *Hibiscus surattensis*
Class 2	**GrevilleaClass Trees** *Agroforestry & Fast-growing Species*	**Moderately high suitability** – midlands, moist uplands; moderately fertile, well-drained soils	1. *Grevillea robusta* 2. *Calliandra calothyrsus* 3. *Leucaena leucocephala* 4. *Gliricidia sepium* 5. *Sesbania sesban* 6. *Eucalyptus grandis* (for windbreaks) *Pinus patula* – good for mid-high altitudes	1. *Tithonia diversifolia* 2. *Tephrosia vogelii* 3. *Lantana camara* (control advised) 4. *Ocimum gratissimum*
Class 3	**Fruit TreeClass Trees** *Fruit & Nut Trees for Semi-dry Areas*	**Moderate suitability** – flatlands with seasonal rainfall; mixed farming zones	1. *Mangifera indica* (Mango) 2. *Persea americana* (Avocado) 3. *Tamarindus indica* 4. *Anacardium occidentale* (Cashew) 5. *Citrus sinensis* (Orange) 6. *Psidium guajava* (Guava) *Faidherbia albida* – suitable in semidry zones	1. *Carissa edulis* 2. *Flueggea virosa* 3. *Solanum anguivi* 4. *Clerodendrum myricoides*
Color & Class	**Tree Group Name**	**Ecological Zone Description**	**Common Tree Species (6+)**	**Suitable Shrubs (4)**
Class 4	**Acacia-Vitellaria Class Trees** *Dryland, Savanna & Restoration*	**Low to very low suitability** – degraded, hot uplands; poor soils, charcoaldepleted or semi-arid lands	1. *Vitellaria paradoxa* (Shea) 2. *Balanites aegyptiaca* 3. *Acacia Senegal* 4. *Melia volkensii* 5. *Azadirachta indica* (Neem) 6. *Commiphora africana* *Jatropha curcas*, *Boscia coriacea*, *Ziziphus spina-christi*, *Calotropis procera*	1. *Euphorbia tirucalli* 2. *Opuntia spp.* 3. *Senna occidentalis* 4. *Indigofera arrecta*

Inter-Class Planting Compatibility Note:

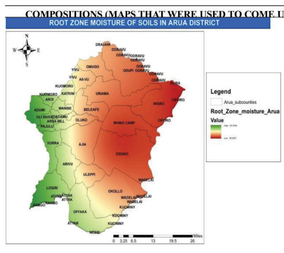
Class 1 areas (Blue) can successfully grow trees from **Class 2–4**.

Class 2 (Green) can grow trees from **Class 3 & 4**.

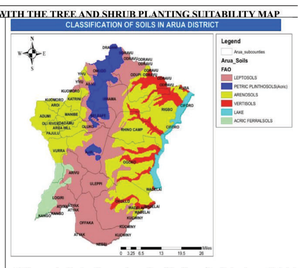
Class 3 (Yellow) can support **Class 4** trees.

Class 4 (Brown) is limited to **drought-resistant and restoration species only**.

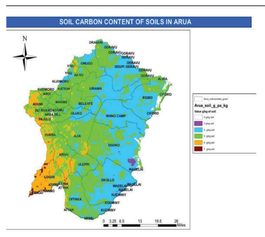
COMPOSITIONS (MAPS THAT WERE USED TO COME UP WITH THE TREE AND SHRUB PLANTING SUITABILITY MAP



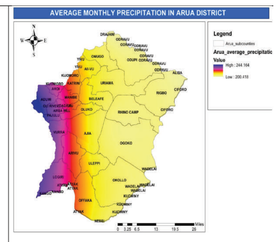
This map indicates the moisture content of soils in Arua district with areas in green having the highest moister content which tends to reduce as it tends to the drier areas in red as of 2025



This map indicates the various classification of soils in Arua district according to FAO



