ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) FOR THE PROPOSED 400kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP) FROM IBADAKULI SUBSTATION IN SHINYANGA REGION VIA GEITA REGION, NYAKANAZI AND KYAKA SUBSTATIONS IN KAGERA REGION TO MASAKA WEST IN UGANDA

PART 2 – Annexes 5 to 10

DEVELOPER:
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Submission Date: July 15th, 2025

JGP

TABLE OF CONTENTS

Annex 5 – Map 7.2.2.1.4.a – Land Cover and Use in the DAA

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

- TL Mutukula - Kyaka
- TL Kyaka - Nyakanazi
- TL Nyakanazi - Ibadakuli

EXISTING (I.E., DESIGNED AND CONSTRUCTED) TRANSMISSION LINES

- TL 220kV Benako - Kyaka (Designed)
- TL 220kV Nyakanazi - Benaco (Constructed)

VEGETATION COVER AND LAND USE

- Evergreen dry forest
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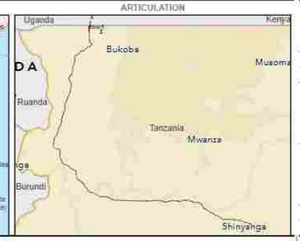
- Cyclical agriculture
- Silviculture
- Rural buildings
- Anthropic area
- Paved road
- Unpaved road
- Substation
- Water

LOCATION

ARTICULATION



Vegetation Expert:

Juliana Maerschner Aguiar Peixoto | JGP

Biologist

Graphic Scale

0 20 100 150 200 m

Projection WGS 1984 UTM Zone 36S

Source: JGP - Mapping and Surveying, Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Map 7.2.2.1.4.a - Land Cover and Use -	0

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

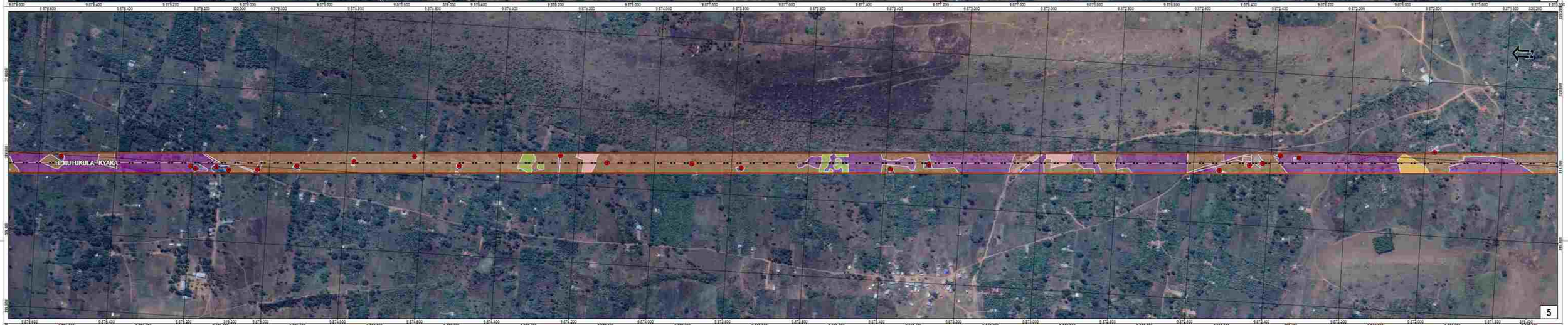
Map 7.2.2.1.4.a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga – Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.



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LOCATION

ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Palxoto
Biologist
JGP

Graphic Scale
0 50 100 150 200

Projection WGS 1984 UTM Zone 36S
Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
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Project:

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Map 7.2.2.1.4.a:

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Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant:

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ARTICULATION

Vegetation Expert:

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Biologist

Graphic Scale: 0 20 100 150 200 m

Projection WGS 1984 UTM Zone 36S

Source: JGP - Mapping and Surveying - Google Earth satellite image

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11/21/2024	1:5.000	Imag 7.2.2.1.4_Land Cover and Use -	03

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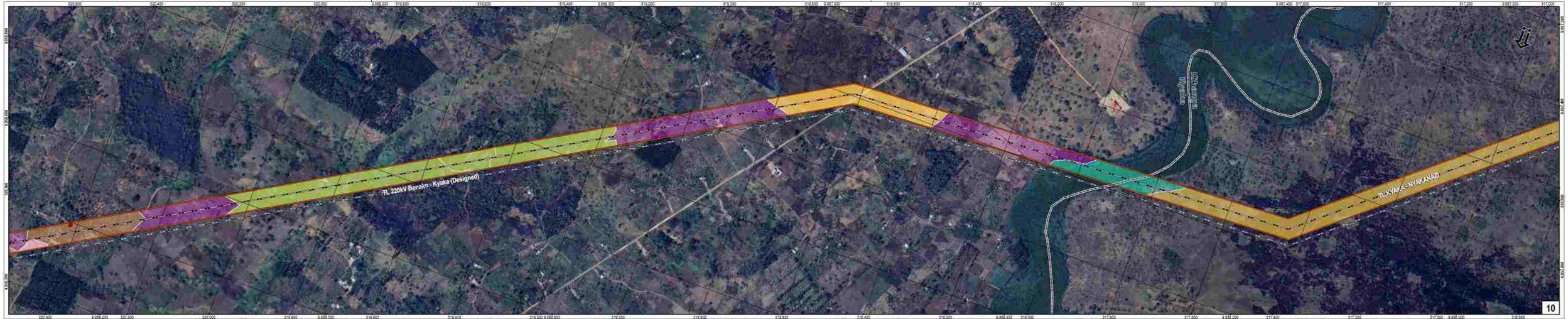

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ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Peixoto — JGP

Biologist

Graphic Scale: 0 50 100 150 200

Projection WGS 1984 UTM Zone 36S

Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Img 7.2.2.1.4 a - Land Cover and Use -	03

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Vegetation Expert:

Juliana Maerschner Aguiar Peixoto | JGP

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ARTICULATION

Vegetation Expert:

Juliana Mayerschner Aguiar Peixoto
Biologist
JGP

Graphic Scale
0 20 100 150 200 m

Projection WGS 1984 UTM Zone 36S
Source: JGP – Mapping and Surveying, Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Imag 7.2.2.1.4 a_Land Cover and Use	03

Developer:

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Project:

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Lead E&S Consultant:

JGP Consultoria e Participações Ltda.

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ARTICULATION

Vegetation Expert:

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Biologist

Graphic Scale
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Source: JGP - Mapping and Surveying; Google Earth satellite image

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11/21/2024	1:5.000	Map 7.2.2.1.4a_Land Cover and Use -	0

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PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4 a:
Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant:
JGP Consultoria e Participações Ltda.

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- Substation
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ARTICULATION

Vegetation Expert:

Juliana Mayerschner Aguiar Peixoto
Biologist
JGP

Graphic Scale
0 20 100 150 300 m

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Map 7.2.2.1.4.a:

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ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Peixoto | JGP
Biologist

Graphic Scale
0 50 100 150 200 m

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Source: JGP - Mapping and Surveying; Google Earth satellite image

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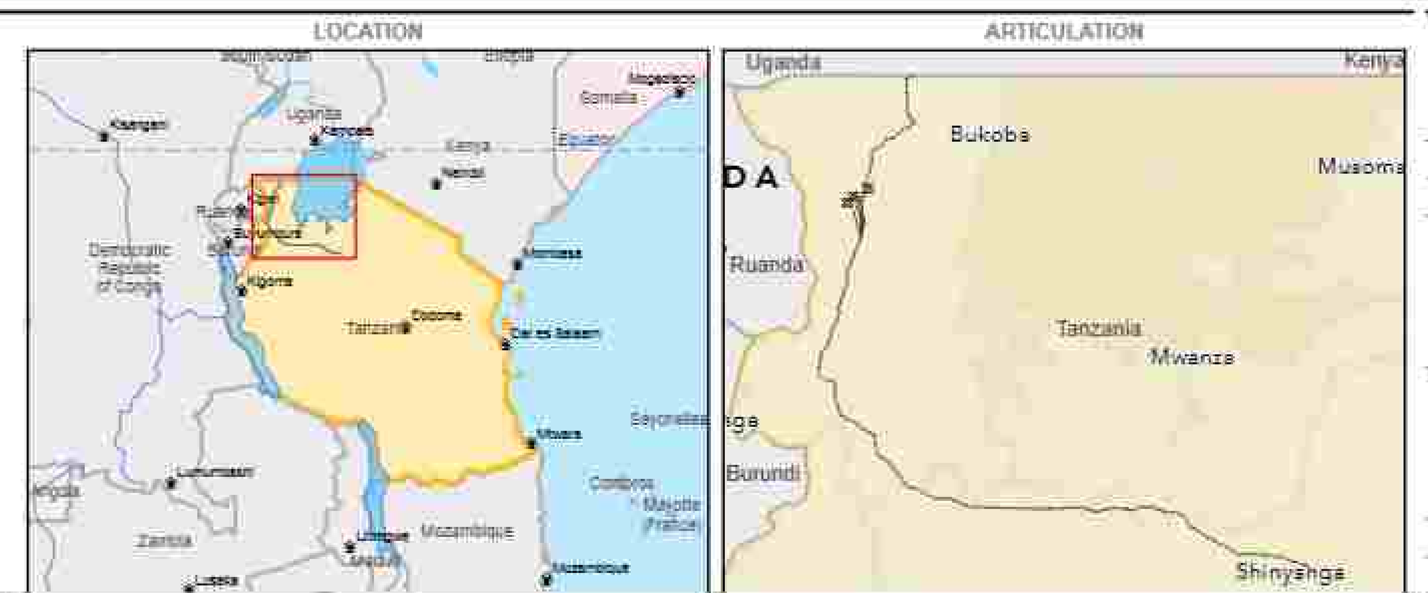

Vegetation Expert:

Juliana Maerschner Aguiar Paizoto | JGP
Biologist

Graphic Scale: 0 – 50 – 100 – 150 – 200 m

Projection WGS 1984 UTM Zone 36S

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11/21/2024	1:5.000	Map 7.2.2.1.4a_Land Cover and Use -	0

Developer: Tanzania Electric Supply Company Limited (TANESCO)

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PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4 a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant: JGP Consultoria e Participações Ltda.

Sheet 10/47

TL KYAKA - NYAKANAZI

TL 220kV Benako - Kyaka (Designed)

31

32

33

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

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ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Peixoto

Biologist | JGP

Graphic Scale

0 20 100 150 200 m

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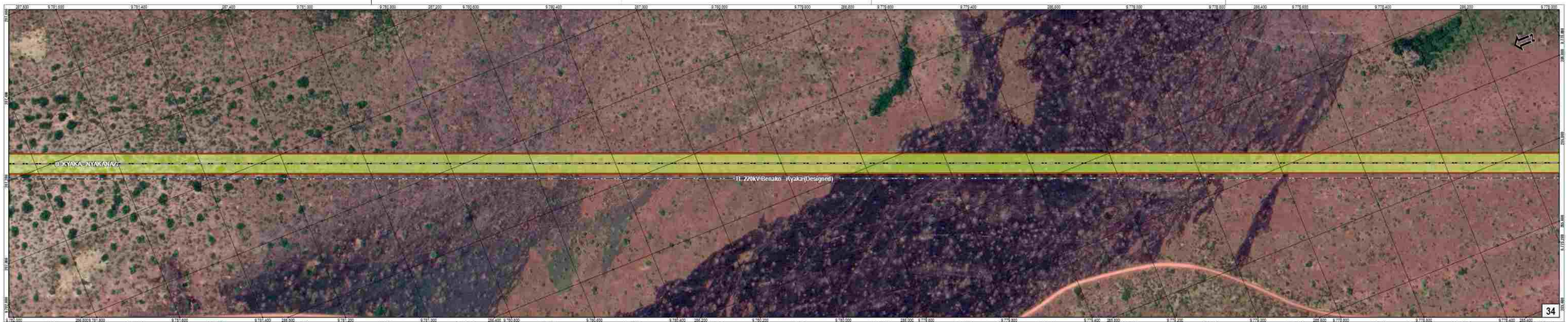

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Vegetation Expert:

Juliana Maierschner Aguiar Peixoto — JGP
Biologist

Graphic Scale: 0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S
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Date	Scale	File	Rev.
11/21/2024	1:5.000	Img 7.2.2.1.4 a_Land Cover and Use -	0

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Map 7.2.2.1.4 a:

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Project: **PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)**

Map 7.2.2.1.4.a:

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Projection WGS 1984 UTM Zone 36S

Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Map 7.2.2.1.4.a_Land Cover and Use -	0

Developer: Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4.a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant: JGP Consultoria e Participações Ltda.

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

- TL Mutukula - Kyaka
- TL Kyaka - Nyakanazi
- TL Nyakanazi - Ibadakuli

EXISTING (I.E., DESIGNED AND CONSTRUCTED) TRANSMISSION LINES

- TL 220kV Benako - Kyaka (Designed)
- TL 220kV Nyakanazi - Benaco (Constructed)

VEGETATION COVER AND LAND USE

- Evergreen dry forest
- Grass wooded savanna
- Riverine forest
- Riverine grassland vegetation
- Miombo woodland
- Mixed woodland
- Thicket bushland/shrubland
- Perennial agriculture
- Cyclical agriculture
- Silviculture
- Rural buildings
- Anthropic area
- Paved road
- Unpaved road
- Substation
- Water

LOCATION

ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Peixoto | JGP
Biologist

Graphic Scale

0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S
Source: JGP - Mapping and Surveying, Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Img 7.2.2.1.4_Land Cover and Use -	0

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4 a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

- TL Mutukula - Kyaka
- TL Kyaka - Nyakanazi
- TL Nyakanazi - Ibadakuli

EXISTING (I.E., DESIGNED AND CONSTRUCTED) TRANSMISSION LINES

- TL 220kV Benako - Kyaka (Designed)
- TL 220kV Nyakanazi - Benaco (Constructed)

VEGETATION COVER AND LAND USE

- Evergreen dry forest
- Grass wooded savanna
- Riverine forest
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- Mixed woodland
- Thicket bushland/shrubland
- Perennial agriculture
- Cyclical agriculture
- Silviculture
- Rural buildings
- Anthropic area
- Paved road
- Unpaved road
- Substation
- Water

LOCATION

ARTICULATION

Vegetation Expert:

Juliana Mgerschner Aguiar Peixoto
Biologist — JGP

Graphic Scale
0 20 100 150 200 m

Projection WGS 1984 UTM Zone 36S
Source: JGP – Mapping and Surveying - Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Imp-7327-ea_Land Cover and Use -	0

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4.a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga – Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

- TL Mutukula - Kyaka
- TL Kyaka - Nyakanazi
- TL Nyakanazi - Ibadakuli

EXISTING (I.E., DESIGNED AND CONSTRUCTED) TRANSMISSION LINES

- TL 220kV Benako - Kyaka (Designed)
- TL 220kV Nyakanazi - Benaco (Constructed)

VEGETATION COVER AND LAND USE

- Evergreen dry forest
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- Perennial agriculture
- Cyclical agriculture
- Silviculture
- Rural buildings
- Anthropic area
- Paved road
- Unpaved road
- Substation
- Water

LOCATION

ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Peixoto | JGP
Biologist

Graphic Scale: 0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S
Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Map 7.2.2.1.4.a_Land Cover and Use -	0

Developer: Tanzania Electric Supply Company Limited (TANESCO)

Project: **PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)**

Map 7.2.2.1.4.a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant: JGP Consultoria e Participações Ltda.

Sheet 17/47

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

- TL Mutukula - Kyaka
- TL Kyaka - Nyakanazi
- TL Nyakanazi - Ibadakuli

EXISTING (I.E., DESIGNED AND CONSTRUCTED) TRANSMISSION LINES

- TL 220kV Benako - Kyaka (Designed)
- TL 220kV Nyakanazi - Benaco (Constructed)

VEGETATION COVER AND LAND USE

- Evergreen dry forest
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- Perennial agriculture
- Cyclical agriculture
- Silviculture
- Rural buildings
- Anthropic area
- Paved road
- Unpaved road
- Substation
- Water

LOCATION

ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Peixoto

Biologist | JGP

Graphic Scale

0 50 100 150 200

Projection WGS 1984 UTM Zone 36S

Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Img 7.2.2.1.4 a_Land Cover and Use -	03

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4 a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

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- TL Kyaka - Nyakanazi
- TL Nyakanazi - Ibadakuli

EXISTING (I.E., DESIGNED AND CONSTRUCTED) TRANSMISSION LINES

- TL 220kV Benako - Kyaka (Designed)
- TL 220kV Nyakanazi - Benaco (Constructed)

VEGETATION COVER AND LAND USE

- Evergreen dry forest
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- Perennial agriculture
- Cyclical agriculture
- Silviculture
- Rural buildings
- Anthropic area
- Paved road
- Unpaved road
- Substation
- Water

LOCATION

ARTICULATION

Vegetation Expert:

Juliana Mgerschner Aguiar Peixoto — JGP

Biologist

Graphic Scale: 0 20 100 150 200 m

Projection WGS 1984 UTM Zone 36S

Source: JGP – Mapping and Surveying, Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Imag 7.2.2.1.4_Land Cover and Use *	03

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4 a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga – Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

- TL Mutukula - Kyaka
- TL Kyaka - Nyakanazi
- TL Nyakanazi - Ibadakuli

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- Perennial agriculture
- Cyclical agriculture
- Silviculture
- Rural buildings
- Anthropic area
- Paved road
- Unpaved road
- Substation
- Water

LOCATION

ARTICULATION

Vegetation Expert:

Juliana Mjaerschner Aguiar Peixoto | JGP
Biologist

Graphic Scale
0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S
Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Map 7.2.2.1.4.a_Land Cover and Use -	Ø

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4.a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

- TL Mutukula - Kyaka
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EXISTING (I.E., DESIGNED AND CONSTRUCTED) TRANSMISSION LINES

- TL 220kV Benako - Kyaka (Designed)
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VEGETATION COVER AND LAND USE

- Evergreen dry forest
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- Perennial agriculture
- Cyclical agriculture
- Silviculture
- Rural buildings
- Anthropic area
- Paved road
- Unpaved road
- Substation
- Water

LOCATION

ARTICULATION

Vegetation Expert:

Juliana Maierschner Aguiar Patzoto — JGP
Biologist

Graphic Scale: 0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S
source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5 000	Map 7.2.2.1.4 a - Land Cover and Use	03

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4 a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga – Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

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- Perennial agriculture
- Cyclical agriculture
- Silviculture
- Rural buildings
- Anthropic area
- Paved road
- Unpaved road
- Substation
- Water

LOCATION

ARTICULATION

Vegetation Expert:

Juliena Maerschner Aguiar Peixoto

Biologist

JGP

Graphic Scale

0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S

Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Map 7.2.2.1.4a_Land Cover and Use -	0

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4 a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

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- Cyclical agriculture
- Silviculture
- Rural buildings
- Anthropic area
- Paved road
- Unpaved road
- Substation
- Water

LOCATION

ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Peixoto

Biologist | JGP

Graphic Scale: 0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S

Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Map 7.2.2.1.4.a_Land Cover and Use -	0

Developer: Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4.a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant: JGP Consultoria e Participações Ltda.

Sheet 23/47

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

- TL Mutukula - Kyaka
- TL Kyaka - Nyakanazi
- TL Nyakanazi - Ibadakuli

EXISTING (I.E., DESIGNED AND CONSTRUCTED) TRANSMISSION LINES

- TL 220kV Benako - Kyaka (Designed)
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VEGETATION COVER AND LAND USE

- Evergreen dry forest
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- Mixed woodland
- Thicket bushland/shrubland
- Perennial agriculture
- Cyclical agriculture
- Silviculture
- Rural buildings
- Anthropic area
- Paved road
- Unpaved road
- Substation
- Water

LOCATION

ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Peixoto | JGP
Biologist

Graphic Scale
0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S
Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Map 7.2.2.1.4a_Land Cover and Use -	0

Developer:
Tanzania Electric Supply Company Limited (TANESCO)

Project:
PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4.a:
Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant:
JGP Consultoria e Participações Ltda.

Sheet 24/47

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

- TL Mutukula - Kyaka
- TL Kyaka - Nyakanazi
- TL Nyakanazi - Ibadakuli

EXISTING (I.E., DESIGNED AND CONSTRUCTED) TRANSMISSION LINES

- TL 220kV Benako - Kyaka (Designed)
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VEGETATION COVER AND LAND USE

- Evergreen dry forest
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- Mixed woodland
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- Perennial agriculture
- Cyclical agriculture
- Silviculture
- Rural buildings
- Anthropic area
- Paved road
- Unpaved road
- Substation
- Water

LOCATION

ARTICULATION

Vegetation Expert:

Juliena Maerschner Aguiar Paixoto

Biologist

JGP

Graphic Scale: 0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S

Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Map 7.2.2.1.4a_Land Cover and Use -	0

Developer: Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4 a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant: JGP Consultoria e Participações Ltda.

Sheet 25/47

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

- TL Mutukula - Kyaka
- TL Kyaka - Nyakanazi
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EXISTING (I.E., DESIGNED AND CONSTRUCTED) TRANSMISSION LINES

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VEGETATION COVER AND LAND USE

- Evergreen dry forest
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- Cyclical agriculture
- Silviculture
- Rural buildings
- Anthropic area
- Paved road
- Unpaved road
- Substation
- Water

LOCATION

ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Peixoto | JGP
Biologist

Graphic Scale
0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S
Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Map 7.2.2.1.4.a_Land Cover and Use -	0

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4.a:

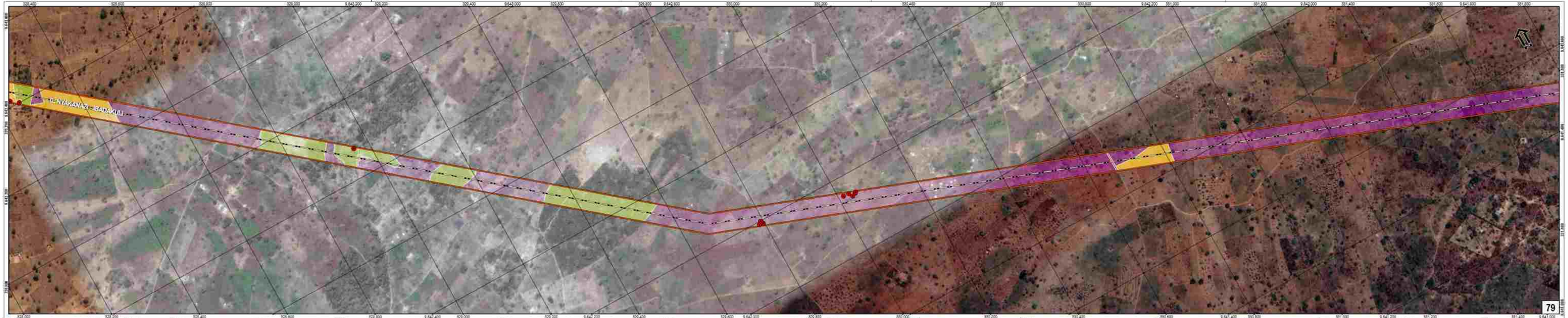
Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.

Sheet 26/47



LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

- TL Mutukula - Kyaka
- TL Kyaka - Nyakanazi
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EXISTING (I.E., DESIGNED AND CONSTRUCTED) TRANSMISSION LINES

- TL 220kV Benako - Kyaka (Designed)
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VEGETATION COVER AND LAND USE

- Evergreen dry forest
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LOCATION

ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Peixoto | JGP
Biologist

Graphic Scale

0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S
Source: JGP - Mapping and Surveying, Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Imag 7.2.2.1.4_Land Cover and Use -	00

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4.a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga – Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

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EXISTING (I.E., DESIGNED AND CONSTRUCTED) TRANSMISSION LINES

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VEGETATION COVER AND LAND USE

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- Paved road
- Unpaved road
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LOCATION

ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Peixoto

Biologist

JGP

Graphic Scale

0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S

Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Map 7.2.2.1.4a_Land Cover and Use -	0

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4.a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.

