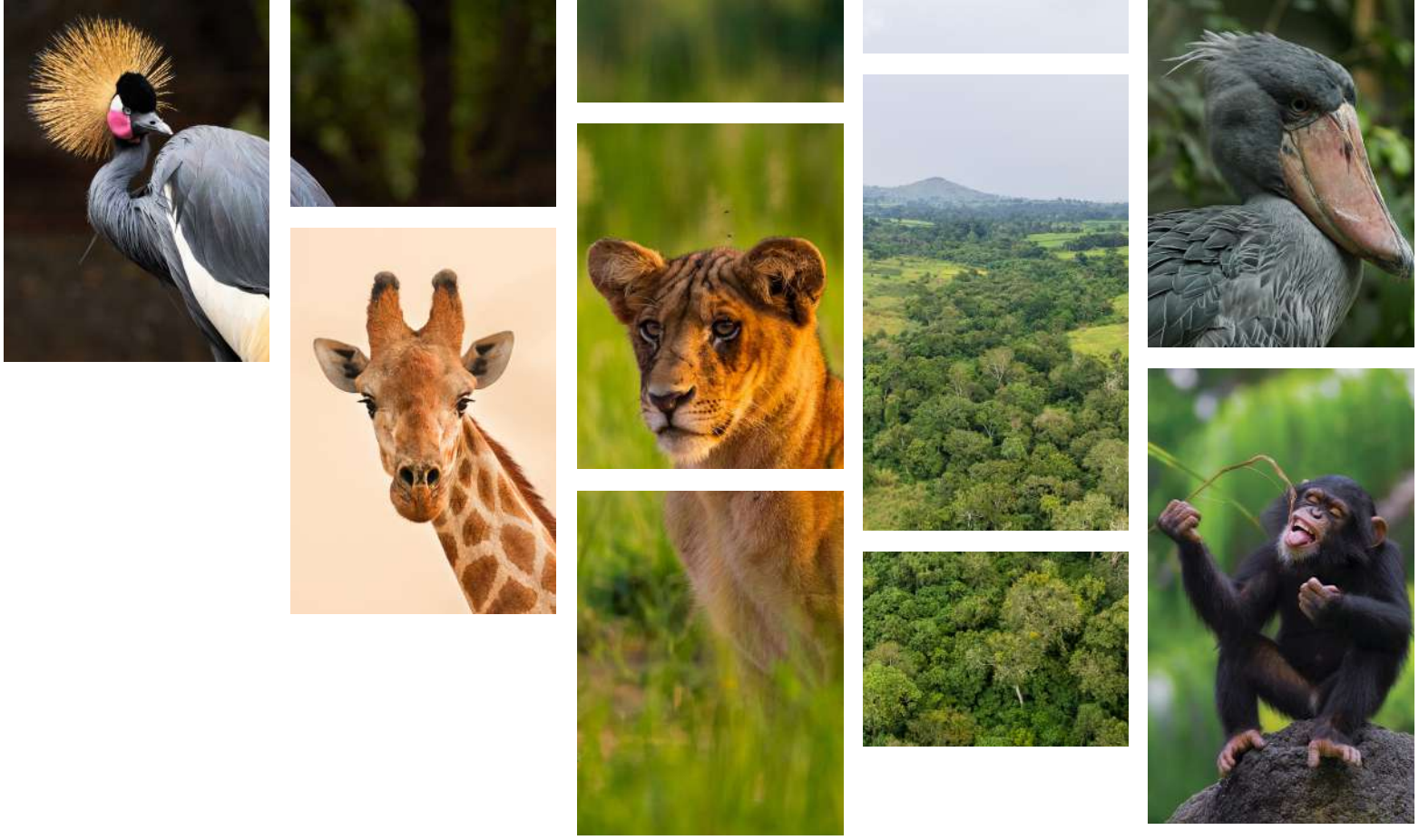
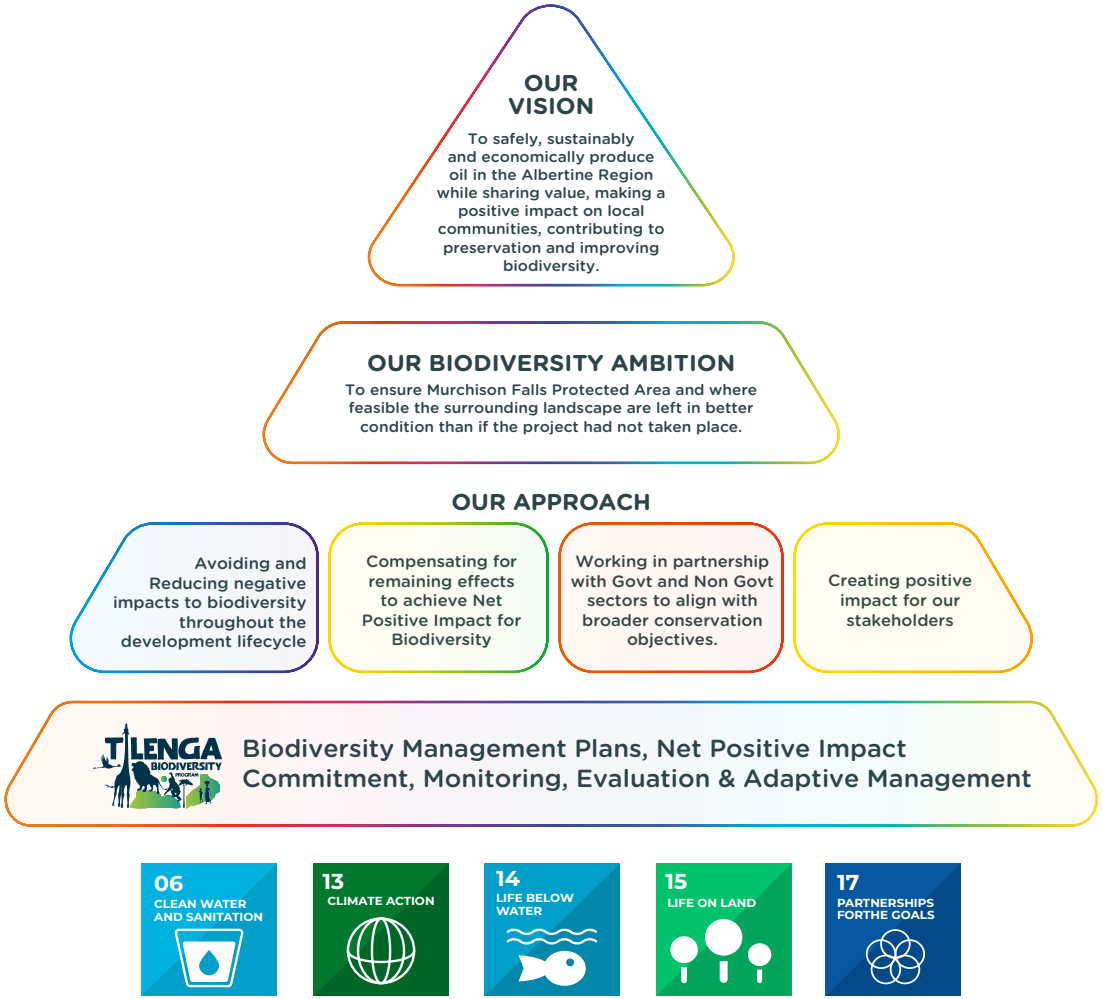


TotalEnergies

TotalEnergies EP Uganda
Biodiversity Report 2024

Our Approach to Biodiversity Management



The TotalEnergies EP Uganda (TEP Uganda) Biodiversity Program is an organizational framework that enables us to deliver our commitments on biodiversity. The program has been designed with active participation of major stakeholders and is fully in line with TotalEnergies approach to Sustainable Development, the company Biodiversity Ambition, the laws of Uganda and the International Finance Corporation Performance Standards on Environmental and Social Sustainability.

The TEP Uganda Biodiversity Program is the first of its kind for the company and sets out the measures required to achieve exemplary performance including our commitment to achieve net positive impact for biodiversity. This commitment is integral to the company's long term development strategy for its Exploration and Production activities in Uganda.

This first edition of the TEP Uganda Biodiversity Report reflects all the activities of the affilate to date and includes the following:

- Development and roll out of the TEP Uganda Biodiversity Strategy
- Updates on the Tilenga project
- Details of our landscape based program to achieve Net Positive Impact

This report also sets out the work led by the TEP Uganda Biodiversity Department on surveys and monitoring as well as details of the various partnerships and initiatives established in order to create long lasting and positive outcomes for communities and wildlife.

The TEP Uganda Biodiversity Report 2024 has not been externally verified. However, our activities are subject to third party review and oversight through various means including Environment and Social Due Diligence reviews and annual visits by the independent bodies including the Independent Biodiversity Livelihoods Advisory Committee (IBLAC) and the International Union for Conservation of Nature ARRC Task Force. Further details of these activities can be found in Section 8 of this report.

As we continue on Uganda's oil and gas journey, we remain focused on long term value creation and delivering exemplary performance on biodiversity management for all our stakeholders.

Contents

Introductions

Executive Summary 02
Our Approach to Biodiversity Management 02
Glossary of Acronyms 04
About this Report 06
A message from the **General Manager** 07
Word from **Biodiversity Director** 08
TEPU's Biodiversity Commitment 09

Background

Overview of the Tilenga Project 11
Our Biodiversity Performance in Numbers 13
Protecting Biodiversity Commitments and Actions 14

Our Biodiversity Strategy

A Landscape Approach 16
Summary of Impacts for Tilenga Project 17
Applying The Mitigation Hierarchy 18
TEP Uganda's Biodiversity Management Process 19
Compensating to Achieve Net Positive Impact 20
TEPU Biodiversity Monitoring and Evaluation Framework 21
Q&A with Prakash Krishnamachari 23

Operations and Field Support

About Operations and Field Support 25
Staff Profiles 26
Avoidance During Project Design and Construction 27
Working with Uganda Wildlife Authority 28
Wildlife Monitoring around the Tilenga Project Footprint 29
Supporting the Tilenga Construction Team 30
Pre-clearance Survey and Invasive Species Management 31
Restoration of Construction Footprint 32
TEP Uganda Restoration Process Implementation 33
Site Restoration Status As of June 2024 33

Rangelands

Delivering Net Positive Impact for Murchison Falls Protected Area 35
Staff Profiles 36
Rangelands Survey and Monitoring 37
Elephant Ranging Behavior and Stress Level Monitoring 38
Q&A with Dr. Patrick Atimnedi 39
Carnivore Census 41
Animal Stress and Ranging Behaviour 42
Ecological Research with Makerere University 45
Rangelands Conservation Actions 46

Tourism

Supporting Development of Tourism Sector 52
Explore Uganda Mobile Application 53
Q&A with Pearl D. Gakazi 54
Murchison Falls National Park Track Upgrades 55

Wetlands and Forests

Delivering a Net Positive Impact for Wetlands and Forests 57
Staff Profiles 58
Wetlands Survey and Monitoring 59
Biodiversity Baseline Surveys of Lake Albert Wetlands 60
Murchison Falls Albert Delta Ramsar: Land Use Mapping and Degradation Assessment 61
Wetlands Conservation Actions 63
Working with Ministry of Water and Environment to Conserve Wetlands 64
Conservation and Restoration of Murchison Falls Albert-Delta Wetland System 65
Forests Survey and Monitoring 66
Survey of Chimpanzee Communities Along Oil Critical Roads 67
Chimpanzee Genomics Study 68
Forests Conservation Actions 69
Working with National Forestry Authority to promote Forest Conservation 70
Joint Patrol Effectiveness Program within Budongo Central Forest Reserve 71
Corridor Restoration Program 72
Conservation Education and Awareness Program 73
Q&A with Douglas Walwanbe 74

Working with Stakeholders

Mobilizing Financial Resources For Biodiversity 76
Independent Biodiversity and Livelihoods Committee 77
Q&A with Ray Victurine 78
International Union for Conservation of Nature (IUCN) ARRC Task Force 80
Our Vision 2025 by Deputy General Manager 81
Our Partners and Stakeholders 82

Glossary of Acronyms

ACA	Additional Conservation Actions
BESAP	Biodiversity Ecosystem Services Action Plan
BMP	Biodiversity Management Plans
BWR	Bugungu Wildlife Reserve
CFR	Central Forest Reserve
CIMS	Cumulative Impacts Management Strategy
CMP	Collaborative Management Partnership
CPF	Central Processing Facility
CODIR	Committee of Directors
CRP	Corridor Restoration Program
CES	Critically Endangered Species
CSR	Corporate Social Responsibility
ESG	Environment and Social Governance
ECOTRUST	Environment Conservation Trust of Uganda
ESIA	Environment and Social Impact Assessment
ES	Endangered Species
ESMP	Environment and Social Management Plan
FR	Forest Reserve
Ha	Hectares
HSSE	Health, Safety, Security and Environment
IAS	Invasive Alien Species
IMEC	Impact Mitigation and Ecological Compensation
IBLAC	Independent Biodiversity Livelihoods Advisory Committee
IFC	International Finance Corporation
IUCN	International Union for Conservation of Nature
KWR	Karuma Wildlife Reserve
MEMD	Ministry of Energy and Mineral Development
MFNP	Murchison Falls National Park
MFPA	Murchison Falls Protected Area
MWE	Ministry of Water and Environment
MTWA	Ministry of Tourism, Wildlife and Antiquities
NFA	National Forestry Authority
NGO	Non-Governmental Organization
NNL	No Net Loss
NPI	Net Positive Impact
NT	Near Threatened
CEO	Chief Executive Officer
QH	Quality Hectares
RoW	Right of Way
SPD	Social Performance Department
TEPU	TotalEnergies EP Uganda
TTE	TotalEnergies SE
WP	Wellpads
UNRA	Uganda National Roads Authority
UWA	Uganda Wildlife Authority
VU	Vulnerable

1 INTRODUCTION

About the Report

For the first time, TotalEnergies EP Uganda is publishing an annual report detailing the activities and achievements of its Biodiversity Program. This Report has been prepared to provide information and updates about the Program and its initiatives for the period June 2022 to to June 2024.

The report is designed to provide information on our performance and focuses on the key areas of interest for our stakeholders. The completeness, relevance and accuracy of the Biodiversity Report 2024 is validated through internal controls and approval processes. Each section of the report is reviewed and approved by relevant members of our Committee of Directors (CODIR).

To enhance our focus on biodiversity, we have established a new directorate dedicated to achieving our Net Positive Impact commitment. The directorate's mandate is to implement impactful programs that adhere to the highest national and international standards in biodiversity conservation and tourism development. These programs aim to create significant lasting benefits for wildlife, local communities and future generations.

A Message From the **General Manager**

I am delighted to present our first annual Biodiversity Report. This Report covers our objectives, approaches, performance, highlighting the crucial role that effective biodiversity management plays in our activities.

Our focus on biodiversity for the Tilenga project demonstrates the company's commitment to creating lasting value and positive impact in communities where we operate. As TotalEnergies celebrates its 100th anniversary this year, I am proud to state that in Uganda, our biodiversity program embodies the pioneering spirit that has driven us since inception.

Over the past 18 months, we have upheld our commitments to stakeholders while rapidly advancing construction on the Tilenga Project and delivering optimal biodiversity performance. This has involved close collaboration with the Uganda Wildlife Authority to minimize any negative impacts of the Tilenga project in Murchison Falls National Park, as well as launching our program to achieve net positive outcomes for wildlife and local communities.

Some notable achievements include the successful roll out of the patrol effectiveness and snare removal program in Murchison Falls National Park, which so far has resulted in the removal of over 3000 snares used for poaching of wild animals.

We also launched the first phase of our forest corridor restoration program by supporting communities to replant 350 hectares of degraded woodland and riverine forest habitats.

To enhance our conservation efforts, we established new partnerships with several organizations including the Ministry of Water and Environment, the National Forestry Authority, and the Uganda Biodiversity Fund.

The objective of these partnerships is to strengthen collaborative efforts to protect and conserve the remarkable biodiversity of the Albertine Region while creating value for host communities, our stakeholders and the country.

We acknowledge and appreciate the continued support of our partners and stakeholders as we progress towards first oil and we look forward to future constructive collaboration in our shared vision for sustainable oil and gas development in Uganda.

Thank you for your interest in the Tilenga project. I hope you find this Report both informative and enjoyable to read.

Philippe Groueix

Word From the **Biodiversity Director**

Dear Reader,

Thank you for taking time to read the TEP Uganda Biodiversity Report 2024. In June 2022, we launched our ambitious Biodiversity Program with a goal of achieving Net Positive Impact (NPI) for Tilenga project. Our objective - to ensure that the Murchison Falls Protected Area and its surrounding landscape are in a better condition than if the project had never occured.

> "Net Positive Impact for Tilenga project requires the negative effects on biodiversity to be outweighed by positive ones. This can be achieved by implementing measurable conservation actions in the same area as the project is taking place for the benefit of wildlife, habitats and local communities."

Since then, we have made significant progress towards this goal. We have continued to strengthen existing partnerships and created new ones enabling us to implement meaningful initiatives that contribute to the long-term protection and enhancement of biodiversity, while maintaining exemplary standards in the implementation of the Tilenga project.

Our actions are guided by the laws of Uganda, TotalEnergies Biodiversity Ambition and international best practice guidelines, including International Finance Corporation Performance Standards on Environmental and Social Sustainability.

The TEP Uganda Biodiversity Program is the first of its kind for TotalEnergies and is a cornerstone in our commitment to sustainably develop oil and gas resources in Uganda.

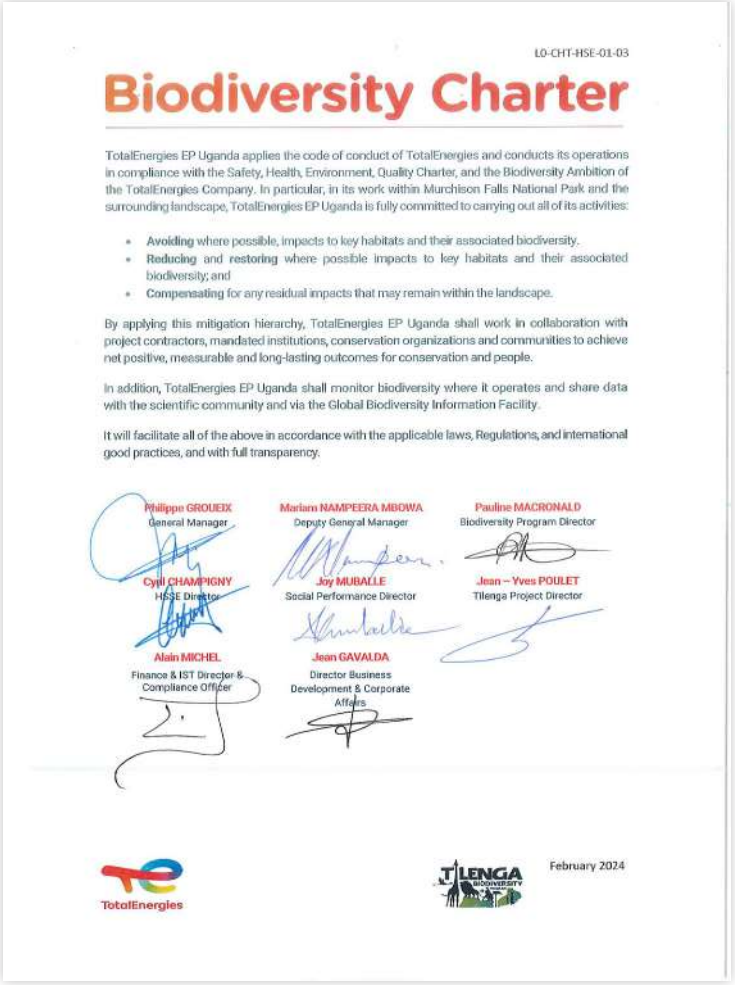
In this Report, we share our achievements to date and provide updates on conservation initiatives supported by the Company. These accomplishments would not be possible without the dedication and commitment of our project teams, our contractors, conservation partners, and the Government of Uganda. I extend my sincere gratitude to all of them.

Your feedback is important to us as we strive to improve our performance and strengthen our interventions each year.

Please share your feedback with us at **EP.TEPUinfo@totalenergies.com**

Pauline MacRonald

TEP Uganda's Biodiversity Commitment



L0-CHT-HSE-01-03

Biodiversity Charter

TotalEnergies EP Uganda applies the code of conduct of TotalEnergies and conducts its operations in compliance with the Safety, Health, Environment, Quality Charter, and the Biodiversity Ambition of the TotalEnergies Company. In particular, in its work within Murchison Falls National Park and the surrounding landscape, TotalEnergies EP Uganda is fully committed to carrying out all of its activities:

- **Avoiding** where possible, impacts to key habitats and their associated biodiversity.
- **Reducing** and **restoring** where possible impacts to key habitats and their associated biodiversity; and
- **Compensating** for any residual impacts that may remain within the landscape.

By applying this mitigation hierarchy, TotalEnergies EP Uganda shall work in collaboration with project contractors, mandated institutions, conservation organizations and communities to achieve net positive, measurable and long-lasting outcomes for conservation and people.

In addition, TotalEnergies EP Uganda shall monitor biodiversity where it operates and share data with the scientific community and via the Global Biodiversity Information Facility.

It will facilitate all of the above in accordance with the applicable laws, Regulations, and international good practices, and with full transparency.

Philippe GROUEIX, General Manager
Mariam NAMPEERA MBOWA, Deputy General Manager
Pauline MACRONALD, Biodiversity Program Director
Cyril CHAMPIGNY, HSSE Director
Joy MUBALLE, Social Performance Director
Jean – Yves POULET, Tilenga Project Director
Alain MICHEL, Finance & IST Director & Compliance Officer
Jean GAVALDA, Director Business Development & Corporate Affairs

TotalEnergies

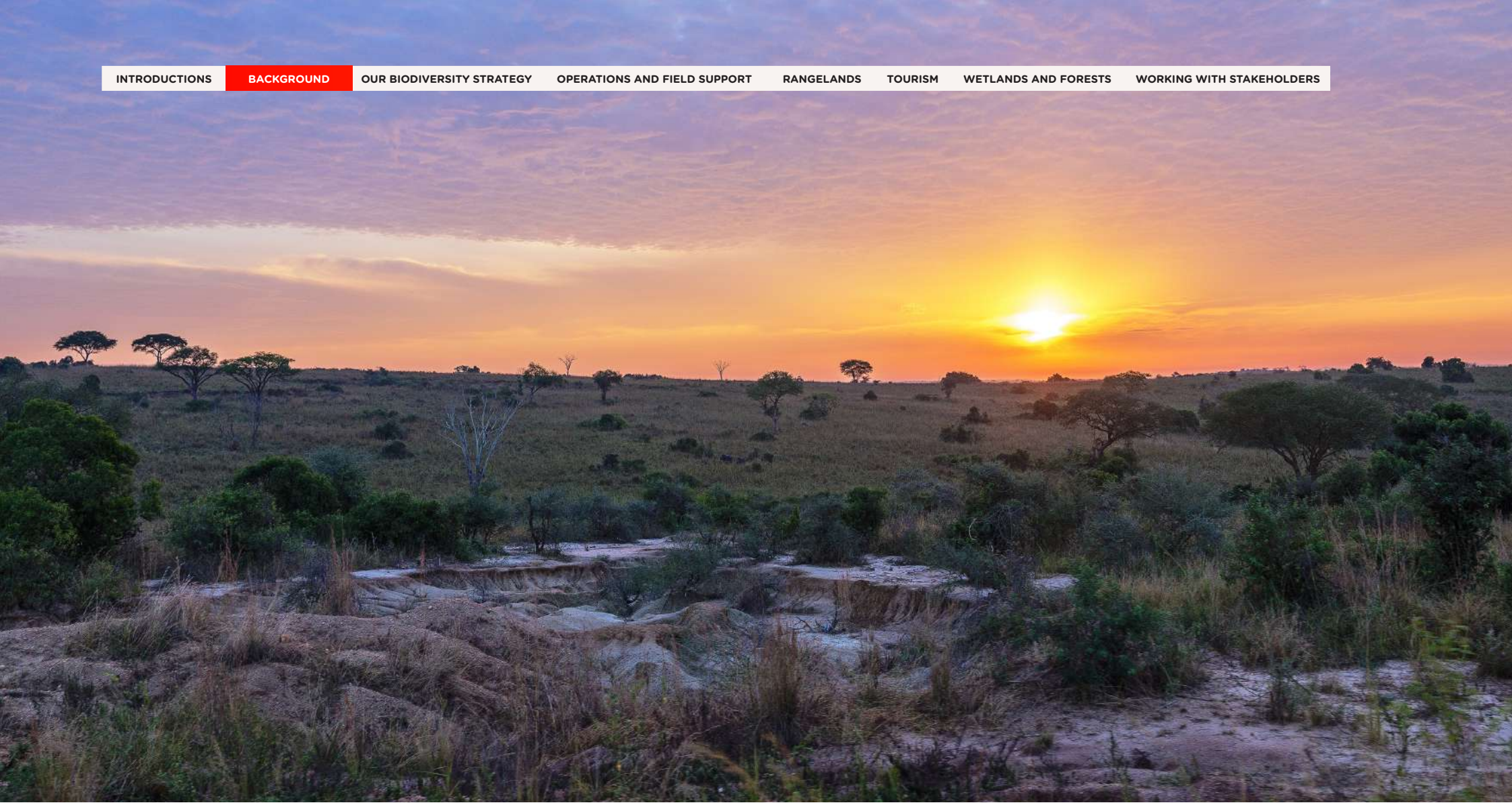
TILENGA BIODIVERSITY

February 2024

Our mission and commitment is to ensure Murchison Falls Protected Area and where feasible the surrounding landscape, are left in better condition than if the project had never occured.