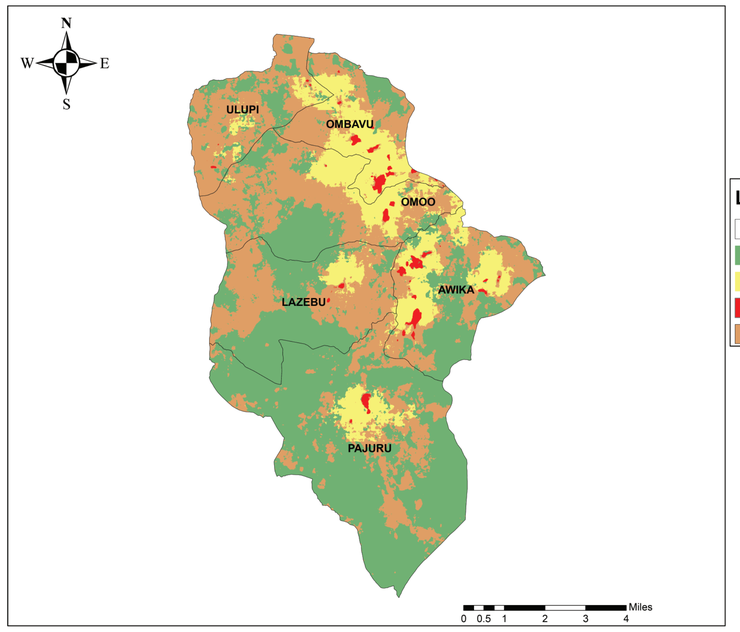
This Map Indicates the soil carbon content in grams per Kilogram of soil (g/kg) ranging from zero to seven and above, Soil carbon (SC) is a key component in climate action as of 2025



This is the map for the annual precipitation in Arua starting with areas with high precipitation as high as 244 mm to as low as 200 mm, as of 2025

LAND USE CHANGE

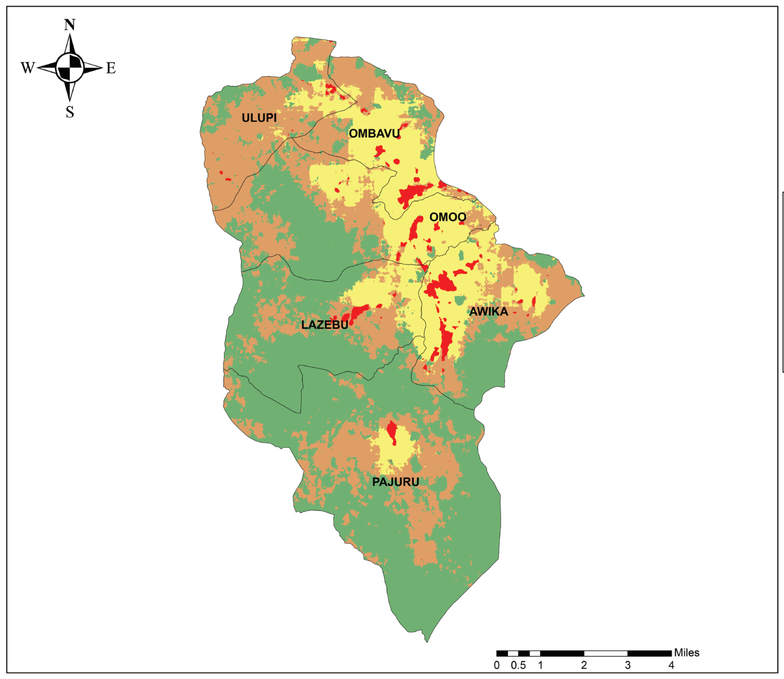
LAND USE LAND COVER FOR ARIVU SUB COUNTY AS OF 2018



Legend

- Arivu
- Trees
- Crops
- Built Areas
- Range Lands

LAND USE LAND COVER FOR ARIVU SUB COUNTY AS OF 2024



Legend

- Arivu
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LAND USE LAND COVER BY ESRI SENTINEL 2 (10M) RESOLUTION
(https://livingatlas.arcgis.com/landcover/)

LAND USE- LAND COVER CHANGE IN ARIVU SUB COUNTY BETWEEN 2018 AND 2024			
LAND USE-LAND COVER	**2018 (ACRES)**	**2023 (ACRES)**	**% INCREASE/LOSS**
Trees	7915.38	5527.02	30.17% loss
Crop	2633.89	3861.23	46.6% Increase
Built Areas	170.52	315.09	84.78% Increase
Range Lands	64331.98	22837.11	64.50% Loss

