

Biodiversity Impact Assessment Report

1.0 Introduction

This document presents information on the ecological survey as well as the baseline biodiversity and impact assessment report undertaken as part of the environmental and social impact assessment for the proposed cashew nut processing plant project at Boke, Guinea.

The project will be undertaken to meet relevant national legislation, the Development Finance Corporation (“DFC”), the International Finance Corporation (“IFC”) and other applicable legislation/guidelines/conventions. The IFC Environmental and Social Performance Standards will be considered for this project and the Performance Standard (PS) relevant to the project is:

- PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.

1.1 Project Location

The project is located within Boke prefecture, in Boke region, South-West Guinea. The project is situated about 14.3km off Boke town, along the Kalaboui - Boke road, and about 12km from the capital, Conakry. The project site comprises secondary forests and tributaries of water bodies traversing the area. The location of the project area in relation to the local setting is presented in

1.2 Assumptions & Limitations

This report is based on the following assumptions and limitations:

- A late wet season site visit was conducted during the first week of October, 2022, during which seasonal variations in the various taxonomic groups, including migratory faunal species and flowering season of flora species could not be accounted for;
- To limit the seasonal and time constraints during the field assessment, site observations were compared with desktop literature;
- Due to the nature of sampling and the secretive habits of most faunal taxa, it is unlikely that all species would have been observed during a field assessment of limited duration during the late wet season. Some species and taxa within the footprint area may therefore have been missed during the assessment.

2 Legal Framework

2.1 The Guinea Regulatory Framework

Primary authority for regulation and enforcement of environmental laws rests with the Guinea Ministry of Environment and Sustainable Development. The specific policies, acts and guidelines enforced by the Ministry that are relevant to the project include:

2.2 Lender's Requirements

The IFC Environmental and Social PS (2012) will be considered for this project. The PS relevant to the project is:

- PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.

2.3 International Legislation and Policy

The following are applicable:

- Convention on Biological Diversity (Rio de Janeiro, 1992);
- The Ramsar Convention (on wetlands of international importance);
- The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). CITES is an international agreement between governments. It aims to ensure that international trade in specimens of wild animals and plants does not threaten their survival; and
- The International Union for Conservation of Nature (IUCN) (World Conservation Union). The IUCN's mission is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.

3 Ecological Description

3.1 Threatened Species of Guinea

According to the IUCN Red List of Endangered Species (IUCN version 2022-1), a total of 422 species were recorded as threatened species across the major taxonomic group for Guinea. Table 1 presents an overview of the number of threatened species recorded for Guinea, dated 2022 (<https://www.iucnredlist.org.com>).

Table 3: Threatened species within each category for Guinea

Mammals	Birds	Reptiles	Amphibians	Fishes	Molluscs	Other Inverts	Plants
32	22	10	7	119	6	5	221

3.1.1 Mammals

Based on the IUCN database (IUCN, 2022), historically and currently seventy-six (76) mammal species had the potential to occur in the project AoI when restricting the information to the project AoI (Appendix B). Of these species, twenty-nine (29) are species of conservation concern (Table 4). Based on the disturbed nature of the area combined with the high density of human settlement, none of these species has a high likelihood of occurring in the project AoI.

Table 4: Mammal SCCs that could possibly occur in the project area

Order	Scientific Name	Common Name	IUCN	Probability of Occurrence
Primates	<i>E g t e q d w u " c v</i>	Sooty Mangabey	VU	Low
Primates	<i>G t { v j t q e g d w</i>	Patas Monkey	NT	Low
Carnivora	<i>I g p g v v c " l q j</i>	Johnston's Genet	NT	Low
Carnivora	<i>J { c g p c " j { c g</i>	Striped Hyena	NT	Low
Carnivora	<i>R c p v j g t c " n g</i>	Lion	VU	Low
Primates	<i>R k n k q e q n q d w</i>	Western Red Colobus	EN	Low
Artiodactyla	<i>V t c i g n c r j w u</i>	Bongo	NT	Low
Sirenia	<i>V t k e j g e j w u "</i>	African Manatee	VU	Low
Carnivora	<i>C e k p q p { z " l w</i>	Cheetah	VU	Low
Primates	<i>E g t e q r k k j p e</i>	Diana Monkey	EN	Low
Primates	<i>R c p " v t q i n q f</i>	Chimpanzee	EN	Low
Primates	<i>E q n q d w u " r q n</i>	King Colobus	EN	Low
Carnivora	<i>R c p v j g t c " r c</i>	Leopard	VU	Low
Artiodactyla	<i>J k r r q r q v c o w</i>	Hippopotamus	VU	Low
Proboscidea	<i>N q z q f q p v c " e</i>	African Forest Elephant	CR	Low

Order	Scientific Name	Common Name	IUCN	Probability of Occurrence
Pholidota	<i>R j c v c i k p w u "</i>	Black-bellied Pangolin	VU	Low
Carnivora	<i>E c t c e c n " c w t</i>	African Golden Cat	VU	Low
Artiodactyla	<i>E j q g t q r u k u "</i>	Pygmy Hippopotamus	EN	Low
Carnivora	<i>C q p { z " e c r g p</i>	African Clawless Otter	NT	Low
Carnivora	<i>J { f t k e v k u " o</i>	Spotted-necked Otter	NT	Low
Primates	<i>R t q e q n q d w u "</i>	Olive Colobus	VN	Low
Primates	<i>E g t e q r k v j g e</i>	Spot-nosed Monkey	NT	Low
Artiodactyla	<i>U { p e g t w u " e c</i>	African Buffalo	NT	Low
Pholidota	<i>R j c v c i t k l p w u u "</i>	White-bellied Pangolin	EN	Low
Carnivora	<i>N { e c q p " r k e v</i>	African Wild Dog	EN	Low
Rodentia	<i>R t q v q z g t w u "</i>	Slender-tailed Squirrel	NT	Low
Eulipotyphla	<i>E t q e k f w t c " i</i>	Large-headed Forest Shrew	NT	Low
Primates	<i>R c r k q " r c r k q</i>	Guinea Baboon	NT	Low
Primates	<i>R g t q f k e v k e w</i>	West African Potto	NT	Low

(NT= Near Threatened, VU= Vulnerable, DD= Data deficient)

3.1.2 Herpetofauna

The IUCN (2022) data was used to compile a species list of the herpetofauna (Reptiles and Amphibians). Thirty (30) reptiles and eleven (11) amphibian species could possibly occur in the project AoI (Appendix C). Of these numbers, four (4) reptiles and two (2) amphibian species were considered and listed as Species of Conservation Concern (Table 5). Considering the large agricultural plantation, the various human activities as well as high density of humans in the area, the habitat is not ideal for these species. However, the gallery forest along the channels of the freshwater streams and the possible availability of food such as rodents utilizing the agricultural plantation habitat increases the chances of these species occurring in the area.

Table 5: Reptile SCC expected in the project area

Family	Scientific Name	Common Name	IUCN Status	Probability of Occurrence
Amphibian				
Anura Odontobatrachidae	<i>Q f q p v q d c v t c</i>	Fouta Djallon Torrent-frog	EN	Moderate
Anura Arthroleptidae	<i>C t v j t q n g r v k</i>	Guinea Screeching Frog	NT	Moderate
Reptile				
Squamata Viperidae	<i>D k v k u " p c u k e</i>	Rhinoceros Viper	VU	Low
Squamata Pythonidae	<i>R { v j q p " t g i k</i>	Ball Python	NT	Low
Squamata Pythonidae	<i>R { v j q p " u g d c</i>	Central African Rock Python	NT	Low
Testudines Trionychidae	<i>E { e n c p q t d k u</i>	Senegal Flapshell Turtle	VU	Low

(VU= Vulnerable; EN = Endangered; NT= Near Threatened)

3.1.3 Avifauna

A list of potential avifauna species that have been recorded in the project AoI was compiled by utilising Birdlife Datazone Species information from Avibase (2022). A total of 388 species were identified that could occur in the AoI (Appendix D). Of the numbers, seventeen (17) species were considered as SCCs (Table 6). The larger predatory and scavengers birds will have a low likelihood of occurring based on the threats associated with human development and persecution. The fruit seed dependent and the water birds have a moderate likelihood of occurrence based on the presence of the fruiting canopy trees and network of streams and estuaries of the River Rio Nuñez a further distance of 45km from the project development footprint.