The TEP Uganda Biodiversity Management System involves the adaptive implementation of several management plans to:

- Illustrate the measures required to address direct, indirect, and cumulative impacts in line with Mitigation Hierarchy.
- Provides a framework for continuous improvement and adaptive management;
- Set clear Key Performance Indicators (KPIs) to monitor performance of the company and its contractors; and
- Promote transparency through robust monitoring and evaluation including independent reviews and third party audits



2 BACKGROUND

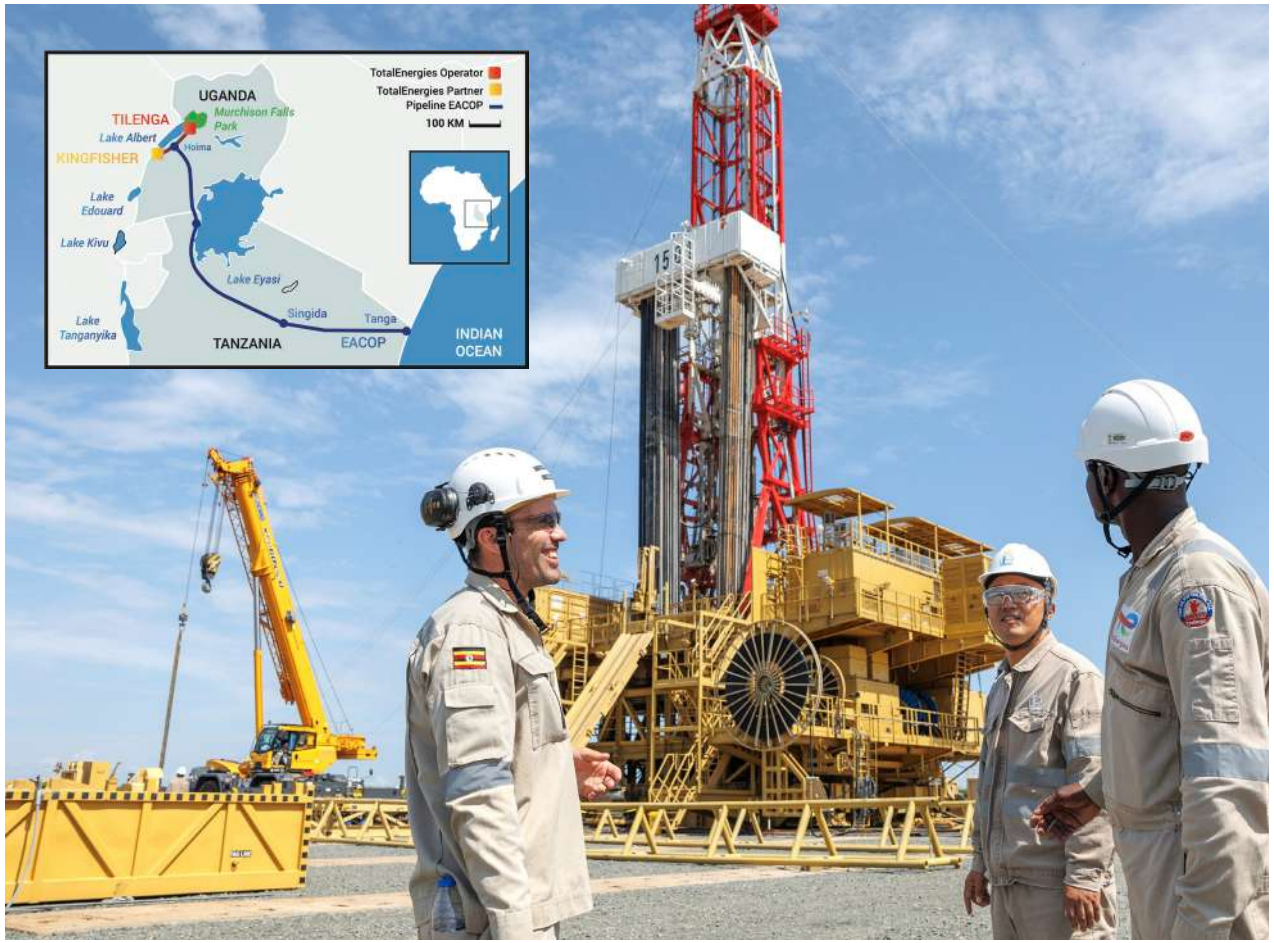
Overview of the Tilenga Project

The Tilenga Project is located in the Lake Albert region of Uganda, primarily within Buliisa and Nwoya Districts. At its peak, the project will produce 190,000 barrels of oil per day. The project is currently in its development phase. The production will be transported through buried pipelines to a processing plant in Kasenyi, Bulisa where the oil, water, gas will be separated and treated.

The project area comprises Contract Area-1 and Licence Area 2 North, spanning Buliisa and Nwoya districts. The development involves drilling over 400 wells from 31 well pads, with 10 pads situated north of Victoria Nile and 21 to the south. Three oil rigs have been deployed for the drilling operations.

Water flooding will be implemented during the production phase, with approximately half of the wells designated as water injection wells, and the other half, as oil producers. A lake water abstraction facility will be constructed on the shores of Lake Albert to supply additional water for injection into the reservoirs during water flooding. Prior to drilling the wells and constructing surface facilities, enabling infrastructure need to be in place including:

- An Industrial Area (site preparation at 99% complete by the end of June 2024),



- Roads: A1 West, C1 and N2 roads were 100% complete; A1 East was 98% complete; and A4 was 82% complete by the end of June 2024.
- Well pads: Site preparation was 41% complete by the end of June 2024.

All Central Processing Facility (CPF) platform areas and three well pads have been handed over by the Enabling Infrastructure contractor to the Surface Facilities and Drilling contractors, with work progressing on the remaining areas.

The second major project component, the Surface Facilities Engineering, Procurement, Supply, Construction and Commissioning (EPSCC) is also underway, both at the industrial area (IA) and “offsite” locations.

The industrial area will consist of the Central Processing Facility with capacity to process up to 200,000 barrels of oil per day. Oil, gas and water will be separated at the CPF before the stabilised crude is exported.

The offsite scope includes:

- Pipelines and Flowlines,
- Lake Water Abstraction Facility (LWA),
- Horizontal Directional Drilling (HDD) of the Nile River Crossing and
- Surface facilities for well pads

By the end of June 2024, EPSCC Construction works at the Industrial Area were at 5% while offsite locations were at 9%. Detailed engineering for the Industrial Area and offsite EPSCC scopes were at 90% and 88% respectively. Flowline and pipeline construction had commenced, totaling over 46km of pipeline. Establishment of a construction camp for 3,900 personnel is in progress.

Drilling and Wells is the third major project component. Currently, all three oil rigs are in operation both north and south of the Nile, having collectively drilled a total of 62 wells (89km in total). Drilling operations are supported by a robust geoscience and reservoir engineering team which has established 10 Passive Seismic Network stations essential for monitoring earth movements in the region.

During the production phase, once crude is stabilised at the CPF, it will be transported via a 98km feeder line to a delivery point at Kabalega Industrial Park. At this delivery point, part of the crude will go to a future oil refinery while the rest will enter the East African Crude Oil Pipeline (EACOP). Additionally, the project is implementing a Carbon Footprint Reduction (CFR) strategy which, among others, includes establishment of a facility with a production capacity of a 40,000 – 80,000 tonnes/year Liquified Petroleum Gas (LPG).

The LPG recovery facility will be situated at the Industrial Area. The call for tender for the LPG EPSCC was executed with strong emphasis on environmental, social and economic sensitivity. The company's goal is to deliver value for the local communities and the country in an efficient and sustainable manner.

12

Our Biodiversity Perfomance in Numbers

BIODIVERSITY TRAINING AND AWARENESS

- **4696** TEP Uganda staff and contractors trained in biodiversity management
- **108** UWA personnel (93 Rangers and 15 Data Analysts) trained in use of Spatial Monitoring & Reporting Tool (SMART) - a tool used by UWA to help monitor their patrolling efforts in the Protected Area
- **160** teachers and **2880** pupils across **10** schools participated in Phase I of the Chimpanzee Conservation Education Program
- Under the Corridor Restoration Program, **248** community members participated in training, with participation of **6** Communal land Associations and **120** individual farmers

SURVEYS AND MONITORING

- **64** pre-clearance surveys completed
- **15** elephants re-collared as part of elephant monitoring program.
- **24** animals re-collared (lion, hartebeest, hyena & kob) for stress & ranging behaviour monitoring
- **1** carnivore census completed across Murchison Falls Protected Area.
- **4** rounds of aerial wildlife monitoring and **4** rounds of wetlands & water quality monitoring
- **45** joint inspections completed with UWA teams
- **363** drone flights completed across project area

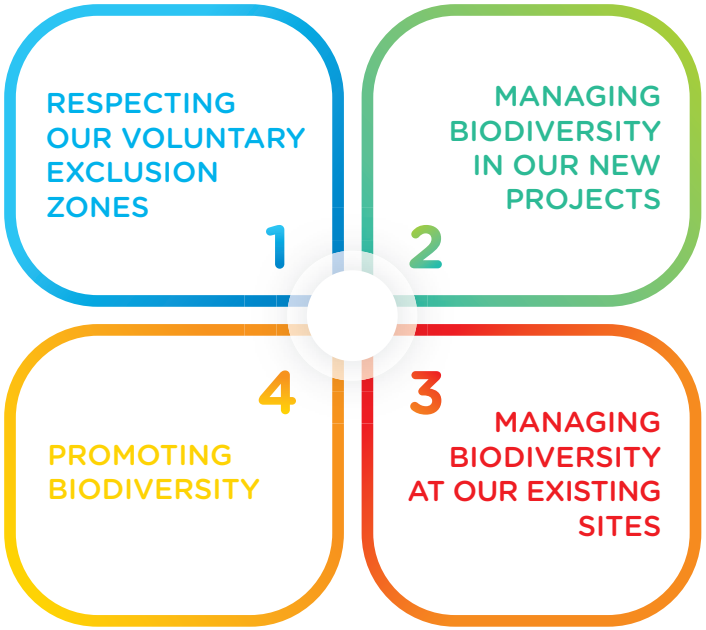
HABITAT ENHANCEMENT

- **118ha** of habitat successfully restored.
- **140,000** tree seedlings planted.
- **350ha** of degraded forest replanted
- **19,000m3** of invasive plant species removed from Murchison Falls National Park
- **84%** of alien invasive plant species found in the project footprint are being actively managed (early detection, removal)

BOOSTING PROTECTED AREA MANAGEMENT

- **101** patrols completed covering an area of 1837km2
- Over **3000** wire snares and other devices used for poaching removed from the national park
- **86** poacher arrests made by UWA Law Enforcement
- **4** Protected Area Management Effectiveness Assesments completed.
- **8** community anti-poaching awareness campaigns & **7** Radio Talk Shows involving over **500** community members.

Protecting Biodiversity: Commitments and Actions



2 Managing Biodiversity In Our New Projects

- We commit to developing biodiversity action plans for each new project on sites located on an area of interest for biodiversity, that is, IUCN (International Union for the Conservation of Nature) Protected Area Categories I to IV and Ramsar areas. The action plan shall be in place, at the latest, at the time of commissioning of the site.
- We commit to producing a net positive impact on biodiversity, confirmed by a third-party institution, for each new project on sites located in an area of priority interest for biodiversity, that is, IUCN (International Union for the Conservation of Nature) Protected Area Categories I to II and Ramsar areas.

HOW?

- By annually publishing the number of biodiversity action plans in place or under preparation and reporting on implementation.
- By annually reporting on the implementation of our net positive impact plans.
- By publishing certificates of net biodiversity gain for these projects.

Specifically for Tilenga Project, we follow the company's global Biodiversity Ambition as illustrated above. TEP Uganda produced its Biodiversity and Ecosystem Services Action Plan in October 2020 following extensive consultation with external stakeholders. Through this plan, our commitment to achieve Net Positive Impact is being realized;

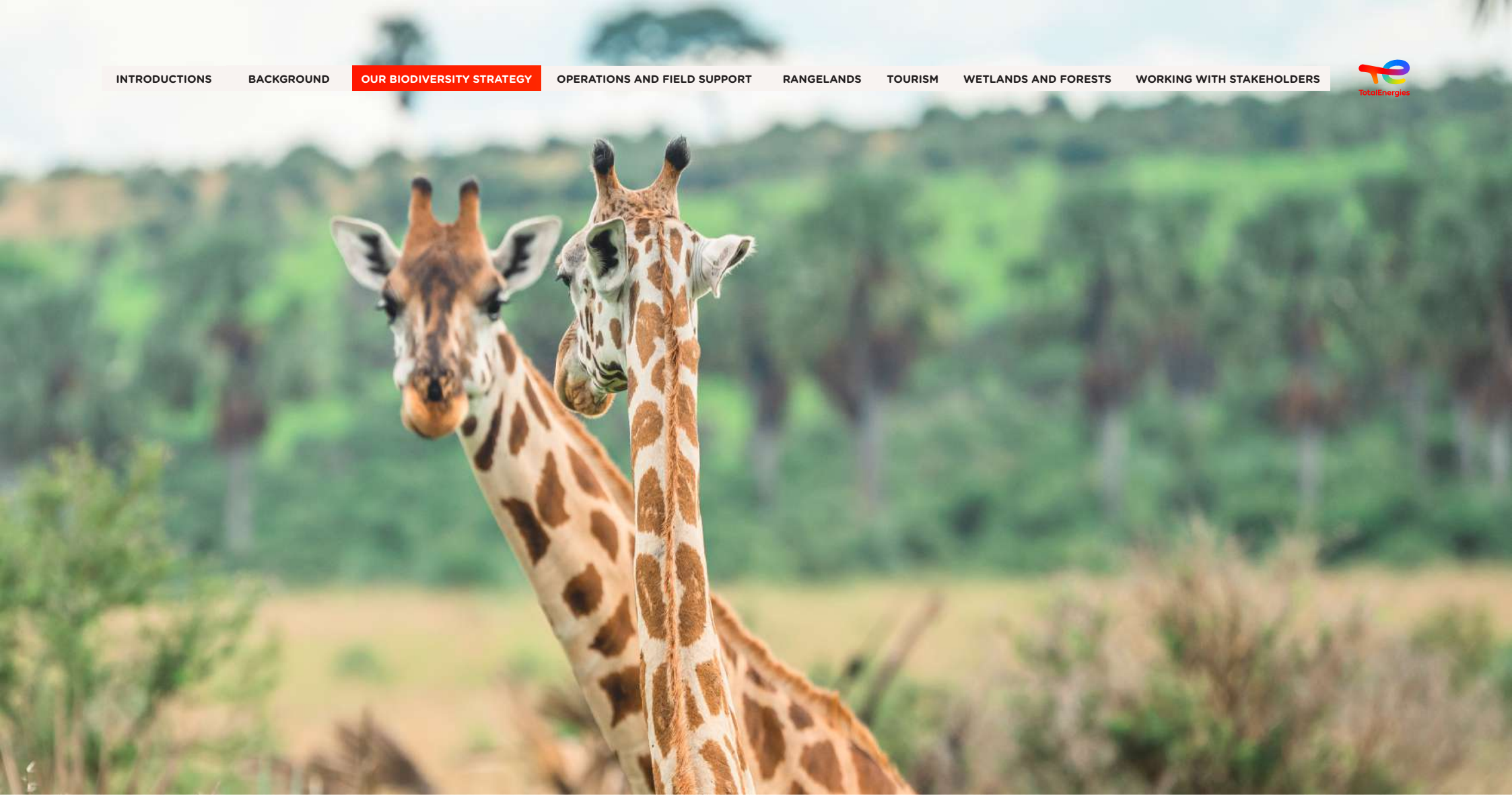
https://totalenergies.com/sites/g/files/nytnzq121/files/documents/2021-10/Brochure_biodiversite_EN_BD.pdf

Each year a number of independent bodies review the status of implementation of the BESAP and provide feedback to internal and external stakeholders.

These organizations include the Independent Biodiversity and Livelihoods Advisory Committee (IBLAC), the IUCN Species Survival Commission Primate Specialist Group on Great Apes and Small Apes (known as the ARRC Task Force) and the EACOP Lender Environment and Social Due Diligence Consultant (LESC)

https://www.eacop.com/report/environment-and-social-due-diligence-esdd-non-technical-summary-nts/ (LESC).

Further details of these activities are detailed in Section 8 of this report.



3 OUR BIODIVERSITY STRATEGY

A Landscape Approach

The Tilenga project is being constructed in the North Albertine region of Western Uganda, which is one of Africa's most important areas for biodiversity. This region is home to several iconic species, including the Nubian Giraffe, Lion, African Elephant, Uganda Kob, Lelwel Hartebeest and Eastern Chimpanzee. It also hosts close to 450 different bird species including Uganda's national bird – the Grey Crowned Crane.

Protecting biodiversity in Murchison Falls Protected Area and the surrounding landscape has been a key priority for TotalEnergies since the early planning stages of the Tilenga project. The North Albertine Region has faced considerable human induced pressures for many years, most of which existed prior to the discovery of oil in 2006.

These pressures include snare poaching, deforestation and habitat conversion for agriculture and cattle rearing.

In addition to these long standing issues, recent activities for oil and gas development and associated infrastructure, including national roads, have added to the challenges in this highly sensitive area. Operating here requires a deep understanding of the complex and dynamic factors that can lead to biodiversity loss.

Our landscape based approach, has been developed from international and national best practice standards and ensures our net positive impact commitment for the development is fully integrated and complements existing conservation and community development efforts in the region.

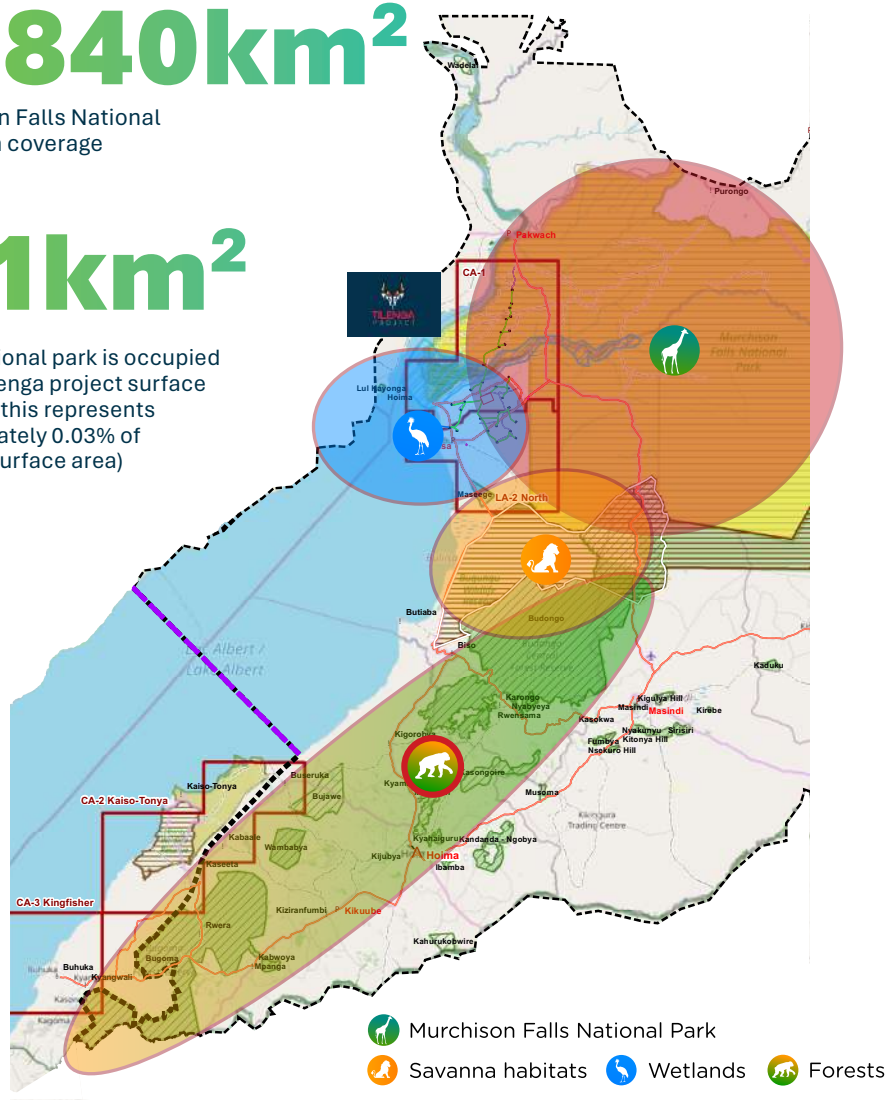
Through active stewardship and collaboration with stakeholders, TEP Uganda aims to align with broader conservation targets, national strategic action plans (such as National Biodiversity Strategy and Action Plan[1]), regional development objectives and the UN Sustainable Development Goals. This approach provides a solid foundation for sustaining benefits for both biodiversity and people over the long term.

3,840km²

Murchison Falls National Park area coverage

1.1km²

of the national park is occupied by the Tilenga project surface footprint (this represents approximately 0.03% of the park surface area)

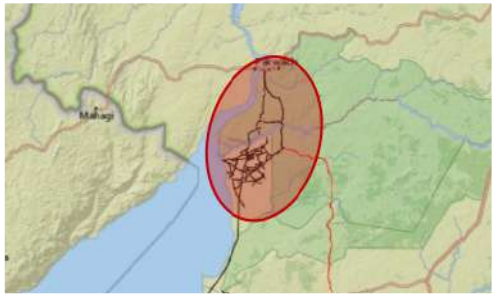


1. https://nema.go.ug/sites/all/themes/nema/docs/NBSAP%20Uganda%202015%20-%20Re-designed.pdf

Summary of Impacts for Tilenga Project

The Tilenga Project Environment and Social Impact Assessment Report provides a detailed account of the impacts associated with oil and gas development in the Albertine Region and are broadly grouped into three main categories. The Environment and Social Management Plan and supporting plans have been specifically developed to address these impacts. The process of adapting the plans is ongoing and is informed by our monitoring and evaluation activities including regular feedback from stakeholders.