Sheet 28/47

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

- TL Mutukula - Kyaka
- TL Kyaka - Nyakanazi
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EXISTING (I.E., DESIGNED AND CONSTRUCTED) TRANSMISSION LINES

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VEGETATION COVER AND LAND USE

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LOCATION

ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Peixoto

Biologist

JGP

Graphic Scale

0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S

Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Map 7.2.2.1.4a_Land Cover and Use -	0

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4 a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

- TL Mutukula - Kyaka
- TL Kyaka - Nyakanazi
- TL Nyakanazi - Ibadakuli

EXISTING (I.E., DESIGNED AND CONSTRUCTED) TRANSMISSION LINES

- TL 220kV Benako - Kyaka (Designed)
- TL 220kV Nyakanazi – Benaco (Constructed)

VEGETATION COVER AND LAND USE

- Evergreen dry forest
- Grass wooded savanna
- Riverine forest
- Riverine grassland vegetation
- Miombo woodland
- Mixed woodland
- Thicket bushland/shrubland
- Perennial agriculture
- Cyclical agriculture
- Silviculture
- Rural buildings
- Anthropic area
- Paved road
- Unpaved road
- Substation
- Water

LOCATION

ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Peixoto

Biologist

JGP

Graphic Scale

0 50 100 150 200

Projection WGS 1984 UTM Zone 36S

Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Imag 7.2.2.1.4_Land Cover and Use -	03

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4.a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga – Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

- TL Mutukula - Kyaka
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- Silviculture
- Rural buildings
- Anthropic area
- Paved road
- Unpaved road
- Substation
- Water

LOCATION

ARTICULATION

Vegetation Expert:

Juliana Mjørschner Aguiar Paixoto

Biologist

JGP

Graphic Scale

0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S

Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Map 7.2.2.1.4.a_Land Cover and Use -	0

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

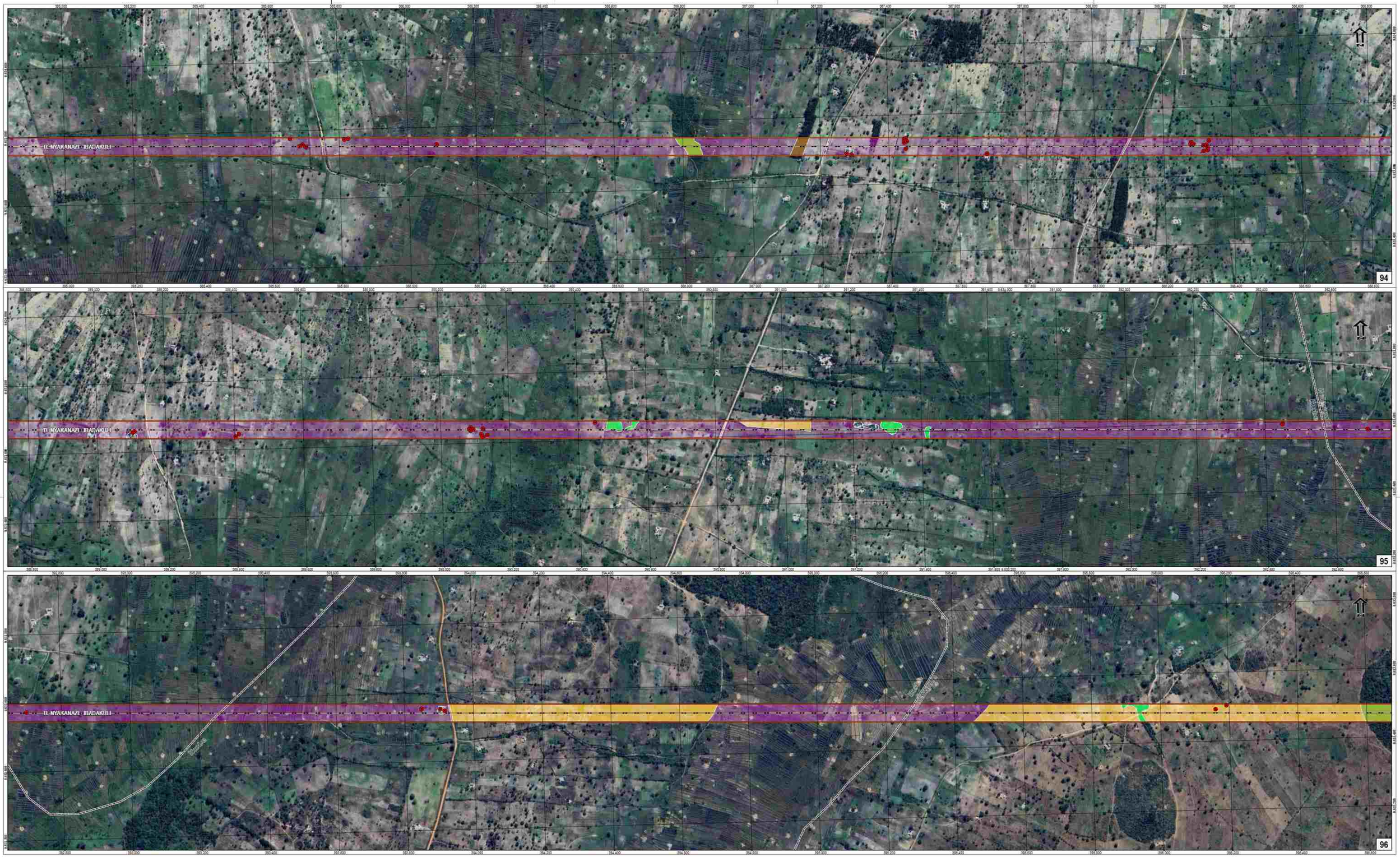
Map 7.2.2.1.4.a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.



LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

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LOCATION

ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Peixoto
Biologist | JGP

Graphic Scale: 0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S
Source: JGP - Mapping and Surveying, Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Imp 7.2.2.1.4 a_Land Cover and Use -	0

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

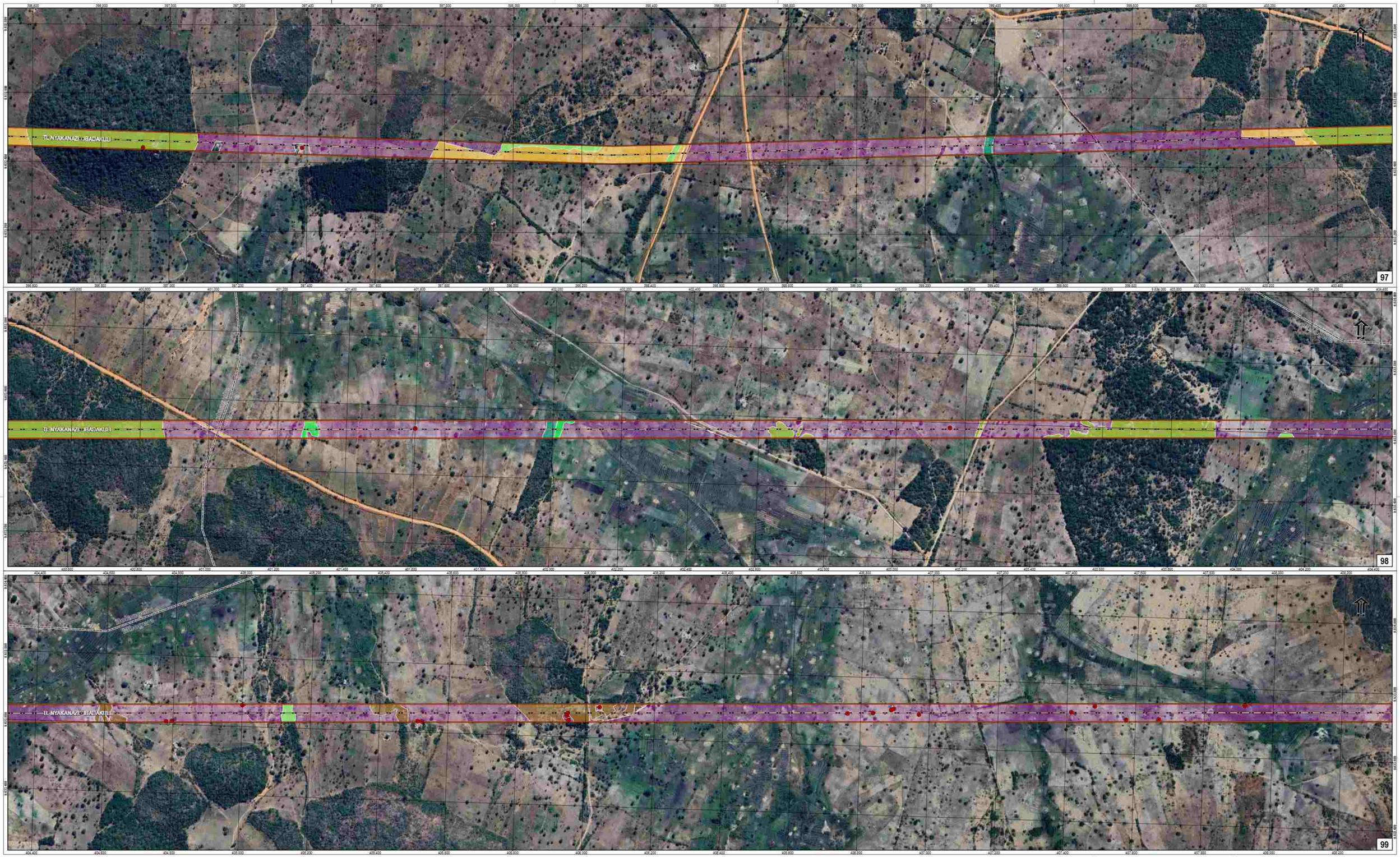
Map 7.2.2.1.4 a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga – Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.



LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

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LOCATION

ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Peixoto | JGP

Biologist

Graphic Scale

0 50 100 150 200

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Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Img 7.2.2.1.4 a - Land Cover and Use -	03

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

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Region: Kagera, Geita and Shinyanga – Tanzânia

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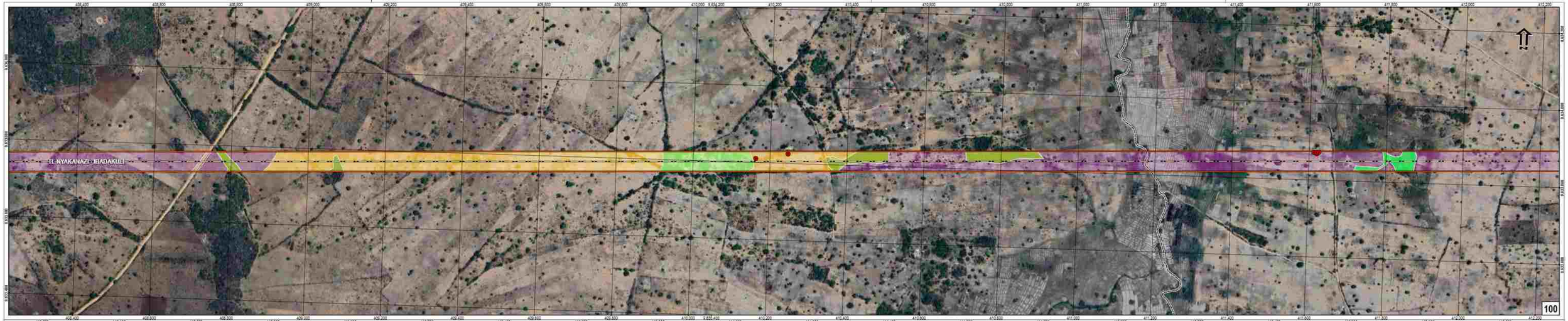

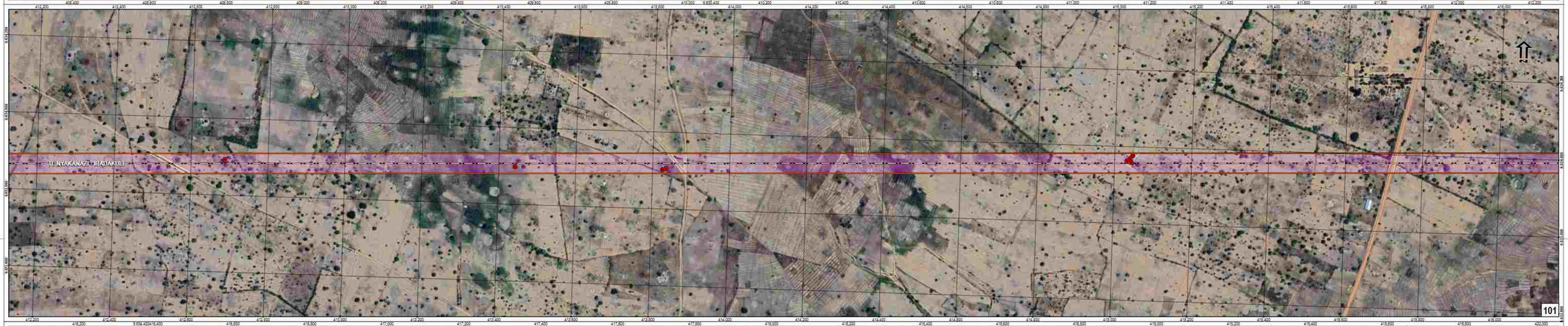

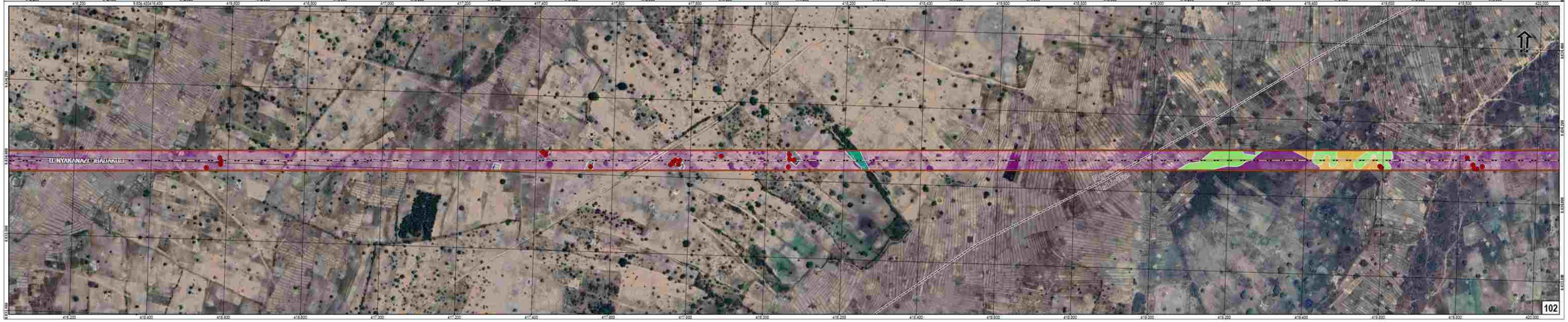

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- Wards

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ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Peixoto

Biologist | JGP

Graphic Scale

0 50 100 150 200

Projection WGS 1984 UTM Zone 36S

Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Img 7.2.2.1.4 a - Land Cover and Use -	03

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Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

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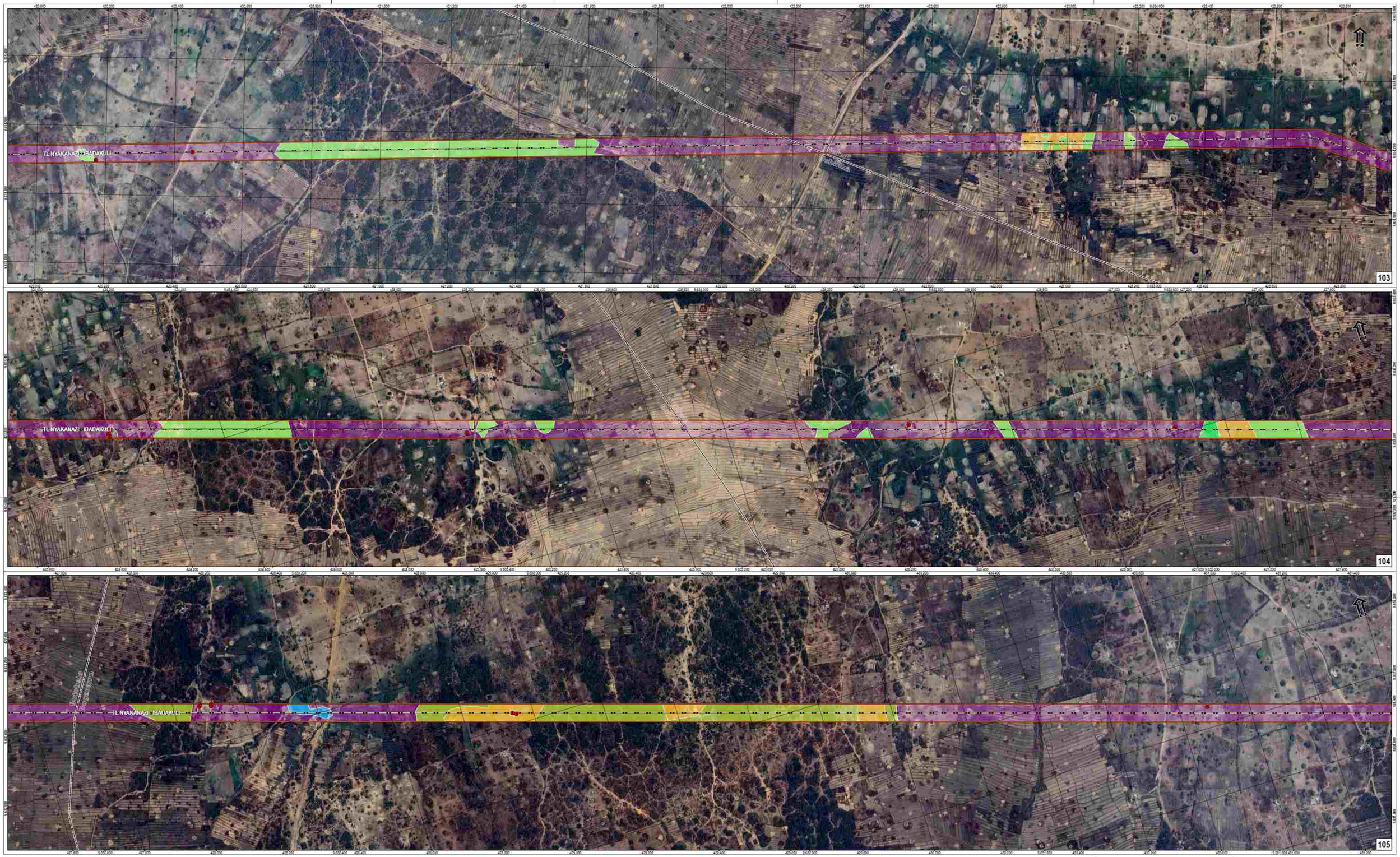

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LOCATION

ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Peixoto — JGP

Biologist

Graphic Scale

0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S

Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Imag 7.2.2.1.4_Land Cover and Use	03

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4.a:

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Region: Kagera, Geita and Shinyanga - Tanzânia

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LOCATION

ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Peixoto
Biologist
JGP

Graphic Scale
0 50 100 150 200

Projection WGS 1984 UTM Zone 36S
Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
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Tanzania Electric Supply Company Limited (TANESCO)

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PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

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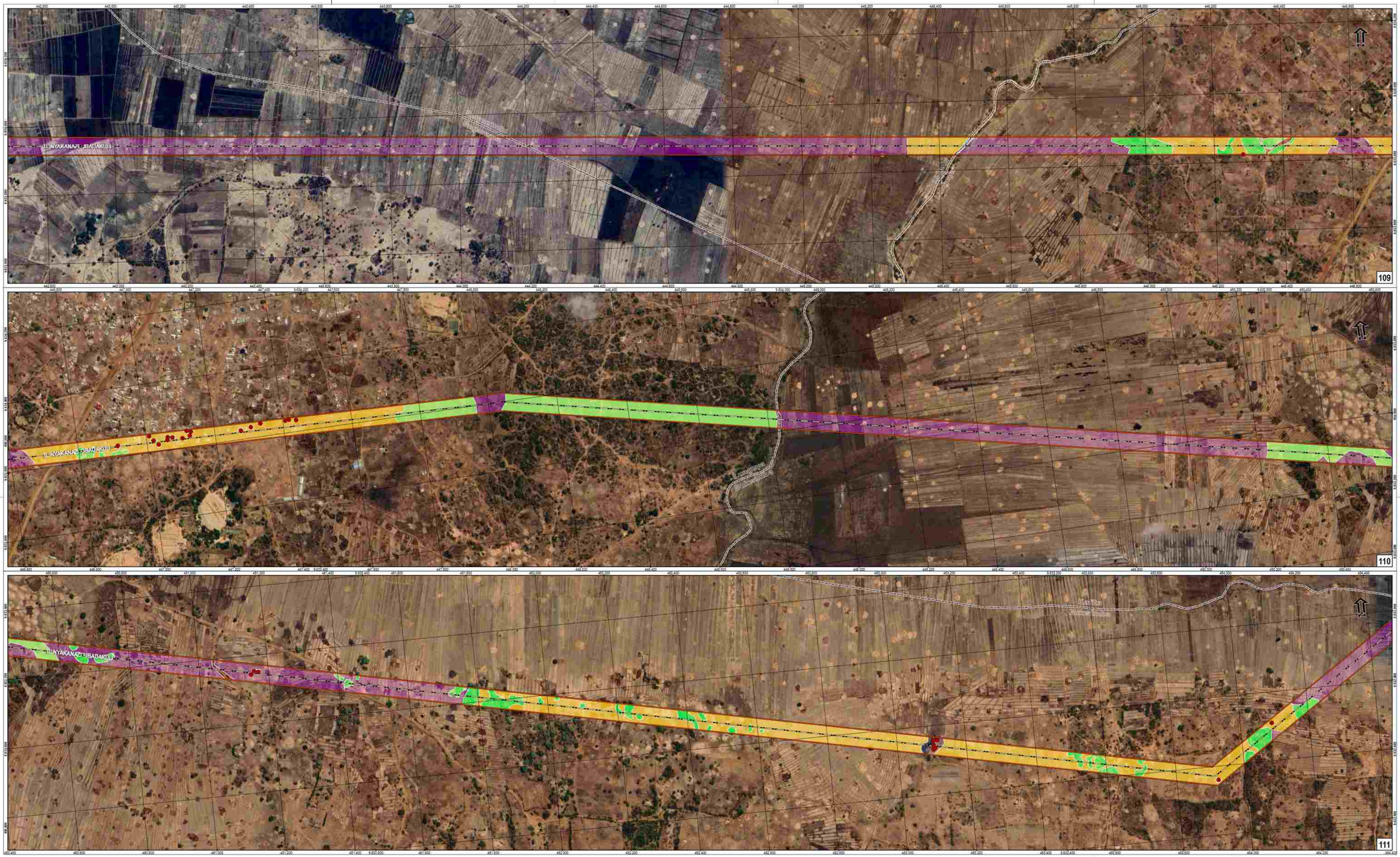

LEGEND

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- Unpaved road
- Substation
- Water

LOCATION

ARTICULATION

Vegetation Expert:

Juliana Mayerschner Aguiar Patzoto — JGP

Biologist

Graphic Scale

0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S

Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Img 7.2.2.1.4 a_Land Cover and Use	03

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

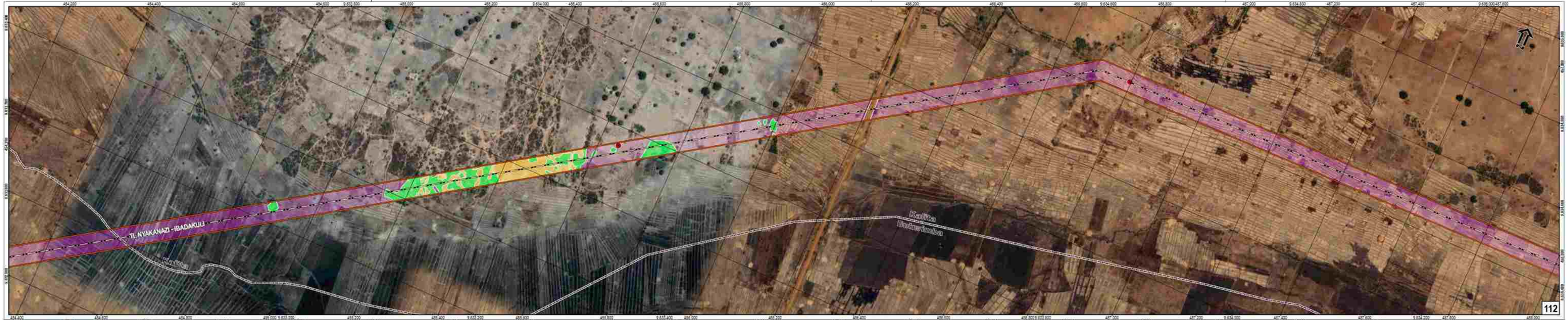
Map 7.2.2.1.4 a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.



LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

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LOCATION

ARTICULATION

Vegetation Expert:

Juliana Maierschner Aguiar Patzoto — JGP

Biologist

Graphic Scale: 0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S

source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Map 7.2.2.1.4 a - Land Cover and Use - ...	03

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

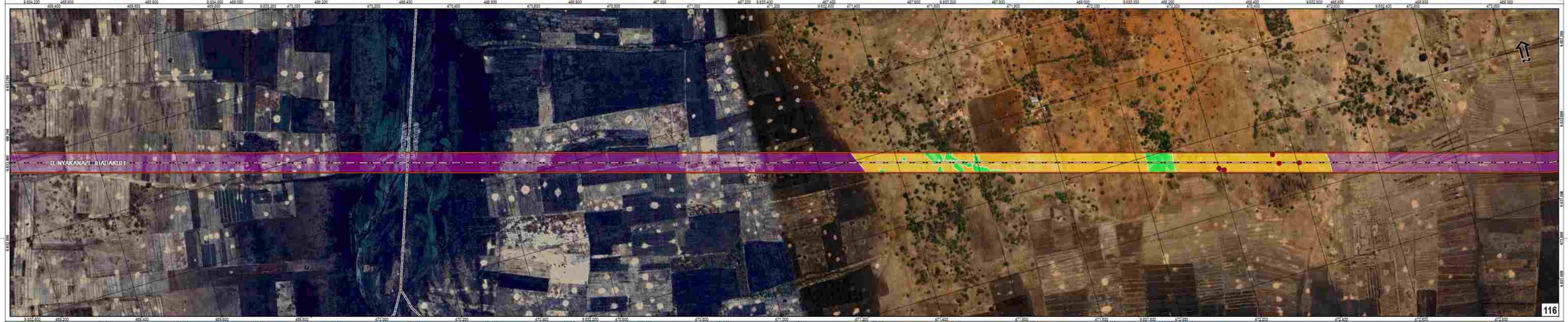
Map 7.2.2.1.4 a:

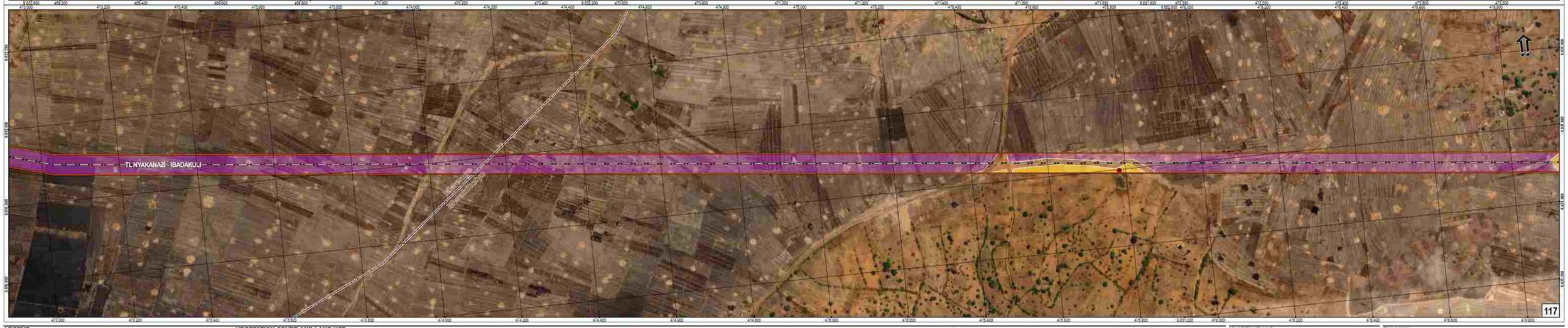
Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga – Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.





LEGEND

- Buildings
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- Directly Affected Area (i.e., T-Line Easement = 52 m)
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- Wards

UTIP PROJECT (ESIA T-LINES)

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ARTICULATION

Vegetation Expert:

Juliana Mgerichner Aguiar Peixoto
Biologist
JGP

Graphic Scale: 0 20 100 150 300 m

Projection WGS 1984 UTM Zone 36S
Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Imes 7.2.2.1.4_Land Cover and Use *	03

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4.a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.

LEGEND

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LOCATION

ARTICULATION

Vegetation Expert:

Juliana Maerschner Aguiar Peixoto | JGP

Biologist

Graphic Scale: 0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S

Source: JGP - Mapping and Surveying - Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Imag 7.2.2.1.4_Land Covers and Use -	03

Developer: Tanzania Electric Supply Company Limited (TANESCO)

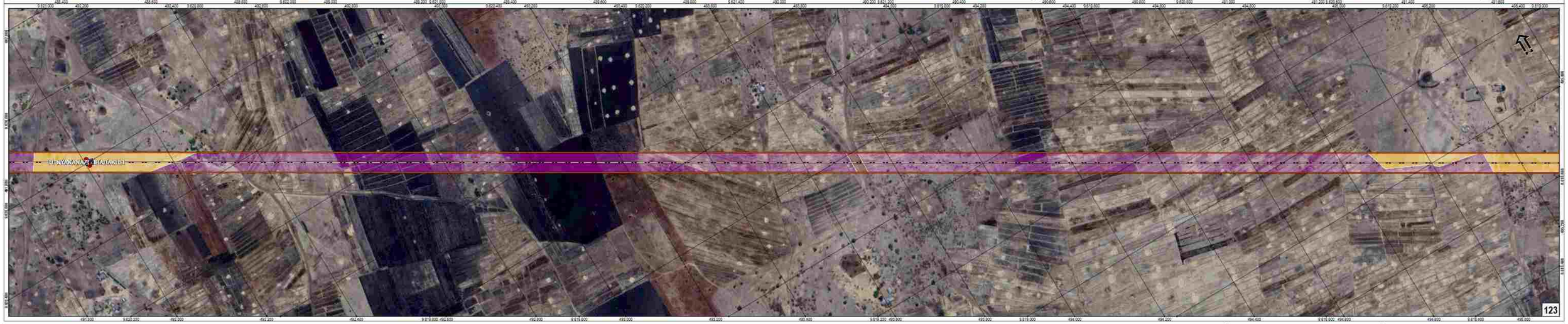
Project: PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4 a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga – Tanzânia

Lead E&S Consultant: JGP Consultoria e Participações Ltda.



LEGEND

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ARTICULATION

Vegetation Expert:

Juliana Mgerschner Aguiar Patroto

Biologist

JGP

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0 50 100 150 200

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Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Imp 7.2.2.1.4 a_Land Cover and Use -	03

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

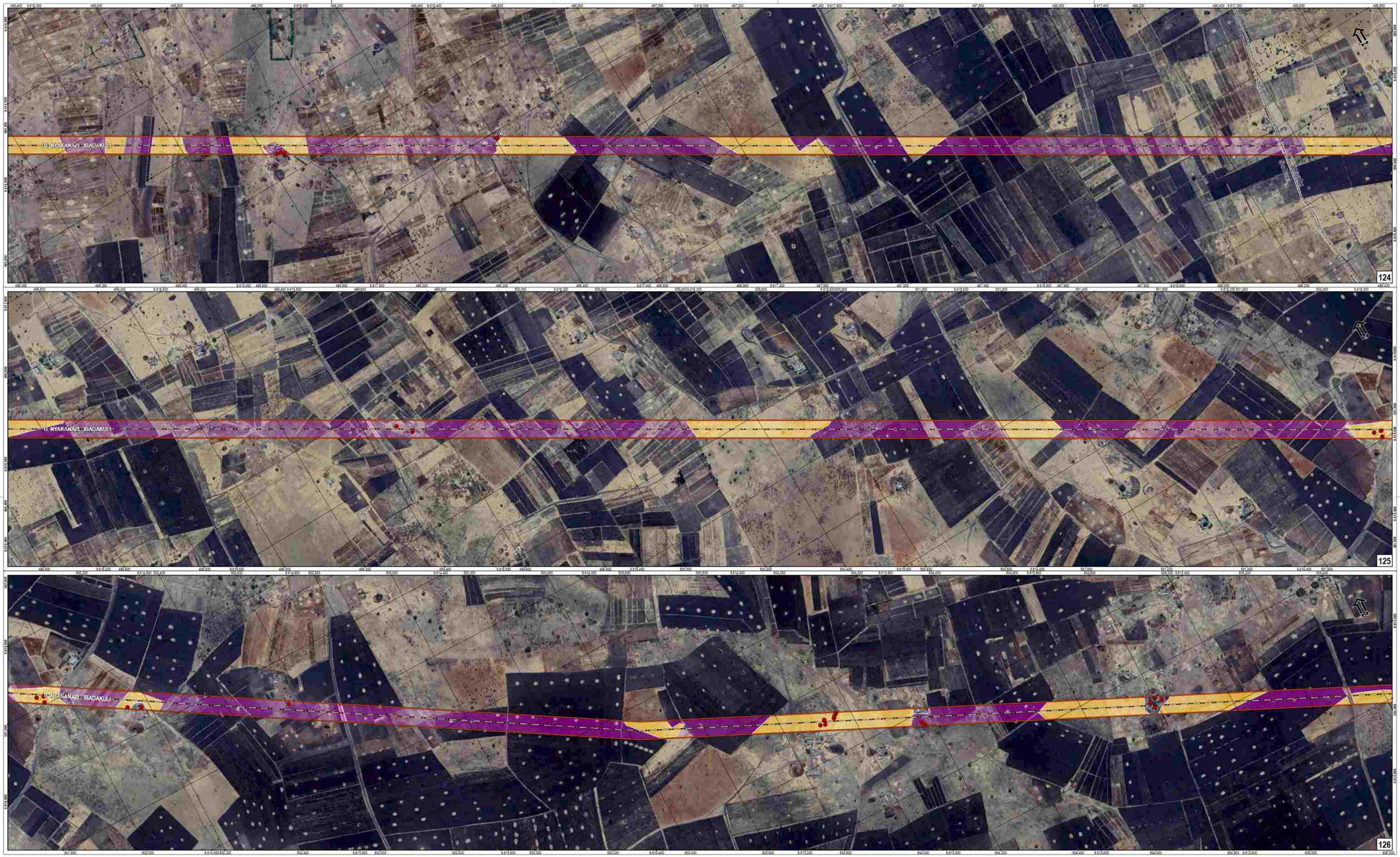
Map 7.2.2.1.4 a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.



LEGEND

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Juliana Maerschner Aguiar Peixoto | JGP
Biologist

Graphic Scale: 0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S
Source: JGP - Mapping and Surveying - Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Imag 7.2.2.1.4_Land Cover and Use -	03

Developer:

Tanzania Electric Supply Company Limited (TANESCO)

Project:

PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

Map 7.2.2.1.4 a:

Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)

Region: Kagera, Geita and Shinyanga – Tanzânia

Lead E&S Consultant:

JGP Consultoria e Participações Ltda.

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

UTIP PROJECT (ESIA T-LINES)

- TL Mutukula - Kyaka
- TL Kyaka - Nyakanazi
- TL Nyakanazi - Ibadakuli

EXISTING (I.E., DESIGNED AND CONSTRUCTED) TRANSMISSION LINES

- TL 220kV Benako - Kyaka (Designed)
- TL 220kV Nyakanazi - Benaco (Constructed)

VEGETATION COVER AND LAND USE

- Evergreen dry forest
- Grass wooded savanna
- Riverine forest
- Riverine grassland vegetation
- Miombo woodland
- Mixed woodland
- Thicket bushland/shrubland
- Perennial agriculture
- Cyclical agriculture
- Silviculture
- Rural buildings
- Anthropic area
- Paved road
- Unpaved road
- Substation
- Water

LOCATION

ARTICULATION

Vegetation Expert:

Juliana Mjaerschner Aguiar Peixoto — JGP

Biologist

Graphic Scale: 0 50 100 150 200 m

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Date	Scale	File	Rev.
11/21/2024	1:5.000	Map 7.2.2.1.4a_Land Cover and Use -	0

Developer: Tanzania Electric Supply Company Limited (TANESCO)

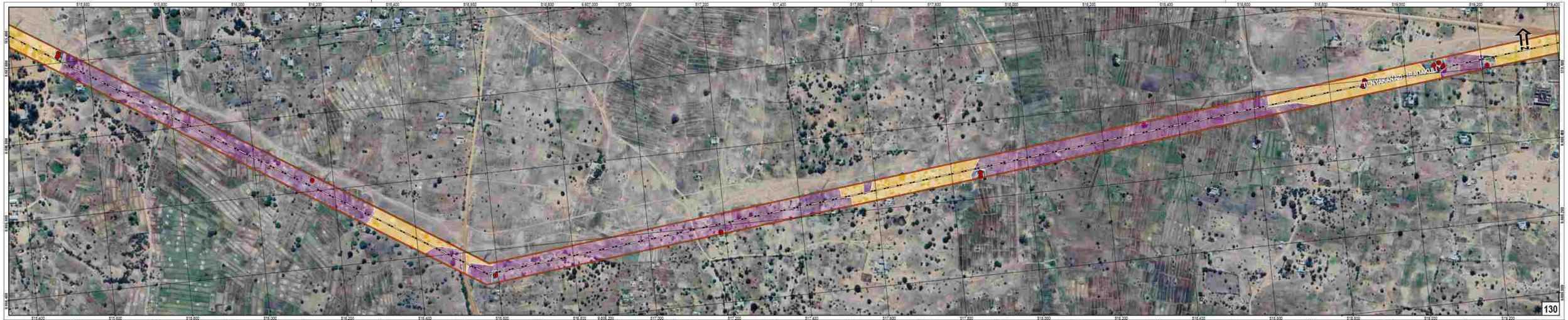
Project: **PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)**

Map 7.2.2.1.4 a: **Vegetation cover and land use in the Directly Affected Area (i.e., T-Line Easement)**

Region: Kagera, Geita and Shinyanga - Tanzânia

Lead E&S Consultant: JGP Consultoria e Participações Ltda.

Sheet 43/47



LEGEND

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LOCATION

ARTICULATION

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Graphic Scale: 0 20 100 150 200 m

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11/21/2024	1:5.000	Imag 7.2.2.1.4_Land Cover and Use -	03

Developer:

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Region: Kagera, Geita and Shinyanga – Tanzânia

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Graphic Scale

0 50 100 150 200

Projection WGS 1984 UTM Zone 36S

Source: JGP - Mapping and Surveying; Google Earth satellite image

Date	Scale	File	Rev.
11/21/2024	1:5.000	Imp 7.2.2.1.4 a_Land Cover and Use -	03

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Project:

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Region: Kagera, Geita and Shinyanga - Tanzânia

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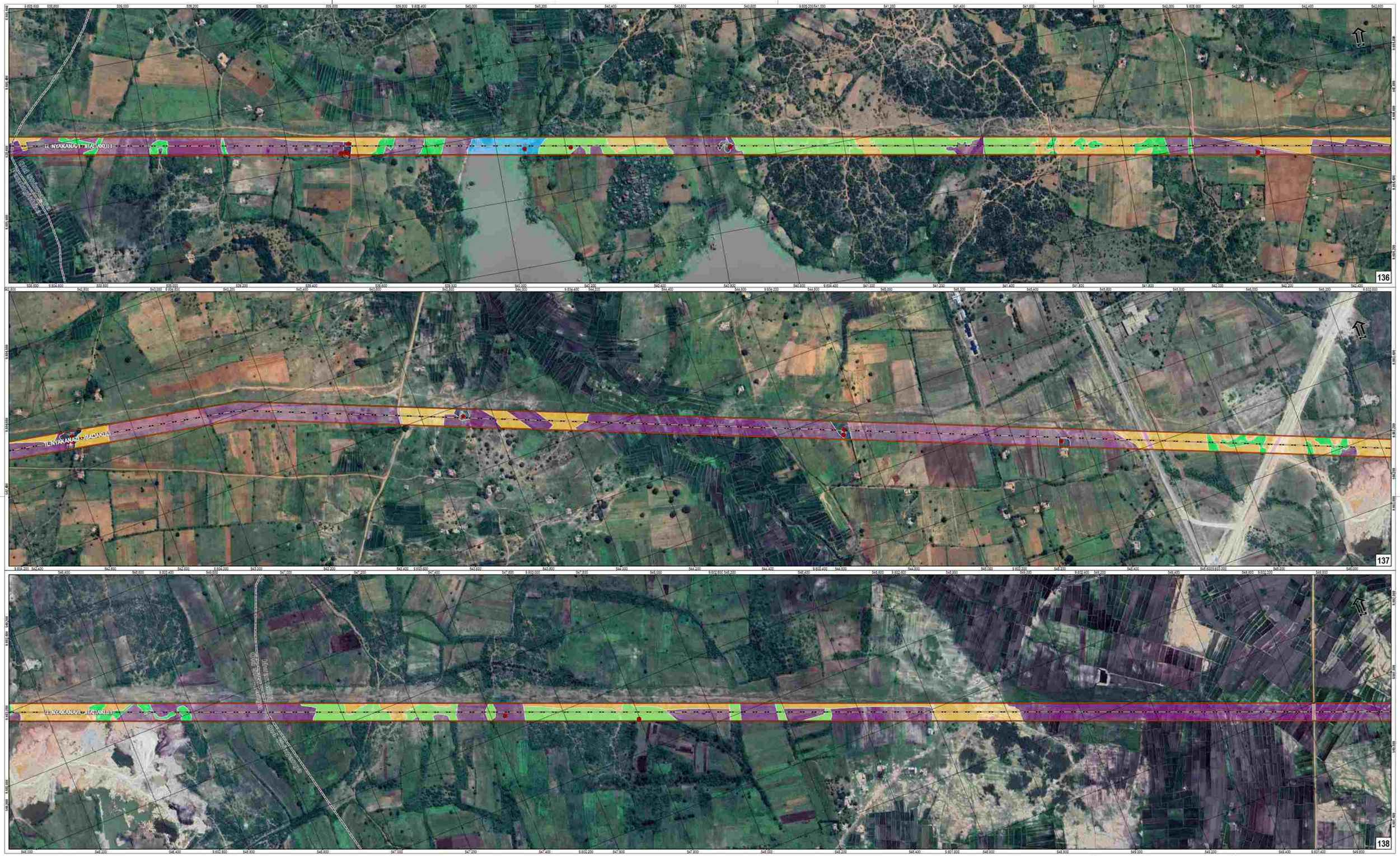

LEGEND

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- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

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Vegetation Expert:

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Graphic Scale: 0 50 100 150 200 m

Projection WGS 1984 UTM Zone 36S

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Date	Scale	File	Rev.
11/21/2024	1:5.000	Img 7.2.2.1.4 a_Land Cover and Use -	0

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PROPOSED 400 kV UGANDA-TANZANIA INTERCONNECTOR POWER (UTIP)

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Region: Kagera, Geita and Shinyanga – Tanzânia

Lead E&S Consultant: JGP Consultoria e Participações Ltda.