This map was developed by Tsevett Agro services under the BCGA (Building Resilience to climate change using GIS in Arua) Project

The BCGA Project is supported by Y4C (Youth 4 Climate), funded by the United Nations Development Program (UNDP) and Italian Ministry of Environment and Energy

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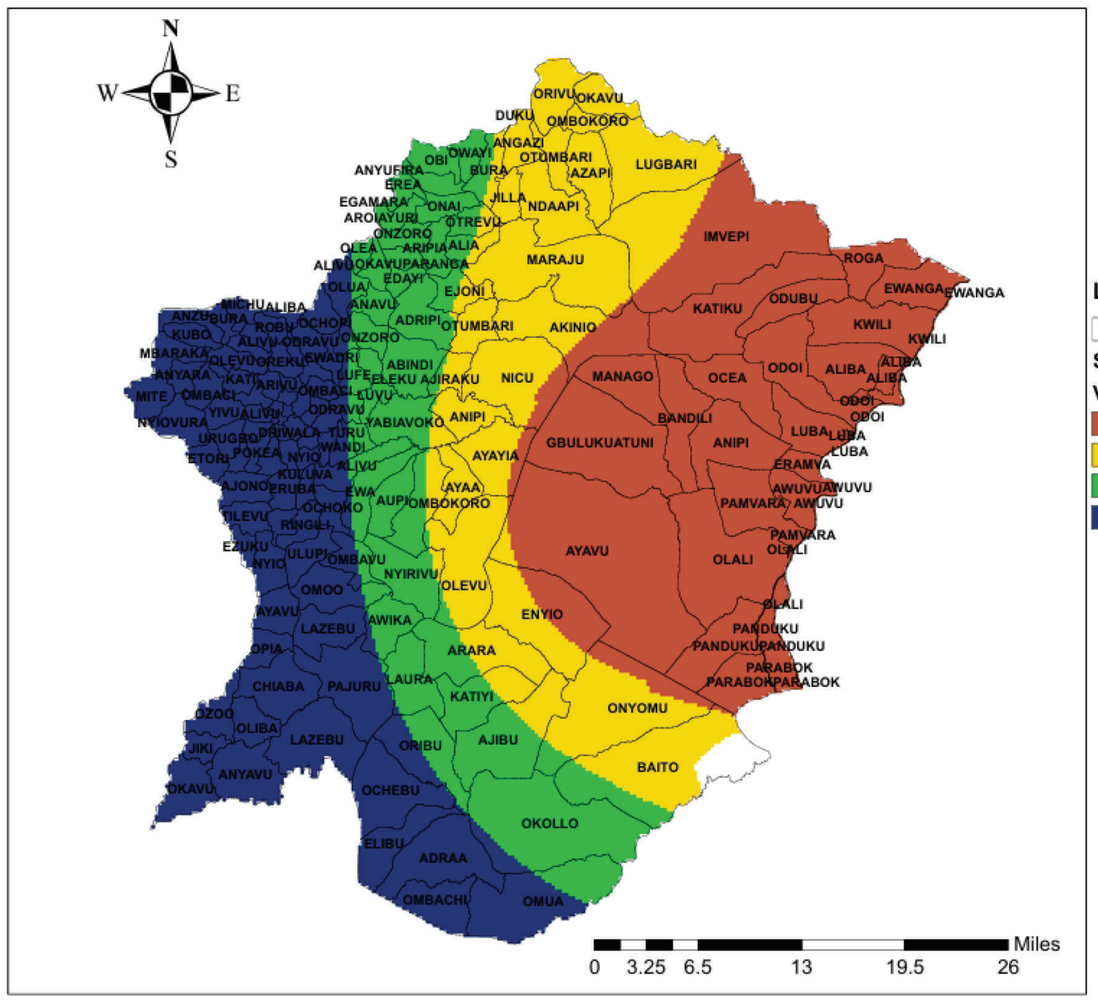