Direct Impacts



Direct impacts from construction and operation of the facilities are expected to be short term limited mainly to construction phase (5 – 7 years)

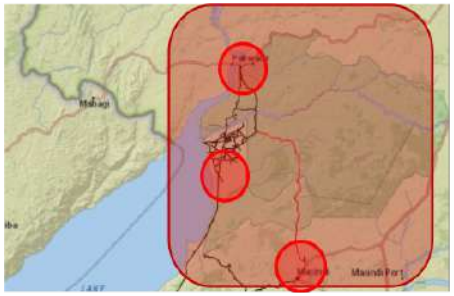
Priority Biodiversity

- Murchison Falls National Park is Uganda's largest and oldest national park and hosts the largest population of Nubian Giraffe in Uganda as well as other emblematic and endemic species such as lion, African Elephant, Uganda Kob and Lelwel Hartebeest
- Murchison Falls Albert Delta Ramsar is a wetland of international importance and is also an Important Bird Area. The site stretches from the top of Murchison Falls to the delta at its confluence with Lake Albert. This delta area is important for waterbirds like shoebill, pelicans and is a spawning ground for Lake Albert fisheries. The site is also of social and cultural importance to the people of the area.

Impacts

- Habitat loss and fragmentation from project footprint and access roads
- Disturbance due to construction activities

Indirect Impacts



Increases in human population and project induced in migration in hotspot areas. These impacts are expected to be medium to long term (10 – 25 years)

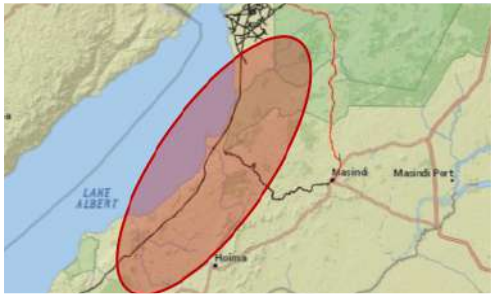
Priority Biodiversity

- Murchison Falls Protected Area (encompassing Bugungu and Karuma Wildlife Reserves) hosting populations of lion, African elephant, Lelwel Hartebeest and Uganda kob
- Murchison Falls Albert Delta Ramsar & Lake Albert wetlands containing rare fish and birds species including Grey Crowned Crane (Uganda's national bird) and Shoebill
- Budongo and Bugoma Central Forest Reserves and their connecting corridors supporting a population of ~2000 Eastern Chimpanzee

Impacts

- Increased human settlement and in migration effects leading to increased resource extraction, illegal activities (poaching and timber extraction) and encroachment.
- Conversion of land for industrial and agricultural activities leading to loss of natural habitats.

Cumulative Impacts



Cumulative effects of multiple activities in the landscape are expected to be long term (>25 years)

Priority Biodiversity

- Habitats unique to North Albertine Region (savanna mosaic, grasslands, wetlands, tropical high forest and riverine corridors)
- Species ranging in the landscape e.g. Eastern Chimpanzee, African elephant

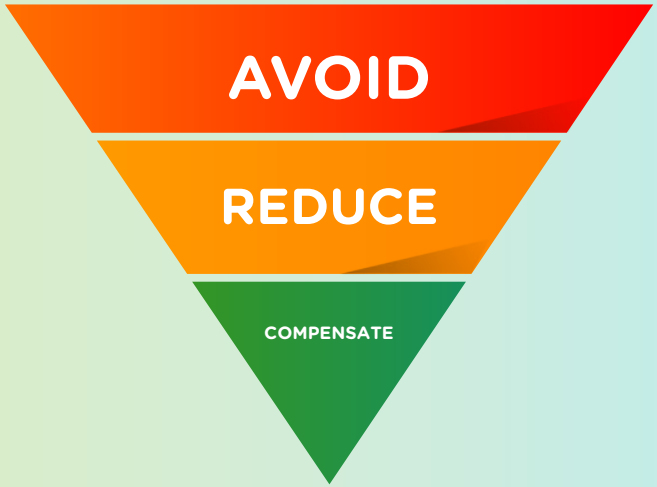
Impacts

Multiple developments in the same landscape (large and small scale agriculture, oil and gas, commercial, road construction) all contributing to increase in land conversion, deforestation, and loss of habitats important for biodiversity and local communities.

More information on impacts can be found in the Tilenga Project ESIA Report:

https://totalenergies.ug/projects/tilenga/tilenga-project-esia-report

Applying The Mitigation Hierarchy



What is the Mitigation Hierarchy?

- **Avoiding** any unnecessary impacts
- **Reducing** any unavoidable impacts, restoring any impacted areas; and
- **Compensating** for residual impacts to achieve Net Positive Impact (NPI).

Application of the mitigation hierarchy and demonstrating NPI requires consistent monitoring and evaluation of ecosystem health as well as the biodiversity they support within the landscape. This process is ongoing and is informed by our baseline studies.

The Mitigation Hierarchy is an internationally used set of guidelines that our company applies to minimize any negative impacts of our activities. By following this hierarchy, we prioritize avoiding and reducing impacts as far as possible.

The company is also implementing compensatory measures to address residual impacts - those impacts that are expected to remain even after applying avoidance and reduction measures.

These compensation (sometimes referred to as offset) measures are designed to result in quantifiable conservation gains to address significant biodiversity losses that cannot be mitigated any other way. This long-term strategy has been developed by TEP Uganda to address the challenges faced by communities and wildlife in the North Albertine landscape.

Our commitment to achieve Net Positive Impact is landscape-based and developed in accordance with national legislation and IFC Performance Standard 6 on Biodiversity Conservation and the Sustainable Management of Living Natural Resources.

The approach is a culmination of an extensive consultative process and was approved for implementation by the National Environment Management Authority (NEMA) in February 2022.

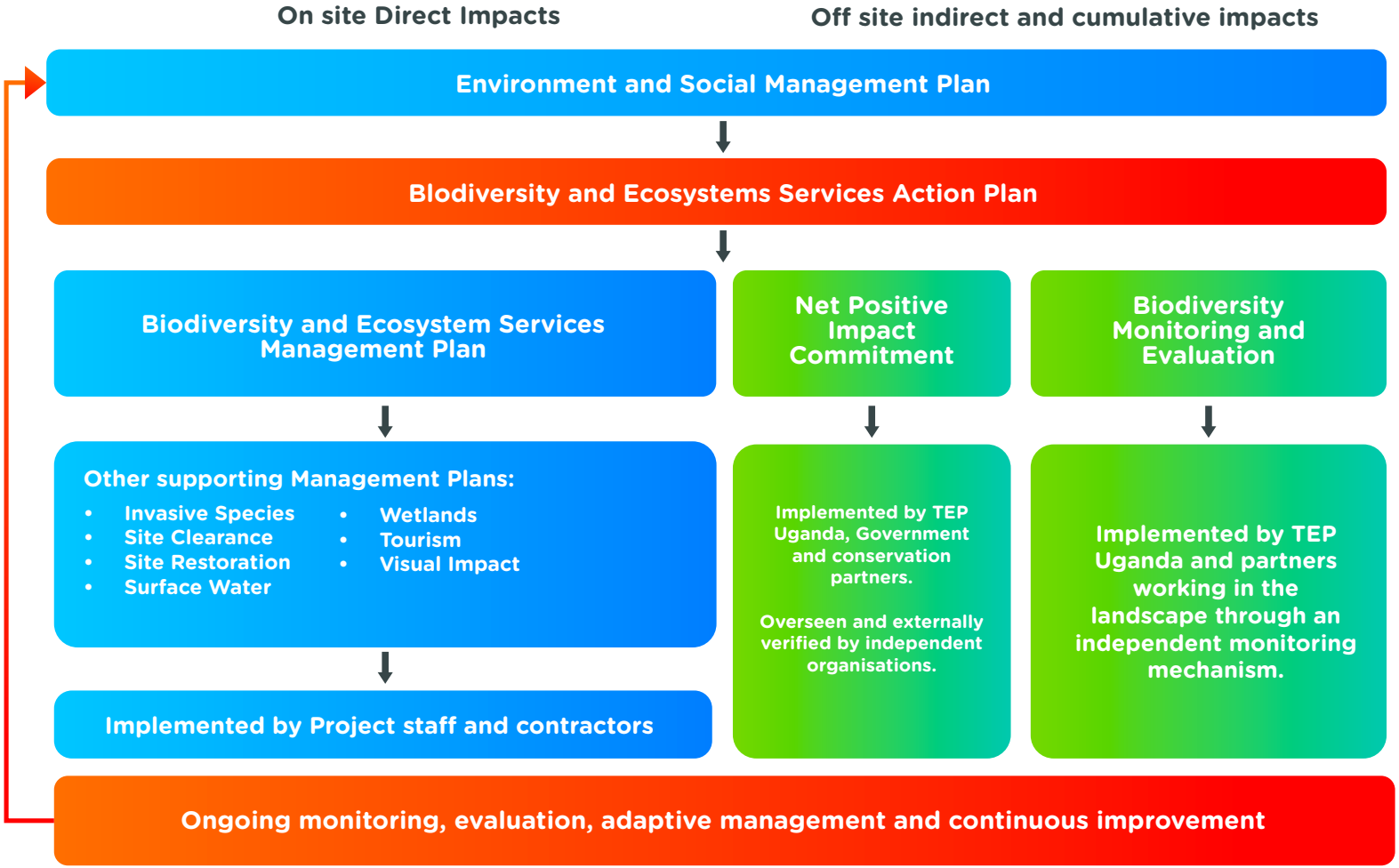
The program was subsequently launched for implementation in June 2022, with collaboration and active stewardship of stakeholders, local communities and conservation partners.

Our strategy aims to:

- **Protect priority biodiversity:** Murchison Falls Protected Area, Murchison Falls Albert Delta Ramsar, Lake Albert Wetlands, Budongo and Bugoma Forest Corridor
- **Complement ongoing efforts** of Ministries, Departments and Agencies and conservation organisations to conserve existing protected areas;
- **Support community-based conservation** through awareness raising, sensitization and promoting alternative income generating opportunities; and
- **Rehabilitate degraded habitats** to conserve threatened species and enhance ecological connectivity.

TEP Uganda's Biodiversity Management System

TEP Uganda has developed a comprehensive set of policies and procedures to ensure that impacts on biodiversity and ecosystem services resulting from the project are effectively managed. These guidelines also define the roles and responsibilities of all entities involved in the project. This process is fully integrated into the TEP Uganda HSSE management system.



Compensating to Achieve Net Positive Impact

To fulfill our NPI commitments, TEPU has developed its Biodiversity Ecosystem Services Action Plan (BESAP).

Our plan focuses on achieving specific, measurable, achievable and time bound targets to demonstrate NPI for four key ecosystems within the North Albertine landscape.

The approach involves implementing specific and coordinated conservation activities in support of local communities in close collaboration with mandated institutions and conservation organizations.

Further details of the actions we are implementing to achieve NPI are provided in this report.

Activities are long term, subject to extensive monitoring and adaptive implementation based on the feedback from stakeholders and our independent panel of experts (IBLAC).

TILENGA BIODIVERSITY PROGRAM PILLARS

Pillar 3

Conserving and restoring wetlands and riparian vegetation

Help build a resilient wetland ecosystem for biodiversity and people through community-based management initiatives

Targets

- Preserve existing wetlands
- Restore degraded wetlands
- Maintain freshwater quality

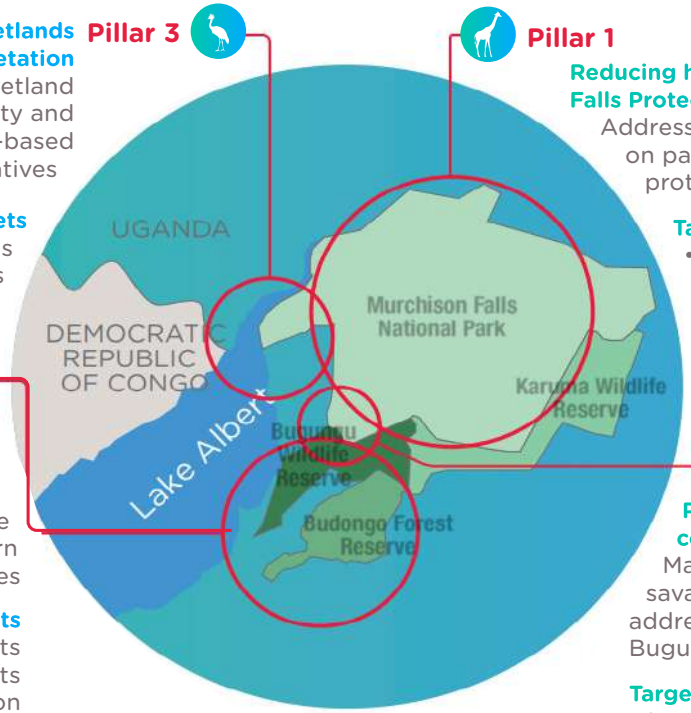
Pillar 4

Conserving and restoring forests and forest connectivity

Protection and restoration of forest habitats for the conservation of eastern chimpanzees

Targets

- Protect existing forests
- Restore degraded forests
- Increase chimp population and area of occupancy



Pillar 1

Reducing human pressures on Murchison Falls Protected Area

Address risk of increased pressure on park wildlife through enhanced protection .

Targets

- Increase populations of lion and elephant.
- Maintain populations of giraffe and Kob
- Enhance habitats

Pillar 2

Protecting the integrity and connectivity of savanna habitats

Manage in-migration impacts to savanna habitat and species by addressing threats within and around Bugungu Wildlife Reserve

Targets

- Increase populations of lion and elephant.
- Maintain overall extent and improve habitat quality

TEP Uganda Biodiversity Monitoring and Evaluation Framework

To achieve our biodiversity commitments, we have established a comprehensive framework for monitoring and evaluating progress towards our targets. The data we collect comes from various sources including:

- **Daily and weekly compliance monitoring** by our teams to ensure that impact mitigation measures are effectively applied.
- **Monitoring for changes in habitat, ecology and animal behavior** in and around the project footprint through: weekly drone monitoring, ground truthing, camera trap surveys, observations from project teams and UWA Rangers and feedback from local stakeholders
- **Long term monitoring of priority species** using GPS collars to track ranging behaviour. Priority species include African Elephant, Lion, Nubian Giraffe, Lelwel Hartebeest, Uganda Kob, Vultures and Spotted Hyena.
- **Habitat specific surveys** including wetlands, vegetation mapping and acquatics
- **Monitoring of community pressures** through ecosystem services assessments (the use of natural resources by local communities), bushmeat studies, anti-poaching patrols, conservation education awareness and human wildlife conflict studies
- **Monitoring of landuse changes:** through Satellite imagery acquisition and land use mapping to assess habitat conversion in the landscape
- **Species population counts** through census studies and aerial wildlife surveys.

Since the initial baseline studies, TEP Uganda has been collecting extensive information on the ecology and social dynamics of the Albertine Region.

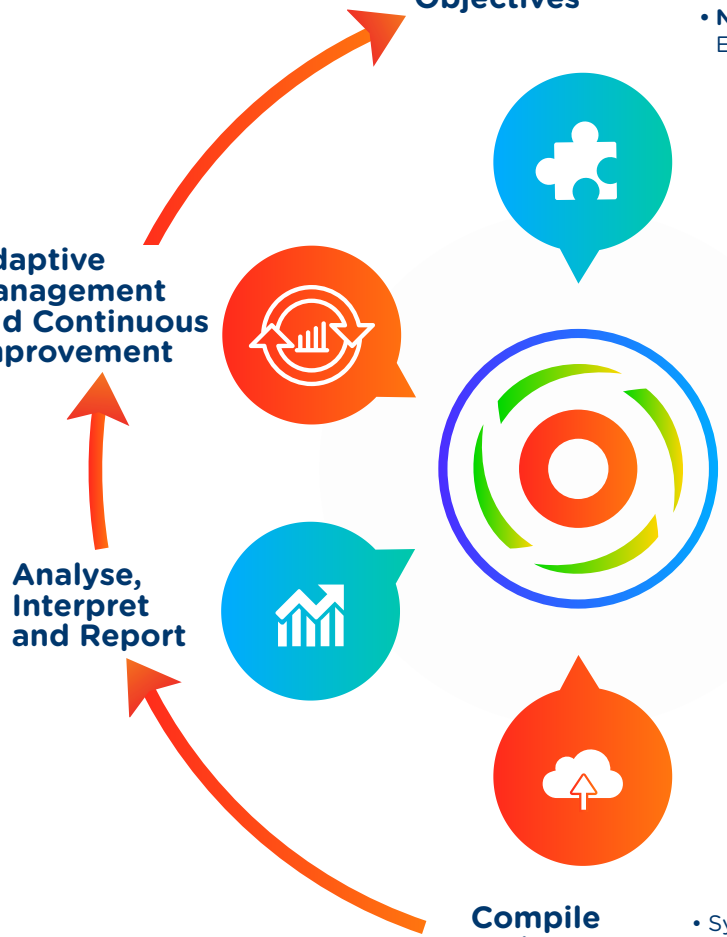
This data has not only contributed to the scientific record but has also enabled us to establish an accurate baseline of site conditions prior to commencement of project activities.

TEP Uganda has been collecting data throughout the diffferent phases of the project including seismic data acquisition, exploration drilling, appraisal and most recently project construction activities. The baseline year for the Tilenga project is 2018 serving as the reference point for assessing the effectiveness of our biodiversity strategy. It is for this reason that robust data management systems and processes are required.

In 2023, TEP Uganda initiated development of the TEPU Biodiversity Monitoring and Evaluation (ME) Framework. This collaborative initiative is led by the Biodiversity Department supported by Head of Geoinformation, and conservation experts. By adopting a sophisticated, centralized platform for data management, we can accurately and consistently report against our Key Performance Indicators and our NPI targets. This evidence-based approach is central to building trust with our stakeholders and our partners.

Habitat monitoring in Murchison Falls National Park

TEP Uganda Biodiversity Monitoring and Evaluation Framework



Developing M&E Objectives

- **Project and Contractor KPIs** as defined in Biodiversity Management Plans
- **Net Positive Impact Targets** as defined in Biodiversity Ecosystem Services Action Plan

Implement Monitoring Programs

- **Compliance and Impact Monitoring:** weekly inspections, drone surveys
- **Priority habitats:** savanna, rivers, wetlands, forests and woodland
- **Priority species:** Elephants, carnivores, Giraffe, Hartebeest, Kob, Chimpanzee
- **Conservation Activities:** Patrol data, community programs, habitat enhancement (invasives removal & restoration)

Field Data Collection

- Development of **data collection protocols**
- **Digital tools** for efficient and consistent data collection via mobile device
- **Validation** and automated transfer to data repository

Compile and Manage Data

- System and parameters for data storage,
- GIS integration
- Migration of historical data,
- Import/export of third party data

Analyse, Interpret and Report

- Development of analytics and trend analysis.
- KPI Dashboards
- Data sharing and reporting with stakeholders

Adaptive Management and Continuous Improvement

- Return of Experience (REX)
- Audits (internal and external)
- Independent reviews (IBLAC, ARRC Taskforce, Lenders)

Q&A with Prakash Krishnamachari Geoinformation Manager

Can you briefly tell us about your background and role at TEP Uganda?

I am a Geophysicist with a strong focus on leveraging Data and Digital technologies to drive business outcomes. As a self-proclaimed Digital Nerd, I thrive at solving complex problems by integrating Data, and Artificial Intelligence technologies. I am also the Geoinformation Manager in Geoscience & Reservoir Department and hold the position of the Company's Data Lead.

In my role, I am directly responsible for managing Geosciences & Reservoir data and implementing Digital Technologies to support the ambitious goals of Tilenga drilling & operations. As TEP Uganda Data lead, I coach data representatives from various departments and provide advisory support to advance the digital & data journey across the organization.

What has been your motivation to work on biodiversity related subjects?

The success of TotalEnergies EP Uganda hinges on developing the Lake Albert region while fulfilling our biodiversity and social commitments. The Biodiversity Program is a new initiative for the company and a robust data management, monitoring & evaluation system is crucial to its success.

I am keen to develop an integrated Monitoring & Evaluation Program that not only serves TEP Uganda but can also be adapted for other activities and disciplines including social and livelihood programs.

How are you applying your knowledge and expertise to support achieving biodiversity net positive impact within TEP Uganda?

Having worked extensively with data and digital technologies across various physical systems, I believe it's time to apply these lessons to natural systems. My expertise in building data management systems, combined with my passion for creating multi-disciplinary teams will help establish a robust data foundation enhanced by various monitoring & analytics tools. The system will serve as a single source of truth in enabling us to monitor progress and adapt our approaches over time.

Ambition

- To build a successful Monitoring & Evaluation system that leverages existing knowledge and the latest tools and technology; and
- To ensure the system meets the needs of the Tilenga Biodiversity Program and serves as a foundation for global data and digital technology development in biodiversity.

4 OPERATIONS AND FIELD SUPPORT

About Operations and Field Support

TEP Uganda's Biodiversity Operations and Field Support teams ensure the delivery of consistent and effective biodiversity management across all of our activities on Tilenga project and construction teams.

The Biodiversity Operations team is responsible for development and implementation of the biodiversity management plans. They also develop training materials and support the TEP Uganda Monitoring and Evaluation Framework.

The Biodiversity Field Support Team comprises of 2 supervisors and 8 field officers and is responsible for oversight of biodiversity related matters for the project on ground. The multi-disciplinary team comprises of experts specializing in wildlife management, ecology, botany, herpetology and natural resources management.

Their specific knowledge and experience is used to guide our teams, monitoring of wildlife, their habitats and for managing relationships with our field based stakeholders including Uganda Wildlife Authority, District Local Government, Tourism Operators and Community Based Organizations (CBOs).

Activities Include:

- Providing biodiversity training and awareness programs for staff and contractors both working inside and outside Protected Areas;
- Developing procedures and maintaining the Biodiversity Management System;
- Conducting compliance monitoring and weekly inspections in collaboration with UWA

Pipe rack construction at Central Processing Facility

- Performing habitat and site pre-clearance surveys, as well as remote sensing and drone monitoring campaigns;
- Preventing and managing of Alien Invasive Species;
- Overseeing the restoration activities on the project footprint; and
- Managing wildlife risks including monitoring, rescue and relocation efforts.

Staff Profiles

Richard Angubo: Biodiversity Operations Manager

Richard holds a BSc (Hons) in Zoology from Makerere University. He has over 20 years of hands-on experience in wildlife management. He began his career in 2002 as Zookeeper with Uganda Wildlife Education Centre, focusing on captive wildlife management. Since then, he has been deeply involved in wildlife management and research.

Richard has worked with the Uganda Wildlife Education Centre and the Jane Goodall Institute delivering conservation education to schools and teachers. He also served as the Field Operations Manager with Lake Albert Safaris at Kabowya Wildlife Reserve.

In his words

"Every day brings new challenges and concepts that require different approaches and new ways of thinking. I very much enjoy interacting with a diverse range of people, from the project teams and contractors to the Uganda Wildlife Authority and other key external stakeholders."

Richard Olwa: Biodiversity Field Supervisor

Richard holds both a Bachelor of Science degree in Fisheries and Aquaculture and Master of Science degree in Environment and Natural Resources from Makerere University. With over 20 years of experience in field operations, he is an accomplished expert in biodiversity and environmental management. Richard specializes in ensuring the impact mitigation hierarchy is fully adopted throughout the project lifecycle and striving to achieve net positive impact on Tilenga project.