TL-NYAKANAZI - IBADAKULI

139

140

Ibadakuli Substation

141

LEGEND

- Buildings
- Ritual Sites
- Directly Affected Area (i.e., T-Line Easement = 52 m)
- Substation
- Wards

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Annex 7 – Tables 7.2.2.2.2.a, 7.2.2.2.3.a, 7.2.2.2.4.a and 7.2.2.2.5.a, with the Results of the Fauna Surveys

Table 7.2.2.2.2.a

List of terrestrial mammal species detected during the assessment, with sampling sites, methods, abundance per species and site, migration (Appendix I or II from CMS), cinegetics, endemism, and conservation status. The abundance is based on records obtained by standardised methods (direct and indirect observation; camera trap)

ORDER / Family / *Species*	Common name	BS1	BS2	BS3	BS4	BS5	BS6	BS8	BS9	Total	Methods			Migrant (CMS)	Cinegetics (IUCN)	Habitat type (IUCN)	Endemism	Status	
											Standard Methods	Interview	Occasional Encounters					IUCN	CITES
ARTIODACTYLA																			
Bovidae																			
Aepyceros melampus	Impala		1		1		4			**6**	OB	X		-	FS, SH	Grassland, Savanna	-	LC	-
Cephalophus sp.	Duiker											X		-	-	-	-	NA	NA
Damaliscus lunatus	Topi, Tsessebe											X		-	FS, SH	Grassland, Savanna, Shrubland	-	LC	-
Hippotragus equinus	Roan Antelope							12		**12**	OB	X	X	-	FS, SH	Grassland, Savanna, Shrubland	-	LC	-
Kobus ellipsiprymnus	Waterbuck											X		-	FS, SH	Forest, Grassland, Savanna, Shrubland	-	LC	-
Madoqua sp.	Dik-dik		18			1	6	4	2	**31**	OB	X		-	FS	-	-	NA	NA
Oreotragus oreotragus	Klipspringer											X		-	FS, SH	Desert, Savanna, Shrubland	-	LC	-
Ourebia ourebi	Oribi											X		-	FS, SH	Grassland, Savanna	-	LC	-
Redunca redunca	Bohor Reedbuck											X		-	FS	Grassland	-	LC	-
Sylvicapra grimmia	Bush Duiker, Common Duiker											X		-	FS	Artificial/Terrestrial, Desert, Forest, Grassland, Savanna, Shrubland	-	LC	-
Syncerus caffer	Cape Buffalo				1		38			**39**	OB	X		-	FS, SH	Forest, Grassland, Savanna, Shrubland, Wetlands (inland)	-	NT	-
Tragelaphus oryx	Common Eland											X		-	DO, FS, OR, SH	Forest, Grassland, Savanna, Shrubland	-	LC	-
Tragelaphus sylvaticus	Cape Bushbuck		1				13			**14**	OB, CT	X		-	FS, SH	Forest, Shrubland	-	NA	NA
Giraffidae																			
Giraffa tippelskirchi	Giraffe, Maasai Giraffe				1					**1**	OB	X		II	FS, SH	Forest, Savanna, Shrubland	-	EN	NA
Hippopotamidae																			
Hippopotamus amphibius	Hippopotamus											X		-	CO, FS, OR	Forest, Grassland, Marine Coastal/Supratidal, Savanna, Wetlands (inland)	-	VU	II
Suidae																			
Phacochoerus africanus	Common Warthog											X		-	FS, OR	Grassland, Savanna, Shrubland	-	LC	-
Potamochoerus cf. *larvatus*	Bushpig											X	X	-	FS, CO	Forest, Shrubland	-	LC	-
CARNIVORE																			
Canidae																			
Canis lupaster	African Wolf				1					**1**	OB			-	CO, OR	Grassland, Savanna, Shrubland	-	LC	-
Lupulella adusta	Side-striped Jackal											X		-	CO	Forest, Savanna, Shrubland, Wetlands (inland)	-	LC	-
Felidae																			
Caracal caracal	Caracal					1				**1**	OB			-	CO	Desert, Forest, Grassland, Savanna, Shrubland	-	LC	II

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											Standard Methods	Interview	Occasional Encounters					IUCN	CITES
Felis lybica	African Wildcat											X		-	FS, OR, SH	Desert, Forest, Grassland, Savanna, Shrubland	-	LC	II
Leptailurus serval	Serval											X		-	OR, TR	Forest, Grassland, Savanna, Wetlands (inland)	-	LC	II
Panthera leo	Lion				1					**1**	OB	X		II	CO, OR, SH, TR	Forest, Grassland, Savanna, Shrubland	-	VU	II
Panthera pardus	Leopard				1					**1**	OB	X		II	CO, OR, SH, TR	Desert, Forest, Grassland, Rocky areas, Savanna, Shrubland	-	VU	I
Herpestidae																			
Atilax paludinosus	Marsh Mongoose	8	1	1		13		9	3	**35**	OB	X		-	FS	Artificial/Aquatic, Forest, Marine Coastal/Supratidal, Marine Neritic, Wetlands (inland)	-	LC	-
Bdeogale crassicauda	Bushy-tailed Mongoose		1							**1**	CT			-	-	Forest, Savanna, Shrubland	-	LC	-
Helogale parvula	Common Dwarf Mongoose											X		-	-	Grassland, Savanna	-	LC	-
Ichneumia albicauda	White-tailed Mongoose											X		-	-	Forest, Grassland, Savanna, Shrubland, Wetlands (inland)	-	LC	-
Mungos mungo	Banded Mongoose											X		-	FS	Forest, Savanna	-	LC	-
Hyaenidae																			
Crocuta crocuta	Spotted Hyena				1		5		1	**7**	OB	X	X	-	CO, TE, TR	Grassland, Savanna	-	LC	-
Mustelidae																			
Mellivora capensis	Honey Badger											X	X	-	FS, TR	Desert, Forest, Savanna, Shrubland	-	LC	III
Viverridae																			
Civettictis civetta	African Civet						1			**1**	OB	X		-	DO, FS	Artificial/Terrestrial, Forest, Savanna, Shrubland	-	LC	III
Genetta fieldiana	Rusty-spotted Genet		1							**1**	CT			-	CO, FS	Artificial/Terrestrial, Forest, Savanna, Shrubland		LC	-
Genetta sp.	Genet		1				8			**9**	OB, CT	X		-	TR	-	-	NA	NA
EULIPOTYPHLA																			
Erinaceidae																			
Atelerix albiventris	Four-toed Hedgehog											X		-	ME	Grassland, Savanna	-	LC	-
LAGOMORPHA																			
Leporidae																			
Lepus cf. *capensis*	Cape Hare		2		1					**3**	OB	X		-	FS	Artificial/Terrestrial, Desert, Grassland, Shrubland	-	LC	-
Oryctolagus cuniculus	European Rabbit		2							**2**	OB	X		Exotic	FS, PE, RE	Exotic	Exotic	Exotic	Exotic

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ORDER / Family / *Species*	Common name	BS1	BS2	BS3	BS4	BS5	BS6	BS8	BS9	Total	Methods			Migrant (CMS)	Cinegetics (IUCN)	Habitat type (IUCN)	Endemism	Status	
											Standard Methods	Interview	Occasional Encounters					IUCN	CITES
MACROSCELIDA																			
Macroscelididae																			
Galegeeska rufescens	Rufous Sengi, Rufous Elephant-shrew								1	**1**	CT			-	-	Grassland, Savanna	-	LC	-
PERISSODACTYLA																			
Equidae																			
Equus quagga	Plains Zebra						12			**12**	OB	X		-	FS, OR	Grassland, Savanna, Shrubland	-	NT	-
PHOLIDOTA																			
Manidae																			
Phataginus tricuspis	Common African Pangolin											X		-	FS, TR	Artificial/Terrestrial, Forest, Savanna	-	EN	I
Smutsia cf. *temminckii*	Ground Pangolin											X		-	FS, OR, TR	Forest, Grassland, Savanna	-	VU	I
PRIMATES																			
Cercopithecidae																			
Cercopithecus mitis	Blue Monkey	3								**3**	OB			-	FS	Artificial/Terrestrial, Forest	-	LC	II
Chlorocebus pygerythrus	Vervet Monkey	4	7							**11**	OB	X		-	FS, RE	Artificial/Terrestrial, Savanna, Shrubland	-	LC	II
Colobus angolensis	Angolan Colobus	7								**7**	OB			-	FS	Forest	-	VU	II
Lophocebus ugandae	Ugandan Crested Mangabay	5								**5**	OB			-	FS	Forest	-	VU	NA
Papio anubis	Olive Baboon	26			81	19	1	9		**136**	OB, CT	X		-	FS	Artificial/Terrestrial, Forest, Grassland, Savanna, Shrubland	-	LC	II
Piliocolobus tephrosceles	Ashy Red Colobus				281	9				**290**	OB	X		-	FS	Forest, Savanna	-	EN	II
Galagidae																			
Otolemur crassicaudatus	Greater Bushbaby											X		-	-	Forest, Savanna, Shrubland	-	LC	II
PROBOSCIDEA																			
Elephantidae																			
Loxodonta africana	African Savanna Elephant	2	4		1		29			**36**	OB	X		II	CO, OR, SH, TE	Desert, Forest, Grassland, Savanna, Shrubland, Wetlands (inland)	-	EN	I
RODENTIA																			
Hystricidae																			
Hystrix sp.	Porcupine				1					**1**	OB	X		-	FS	-	-	NA	NA
Muridae																			
Otomys sp.	Vilei Rat							1	5	**6**	CT			-	-	-	-	NA	NA
Nesomyidae																			
Cricetomys sp.	Giant Pouched Rat				1					**1**	CT			-	-	-	-	-	-
Sciuridae																			
Paraxerus boehmi	Bohem's Bush Squirrel		1							**1**	CT			-	-	Forest, Savanna	-	LC	-
Thryonomyidae																			
Thryonomys gregorianus	Lesser Cane Rat	1								**1**	OB			-	FS	Grassland, Shrubland, Wetlands (inland)	-	LC	-

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List of terrestrial mammal species detected during the assessment, with sampling sites, methods, abundance per species and site, migration (Appendix I or II from CMS), cinegetics, endemism, and conservation status. The abundance is based on records obtained by standardised methods (direct and indirect observation; camera trap)

ORDER / Family / *Species*	Common name	BS1	BS2	BS3	BS4	BS5	BS6	BS8	BS9	Total	Methods			Migrant (CMS)	Cinegetics (IUCN)	Habitat type (IUCN)	Endemism	Status	
											Standard Methods	Interview	Occasional Encounters					IUCN	CITES
Thryonomys swinderianus	Greater Cane Rat	9								9	OB	X		-	CO, FS	Artificial/Terrestrial, Forest, Grassland, Wetlands (inland)	-	LC	-
TOTAL		**65**	**40**	**1**	**373**	**43**	**117**	**35**	**12**	**686**									

Legend: Sampling sites: BS1, BS2, BS3, BS4, BS5, BS6, BS8, BS9. Standard methods: OB - Direct and indirect observation, CT - Camera Trap. Cinegetics: CO - Human-wildlife Conflict, DO - Domestication and/or Farming, FS - Food Source, ME - Medicine, OR - Ornamentation, PE - Pet, RE - Research, SH - Sports Hunting and/or Pouching, TE - Tourism Exploitation, TR - Traditional medicine and religious use. Conservation status: LC - Least Concern, NT - Near Threatened, VU - Vulnerable, EN - Endangered, NA - Not Assessed.

Table 7.2.2.2.3.a
List of bats species detected during the assessment, with sampling sites, methods, abundance per species and site, migration, cinegetics, endemism, and conservation status. The abundance is based on records obtained by standardised methods (Song Meter and Mist nets)

Family / *Species*	Common name	BS1	BS2	BS3	BS4	BS5	BS6	BS8	BS9	Total	Methods			Migrant (CMS)	Cinegetics (IUCN)	Endemism	Status	
											Song Meter	Mist nets	Other				IUCN	CITES
Emballonuridae																		
Taphozous mauritianus	Mauritian Tomb Bat								28	28	27	1		-	SH	-	LC	-
Miniopteridae																		
Miniopterus natalensis	Christmas Long-fingered Bat		17		11	15				43	43			X	-	-	LC	-
Molossia																		
Mops condylurus	Angolan Free-tailed Bat		2	4		1			3	10	10			-	-	-	LC	-
Mops pumilus	Little Free-tailed Bat	2	65	106	21	63	38	43	457	795	795			-	-	-	LC	-
Otomops martiensseni	Large-eared Giant Mastiff Bat		1	14		8	1	2	6	32	32			X	SH	-	NT	-
Tadarida sp.	Free-tailed Bat		39		3	7		6	5	60	60			-	-	-	-	-
Rhinolophidae																		
Rhinolophus hildebrandtii	Hildebrandt's Horseshoe Bat			1	7					8	8			-	-	-	LC	-
Rhinolophus swinnyi	Swinny's Horseshoe Bat				1					1	1			-	-	-	LC	-
Vespertilionidae																		
Pipistrellus hesperidus	Dusky Pipistrelle		39		8	2				49	49			-	-	-	LC	-
Scotophilus dinganii	African Yellow Bat	2	2		21		1	1	4	31	31			-	-	-	LC	-
Afronycteris nanus	Banana Serotine		1	1						2	2			-	-	-	LC	-
Vanzonia rueppellii	Rüppell's Bat		1		1	16				18	18			-	-	-	LC	-
Laephotis capensis	Cape Serotine			2	2	7				11	11			-	-	-	LC	-
Pteropodidae																		
Epomophorus sp.	Fruit Bat					1		2	1	4		4		-	-	-	-	-
Megadermatidae																		
Lavia frons	Yellow-winged False-vampire								4	4			4	-	-	-	LC	-
Grand Total		**4**	**167**	**128**	**75**	**120**	**40**	**54**	**508**	**1096**	**1087**	**5**	**4**					

Table 7.2.2.2.4.a
List of species of Avifauna recorded during the Bird Survey Campaigns (Sampling Areas, Methods, Conservation Status and Ecological Aspects)

Order/Family/*Species*	Common name	Sampling Areas								Methods						Total	Conservation Status			Ecological Aspects					
		BS1	BS2	BS3	BS4	BS5	BS6	BS8	BS9	OR	IN	MN	TS	SM	TC		IUCN, 2024	CITES, 2024	CMS, 2024	Cin.	End.	Mig.	Hab. Den.	Hab. Typ.	Tro. Lev.	Pri. Lif.
Accipitriformes																										
Accipitridae																										
Accipiter badius	Shikra							1				1				1	LC	II	II	X	-	Mig	SH	Shr	Car	Ins
Accipiter tachiro	African Goshawk	1			1									1	1	2	LC	II	II	X	-	Sed	DH	For	Car	Aer
Aquila rapax	Tawny Eagle			1		1			2						4	4	VU	II	II	X	-	Mig	SH	Shr	Car	Gen
Buteo augur	Augur Buzzard	1	1	1	1		1							1	4	5	LC	II	II	X	-	Sed	SH	Woo	Car	Ins
Circaetus cinerascens	Western Banded Snake-eagle		1											1		1	LC	II	II	X	-	Sed	DH	For	Car	Ins
Circaetus cinereus	Brown Snake-eagle	1		1	1				4						7	7	LC	II	II	X	-	Sed	SH	Shr	Car	Ins
*Gypohierax angolensis**	Palm-nut Vulture	4	6	1	1	1									13	13	LC	II	II	X	-	Sed	SH	For	Her	Ins
Haliaeetus vocifer	African Fish-eagle		1	1	1										3	3	LC	II	II	X	-	Sed	SH	Wet	Car	Ins
Hieraaetus wahlbergi	Wahlberg's Eagle	4													4	4	LC	II	II	X	-	Sed	SH	Shr	Car	Ins
Kaupifalco monogrammicus	Lizard Buzzard	2	1			2	1	2							8	8	LC	II	II	X	-	Sed	OH	Woo	Car	Ins
Lophaetus occipitalis	Long-crested Eagle	3	1	1		1					1				5	6	LC	II	II	X	-	Sed	SH	For	Car	Ins
Milvus aegyptius	Yellow-billed Kite									1			1			1	LC	II	II	X	-	Mig	OH	Woo	Omn	Aer
Milvus migrans	Black Kite					1									1	1	LC	II	II	X	-	Mig	OH	Woo	Omn	Aer
Necrosyrtes monachus	Hooded Vulture		1								1					1	CR	II	II	X	-	Sed	SH	Shr	Sca	Have
Polyboroides typus	African Harrier-hawk	2													2	2	LC	II	II	X	-	Sed	DH	For	Car	Ins
Stephanoaetus coronatus	Crowned Eagle		1	1	1										3	3	NT	II	II	X	-	Sed	DH	For	Car	Gen
Terathopius ecaudatus	Bateleur		1				1	1			1				2	3	EN	II	II	X	-	Sed	SH	Woo	Car	Gen
Anseriformes																										
Anatidae																										
Plectropterus gambensis	Spur-winged Goose	3													3	3	LC	-	II	X	-	Mig	OH	Wet	Her	Have
Bucerotiformes																										
Bucerotidae																										
Bycanistes subcylindricus	Grey-cheeked Hornbill	33			1	2								1	35	36	LC	-	-	X	-	Sed	SH	For	Her	Ins
Lophoceros alboterminatus	Crowned Hornbill	7	1	1	1	7								1	16	17	LC	-	-	X	-	Sed	DH	For	Omn	Ins
Lophoceros nasutus	African Grey Hornbill	5				1									6	6	LC	-	-	X	-	Sed	SH	Shr	Car	Ins
Phoeniculidae																										
Phoeniculus purpureus	Green Woodhoopoe				1	6									7	7	LC	-	-	-	-	Sed	SH	Woo	Car	Ins
Rhinopomastus cyanomelas	Common Scimitarbill	1	1		1		1							1	3	4	LC	-	-	-	-	Sed	SH	Gras	Car	Ins
Caprimulgiformes																										
Apodidae																										
Apus affinis	Little Swift		1				5								6	6	LC	-	-	-	-	Mig	DH	Hum Mod	Car	Aer
Cypsiurus parvus	African Palm-swift							1							1	1	LC	-	-	-	-	Sed	DH	Shr	Car	Aer
Caprimulgidae																										
Caprimulgus pectoralis	Fiery-necked Nightjar		4				3	8				2		7	6	15	LC	-	-	-	-	Mig pair	SH	Woo	Car	Gen
Charadriiformes																										
Turnicidae																										
Turnix sylvaticus	Common Buttonquail		1											1		1	LC	-	-	-	-	Sed	SH	Shr	Omn	Have
Ciconiiformes																										
Ciconiidae																										
Anastomus lamelligerus	African Openbill	165						8	10	1			1		183	184	LC	-	-	X	-	Mig pair	OH	Wet	Car	Have
Ciconia episcopus	Woolly-necked Stork									1			1			1	NT	-	-	X	-	Sed	OH	Wet	Car	Have
Ciconia microscelis	African Woollyneck	3				1				1			1		4	5	LC	-	II	X	-	Sed	OH	Wet	Car	Have
Leptoptilos crumeniferr	Marabou	1		1					2	1			1		4	5	LC	-	-	X	-	Sed	OH	Gras	Omn	Have
Mycteria ibis	Yellow-billed Stork	1						6		1			1		7	8	LC	-	II	X	-	Mig pair	OH	Wet	Car	Have
Coliiforms																										
Coliidae																										
Colius striatus	Speckled Mousebird	6	6			1		28	42					1	82	83	LC	-	-	-	-	Sed	SH	Shr	Her	Ins
Urocolius macrourus	Blue-naped Mousebird	8	2	1	1	1		4	1					1	17	18	LC	-	-	-	-	Sed	SH	Shr	Her	Ins
Columbiformes																										
Columbidae																										
Columba guinea	Speckled Pigeon									1			1			1	LC	-	-	X	-	Sed	SH	Shr	Her	Have
Oena capensis	Namaqua Dove								3						3	3	LC	-	-	X	-	Mig pair	OH	Shr	Her	Have

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Order/Family/*Species*	Common name	Sampling Areas								Methods						Total	Conservation Status			Ecological Aspects						
		BS1	BS2	BS3	BS4	BS5	BS6	BS8	BS9	OR	IN	MN	TS	SM	TC		IUCN, 2024	CITES, 2024	CMS, 2024	Cin.	End.	Mig.	Hab. Den.	Hab. Typ.	Tro. Lev.	Pri. Lif.
Spilopelia senegalensis	Laughing Dove	2		1					27						30	30	LC	-	-	X	-	Sed	OH	Woo	Her	Have
*Streptopelia capicola**	Ring-necked Dove	10	7	1	1	10	5	29	2			1		4	60	65	LC	-	-	X	-	Sed	OH	Shr	Her	Have
Streptopelia semitorquata	Red-eyed Dove	38	7	1	1	6	3	7	5					1	67	68	LC	-	-	X	-	Sed	OH	Shr	Her	Have
Treron calvus	African Green-pigeon	26				1		1							28	28	LC	-	-	X	-	Mig pair	SH	For	Her	Ins
Turtur afer	Blue-spotted Wood-dove	2	3	2	1	2								1	9	10	LC	-	-	X	-	Sed	SH	Shr	Her	Have
Turtur chalcospilos	Emerald-spotted Wood-dove	2	6	1	1	8		19	26			10		2	51	63	LC	-	-	X	-	Sed	SH	Shr	Her	Have
Turtur tympanistria	Tambourine Dove		2			1									3	3	LC	-	-	X	-	Sed	SH	For	Her	Have
Coraciiformes																										
Alcedinidae																										
Ceryle rudis	Pied Kingfisher			1	1					3			3		2	5	LC	-	-	-	-	Sed	OH	Wet	Car	Ins
Corythornis cristatus	Malachite Kingfisher	6						4		1		3	1		7	11	LC	-	-	-	-	Sed	SH	Wet	Car	Ins
Halcyon chelicuti	Striped Kingfisher		2	1	1										4	4	LC	-	-	-	-	Sed	SH	Shr	Car	Ins
Halcyon leucocephala	Grey-headed Kingfisher	9			1				5						15	15	LC	-	-	-	-	Mig pair	SH	Shr	Car	Ins
Halcyon malimbica	Blue-breasted Kingfisher	6												2	4	6	LC	-	-	-	-	Sed	DH	For	Car	Ins
Halcyon senegalensis	Woodland Kingfisher	3	1											1	3	4	LC	-	-	-	-	Sed	SH	Woo	Car	Ins
Ispidina picta	African Pygmy-kingfisher						1							1		1	LC	-	-	-	-	Sed	DH	For	Car	Ins
Coraciidae																										
Coracias caudatus	Lilac-breasted Roller								2	1			1		2	3	LC	-	-	-	-	Mig pair	SH	Shr	Car	Ins
Eurystomus glaucurus	Broad-billed Roller	1	1	1	1		1			2			2	1	4	7	LC	-	-	-	-	Sed	SH	For	Car	Gen
Meropidae																										
Merops pusillus	Little Bee-eater	3				1			11			2			13	15	LC	-	-	-	-	Sed	SH	Gras	Car	Ins
Merops superciliosus	Olive Bee-eater		3												3	3	LC	-	-	-	-	Mig pair	SH	Shr	Car	Gen
Cuculiformes																										
Cuculidae																										
Centropus monachus	Blue-headed Coucal	4	2	1	1	1								1	8	9	LC	-	-	-	-	Sed	DH	Wet	Car	Have
Centropus superciliosus	White-browed Coucal	11	5	1	1	3								2	19	21	LC	-	-	-	-	Sed	DH	Wet	Car	Have
Chrysococcyx caprius	Diederik Cuckoo	14	1					1	5						21	21	LC	-	-	-	-	Sed	SH	Shr	Car	Ins
Chrysococcyx cupreus	African Emerald Cuckoo	1													1	1	LC	-	-	-	-	Sed	SH	For	Car	Ins
Chrysococcyx klaas	Klaas's Cuckoo	4	1	1	2	1		2	1						12	12	LC	-	-	-	-	Sed	SH	Shr	Car	Ins
Clamator glandarius	Great Spotted Cuckoo				1										1	1	LC	-	-	-	-	Mig	SH	Shr	Car	Ins
Cuculus solitarius	Red-chested Cuckoo	7		1	1	2		5	1					2	15	17	LC	-	-	-	-	Mig pair	SH	For	Car	Ins
Falconiformes																										
Falconidae																										
Falco biarmicus	Lanner Falcon		1												1	1	LC	II	II	X	-	Mig pair	OH	Shr	Car	Aer
Falco chicquera	Red-necked Falcon									1			1			1	LC	II	II	X	-	Sed	OH	Woo	Car	Aer
Galliformes																										
Numididae																										
Numida meleagris	Helmeted Guineafowl	4	1	1	1			3							10	10	LC	-	-	X	-	Sed	SH	Woo	Her	Have
Phasianidae																										
Campocolinus coqui	Coqui Francolin		5												5	5	LC	-	-	X	-	Sed	OH	Gras	Her	Have
Ortygornis sephaena	Crested Francolin		3						5					3	5	8	LC	-	-	X	-	Sed	SH	Shr	Omn	Have
Pternistis afer	Red-necked Francolin	2	19	1	1	1	1							3	22	25	LC	-	-	X	-	Sed	SH	Shr	Her	Have
Pternistis hildebrandti	Hildebrandt's Francolin	5	2					14	1						22	22	LC	-	-	X	-	Sed	SH	Shr	Her	Have
Gruiformes																										
Gruidae																										
Balearica regulorum	Grey Crowned Crane	4		1						1	1		1		4	6	EN	II	-	-	-	Sed	OH	Wet	Omn	Have
Musophagiformes																										
Musophagidae																										
Corythaeola cristata	Great Blue Turaco	11					1							1	11	12	LC	-	-	-	-	Sed	DH	For	Her	Ins
Corythaixoides personatus	Brown-faced Go-away-bird		1											1		1	LC	-	-	-	-	Sed	SH	Woo	Her	Ins
Crinifer zonurus	Eastern Plantain-eater	1	7	1	1	1								3	8	11	LC	-	-	-	-	Sed	OH	Gras	Her	Ins
Gallirex porphyreolophus	Purple-crested Turaco	3	2	1	1	1									8	8	LC	-	-	-	-	Sed	SH	Woo	Her	Ins
Musophaga rossae	Ross's Turaco		23	1	1	1									26	26	LC	-	-	-	-	Sed	SH	For	Her	Ins
Tauraco livingstonii	Livingstone's Turaco					3	10								13	13	LC	II	-	-	-	Sed	DH	For	Her	Ins