Color & Class	Tree Group Name	Ecological Zone Description	Common Tree Species (6+)	Suitable Shrubs (4)
Class 1	 **Mvule-Class Trees** *Moist Indigenous Forest & Agroforestry*	**Very suitable** – river valleys, wetlands, forest edges; deep, moist, fertile soils; high rainfall & humidity	1. *Milicia excelsa* **(Mvule)** 2. *Maesopsis eminii* **(Musizi)** 3. *Ficus natalensis* **(Mutuba)** 4. *Markhamia lutea* **(Lusambya)** 5. *Lovoa trichilioides* **(Nkalati)** 6. *Tectona grandis* **(Teak)** *Grevillea robusta* – tolerates similar conditions	 1. *Vernonia amygdalina* (Bitter leaf) 2. *Acalypha wilkesiana* 3. *Croton macrostachyus* 4. *Hibiscus surattensis*
Class 2	 **GrevilleaClass Trees** *Agroforestry & Fast-growing Species*	**Moderately high suitability** – midlands, moist uplands; moderately fertile, well-drained soils	1. *Grevillea robusta* 2. *Calliandra calothyrsus* 3. *Leucaena leucocephala* 4. *Gliricidia sepium* 5. *Sesbania sesban* 6. *Eucalyptus grandis* (for windbreaks) *Pinus patula* – good for mid-high altitudes	 1. *Tithonia diversifolia* 2. *Tephrosia vogelii* 3. *Lantana camara* (control advised) 4. *Ocimum gratissimum*
Class 3	 **Fruit TreeClass Trees** *Fruit & Nut Trees for Semi-dry Areas*	**Moderate suitability** – flatlands with seasonal rainfall; mixed farming zones	1. *Mangifera indica* (Mango) 2. *Persea americana* (Avocado) 3. *Tamarindus indica* 4. *Anacardium occidentale* (Cashew) 5. *Citrus sinensis* (Orange) 6. *Psidium guajava* (Guava) *Faidherbia albida* – suitable in semidry zones	 1. *Carissa edulis* 2. *Flueggea virosa* 3. *Solanum anguivi* 4. *Clerodendrum myricoides*
Color & Class	**Tree Group Name**	**Ecological Zone Description**	**Common Tree Species (6+)**	**Suitable Shrubs (4)**
Class 4	 **Acacia-Vitellaria Class Trees** *Dryland, Savanna & Restoration*	**Low to very low suitability** – degraded, hot uplands; poor soils, charcoaldepleted or semi-arid lands	1. *Vitellaria paradoxa* (Shea) 2. *Balanites aegyptiaca* 3. *Acacia Senegal* 4. *Melia volkensii* 5. *Azadirachta indica* (Neem) 6. *Commiphora africana* *Jatropha curcas, Boscia coriacea, Ziziphus spina-christi, Calotropis procera*	 1. *Euphorbia tirucalli* 2. *Opuntia spp.* 3. *Senna occidentalis* 4. *Indigofera arrecta*

Inter-Class Planting Compatibility Note:

Class 1 areas (Blue) can successfully grow trees from **Class 2–4**.

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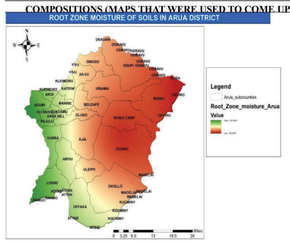
Class 4 (Brown) is limited to **drought-resistant and restoration species only**.

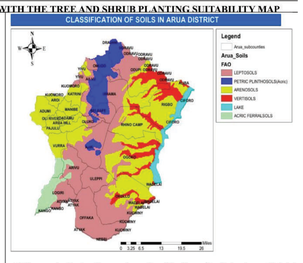
COMPOSITIONS/MAPS THAT WERE USED TO COME UP WITH THE TREE AND SHRUB PLANTING SUITABILITY MAP

ROOT ZONE MOISTURE OF SOILS IN ARUA DISTRICT



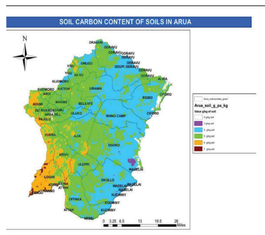
This map indicates the moisture content of soils in Arua district with areas in green having the highest moister content which tends to reduce as it tends to the drier areas in red as of 2025