Table 6: Avifauna SCCs expected to occur in the project area

Scientific Name	Common Name	IUCN status	Probability of Occurrence
<i>Phoeniconaias minor</i>	Lesser Flamingo	NT	Low
<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	NT	Low
<i>Numenius arquata</i>	Eurasian Curlew	NT	Moderate
<i>Limosa lapponica</i>	Bar-tailed Godwit	NT	Moderate
<i>Limosa limosa</i>	Black-tailed Godwit	NT	Moderate

Scientific Name	Common Name	IUCN status	Probability of Occurrence
<i>Calidris canutus</i>	Red Knot	NT	Moderate
<i>Calidris ferruginea</i>	Curlew Sandpiper	NT	Moderate
<i>Trionocephs occipitalis</i>	White-headed Vulture	CR	Low
<i>Necrosyrtes monachus</i>	Hooded Vulture	CR	Low
<i>Gyps africanus</i>	White-backed Vulture	CR	Low
<i>Gyps rueppelli</i>	Rüppell's Griffon	CR	Low
<i>Terathopius ecaudatus</i>	Bateleur	EN	Low
<i>Circaetus beaudouini</i>	Beaudouin's Snake-Eagle	VU	Low
<i>Polemaetus bellicosus</i>	Martial Eagle	EN	Low
<i>Bucorvus abyssinicus</i>	Abyssinian Ground-Hornbill	VU	Moderate
<i>Ceratogymna elata</i>	Yellow-casqued Hornbill	VU	Moderate
<i>Lanius senator</i>	Woodchat Shrike	NT	Moderate

(NT= Near Threatened, VU= Vulnerable, CR= Critically Endangered, EN = Endangered)

3.1.4 Flora

The vegetation expected in the project area was based on ecological survey and biodiversity assessment reports undertaken as part of the different EIA reports supporting the various mining development activities within the Boke region (EEM, 2015 and TBC, 2017). This information was also supported and supplemented by flora species listed on the IUCN (2022) site and compiled a preliminary checklist of threatened plant species of Guinea (Couch g v .,"2010). According to the information 30 woody flora species and 31 herbaceous species are expected in the project area (Appendix E). A total of eleven (11) of these species are expected are species of conservation concern (Table 7).

Table 7: Flora SCCs expected to occur in the project area

Family	Scientific Name	Common Name	IUCN Status	Ecology	Probability of Occurrence
Orchidaceae	<i>Ansellia africana</i>	Leopard Orchid	VU		
Rubiaceae	<i>Pavetta leonensis</i>	Kansibomba	EN		
Myristicaceae	<i>Coelocaryon sphaerocarpum</i>	wild nutmeg	NT		
Rubiaceae	<i>Pavetta platycalyx</i>		VU		
	<i>Lipotriche tithonioides</i>	Simandou Daisy	EN		
Rubiaceae	<i>Nauclea diderrichii</i>		NT		
Leguminosae-Caesalpinioideae	<i>Afzelia africana</i>		VU		

Family	Scientific Name	Common Name	IUCN Status	Ecology	Probability of Occurrence
Meliaceae	<i>Entandrophragma angolense</i>	Tiama Mahogany	NT		
Rubiaceae	<i>Mitragyna stipulosa</i>		NT		

(NT= Near Threatened, VU= Vulnerable, EN = Endangered)

4.0 Biological Assessment Result

4.1 Flora Assessment Methodology

The Flora study encompassed an assessment of all the vegetation units and habitat types within the project AoI. The focus of the assessment was on the project area with special attention to habitat types as well as the occurrence of any IUCN red list-data species. The survey methodologies include the following survey techniques:

- Timed meanders;
- Sensitivity analysis based on structural and species diversity; and
- Identification of floral red-data species

4.1.1 Literature study

A literature review was conducted as part of the assessment to identify the potential habitats present within the project area. The flora species expected in the project area was based on previous ecological survey and biodiversity assessment reports compiled as part of different EIA reports supporting the various mining development project undertaken within the Boke region (EEM, 2015) and (TBC, 2017) and supplemented by species listed on the IUCN (2022) site and a preliminary checklist of Threatened plant species of Guinea (Couch *g v* .,"2019).

4.1.2 Floristic sampling

To scope the survey, the proposed project area was traversed by motorbike and on foot. The floristic diversity and search for flora SCC were conducted through meanders within the 5km AoI that was created from the project area. The random meander method is a highly efficient method for conducting floristic analysis specifically in detecting flora SCC and maximising floristic

coverage. In addition, the method is time and cost-effective and highly suited for compiling flora species lists and therefore gives a rapid indication of flora diversity. Current impacts (e.g. plantation stands, wood harvesting for charcoal production etc.) including subjective recording of dominant vegetation species and any sensitive features (e.g. riparian, restricted habitat types etc.) were also undertaken. In addition, opportunistic observations were made while moving through the project area.

4.2 Faunal Assessment Methodology

4.2.1 Mammals & Avifauna

The faunal desktop assessment included the following:

- Compilation of expected species lists;
- Compilation of identified species lists;
- Identification of any Red list Data or species of conservation concern (SCC) present or potentially occurring in the area; and
- Emphasis was placed on the probability of the occurrence of species of conservation importance.

The field survey component of the assessment utilised a variety of sampling techniques including, but not limited to, the following:

- Visual observations;
- Identification of tracks and signs; and
- Utilization of local knowledge.

Habitat types sampled included; Fresh water streams, Riparian habitats, Agricultural plantation stands and the modified natural habitat of the area. Mammal and avifauna distribution data were obtained from the following information sources:

- Avibase (2022) that utilises Birdlife Datazone Species information;
- The International Red List of Threatened Species website (IUCN, 2022).

4.2.2 Herpetology (Reptiles & Amphibians)

The herpetofauna assessment component of the project area was undertaken to utilise a variety of active and passive techniques. The cryptic nature and habits of herpetofauna species as well as seasonal and temporal fluctuations dictated that certain species within the assessment area may not have been recorded.

The herpetological field survey comprised the following techniques:

- Diurnal active hand searches - used for reptile species that shelter in or under micro-habitats such as woody debris, leaf litter, peeling bark etc; and
- Visual searches - typically undertaken for fast-moving species that are difficult to detect by hand searches. This involved using binoculars to view species from a distance without them being disturbed.

Herpetofauna distributional and species data were obtained from:

- The International Red List of Threatened Species website (IUCN, 2022).

4.3 Project Area of Analysis

To manage risks associated with the project, the IFC's PS6 is crucial for the identification of Critical Habitat, which in turn requires the definition of an Ecological Area of Analysis (EAA). A spatial EAA has been defined for the project (. The EAA encompasses the area that is:

- Likely to be affected by the project directly, indirect or unplanned events associated with the project. The EAA must take into account the biodiversity as well as the local communities; and
- Associated facilities that would not have been constructed or expanded if the project did not exist;

For each species qualifying for consideration under PS6 Criteria 1-3, the relevant EAAs are first identified. EAAs will likely be similar for many species, but if appropriate, different EAAs can be defined for each species. The selection of AOIs to include Critical Habitat assessment should be informed by an understanding of the scale of a project's potential impacts (so as not to waste effort

studying areas outside the project's influence) and the AOIs should be defined solely by ecological or administrative criteria.

The whole of an EAA containing Critical Habitat-qualifying biodiversity features is considered to be Critical Habitat for those features, even if the qualifying features are found only in a portion of the AOI. However, the assessment of impacts and mitigation actions that will determine if a project can align with PS6 will focus only on the portions of the AOI where the Critical Habitat-qualifying features can be found.

Definable ecological boundaries such as freshwater streams adjacent to the project area were identified. As a result, a 1000m buffer width from the project footprint area was assigned. This provides an area large enough to ensure the impacts of the project on the surrounding habitats are considered.

4.4 Land Use

The surrounding environment has undergone significant transformation due to large-scale cash crop plantation which includes cashew and oil palm plantation, rural subsistent agriculture and harvesting of surrounding trees for fuelwood and building materials. The existing vegetation consists largely of secondary tropical forests and agricultural plantation mainly cash crop such as palm and cashew with mosaic of natural vegetation especially along the fringes of the several fresh water stream distribution in the area.

The Current land uses within the surrounding area are dominated by agricultural uses, mostly consisting of cash crop plantations and subsistence crop cultivation. Villages are present within the surrounding areas and are associated with the surrounding agricultural plantations and farmlands (Plate 4.1 and Plate 4.2).



Plate 4.1: Palm plantation within the project AoI

U q w t' Tekge<j h n q q f . " 4 2 4 4



Plate 4.2: Cashew Plantation within the Project AoI

U q w t' Tekge<j h n q q f . " 4 2 4 4

4.5 Habitat and Floristic Analysis

4.5.1 Ecoregions and landscapes

The main project area falls within the lowland tropical rainforest ecoregion of Guinea, which is characterised by evergreen broadleaf trees, with patches and an undergrowth mixture of shrubs, herbs and grasses. The ecoregion within the project area also extends southwest into the low-lying coastline mangrove forest which is dissected by estuaries and swamps. From a broader perspective, the ecoregion is considered a Guinea savannah forest mosaic, characterised by a plateau covered with scattered wooded savannah, grasslands, and rare patches of dry forests, interspersed by remnants of gallery forests along the water courses (TBC, 2021). Several freshwater streams of variable sizes traverse the vegetation within the project area, flowing towards the coastal area. The streams are bordered by gallery forest which provides watershed conditions within the area. Generally, while the project area is heavily used for plantation agriculture and subsistent farming, the area still maintains a good level of ecosystem functionality.

The vegetation unit is predominantly made up of broadleaf secondary forest tall trees, spread across the landscape and forming gallery forest along the edge of the various flowing streams, as well as stands of plantation (cashew and oil palm), grasses and shrubs. The forest structure consists of tall canopy tree species reaching different heights and stratified at different layers. The crowns of the resident species grow to different heights, with the uppermost storey consisting of trees reaching 50m in height, trees of 20-30m forming the second storey, while the lower and densest layer includes trees of 5 to 20m (Robert, 1983).