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Tauraco schuettii	Black-billed Turaco	1												1		1	LC	II	-	-	-	Sed	DH	For	Her	Ins
Pelecaniformes																										
Ardeidae																										
Ardea alba	Great White Egret				1	1									2	2	LC	-	-	X	-	Mig pair	OH	Wet	Car	Have
Ardea cinerea	Grey Heron	5						2	12	1			1		19	20	LC	-	-	X	-	Sed	OH	Wet	Car	Have
Ardea melanocephala	Black-headed Heron	9						3	7	1			1		19	20	LC	-	-	X	-	Sed	OH	Wet	Car	Have
Ardeola ralloides	Squacco Heron		1								1					1	LC	-	-	X	-	Mig	OH	Wet	Car	Have
Ardeola rufiventris	Rufous-bellied Heron		2												2	2	LC	-	II	X	-	Sed	OH	Wet	Car	Have
*Bubulcus ibis**	Cattle Egret	5	33	1	1	1			22		1				82	83	LC	-	-	X	-	Mig pair	OH	Hum Mod	Car	Have
Butorides striata	Green-backed Heron	1	2			1		1							5	5	LC	-	-	X	-	Sed	OH	Wet	Car	Have
*Egretta garzetta**	Little Egret	6	1	1		1			41						50	50	LC	-	-	X	-	Mig pair	OH	Wet	Car	Have
Nycticorax nycticorax	Black-crowned Night-heron		1											1		1	LC	-	-	X	-	Mig	OH	Wet	Car	Have
Scopidae																										
Scopus umbretta	Hamerkop	16	3		1	1			2						23	23	LC	-	-	-	-	Mig pair	OH	Wet	Car	Have
Threskiornithidae																										
Bostrychia hagedash	Hadada Ibis	9	6		1	2			60					3	75	78	LC	-	-	X	-	Sed	SH	Gras	Car	Have
Platalea alba	African Spoonbill									1			1			1	LC	-	II	X	-	Mig pair	OH	Wet	Car	Have
Plegadis falcinellus	Glossy Ibis								37						37	37	LC	-	II	X	-	Mig pair	OH	Wet	Car	Have
Threskiornis aethiopicus	African Sacred Ibis	1						7	1	1			1		9	10	LC	-	II	X	-	Sed	OH	Wet	Car	Have
Piciformes																										
Indicatoridae																										
Indicator indicator	Greater Honeyguide	1			1	1	3							1	5	6	LC	-	-	-	-	Sed	SH	Shr	Car	Ins
Indicator minor	Lesser Honeyguide					1	1	5	6			1			12	13	LC	-	-	-	-	Sed	SH	Woo	Car	Ins
Lybiidae																										
Lybius torquatus	Black-collared Barbet						2							1	1	2	LC	-	-	-	-	Sed	SH	Gras	Omn	Ins
Pogoniulus bilineatus	Yellow-rumped Tinkerbird	7												1	6	7	LC	-	-	-	-	Sed	DH	For	Her	Ins
Pogoniulus chrysoconus	Yellow-fronted Tinkerbird	1	1				1							1	2	3	LC	-	-	-	-	Sed	SH	Woo	Omn	Ins
Pogoniulus pusillus	Red-fronted Tinkerbird								4			1			3	4	LC	-	-	-	-	Sed	SH	Shr	Omn	Ins
Trachyphonus darnaudii	D'Arnaud's Barbet							1							1	1	LC	-	-	-	-	Sed	SH	Gras	Her	Ins
Trachyphonus vaillantii	Crested Barbet		1	1	1										3	3	LC	-	-	-	-	Sed	SH	Woo	Omn	Ins
Tricholaema lacrymosa	Spot-flanked Barbet		1												1	1	LC	-	-	-	-	Sed	SH	For	Her	Ins
Picidae																										
Campethera bennettii	Bennett's Woodpecker		1											1		1	LC	-	-	-	-	Sed	OH	Woo	Car	Have
Campethera nubica	Nubian Woodpecker	1	2	1	1	1									6	6	LC	-	-	-	-	Sed	SH	Shr	Car	Ins
Dendropicos fuscescens	Cardinal Woodpecker		1											1		1	LC	-	-	-	-	Sed	SH	Shr	Car	Ins
Psittaciformes																										
Psittacidae																										
Poicephalus meyeri	Brown Parrot	2	8	1	1	1									13	13	LC	II	-	X	-	Sed	SH	Gras	Her	Ins
Strigiformes																										
Strigidae																										
Otus senegalensis	African Scops-owl						1							1		1	LC	II	-	X	-	Sed	SH	Woo	Car	Ins
Suliformes																										
Phalacrocoracidae																										
Microcarbo africanus	Long-tailed Cormorant	1													1	1	LC	-	-	-	-	Sed	OH	Wet	Car	Aqu
Passerines																										
Alaudidae																										
Mirafra rufocinnamomea	Flappet Lark				1										1	1	LC	-	-	-	-	Sed	SH	Woo	Car	Have
Campephagidae																										
Campephaga flava	Black Cuckooshrike			1	1										2	2	LC	-	-	-	-	Sed	SH	Shr	Car	Ins
Cysticolidae																										
Apalis flavida	Yellow-breasted Apalis	3	4	1	1	1	2	6	11					1	28	29	LC	-	II	-	-	Sed	SH	Woo	Car	Ins
Camaroptera brachyura	Bleating Camaroptera	25	9	1	1	1	3	8	12			4		2	54	60	LC	-	II	-	-	Sed	DH	For	Car	Ins
Cisticola brachypterus	Short-winged Cisticola		1												1	1	LC	-	II	-	-	Sed	SH	Woo	Car	Ins
Cisticola carruthersi	Carruthers' Cisticola	1			1									1	1	2	LC	-	II	-	-	Sed	SH	Wet	Car	Ins

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Cisticola chiniana	Rattling Cisticola		1			1			5						7	7	LC	-	II	-	-	Sed	SH	Shr	Car	Ins
Cisticola erythrops	Red-faced Cisticola	15	10	1	1	5	6					8		3	27	38	LC	-	II	-	-	Sed	OH	Gras	Car	Ins
Cisticola natalensis	Croaking Cisticola		1	1	1			10							13	13	LC	-	II	-	-	Sed	SH	Gras	Car	Gen
Cisticola woosnami	Trilling Cisticola	4	21	1	1	17	20	11		1			1		75	76	LC	-	II	-	-	Sed	OH	Gras	Car	Gen
Eminia lepida	Grey-capped Warbler	4	2	1		1								1	7	8	LC	-	II	-	-	Sed	DH	Shr	Car	Ins
Prinia subflava	Tawny-flanked Prinia	2	4	1		5	6	8	5					1	30	31	LC	-	II	-	-	Sed	SH	Shr	Car	Ins
Schistolais leucopogon	White-chinned Prinia	14	1												15	15	LC	-	II	-	-	Sed	SH	For	Car	Ins
Corvidae																										
Corvus albus	Pied Crow	3	1	1		10	1		10	1			1	1	25	27	LC	-	-	-	-	Mig pair	OH	Shr	Car	Have
Dicruridae																										
Dicrurus adsimilis	Fork-tailed Drongo		5			5		2							12	12	LC	-	-	-	-	Sed	OH	Woo	Car	Ins
Emberizidae																										
Emberiza flaviventris	Golden-breasted Bunting								3			1			2	3	LC	-	-	-	-	Sed	SH	Shr	Her	Have
Estrildidae																										
Estrilda astrild	Common Waxbill	10	1	1	1	1									14	14	LC	-	-	-	-	Sed	OH	Gras	Her	Gen
Lagonosticta senegala	Red-billed Firefinch		1					3	24			4			24	28	LC	-	-	-	-	Sed	SH	Woo	Her	Have
Pytilia melba	Green-winged Pytilia					4		8				3			9	12	LC	-	-	-	-	Sed	SH	Shr	Her	Have
Spermestes bicolor	Black-and-white Mannikin	6				1									7	7	LC	-	-	-	-	Sed	SH	Woo	Her	Ins
Spermestes cucullata	Mannikin Bronze		1	1	1	1		130	31						165	165	LC	-	-	-	-	Sed	SH	Woo	Her	Have
Uraeginthus angolensis	Blue-breasted Cordon-bleu						3	56	83			1			141	142	LC	-	-	-	-	Sed	OH	Woo	Her	Have
Uraeginthus bengalus	Red-cheeked Cordon-bleu	2	2	1	1	1								1	6	7	LC	-	-	-	-	Sed	OH	Shr	Her	Have
Fringillidae																										
Crithagra mozambica	Yellow-fronted Canary	1	4	2	2	2	3	3	3						20	20	LC	-	-	-	-	Sed	SH	For	Her	Gen
Crithagra sulphurata	Brimstone Canary		1												1	1	LC	-	-	-	-	Sed	SH	Shr	Her	Ins
Hirundinidae																										
Cecropis abyssinica	Lesser Striped Swallow	88			1	1	10	25							125	125	LC	-	-	-	-	Sed	OH	Gras	Car	Aer
Psalidoprocne albiceps	White-headed Saw-wing	5				1		3							9	9	LC	-	-	-	-	Mig	SH	For	Car	Aer
Psalidoprocne pristoptera	Black Saw-wing	1		1											2	2	LC	-	-	-	-	Mig pair	SH	For	Car	Aer
Riparia paludicola	African Plain Martin			1	1										2	2	LC	-	-	-	-	Mig pair	OH	Wet	Car	Aer
Laniidae																										
Lanius collaris	Common Fiscal			1	1				4	1			1		6	7	LC	-	-	-	-	Sed	OH	Gras	Car	Ins
Lanius excubitoroides	Grey-backed Fiscal	1								1			1		1	2	LC	-	-	-	-	Sed	OH	Shr	Car	Ins
Lanius souzae	Souza's Shrike						4					1			3	4	LC	-	-	-	-	Sed	SH	Woo	Car	Ins
Leiotrichidae																										
Turdoides jardineii	Arrow-marked Babbler	2	2	1	1			3	4			2		1	10	13	LC	-	II	-	-	Sed	SH	Shr	Car	Gen
Turdoides sharpei	Black-lored Babbler		12				11		9						32	32	LC	-	II	-	-	Sed	SH	Woo	Car	Ins
Locustellidae																										
Bradypterus baboecala	Little Rush-warbler	1	2				2	1						2	4	6	LC	-	II	-	-	Sed	OH	Wet	Car	Ins
Macrosphenidae																										
Melocichla mentalis	Moustached Grass-warbler	2	2											2	2	4	LC	-	II	-	-	Sed	SH	Shr	Car	Ins
Sylvietta whytii	Red-faced Crombec		1	1	1	1			1		1				4	5	LC	-	II	-	-	Sed	SH	Woo	Car	Ins
Malaconotidae																										
Bocagia minuta	Marsh Tchagra		1												1	1	LC	-	-	-	-	Sed	OH	Wet	Car	Ins
Chlorophoneus sulphureopectus	Orange-breasted Bush-shrike	4	5	1	1	1	1	2	9					1	23	24	LC	-	-	-	-	Sed	SH	Woo	Car	Ins
Dryoscopus cubla	Black-backed Puffback	5		1	1	4	4	10	5						30	30	LC	-	-	-	-	Sed	SH	Woo	Car	Ins
Dryoscopus gambensis	Northern Puffback						1								1	1	LC	-	-	-	-	Sed	SH	Woo	Car	Ins
Laniarius aethiopicus	Tropical Boubou		6			9	2	12	1					1	29	30	LC	-	-	-	-	Sed	SH	Woo	Car	Ins
Laniarius erythrogaster	Black-headed Gonolek		1											1		1	LC	-	-	-	-	Sed	SH	Shr	Car	Ins
Laniarius funebris	Slate-coloured Boubou	11	12	1	1	1	8	12	37					6	77	83	LC	-	-	-	-	Sed	SH	Shr	Car	Gen
Laniarius mufumbiri	Papyrus Gonolek		1											1		1	NT	-	-	-	-	Sed	SH	Wet	Car	Ins
Nilaus afer	Brubru		2		1										3	3	LC	-	-	-	-	Sed	SH	Woo	Car	Ins
Tchagra australis	Brown-crowned Tchagra	1	1	1	1	1			5						10	10	LC	-	-	-	-	Sed	SH	Shr	Car	Have
Tchagra senegalus	Black-crowned Tchagra	1	2			8	5	9						3	22	25	LC	-	-	-	-	Sed	OH	Shr	Car	Have

Table 7.2.2.2.4.a
List of species of Avifauna recorded during the Bird Survey Campaigns (Sampling Areas, Methods, Conservation Status and Ecological Aspects)

Order/Family/*Species*	Common name	Sampling Areas								Methods						Total	Conservation Status			Ecological Aspects					
		BS1	BS2	BS3	BS4	BS5	BS6	BS8	BS9	OR	IN	MN	TS	SM	TC		IUCN, 2024	CITES, 2024	CMS, 2024	Cin.	End.	Mig.	Hab. Den.	Hab. Typ.	Tro. Lev.	Pri. Lif.
Monarchidae																										
Terpsiphone viridis	African Paradise-flycatcher	4	2			6		1							13	13	LC	-	II	-	-	Sed	SH	Woo	Car	Ins
Motacillidae																										
Anthus leucophrys	Plain-backed Pipit	6	1	1	1	1									10	10	LC	-	II	-	-	Sed	SH	Gras	Car	Have
Macronyx croceus	Yellow-throated Longclaw	1	2					1							4	4	LC	-	II	-	-	Sed	OH	Gras	Car	Have
Motacilla aguimp	African Pied Wagtail	4						20	10	1			1		34	35	LC	-	II	-	-	Sed	SH	Riv	Car	Have
Muscicapidae																										
Bradornis microrhynchus	African Grey Flycatcher						2		10						12	12	LC	-	II	-	-	Sed	SH	Shr	Car	Ins
Cercotrichas hartlaubi	Brown-backed Scrub-robin	4	3	1	1		1	1	2					2	11	13	LC	-	II	-	-	Sed	SH	Shr	Car	Have
Cercotrichas leucophrys	White-browed Scrub-robin					3	1	3	17					1	23	24	LC	-	II	-	-	Sed	SH	Shr	Car	Have
Cichladusa guttata	Spotted Palm-thrush								1						1	1	LC	-	II	-	-	Sed	SH	Shr	Car	Have
Cossypha heuglini	White-browed Robin-chat	5	7			1	4	17						7	27	34	LC	-	II	-	-	Sed	SH	Riv	Car	Have
Cossypha natalensis	Red-capped Robin-chat	18	1	1	1	6	1	4				1		1	30	32	LC	-	II	-	-	Sed	SH	Woo	Car	Have
Cossypha niveicapilla	Snowy-crowned Robin-chat	3	1												4	4	LC	-	II	-	-	Sed	SH	Woo	Car	Gen
Myrmecocichla nigra	Sooty Chat			2	1		1								4	4	LC	-	II	-	-	Sed	OH	Gras	Car	Have
Saxicola torquatus	Common Stonechat	5		1	1										7	7	LC	-	II	-	-	Mig pair	OH	Shr	Car	Ins
Sheppardia polioptera	Grey-winged Akalat	1												1		1	LC	-	II	-	-	Sed	DH	Shr	Car	Have
Nectariniidae																										
Anthreptes longuemarei	Western Violet-backed Sunbird						1								1	1	LC	-	-	-	-	Sed	SH	Woo	Car	Ins
Chalcomitra senegalensis	Scarlet-chested Sunbird	1	2	1	1	1	1		1					1	7	8	LC	-	-	-	-	Mig pair	SH	Shr	Omn	Ins
Cinnyris bifasciatus	Purple-banded Sunbird	3	1			2	3	5	1					1	14	15	LC	-	-	-	-	Sed	SH	Shr	Her	Ins
Cinnyris mariquensis	Marico Sunbird	1	1	1	1	1	3	1							9	9	LC	-	-	-	-	Sed	OH	Woo	Omn	Ins
Cinnyris venustus	Variable Sunbird	3							5					1	7	8	LC	-	-	-	-	Sed	SH	Woo	Omn	Ins
Cyanomitra olivacea	Olive Sunbird	2	1			2								2	3	5	LC	-	-	-	-	Sed	DH	For	Omn	Ins
Cyanomitra verticalis	Green-headed Sunbird	5			1	4	1								11	11	LC	-	-	-	-	Sed	SH	Woo	Her	Ins
Hedydipna collaris	Collared Sunbird	1	2		1	3								1	6	7	LC	-	-	-	-	Sed	SH	For	Omn	Ins
Nectarinia kilimensis	Sunbird Bronze		1	1	1	1									4	4	LC	-	-	-	-	Sed	SH	Woo	Omn	Ins
Oriolidae																										
Oriolus auratus	African Golden Oriole					1	10	1							12	12	LC	-	II	-	-	Sed	SH	Woo	Omn	Ins
Oriolus larvatus	Eastern Black-headed Oriole		1	1	1	4	5	6		2			2	3	15	20	LC	-	II	-	-	Sed	SH	Woo	Omn	Ins
Passeridae																										
Gymnoris pyrgita	Yellow-spotted Bush-sparrow		1											1		1	LC	-	-	-	-	Sed	OH	Gras	Her	Gen
Passer domesticus	House Sparrow								80						80	80	LC	-	-	-	-	Sed	OH	Hum Mod	Her	Have
Passer griseus	Northern Grey-headed Sparrow	8		1					62						71	71	LC	-	-	-	-	Sed	OH	Shr	Her	Have
Passer suahelicus	Swahili Sparrow								20						20	20	LC	-	-	-	EA	Sed	OH	Gras	Her	Have
Platysteiridae																										
Batis molitor	Chinspot Batis	3	6		1	1	1	1	2			1		3	11	15	LC	-	II	-	-	Sed	SH	Woo	Car	Ins
Platysteira cyanea	Brown-throated Wattle-eye	7	1											2	6	8	LC	-	II	-	-	Sed	SH	For	Car	Ins
Platysteira peltata	Black-throated Wattle-eye					3									3	3	LC	-	II	-	-	Sed	DH	For	Car	Ins
Ploceidae																										
Anaplectes leuconotos	Northern Red-headed Weaver	1	1				5	2				1			8	9	LC	-	-	X	-	Sed	SH	Woo	Car	Ins
Anaplectes rubriceps	Southern Red-headed Weaver								11						11	11	LC	-	-	X	-	Sed	SH	Woo	Car	Ins
Bubalornis niger	Red-billed Buffalo-weaver		1											1		1	LC	-	-	X	-	Sed	SH	Woo	Omn	Have
Euplectes albonotatus	White-winged Widowbird		3												3	3	LC	-	-	X	-	Sed	OH	Gras	Her	Have
Euplectes ardens	Red-collared Widowbird	2					9								11	11	LC	-	-	X	-	Sed	OH	Gras	Her	Gen
Euplectes axillaris	Fan-tailed Widowbird	69													69	69	LC	-	-	X	-	Sed	OH	Gras	Her	Have
Euplectes capensis	Yellow Bishop					1									1	1	LC	-	-	X	-	Sed	OH	Gras	Omn	Have
Euplectes hordeaceus	Black-winged Bishop					2		1							3	3	LC	-	-	X	-	Sed	OH	Gras	Her	Have
Histurgops ruficauda	Rufous-tailed Weaver		1											1		1	LC	-	-	X	EA	Sed	SH	Shr	Omn	Have
Ploceus baglafecht	Baglafecht Weaver	1	1	1	1										4	4	LC	-	-	X	-	Sed	SH	Shr	Car	Ins
Ploceus cucullatus	Village Weaver									1			1			1	LC	-	-	X	-	Sed	OH	Woo	Her	Ins
Ploceus luteolus	Little Weaver		6												6	6	LC	-	-	X	-	Sed	SH	Woo	Omn	Ins
Ploceus melanocephalus	Black-headed Weaver	92						70							162	162	LC	-	-	X	-	Sed	SH	Wet	Omn	Ins
Ploceus nigerrimus	Vieillot's Black Weaver	1										1				1	LC	-	-	X	-	Sed	SH	Woo	Omn	Ins

Table 7.2.2.2.4.a
List of species of Avifauna recorded during the Bird Survey Campaigns (Sampling Areas, Methods, Conservation Status and Ecological Aspects)

Order/Family/*Species*	Common name	Sampling Areas								Methods						Total	Conservation Status			Ecological Aspects						
		BS1	BS2	BS3	BS4	BS5	BS6	BS8	BS9	OR	IN	MN	TS	SM	TC		IUCN, 2024	CITES, 2024	CMS, 2024	Cin.	End.	Mig.	Hab. Den.	Hab. Typ.	Tro. Lev.	Pri. Lif.
Ploceus ocularis	Spectacled Weaver	1	6					1				1		3	4	8	LC	-	-	X	-	Sed	SH	Woo	Car	Ins
Quelea quelea	Red-billed Quelea		1	1	1	1									4	4	LC	-	-	X	-	Mig pair	OH	Gras	Her	Gen
Pycnonotidae																										
Atimastillas flavigula	Pale-throated Greenbul					3	4	9							16	16	LC	-	-	-	-	Sed	SH	Shr	Her	Ins
Chlorocichla flaviventris	Yellow-bellied Greenbul							16	1			1			16	17	LC	-	-	-	-	Sed	DH	For	Her	Ins
Eurillas latirostris	Yellow-whiskered Greenbul			1											1	1	LC	-	-	-	-	Sed	DH	For	Omn	Ins
Eurillas virens	Little Greenbul	9												1	8	9	LC	-	-	-	-	Sed	DH	For	Her	Ins
Pycnonotus barbatus	Common Bulbul	40	26	1	1	4	8	36	15			3		6	122	131	LC	-	-	-	-	Sed	SH	Woo	Her	Ins
Sturnidae																										
Cinnyricinclus leucogaster	Violet-backed Starling	30			1	1		36							68	68	LC	-	-	-	-	Mig	SH	For	Her	Ins
Lamprotornis chalybaeus	Greater Blue-eared Starling	2			1	1		30							34	34	LC	-	-	-	-	Sed	OH	Shr	Omn	Gen
Lamprotornis purpuroptera	Rüppell's Starling	11	11	1	1	1		1						1	25	26	LC	-	-	-	-	Sed	OH	Shr	Omn	Have
Lamprotornis splendidus	Splendid Starling	8													8	8	LC	-	-	-	-	Mig pair	DH	For	Omn	Ins
Lamprotornis unicolor	Ashy Starling								16						16	16	LC	-	-	-	TZ	Sed	SH	Woo	Car	Have
Turdidae																										
Stizorhina fraseri	Rufous Flycatcher-thrush	1												1		1	LC	-	II	-	-	Sed	DH	For	Car	Ins
Turdus libonyana	Kurrichane Thrush							2				1			1	2	LC	-	II	-	-	Sed	SH	Woo	Car	Have
Turdus pelios	African Thrush	16													16	16	LC	-	II	-	-	Sed	SH	Woo	Omn	Gen
Vangidae																										
Prionops plumatus	White-crested Helmetshrike						6								6	6	LC	-	II	-	-	Sed	SH	Woo	Car	Ins
Viduidae																										
Vidua chalybeata	Village Indigobird					1		12							13	13	LC	-	-	-	-	Sed	OH	Shr	Her	Have
Vidua macroura	Pin-tailed Whydah	2	1	1	1	9			1						15	15	LC	-	-	-	-	Sed	OH	Shr	Her	Have
Vidua obtusa	Broad-tailed Paradise-whydah					2									2	2	LC	-	-	-	-	Sed	OH	Woo	Her	Have
Vidua paradisaea	Long-tailed Paradise-whydah					3	1	4	1						9	9	LC	-	-	-	-	Sed	OH	Woo	Her	Have
Total		**1079**	**431**	**74**	**80**	**231**	**202**	**766**	**865**	**28**	**7**	**55**	**28**	**127**	**3539**	**3756**										

Caption: *recorded at Birds Point. Methodologies: OR - Opportunistic observation; IN - Interview, MN - Mistnets, TS - Transect Sampling, SM - Song Meter (Bioacoustics); Conservation Status (IUCN, 2024): **LC** - "Least Concern", **NT** - "Near Threatened", **VU** - "Vulnerable", **EN** - "Endangered", **CR** - "Critically Endangered". (CITES, 2024): **Appendix I** - endangered species whose trade will only be permitted in exceptional circumstances, **Appendix II** - species not necessarily endangered but whose trade must be controlled in order to avoid uses incompatible with their survival; (CMS, 2024): **Appendix I** - includes endangered migratory species for which strict conservation measures are required, **Appendix II** - species that require or would benefit from international co-operation for their conservation; Cin. - Game - X, End. - Endemism (STEVENSON & FANSHAWE, 2020): **EA** - East Africa, **TZ** - Tanzania; Mig. - Migration (TOBIAS *et al*., 2022): **MG** - Migratory, **PM** - Partially Migratory, **SE** - Sedentary; Habitat Density (TOBIAS *et al*., 2016; TOBIAS *et al*., 2022): **Shr** - Shrubland, **Woo** - Woodland, **For** - Forest, **Wet** - Wetland, **Gra** - Grassland, **Hum Mod** - Human Modified, **Riv** - Riverine; Trophic Level (PIGOT *et al*., 2020; TOBIAS *et al*., 2022): **Her** - Herbivores, **Car** - Carnivores, **Omn** - Omnivores, **Sca** - Necrophages; Pri. Lif. - Primary Lifestyle (TOBIAS *et al*., 2022): **Aer** - Aerial; **Ter** - Terrestrial; **Ins** - Insessional; **Aqu** - Aquatic; **Gen** - Generalist.