Since joining TotalEnergies EP Uganda in 2012, Richard has been responsible for delivering the Tilenga project's Biodiversity program at site level. He leads a team of eight biodiversity specialists to providing technical guidance, training, advice and support. His team is on the front line also managing field-based stakeholder engagements and monitoring activities.

Avoidance: Tilenga Project Design and Construction

Avoiding and **Reducing** impacts such as visual and noise disturbances are of utmost importance as part of the first two stages of the mitigation hierarchy. This has been a major focus for our project teams since the initial design studies in 2015. Here are some examples of the measures we have implemented:

- **Central Processing Facility:** Located outside the protected area, zero produced water discharge and no operational flaring from the facilities.
- **Horizontal Directional Drilling:** Selected as best available technology for flowline installation underneath the River Nile and removing the need for a permanent footprint inside the Ramsar
- **Wellpads:** Designed to reduce visual impact by erecting earth bund walls around the perimeter.
- **Project vehicles and pipeline Construction:** Activities are confined to one access road inside the park located away from tourist tracks. Vehicle movements on tourist tracks are strictly prohibited, and a maximum speed limit of 40km/hr is rigorously enforced for all vehicles and 30km/hour for larger vehicles.
- **Construction Hours:** No construction work is permitted inside the park during the hours of darkness, except for drilling which operates 24hrs a day and is fully contained within the wellpad boundary. All project teams are required to strictly adhere to the permitted access and exit times as specified by Uganda Wildlife Authority.
- **Noise Reduction:** The drilling rig and associated equipment are specifically designed to reduce noise, including the use of sound proofing and electrically driven motors. This has reduced noise levels to under 45 decibels (equivalent to the sound levels of a normal conversation).
- **Lighting:** Installed at the rig site is shielded and directed downwards to reduce glare. The lighting is also of a sufficient wavelength to avoid attracting insects.

Artists Impression of wellpad

Jobi-Rii 5 wellpad under restoration

Working with Uganda Wildlife Authority

Ranger relocating a Red-Headed Rock Agama from the pipeline right of way

TEP Uganda continues to work closely with the Uganda Wildlife Authority for daily activities inside Murchison Falls National Park. Key areas of collaboration include:

- **Project support from UWA Rangers:** UWA has allocated 75 Rangers to support project operations in the Park. These rangers oversee activities to protect personnel, wildlife and assist in inspection and monitoring activities.
- **Weekly inspections & Monthly Engagement Meetings:** TEPU and UWA entered a Memorandum of Understanding in 2013 to manage activities in the park. To ensure smooth operations, weekly inspections and monthly meetings are conducted.

In 2023, the project teams conducted 36 joint inspections with UWA field teams and 9 coordination meetings with UWA top management including a visit by the UWA Board of Trustees in October 2023. This effective collaboration has led to continuous improvement in managing project impacts, with over 85% of concerns raised during these joint inspections successfully addressed.

UWA Executive Director Mr Samuel Mwandah and Board Chair Professor James Kalema during a visit by UWA Board of Trustees, October 2023

Wildlife Monitoring around the Tilenga Project Footprint

TEP Uganda Biodiversity Field Officers collaborate with UWA Rangers to monitor and provide unique insights into animal behavior around the project facilities. These monitoring findings are crucial for supporting our activities and for adapting our approaches to ensure minimal disturbance to wildlife and tourists. To date, the ranging patterns of various wildlife species, including lions, elephants, giraffes and many others, show that the animals continue to inhabit their historical home ranges around the project footprint. We take great care to minimize disturbance to the wildlife and monitor any changes to their core activities on an ongoing basis.

All linear infrastructure in the park, including the access road and pipeline right of way have dedicated animal crossing points to minimize disruption and allow free movement of animals. All project traffic must give way to animals and embankments along the access roads are designed to allow easy crossing. Barriers are also erected to prevent wildlife from entering excavated areas. All worksites are inspected by UWA rangers each morning. These measures among others, ensure minimal disturbance to wildlife.

In April 2023, the Biodiversity Field Team received training from Nature Uganda in survey methods for detecting amphibians and reptiles. This training equipped the teams with the necessary techniques for conducting herptiles surveys. Additionally, UWA has trained the field teams, in the rescue, handling and relocation of reptiles.

Through internal training programs and close collaboration with UWA, the Biodiversity Department trained **122** Contractors and site security personnel in basic wildlife identification, monitoring, record keeping and reporting methods. Site specific wildlife monitoring logbooks and the use of the Spot Lens (an online app that allows personnel to take pictures with GPS location and timestamp) have been rolled out to active sites to encourage daily wildlife observations.

Based on current available data, there are no observable negative trends in the ranging patterns of keystone species.

Lion resting near the project footprint

Hartebeest and Kob grazing on the reinstated pipeline right of way

Working with Tilenga Construction Teams

Wildlife Awareness Training with Sinopec Teams

Park Induction and Kick off meeting for flowline works

Currently there are over 3000 contractors working on the Tilenga project, who actively participate in training to enhance understanding of the ecological sensitivity of the national park. The biodiversity operations team plays a crucial role in conducting routine awareness campaigns and specific training sessions to ensure staff are well informed and key messages are consistently delivered.

These campaigns include - induction sessions, pre-job start toolbox talks, and specific training sessions. Their goal is to ensure contractors fully understand the biodiversity mitigation measures, have procedures in place for unexpected biodiversity issues and know how to report and address any biodiversity related incidents during their work.

Our objective is to reach at least 95% of the target group identified for specific training.

To enhance awareness, we have developed and shared various informational and educational materials with contractors, such as fact sheets, pocket guides and posters on topics like Park Do's and Don'ts, Invasive Species Management, Wildlife Risk Awareness, and Soil Management. Additionally, the Biodiversity Department provides specialist training on emerging issues like bee colonization and snake management.

Since the start of construction activities in the national park, a cumulative total **4,696** people have been trained in biodiversity management on the Tilenga Project. This includes personnel from **29** different contracted companies, TEPU staff, UWA rangers, Tourism Police and visitors.

Through the TEP Uganda Biodiversity Field Team, our activities are closely monitored, staff and contractor awareness is upheld to ensure that disturbance to wildlife and other park users is reduced as far as possible.

Pre-clearance Surveys and Invasives Management

Now that the project is in the construction phase, the TEPU Biodiversity Department monitors for changes in ecology, animal behavior and movement patterns. This monitoring is conducted through direct observations, indirect signs (such as footprints, nests etc.), drone surveys, and camera trap studies.

Pre-clearance surveys are essential for identifying and accurately recording any sensitive biodiversity that may have colonized or is present in the project footprint construction areas. These surveys are conducted by flora and fauna experts to ensure that reference conditions are formally documented. The findings from these surveys guide contractors on managing sensitive features during site clearing and construction. Additionally, the information gathered is crucial for comprehensive restoration planning post construction.

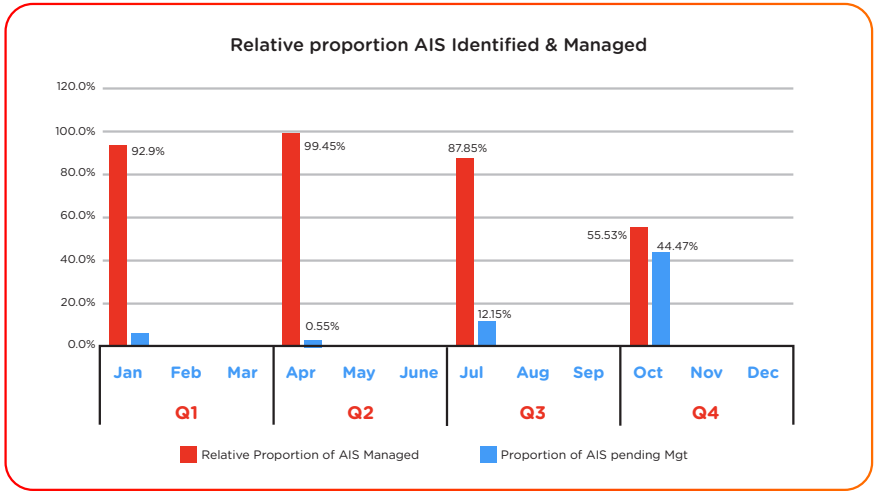
In 2024, the Biodiversity Field Teams has conducted **14** preclearance surveys. To-date, a cumulative total of **64** pre-clearance surveys have been successfully conducted across the project footprint.

Pre-clearance survey of Ramsar area

Reducing the spread of Alien Invasive Species (AIS): During the on-going works, the risk of introducing, and spreading of AIS remains high. In line with the TEP Uganda AIS Management Plan, the company and its contractors prevent the introduction and spread as well as manage any emerging invasives through early detection monitoring.

AIS are the second most significant threat to biodiversity after habitat loss. They can be plants, animals or even pathogens that are not native to an ecosystem. They spread quickly, supress native species and can impact on habitats. As of 2018, it is estimated that AIS covers 10-20% of MFPA. Therefore management and control of AIS is critical in protecting biodiversity

A cumulative total, **9,113** invasive plant species infestation spots have been identified on active project footprints (including well pads, flowlines and access roads). On average, **84%** of the identified infestation spots are being actively managed through early detection, monitoring and removal activities.



Restoration Activities

Restoration is a crucial part of the mitigation hierarchy and represents the final stage in managing the direct footprint impacts of project activities. The key objectives of the restoration process are to:

- Establish clear performance indicators and site specific restoration protocols that require to be met during and after restoration;
- Restore the site to a condition as close to its original state as possible (referred to as reference state); and
- Increase where possible the extent of native vegetation cover to improve habitat value.

To ensure that any disturbed areas are restored as close to their original condition as possible, the TEP Uganda Biodiversity Department has a dedicated team of experts including ecologists and botanists.

The Biodiversity team works closely with construction teams to ensure that appropriate restoration planning, execution and post restoration monitoring is carried out. The team also guides by providing detailed understanding of the plant species present, the area's ecology and planning for sourcing of appropriate materials (soils and plants). This work is done in close collaboration with Uganda Wildlife Authority and other relevant stakeholders.

Physical and ecological monitoring of the restored areas is also conducted to ensure the integrity of the different habitats is re-established post restoration. The graphic on the following page depicts the restoration process implemented by TEP Uganda for each and every site. Below are pictires of Avogera Borrow Pit before, during and after restoration.

Avogera Pre-Clerance Survey 6th Aug 2023

Avogera active Site Survey 27th Jan 2023

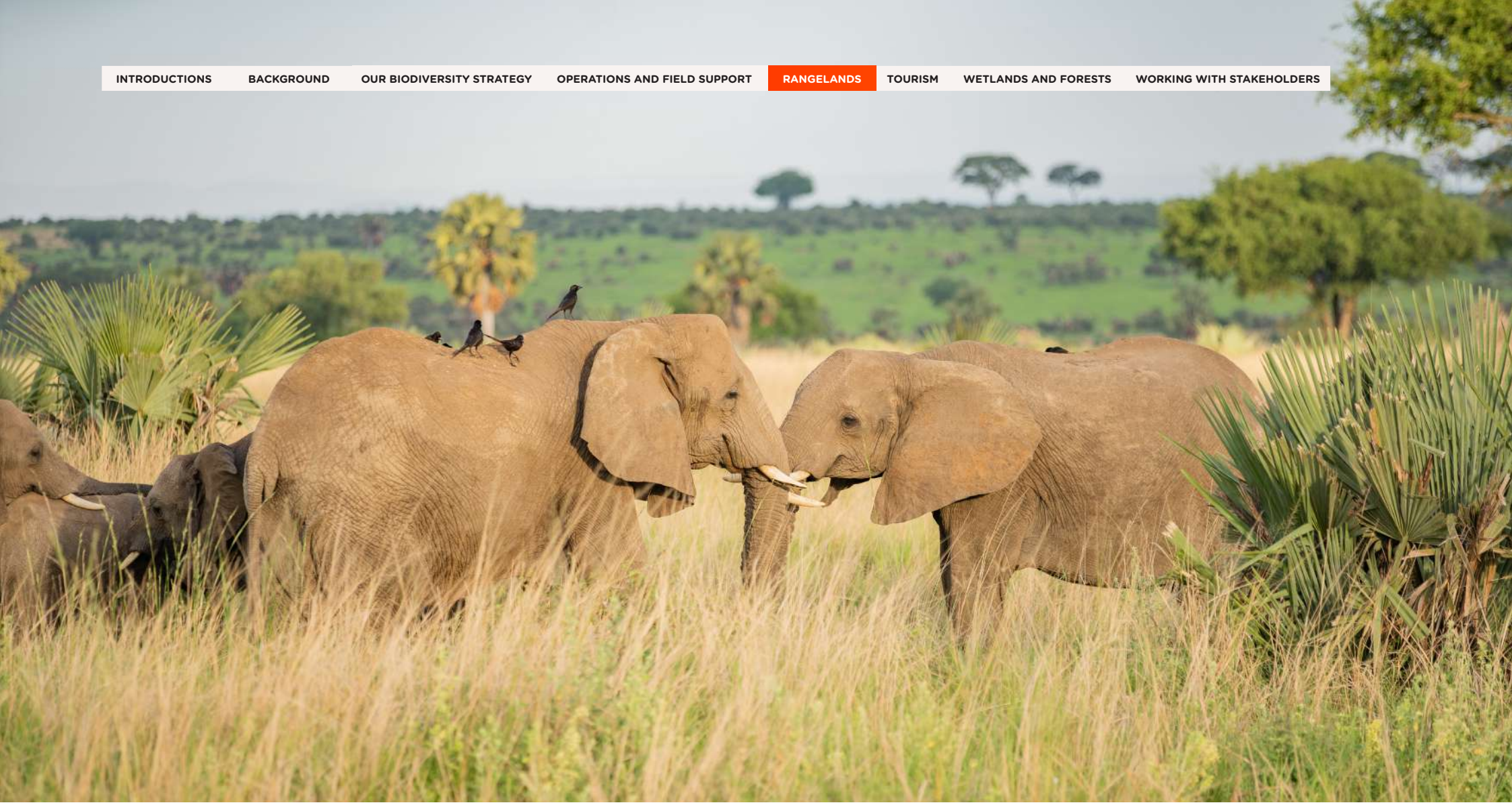
Avogera Post-Restoration Monitoring 27 May 2024

TEP UGANDA RESTORATION PROCESS IMPLEMENTATION

In 2023, restoration of construction areas commenced on sites used for extracting of materials (murram and sand) for civil works (known as borrow pits), embarkments of access roads, greening and landscaping of completed areas of the Industrial Area and wellpads. The table below summarizes our progress. Restoration will continue on completed wellpads as well as the production and water injection network currently being installed. As of end of June 2024, a total of 118ha had been fully restored and handed back to landowners and authorities.

SITE RESTORATION STATUS AS OF JUNE 2024

Sites	Number	Number of Active sites	Number of Restored sites	Area Restored (ha)
Borrow pits	28	9	8	15
Exploration and appraisal wellpads	60	17	39	94
Access roads	28	0	28	9



5 RANGELANDS

Delivering Net Positive Impact for Murchison Falls Protected Area

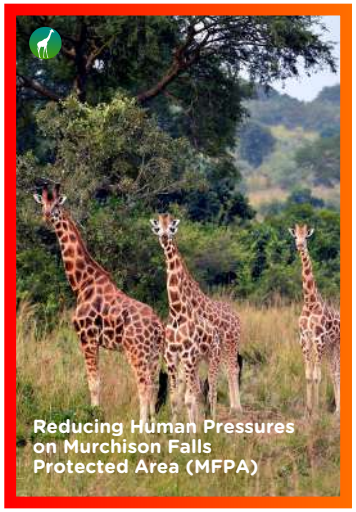
The Rangelands team is responsible for delivering of TEP Uganda's NPI commitment for Murchison Falls Protected Area (MFPA) through the creation and implementation of the **Murchison Falls Conservation Program** which encompasses Pillars 1 and 2 of the Biodiversity Program

About Murchison Falls Protected Area

Murchison Falls Protected Area (MFPA) covers an area **~5000km2** and is Uganda's oldest and largest Protected Area receiving around **145,000** visitors annually (according to UWA's 2022-2023 Annual Report). The area encompasses Murchison Falls National Park (3,840km2), Bugungu Wildlife Reserve to the south (501km2) and Karuma Wildlife Reserve to the east (678km2). MFPA hosts over **70** different types of mammals and close to **450** bird species.

It is also home to **75%** of the world's population of Nubian Giraffe and hosts four of the big five (lion, elephant, leopard and buffalo).

However, the area faces considerable challenges – over 300,000 people live around the MFPA and depend on its natural resources for fuel, food and livelihood. Bushmeat poaching and human wildlife conflicts are significant issues that require a combination of enhanced park proection and community based management to overcome.



The Rangelands team, led by David Ochanda collaborates closely with Uganda Wildlife Authority, local stakeholders (including communities and the tourism sector) and our conservation partners to achieve the conservation objectives as set out in the TEPU Biodiversity Ecosystem Services Action Plan.

NPI Targets*:

- Increase the population of indicator species, such as lion and African elephant by 25%
- Maintain populations of Uganda Kob, Lelwel Hartebeest and Nubian Giraffe by mitigating threats
- Improve habitat extent and quality; and
- Boost tourism development

Activities

- Habitat and species surveys and monitoring
- Support UWA in enhancing management effectiveness of Murchison Falls Protected Area
- Improve Patrol effectiveness, remove snares and engage in community anti-poaching efforts
- Enhance Habitats by removing invasives species
- Implement actions to support local communities to address human wildlife co-existence issues

***at or above 2018 baseline levels**

Staff Profiles

David Ochanda: Biodiversity Manager Rangelands

David is an Industrial Ecologist and Project Management Specialist with over 15 years of experience. He joined TEP Uganda in 2012 as the first biodiversity specialist. David has also worked with various conservation organizations where he designed and implemented monitoring programs to assess and mitigate potential climate change impacts onto mountain forest biodiversity within Uganda, Rwanda, and Burundi.

In his words

"A rangeland is a vast area of land occupied by native herbaceous plants or shrubs grazed by animals. Rangeland management involves regulating animal populations and managing habitats to avoid depletion of range resources. The Murchison Falls Protected Area (MFPA) is an example of a rangeland inhabited by wild animals and is managed by Uganda Wildlife Authority.

The presence of Tilenga Project in and around MFPA can exacerbate anthropogenic pressures on the park which potentially affects animal populations and quality of the different habitats. My team is responsible for designing long-term conservation programs to compensate for these impacts and promote co-existence between the project, wildlife, tourism, and communities."

Jennifer Oweka: Biodiversity Engineer - Murchison Falls National Park

Oweka Jenifer holds a Bachelor of Science in Wildlife Health and Management from Makerere University. She joined the team in June 2023 as the Biodiversity Engineer for Murchison Falls National Park. She began her career in Wildlife Management at the Uganda Wildlife Education Centre where she conducted research for her bachelor's degree. She then interned with Uganda Wildlife Authority in Murchison Falls National Park gaining valuable skills in managing protected areas.

Before joining TEP Uganda, she worked as Environment Officer for Pakwach District Local Government for six years where she championed the management of natural resources within the District.

In her words

"I am passionate and committed to contributing to the achievement of the Biodiversity Program vision and the net positive impact targets using my expertise and experience. If these ambitions are achieved, we will be proud to have contributed to the company legacy of sustainable oil and gas within critical habitat."

RANGELANDS SURVEYS AND MONITORING

Since 2012, TEP Uganda has been collecting data on the animals and habitats of Murchison Fall Protected Area (MFPA), starting with the initial baseline studies. The information gathered from these studies offers detailed insights into the ecology and wildlife behaviour of the various species present as well as the pressures exerted on them. This data has been instrumental in enhancing the understanding of the area, contributing to the scientific record and shaping the mitigation measures required to protect and enhance the rich biodiversity of MFPA.

African Buffalo (*Syncerus caffer)*

Elephant Ranging and Stress Level Monitoring

Partners: Uganda Wildlife Authority and Wildlife Conservation Society

UWA rangers performing recollaring operation

In 2013, TEP Uganda and Wildlife Conservation Society (WCS) in collaboration with the Uganda Wildlife Authority began collecting baseline data on elephant movements within Murchison Falls National Park. The goal of this monitoring is to provide insights into the elephants ranging patterns and behaviour during different phases of oil and gas development in the park, located north of the Nile. WCS uses satellite telemetry (radio collars) to study the elephant's home ranges, identifying their movement patterns and critical areas for their long-term survival. Initially commissioned for the exploration phase of the oil development, this monitoring has been ongoing ever since.

This long term program also measures the stress levels of the elephants by collecting and analyzing cortisol (a stress hormone) from their dung. It also provides information on individual elephants that range at the boundary of the protected area, far from the project activities. The monitoring has been split into four phases (Phase I: 2013 to 2015; Phase II: 2015 – 2017; Phase III from 2019 – 2021 and Phase IV from 2023 – 2025) to reflect the different phases of project activity. The monitoring will also continue into the operational phase of the project (post first oil).

So far, the monitoring from Phase I has shown that elephants were moving up to 5km away from areas during the initial seismic and exploration activities but soon returned to their home ranges. Data from Phases II and III shows very little variation in the home ranges of elephants. This indicates that the movements of collared individuals did not change much during the period.

The ranging behaviour of elephants at the park's northern boundary (including those that frequently range outside of the park) also showed little variation during the different phases. This suggests that the behaviour of the collared individuals is more influenced by harvesting patterns and seasonal changes rather than activities inside the park. In October 2023, the Phase IV recollaring operation was conducted with 15 elephants (7 males and 8 females) collared on the Northern bank. The monitoring will soon expand to the southern part of Murchison Falls National Park in an effort to better understand the ranging behaviour of individuals who are frequently moving in and around community areas.

The results are crucial for informing UWA on actions required to mitigate human wildlife conflict issues. Elephants tend to raid crops and can also harm people. Wildlife Conservation Society is developing a Human Wildlife Conflict Intervention Plan for MFPA utilizing the monitoring results. This plan has been commissioned and funded by TEP Uganda and is expected to provide clear guidance on hot spot locations and interventions to reduce human wildlife conflict. Most recently, TEP Uganda is also supporting UWA with its plans to erect wildlife fencing around the protected area. For the first phase, 10km of fencing (funded and supplied by TEP Uganda) will be installed.

Q&A with Dr Patrick Atimnedi Senior Manager Veterinary Services, Uganda Wildlife Authority

Tell us briefly about the elephant collaring operation?

The elephant collaring operation is fascinating but potentially dangerous. It requires an array of advanced preparations, and highly skilled team including wildlife veterinarians, helicopter & fix wing aircraft pilots, drivers, field capture rangers, laboratorians among others.

Additionally, thorough preparation is crucial. This includes importing necessary items such as - narcotic drugs, collars and their accessories and locally purchasing aviation fuels (aviation gasoline & Jet A fuel for fix wing and helicopter respectively), support drugs etc.

At the start, a team briefing on elephant behavior and ecology, health and safety precautions and other essential guidelines is crucial. ,The team is divided into groups with specific tasks assigned to each group.

A central command system coordinating the ground and air teams via ground-to-air radio is critical. Once all the necessary preliminaries are well simulated, the fix wing aircraft heads out to spot an elephant herd, guided by transmissions from functional old collars or other monitoring data. This information is relayed to helicopter and ground team. The ground team then moves towards the herd and informs the helicopter when they are within reach.

The helicopter carrying the veterinarian who has prepared the darting system takes off. A highly potent morphine derivative (etorphine Hcl, 9.8mg/ml) is used in appropriate doses. Once the elephant is, immobilized from the air, ground team moves in, to measure the physiological parameters to ensure they are within range. The collar is deployed concurrently with body measurements, and sample collection .