The Fouta Djallon mountain range which forms a broad overlap with the ecoregion of the area presents a noticeable level of endemism, especially for small-bodied herpetofauna and freshwater species. This part of Guinea is also one of the last strongholds of Western Chimpanzees (*Pan troglodytes*) in West Africa as noted by the IUCN SSC Primate Specialist Group (TBC, 2021).

Considering that the littoral zone within the project area remains relatively sparsely populated and undeveloped, the vegetation units have not been greatly threatened (EEM, 2015).

However, the activities of mining within Sangarédi and Kamsar about 70km northeast and 45km southwest of Boke have had a significant impact on natural ecosystems, both in coastal areas

around the Rio Nuñez estuary and the Sangarédi plateau area. Areas of higher ecological value in the southern ecoregion around Kamsar city include the Rio Kapatchez and Îles Tristao Ramsar sites Important Bird Area (IBAs) and the Île Alcatraz and Île du Naufrage marine IBAs (TBC, 2021).

4.5.2 Habitats Types

Five habitat types were delineated for the project footprint area and the associated AoI. These habitats are shown in Figure 4.5 and are briefly discussed below.

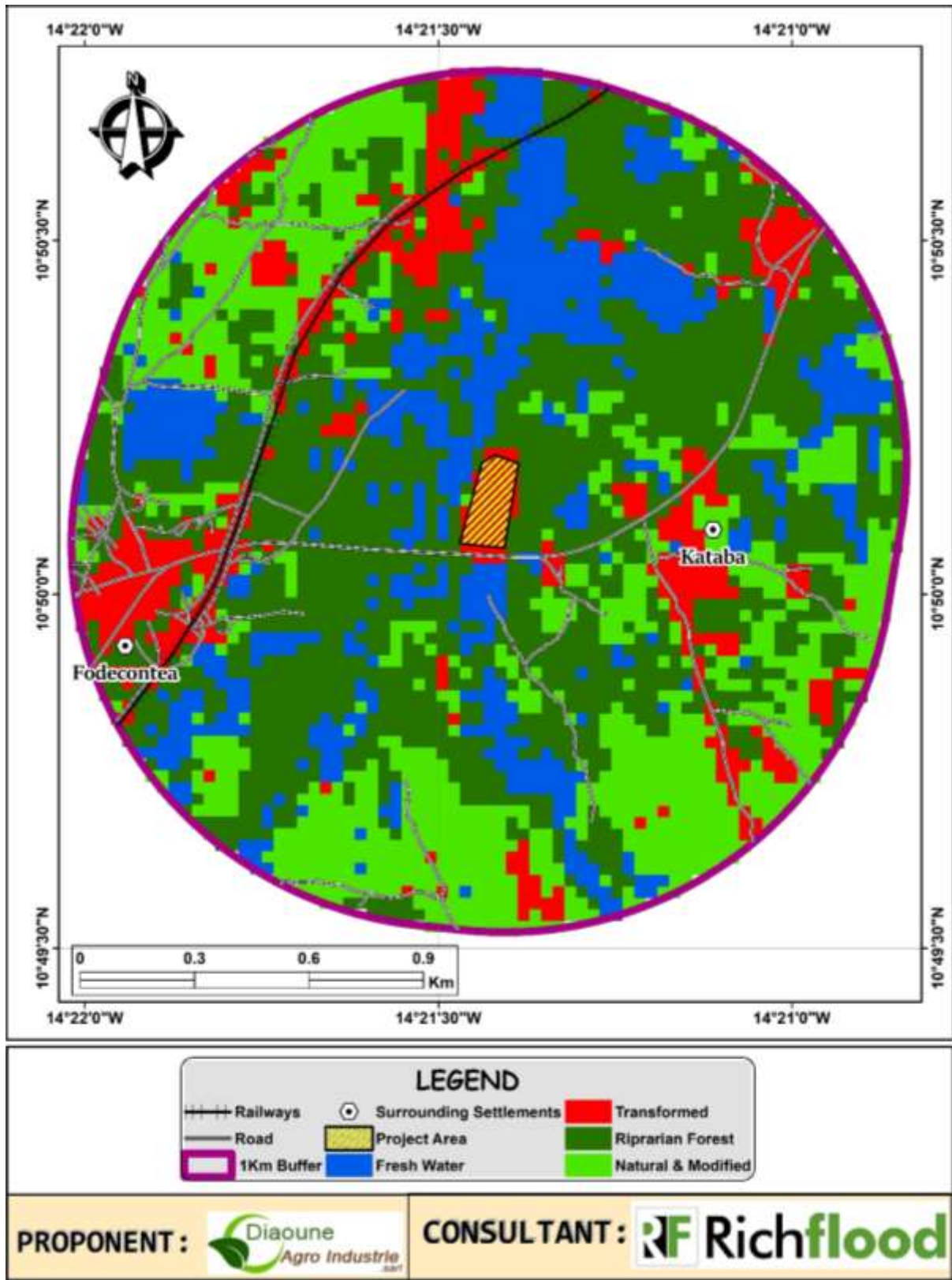


Figure 4.5: Land cover and Habitat delineated for the project area

Riparian Forest

The riparian habitat constitutes the low-lying gallery forest along the several flowing streams traversing the project AoI. Riparian habitat was observed within the west section and the edge of the project footprint. The presence of river Rio Nuñez, northwest of the project greatly influences the ecosystem dynamics of the project area with the network of streams draining the project area and providing riparian habitat conditions. The river Rio Nuñez splits south of the project AoI, with its tributaries flowing south towards the coastal area. In low-lying areas, the stream provides wetland conditions for rice farming which is a major subsistent agricultural activity in the area.

The Riparian forest plays crucial roles as a habitat and movement corridor for several faunal species especially birds, small species of reptiles and amphibians which are known or believed to occur within the project AoI, and dependent on the riparian forest and freshwater ecosystem. Downstream, the habitat also serves as a water resource for the local community.

This habitat unit can be regarded as highly important, not only within the local landscape but also regionally. The habitat sensitivity is considered moderate. Limited direct impacts are predicted on the riparian habitats from the project activities to be undertaken by DAI. No IUCN Red-listed species were recorded within this habitat unit.

Agricultural Plantation

Agricultural plantations within the project AoI majorly consist of cashews and stands of Palm oil which constitute the predominant cash crop cultivated by residents in the area. Plantations were found at different clusters around the villages where farmers reside and serve as one of the major sources of livelihood in the area. The agricultural plantation is derived from the transformation of Natural habitats and is considered to support low biodiversity compared to the natural habitats. Despite supporting low biodiversity, the agricultural plantation habitat forms a unique habitat within the region, playing an important role within the faunal species makeup by providing refugia and food for faunal species especially birds and lower invertebrates. The habitat sensitivity is considered low. Direct impacts from the project are predicted on this habitat condition, with increased demand for cashew translating to associated expansion in cashew plantations and loss of natural habitat. The habitat is highly modified and No SCC specie was recorded within this habitat unit.



Plate 4.3a: Agricultural plantation (Palm plantation observed) in the area
U q w t'Tekge<j h n q q f . " 4 2 4 4



Plate 4.3b: Agricultural plantation (Cashew farm) observed in the area
U q w t'Tekge<j h n q q f . " 4 2 4 4

Freshwater

The presence of the river Rio Nuñez in the project AoI is associated with perennial streams of freshwater traversing the project AoI. A network of streams was found in low-lying areas which drain the area. The freshwater habitat plays a crucial role in the ecosystem function of the area and accounts for the presence of freshwater-dependent species, especially fish species as well as aquatic flora and fauna species.

Limited direct impacts are foreseen on freshwater habitats due to the activities undertaken as part of the project. The main potential impact of the project activities stems from erosion-induced water run-off and increased turbidity/sedimentation on water streams. No SCC was recorded within this habitat.



Plate 4.4: The freshwater stream observed at the edge of the project footprint

U q w t' Tekge<j h n q q f . " 4 2 4 4

Transformed

This habitat is characterised by areas cleared of natural vegetation mainly for housing and infrastructure as well as some of the roads and railway lines within the project AoI. The project footprint where the project will be situated is also classified as transformed habitat. The vegetation structure consists of short shrubs and grassland including some non-native crops and weeds. No IUCN Red-listed Data species were recorded within this habitat unit. This habitat is assigned a low sensitivity.



Plate 4.5: Transformed habitat along Railway as observed within the project area

U q w t' Tekge< j h n q q f . " 4 2 4 4

Natural and Modified Habitats

This habitat is a mosaic of Natural and Modified forests within the project AoI. The habitat consists mostly of primary dense forest and modified woodland forest transformed from the loss of primary forest. In between these areas, some patches of modified shrub, grassland, and fallow land (arable land used for rotational crop cultivation and cash crop plantation) in various states of utilisation and recovery were found. The mosaic Natural and Modified habitats have undergone the variable level of anthropogenic pressure including charcoal production, bushfires, and use of timber associated with the local community. The vegetation found here consists of tall woodland trees and shrubs as well as grasses and herbaceous species that are known to grow in more disturbed areas.

There are large areas of lowland forest in Guinée Forestière (Forest Guinea) with most of these forests are highly fragmented (Couch g v .,"2010).

No species of conservation concern were recorded within this habitat during the baseline survey for the project. Terrestrial mosaics of Natural and Modified Habitats are considered a priority biodiversity feature of stakeholder concern and therefore an NNL target is required (TBC, 2015).