CLASSIFICATION OF SOILS IN ARUA DISTRICT



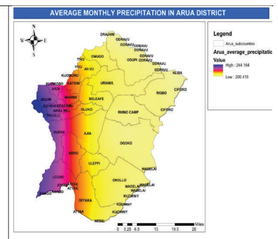
This map indicates the various classification of soils in Arua district according to FAO

SOIL CARBON CONTENT OF SOILS IN ARUA



This Map Indicates the soil carbon content in grams per Kilogram of soil (g/kg) ranging from zero to seven and above, Soil carbon (SC) is a key component in climate action as of 2025

AVERAGE MONTHLY PRECIPITATION IN ARUA DISTRICT



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LAND USE CHANGE

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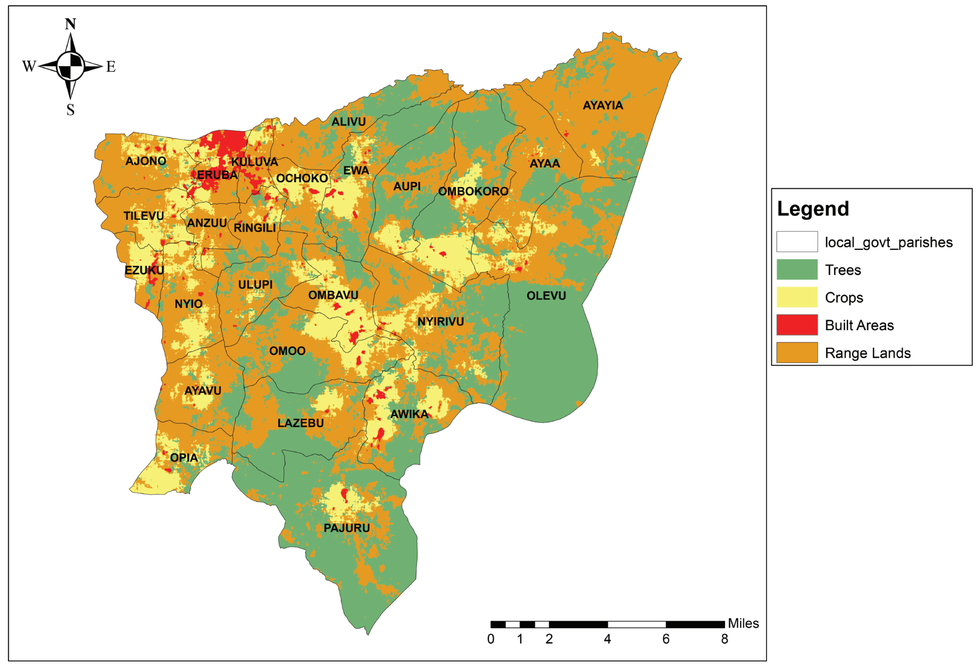
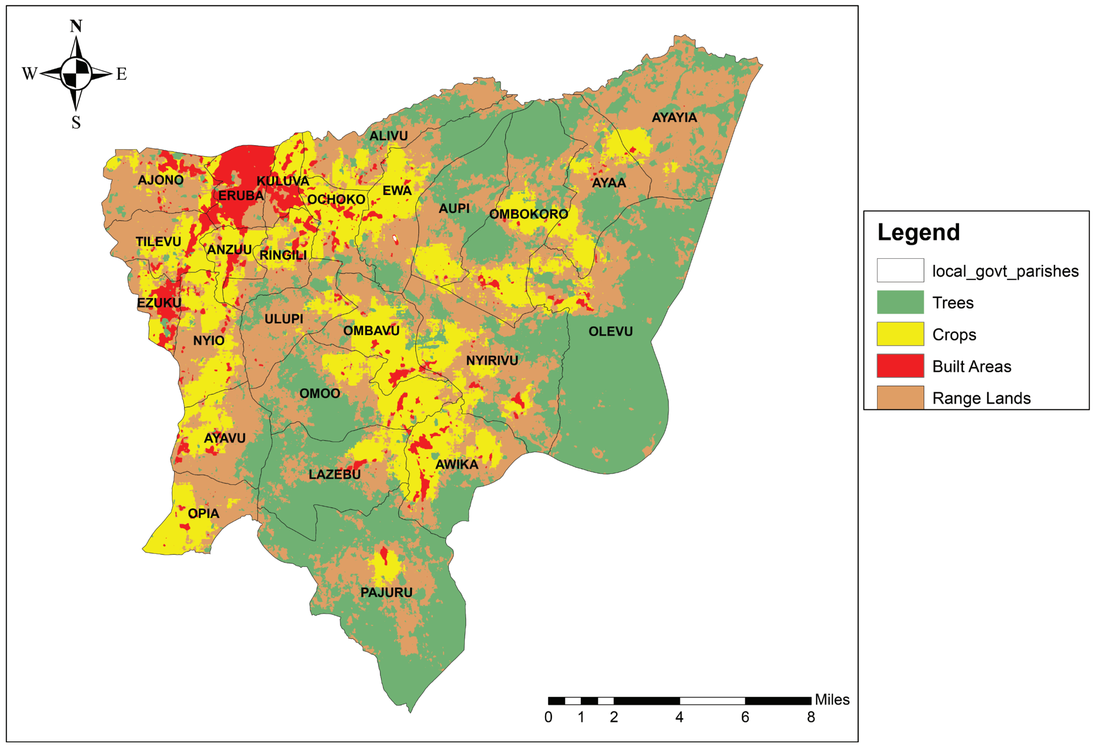