Table 7.2.2.2.5.a
List of Herpetofauna species recorded in the study with information on the location of recording, method applied, data source, endemism, hunting, medical-sanitary interest and conservation status

CLASS/Order/Family/*Species*	Common Name	BS1	BS2	BS5	BS6	BS8	BS9	Total	Method			Hunting and medical interest	Endemism	Status	
									AS	IN	SM			IUCN	CITES
AMPHIBIANS															
Anura															
Bufonidae															
Sclerophrys gutturalis	*Guttural Toad*	30		2			2	34	34				No	-	-
Dicroglossidae															
Hoplobatrachus occipitalis	*Crowned bullfrog*					11	10	21	21				No	LC	-
Hyperoliidae															
Hyperolius sp.	-		1					1			1		-	-	-
Kassina senegalensis	*Bubbling Kassina*	4			2			6			6		No	LC	-
Hyperolius viridiflavus	*Painted Reed Frog*		2			12		14	12		2		No	-	-
Phrynobatrachidae															
Phrynobatrachus acridoides	*Eastern puddle frog*	10			13	10		33	33				No	LC	-
Pipidae															
Xenopus muelleri	*Mueller's Clawed Frog*	14						14	14				No	-	-
Xenopus victorianus	-	16						16	16				No	LC	-
Ptychadenidae															
Ptychadena anchietae	*Anchieta's ridged frog*	13						13	13				No	LC	-
Ptychadena nilotica	-	35					6	41	41				No	LC	-
Rhacophoridae															
Chiromantis petersii	-						7	7	7				No	LC	-
Family Not identified															
Anura Not Identified	-	62						62			62		-	-	-
REPTILES															
Squamata (lizards)															
Agamidae															
Agama mwanzae	*Mwanza Flat-Headed Agama*			1				1	1				No	LC	-
Scincidae															
Trachylepis maculilabris	*Speckle-Lipped Skink*			2				2	2				No	LC	-
Trachylepis striata	*Striped Skink*				14	6	9	29	29				No	LC	-
Trachylepis varia	*Variable Skink*				14	9	9	32	31	1			No	-	-
Varanidae															
Varanus niloticus	*Nile Monitor/Water Monitor*					7		7	7			Hunted	No	LC	II
Squamata (snakes)															
Colubridae															
Philothamnus hoplogaster	*South-Eastern Green Snake*		1	1				2	1	1			No	LC	-
Elapidae															
Naja haje	*Egyptian Cobra*			1				1		1		Venomous	No	LC	-
Dendroaspis polylepis	*Black Mamba*		1	1	1		2	5	1	4		Venomous	No	LC	-
Pythonidae															
Python sebae	*Central African Rock Python*		1	1	1			3		3		Hunted	No	NT	II
Viperidae															
Bitis arietans	*Puff Adder*		1		1		1	3		3		Venomous	No	LC	-
Testudines															
Testudinidae															
Stigmochelys pardalis	*Leopard Tortoise*		1		1			2		2		Hunted	No	-	II
Grand Total		**184**	**8**	**9**	**47**	**55**	**46**	**349**	**263**	**15**	**71**				

Legend: Sampling Points: BS1, BS2, BS5, BS6, BS8 and BS9. **Method**: AS - Active Search, IN - Interview, SM - SongMeter. **Endemism** (RAZZETTI & MSUYA, 2002; MICHELE *et al.*, 2020). **Conservation Status**: IUCN (2024): NT - Near Threatened; LC - Least Concern.

Annex 8 – Archaeology and Cultural Heritage Impact Assessment

Table of Contents

List of Figure

List of Plates

List of Tables

Abbreviations

BP	Before Present
CB	Code Book
CHMP	Cultural Heritage Management Plan
DC	District Council
DCO	District Cultural Officer
DoA	Director of Antiquities
DP	Datum Point
EHS	Ethno-Historical Survey
EIW	Early Iron Working
IA	Iron Age
LIW	Later Iron Working
LSA	Later Stone Age
MSA	Middle Stone Age
STP	Shovel Test Pit
TAZA	Tanzania – Zambia
TPDF	Tanzania People's Defence Forces
UTIP	Uganda – Tanzania Transmission Interconnector Project
VEO	Village Executive Officer
WEO	Ward Executive Officer

1 INTRODUCTION

This section of the ESIA Report considers the potential impacts on archaeology and cultural heritage of the proposed Uganda – Tanzania Transmission Interconnector Project (UTIP). The proposed project will involve the construction of a new 548.91 km long transmission line premised on 400 kV. The line will connect Ibadakuli, Nyakanazi, Kyaka and Mutukula on the Uganda - Tanzania Border. It will have 52m wide as per TANECSO standards. The assessment predicts and evaluates the potential impacts of the proposed project on archaeology and cultural heritage resources arising from construction and operation of the proposed project.

The chapter mainly identify, document and retrieve areas of archaeological and cultural heritage potentials within the vicinity of the proposed project and ascertains the potential impacts on the cultural heritage resources. The driving force for this is to undertake total salvage/rescue of the identified archaeological and cultural heritage resources for the benefit of the present and future generations. The assessment followed the requirement of the World Bank's ESS 8.

For the purposes of this assessment, cultural heritage resources are described as tangible materials and intangible customs from the past that are consistently appreciated, re-constructed and re-used by living communities to suit their present needs: in other words, they are used for economic gain, education, research, national identity, religious and other traditional activities (Keitumetse, Matlapeng, & Monamo, 2007). They have been categorized as follows:

- Tangible are cultural heritage resources that can be felt by touch such as cultural heritage sites, buildings, structures, and artefacts.
- Intangible are non-physical aspects of cultural heritage such as language, expressions, performing arts, belief, rituals, myths and legends, traditions, folklore and customs.
- Immovable are cultural heritage resources that cannot be moved from one place to another such as buildings, rock paintings and historical areas/places.
- Movable are cultural resources that can be moved from one place to another such as tools, beads, ornaments and fossils.

2 POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

2.1 Cultural Policy of 1997

The protection and promotion of cultural resources is the civic responsibility and the central government shall be the supervisor. The policy has directed the developer in section 3.2.1 to undertake cultural heritage impact assessment studies to all land development projects. The cost for undertaking these studies shall be incorporated in the budgets of the respective development projects.

2.2 Cultural Heritage Policy of 2008

It defines cultural heritage resources as any tangible and intangible material that represent contemporary, historic, and pre-historic human life ways. Movable and immovable heritage resources found on land surface or underwater, one hundred (100) years old or more. It also encompasses those which due to their significance and according to Government laws and regulations on cultural heritage, have been identified and declared national monuments by the Minister responsible for cultural heritage resources. Section 4.2.5 and 4.6.2 points out that procedures shall be developed to require all major development projects involving excavations are preceded by cultural heritage impact assessment studies and the cost for undertaking such assessment will be undertaken/met by the developer.

2.3 Antiquities Act of 1964 and Its Amendment Act of 1979

The Antiquities Act of Tanzania, enacted in 1964 (amended in 1979) is the basic legislation for the management, protection and preservation of movable and immovable tangible cultural heritage resources. The Act provides for the recognition and protection of cultural properties including relics, monuments, protected objects, conservation areas and ethnographic objects. It has a mandate to protect, conserve and manage monuments, relics, archaeological, paleontological, historical sites of more than 100 years. In section 11 of the Act does not allow anyone to undertake excavation without permission from the Director of Antiquities (DoA). It identifies to ensure that such pre-development impact

assessments are properly conducted and that resources found in an area of impact are scientifically examined and reported to the respective authority.

2.4 Grave (Removal) Act of 1968

Graveyard Removal Act of 1968 refers directly to grave removal and requirement for compensation. The Act stipulates that the owners of graves should be compensated and the remains reburied elsewhere to pave the way for development interventions. The project is likely to affect some graves in UTIP alignment, due processes of grave relocation will be followed in accordance with provisions of this Act.

2.5 World Bank Safeguarding Policy

World Bank's ESS8 that aimed to assist in protecting and enhancing cultural property by sponsoring projects that sustain cultural property and to decline funding those that could result in damage.

3 ASSESSMENT METHODOLOGY

Field work included five approaches mixed together in order to gather appropriate information for cultural heritage resources. These approaches included: ethno-historical survey, surface walking over survey (pedestrian), sub surface survey (STP), literature reviews and physical attributes analysis for the retrieved archaeological finds.

Ethno-historical surveys (EHS) involved conducting face-to-face interviews and meetings with District Cultural Officers (DCOs), Ward Executive Officers (WEOs), Village Executive Officers (VEOs) and members of respective village governments. The first step of the EHS was to report and sign in the visitors' book. This was done at all administrative levels – district, ward and village. For recording purposes, we also requested the DCOs, WEOs and VEOs/village chairpersons to sign in my archaeological and cultural heritage stakeholders' signature form. After signing, we briefed the respective leaders/members about the project. We then introduced the aims of the investigation - searching for archaeological sites (concentration of artefacts, ecofacts, structures and features) and other (non-archaeological) cultural heritage sites such as traditional dance grounds, ritual sites, sacred sites and burial places.

Plate 3.1: Archaeologists with Village Chairman of Rwakalemera Village, Ngara DC

Surface survey through walkover surveys were deployed. The aim of the surface survey technique was to discover surface archaeological materials, ritualistic sites, and graves or graveyards, and; to examine the significance and importance of the discovered archaeological and non-archaeological cultural heritage materials.

The survey covered as much of the area as possible and revealed several patches of artefacts littering the surface in varying degrees of concentration as shown in

Table *3.1*. Lithics would be considered characteristics of the Middle Stone Age (MSA) and Later Stone Age (LSA), potsherds belonging to Early Iron Working (EIW) pottery and slags.

Table 3.1: Recorded Sites with Archaeological materials observed along the UTIP Transmission Line

SITE NAME	LOCATION (36UTM ARC 1960)	NUMBER OF ARTEFACTS COLLECTED AND THEIR CULTURAL DESGNATION	SIGNIFICANCE	IMPORTANCE
Ibadakuli	557214/9599391	8 MSA/LSA and 1 EIW potsherd	Archaeological	Moderate
Igeka	0460547/9634512	7 Early Iron Working slags	Archaeological	High
Mavota	0333713/9640778	8 Early Iron Working potsherds	Archaeological	High
Burigi-Chato	0283677/9773213	15 MSA/ LSA	Archaeological	High
Nyantakara	0318728/9647237	7 MSA/ LSA	Archaeological	Moderate
Nyabugombe	0267697/9711501	3 MSA/LSA and 1 POTSHERD	Archaeological	Low

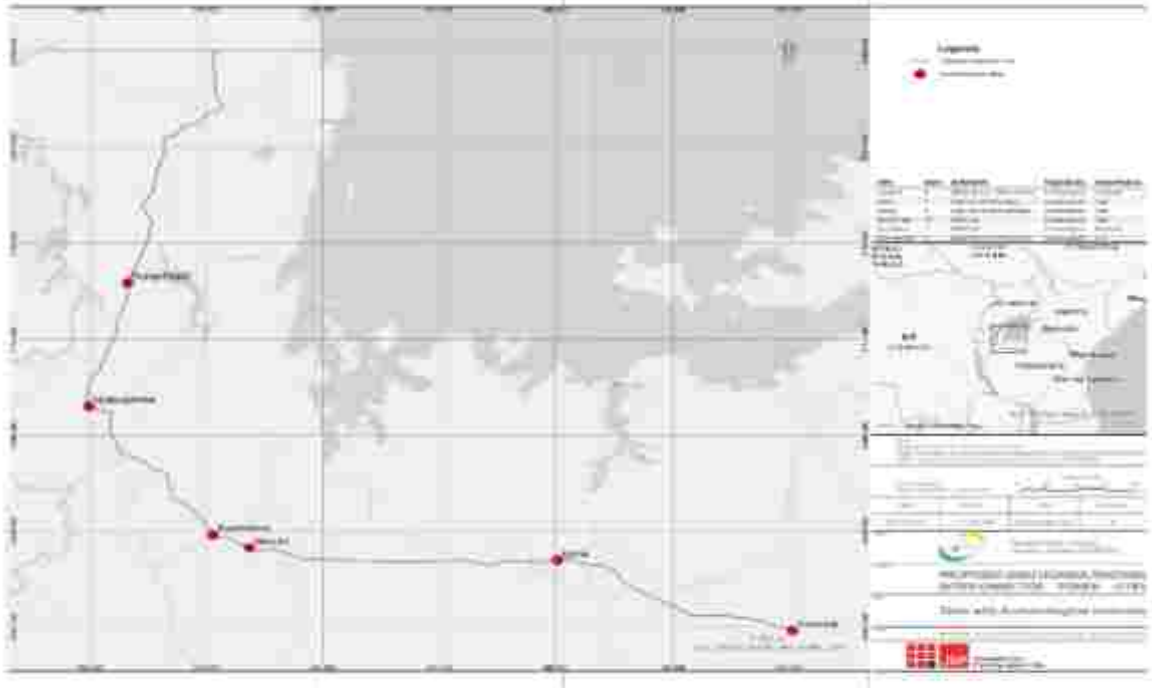

Figure 3.1: A Map Showing the Archaeological Site Mapped by Archaeologis

Sub-surface survey through shovel test pits were employed. The aim of the sub-surface technique was to discover and examine sub-surface archaeological materials, and; to determine the significance and importance of the discovered archaeological materials. Each STP had a measurement of 1 m by 1 m and it was established at the exact centre of the alignment. Each STP was referenced from a datum point (DP) and was set to the north. The digging followed levels of 10 cm and the STP soil was sieved through a 5 mm mesh, and digging stopped at a sterile level.

Plate 3.2: STP Five at Omundongo Village, Missenyi DC

Source: Field Data, 2024

A total number of seven STPs were excavated along the alignment and they are located at UTM 36 Coordinates 0333713/9640778 Mavota village, 0279157/9752679 Burigi Chato National Park, 0283677/9773213 Burigi-Chato National Park, 0323444/9862108 Nyabihanga village, 0320170/9865357 Omundongo village, 0319586/9875380 Byamtemba village and 0320934/9888830 Mutukula village. Twenty-nine (29) artefacts were recovered from the test pits. They included potsherds, lithics and slags. The test pits exposed a two or three layered stratigraphy spanning a depth of 1m down the top layer was composed by loamy or humus soil with varying inclusion of pisolith/ gravels but where the top soil has been eroded considering in small size invariably the second

stratigraphic unit was dominated by large particle of gravels while the third part unit the gravels increased too large. Gravely layer overlying the schistose bedrock it becomes solid schist and completely devoid of artefacts.

Physical attributes analysis was preceded by cleaning, drying, sorting, and labelling the archaeological materials. Next was preparation and refining of Code Books (CB) (also called analytical schemes) for physical attributes analysis of lithics, metallurgical remains and potsherds. Preparation of CB was developed based on the varieties of the archaeological materials rescued from the assessment.

4 BASELINE CONDITIONS

The archaeological field revealed the existence of cultural remains along the alignment that range from stone age, iron age and pastoral neolithic. Recovered archaeological materials are presented as follows:

4.1 Archaeological Resources

4.1.1 Lithics/ Stone age tools

A total of 71 artefacts mostly belonging to MSA and LSA. The assemblage seems to be dominated by cores, flakes and core fragments which account for 20 or ca.71% of the artefacts recovered. Since some of the flakes display unworked but the proliferation of core tools and the proximity of the type site, having said that one must underscore the fact that some of the artefacts retrieved are reminiscent of artefact types and reduction techniques as shown in the tables and photographs different artefact types attributed to MSA and LSA and historical pottery.

The Middle Stone Age (MSA) includes flake tool industries but precede blade based microlithic industries, the employment of the Levalloisian and particularly the facetted platform techniques, convergent and parallel flaking on flake and a variety of flake-tool forms are some of the dominant features of these cultures. The MSA is characterized by typological variation among stone artefact assemblages. This variability has been interpreted as a reflection of different economic activities; different raw materials or different environmental adaptation by MSA population the MSA possesses many of the earlier artefact forms such as different types of bifacial implements, Levalloisian flakes

and core artefacts. The most frequent artefacts are detached pieces popularly known as flakes and now shown experimentally to be perhaps the most utilitarian tools on account of their sharp edges and ease with which they are made, though this assertion has also been questioned. Blades are also a feature of the MSA although they also appear in a microlithic form in later industries.

In the assemblages reported here however, blades and blade implements are rare. A total of 12(18%) detached pieces were recovered. Of these, 8 are Levalloisian flakes while 7 are blades recognized as such on account of their being at least twice as long as they are broad. There is a wide variety of flakes, distinguished because of the platform type, number of dorsal scars, absence or presence of cortex and length-width ratios (Length/width ratios have not been computed for this report). While the majority of the flakes exhibit facetted platforms there are also some with point and scaled platforms signifying the bipolar core reducing technique. A good number of the flakes exhibit broad dorsal negative scars again signifying employment of the prepared core technique. Utilized flake as already remarked, flakes are perhaps the most utilizable implements for all functions involving cutting.

Table 4.1: Showing Artefact Categories Recovered from Surface and Sub-Surface Survey

Artifact categories	Surface survey	Test pit	Total artefact
Flakes (Kombewa)	2	1	3
Blade	6	4	10
Levallois flake	3	0	3
Utilized flake	5	2	7
Scraper	3	2	5
Core scrapper	6	4	10
Becs/percor	0	2	2
Notched scraper	1	0	1
Bifacial point	0	2	2
Flake fragments	4	5	9
Pottery	5	7	12

Slags	7	0	7
Grand Total	**42**	**29**	**71**

The LSA is characterized by the preponderance of microlithic implements, which include whole and broken flakes, thumbnail scrapers, a variety of geometrics e.g., lunates, wood working implements such as outils ecailles, boring implements such as burins and becs.

4.1.1.1 Flakes and blades

A total of 13 (48%) detached pieces were recovered. Of these, 8 are Levalloisian flakes while 5 are blades recognized as such on account of their being at least twice as long as they are broad. There is a wide variety of flakes, distinguished on the basis of the platform type, number of dorsal scars, absence or presence of cortex and length-width ratios (Length/width ratios have not been computed for this report). While the majority of the flakes exhibit facetted platforms there are also some with point and scaled platforms signifying the bipolar core reducing technique. A good number of the flakes exhibit broad dorsal negative scars again signifying employment.

Plate 4.1: Blade

Plate 4.2: Flakes

Source: Field Data, 2024

4.1.1.2 Utilized flake

As already remarked, flakes are perhaps the most utilizable implements for all functions involving cutting. 5 (2.4%) flakes exhibited some edge damage while 2 flakes did not have edge damage, which could have resulted from utilization, although the damage, it has been argued, is not directly related to use and that utilization should be recognized on the basis of minimally secondary retouch. However, since most of the flakes are of quartzite, some of which is coarse grained, it is presumed part of the edge damage seen is natural

4.1.1.3 Scrapers

Many types of scrapers are represented in this assemblage and form the third most frequent artefact type after flakes and utilized flakes and the largest formal tool category accounting for a total of 10 (5.3%) of the assemblage.

Plate 4.3: Scrapers

Source: Field Data, 2024

4.1.1.4 Cores

18 flaked pieces were recognized as cores, thus making this the second largest category after flakes and blades. Based on where the flaking originates and the direction of the flaking, they may be in several categories categories.

4.1.1.5 Biface

Three pointed-like bifaces were recovered. Although worked from both sides to produce an almond shaped implement, one side seems to have been deliberately more intensively trimmed. They are all made from coarse-grained quartzite.

Plate 4.4: Bifaces

Source: Field Data, 2024

4.1.1.6 Becs/burins/percoirs/borers

These are implements, which are technically or intentionally spalled or flaked at one end to produce a bit-like point, presumably for boring. They make up a significant proportion of the assemblage and account for two (1.6%) unifacial and bifacial points. Although there were only two such artefacts, they are considered important as being among the fossil directors of LSA. They measured 10cm on average length and exhibited a pointed end achieved by trimming the implement either from one or both side.

Plate 4.5: Becs

Source: Field Data, 2024

4.1.2 Archaeometallurgical remains

4.1.2.1 Slags

The Iron Age (IA) dates from 2,000 years ago when most of Tanzania would have been settled. Iron age remains included pottery, slags and iron implements. Very early knowledge of metallurgy, indeed perhaps the earliest in East Africa, has been documented in Buhaya west (North north east) of the Project area while several other IA sites, although not as ancient, have been described from Shinyanga and Geita but at Igeka village site we collected 7 slags on the surface along the UTIP alignment near to Mwakulali ritual site 0460547/9634512.

Plate 4.6: Slags

Source: Field Data, 2024

4.1.2.2 Potsherds

Few early IA diagnostics were found. At Mavota site as archaeological survey and STP encountered a total of 12 pieces and those pieces have possed the features of Early Iron Working particularly hatched or incised impressed with line of incision and stemple decorative motif, though the people of the area, have denied knowledge of its antiquity, but they can also be made on the ground or engraved in rock. Its introduction to eastern central Africa, may span several centuries and in that context contemporary with the Later Iron Age, ca. 300 BP.

Plate 4.7: Potsherds of Iron Age Cultures

Source: Field Data, 2024

4.2 Non-Archaeological Resources

Archaeologists encountered some non-archaeological remains during the field. Most of the revealed ritual places have special connection to the surrounding communities. They are still in use as local communities value them at all cost. The following are the identified ritual sites along the UTIP transmission line:

4.2.1 Kabagole Ritual Site

It is found at Kabagole village, Bukombe DC and owned by Lameck Chatika Mwabahe. It is found within the UTIP line at UTM 36 0338421/9639217 characterized by church and ritual practices whereby the owner heals people traditionally and he has his small houses to keep his patients. It is still used by the people within and outside the village and behind this church there is place fenced that do not allowed any one to entering with any kind of shoes

Plate 4.8: A Church within a Ritual Healer Premises

Source: Field Data, 2024

4.2.2 Nakurumbogwe Ritual Site

It is found in a Nakurumbogwe hill which is at Ilolanguru village, Mbogwe DC. It is used by the villagers from Ilolanguru, Busabaga and Bugalagala during the time when people are in need of rainfall and they use black cows and goats, traditional alcohoal called Kidugugu made by sorghum and maize usually practiced Sumbwe tribe. This site is protected by village authority. The site is near the Halotel/Airtel tower but it is 300m from UTIP transmission line.