Once the procedure is complete , a command is issued, for team to retreats. The animal is then revived with Naltrexone Hcl, 50mg/ml and observed from the safety of the vehicles until it gets up and starts moving about, usually within 3-5 minutes. The exercise is repeated until all collars are deployed. Above all, maintaining staff morale is crucial to. ensures team spirit, cohesion and an enjoyable fieldwork experience!

Why is this monitoring important for Uganda Wildlife Authority?

The UWA relies on monitoring data for informed management decision making. Elephants being a keystone species and a major tourism attraction in MFNP require careful observation. Their reactions to different phases of oil and gas development, home range, habitat use, feeding and other behavioral changes are critical for decision making. For instance, if the developments are displacing herds closer to, or on to community land resulting in human-wildlife conflicts (HWC), management must institute appropriate interventions to mitigate these conflicts and address underlying causes in collaboration with stakeholders.

What is the data telling us so far?

Preliminary data indicates that collared elephants along with their herds are utilizing approximately 90% and 50% of their home ranges. Their core home range is primarily in areas close to Albert Nile...Delta, Pakuba, Tangi as well as regions farther from the project footprint like Wankwar and Puniri.

> “The six months data indicates the herds are ranging within both the project footprint and non foot print areas, with no significant displacement that would cause Human Wildlife Conflict. However the collar at Wankwar/ Latoro is one to watch for crop raiding.”

WCS team and UWA rangers undertaking elephant collaring

Carnivore Census

Partners: Uganda Wildlife Authority & Wildlife Conservation Society

The Wildlife Conservation Society (WCS) in collaboration with TEP Uganda conducted the first ever full population census of African lions and Spotted hyena across Murchison Falls Protected Area.

Previous counts of lions and spotted hyena's yielded unreliable estimates due to the methods used. While lions and hyenas were the target species for the survey, leopards were also opportunistically included in the study. The main goal was to provide a comprehensive population census of these carnivores, establish their social structure and determine their spatial distribution. Lions are a keystone species and the dominant predator, playing a crucial role at the apex of the food chain by regulating prey populations. Scavengers like the spotted hyena recycle nutrients in the ecosystem making them important indicators of ecosystem health.

The survey employed camera traps, search encounters and call ups to capture images of different carnivores. These images were then analyzed using specialist software to identify unique distinguishing marks and whisker patterns for accurate population estimates.

Over 113 days the analysis of more than **50,000** images provided population estimates of **206** lions, **249** Spotted hyenas and **71** leopards across the Protected Area. This data is vital for understanding the health of the carnivore populations.

With an estimated total of 206 lions, the population in Murchison Falls National Park is the largest in the country and has potential to increase further, as populations in the Southern Bank are currently at low densities and those in the Northern Bank are not yet at carrying capacity. Other sites have much smaller populations, with 39 lions in Queen Elizabeth Conservation Area and 12 in Kidepo Valley Conservation Area (MTWA, 2024).

Estimated Population Size of some canivores

LION

HYENA

LEOPARD

206

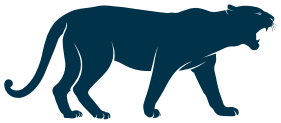
Lion

Panthera leo

249

Spotted hyena

Crocuta crocuta



71

Leopard

Panthera pardus

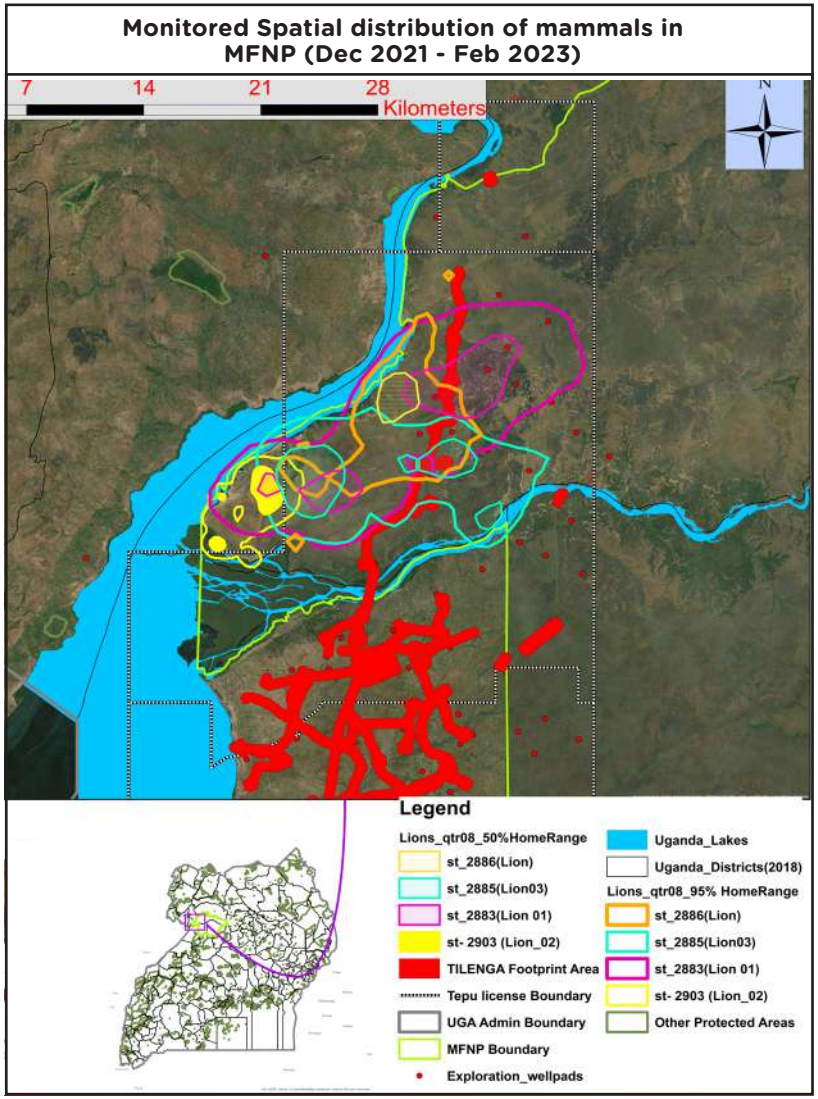
Animal Stress and Ranging Behaviour

Partners: Uganda Wildlife Authority and Biodiversity Solutions Limited

In 2018, TEP Uganda began monitoring other critical habitat qualifying species in collaboration with Biodiversity Solutions Limited (BSL) and the Uganda Wildlife Authority (UWA). The study aims to determine ranging patterns, behavior and stress levels of selected mammal species. This monitoring involves fitting individuals with GPS satellite collars and analyzing fecal cortisol levels, The focus is on Uganda Kob (Kobus kob), Lelwel Hartebeest (Alcelaphus buselaphus), Lion (Panthera leo), and Spotted Hyena (Crocuta crocuta). The goal is to understand how these animals respond to the oil and gas activities in the park, particularly in-terms of changes in their ranging patterns, behaviors and stress-levels. This information helps assess the effectiveness of the mitigation measures being implemented to minimize the impact of the development on wildlife and informs adaptive management. In the latest round of collaring undertaken in March 2024, **24** individuals have been fitted with satellite collars.

The monitoring is showing no significant difference in the ranging patterns, stress levels or behavioral attributes of the individual species when compared to older datasets. This indicates the animals are continuing with their normal way of life irrespective of Tilenga project activities in the park.

BSL team and UWA rangers collaring a lioness



Home ranges of collared lions on the northern bank of MFPA

Vulture Monitoring

Partner: Biodiversity Solutions Limited

TEP Uganda in partnership with Biodiversity Solutions Limited has been monitoring various vulture species across the Murchinson Falls Protected Area. This initiative included a baseline survey conducted from 2019 – 2020, followed by a two year monitoring phase from 2021 to 2023, which focused on movement patterns, identified nesting areas and assess breeding success.

Prior to this study, there was no documented information on vulture breeding areas. The project involved tagging and monitoring of 10 individual vultures including Ruppell's Griffon Vultures (Gypus rueppelli) and African White Backed Vultures (Gyps africanus) in an effort to understand their ranging patterns and behaviors in response to changing environmental factors. It also included quarterly population surveys to estimate vulture abundance and density.

Analysis of the collared vultures revealed these birds traverse vast distances and frequently move between sites within Murchison Falls Protected Area and beyond, reaching as far as Bugungu Wildlife Reserve and parts of North-Western Uganda including the Luku Central Forest Reserve in Arua District (approx. 60km from Murchison Falls National Park).

That data shows that, activities have not impacted the vultures ranging behavior or population numbers in the MFPA:

- The ranging behaviour and daily distances moved by the vultures remained consistent between the baseline and monitoring phases;
- Ruppell's Griffon Vultures move across much bigger areas than African White Backs and frequently traverse between an identified breeding ground in Arua and the park. A fact that was not previously known about these birds
- African White Back vultures remain within Murchison Falls National Park or close to its boundary
- Vultures predominantly preferred open grassland habitats over wooded areas

BSL and UWA teams collaring a Ruppell's vulture (*Gyps rueppelli)*

Aerial Widlife Surveys

Partners: Ecotrends and Dr Richard Lamprey

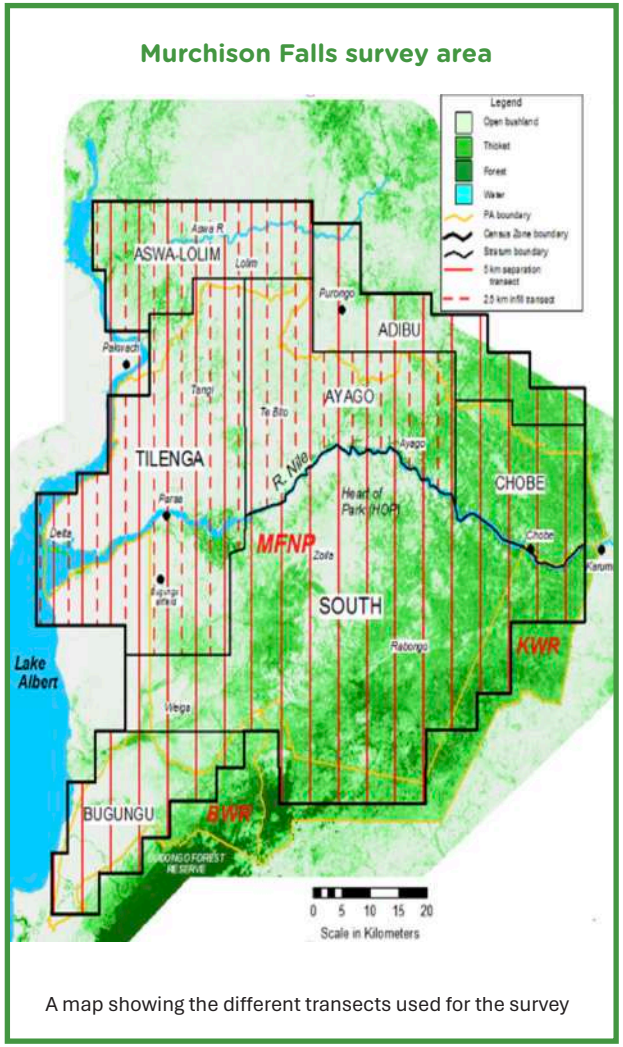
Ecotrends Ltd in collaboration with Dr. Richard Lamprey, an internationally renowned Aerial Wildlife Survey specialist conducted aerial surveys within MFPA and adjacent areas of Aswa-Lolim. The aim of these surveys is to monitor populations and distribution of large and medium sized mammals as well as anthropogenic activities to identify any wildlife responses to oil and gas development activities and apply adaptive measures as necessary for the benefit of wildlife and their habitats.

The survey utilized an aircraft equipped with a large camera port in the floor for two Nikon Cameras. The aircraft flew along pre-determined transects capturing georeferenced images every two seconds. These images were then interpreted and analyzed to estimate the population of the different species. A baseline survey was undertaken by Dr Lamprey in 2015/2016 and the follow up survey was conducted in 2022/2023 using the same methodology and transects. The surveys were scheduled quarterly to capture seasonal trends.

The results of the 2022 / 2023 survey indicate a general decline in the numbers of species such as Lelwel hartebeest, hippo and buffalo whilst recording an increase in the numbers for kob and giraffe.

The results of the aerial wildlife surveys have been subject to independent review and the results shared with Uganda Wildlife Authority. Further ground based monitoring on selected species is planned in an effort to better understand the findings from the survey. Further measures shall then be recommended to UWA for consideration.

Aerial images of Nubian giraffe
(Giraffa camelopardalis camelopardalis)



A map showing the different transects used for the survey

Ecological Research with Makerere University

In 2023, TEPU partnered with Makerere University to fund a Master of Science (MSc) study on the abundance and distribution of Borassus aethiopum Mart in Murchison Falls National Park (MFNP). In recent years, the distribution of Borassus has increased, now appearing in larger numbers in areas predominantly covered by savanna grasslands.

Borassus is widespread throughout areas of tropical Africa requiring a high-water table and is found extensively in MFNP. Borassus has many uses but in Murchison, elephants are the primary users, consuming the fruit and aiding in the tree's distribution through their dung. The wood of Borassus is hard, heavy and resistant to fire, termites and fungi.

Titus Ogwal, a passionate botanist pursuing an MSc in Botany at Makerere University is conducting this study under the supervision of **Associate Professor James Kalema** and **Dr Collins Edward Bulafu**. His research focuses on the influence of Borassus aethiopum Mart on plant diversity.

Why is Borassus aethiopum Mart a problem in MFNP?

This study is ongoing in the Northern Section of Murchison Falls National Park, an area previously characterized by open grasslands, bushed grasslands, and tropical woodlands with a negligible population of Borassus aethiopum Mart (Langdale-Brown 1964).

However, over the past six decades, the population of Borassus has greatly increased spreading across a considerable area of the open grasslands in this section of the park. This increase is a concern for Uganda Wildlife Authority as it is hypothesized that the dense population of Borassus may be suppressing diversity of both flora and fauna. Therefore, this study aims to examine the influence of Borassus aethiopum Mart on plant diversity within Murchison Falls National Park.

How will the results of your work benefit Murchison Falls National Park?

The results of this study will provide a foundation for UWA to develop biodiversity conservation strategies helping to maintain the integrity of MFNP as an ecosystem that supports a vast range of biodiversity. Additionally, the findings will enable early intervention and inform decision making regarding its control and spread.

Additional research studentships awarded in 2024 by TEP Uganda include:

- Molecular identification and characterization of mycotic agents isolated from giraffe skin disease (GSD)
- Dynamics of wild animal interaction with oil and gas facilities and infrastructure
- Effects of Senna (cassia) spectabilis (an invasive) in MFPA and Budongo Forest

Protase Rwanburindore and Titus Ogwal conducting field monitoring

RANGELANDS CONSERVATION ACTIONS

Since the launch of the Biodiversity Program in June 2022, TEP Uganda has been working closely with the Uganda Wildlife Authority, conservation partners and local communities to implement several initiatives in Murchison Falls Protected Area.

L-R Haruna Kiirya - Warden Law Enforcement UWA, David Ochanda - Biodiversity Manager Rangelands TEPU, Denis Muhereza - Head of Intelligence Unit UWA, Isaac Kiirya - Project Manager WCS

Promoting Effective Management of Murchison Falls Protected Area

Conservation Actions

The IUCN Green List Standard for Protected and Conserved Areas:

The IUCN Green List is a globally applicable s:tandard that provides a benchmark for quality motivating improved performance and achievement of conservation objectives. The IUCN Green List is organized into four components of successful nature conservation in protected and conserved areas: Three baseline components

- Good governance
- Sound design and planning
- Effective Management

These baseline components support the fourth component: **Successful Conservation Outcomes** which attests to the achievement of the protected area's goals and objectives. As part of its NPI commitment, TEPU is actively supporting UWA to achieve the Green list standard for Murchison Falls Protected Area.

Effective management of Murchison Falls Protected Area (MFPA) is central to conserving biodiversity and promoting sustainable development in our operational area.

The mission of Uganda Wildlife Authority as outlined in its General Management Plan (GMP) for MFPA is to "conserve, economically develop and sustainably manage the wildlife and protected Areas of Uganda in partnership with neighboring communities and other stakeholders..." These are values that are also shared by TEP Uganda.

Achieving effective management of the MFPA requires significant mobilization of financial and technical resources from public and private sources. It also requires the active participation of local communities by enhancing their wellbeing and resilience. By investing in impactful programs to promote sustainable natural resource usage (fuel, food, livelihoods), TEP Uganda continues to support the ongoing efforts of Uganda Wildlife Authority in addressing major challenges such as poaching and human wildlife conflict.

TEP Uganda has aligned its NPI objectives with those of Uganda Wildlife Authority for Murchison Falls Protected Area and is supporting the evaluation and update of the Murchison Falls Protected Area General Management Plan (GMP). In 2023, UWA conducted an evaluation of the most recent plan (2013 – 2023) with support of TEP Uganda. The GMP is formal document issued by UWA that guides the prioritization of resources required to meet specific conservation goals.

The objectives outlined in the GMP span a 10 year period and are the result of an interactive process involving all stakeholders with an interest in MFPA. The process of updating the GMP is currently ongoing by UWA.

Other activities to support improved management effectiveness include:

- Protected Area Management Effectiveness Assessments were completed across MFPA. These assessments provide valuable insights and serve as a benchmark of performance against the **IUCN Green List for Protected and Conserved Areas.** The results of these assessments are being used to inform the key conservation and management development objectives for UWA;
- TEP Uganda is also Supporting individual programs designed to support law enforcement efforts, enhance habitats and boost tourism.

Nubian giraffe *(Giraffa camelopardalis camelopardalis)*

Ranger Patrol Effectiveness and Snare Removal Program

Partners: Uganda Wildlife Authority and Wildlife Conservation Society

In 2022, the company launched one of its first programs aimed at enhancing conservation efforts in Murchison Falls Protected Area. This program conducted in partnership with Uganda Wildlife Authority and Wildlife Conservation Society focuses on snare removal and improving effectiveness of ranger patrols through the use of the Spatial Monitoring and Reporting Tool (SMART).

Most poaching activities involve wire snares and metal traps to catch mainly antelopes and buffalo. Unfortunately, these snares indiscriminately trap other animals including elephants, giraffe and lions causing immense pain and suffering. To mitigate these threats, UWA's law enforcement team physically searches and systematically removes wire snares and other traps as well as regular patrols and community awareness campaigns.

The aim is to support and build capacity of UWA law enforcement in managing poaching and other illegal activities within the park. The first phase of this program was completed in 2023 and is now in its second phase , being scaled up to cover other areas.

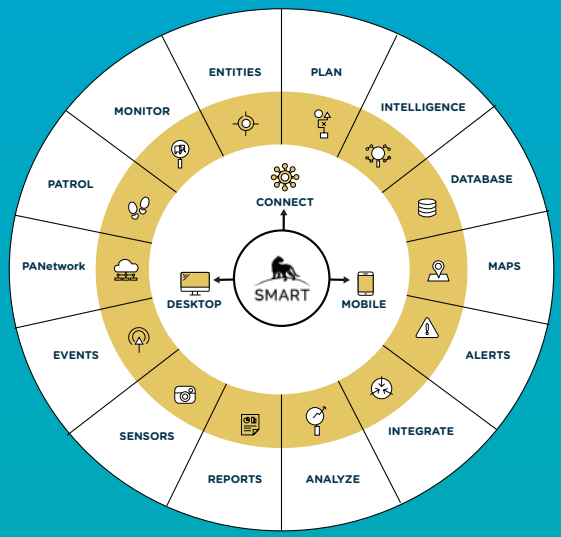
A wire snare dislodged and retrieved by an UWA ranger in Murchison Falls National Park

What is SMART?

The SMART platform consists of a set of software and analysis tools designed to help conservationists manage and protect wildlife and wild places. SMART helps to standardize and streamline data collection, analysis, and reporting, making it easier for key information to get from the field to decision-makers.

SMART supports a broad range of conservation management activities, including biodiversity conservation, law enforcement, tourism and visitor management, natural resources use, intelligence, and performance and threat level assessments.

The approach covers three areas: cutting-edge technology, building conservation capacity, and empowering a global network of SMART conservation practitioners. The SMART Approach is supported by a unique, long-term alliance of leading conservation organizations, offering powerful applications in conservation practice to ensure the survival of the Earth's biodiversity for generations to come.



Poaching indiscriminately affects many different species and increases pressure on the authorities who need to extend their activities to the entire park, to ensure poaching and other illegal activities are mitigated. This is essential for the continued thriving of animal populations, their habitats and tourism in MFNP .. The pilot program involved four main activities:

- Running monthly snare removal, extended patrols and water operations to detect threats to wildlife
- Conducting anti-poaching campaigns through community awareness meetings and radio talk shows
- Procuring SMART connect and IT equipment; and
- Training and equipping UWA Rangers in use of SMART for effective field patrols.

SO far, the program has resulted in:

- **86** arrests from **101** operations (patrols) covering an area of 1837km2,
- The removal of over **3000** wire snares,
- **8** community anti-poaching awareness campaigns, 7 radio talk shows
- Trained **108** UWA staff in the use of SMART connect software

Trap used for snaring large animals such as Buffalo

Invasives Removal Program

Partners: Uganda Wildlife Authority, Biodiversity Solutions Limited and Community Based Groups

TEP Uganda through Biodiversity Solutions Limited in collaboration with the Uganda Wildlife Authority is piloting a one year project to remove invasive species along the Paara-Masindi Road inside Murchison Falls National Park. Parts of the Protected Area are becoming increasingly infested by invasive plants with the impact evident along the roads, and within the park. The most dominant invasive species is ***Chromolaena odorata***, which has altered the composition and vegetation structure of native plants. This species is rapidly dominating and modifying parts on the Southern bank and has also been detected colonizing several spots north of the Nile and within several footprints of the Tilenga Project.

The aim of the pilot study is to test different ways of eradicating the species and determine the most effective methods for managing it through field based experimental plots. The pilot will provide key recommendations for to UWA for its ongoing management. The pilot project is led by Biodiversity Solutions with the support of local communities.