The DAI project site has undergone a varying degrees of anthropogenic pressure which has modified its intrinsic value and the project is not expected to have direct impacts on terrestrial habitats.



Plate 4.6: Mosaic Natural and Modified Habitats

U q w t' Tekge<j h n q q f . " 4 2 4 4

4.5.3 Floristic Analysis

A total of 37 plant species were observed during the field survey and are provided in Table 4.1. Plants were recorded across 19 families, with Fabaceae having the highest proportion of species. All of the species have at least one known secondary ecosystem service that it provides to the local community. The three main categories of ecosystem services are medicine, food source or commodity (e.g. thatch or wood).

All the species recorded were non-endemic and none were Species of Conservation Concern (SCC), this speaks to the disturbed nature of the habitat in the project area. A selection of photographs taken during the survey of plants is provided in Plate 18. Critical habitat assessment for flora as per IFC Performance Standard 6 found no critical habitats to be present within the project area.

Table 4.2: Flora species recorded in the proposed project area

Scientific Name	Common Name	Family	IUCN Status	Endemic Status	Growth Form	Uses
<i>Parkia biglobosa</i>	African Locust Beans	Fabaceae	LC	Non-Endemic	Tree	Consumed as Food
<i>Anthocleista djalonensis</i>	Cabbage Tree	Gentianaceae	LC	Non-Endemic	Shrub	Used as medicine
<i>Ageratum conyzoides</i>	Goatweed	Asteraceae	LC	Non-Endemic	Herb	Medicinal use
<i>Tamarindus indica</i>	Tamarind	Caesalpinioideae	LC	Non-Endemic	Tree	Medical purpose, ingredient for local drink
<i>Chromolaena odorata</i>	Chromolaena	Asteraceae	LC	Non-Endemic	Herb	Medicinal purpose
<i>Ceiba pentandra</i>	Silk Cotton Tree	Bombacaceae	LC	Non-Endemic		For food and construction
<i>Bambusa vulgaris</i>	Common Bamboo	Poaceae	LC	Non-Endemic	Grass	For construction
<i>Piliostigma thonningii</i>	Cattle Foot	Fabaceae	NA	Non-Endemic	Tree	Medicinal purpose
<i>Elaeis guineensis</i>	Oil Palm	Arecaceae	LC	Non-Endemic	Tree	Consumed as Food
<i>Milicia excelsa</i>	African Teak	Moraceae	NT	Non-Endemic	Tree	Construction purpose
<i>Xylopia aethiopica</i>	Custard Apples	Annonaceae	LC	Non-Endemic	Tree	For consumption
<i>Albizia adianthifolia</i>	Flat-Crown	Fabaceae	LC	Non-Endemic	Tree	Medical purpose
<i>Combretum grandiflorum</i>	Bushwillow	Combretaceae	LC	Non-Endemic	Shrub	Making dyes
<i>Uapaca heudelotii</i>	-	Euphorbiaceae	LC	Non-Endemic	Tree	Medicinal purpose
<i>Terminalia catappa</i>	Tropical Almond	Combretaceae	LC	Non-Endemic	Tree	For food consumption
<i>Allophylus africanus</i>	African Allophylus	Sapindaceae	LC	Non-Endemic	Shrub	Consumed as food
<i>Annona senegalensis</i>	Wild Soursop	Annonaceae	LC	Non-Endemic	Shrub	Consumed as food
<i>Treculia africana</i>	African Breadfruit		LC	Non-Endemic	Tree	Medicinal purpose
<i>Pennisetum purpureum</i>	Elephant Grass	Poaceae	LC	Non-Endemic	Herb	Consumed as food
<i>Andropogon tectorum</i>	Beard Grass	Poaceae	LC	Non-Endemic	Herb	For furniture
<i>Cantinoa americana</i>	Black Sesame	Lamiaceae	LC	Non-Endemic	Herb	Medicinal purpose
<i>Dioscorea hirtiflora</i>	Wild yam	Dioscoreaceae	LC	Non-Endemic	Climber	Consumed as food
<i>Rungia eriostachya</i>	-	Acanthaceae	NT	Non-Endemic	Herb	Medicinal purpose
<i>Afzelia africana</i>	African oak	Fabaceae	VU	Non-Endemic	Tree	Medicinal purpose
<i>Dichrostachys cinerea</i>	Sickle bush	Fabaceae	LC	Non-Endemic	Tree	Medicinal purpose
<i>Lophira lanceolata</i>	Dwarf Red Ironwood	Ochnaceae	LC	Non-Endemic	Tree	for construction purpose

<i>Daniellia oliveri</i>	African Copaiba Balsam Tree	Fabaceae	LC	Non-Endemic	Tree	Medicinal purpose
<i>Dialium guineense</i>	Black Velvet Tamarind	Leguminosae	LC	Non-Endemic	Tree	Medicinal purpose
<i>Newbouldia laevis</i>	Boundary Tree	Bignoniaceae	LC	Non-Endemic	Tree	For food and construction purpose
<i>Hevea brasiliensis</i>	Rubber Tree	Apocynaceae	LC	Non-Endemic	Tree	Medicinal purpose
<i>Diospyros heudelotii</i>	-	Ebenaceae	LC	Non-Endemic	Tree	Food, medicine, and wood for construction
<i>Anisophyllea laurina</i>	Monkey Apple	Anisophylleaceae	LC	Non-Endemic	Tree	Medicinal purpose
<i>Rutidea parviflora</i>	-	Rubiaceae	LC	Non-Endemic	Shrub	Medicinal purpose
<i>Bombax costatum</i>	Red-Flowered Silk Cotton Tree	Malvaceae	LC	Non-Endemic	Tree	Medicinal purpose
<i>Dilophotriche occidentalis</i>	-	Poaceae	LC	Non-Endemic	Grass	Consumed as food
<i>Utricularia rigida</i>	Bladderworts	Lentibulariaceae	LC	Non-Endemic	Herb	Medicinal purpose
<i>Ficus platyphylla</i>	Broadleaf fig	Moraceae	LC	Non-Endemic	Tree	Consumed as food

Source: Richflood, 2022

4.5.4 Critical Habitat Assessment for Flora

Performance Standard 6 (PS6; IFC 2012a) and the associated Guidance Note 6 (GN6; IFC 2012b) focuses on the protection and conservation of biodiversity. In most cases, the required conservation outcome under PS6 is no-net-loss of biodiversity value achieved using the “like-for-like” or better principle of biodiversity offsets. However, when a project occurs in critical habitat (CH) supporting exceptional biodiversity value, a net gain in biodiversity value is required.

CH identification is required by PS6 to manage risks and avoid, mitigate and offset impacts to areas with high biodiversity value including: 1) habitat of significant importance to Critically Endangered (CR) and/or Endangered (EN) species; 2) habitat of significant importance to endemic and/or restricted-range species; 3) habitat supporting significant global concentrations of migratory species and/or congregator species; 4) highly threatened and/or unique ecosystems; and/or 5) areas associated with key evolutionary processes. CH exists independent of a project and can be identified without reference to a project; a project may be proposed in CH, but the CH is present under baseline conditions and is not defined by the size of the project footprint, or other project effects. CH should be determined on a case-by-case basis according to the concepts of irreplaceability and vulnerability. The CH assessment for vegetation is shown in Table 11. Based on this, no CH was identified for this component of the project.

Table 11: Critical habitat assessment of flora

Criterion	Description	Flora
1	The occurrence of critically endangered or endangered species.	Tier 1 critical habitat is considered unlikely - it is unlikely that the project area will support 10% or more of the global population of any flora species.
2	Habitat types sustain any endemic species with > 95% its global population restricted to the habitat. And/or, taxa are restricted range species with an extent of occurrence of 50,000km ² or less.	None of the floral taxa in the project area were restricted range species with an extent of occurrence 50,000km ² or less.
3	Migratory or congregator species are present on the site, with abundance values exceeding 1% of the global population size	N/A

4	This criterion has relevance to threatened or unique ecosystems containing unique assemblages of species, including concentration of biorestricted species.	The assessment did not find endemic species, the habitat assemblages were also found disturbed. The direct impact of development will thus not influence any unique species or habitat.
5	This criterion has relevance to associated with key evolutionary processes (i.e. important landscape level features, which allow for evolutionary processes to take place	Perennial river habitat is considered under Criterion 5, but no evolutionary processes were identified.

4.6 Mammals

4.6.1 National and Regional Context

Guinea has a total of 315 mammal species of which nine is critically endangered, twenty-two are endangered (IUCN, 2022). The species composition also consists of 214 Least Concerned species, 24 vulnerable species and 19 data deficient species (Table 14). The species compositions are dependent on the habitat types, rainforest, savannah or mountains. The species ranges from large mammals to small rodents and bats.

Table 14: Guinea mammal composition and their IUCN threat status

Total Mammal Species	CR	EN	VU	LC	DD

4.6.2 Field Observations

As a large portion of the project area is covered with agricultural plantation and modified vegetation, rodent species were the predominant mammal species occurring in the area. During field observations three mammal species; Giant Rat (*E t k e g v q o { u }*), Grasscuttle (*V j t { q p q o { u }*) and Tree Squirrel (*Z c g p t w w u u " g*) were observed in the project area. This is likely due to the disturbed nature of the area from human anthropogenic activities with resultant loss of habitat and utilisation as food source. As a large portion of the project area is covered with agricultural stand, rodent species are still very likely to occur.