Table 4.2: Identified Ritual Sites/Places with Coordinates

RITUAL SITES	COORDINATES
Kabagole	36 UTM 0338421/9639217
Mwakulali	36 UTM 0461078/9634533
Nakurumbogwe	36 UTM 0338224/9638324

4.2.3 Mwakulali Ritual Site

It is found at Igeka village, Nyang'hwale DC and located with coordinates UTM 36

0461078/9634533. It is covered by large tree and thick forest. The site is within the UTIP alignment and it is in use as villagers from Nyakayenzi, Igeka, Bukima and Isonda villages are using it when there is a need for rainfall and other unknown problems. Also people who are involved in mining activities they do some rituals to locate minerals. The practitioners used black cows or goats and 300m from the site they built a small house for camping. This site is too sensitive as there some rules that whoever go there without a permission should be punished by paying one million shillings as a fine.

Plate 4.9: Mwakulali Ritual Site, Igeka Village, Nyang'wale DC

Source: Field Data, 2024

4.2.4 Karagwe Chiefdom

Karagwe historically is a home of chiefdom system known as chief Omukama descendant in the history of Wanyambo people at the Nyakahanga village. This place was too sensitive in chiefdom system and it is the home of Chief Rumanyika but it is far from the UTIP line about 460 m. Around 1700s Chief Ntale V died of hunger at a place called Omugakorongo Mrombo and people are still doing rituals.

Plate 4.10: Karagwe Heritage Museum

Source: Field Data, 2024

At Omurushaka center, there is Karagwe Heritage Museum, which is under Fredrick B. Ruhinda as the director of the Museum. This museum keeps history of the Nyambo tribe but it is far from the UTIP line. It was reported by the director of Karagwe museum that there is this place called Kitengule which used to be a slave trade center in 1700s whereby slaves were taken from Buganda Kingdom Uganda to Zanzibar via Bagamoyo but the site is also far from the proposed alignment.

4.2.5 Misenyi Chiefdom

Historically Misenyi has been ruled by Chief Kyamkuma whose palace is at Bunazi whereby the current chief lives. It is composed of ritual house, traditional house and a palace. It is very close to the administration blocks of Misenyi DC. The clan of Chief Kyamkuma has been ruling the area for ages and they have a family farm that is used for burying the chiefs. This burying place is about 361.4m from the UTIP alignment with the coordinates 36 M 0320238 UTM 9870531. There are four graves of Rwekira, Omukama Seleman, Paul Ramjongo and Sarapion Paulo Kyamkuma. There are presences of rock paintings for hunters and animal keepers at Kiziba (Bugandika, Kanyigo, Kitobo and Bwanja) but the UTIP alignment does not cross these areas.

Plate 4.11: Graves of the Chief Kyamkuma Clan covered by Dry Grasses

Source: Field Data, 2024

Misenyi has also the remains of the Uganda and Tanzania war in the late 1970s such as old Kagera sugar industry that was bombed during the wars, a church at Kyaka that is managed by the Tanzania Peoples Defence Forces (TPDF).

At Byamtemba, Byeju and Mutukula villages their landmine and it was difficult to dig until we consulted army officers who scanned the area to check if it is safe to dig it.

Historically near the border between Tanzania and Uganda specifically the Kagera region especially Misenyi district from Kyaka to Mutukula is exactly location of 1978 war between Tanzania and Uganda for the case of boundary concerning Kagera river so in this area there is no clearance done by Tanzania government for landmines and bomb remains in this area. According to defense officer Haji I. Stambuli from TPDF -ERW-Coordinator, there are several cases occurring for instance, in 2015 at Nsunga village during the construction of water pipelines there was occurrence of bombs which killed seven people diving into the surface for pipeline and in 2018 at Ngando village one of the villagers saw bombs and landmines that occurred and reported to TPDF to come for clearance.

Plate 4.12: Army Officer Detecting for the Presences of War Bombs Before Archaeological Digging

Source: Field Data, 2024

5 POTENTIAL IMPACTS

5.1 Construction Phase Impacts

- Undiscovered cultural heritage resources, may potentially be disturbed as a result of ground intervention activities associated with construction of the transmission line.
- Ritual places can also be disturbed as they are very sensitive to the communities. It is better for the developer to seek concerns of the traditional ritual practitioners before doing anything.
- Loss of matrix of archaeological materials, construction of the access road and camping areas for the workers also have the potential to result in disturbance or damage to the archaeological and non-archaeological resources such as objects of living tangible heritage, including features of the natural landscape and man-made structures.

Construction of the transmission line has the potential to directly damage these iron age with potteries sites and stone age sites which are indicators of the early people's settlement.

- Removal of vegetation, top soil stripping, site clearance and earthworks have the potential to lead to the exposure and possible damage or destruction of archaeological resources. The extent of the impact would be local, covering the impacted area of the project and the duration would be short term only. The magnitude of this impact is therefore medium and the receptor sensitivity is considered low. Impact significance after implementation of mitigation measures is minor adverse.

Construction of the UTIP line may also disturb graves that have been found within and nearby the alignment. As in most cases villagers are burying their loved ones in their farms and the alignment is crossing into these farms so possibly the project may disturb human burials at a large extent.

The extent of impacts in the event that a burial site is discovered would be local, impacting the Proposed Project Area. Duration of the impact would be short term as relocation/reburial will be made a priority. The magnitude of this impact is assessed as

medium and receptor sensitivity high. Impact significance before mitigation is therefore major adverse. No impacts to archaeological resources are anticipated during operation.

5.2 Significance Criteria

Significance is specific to a location, receptor and the importance of the artefact identified. The magnitude of the effect is subject to the potential change/impact that can occur to either the landscape/location, receptor and condition of the artefact. The receptor sensitivity and magnitude of impact criteria utilised to identify the impact significance on cultural heritage are provided in Table 5.1 and Table 5.2.

Table 5.1: Receptor Sensitivity

Sensitivity Receptor	Criteria for Assessment
High	➢ Sites of acknowledged international importance designated as World Heritage Sites. ➢ Nationally-designated archaeological monuments, sites, buildings or historic landscapes protected by national laws. Undesignated sites, structures or historic landscapes of demonstrable national value. ➢ Assets that can contribute significantly to acknowledged national or international research objectives, whether designated or not. ➢ Well or extremely well-preserved historic landscapes or seascapes with considerable or exceptional coherence, time-depth, or other critical factors. ➢ Intangible cultural heritage listed in national registers, or associated with movements or individuals of national or global significance.
Moderate	➢ Designated or undesignated sites, landscapes or seascapes that can contribute significantly to regional research objectives. ➢ Designated or historic (unlisted) buildings that have exceptional qualities or historical associations, with important historic integrity and contributing significantly to historic character. ➢ Designated or undesignated historic landscapes or seascapes of

Sensitivity Receptor	Criteria for Assessment
	regional value, which would warrant designation. ➢ Intangible cultural heritage areas listed in local registers, or associated with movements or individuals of local importance.
Low	➢ Designated or undesignated assets of local importance. Assets compromised by poor preservation and/or poor survival of contextual associations, or with little or no surviving archaeological interest. ➢ Undesignated historic landscapes or seascapes with importance to local interest groups, whose value is limited by poor preservation and/or poor survival of contextual associations. ➢ Intangible cultural heritage activities of local significance, or associated with individuals of local importance. Poor survival of physical areas in which activities occur or are associated. Areas with few intangible cultural heritage associations or vestiges surviving.
Negligible	➢ Assets with little or no surviving archaeological interest. ➢ Buildings or urban landscapes of no architectural or historical merit; buildings of an intrusive character. ➢ Areas with few intangible cultural heritage associations or vestiges surviving.
Unknown	➢ The importance of the resource cannot be ascertained.

5.3 Magnitude of Impact

Table 5.2: Magnitude of Impact Assessment

Magnitude of Impact	Criteria for Assessment
High	➢ Changes to most or all key archaeological sites/key architectural and artistic building elements/historic landscape elements such that

Magnitude of Impact	Criteria for Assessment
	the resource is totally altered. ➢ Major changes to an area affecting intangible cultural heritage activities, associations, visual links and cultural appreciation.
Moderate	➢ Changes to most or all key archaeological sites/key architectural and artistic building elements/historic landscape elements such that the resource is clearly modified. ➢ Considerable changes to an area affecting intangible cultural heritage activities, associations, visual links and cultural appreciation.
Low	➢ Minor changes to key archaeological sites/key architectural and artistic building elements/historic landscape elements such that the resource is slightly altered or clearly modified. Slight changes to setting, or changes to setting that affect the character of the asset. ➢ Minor changes to area that affect intangible cultural heritage activities, associations, visual links and cultural appreciation.
Very Low	➢ Very minor or no changes to archaeological asset, historic building fabric or setting. ➢ Very minor or no changes to elements, parcels or components of landscapes or seascapes; no visual or audible changes. ➢ Very minor or no changes in amenity or community factors.

6 MITIGATION MEASURES

Loss of serendipity discovery of archaeological resources, Cultural Heritage Management Plan (CHMP) will include measures like preservation by photo-record, excavation by qualified archaeologist, working in conjunction with the Division of Antiquities to ensure that findings are shared within the cultural heritage expert community and programmes are implemented to share findings with a wider audience. The plan will be implemented

in agreement with government authorities in advance of construction. Regular meetings will be scheduled with government authorities and appropriate community leaders.

To train all UTIP construction contractors on weekly or monthly basis on archaeological and other non-archaeological cultural heritage resources in the project area before mobilization and during construction.

To revisit the impacted areas that were not surveyed due to inaccessibility and presences of rice farm fields. It was difficult to undertake surface and subsurface survey in such areas hence these areas were not fully assessed. These areas included: Lyabusalu, Bukamba, Mwabagehu, Nzoza, Zunzuli, Bukwimba and Kasubuya.

To undertake archaeological and heritage assessment in areas such as access roads and worker's camps. These areas were not assessed archaeologically hence there is a need to conduct an assessment before the start of the project.

Implementation of the chance finds procedure to address finds during construction. Particularly to Igeka, Mavota and Burigi-Chato sites which have provided signs of potential archaeological materials such as EIW with slags and potsherds.

To employ archaeologist for on-site training of the contractors and implementation of a chance finds procedure and for the archaeological watching brief of the construction activities.

Graves to be exhumed based on the procedures they (relatives and owners) suggested while adhered to Grave (Removal) Act of 1968.

To undertake negotiations with ritual practitioners of Kabogole and Mwakulali ritual sites in which the UTIP alignment has crossed these ritual sites.

Therefore, with implementation of mitigation measures mentioned herein, the significance level of the impacts identified during the construction of the proposed project will be reduced to either Minor Adverse or Negligible. There are not expected to be any impacts during the operation phase as the ground will not be disturbed.

Table 6.1: Summary of Findings

Impact	Receptor	Phase	Impact Magnitude	Receptor Sensitivity	Pre-Mitigation Impact Significance	Design, Enhancement or Mitigation Measures	Management Plan	Residual Significance
Destruction of archaeological sites such as Igeka, Mavota and Burigi-Chato (These sites are rich in terms of archaeological finds such as iron working potsherds, slags and MSA and LSA tools	Local communities	Construction	**Impact Magnitude**: Medium **Nature:** Adverse **Type:** Direct **Extent/Scale**: Local **Duration:** Short Term **Frequency:** Infrequent **Reversibility:** Irreversible	Low	Minor adverse	Chance Finds Procedure	Chance Finds Procedure When artefacts are identified, they have to be reported and the work should stop	Negligible
Destruction of human burials	Grave owners	Construction	**Impact Magnitude**:	Medium	Major Adverse	Relocation of burials, if found,	Human remains to be exhumed	Minor adverse

Impact	Receptor	Phase	Impact Magnitude	Receptor Sensitivity	Pre-Mitigation Impact Significance	Design, Enhancement or Mitigation Measures	Management Plan	Residual Significance
and exposure human remains			Medium **Nature:** Adverse **Type:** Direct **Extent/Scale**: Local **Duration:** Short Term **Frequency:** Infrequent **Reversibility:** Reversible			within the Proposed Project Area will be done in consultation with Affected Community, and all the ritual requirements for the relocation will be followed; and Consultation with the area elders on requirements needed in case	according to the Grave (Removal) Act of 1968 abiding with grave owners requirements	

Impact	Receptor	Phase	Impact Magnitude	Receptor Sensitivity	Pre-Mitigation Impact Significance	Design, Enhancement or Mitigation Measures	Management Plan	Residual Significance
						of relocation of human remains		

7 STAKEHOLDER CONSULTATIONS AND PUBLIC INVOLVEMENT DURING CHIA

Identification of the relevant stakeholders as well as conducting public consultation was main aspect of CHIA study. Public consultation was one of the ways of obtaining relevant information related to the study. Public consultation helped in identifying the issues and concerns related to the project. The consultations were done mainly to traditional practitioners, village chairmen, cultural officers of the respective regions, districts and villages. Their concerns are presented in the table below:

Table 7.1: Summary of Stakeholders' Concerns and Response on Cultural Heritage Assets

S/N	REGION/DISTRICT/VILLAGE	EXPLANATION ON THE ISSUE/CONCERN	RESPONSE	REFERENCE DOCUMENT
1.	Mwakulali Sacred Site, Igeka village, Nyang'hwale District, Geita Region.	It cannot be relocated because it's a taboo in their culture to shift the sacred area to another place. If they do that the ancestors will be distraught and can cause bad omens to their community. Also, they do not know the procedures to be followed to remove the tomb because it has never happened before.	The site has spiritual connection to the surrounding communities as the proposed project cannot shift the sacred area. Thus, it is important to diverge the transmission line as the sacred place is crucial to the communities.	Minutes of the meeting with traditional practitioners of Mwakulali sacred site and archaeologists.

S/N	REGION/DISTRICT/VILLAGE	EXPLANATION ON THE ISSUE/CONCERN	RESPONSE	REFERENCE DOCUMENT
2.	Kabagole Sacred Site, Kabogole Village, Bukombe District, Geita Region	The site can be relocated because it has shifted from another place. If we want to relocate, compensation should be considered, in order to buy another place for establishment of the site and their settlement pattern	The owners of the site have agreed to be relocated. Necessary procedures should be undertaken by the developer.	Minutes of meeting with owner of the site and archaeologists
3.	Shinyanga, Geita and Kagera	Existence of graves along the transmission line have been identified to some of the pieces of the land. People of Kagera, Geita and Shinyanga have a tendency of burying their loved ones in their farms and the proposed line has crossed their farms.	It is necessary to abide with grave owners on the relocation of their graves.	Minutes of the meeting with owner of the graves and archaeologists

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Annex 9 – List of NGOs in the Project Areas

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List of NGOs in the project areas

1. List of NGOS operating in Chato District

S/N	NGOS	LOCATION	ACTIVITIES	SPONSOR	CONTACT
1	The Eleanor Foundation Tanzania	P.O BOX 99, Biharamulo	Provision of education of water and sanitation and assisting vulnerable groups	Eleanor Funder, Overseas Aid Foundation, The Family Of Good Samaritans Of Ganzer Island UK	Manager GODFREY GAHANGA (0762603633)
2	Chato Legal Aid Organisation (**CHALAO**)	P.O BOX 72, Chato, Geita	Provision of legal and legal aids to the people who can not afford to pay the costs to the advocates	Legal Service Facility (LSF)	Deogratias Alcard Mulima-Mratibu (0759076095)
3	Tumaini Orphan Support Organization (TOSO)	P.O. BOX 292, Muleba, Kagera	Provision of education on reproductive health and economic development issues	TUMAINI UK, TUMAINI USA,	Project Manager BENSON MODEST (0744199198)
4	Tanzania Development and Aids Prevention Association (TADEPA)	P.O BOX 1603 ZAMZAM ST BUKOBA, TANZANIA TEL; +255 784 666 727	Provision of health education and reproductive and economic development issues	US Embassy PEPFAR	DR. JAMES BARONGO BASHWEKA (+255 784 666 727)
5	**SHDEPHA+** (Service Health And Development For People Living Postively With Hiv/Aids)	P.O. BOX 564, KAHAMA, SHINYANGA	Provision of education on reproductive health and economic development issues	USAID	JOYCE KAYANDA-Project Manager (0759452736)

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2. List of NGOS in Geita DC

S/N	Name of NGOS	Type	Location	Headquarters	Operations	Sponsor	Contacts
1	RAFIKI SDO	LOCAL	BOMANI STREET P.O. BOX 194 GEITA	Kahama SHINYANGA	ENSURING GIRLS GET QUALITY EDUCATION THAT CONSIDERS GENDER EQUALITY AND ENSURE THEY STAY IN SCHOOL	GLOBAL AFFAIRS CANADA	PROGRAM MANAGER 0659507338
2	VSO (VOLUNTARY SERVICE OVERSEAS)	INTERNATIONAL	EPZ AREA PLOT NO 1 BOMBAMBILI STREET	DAR ES SALAAM	PROMOTING THE ACHIEVEMENT OF JUSTICE IN THE LAUNCHES SECTOR	EUROPEAN UNION	PROJECT MANAGER 0784527818
3	SSA	LOCAL	BUGAYAMBELELE	KATORO-GEITA	PROVIDING EDUCATION TO PARENTS/GUARDIANS SO THAT THEY CAN HELP THEIR CHILDREN ON VALUES	HAWANA	MANAGER 07535718807
4	SHDEPHA+	LOCAL	MAGOGO IGEMBESABO CENTER	KAHAMA SHINYANGA	WORKING TOWARDS MILLENNIUM DEVELOPMENT TO IMPROVE THE LIVES OF PEOPLE IN DANGEROUS ENVIRONMENTS AS WELL AS PEOPLE AT MOST RISK OF ACQUIRING MAJOR VIRUSES IN SOCIETY AS A WHOLE	USAID MISSION IN TANZANIA	PROJECT MANAGER 06380222
5	SOLIDARIDAD EAST AND CENTRAL AFRICA	INTERNATIONAL	MEREMETA ROAD GEITA	UHOLANZI, AFRICA MASHARIKI (NAIROBI, KENYA) ARUSHA, GEITA	PARTNERING WITH THE GOVERNMENT AND OTHER DEVELOPMENT STAKEHOLDERS TO IDENTIFY AND IMPROVE THE VALUE CHAIN FOR	WIZARA YA MAMBO YA NJE YA UHOLANZI	PROJECT MANAGER 00754941989

2. List of NGOS in Geita DC

S/N	Name of NGOS	Type	Location	Headquarters	Operations	Sponsor	Contacts
					SMALL GOLD MINERS TO RAISE ECONOMIC PRODUCTION OF THE BUSINESS		
6	FADEV	INTERNATIONAL	EPZ Area PLOT NO 1 BLOCK-K BOMBAMBILI STREET SLP 384 GEITA	DAR ES SALAAM	SUPPORTING WOMEN'S GROUPS ACTIVITIES IN SMALL MINING	SWISSAID	PROJECT OFFICER 0752055888
7	RAPO	LOCAL	OLD GEITA DISTRICT COUNCIL OFFICE	GEITA	poverty reduction	TREE-NATIONAL PLATFORM	MANAGER 06774458727
8	NELICO	LOCAL	BOMANI STREET NELICO RD. HOUSE NO 153 BLOCK K P.O. BOX 160	GEITA	ACTING FOR THE RIGHTS OF CHILDREN PRIORITY WITH DISABILITIES, AGAINST SEXUAL VIOLENCE, IMPROVING PRIMARY SCHOOL EDUCATION, STRENGTHENING THE ECONOMY FOR DISABLED GROUPS, FIGHTING CHILD MARRIAGE AND PREGNANCY, FIGHTING HIV/AIDS DISEASES	PLAN INTERNATIONALS WISSAID, PACT TANZANIA,PASTAL OZZI CHILSDREN FOUNDATION	MANAGER 0767940550
9	PLAN INERNATIONAL	INTERNATIONAL	MTAA WA KAGERA PLOT NO 89 SLP 448	UNITED KINGDOM	PARTNERING WITH THE GOVERNMENT TO ENABLE THE SOCIETY TO GET SOCIAL SERVICES THAT CONSIDER HUMANITY	THE AGENCY FRANCAISE, DE DEVELOPMENT (AFP) GROUP FUND, GLOBAL AFFAIRS CANADA	MANAGER 0752055202

2. List of NGOS in Geita DC

S/N	Name of NGOS	Type	Location	Headquarters	Operations	Sponsor	Contacts
					AND EQUALITY, FOCUSING MORE ON THE DEVELOPMENT OF CHILDREN, ESPECIALLY FEMALE CHILDREN	(GAC), THE MOODANCE FOUNDATION	
10	GATA	LOCAL	SLP 19853 DAR ES SALAAM	DAR ES SALAAM	PROVIDING EDUCATION ON MAIN ISSUES OF EQUAL RIGHTS FOR WOMEN AND MEN	SOLIDADIDAD	PROGRAM OFFICER 0676740811
11	AMREF HEALTH TANZANIA	LOCAL	BOMANI	ALI HASSAN MWINYI ROAD PLOT NO 1019 SLP 2773 DAR ES SALAAM	COOPERATING WITH THE MINISTRY OF HEALTH IN JOINING GOVERNMENT EFFORTS IN IMPLEMENTING PROJECTS TO IMPROVE HEALTH SERVICES AND SOCIAL DEVELOPMENT THROUGH HEALTH POLICIES AND GUIDELINES	AMREF UK, USAID TANZANIA	LAKE ZONE CORDINATOR 0755324866
12	ICAP	INTERNATIONAL	OTONDE	SLP 80214 DAR ES SALAAM	PROVIDING HEALTH CARE REGARDING STD DISEASES AND SEXUAL DISEASES	SIDC	0755978478 PROJECT MANAGER
13	KIJANI SONSULT	INTERNATIONAL	BUHALAHALA CENTRE	SLP 2611 DODOMA	ROMOTING AND PROMOTING AGRICULTURAL ACTIVITIES, BUSINESS, ENVIRONMENTAL CONSERVATION, NATURAL RESOURCES AND TOURISM	DIBDENMARK NA CISU DENMARK	MANAGER 0686928828

2. List of NGOS in Geita DC

S/N	Name of NGOS	Type	Location	Headquarters	Operations	Sponsor	Contacts
14	HDT (HEALTH PROMOTION TANZANIA)	LOCAL	JIMBONI GETI NO 3 OFISI ZA MAENDELEO	S.L.P 65147 DAR ES SALAAM	TO EMPOWER AND EDUCATIONALLY SUPPORT CHILDREN LIVING IN DANGEROUS ENVIRONMENTS WITH POOR RIGHTS OF LIFE	JAPAIGO	MANAGER 0784217127
16	ADEC	LOCAL		DAR ES SALAAM	ROMOTION OF NATURAL AGRICULTURE		65821770
N	GRUCSO	LOCAL	NYANTOROTO RO STREET	GEITA MJI S.L.P 700	EMPOWER AND EDUCATIONALLY SUPPORT CHILDREN LIVING IN DANGEROUS ENVIRONMENTS WITH POOR RIGHTS OF LIFE	NON	MANAGER 0755 902776