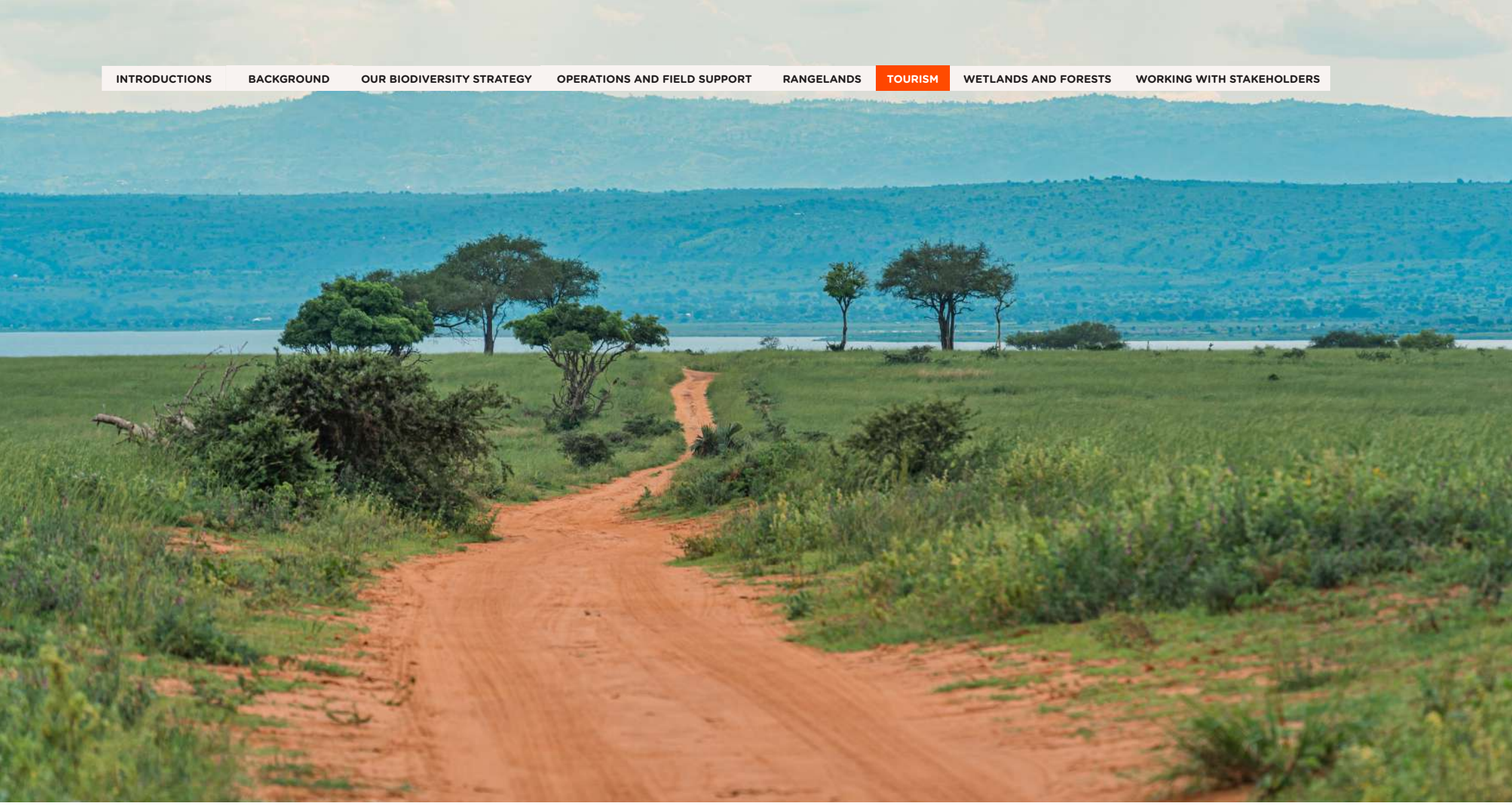
Methods being tested include controlled burning (undertaken by UWA) mechanical and manual removal with the support of community based groups. This approach ensures knowledge transfer to local communities, empowering them to manage invasives on their own lands using scientifically proven methods.

The pilot commenced in February 2024 and to date, a total area of **18,409** square meters has been cleared, with **3,214** colonies uprooted. The results of the pilot will serve as a key input to the Habitat Modification Plan, which is currently under development for the entire MFPA.

Community members clearing Chromolaena odorata

Resprouting of Chromolaena odorata after few days

Chromolaena odorata regermination after clearing and uprooting.



6 TOURISM

Supporting Development of Tourism Sector

Tourism is a vital economic resource for Uganda. In 2019, the sector contributed 1.37bn USD directly to the Ugandan economy and attracted over 1.5M foreign visitors. However, the COVID 19 pandemic had a significant impact with international tourist numbers drastically dropping to 473,085 in 2020. Although the number of visitors (both domestic and foreign) are steadily recovering, much work remains to return to pre-COVID levels and ensure the long term prosperity of the sector. The Lake Albert region is home to 10 of Uganda's 22 protected areas (national parks and wildlife reserves) and is a critical part of sustainable development for the region. In 2023, the Petroleum Authority of Uganda (PAU) commissioned a study to support evidence-based planning and decision making on how the tourism industry can leverage opportunities presented by the oil and gas sector to diversify Uganda's economy and create lasting socio-economic value[2].

In support of this vision, TEP Uganda launched several initiatives in 2023 and 2024 as part of the company's Tourism Development Strategy. This demonstrates our commitment to supporting the sector at local, regional and national level. This support focuses on engaging with external partners and adding value through the development of community based tourism as well as creation of a visitor centre near the Tilenga project area. Feasibility studies are currently ongoing in both these areas.

Pearl of Africa Tourism Expo 2024

This year, TEP Uganda was proud to be one of the main sponsors for the 8th annual Pearl of Africa Tourism Expo (POATE) held at Speke Resort, Munyonyo. Organized annually by the Uganda Tourism Board (UTB) this tourism and travel trade show brings together value chain actors and stakeholders from around the globe to collectively promote and share knowledge on tourism in Uganda. The theme for this year was "Responsible Tourism". According to the UN World Tourism Organization "Sustainable tourism meets the needs of present tourists and host regions while protecting and enhancing opportunity for the future. It is envisaged as leading to the management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems."

2. https://www.pau.go.ug/download/linkages-between-the-oil-and-gas-and-other-sectors-of-ugandas-economy-opportunities-and-challenges/

Explore Uganda Mobile Application

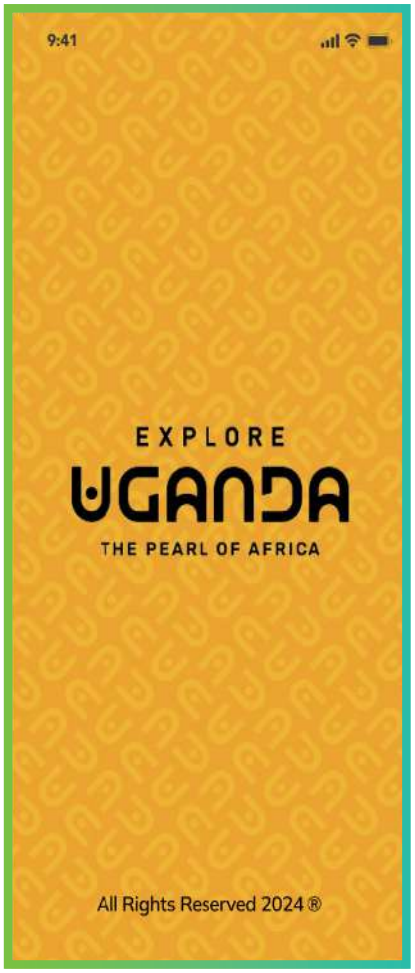
Partners: Uganda Tourism Board, Kolaborate and Outbox

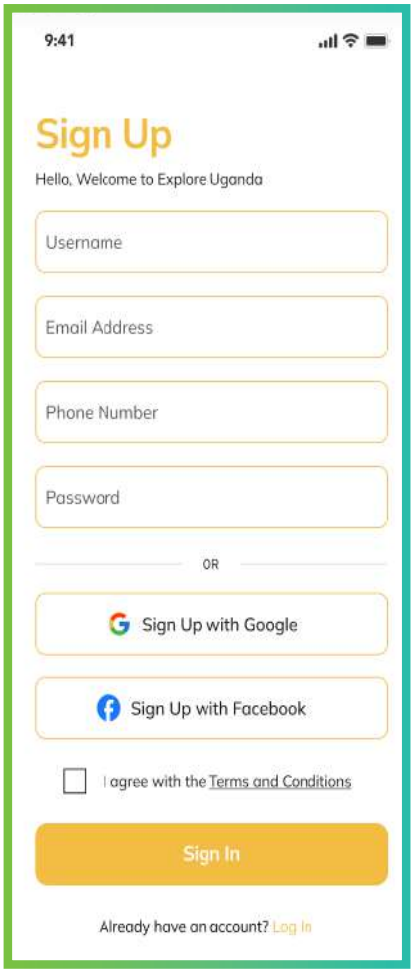
In March 2024, TEP Uganda pledged support to the Uganda Tourism Board (UTB) in its mission "to sustainably promote Uganda as the preferred tourist destination for inclusive development".

Supporting the growth and enhancement of the tourism sector aligns perfectly with the strategic vision for oil and gas development in the country and is an integral part of TEP Uganda's commitment to sustainable development.

To mark the start of this partnership, TEP Uganda collaborated with UTB, Koloborate (an online marketplace that connecting creatives and software developers across the region) to develop the Explore Uganda mobile application. This app is anticipated to enhance outreach for the tourism industry in Uganda. The app will provide essential information for both foreign and domestic tourists, potential investors and provide a platform for tour and hotel operators to showcase their products.

The app is expected to be launched by Uganda Tourism Board in October 2024





Q&A with Pearl D. Gakazi Team Lead at Kolaborate

Tell us a little bit about yourself and Kolaborate.

I am Pearl Gakazi, a passionate advocate for Africa's digital economy and the founder of Kolaborate Platforms. With a BA in Business Administration and an ongoing MBA, my journey has been shaped by a commitment to bridging digital divides and empowering marginalized communities. Kolaborate Platforms is a talent marketplace dedicated to connecting African youth and women, particularly those in the tech sector, creative industries and digital media with global opportunities. We leverage advanced technology, including AI-driven tools, to create efficient and inclusive job-matching experiences.

Our platform is driven by three core values: being an Africa-first platform, focusing on demand-driven solutions, and democratizing access of opportunities to empower historically marginalised talent, including refugees. By providing digitally transferable skills and facilitating entry into gainful online remote employment, we aim to transform the digital employment landscape in Africa.

How did you find out about TotalEnergies and the work they're doing in tourism development?

I first learned about TotalEnergies' initiatives in tourism development through an event organized by Club d'Affaires de Kampala (CAK). Initially, it was a high-level introduction, but later, a meeting with Pauline Macronald, her team, and Prakash Krishnamachari provided detailed insights into their remarkable conservation work in partnership with the Uganda Tourism Board. This exposure highlighted various avenues to empower local Ugandan talent, especially women. TotalEnergies' commitment to sustainable development and job creation resonated deeply with our mission at Kolaborate Platforms. Their innovative approach to integrating energy projects with tourism development while leveraging technology stood out as a model for inclusive economic growth. This motivated me to further explore their work and consider potential synergies that could enhance our efforts in promoting digital literacy and job creation for Ugandan youth, with a focus on women.

What is your project all about?

Our project focuses on improving digital literacy among women and youth in Uganda. We aim to equip women aged 18-40 and youth aged 15-24 with the skills needed to effectively use digital tools and access online educational and economic opportunities. The project includes conducting digital literacy workshops, providing hands-on training with computers and mobile devices and soft skills equipping. By leveraging our expertise in digital platforms, training and job matching, we seek to increase digital literacy rates by 50% within one year, thereby enhancing these communities' ability to participate in the digital economy.

Notably, this project has trained highly capable young women who are now developing the National Tourism App on behalf of the Uganda Tourism Board (UTB). This app aggregates all stakeholders to simplify and improve tourists' experiences as they explore Uganda. TotalEnergies EP Uganda, under the stewardship of Ms. MacRonald, has deeply supported this project both financially and strategically.

What value do you think this project will bring for Uganda?

This project will have a transformative impact on Uganda by empowering women with essential digital skills. It will bridge the digital divide, providing marginalized communities with the tools and knowledge needed to access online education, employment, and entrepreneurial opportunities. By enhancing digital literacy, we are not only improving individual prospects but also fostering economic growth and social inclusion. Particularly in the tourism sector, the app, once completed, will bring tremendous national pride, increase tourist retention, and empower everyone in the tourism value chain, from operators to hotels. We are intentionally designing the app to attract investors into the country, which will ultimately bolster our economy.

Murchison Falls Tourist Track Upgrades

Partners: Uganda Wildlife Authority, Pearl Engineering, Prand Engineering

"Murchison Falls National Park received 145,116 visitors in the year 2022 -2023, a 24% increase from 2021-2022 numbers." - UWA Annual Physical Performace Report, July 2022 - June 2023

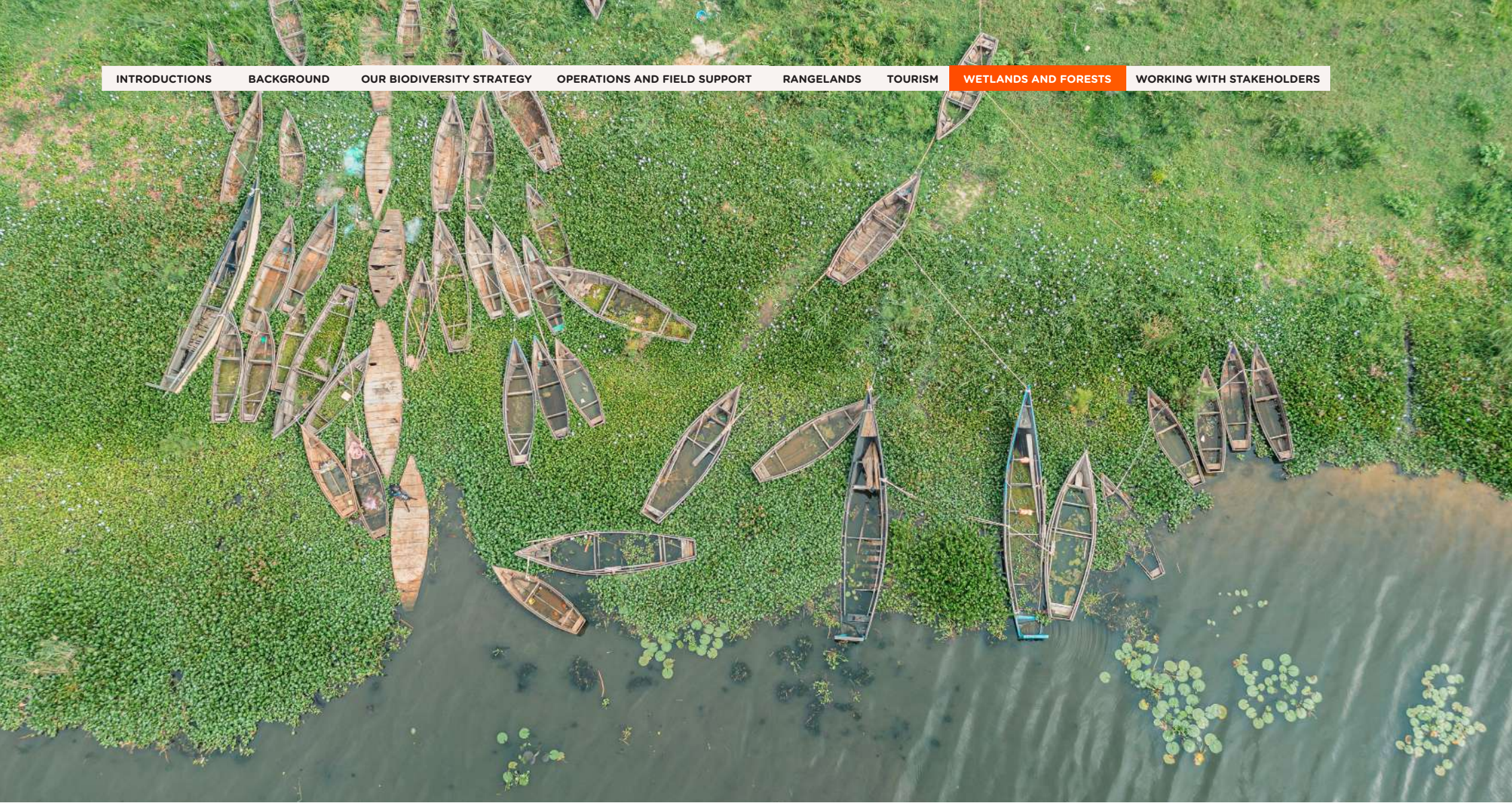
In January 2023, TEP Uganda launched a program in collaboration with Uganda Wildlife Authority to upgrade tourism tracks with Uganda Wildlife Authority. The program is aims to support in enhancing the existing infrastructure and minimizing disturbance to tourists during the ongoing Tilenga construction activities. Most safaris take place on the northern back (north of the White Nile River) where the majority of wildlife can be viewed by tourists on game drives.

Safari tracks on this area side include Buligi, Pakuba, Queen's, Victoria and Albert tracks. By opening up new areas and repairing damaged sections of track, UWA hopes to diversify the game viewing opportunities for tourists and provide more incentives for them to extend their stay .

The first track (Buligi-16km) was completed by Pearl Engineering and opened in July 2023. This track offers numerous opportunities to view large numbers of giraffe, buffalo and antelope. Currently, work is ongoing on a 10km section of the Albert Track by Prand Engineering Ltd. This track provides breathtaking views of the Blue Nile and great opportunities to view birds, hippo, elephants and lion. However, this area is currently impassable due to the collapse of the bridge crossing the Katuna River.

The upgrade includes construction of a new bridge and repairs to the existing track. This upgrade will complete the circuit of the Albert Delta improving the animal and scenic viewing experience for tourists. The track upgrade program is a long-term commitment of TEP Uganda aiming to diversify opportunities in other areas of the park both on the northern and southern banks. With animal populations increasing on southern side of the park, UWA wishes to make this area more accessible to tourists.

Tourists enjoying evening game drive along the new section of the Buligi track



7 WETLANDS AND FORESTS

Delivering a Net Positive Impact for Wetlands and Forests

The Wetlands and Forests team is responsible for delivery of TEP Uganda's NPI commitment for Pillar 3 – Conserving and Restoring Wetlands and Riparian Vegetation and Pillar 4 – Conserving and Restoring Forests and Forest Connectivity. This team specializes in a blend of activities aimed at conserving and protecting these critical ecosystems. Their work involves creating partnerships with Government entities at national, district and local levels responsible for the protection of wetlands and forests. They also collaborate closely with community-based organizations, conservation NGOs and other funding partners. The ultimate aim is to mobilize and consolidate resources to collectively improve the quality of wetland and forest habitats for the conservation of critical species such as the Grey Crowned Crane (Uganda's national bird) and Eastern Chimpanzee (man's closest relative).

Objective:
Collaborate with Ministry of Water & Environment and local communities to build resilient wetland ecosystems in **Murchison Falls Albert Delta** and **Lake Albert**

Net Positive Impact Targets by 2045:
- Maintain >75% of wetlands in Murchison Falls Protected Area with demonstrable reduction in threats
- Improve quality wetlands outside of Murchison Falls Protected Area to 60%. To be achieved through securing important remaining wetlands and restoration of c500ha of degraded wetlands along Lake Albert
- Improve freshwater quality

Activities:
- Supporting Ministry of Water and Environment to ensure effective management of critical wetlands along Lake Albert
- Collaborating with conservation NGOs and local communities to promote sustainable usage of critical wetlands
- Identifying and restoring degraded wetlands
- Implementing a water quality monitoring program

Objective:
Collaborate with National Forestry Authority, joint venture partners and local communities to protect and restore the Budongo - Bugoma Forest Corridor for conservation of eastern chimpanzees.

Net Positive Impact Targets by 2045:
- Protect priority habitat within NFA managed forests: Budongo Central Forest Reserve (35,000ha) and other Forest Reserves in the corridor (27,000ha)
- Maintain forests on private lands (10,000ha)
- Restore degraded forests and riverine corridors (1000ha)
- Increase population and area of occupancy of eastern chimpanzees

Activities:
- Collaborating with NFA and Community Forest Management groups to improve management effectiveness of Budongo and other important forest reserves
- Securing remaining forests on private lands
- Supporting local communities in restoring degraded forests and riverine corridors
- Developing a landscape chimpanzee action plan for North Albertine Region

Staff Profiles

Nebat Atuhura Kasozi: Biodiversity Manager Forests and Wetlands

Nebat currently serves as the Biodiversity Manager for Forests and Wetlands, having joined the team in January 2023.

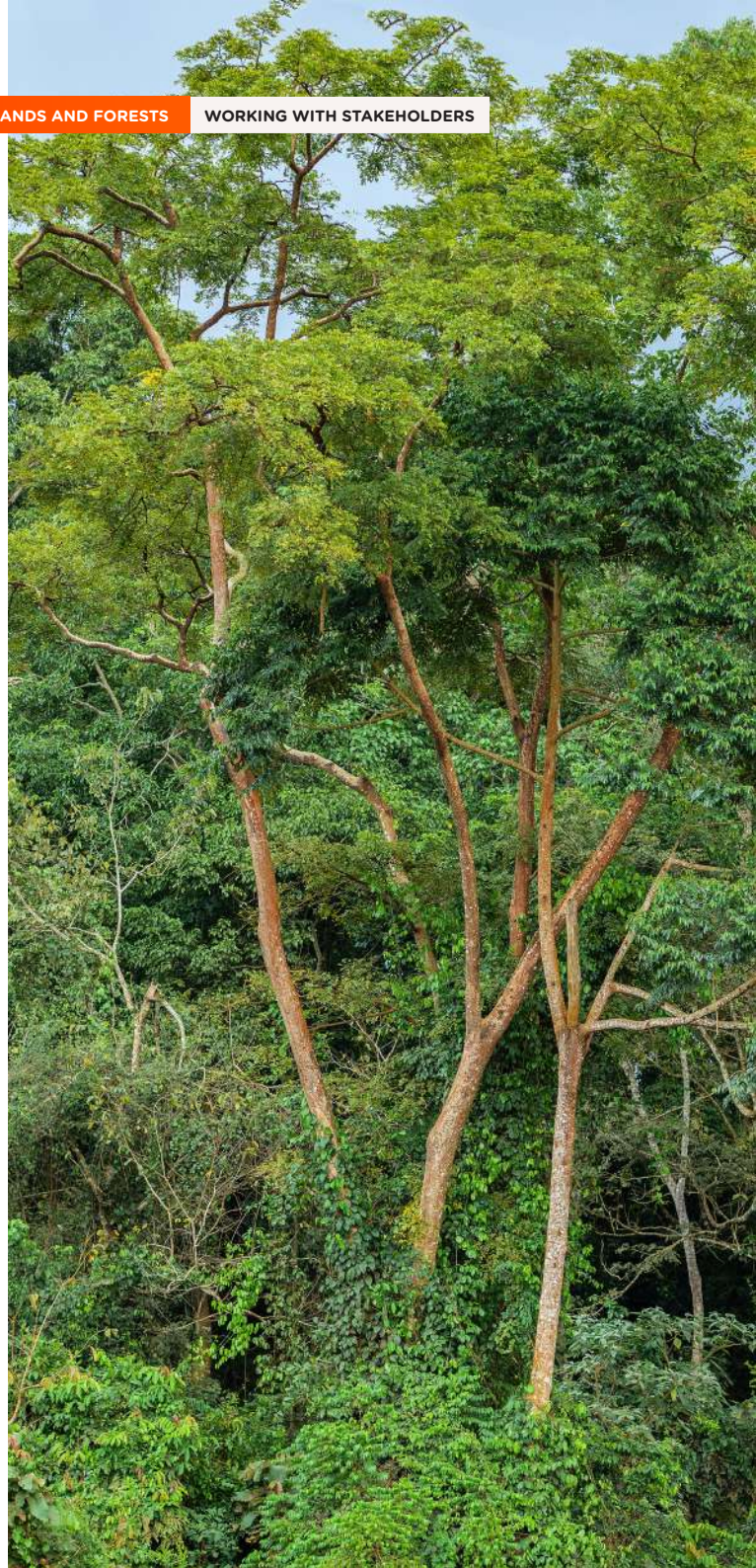
Education: He holds a master's degree in Conservation Leadership from the University of Cambridge and a Bachelor of Science in Environmental Science from Makerere University.

Passion: Nebat is dedicated to conserving wildlife habitats, particularly forests and watersheds.

Experience: With 15 years of experience in the Northern Albertine Landscape, he is well acquainted with key stakeholders and frontline communities. His career has heavily involved chimpanzee, forest, watershed and community conservation efforts, a commitment shared by TEP Uganda, our joint venture partners (CNOOC Uganda Limited and UNOC) and EACOP to protect/ conserve habitats and species therein.