4.6.3 Critical Habitat Assessment for Mammals

The critical habitat assessment for mammals in the project area is shown in Table 15. No critical habitat was identified for this component.

Table 15: Critical habitat assessment of mammals

Criterion	Description	Mammals
1	The occurrence of critically endangered or endangered species.	No CR or EN mammal species were recorded or expected to be present in the project area. Tier 1 critical habitat is considered as unlikely - it is unlikely that the project area will support 10% or more of the global population of any mammalian species.
2	Habitat types sustain any endemic species with >95% or ≥1% but <95% of its global population restricted to this habitat. And/or, taxa are restricted-range species with an extent of occurrence of 50,000km ² or less.	No endemic / range restricted mammal species were recorded or are expected in the project area.
3	Migratory or congregator species are present on the site, with abundance values exceeding 1% of the global population size.	There are no migratory mammal species that occur in the area that would fulfil the quantitative threshold for Critical Habitat under Criterion 3.
4	This criterion has relevance to highly threatened or unique ecosystems containing unique assemblages of species, including concentrations of biome-restricted species.	The perennial river habitat which is unlikely to be affected by the proposed developments, must however be mentioned that it can be considered to be unique
5	This criterion has relevance to areas associated with key evolutionary processes (i.e. important landscape level features, which allow for key evolutionary processes to take place).	Whilst the systems separate habitat features and ecosystems, no mammal populations are divided by the river system and this river has not created a particular habitat exploited by only a single range restricted species.

4.7 Avifauna

4.7.1 National Context

As of 2019 a total of 969 bird species have been recorded within Guinea of which 436 are confirmed breeding residents, 180 are suspected breeding residents, about 150 are Palearctic migrants and 90 are intra-African migrants (Lepage, 2019). Currently the country supports 30 globally threatened and four endemic species. The rich diversity is attributed to the varied

topography and climate. Altitude increases gradually from sea-level in the south to about 600 m a.s.l. in the northern interior, although some mountains as well as the highland region of the Jos Plateau exceed 1500 m a.s.l. This gradient is accompanied by a decrease in annual precipitation and increase in climatic seasonality towards the interior, driving the diverse array of habitats ranging from lowland evergreen, mangrove and swamp forests in the south to a mosaic of semi-desert grasslands and savannas in the north, interspersed by patches of Afromontane forest (Ezealor, 2000).

Avifaunal assemblages are associated with each of the four main biomes which together support some 279 biome restricted species (and likely more since this estimate was made 19 years ago). These include the Sahel (biome A03, 13 spp.) in north-east, the Sudan–Guinea Savanna (A04, 42 spp.) in the centre and north, the Guinea–Congo Forests (A05, 187 spp.) in the south and the Afrotropical Highlands (A07, 37 spp.) confined to the south-eastern corner. The country supports 27 Important Bird Areas (IBAs) and two Endemic Bird Areas (EBAs) namely the Cameroon and Gabon lowlands (EBA 085) and the Cameroon mountains (EBA 086) (Ezealor, 2000).

Major hotspots for birdlife include (1) Okomu National Park Guinea, the largest remaining stand of lowland rainforest in south-western Guinea and a stronghold for both Black-casqued Hornbill (*Ceratogymna atrata*) and Yellow-casqued Hornbill (*Ceratogymna elata*), three species of spinetail and all four species of nigritas, (2) Obudu Plateau in the far south-east near the Cameroon border (Cross river State) which supports Grey-necked Picathartes (*Picathartes oreas*) as well as 18 endemics associated Cameroon Montane EBA 2, (3) the Hadejia-Nguru Wetlands north-east of Kano which together with Lake Chad is renowned as one of the most important wetland areas in West Africa for migratory waterbirds while its surrounding savannas represent major overwintering areas for species from Europe and (4) the Amurum Woodlands of the Jos Plateau which supports 2 restricted range endemics, the Rock Firefinch (*Lagonosticta sanguinodorsalis*) and its brood-parasite the Plateau Indigobird (*Vidua maryae*) (African Bird Club, 2013).

4.7.2 Field Observations

This section provides an overview of the species recorded during the field assessment. A total of forty-one (41) species were observed during the field assessment and are listed in Table 4.9. Most of the species are regarded as generalist common species that are well adapted to human

disturbances. None of the species recorded are species of conservation concern. Some of the species observed area shown in Figure 21.

Table 4.3: Avifaunal species recorded in the project area during the field assessment

Scientific Name	Common Name	IUCN Status	Endemic Status
<i>Polyboroides typus</i>	African Harrier Hawk	LC	Not endemic
<i>Lophoceros semifasciatus</i>	African Pied Hornbill	LC	Not endemic
<i>Cinnyris venustus</i>	Variable Sunbird	LC	Not endemic
<i>Vidua chalybeata</i>	Village Indigobird	LC	Not endemic
<i>Crithagra mozambica</i>	Yellow-fronted Canary	LC	Not endemic
<i>Euplectes ardens</i>	Red-collard Widowbird	LC	Not endemic
<i>Lagonosticta rubricata</i>	African Firefinch	LC	Not endemic
<i>Chrysococcyx klaas</i>	Klaas's Cuckoo	LC	Not endemic
<i>Illadopsis fulvescens</i>	Brown Illadopsis	LC	Not endemic
<i>Gypohierax angolensis</i>	Palm-nut vulture	LC	Not endemic
<i>Chrysococcyx caprius</i>	Diederik Cuckoo	LC	Not endemic
<i>Cyanomitra olivacea</i>	Olive Sunbird	LC	Not endemic
<i>Platysteira cyanea</i>	Brown-throated Wattle-eye	LC	Not endemic
<i>Streptopelia semitorquata</i>	Red-eyed Dove	LC	Not endemic
<i>Streptopelia vinacea</i>	Vinaceous Dove	LC	Not endemic
<i>Ploceus cucllatus</i>	Village Weaver	LC	Not endemic
<i>Pogoniulus bilineatus</i>	Yellow-rumped Tinkerbird	LC	Not endemic
<i>Pogoniulus chrysoconus</i>	Yellow-fronted Tinkerbird	LC	Not endemic
<i>Corvus albus</i>	Pied Crow	LC	Not endemic
<i>Camaroptera brevicaudata</i>	Grey-backed Camaroptera	LC	Not endemic
<i>Pycnonotus barbatus</i>	Common Bulbul	LC	Not endemic
<i>Numenius arquata</i>	Eurasian Curlew	NT	Not endemic
<i>Tringa totanus</i>	Senegal Coucal	LC	Not endemic
<i>Prinia subflava</i>	Tawny-flanked Prinia	LC	Not endemic
<i>Terpsiphone rufiventer</i>	Red-billed Paradise Flycatcher	LC	Not endemic
<i>Passer griseus</i>	Northern Grey-headed Sparrow	LC	Not endemic
<i>Cypsiurus parvus</i>	African Palm Swift	LC	Not endemic
<i>Butorides striata</i>	Green-backed Heron	LC	Not endemic
<i>Kaupifalco monogrammicus</i>	Lizard Buzzard	LC	Not endemic
<i>Accipiter tachiro</i>	African Goshawk	LC	Not endemic
<i>Pternistis bicalcaratus</i>	Double-spurred Francolin	LC	Not endemic
<i>Actophilornis africanus</i>	African Jacana	LC	Not endemic
<i>Turtur afer</i>	Blue-spotted Wood Dove	LC	Not endemic
<i>Chrysococcyx cupreus</i>	African Emerald Cuckoo	LC	Not endemic
<i>Halcyon malimbica</i>	Blue-breasted Kingfisher	LC	Not endemic
<i>Eurystomus gularis</i>	Blue-throated Roller	LC	Not endemic
<i>Bycanistes sharpii</i>	Piping Hornbill	LC	Not endemic
<i>Nicator chloris</i>	Western Nicator	LC	Not endemic
<i>Spermestes cucullata</i>	Bronze Mannikin	LC	Not endemic
<i>Vidua macroura</i>	Pin-tailed Whydah	LC	Not endemic
<i>Lagonosticta senegala</i>	Red-billed Firefinch	LC	Not endemic

Source: Richflood, 2022



Plate 21: Some of the avifauna recorded in the project area: A) Northern Red-billed Hornbill, B) Senegal Coucal, C) Western Cattle Egret, D) Yellow-billed Shrike, E) Long-tailed Glossy Starling and F) Abyssinian Roller

4.7.3 Critical Habitat Assessment for Avifauna

The critical habitat assessment for avifauna is shown in Table 17. The modified secondary forest as observed during field assessment still harbours a rich species of avifauna. Also, the fresh water stream habitat is regarded as important habitat for avifauna, but based on these criteria, no critical habitat was identified for the avifauna component of the project.