3. Ushirombo District NGOs

S/N	Name of NGO	Location	Office in the District Council	Operations and Activities	Contact
	TANZANIA RED CROSS SOCIETY	Dar es Salaam	Yes	Blood donation Reduction of under five child mortality rates Protect stigmatization and violence on HIV/AIDs	Unknown
	TANZANIA NETWORKING WITH PEOPLE LIVING WITH HIV (NACOPHA)	Ushirombo	Yes	Provide services to HIV/AIDs and fight against stigmatization and violence	Unknown
	BUKOMBE LEGAL ASSISTANT ORGANISATION (BULAO)	Ushirombo	Yes	Provision on legal aids to the community and fight against stigmatization and violence on HIV/AIDS victims.	Unknown
	MWANGAZA	Ushirombo	Yes	Create awareness to the community about women's equal rights, and HIV awareness and	Unknown

3. Ushirombo District NGOs

S/N	Name of NGO	Location	Office in the District Council	Operations and Activities	Contact
				against stigmatization on HIV/AIDS positive people	
	TANZANIA HUMANE CHARITY	Ushirombo	Yes	Stretherning of animal rights and its treatment	Unknown
	FARAJA FOUNDATION	Uyovu	Yes	Environmental Conservation	Unknown
	MAGUKO	Ushirombo	Yes	Environmental Conservation, Horticulture and blood donation	Unknown

4. List of NGO's Mbogwe District

S/N	NAME OF THE NGOS	OPERATIONS AND ACTIVITIES	AREA OF INTERVENTION	CONTACT PERSON (FOCAL PERSON)
1	Tanzania Health Promotion Support	Strengthening of Health and Community systems - HIV/AIDS, tuberculosis, Prevention of sexual violence, mother and child health, youth health, Improving laboratory systems and health information and Covid 19	Operates in all the wards in the district	P.o.box 3260 Dar es salaam Tel +255-22-2602790/1/2 Fax *255 222602796, e-mail rmbatia@thps.or.tz info@@thps.or.tz/ Dr. Amos Scott Meneja Mradi-Shinyanga
2	Women Fund Tanzania	Protection of Women and Children Legal Aid Services	Mbogwe DC Funder –NGOs	Project Coordinator Glory Mbia S.L.P 79235 DAR ES SALAAM 0752- 056969
3	Young Women Leadership	Protection of Women and Children Legal Aid Services	Operates in the wards of: Iselamagazi na Nyamalogo	Kambarage stadium No.12 Project Manager Veronica Masawe 0757 211 447

4. List of NGO's Mbogwe District

S/N	NAME OF THE NGOS	OPERATIONS AND ACTIVITIES	AREA OF INTERVENTION	CONTACT PERSON (FOCAL PERSON)
4	SHDEFA+Network for People Living with H.IV and Aids.	Education to protect yourself from new HIV and AIDS infections	Operates in all wards -	SHDEPHA+ NETWORK FOR PLHA KAHAMA BRANCH, P.O.BOX 564, KAHAMA MOB: 0713-509760 Email: shdephakahama@yahoo.com

5. List of Non-Governmental Organizations (NGOS) in Shinyanga Municipality

S/N	Name of the NGO	Location	Name of the Leader, Contacts and Nationality	Operation of the NGO's
1	Modern Education and Culture Group	Kambarage Stadium P.O Box 1282	Mtinga Masatu 0764 602 919	Environmental Conservation
2	Youth and Women Emancipation	Ndembezi, Mabambasi Street Plot No. 89 Block V. S.L.P 578	Vicent Mgema, Mtanzania 0767 783 823	Youth empowerment
3	Women Elderly Advocacy and Development Organization (Weado)	Mwasele Near Karena Hotel, (Mashishanga Road)	Eliasenya Nnko 0754 572 677	- Fighting against sexual violence - Helping special groups of elderly
4	Children on Disability Development Programme (Chidep)	S.L.P 2006 Shinyanga/ Chidep2007tz@yahoo.Com	Mathias Chidama 0623 950 580	- Support special groups, - Fighting against sexual violence - Human rights
5	Lifeline Counseling Centre and Gender Empowerment	Ndala	Meshack Kulwa 0755 787 127	- Empowerment of women, - Fighting against sexual violence
6	Benevolent Institute Of Development Initiatives in Tanzania	S.L.P 1255 Shinyanga / bidiitz_shinyanga@yahoo.co.uk	Daniel Nsanzugwanko 0754 164 648	- Environmnetal Conservation
7	Young Women Leadership	Kambarage Stadium 62	Beatrice John 0622 242 699	- Economic empowerment, - Health

5. List of Non-Governmental Organizations (NGOS) in Shinyanga Municipality

S/N	Name of the NGO	Location	Name of the Leader, Contacts and Nationality	Operation of the NGO's
8	Thubutu Africa Initiative	NSSF MAFAO House- Shinyanga, 2nd Floor, Western Wing, Mjini Kati Street, Block 36&37, Block A, Along Mwanza Highway	JONATHAN KIFUNDA 0767 254 201	- Health, - Education - Community empowerment
9	Green Community Initiatives	Ndala, Mwabundu Street,	ISABUDA 0755 736 908	- Economic empowerment through the voice of women and children
10	PROMISING WORLD FOR WOMEN AND CHILDREN ORGANIZATION	LUBAGA	UMMYKULTHUM MLOLWA 0786 107 043	- Economic empowerment of the people
11	COMPANION OF WOMEN AND CHILDREN EMPOWERMENT	NDALA	JOSEPH NDATALA 0754 245 206	- Economic empowerment
12	WOMEN AND YOUTH DEVELOPMENT SOLUTION (WAYDS)	Majengo mapya street near Mabanda ya kuku ya zamani, Ngokolo ward,	CHARLES MAGANGA 0754 572 677	- Health
13	RIGHT TO LIFE	LUBAGA	ALEX ENOCK 0714 071 885	- KUSAIDIA WWKMH
14	COMMUNITY EDIFICATION ORGANIZATION	NDALA, MWABUNDU	NYAMBULI KAMOGA 0762 528 087	- Human Rights

Shinyanga District Council

6. List of NGOS Operating in the District for the period of 2024

S/N	NAME OF THE NGOS	OPERATIONS AND ACTIVITIES	AREA OF INTERVENTION	CONTACT PERSON (FOCAL PERSON)
1	Tanzania Health Promotion Support	Strengthening of Health and Community systems - HIV/AIDS, tuberculosis, Prevention of sexual violence, mother and child health, youth health, Improving laboratory	Operates in all the wards in the district	P.o.box 3260 Dar es salaam Tel +255-22-2602790/1/2 Fax *255 222602796, e-mail rmbatia@thps.or.tz

Shinyanga District Council

6. List of NGOS Operating in the District for the period of 2024

S/N	NAME OF THE NGOS	OPERATIONS AND ACTIVITIES	AREA OF INTERVENTION	CONTACT PERSON (FOCAL PERSON)
		systems and health information and Covid 19		info@@thps.or.tz/ Dr. Amos Scott Meneja Mradi-Shinyanga
2	Agape Aids Control Programme	Protection of Women and Children Legal Aid Services	Pandagichiza	Director John Myora S.L.P 2189 SHINYANGA. O757-516965
3.	Tanzania Inland Development Organization	Agriculture	Operates in Iselamgazi na Lyabusalu Solwa Wards	Director Ezekiel 0626445230 S.L.P SHINYANGA.
4	PATHFINDER	Health	Operates in all the wards in the district	Director Godbless 0784414615,0784414615 na +255762761444 S.L.P SHINYANGA.
5	PACESH	Protection of Women and Children Legal Aid Services	26 wards of the district	Director Perepetua Magoke S.L.P 2202 SHINYANGA. O713-295948
6	NEW ERA LEGAL AND HUMAN RIGHT FOUNDATION(NELEHULIFO)	Protection of Women and Children Legal Aid Services	Operates in 13 wards of: - Iselamagazi. - Lyabusalu - Solwa	Director Deogratius Kasindye S.L.P 113 Nindo - SHINYANGA. 0759-780208

Shinyanga District Council

6. List of NGOS Operating in the District for the period of 2024

S/N	NAME OF THE NGOS	OPERATIONS AND ACTIVITIES	AREA OF INTERVENTION	CONTACT PERSON (FOCAL PERSON)
			- Ilola - Lyabukande - Didia - Nyida - Usanda - Tinde - Mwalukwa - Pandagichiza - Mwantini - Nyamalogo	
7	Women Fund Tanzania	Protection of Women and Children Legal Aid Services	Shinyanga DC Funder – NGOs	Project Coordinator Glory Mbia. S.L.P 79235 DAR ES SALAAM 0752- 056969
8	Young Women Leadership	Protection of Women and Children Legal Aid Services	Operates in the wards of: Iselamagazi na Nyamalogo	Kambarage stadium No.12 Project Manager Veronica Masawe 0757 211 447
9	ORGANIZATION OF PEOPLE EMPOWERMENT (OPE)	promotion of millet production in schools with the aim of providing lunch at school in Pandagichiza Ward	Pandagichiza na Iselamagazi	Catholic Parish sign board, Bloc No.335 Mwasele; P.O .BOX 123, SHINYANGA Email: ope.organization@yahoo.com Mob: +255 752 112 080/767 340 817
10	World Vision	Gow -ENRICH Projecy	Operates in wards of: - Itwangi - Usanda - Samuye - Mwalukwa - Pandagichiza	P.O box 181, Shinyanga. Project Manager Shukrani Dickson

Shinyanga District Council

6. List of NGOS Operating in the District for the period of 2024

S/N	NAME OF THE NGOS	OPERATIONS AND ACTIVITIES	AREA OF INTERVENTION	CONTACT PERSON (FOCAL PERSON)
			- Iselamagazi	
11	SHDEFA+Network for People Living with H.IV and Aids.	Education to protect yourself from new HIV and AIDS infections	Operates in the wards of: - Samuye - Tined - Mwakitolyo - Lyabukande - Iselamagazi - Samuye	SHDEPHA+ NETWORK FOR PLHA KAHAMA BRANCH, P.O.BOX 564, KAHAMA MOB: 0713-509760 Email: shdephakahama@yahoo.com
12	SUSTAINABLE BEEKEEPING AND HUMAN DEVELOPMENT	Environmental Care. Beekeeping and tree planting	Operates in ward Nyamalogo in the village of Shatimba. Ng'wang'osha	Mpela Street P.O. Box 376, Phone: +255788401268 Whats App: +255762390225 Email: subehudetz@gmail.com Mayaya K. S. Mack Executive Director
13	Thubutu Africa Initiatives	Protection of Women and Children Legal Aid Services	Operates in 16 wards of: - Salawe - Samuye - Solwa - Mwenge - Mwantini - Lyabukande - Iselamagazi - Mwalukwa - Bukene - Tinde - Itwangi - Puni - Lyamidati	Director Jonathan Kifunda S.L.P 1195 SHINYANGA. 0767-254201

Shinyanga District Council

6. List of NGOS Operating in the District for the period of 2024

S/N	NAME OF THE NGOS	OPERATIONS AND ACTIVITIES	AREA OF INTERVENTION	CONTACT PERSON (FOCAL PERSON)
			- Masengwa - Mwamala - Lyabukande	
14	SEIDA	Food security	Iselamagazi Lyabusalu	

7. List of Non-Governmental Organizations (NGOS) Missenyi District

N/S	Name of the NGO	Location		Contacts and Nationality	Operation of the NGO's
		Ward	Village		
1	Missenyi AIDS and Poverty Eradication Crusade (MAPEC)	Kyaka	Bulfani	George Buberwa 0784502771	Project on Health reproduction and provition education on HIV/AIDS
2	Missenyi Gender Enviroment and Health Organisation	Kyaka	Bulfani	Mansour Talemwa 0765172101 0622792617	Provision of education on enviroment and health issues
3.	Saidia Yatima na Wahitaji Missenyi	Mushasha	Mshasha	Dickson Njunwa 0784344517 0757581852	Help orphanage
4	Kakinga Upendo Organisation	Kassambya	Nyabihanga	Philemon Nzigula 0754643068 0629090599	Helping vulnarabe chidren
5	Shirika la Matumaini na Maendeleo Kanyigo	Kanyigo	Kikukwe	Frederik Majwahuzi 0759183154 0695665558	Provision of good governance education, empwering development groups and environmental conservation
6.	Umoja wa Wasaidizi wa Sheria Missenyi	Kassambya	Bunazi	Merchiory Serapion 0785694174 0733360028	Helping youths and vulnarabe chidren

7. List of Non-Governmental Organizations (NGOS) Missenyi District

N/S	Name of the NGO	Location		Contacts and Nationality	Operation of the NGO's
		Ward	Village		
7	SHINA Tanzania	Bugorora	Kabingo	Johannes Chamshal 0658232766 0629202766	Helping vulnarabe chidren
8	Show me the Way Tanzania	Bwanjai		Immanuel Ishasi 0852104919 0784915575	Helping vulnarabe chidren provide education of health and nutrition
9	Tumaini Orphan Support Organisation (T0SO)	Muleba			Helping vulnarabe chidren provide education of health and nutrition and HIV/AIDS
10	HUMULIZA	Nshamba Muleba			Helping vulnarabe chidren provide education of health and nutrition and HIV/AIDS
11	Management and Development for Health (MDH)	DSM			HIV/AIDS interventions
12	Compassion International Tanzania (CITZ)	Arusha			Helping vulnarabe chidren provide education of health and nutrition

8. List of NGOS in Msalala District

S/N	Name of NGOS	Name of Intervention	Sources of Funds	Location	Contacts
1	Health for a Prosperous Nation (H- PON)	ADDO Project- reaching young women (15-24 yrs) through essential drug stores, providing them with family planning services and HIV testing	NATIONAL INSTITUTE OF HEALTH (USA) Through UNIVERSITY OF CALIFONIA BERKELE &SAN FRANSISCO	NSSF BUILDING (KAHAMA MC)	Regional Manger, 074280515
2.	Agriculture Development and Environmental Conservation (ADEC)	1. Pilot Project implemented for households surrounding the Bulyanhulu Mine (15 villages) 2. Advice for farmers	BARICK- BULYANHULU	Ilogi Msalala	Executive Director 0658217070
3.	TAHA	Agricuture	N/A	Zonal Office Mwanza	JUNIOR AGRONOMIST 0717979398

8. List of NGOS in Msalala District

S/N	Name of NGOS	Name of Intervention	Sources of Funds	Location	Contacts
4	Tanzania Health Promotion Support (THPS)	Therapy and Education	Centers for Disease Control and		

Annex 10 – Consultation Forms

General Considerations

The points presented here are flexible, as the conversations will not necessarily follow the order defined in these questionnaires. It may also happen that new issues may surface in the conversation, that were not previously taken into consideration or that it is not possible to access all the interviewees intended.

This is a first proposal that will be adjusted with TANESCO reports and a second revision of JGP/BENE team.

All the interviews will begin with a brief presentation of the project, as this information is new to the stakeholders, and they need it to frame their answers. This will include information on the wards and villages that will be intercepted by the project.

Once approved, these questionnaires will be adapted to a digital format (Collectum) that will be used to register the interviews.

The interview to ward and village officers and leaders can be divided among different officers and leaders of the community, given its extension.

The social team members will ask for permission to register the interviews. However, if the social team perceives that this may constitute a barrier in the communication, this requirement will be dropped.

This document presents the following questionnaires:

1. Interview with wards officers, village officers and community leaders.
2. Inverview with health extension officers.
3. Inverview with education extension officers.
4. Focus group – community members.
5. Focus group – women separately.

1. Interviews with Wards and Village Executive Officers and Community Leaders

General:

- How many villages the ward has? How many hamlets the village has?
- How many villages are crossed by the alignment? What are their names?
- What organizations do you have? Who are the leaders?

Land:

- How is the land tenure system in your community?
- Do the villages have collective or community lands?
- Are there people who occupy the land informally? Where?
- Are there any conflicts regarding land ownership?
- What challenges encounter women in terms of land ownership and other means of production in your area?
- How is the value of the land defined? Is there a land market? Does the government has standards?
- Is there any urban expansion foreseen? Where?

Demography:

- How many families compose the ward/village? How many people?
- What type of composition do the households have? How many nuclear families live in a house?
- Migration: do people migrate out of these localities? What for?
- Do people migrate into these wards/villages? What for?

Economy:

- What are the main economic activities in the wards and villages?
- Are there any concerns related to them? Advancements?
- What are the economic projects/ areas of growth that you have?
- Are there informal economic activities?
- What are the poverty levels of the ward/village?
- What is the economic situation of women?

Transportation and communication

- What are the main roads.
- Are there any problems regarding them?
- If we want to reach the population with information, which ones are the best ways/channels of doing so?

Social aspects:

- Have you identified vulnerable groups? Who are they?

Housing:

- Does the population have access to electricity in their houses?
- What problems do you face regarding electricity/energy?
- Does the population have access to running/soft water? And sanitation?
- What are the sources of water for human consumption?
- Sources of water for agriculture?
- What are the problems faced regarding water?
- Waste disposal: how it is done, disposal sites, challenges faced.
- Do you have any projects on these issues?

Gender mainstreaming at the ward/village level:

- Are their structures/regulations, activity levels, participation of women and men.
- Do you have any plan or program addressed to women?
- Is there NGOs/CBOs that deal with Gender (SEA/SH/GBV)?
- What are the common practices of GBV in the district?

Violence Against Children (VAC):

- Can you comment on the current of situation of child labour in your area? In your opinion, is child labour increasing or decreasing?
- Is their intervention and regulation practiced for the VAC: 1. Yes 2 No
- If the answer is yes, how does it operate.
- Is there NGOs/CBOs that deal with VAC? Who they are? What programs they implement?

Culture:

- What are the main festivities?
- Does the community have any sacred places?

Natural resources:

- What are the main natural resources of the villages intercepted by the project?
- Do people hunt, recollect, fish? What for?
- What are the problems faced?
- Do you have mining in the area? What changes has it brought?
- Timber: Is wood extracted for sale, buildings, furniture, others?
- Do you have any problems regarding your natural resources?

Agriculture:

- What are the main crops?
- Main agricultural practices (preparation of plots, irrigation, vegetation clearing, crop production).
- Main challenges faced for agricultural activities.

Perceptions:

- What is your opinion of the project?
- How do you think the population will receive it?
- What is your opinion of the project?
- How do you think the population will receive it?
- Recommendations?

2. Interview with Health Extension Officers (Ward/Village)

Services:

- Health facilities existent in the ward and villages. Services provided.
- Are they easily accessible for the population? How long do they need to travel to access them?
- Does the population have access to medicines? Challenges faced?
- Would the health services be in capacity to attend the projects' workers?
- Traditional health: are there traditional healers? In what cases people go to the health services and when do the visit the traditional healers?

Morbidity:

- What are the main problems and rates?
- Causes.
- Incidence of endemic diseases. What are their causes? Actions taken?
- Incidence of water-borne diseases. Causes? Actions taken?
- Incidence of sexually transmitted diseases. Causes? Actions taken?
- What are the main problems faced by women? And by children?

Mortality:

- What are the main causes of mortality and rates?
- What are the main causes of death among women?
- What is the situation of maternal mortality? What are the causes? Has this changed in the last years?
- Situation of infant/child mortality: what is the situation? Causes? Have there been improvements?

Vulnerability:

- Are there groups who are more vulnerable to health problems in the area of influence of the project? Who are they, what are their characteristics? Why?

Health promotion and prevention:

- Health promotion and prevention programs implemented.
- *Summing up*: what are the main health problems faced in the wards and villages intercepted? What are the root causes?
- What are the main challenges faced?
-

Perceptions:

- What is your opinion of the project?
- How do you think the population will receive it?
- Recommendations?

3. Interview with Education Extension Officers (Ward/Village)

Services:

- General characteristics of the education system (levels).
- Education facilities existent in the ward and villages.
- Are they accessible for the children? What problems do they face?
- Associated support programs (for example, breakfasts, books, accommodation, others).
- Immigration associated to education: Do children and young need to migrate to other areas to access higher education?

Indicators:

- Access to education: is it universal? Do some groups have problems to access education? Which groups?
- Are women accessing education in equal terms? Do girls access it at the same age than boys?
- Do women have the same opportunities to study? Do they face particular problems?
- Is school dropout a problem? What are the rates? Among which groups? Causes?
- Do you face a teachers' shortage problem in the area? For which level? How are you dealing with it?
- Levels of literacy/illiteracy in the area. What are the challenges? Programs implemented.
- Second language proficiency: achievements, challenges faced.

Vulnerability:

- Are there any groups that are more vulnerable than others? he school).
- What are the causes?
- Is any support given?
- *Summing up*:what are the main education problems faced in the wards and villages intercepted? What are the root causes?
- What are the main challenges faced?

Perceptions:

- What is your opinion of the project?
- How do you think the population will receive it?
- Recommendations?

4. Focus Group – Community Members

In the focus groups will participate approximately 10 – 12 personas. The different villages will be represented. They will be divided in three or four groups (depending on the number of participants and villages).

First task: How is your village?

- Draw their main characteristics.
- Where are the main natural resources (water, land, others).
- What are the areas for agriculture. Are there any sacred places?
- What are the economic activities in your village? (what are your jobs, how do you get income, food, fuel).
- What are our main strengths and concerns/problems?

After the groups have finished their drawings, each one explains to the others what they have drawn (characteristics). And the main strengths and concerns.

Then the group answer the following questions:

- Do you have any concerns regarding your lands? How is the land tenure in your village? Are there any conflicts?
- Are there any groups of the population who are more vulnerable, who need special attention because they are in a difficult situation?

Regarding the project:

- Have you understood what the project is about? Do you have any questions about the project, is anything unclear?
- Do you have any concerns about it?
- Do you think it will be, or not, beneficial? Why?

Closing: the focus group conductor explains that for us, working in the ESIA, the dialogue with the community is very important. In the future different groups of specialists will visit the area, we ask for your cooperation. If you have any questions or grievances, please contact (.....). Once the ESIA is concluded we will present the results through a public consultation (virtual).

5. Focus Group – Women

Do you practice traditional division of work according to age and sex in your community?
(YES = 1, NO = 2)
If the answer is yes: How?

.....
.....
.....
.....

Gender daily division of household at each step

Male group			Female Group	
Time of Day	**Activity**		**Time of Day**	**Activity**
5.00am			5:00 am	
6:00 am			6:00 am	
7:00 am			7:00 am	
8:00 am			8:00 am	
9:00 am			9:00 am	
10:00 am			10:00 am	
11:00 am			11:00 am	
12:00 pm			12:00 pm	
1:00 pm			1:00 pm	
2:00 pm			2:00 pm	
3:00 pm			3:00 pm	
4:00 pm			4:00 pm	
5:00 pm			5:00 pm	
6:00 pm			6:00 pm	
7:00 pm			7:00 pm	
8:00 pm			8:00 pm	
9:00 pm			9.00pm	
10:00 pm			10:00 pm	
11:00 pm			11.00pm	
REPRODUCTIVE ROLES	Hours		REPRODUCTIVE ROLES	Hours
PRODUCTIVE ROLES			PRODUCTIVE ROLES	
COMMUNITY ROLES			COMMUNITY ROLES	

What do you consider are three major gender related problems faced by your community?

Problems	Reason

How could you rate the position of women in your community? (HIGH = 1, SATISFACTORY = 2; LOW = 3)

Could you mention some of the leadership posts headed by women in your community?

_____ _____ _____

_____ _____ _____

What are the role of male and female in your community?

Male Roles	Female Roles

Regarding the project:

- Have you understood what the project is about? Do you have any questions about the project, is anything unclear?
- Do you have any concerns about it?
- Do you think it will be, or not, beneficial? Why?

Closing: the focus group conductor explains that for us, working in the ESIA, the dialogue with the community is very important. In the future different groups of specialists will visit the area, we ask for your cooperation. If you have any questions or grievances, please contact (.....). Once the ESIA is concluded we will present the results through a public consultation (virtual).