Lilian Kempango: Biodiversity Engineer Forests & Wetlands & NBS

Lilian holds a master's degree in Natural Resources Management and Development from Cologne University of Applied Sciences and a Bachelor of Science in Agricultural Land use and Management from Makerere University. Since March 2024, she has held the position of Biodiversity Engineer for Forests and Wetlands. Lilian's career reflects her commitment to sustainable natural resource use and management for social and economic development. At TEP Uganda, she is passionate about fostering partnerships among stakeholders to create innovative strategies for conserving and revitalizing forests and wetlands in a unique and delicate Albertine Landscape in line with the Net Positive Impact commitments of the Tilenga project.



WETLANDS SURVEY AND MONITORING

Lake Albert and fringing wetlands, including The Murchison Falls Albert-Delta (MFAD) Ramsar Wetland and Waiga/Waisoke River floodplain as well as many other rivers and swamps contain significant populations of indigenous fish species and are important for birds. As part of its commitment to conserving and restoring wetlands, TEP Uganda has launched several surveys to obtain accurate information on the baseline conditions and also to assess the level of degradation of wetland areas in the region.

Bask of Nile crocodiles on the banks of River Nile
(Crocodylus niloticus)

Biodiversity Baseline Surveys of Lake Albert Wetlands

Partner: EcoTrends Limited

In 2023, biodiversity surveys were conducted by EcoTrends Ltd over a period of one year, covering two wet seasons and two dry seasons. These surveys were carried out in 11 key wetlands (Sambiye, Ngazi, Waiga, Zoleya and Kasemene-Lake Albert Interface, Waki, Waisoke, Rwamutonga, Sonso, Hoimo and Wambabya). The surveys included assessments of water quality and flow characteristics, plants/ vegetation cover, fish, macroinvertebrates, herpetiles (amphibians and reptiles), and birds. These areas serve as indicators of habitat quality and play a critical role in future monitoring and conservation strategy development.

The surveys provided key information on the following:

- Presence of key species in several wetlands including the Grey Crowned Crane, nearly threatened Papyrus Gonolek and nearly threatened Bateleur.
- Migratory bird species include the Dwarf Bittern, Wood Sandpiper and African Openbill;
- Establishment of baseline water quality parameters to understand the biophysical and biochemical characteristics of the habitat.
- Detailed descriptions of vegetation cover documenting key threats such as cultivation which presents opportunities for restoration, in collaboration with communities.
- Identification of key habitats for avoidance to minimize the project's impacts on wetland resources.

Grey crowned crane *(Balearica regulorum)*

Murchison Falls Albert Delta Ramsar: Land Use Mapping and Degradation Assessment

TEP Uganda Biodiversity Field Team

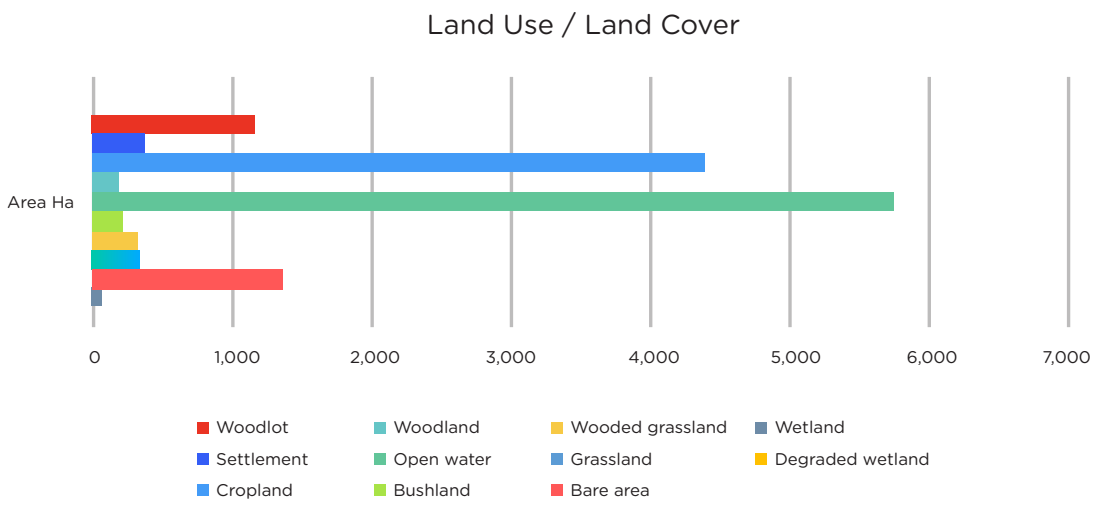
In 2023, the TEP Uganda Biodiversity Field Team conducted a land use and landcover assessment of the Murchison Albert Delta Ramsar using drone technology. The assessment aimed to capture baseline information on the extent of disturbance exerted on the wetland ecosystem by human activities such as agriculture, grazing and settlements on wetland habitat and associated biodiversity.

The results of this assessment are being used to target specific areas of intervention across the Ramsar site. This information is a key input for designing the long-term conservation activities and associated monitoring program which will be incorporated into the Community-Based Wetland Management Plan for the Murchison Falls Albert Delta Ramsar Site.

In 2024 this study is being extended to cover the wetlands along Lake Albert. The findings shall be used to target specific areas for intervention under the wetlands program.

The largest landcover types by area (ha) are open water and wetland at **5764ha** and **4408ha** respectively. Most of the area is within the Delta and is characterized by floating vegetation and papyrus swamp. Additionally, a significant area covering **437ha** is cropland primarily concentrated on the southern bank.

Based on the assessment findings, most of the northern bank of the White Nile is within Murchison Falls Protected Area (MFPA) and remains intact with natural vegetation such as woodland, bushland and grassland. However significant areas in the southern bank have been degraded mainly by small-scale cropland. In areas where natural vegetation still exists, there is an increasing conversion to cropland. primarily due to the presence of water that supports year round agriculture (mainly horticulture).



WETLAND CONSERVATION ACTIONS

The wetlands of Murchison Falls Albert Delta and Lake Albert are critically important to a wide range of fish and bird species. TEP Uganda is working to help protect and restore these wetlands for benefit of biodiversity and local communities.

Cattle Egrets (*Bubulucis ibis)*

Working with Ministry of Water and Environment to Conserve Wetlands

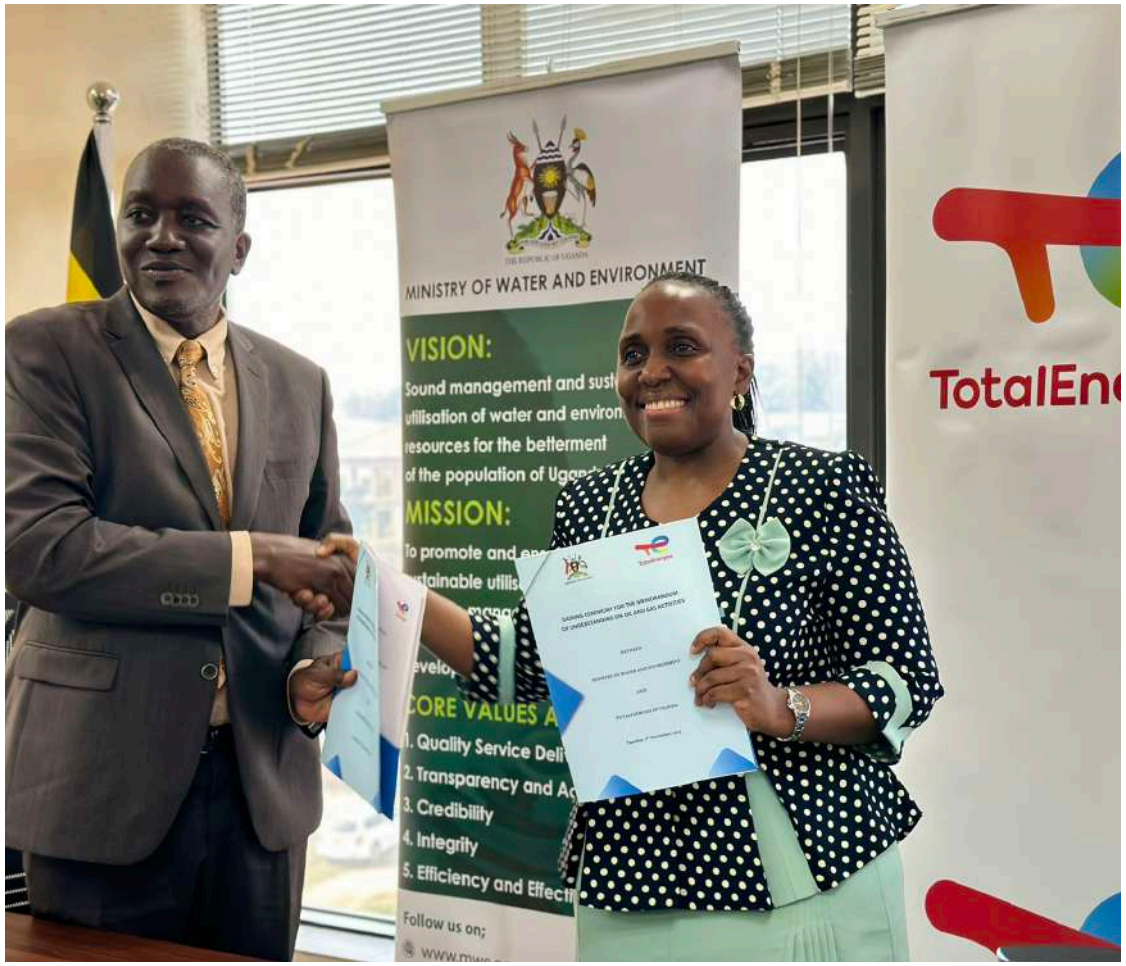
Collaboration with Ministry of Water and Environment

On 7th November 2023, TEP Uganda signed a Memorandum of Understanding (MoU) with Ministry of Water and Environment. This MoU is specifically designed to mobilize policy makers, regulators and financial/technical resources to conserve and restore wetlands and riparian vegetation within the Lake Albert Region. This five year framework MoU marks the beginning of a partnership to develop and implement various activities designed aimed at achieving net positive impact through establishment of community best wetland management practices.

This initiative focuses on a collaborative partnership with the Ministry of Water and Environment and host communities to formally demarcate critical wetlands, restore degraded areas, improve freshwater quality, and promote the principles of wise use.

The MoU has formalized the appointment of the Lake Albert Wetlands Task Force led by MWE Assistant Commissioner for Wetlands (Ms Lucy Iyongo). Other members include technical teams from the Petroleum Authority of Uganda , District Local Government and TEP Uganda. The taskforce's mandate is to identify, develop and formally recommend joint initiatives for the preservation of wetland resources.

During the signing, MWE Permanent Secretary Mr. Alfred Okot Okidi, noted "Wetlands are the most vulnerable ecosystems and also the quickest to recover when restoration is undertaken well. Wetland restoration results can be achieved in under 12 months compared to forest restoration. Communities are part of the solution primarily to solve the problem and also ensure restoration efforts are sustained."



Permanent Secretary Mr. Alfred Okot Okidi, MWE and Ms. Mariam Nampeera Mbowa, Deputy General Manger TEPU during MOU signing

Conservation and Restoration of Murchison Falls Albert-Delta Wetland System

Partner: Nature Uganda

TEP Uganda has recently received approval to commence its first project aimed at conserving and restoring wetlands. This project will be implemented by Nature Uganda with support from the Petroleum Authority of Uganda, Ministry of Water and Environment (MWE) and local communities. The project focuses on the following objectives:

- **Objective 1:** Update the Community-Based Wetland Management Plan for Murchison Falls Albert Delta Ramsar Site. This will involve detailed stakeholder engagement and community consultation, formal review and update of the existing plan.
- **Objective 2:** Ensure sustainable planning and management of the Murchison-Delta Ramsar site. This will involve establishing, training and equipping Community Wetland Management Committees (CWMCs) for effective Ramsar site management and conservation over the period of the management plan (minimum of five years).
- **Objective 3:** Promote collaborative restoration of degraded patches of the Ramsar through restoration of 30 hectares which includes backfilling drainage channels in identified degraded areas and managing and controlling invasive species
- **Objective 4:** Build capacity and raise conservation awareness. This includes conducting a knowledge, attitude, and practices (KAP) assessment, along with training and sensitization campaigns and designing and distributing educational materials.

This project shall provide a sound basis for TEP Uganda to progress towards achieving Biodiversity Net Positive Impact for Murchison Falls Albert Delta (MFAD) wetland.

The project deliverables are:

- Policy products such as the wetland management plan, to guide conservation efforts for the Ramsar site;
- Knowledge and awareness products to foster a mindset change in communities towards protecting wetlands and reducing pressure on them
- Maps providing a baseline of the total Ramsar area vs degraded areas facilitating wetland demarcation.
- Restoration of the degraded areas;
- A baseline report for the Murchison to identify threats and assess wetlands quality.

FORESTS SURVEY AND MONITORING

Budongo Central Forest Reserve supports a well-studied population of eastern chimpanzee numbering 600 - 800 individuals. It is also home to several bird species with restricted ranges such as Nahans Francolin which are not found outside the forests of the North Albertine region.

Bugoma lies to the south of Budongo situated on top of the escarpment overlooking the Albertine Rift Valley. It hosts a variety of forest dependent animals including two globally threatened bird species Nahan's Francolin and Grey Parrot and supports another significant population of eastern chimpanzee (~400 individuals).

The corridor connecting Budongo and Bugoma CFRs consists of a mixture of cropland, degraded tropical high forest, agricultural land smaller forest reserves and private forests. Estimates suggest that around 300 chimpanzees live within this corridor between the main forest blocks.

The chimpanzees in this area face numerous threats. They tend to move along riverine corridors between the main patches of forest which are significantly degraded by cropland and can lead to human wildlife conflict. In addition, the construction of road infrastructure poses further challenges.

To address these issues, the forests and wetlands team is working closely with research partners and the National Forestry Authority to study this population of chimpanzee and their habitats. The results of these studies will inform the nature and extent of conservation actions required to ensure their long term suvival.

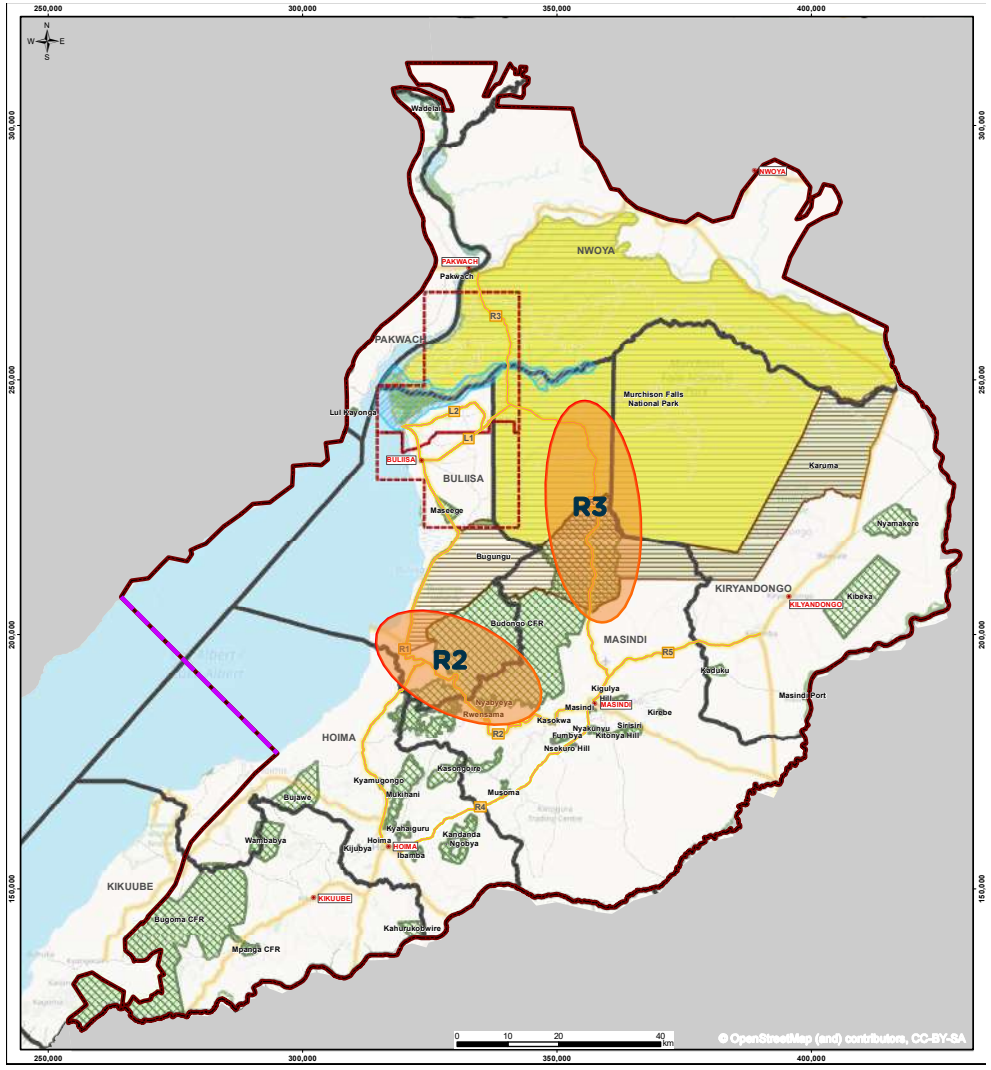
SURVEY OF CHIMPANZEE COMMUNITIES ALONG NATIONAL ROADS

Partner: Biodiversity Solutions Limited

The Ugandan government, through the Uganda National Roads Authority (UNRA), is constructing critical roads to facilitate the development of oil and gas resources in the Albertine Region. As a key stakeholder, TEP Uganda is cognizant of the possible implications of linear infrastructure in habitats supporting key species such as eastern chimpanzee. Two roads are being built and upgraded: R2 (Masindi-Biiso Road through Budongo Central Forest Reserve in the Busingiro block) which is still under construction and R3 (Kisanja-Park Junction-Buliisa Road which is now complete. In partnership with Biodiversity Solutions Ltd, TEP Uganda conducted a comprehensive baseline survey to gather data on the impacts of road construction on chimpanzee communities along the two roadways. The survey covered all forested areas within in the landscape, adjacent to the two roads, including community areas within the corridors bordering Budongo Central Forest Reserve, riverine forest fragments located within local communities and Murchison Falls National Park.

The aim of the study was to establish the chimpanzees' spatial and temporal use of the different forest sectors along the transects adjacent to the two roads with emphasis on documenting their crossing points, and establishing the size and composition of their communities/groups specific to the areas affected by road construction activities. Recommendations of the survey have been shared with UNRA and ARRC taskforce for further discussion.

The monitoring captured **534** direct sightings of chimpanzee, **246** indirect sightings and another **28** mammal species sharing the same habitats along the two roads. Incidents of chimpanzees were highest in isolated forest patches along R2 as well within the main forest block itself. The next phase of monitoring is set to commence in July 2024.



What is genomics?

Genomics is the study of the genome, which is the complete genetic makeup of an individual. It helps us understand the function of genes, identify variations in the DNA sequence and can inform conservation actions by identifying high levels of inbreeding or low adaptive capacity.

Eastern Chimpanzee (Pan troglodytes schweinfurthii)

Chimpanzee Genomics Study

Partners: Bulindi Community Conservation Project, East African Crude Oil Pipeline, TotalEnergies Biodiversity R&D, University of Pompeu, Barcelona

In 2024, a study was launched to examine the genetic distribution of different chimpanzee populations across the forest corridor. This three year study involves the collection of chimpanzee DNA from fecal samples. The samples are then analyzed to study genomic sequences and will allow for insights into many biological questions such as understanding the genetic relationships between the chimp populations as well as health and disease factors.

Chimpanzees are a genetically diverse species which is very important for their long term health and viability. The study involves the collection of fecal samples and related data for the entire chimpanzee population in the greater Budongo - Bugoma landscape. Year 1 will be devoted to sampling the "corridor" chimpanzee populations with sampling of the larger Budongo and Bugoma populations planned for Years 2 and 3.

The overall aim is to elucidate, for the first time, the genetic characteristics of the entire population. It will generate new valuable data on the abundance, effective population size and population structure of this iconic species. This information will be crucial in determining appropriate conservation strategies as well as detailed information on the impacts of anthropogenic barriers on female migration and gene flow.

The samples will be collected by the Bulindi Community Conservation Project team and transported to a specialist laboratory in Barcelona, Spain for analysis. The results will then be reviewed by an expert panel of geneticists and primatologists in order to make formal recommendations.

Most recent studies estimate there are over 2000 chimpanzees in the Budongo-Bugoma landscape

Chimpanzees and Humans share a surprising 98.8% of their DNA.

FORESTS CONSERVATION ACTIONS

TEP Uganda launched several programs aimed at conserving existing forests and restoring degraded forest patches in the Budongo – Bugoma Forest Corridor. Central to our program is the promotion of conservation with local communities as well as enhancing capacity to help protect the main forest units within the corridor. Forests in the region are under major threat of deforestation from illegal logging, pit sawing and charcoal production whilst the connecting corridors are being converted for agriculture. Through its' program, TEP Uganda hopes to reverse this trend, boost efforts for conservation of chimpanzees and other forest dwelling animals whilst harnessing benefits for local communities.

Olive Baboon *(Papio anubis)*

Working with National Forestry Authority to promote Forest Conservation

Collaboration with National Forestry Authority

On 16th June 2023, TEP Uganda signed a five-year Memorandum of Understanding (MoU) with the National Forestry Authority (NFA) to conserve Budongo Central Forest Reserve, the largest mahogany forest in East Africa. This MoU aims to mobilize policy makers, regulators and financial/technical resources to conserve and restore forests and enhance forest connectivity for the benefit of communities and biodiversity.

This five-year commitment marks the beginning of a partnership to deepen the understanding of Budongo Central Forest Reserve, raise awareness of its immense biodiversity value and support the NFA in its strategic objectives to improve management of forest reserves.

This agreement provides for the constitution of a task force to guide the collaboration between NFA and TEP Uganda in developing interventions that will be implemented under the Pillar 4 of the Biodiversity Program.

Activities launched under the MoU so far include:

- Management Effectiveness Assessment of Budongo Central Forest Reserve
- Launch of the Patrol effectiveness program for Budongo Forest with Wildlife Conservation Society
- Development of a Forest Management Plan for the restoration and protection of Maseege Forest Reserve

Executive Director of NFA, Mr Tom Okello and Ms. Mariam Nampeera Mbowa, Deputy General Manager of TotalEnergies EP Uganda at the MoU signing ceremony 16th June 2023

Joint Patrol Effectiveness Program within Budongo Central Forest Reserve

Partners: National Forestry Authority, Wildlife Conservation Society, Community Forest Management Groups

In March 2024, TEP Uganda in partnership with WCS launched the joint patrol effectiveness program for Budongo. The forest faces significant challenges from illegal activities within such as clearing of forest for agriculture, pit-sawing, hunting and timber extraction. Budongo is managed by the National Forestry Agency (NFA) and some areas are collaboratively managed with Community Forest Management (CFM) groups.

Collaborative Forest Management aims to establish a mutually beneficial relationships between eligible local community groups and the governing authority. The CFM group takes on specific responsibilities such as forest patrolling in exchange for specific benefits like access to forest resources and forest land for tree growing. The program is supporting six CFM Groups around Budongo including:

- North Budongo Conservation Association (NOBFOCA)
- Budongo Good Neighbour Conservation Association (BUNCA)
- Kapeeka Integrated Community Development Association (KICODA)
- Nyantonzi Kasenene Environmental Conservation Development Association (NECODA)
- Siiba Environment Development Association (SEDA)
- Karijibu Forest Adjacent Community Association (KAFACA)

The program objectives are to provide equipment, training and support to the CFM Groups and to work alongside the NFA to develop and implement a strategic patrolling plan for Budongo using SMART (Spacial Monitoring and Reporting Tool). The program shall run for a period of 14 months. So far, a needs assessment has been conducted, training on the use of SMART has been completed and the procurement of necessary equipment is ongoing. Work has commenced on the strategic patrolling plan.