Table 17: Critical habitat assessment of avifauna

Criterion	Description	Avifauna
1	The occurrence of critically endangered or endangered species.	No IUCN listed critically endangered or endangered species were observed within the project area. Although the potentially of water bird SCCs does occur.
2	Habitat types sustain any endemic species with >95% or ≥1% but <95% of its global population restricted to this habitat. And/or, taxa are restricted-range species with an extent of occurrence of 50,000km ² or less.	None of the species found has an extent of occurrence of 50,000km ² or less nor could they be said to occupy significant proportion of their global population.
3	Congregatory species present on the site, with abundance values exceeding 1% of the global population size.	No globally significant congregations of local or migratory waterfowl were observed nor are they likely to occur given the available habitat within the project area
4	This criterion has relevance to highly threatened or unique ecosystems containing unique assemblages of species, including concentrations of biome-restricted species.	Watercourse habitat is known to support a unique assemblage of avifauna. Additionally, the habitat provides an important movement corridor for birdlife. Two biome restricted species were found, they were however not recorded in high number and can thus be regarded as incidental records.
5	This criterion has relevance to areas associated with key evolutionary processes (i.e. important landscape level features, which allow for key evolutionary processes to take place).	The project area does not support landscape features which could be considered important in driving avifaunal speciation. The ridges on the edge of the project area is not large enough to be a geographical barrier for avifauna species.

4.8 Herpetofauna

4.8.1 National and Regional Context

4.8.2 Field Observations

Critical habitat assessment for herpetofauna found no critical habitats to be present within the project area.

Relatively few species of herpetofauna were recorded within the assessment area, with only five (5) observed during the survey period (Table 4.3). The species recorded comprised of three (3) reptiles and two (2) amphibian species. The relatively low richness of herpetofauna was likely due to the synergistic effect of habitat degradation due to anthropogenic activities. Furthermore, no herpetofauna species of global conservation concern were recorded, and none of the species recorded are regarded as endemics.

Table 4.3: Herpetofauna recorded in the project area during the field assessment

Scientific Name	Common Name	IUCN Status	Endemic Status
Reptile			
<i>Agama agama</i>	Common Agama	LC	Non-endemic
<i>Hemidactylus angulatus</i>	House Gecko	LC	Non-endemic
<i>Varanus niloticus</i>	Nile Monitor	LC	Non-endemic
Amphibians			
<i>Hyperolius spatzi</i>	African reed frog	LC	Non-Endemic
<i>Leptopelis viridis</i>	Rusty Forest Tree frog	LC	Non-Endemic

Source: Richflood, 2022

4.8.3 Critical Habitat Assessment for Herpetofauna

The critical habitat assessment for herpetofauna is shown in Table 13 below. Based on these criteria, no critical habitat was identified for the herpetofauna component of the project.

Table 13: Critical habitat assessment of herpetofauna for the project

Criterion	Description	Herpetofauna
1	The occurrence of critically endangered or endangered species.	No IUCN listed critically endangered or endangered species were observed.
2	Habitat types sustain any endemic species with >95% or $\geq 1\%$ but <95% of its global population restricted to this habitat. And/or, taxa are restricted-range species with an extent of occurrence of 50 000km ² or less.	None of the herpetofauna taxa in the project area were restricted-range species with an extent of occurrence of 50,000km ² or less

3	Migratory or congregatory species are present on the site, with abundance values exceeding 1% of the global population size.	None of the herpetofauna taxa are believed to have abundance values in the project area that exceed 1% of their global population size and/ or exceeds 1% of the global population size within a definitive AOI. Furthermore, there are no terrestrial migratory herpetofauna in this region and the only congregatory herpetofauna are amphibians which congregate in aquatic habitats to breed. However, these congregations are localized and are not likely to be impacted by the proposed activities. No specific congregation of a single herpetofauna species is known to occur within the project area that would fulfil this criterion.
4	This criterion has relevance to highly threatened or unique ecosystems containing unique assemblages of species, including concentrations of biome-restricted species	None of the habitat types supported assemblages of species that are considered to be unique.
5	This criterion has relevance to areas associated with key evolutionary processes (i.e. important landscape level features, which allow for key evolutionary processes to take place).	In general, large rivers are usually associated with key evolutionary processes as they often divide landscapes and therefore promote speciation by preventing gene flow across the river. However, no herpetofauna populations are divided by the river or has this river created a particular habitat exploited by only a single range restricted species.

4.4.7 Ecosystem Services

The project AoI is low-lying, cut by tributaries of river Rio Nunez providing an ideal environment for riparian forests. Because project AoI remains relatively sparsely populated and undeveloped, except in the vicinity of Boke town, the vegetation has not been greatly threatened. The Guinean coastal mangrove ecosystems, therefore, continue to provide a habitat for marine wildlife and a host of social and economic benefits to the resident population.

Some of the obvious uses of forest species which includes firewood, timber and charcoal clearly have been recognized and incorporated into local lifestyle among villagers. Other, less

apparent products (foods, oils, medicines) play major roles in traditional usage amongst local people.

4.4.9 Current impacts to ecological resources

Based on field observations, it is evident that ecological resources in the project area are currently impacted by a range of factors. Figure 4.10 illustrates a number of these factors which include:

- Presence of alien invasive plant species;
- Roads and railway lines;
- Agricultural Plantation;
- Production of charcoal;
- Cutting of trees (vegetation removal); and
- Developments, farmsteads and houses.



Plate 4.7: Ecological Impacts observed: Wood burning to produce Charcoal

U q w t' Tekge< j h n q q f . " 4 2 4 4

4.4.8 Habitat Sensitivity

Habitats provide ecosystem services in the form of food and aesthetic value. The riparian forest and fresh water streams within the project area are rated as moderately sensitive. The habitat has already been modified by impacts such as replacement for palm plantation agriculture. The extent of the habitat that will be altered as a result of the project can thus not be regarded as extensive.

Areas that are classed as sensitive are generally those which are considered to be in a natural condition or were found to contain (or provide habitat for) threatened faunal or floral species. The following classifications are used to describe the possible sensitivity rankings:

- Low – insignificant amounts of natural habitat or vegetation present. Existing habitat has been extensively transformed. Remaining vegetation dominated by alien invasive plant species;
- Low-Moderate – existing habitats have been heavily transformed and little natural vegetation or habitats are present. Species diversity is considered low. Area may be considered otherwise moderately important (such as a movement corridor for fauna);
- Moderate – existing habitats have been modified or transformed but an equal percentage of natural vegetation and habitats remain. Species diversity is considered moderate. Such habitat is considered to have a strong chance of successful rehabilitation if left to restore through natural succession processes;
- Moderate-High – the majority of area is considered to be in a near-natural state. Species diversity is high, and the ecosystem function is healthy. Minor impacts may be present; and
- High – the area is considered to be in a largely natural condition with high levels of species diversity and also a good probability of Critical Habitat classification. Alternatively, an area may be regarded as having a high sensitivity (even if the habitat is modified) but is found to be habitat, or a breeding area, for any Species of Conservation Concern.

Each habitat unit was assessed and assigned a habitat sensitivity rating.

Appendix A: Mammal species expected to occur in the project area as per the IUCN (2022)

Scientific Name	Common Name	IUCN
<i>P f e v g t k u " c t i g</i>	Bates's Silt-faced Bat	LC
<i>E g t e q d w u " c v f u</i>	Sooty Mangabey	VU
<i>N e j p g w o k c " c n a</i>	White-tailed Mongoose	LC
<i>C v j g t w t w u " c h t</i>	African Brush-tailed Porcupine	LC
<i>J { n q e j j q t w u " a</i>	Forest Hog	LC
<i>Z g t w u " g t { v j t q</i>	Striped Ground Squirrel	LC
<i>E t q e k f w t c " d w g</i>	Buettikofer's Shrew	LC
<i>G t { v j t r q c e v g c d u w u "</i>	Patas Monkey	NT
<i>P c p f k p k c " d k p q</i>	African Palm Civet	LC
<i>Q i k a u d F w k m g t</i>	Cephalophus ogilbyi	LC
<i>J k r r q u k f g t q u "</i>	Cyclops Roundleaf Bat	LC
<i>I g p g v v c " l q j p u</i>	Johnston's Genet	NT
<i>R c t c z g t w u " r q g</i>	Green Bush Squirrel	LC
<i>C t x k e c p v j k u " t</i>	Guinean Arvicanthis	LC
<i>R q v c o q e j q g t w u</i>	Red River Hog	LC
<i>O w p i q u " i c o d k c</i>	Gambian Mongoose	LC
<i>E g r j c n q r j w u " p</i>	Black Duiker	LC
<i>J { c g p c " j { c g p c</i>	Striped Hyena	NT
<i>R c p v j g t c " n g q</i>	Lion	VU
<i>R k n k q e q n q d w u "</i>	Western Red Colobus	EN
<i>X w n r g u " r c n n k f</i>	Pale Fox	LC
<i>T g f w p e c " t g f w p</i>	Bohor Reedbuck	LC
<i>V t c i g n c r j w u " g</i>	Bongo	NT
<i>V t k e j g e j w u " u g</i>	African Manatee	VU
<i>R c r k q " c p w d k u</i>	Olive Baboon	LC