LAND USE LAND COVER FOR ARUA DISTRICT AS OF 2024



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LAND USE-LAND COVER	**2018 (ACRES)**	**2023 (ACRES)**	**% INCREASE/LOSS**
Trees	51500.39	36688.99	28.76% loss
Crop	20982.67	13544.91	35.45% Loss
Built Areas	2631.16	4705.92	78.85% Increase
Range Lands	66246.26	86418.17	30.45 % Increase

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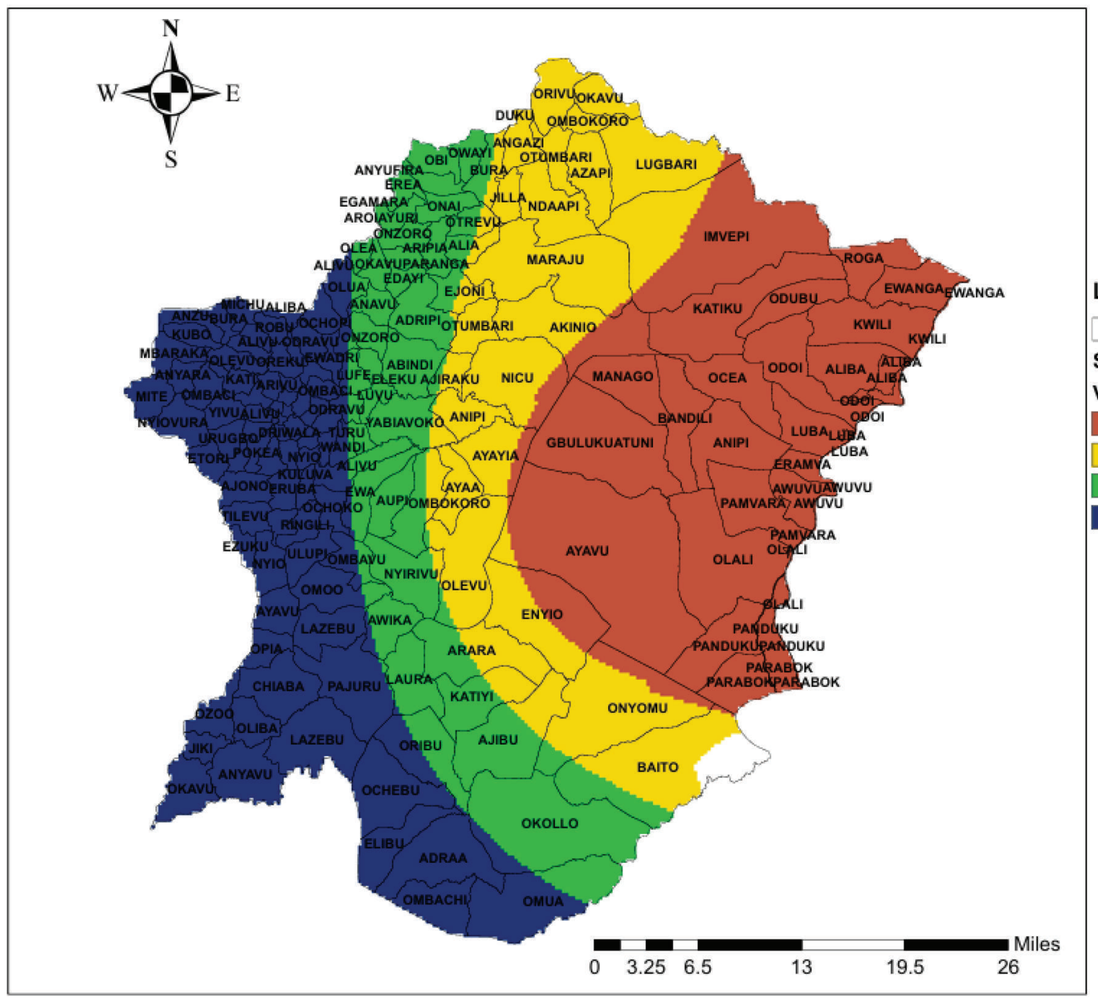
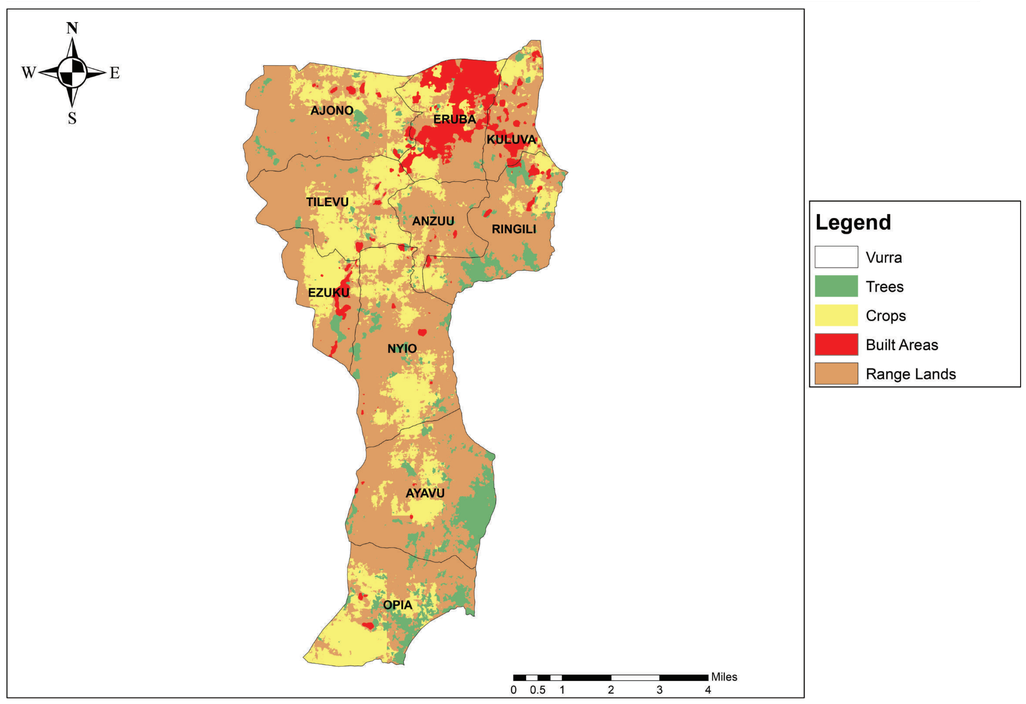