Corridor Restoration Program

Partner: Ecotrust

In July 2022, TEP Uganda commenced Phase I of the Corridor Restoration Program with The Environmental Conservation Trust of Uganda (ECOTRUST), a not-for-profit organization established in 1999 to conserve biodiversity and enhance social welfare through innovative and sustainable environmental management. ECOTRUST provides conservation finance to thousands of smallholders engaged in restoration as business in rural communities, drawing on its flagship Trees for Global Benefit (TGB) program.

TEP Uganda seeks to restore approximately 1000 ha of tropical high forest to maintain connectivity between different forest blocks as part of its net positive impact commitments for Tilenga Project. During the first phase, the program distributed 140,000 seedlings of indigenous tree species on individual farmlands and communal lands in Hoima and Masindi districts creating linkages for Kasongoire FR, Mukihani FR, and Budongo CFR.

By the end of Phase I the following objectives were achieved:

- Distribution of **140,000** tree seedlings across linkages 5,6 and 7
- Replanting **350ha** of degraded habitats
- Participation of **6** Communal Land Associations, and **120** individual farmers

Phase II of the project which aims to reforest the full **1000ha** target is currently under development.

Conservation Education and Awareness Program

Partner: Chimpanzee Sanctuary and Wildlife Conservation Trust

In June 2022, TEPU partnered with Chimpanzee Trust - a Ugandan not-for-profit, organisation founded in 1998 as an international collaborative conservation effort to establish a chimpanzee sanctuary on Ngamba Island in Lake Victoria. Since 2005, Chimpanzee Trust has focused on chimpanzee centred environmental conservation, the care & welfare of rescued chimpanzees, raising public awareness of broader conservation issues with chimpanzees as a flagship species, and engaging with communities living alongside chimpanzee populations.

TEP Uganda's partnership with Chimpanzee Trust aims to implement a conservation education and awareness project both in schools around Budongo and through radio dramas to raise public awareness among local communities. The project supports nature clubs in schools, enhances knowledge, improves attitudes, and promotes practices to mitigate biodiversity loss around Budongo Central Forest Reserve.

A **30 episode** radio drama aired on Biiso FM, one of the most effective communication tools in the communities surrounding Budongo Forest.

The project also supported the educational curriculum through practical lessons and after school nature clubs for children between ages of 8 and 12.

Ten schools participated in the program, with **160** teachers trained and over **2880** pupils involved.

Phase II of the program is currently under development

Pupils of St. John Bosco School participating in a conservation awareness session

Q&A with Douglas Walwambe Education Officer, Chimpanzee Trust

I am Douglas Walwambe, the Education Officer at Chimpanzee Trust's. I joined the Trust 19 months ago and oversee all conservation education programs.

What does Chimpanzee Trust do?

Chimpanzee Trust is a non-profit organization based in Uganda, dedicated to the conservation and welfare of chimpanzees. The Trust operates three main portfolios, Ngamba Island Chimpanzee Sanctuary, a haven for orphaned and confiscated chimpanzees; Field program in the Northern Albertine Landscape focused on the conservation of chimpanzees in the wild and their habitat; and lthe education program aims to improve the appreciation and understanding of chimpanzees in Uganda.

What is the strategic direction of the Chimpanzee Trust in the Albertine Rift?

The Chimpanzee Trust aims to:

- Contribute to the conservation of chimpanzees and their habitat.
- Establish and implement mechanisms for stakeholder collaboration and coordination.
- Lobby and advocate for decision makers to support chimpanzee and forest conservation in hotspot areas.

Explain about the partnership with TEP Uganda and the project being implemented?

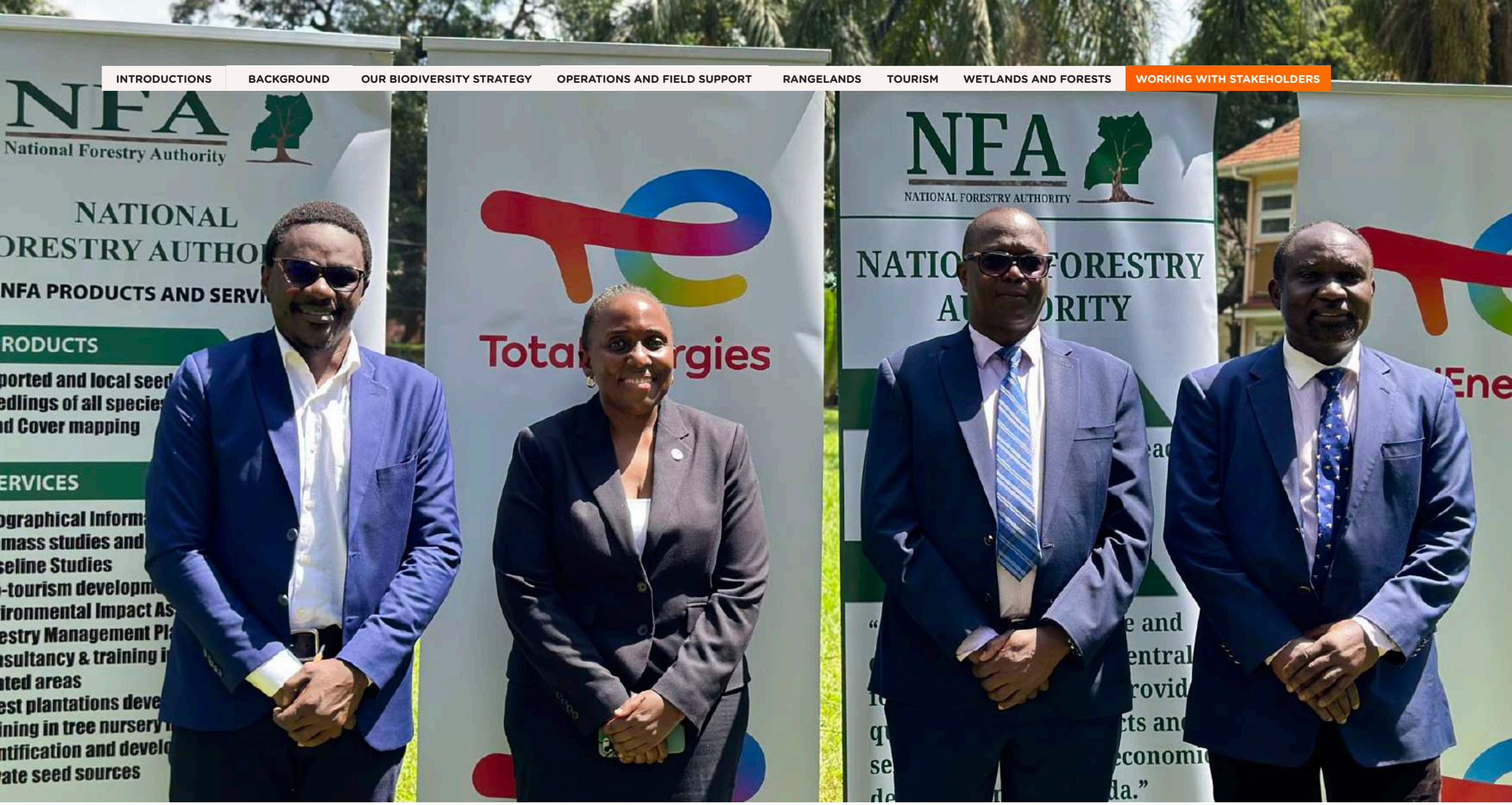
Chimpanzee Trust signed a Memorandum of Understanding (MoU) with TEP Uganda to implement conservation awareness strategies for communities around Budongo Central Forest Reserve (CFR). The Trust piloted a one year education and awareness project focusing on 10 schools around Budongo CFR and produced a 30-episode radio drama to raise awareness among the general public in the same area. The project also established School Based Enterprises in the participating schools.

What have been the benefits of partnering with TEPU?

TEP Uganda partnership has enabled the Chimpanzee Trust to reach frontline communities around Budongo CFR increasing awareness about biodiversity loss among school children and the general public. Through the radio drama program, the project has also advocated for coexistence between communities and chimpanzees contributing to a reduction in human-wildlife conflicts.

Lessons learned so far with the pilot?

Frontline communities interact with wildlife daily, so education and awareness raising efforts needs to be continuous and long term, potentially extending to 5 years to have a lasting impact. The geographic scope of the project should be gradually expanded to cover both frontline and corridor communities that interface with wildlife.



8 WORKING WITH STAKEHOLDERS

Mobilizing Financial Resources ForBiodiversity Conservation in the North Albertine Region

Memorandum of Understanding with Uganda Biodiversity Fund and East Africa Crude Oil Pipeline

TEP Uganda and EACOP have signed a partnership agreement with the Uganda Biodiversity Fund (UBF). The fund was registered in Uganda as an independent Trust incorporated under the Trustees Incorporation Act in August 2016, and operates as a grant making institution.

It serves as a catalyst for mobilizing, managing, and channeling financial resources for biodiversity conservation and sustainable use of natural resources in Uganda for the benefit of both current and future generations and recognizing the intrinsic value of nature.

UBF collaborates with various partners to implement projects aimed at conserving biodiversity driven by its mission to mobilize financial resources for biodiversity conservation in Uganda.

In this partnership, TEP Uganda and EACOP will mobilise funds via the UBF, which will then grant resources to various partners and organizations aligned to broader conservation objectives in the region. This approach promotes greater alignment between funding institutions and enhances the mobilization of collaborative financing directly for conservation in the Region.

Under this MoU, the following activities are currently under development:

- Phase II of the Corridor Restoration Program
- Establishing a framework for the management of cumulative impacts in the North Albertine region in partnership with Ministry of Energy and Mineral Development and EACOP
- Implementation of a regional chimpanzee action plan aligned with the recently launched National Chimpanzee Conservation Strategy

This landmark agreement will strengthen partnerships and collaborations to enhance stakeholder engagement and service delivery. To achieve this, UBF will continuously foster relationships with the Government, the Private Sector, Aid Sector, Civil Society, academia, and other trust funds.

L-R Stephen Makanga (Finance), Posiano Musiime (Program Officer), Ivan Amanigaruhanga (Executive Director, Uganda Biodiversity Fund), Pauline MacRonald (Biodiversity Director, TEPU), David Okullu (MAEL, UBF), Lodewijk Werre (Biodiversity Manager, EACOP)

Independent Biodiversity and Livelihoods Advisory Committee

In 2013, TEP Uganda established the Independent Biodiversity and Livelihoods Advisory Committee (IBLAC). This Committee's remit includes the Tilenga, Kingfisher and East African Crude Oil Pipeline projects. The IBLAC mandate is to provide advice on best practices for conserving and enhancing biodiversity and community livelihoods within the project areas and broader landscape throughout the oil and gas development lifecycle. The Committee is made up of national and international experts from various organizations who participate in meetings, site visits, and discussions on management of the biodiversity and livelihoods.

Each year IBLAC conducts an annual field visit, engaging with project teams and external stakeholders such as civil society, government agencies, local communities and conservation organizations. Additionally, the Committee prepares an annual report which is published externally each year. The report sets out the main events and findings of the year and incorporates a set of recommendations for implementation by the projects. For more information on IBLAC and its activities please visit the TotalEnergies website: https://totalenergies.ug/system/files/atoms/files/iblac_2023_annual_report_final.pdf

IBLAC 2023 in country visit

IBLAC visiting wetland areas

Q&A with Ray Victurine Independent Biodiversity and Livelihoods Committee (IBLAC) Chairman

Ray Victurine serves as the Chair of the Independent Biodiversity and Livelihoods Committee (IBLAC). He is also the Director of WCS's Business and Conservation program, where he collaborates with the public and private sectors to promote policies and best practices that mitigate impacts on nature. Ray works with companies and governments to develop programs aimed at achieving a net gain in biodiversity through effective conservation actions and long-term, sustainable financing. . His academic background includes natural resource economics, conservation biology, and business administration.

What is the role of the IBLAC for the Lake Albert Development?

Established in 2013, the Independent Biodiversity and Livelihoods Committee is tasked with assessing the Lake Albert Development's biodiversity and social programs to support the companies' efforts in achieving biodiversity net gain. IBLAC conducts annual site visits, reviews proposed programs to ensure alignment with the overall goals, makes recommendations on program implementation, including potential new initiatives advises on effective integration between the biodiversity and social programs within the landscape.

What value do you think IBLAC can bring to the developers and key stakeholders who have interest in these projects?

IBLAC brings extensive experience in implementing the mitigation hierarchy and key elements of achieving net gain which informs the recommendations it provides to the companies. The Committee includes members from various countries and individuals with regional experience who understand the challenges and opportunities of achieving conservation outcomes. This experience is particularly important given the challenges of working across a large and dynamic landscape that requires significant cooperation among different stakeholders from civil society, government and the private sector.

Additionally, IBLAC has valuable experience in project implementation, particularly ensuring long-term financing to secure the expected conservation outcomes. This perspective involves collaborating with companies to explore and develop new models for financing landscape-level conservation and social activities. It includes identifying priority actions, committing funding, and adjusting implementation plans to respond to changes in the landscape over time.

Another important benefit arises of sharing IBLAC recommendations and promoting engagements with Government and Civil Society. This engagement allows these organizations to understand the companies field activities ,raise issues and voice their concerns.

The existence of IBLAC has also enhanced transparency regarding company operations and improved dialogue with important stakeholders.

> "The value of IBLAC depends a great deal on the willingness of the companies to respond to the recommendations provided by the Committee. Over the past four years, that willingness has increased significantly and along with it, greater transparency. The companies have demonstrated a commitment to engage with IBLAC on the recommendations and to regularly discuss both implementation successes and challenges as part of regular meetings."

What progress has been made to date and what are the recommendations made by the IBLAC?

There has been positive progress, but much works remains to be done. Over the years, IBLAC has provided a variety of targeted recommendations related to avoidance and impact minimization efforts, research, and project design. The majority of these have been adopted by the companies, some with less dispatch than others, with some lost opportunities. Some of IBLAC's recommendations will have a significant long-term impact such as the integration of biodiversity work with the social programs. This integration ensures , that efforts to improve livelihoods are viewed through a biodiversity impact lens, and vice versa. Such coordination is essential in a landscape program seeking to achieve net gain.

One of the most consequential outcomes of IBLAC's recommendations was elevating the role of biodiversity manager to report directly to the General Manager in the Tilenga project. This management approach significantly raises the profile of the biodiversity program and allows for more effective decision-making regarding both the design and funding of biodiversity and social initiatives.

Other recommendations reflect the concerns over delivering a biodiversity net gain over a long period in a rapidly changing landscape. IBLAC has recommended working with an inter-Ministerial Committee to review investment and conservation plans in the landscape to better harmonize decisions among stakeholders.

The company has made efforts to establish this Committee which, despite some delays, is expected to be operational in the latter half of 2024. This coordination is crucial as non-project investments in the landscape put pressure on efforts to achieve net gain. Additionally, IBLAC recommended conducting a theory of change exercise to establish priorities and better understand options and outcomes in the landscape. This recommendation was accepted, and the process will continue through the coming year.

Recommendations from IBLAC have also led to greater civil society engagement and greater levels of transparency regarding company operations in the landscape. IBLAC also recommended that the companies establish the foundation for long-term funding in the landscapes. This has been accomplished in two ways. The companies have supported program financing through national conservation trust funds, investing not only to ensure provision of funding, but also to support building greater capacity in the institutions.

The hope is that these funds will be vehicles for the long-term sustainable funding that will be required to assure net gain. Additionally, the company is working with Government to devise an improved management system for Murchison Falls National Park. This system will incorporate long-term funding to enhance protection and monitoring, support wildlife reintroduction and more effectively address human wildlife conflict.

> "The recommendations from IBLAC have made a difference in how the companies are addressing biodiversity and social issues, especially over the past few years. IBLAC advice is seen more as something the companies need to adopt, rather than simply consider – a significant, and positive change from when the Committee was first formed."

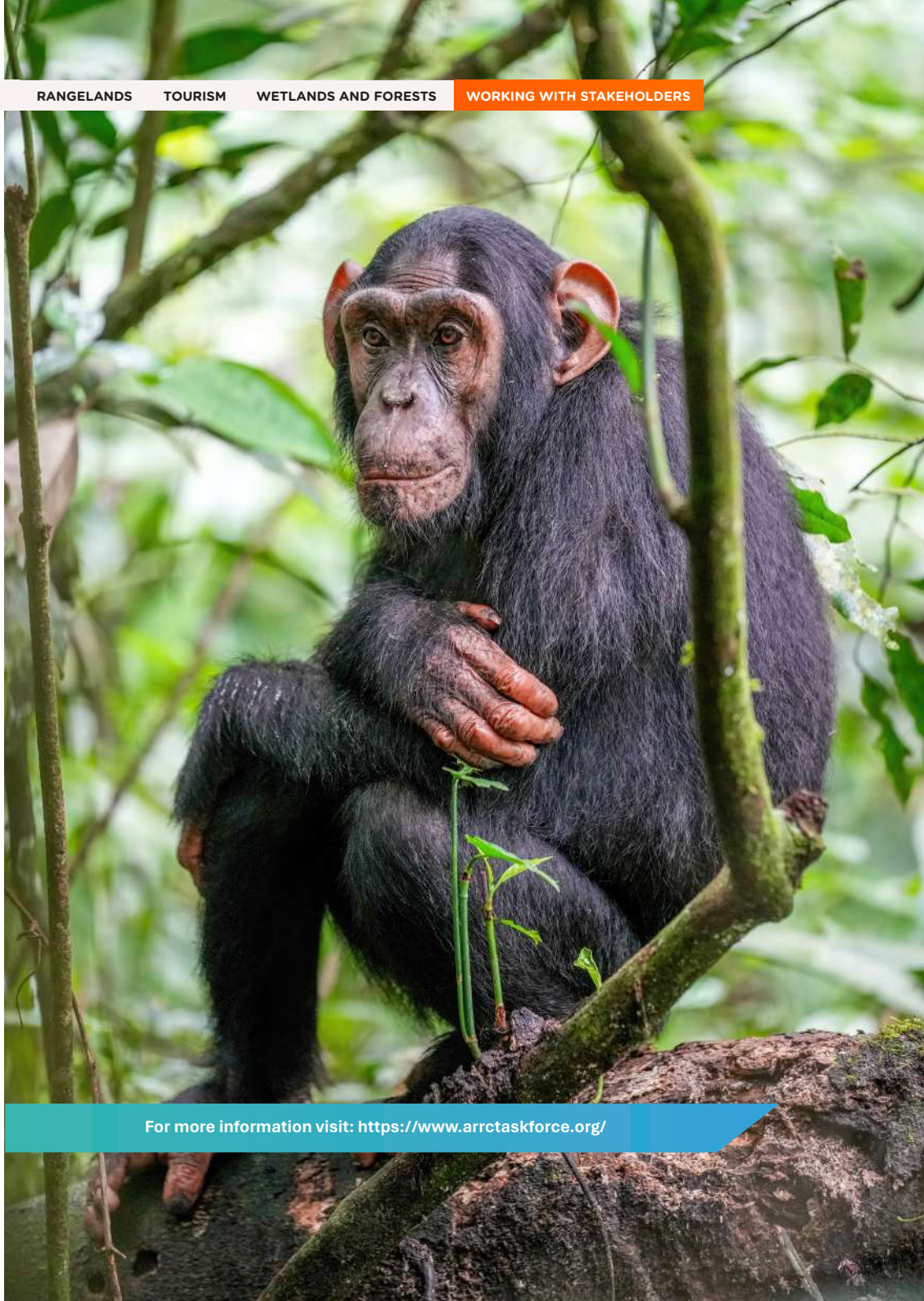
International Union for Conservation of Nature (IUCN) ARRC Task Force

In 2021, TEP Uganda and East African Crude Oil Pipeline signed a Memorandum of Understanding with the IUCN Species Survival Commission Primate Specialist Group Section on Great Apes This group is known as the ARRC Task Force (Avoid, Reduce, Restore, Conserve) and are mandated under IFC Performance Standard 6 and associated guidance which requires that special consideration should be given to great apes (gorilllas, organutans, chimpanzees and bonobos) due to their anthropological significance.

As the Tilenga, Kingfisher and EACOP projects are taking place in areas inhabited by chimpanzees, the projects are collaborating with the task force to implement a robust mitigation strategy to address the impacts on the chimpanzee population.

Since signing the MoU, TEPU, EACOP and CNOOC have been working under the task force 's guidance in several areas:

- Providing support in designing survey for chimpanzee communities: Masindi-Biiso (R2) and Masindi-Paraa (R3) roads;
- Conducting in country workshops with task force members to present the impact mitigation strategy for the projects and to conduct field visits to assess survey findings
- Launch of the Chimpanzee Genomics Study in collaboration with EACOP , TotalEnergies Biodiversity Research and Development Team, the Bulindi Community Conservation Project and the University of Barcelona
- Appointing a specialist coordinator and technical advisor to develop the North Albertine Rift Chimpanzee Action Plan in consultation with key stakeholders. The consultation process is ongoing with the plan expected to be available in the latter half of 2024.



For more information visit: https://www.arrctaskforce.org/

Our vision 2025 by Deputy General Manager

To our partners: Without your active stewardship and involvement, many of the initiatives under the Biodiversity Program would not be possible. We greatly appreciate your support. As the company continues the journey to first oil, I'm excited to share a glimpse of plans for the coming year to further support our commitment "to leave Murchison Falls Protected Area and where feasible, the surrounding landscape in better condition":

- To improve management of Murchison Falls Protected Area, we will continue to support Uganda Wildlife Authority in their vision of establishing a Collaborative Management Partnership. This landmark partnership agreement will provide essential resources and expertise to enhance park management, community development and boost tourism for the benefit of current and future generations.
- We will continue to support the development and implementation of the North Albertine Rift Chimpanzee Action Plan. This long-term conservation program dedicated to this iconic species is aligned with the National Chimpanzee Conservation Strategy and will be implemented in partnership with Ministry of Tourism, Wildlife and Antiquities, our joint venture partners, East African Crude Oil Pipeline and Uganda Biodiversity Fund
- To address cumulative impacts in the Albertine region, we will continue to work with Ministry of Energy and Mineral Development to develop the Regional Cumulative Impacts Management Framework
- For wetlands, we plan to launch a regional program focused on the protection and restoration of key wetlands in Buliisa
- We will establish a visitor centre in the Tilenga project area in collaboration with Petroleum Authority of Uganda. This centre will create an educational space to enrich the visitor experience and deepen understanding of our activities.

Thank you for your continued support and engagement.

Mariam Nampeera Mbowa

Our Partners and Stakeholders

Ministry of Energy and Mineral Development
Republic of Uganda

Ministry of Water and Environment
Republic of Uganda

Ministry of Tourism, Wildlife and Antiquities
Republic of Uganda

UWA
Conserving for Generations

Petroleum Authority of Uganda

NFA
National Forestry Authority

Uganda Tourism Board

NOOC

UNOC
Uganda National Oil Company

East African Crude Oil Pipeline

Uganda Biodiversity Fund
For now & the future

NatureUganda

The Bulindi Chimpanzee & Community Project

Makerere University

Wildlife Conservation Society

Chimpanzee Trust
Chimpanzee Sanctuary and Wildlife Conservation Trust

ECOTRUST

Biodiversity Solutions

Ecological Trends Alliance

atbox

Kolaborate

Conservation Alpha

Hardner & Gullison

TotalEnergies

TotalEnergies EP Uganda, Course View Towers, Plot 21, Yusuf Lule Road,
P.O. Box 34867, Kampala-Uganda Tel: +256 (0) 312 426 000
Website: https://totalenergies.ug
Email: ep.tepuinfo@totalenergies.com