<i>C e k p q p { z " l w d c</i>	Cheetah	VU
<i>D c p f g f " O q p i q q</i>	Mungos mungo	LC
<i>E g t e q r k v j g e w u</i>	Diana Monkey	EN
<i>R c p " v t q i n q f { v</i>	Chimpanzee	EN
<i>E c p k u " c f w u v w u</i>	Side-striped Jackal	LC
<i>E j n q t q e g d w u " u</i>	Green Monkey	LC
<i>E q n q d w u " r q n { n</i>	King Colobus	EN
<i>R c p v j g t c " r c t f</i>	Leopard	VU
<i>V t c i g n c r j w u " u</i>	Sitatunga	LC
<i>J k r r q r q v c o w u "</i>	Hippopotamus	VU
<i>N q z q f q p v c " e { e</i>	African Forest Elephant	CR
<i>R j c v c i k p w u " v g</i>	Black-bellied Pangolin	VU
<i>E c t c e c n " c w t c v</i>	African Golden Cat	VU
<i>M q d w u " g n n k r u k</i>	Waterbuck	LC
<i>Q w t g d k c " q w t g d</i>	Oribi	LC
<i>C n e g n c r j w u " d v</i>	Hartebeest	LC
<i>E c p k u " n w r c u v g</i>	African Wolf	LC
<i>E j q g t q r u k u " n k</i>	Pygmy Hippopotamus	EN
<i>M q d w u " M q d</i>	Kob	LC
<i>C q p { z " e c r g p u k</i>	African Clawless Otter	NT
<i>J { f t k e v k u " o c e</i>	Spotted-necked Otter	NT
<i>R t q e q n q d w u " x g</i>	Olive Colobus	VN
<i>R j c e q e j q g t w u "</i>	Common Warthog	LC
<i>V t c i g n c r j w u " u</i>	Bushbuck	LC
<i>E t q e w v c " e t q e w</i>	Spotted Hyaena	LC
<i>E g t e q r k v j g e w u</i>	Spot-nosed Monkey	NT
<i>R j k n c p v q o d c " d</i>	Maxwell's Duiker	LC
<i>U { p e g t w u " e c h h</i>	African Buffalo	NT
<i>R j c v c i k p w u " v t</i>	White-bellied Pangolin	EN
<i>N { e σ ð ð " v w u</i>	African Wild Dog	EN
<i>U w p e w u " g v t w u e</i>	Pygmy White-toothed Shrew	LC

<i>V j t { q p q o { u " u y</i>	Cane Rat	LC
<i>E t k e g v q o { u " i c</i>	Gambian Rat	LC
<i>O c u v q o { u " g t { v</i>	Guinea Multimammate Mouse	LC
<i>N g r w u " x k e v q t k</i>	African Savanna Hare	LC
<i>C v k m c c w f k p q u w</i>	Marsh Mongoose	LC
<i>I c n c i q " u g p g i c</i>	Northern Lesser Galago	LC
<i>E k x g v v k e v k u " e</i>	African Civet	LC
<i>R t q v q z g t w u " c w</i>	Slender-tailed Squirrel	NT
<i>O q r u " d t c e j { r v</i>	Sierra Leone Mops Bat	LC
<i>E t q e k f w t c " i t c</i>	Large-headed Forest Shrew	NT
<i>F g p f t q j { t c z " f</i>	Western Tree Hyrax	LC
<i>C v g n g t k z " c n d k</i>	Four-toed Hedgehog	LC
<i>J g n k q u e k w t w u "</i>	Gambian Sun Squirrel	LC
<i>I g p g v v c " r c t f k</i>	Pardine Genet	LC
<i>Q t { e v g t q r w u " c</i>	Aardvark	LC
<i>O { q p { e v g t k u " n</i>	Sierra Leone Collared Fruit Bat	LC
<i>R c r k q " r c r k q</i>	Guinea Baboon	NT
<i>J g n k q u e k w t w u "</i>	Red-legged Sun Squirrel	LC
<i>R g t q f k e v k e w u "</i>	West African Potto	NT
<i>E t q e k f w t c " q n k</i>	Olivier's Shrew	LC

Appendix B: Herpetofauna species expected to occur in the project area as per the IUCN (2021)

Family	Scientific Name	Common Name	IUCN
Amphibian			
	<i>Kassina lamottei</i>	Rainforest Running Frog	LC
	<i>Hoplobatrachus occipitalis</i>	African Groove-crowned Frog	LC
	<i>Phrynobatrachus liberiensis</i>	Liberia River Frog	LC
	<i>Pyxicephalus edulis</i>	Lesser Bull-frog	LC
	<i>Phrynobatrachus guineensis</i>	Guinea River Frog	LC
	<i>Odontobatrachus fouta</i>	Fouta Djallon Torrent-frog	EN
	<i>Sclerophrys pentoni</i>	Penton's Toad	LC
	<i>Hemisus guineensis</i>	Guinea Snout-burrower	LC
	<i>Leptoplis viridis</i>		LC
	<i>Hyperolius nitidulus</i>	Plain Reed Frog	LC
	<i>Arthroleptis cruscolum</i>	Guinea Screeching Frog	NT
Reptile			
	<i>Varanus exanthematicus</i>	Savanna Monitor	LC
	<i>Pseudohaje nigra</i>	Black Tree Cobra	LC
	<i>Hemidactylus muriceus</i>	Guinea Leaf-toed Gecko	LC
	<i>Causus maculatus</i>	Spotted Night Adder	LC
	<i>Atheris chlorechis</i>	Green Bush Viper	LC
	<i>Hemidactylus fasciatus</i>	Banded Leaf-toed Gecko	LC
	<i>Bitis nasicornis</i>	Rhinoceros Viper	VU
	<i>Python regius</i>	Ball Python	NT
	<i>Panaspis tristaoi</i>	Tristoi's Snake-eyed Skink	LC
	<i>Philothamnus heterolepidotus</i>	Slender Green Snake	LC
	<i>Python sebae</i>	Central African Rock Python	NT
	<i>Lygodactylus conraui</i>	Cameroon Dwarf Gecko	LC
	<i>Natriciteres olivacea</i>	Olive Marsh Snake	LC
	<i>Dendroaspis polylepis</i>	Black Mamba	LC
	<i>Bitis rhinoceros</i>	Rhinoceros Viper	LC
	<i>Dendroaspis viridis</i>	Western Green Mamba	LC
	<i>Dasypeltis fasciata</i>	Western Forest Egg Eater	LC
	<i>Agama agama</i>	Agama Lizard	LC
	<i>Dendroaspis jamesoni</i>	Jameson's Mamba	LC

	<i>Afrotyphlops punctatus</i>	Spotted Blind Snake	LC
	<i>Varanus niloticus</i>	Nile Monitor	LC
	<i>Philothamnus heterodermus</i>	Emerald Green Snake	LC
	<i>Cyclanorbis senegalensis</i>	Senegal Flapshell Turtle	VU
	<i>Cynisca liberiensis</i>	Liberia Worm Lizard	LC
	<i>Trachylepis aureogularis</i>	Orange-throated Skink	LC
	<i>Boaedon lineatus</i>	Striped House Snake	LC
	<i>Mochlus guineensis</i>	Guinea Forest Skink	LC
	<i>Chamaelycus fasciatus</i>	African Banded Snake	LC
	<i>Bothrophthalmus lineatus</i>	Red-Black Striped Snake	LC
	<i>Holaspis guentheri</i>	Sawtail Lizard	LC

Appendix C: Avifauna species expected to occur in the project area

Scientific Name	Common Name	IUCN status
<i>Dendrocygna viduata</i>	White-faced Whistling-Duck	LC
<i>Sarkidiornis melanotos</i>	Knob-billed Duck	LC
<i>Alopochen aegyptiaca</i>	Egyptian Goose	LC
<i>Plectropterus gambensis</i>	Spur-winged Goose	LC
<i>Nettapus auritus</i>	African Pygmy-Goose	LC
<i>Spatula querquedula</i>	Garganey	LC
<i>Anas acuta</i>	Northern Pintail	LC
<i>Numida meleagris</i>	Helmeted Guineafowl	LC
<i>Guttera verreauxi</i>	Western Crested Guineafowl	LC
<i>Ptilopachus petrosus</i>	Stone Partridge	LC
<i>Coturnix coturnix</i>	Common Quail	LC
<i>Pternistis achantensis</i>	Ahanta Spurfowl	LC
<i>Pternistis bicalcaratus</i>	Double-spurred Spurfowl	LC
<i>Phoeniconaias minor</i>	Lesser Flamingo	NT
<i>Columba guinea</i>	Speckled Pigeon	LC
<i>Streptopelia hypopyrrha</i>	Adamawa Turtle-Dove	LC
<i>Streptopelia semitorquata</i>	Red-eyed Dove	LC
<i>Streptopelia vinacea</i>	Vinaceous Dove	LC
<i>Spilopelia senegalensis</i>	Laughing Dove	LC
<i>Turtur abyssinicus</i>	Black-billed Wood-Dove	LC
<i>Turtur afer</i>	Blue-spotted Wood-Dove	LC
<i>Oena capensis</i>	Namaqua Dove	LC
<i>Treron calvus</i>	African Green-Pigeon	LC
<i>Lissotis melanogaster</i>	Black-bellied Bustard	LC
<i>Tauraco persa</i>	Guinea Turaco	LC
<i>Crinifer piscator</i>	Western Plantain-eater	LC
<i>Centropus senegalensis</i>	Senegal Coucal	LC
<i>Centropus grillii</i>	Black Coucal	LC
<i>Clamator glandarius</i>	Great Spotted Cuckoo	LC
<i>Clamator levaillantii</i>	Levaillant's Cuckoo	LC
<i>Clamator jacobinus</i>	Pied Cuckoo	LC
<i>Chrysococcyx klaas</i>	Klaas's Cuckoo	LC
<i>Chrysococcyx caprius</i>	Dideric Cuckoo	LC
<i>Chrysococcyx cupreus</i>	African Emerald Cuckoo	LC
<i>Cuculus clamosus</i>	Black Cuckoo	LC
<i>Cuculus gularis</i>	African Cuckoo	LC
<i>Caprimulgus longipennis</i>	Standard-winged Nightjar	LC
<i>Caprimulgus climacurus</i>	Long-tailed Nightjar	LC
<i>Telacanthura ussheri</i>	Mottled Spinetail	LC
<i>Apus apus</i>	Common Swift	LC
<i>Apus affinis</i>	Little Swift	LC
<i>Cypsiurus parvus</i>	African Palm Swift	LC
<i>Gallinula chloropus</i>	Eurasian Moorhen	LC
<i>Porphyrio alleni</i>	Allen's Gallinule	Rare/Accidental
<i>Zapornia flavirostra</i>	Black Crake	LC