LAND USE CHANGE

LAND USE LAND COVER FOR VURRA SUB COUNTY AS OF 2018



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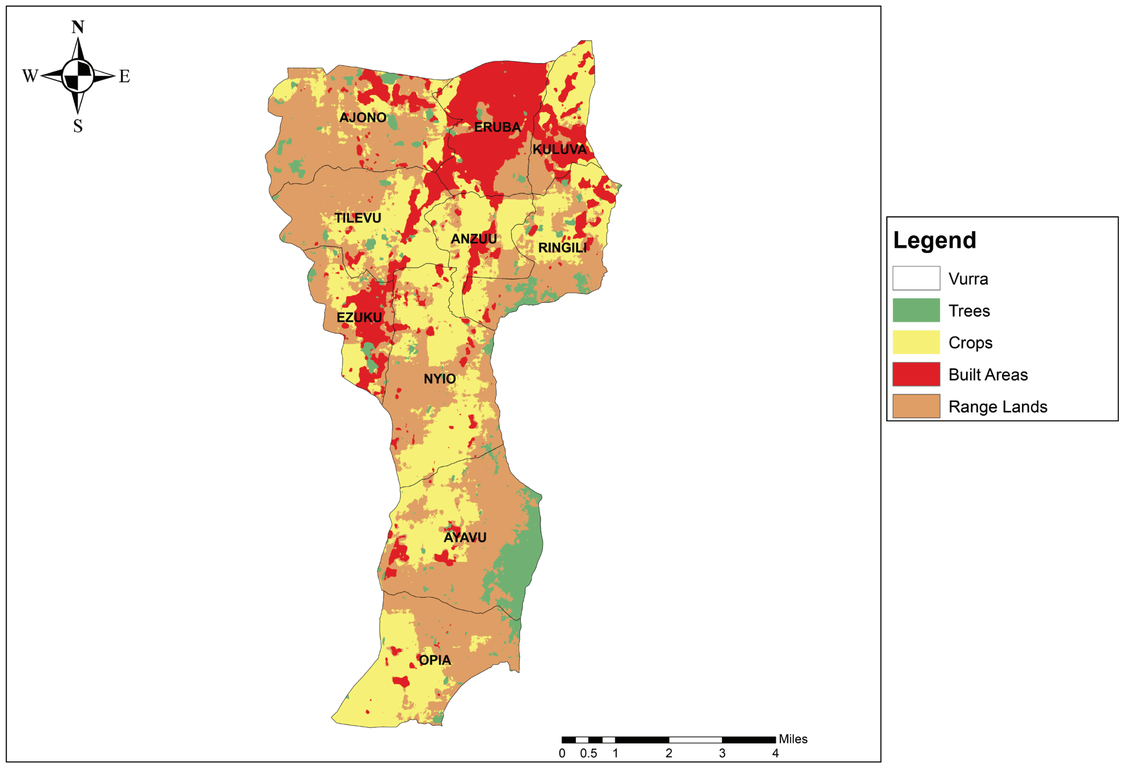

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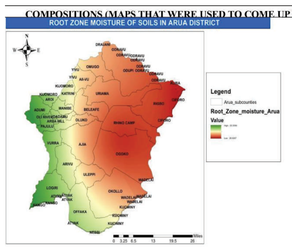

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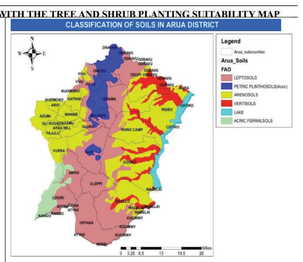

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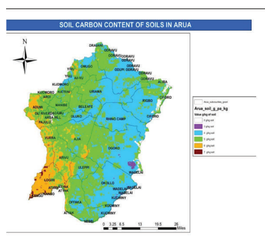

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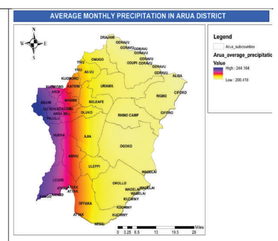

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LAND USE-LAND COVER	**2018**	**2023**	**% INCREASE/LOSS**
Trees	2520.64	1748.34	30.64% Loss
Crop	7499.82	10119.86	34.9% Increase
Built Areas	1919.40	4877.09	154.14% Increase
Range Lands	17599.31	12794.84	27.3% Loss

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