<i>Podica senegalensis</i>	African Finfoot	LC
<i>Burhinus senegalensis</i>	Senegal Thick-knee	LC
<i>Pluvianus aegyptius</i>	Egyptian Plover	LC
<i>Pluvialis squatarola</i>	Black-bellied Plover	LC
<i>Vanellus spinosus</i>	Spur-winged Lapwing	LC
<i>Vanellus senegallus</i>	Wattled Lapwing	LC
<i>Charadrius hiaticula</i>	Common Ringed Plover	LC
<i>Charadrius marginatus</i>	White-fronted Plover	LC
<i>Actophilornis africanus</i>	African Jacana	LC
<i>Numenius arquata</i>	Eurasian Curlew	NT
<i>Limosa lapponica</i>	Bar-tailed Godwit	NT
<i>Limosa limosa</i>	Black-tailed Godwit	NT
<i>Calidris canutus</i>	Red Knot	NT
<i>Calidris ferruginea</i>	Curlew Sandpiper	NT
<i>Calidris temminckii</i>	Temminck's Stint	Rare/Accidental
<i>Ciconia nigra</i>	Black Stork	Rare/Accidental
<i>Ciconia microscelis</i>	African Woolly-necked Stork	LC
<i>Ardea goliath</i>	Goliath Heron	LC
<i>Ardea purpurea</i>	Purple Heron	LC
<i>Ardea alba</i>	Great Egret	LC
<i>Ardea intermedia</i>	Intermediate Egret	LC
<i>Egretta garzetta</i>	Little Egret	LC
<i>Egretta gularis</i>	Western Reef-Heron	LC
<i>Egretta ardesiaca</i>	Black Heron	LC
<i>Bubulcus ibis</i>	Cattle Egret	LC
<i>Ardeola ralloides</i>	Squacco Heron	LC
<i>Butorides striata</i>	Striated Heron	LC
<i>Nycticorax nycticorax</i>	Black-crowned Night-Heron	LC
<i>Ixobrychus minutus</i>	Little Bittern	LC
<i>Scopus umbretta</i>	Hamerkop	LC
<i>Elanus caeruleus</i>	Black-winged Kite	LC
<i>Polyboroides typus</i>	African Harrier-Hawk	LC
<i>Gypohierax angolensis</i>	Palm-nut Vulture	LC
<i>Aviceda cuculoides</i>	African Cuckoo-Hawk	LC
<i>Trionoceps occipitalis</i>	White-headed Vulture	CR
<i>Necrosyrtes monachus</i>	Hooded Vulture	CR
<i>Gyps africanus</i>	White-backed Vulture	CR
<i>Gyps rueppelli</i>	Rüppell's Griffon	CR
<i>Terathopus ecaudatus</i>	Bateleur	EN
<i>Circaetus beaudouini</i>	Beaudouin's Snake-Eagle	VU
<i>Circaetus cinereus</i>	Brown Snake-Eagle	LC
<i>Circaetus cinerascens</i>	Banded Snake-Eagle	LC
<i>Macheiramphus alcinus</i>	Bat Hawk	LC
<i>Polemaetus bellicosus</i>	Martial Eagle	EN
<i>Lophaetus occipitalis</i>	Long-crested Eagle	LC
<i>Hieraaetus wahlbergi</i>	Wahlberg's Eagle	LC
<i>Aquila spilogaster</i>	African Hawk-Eagle	LC
<i>Kaupifalco monogrammicus</i>	Lizard Buzzard	LC

<i>Accipiter tachiro</i>	African Goshawk	LC
<i>Accipiter badius</i>	Shikra	LC
<i>Milvus migrans</i>	Black Kite	LC
<i>Otus senegalensis</i>	African Scops-Owl	LC
<i>Ptilopsis leucotis</i>	Northern White-faced Owl	LC
<i>Bubo cinerascens</i>	Grayish Eagle-Owl	LC
<i>Bucorvus abyssinicus</i>	Abyssinian Ground-Hornbill	VU
<i>Lophoceros fasciatus</i>	African Pied Hornbill	LC
<i>Lophoceros nasutus</i>	African Gray Hornbill	LC
<i>Ceratogymna elata</i>	Yellow-casqued Hornbill	VU
<i>Bycanistes fistulator</i>	Piping Hornbill	LC
<i>Corythornis cristatus</i>	Malachite Kingfisher	LC
<i>Ispidina picta</i>	African Pygmy Kingfisher	LC
<i>Halcyon leucocephala</i>	Gray-headed Kingfisher	LC
<i>Halcyon senegalensis</i>	Woodland Kingfisher	LC
<i>Halcyon malimbica</i>	Blue-breasted Kingfisher	LC
<i>Ceryle rudis</i>	Pied Kingfisher	LC
<i>Merops bulocki</i>	Red-throated Bee-eater	LC
<i>Merops pusillus</i>	Little Bee-eater	LC
<i>Merops hirundineus</i>	Swallow-tailed Bee-eater	LC
<i>Coracias abyssinicus</i>	Abyssinian Roller	LC
<i>Coracias naevius</i>	Rufous-crowned Roller	LC
<i>Coracias cyanogaster</i>	Blue-bellied Roller	LC
<i>Eurystomus glaucurus</i>	Broad-billed Roller	LC
<i>Pogoniulus bilineatus</i>	Yellow-rumped Tinkerbird	LC
<i>Pogoniulus chrysoconus</i>	Yellow-fronted Tinkerbird	LC
<i>Lybius vieilloti</i>	Vieillot's Barbet	LC
<i>Lybius dubius</i>	Bearded Barbet	LC
<i>Chloropicus goertae</i>	African Gray Woodpecker	LC
<i>Campethera nivosa</i>	Buff-spotted Woodpecker	LC
<i>Campethera maculosa</i>	Little Green Woodpecker	LC
<i>Falco alopex</i>	Fox Kestrel	LC
<i>Falco ardosiaceus</i>	Gray Kestrel	LC
<i>Falco biarmicus</i>	Lanner Falcon	LC
<i>Poicephalus senegalus</i>	Senegal Parrot	LC
<i>Coracina pectoralis</i>	White-breasted Cuckooshrike	LC
<i>Oriolus oriolus</i>	Eurasian Golden Oriole	LC
<i>Oriolus auratus</i>	African Golden Oriole	LC
<i>Platysteira cyanea</i>	Brown-throated Wattle-eye	LC
<i>Dryoscopus gambensis</i>	Northern Puffback	LC
<i>Tchagra senegalus</i>	Black-crowned Tchagra	LC
<i>Dicrurus occidentalis</i>	Western Square-tailed Drongo	LC
<i>Dicrurus divaricatus</i>	Glossy-backed Drongo	LC
<i>Terpsiphone rufiventer</i>	Black-headed Paradise-Flycatcher	LC
<i>Terpsiphone viridis</i>	African Paradise-Flycatcher	LC
<i>Lanius corvinus</i>	Yellow-billed Shrike	LC
<i>Lanius senator</i>	Woodchat Shrike	NT
<i>Corvus albus</i>	Pied Crow	LC

<i>Elminia longicauda</i>	African Blue Flycatcher	LC
<i>Nicator chloris</i>	Western Nicator	LC
<i>Sylvietta brachyura</i>	Northern Crombec	LC
<i>Melocichla mentalis</i>	Moustached Grass-Warbler	LC
<i>Eremomela pusilla</i>	Senegal Eremomela	LC
<i>Camaroptera brachyura</i>	Green-backed Camaroptera	LC
<i>Prinia subflava</i>	Tawny-flanked Prinia	LC
<i>Hypergerus atriceps</i>	Oriole Warbler	LC
<i>Chlorocichla simplex</i>	Simple Greenbul	LC
<i>Atimastillas flavicollis</i>	Yellow-throated Greenbul	LC
<i>Eurillas virens</i>	Little Greenbul	LC
<i>Phyllastrephus scandens</i>	Leaf-love	LC
<i>Passer griseus</i>	Northern Gray-headed Sparrow	LC
<i>Spermestes cucullata</i>	Bronze Mannikin	LC
<i>Quelea erythrops</i>	Red-headed Quelea	LC
<i>Euplectes franciscanus</i>	Northern Red Bishop	LC
<i>Turdus pelios</i>	African Thrush	LC
<i>Illadopsis fulvescens</i>	Brown Illadopsis	LC
<i>Turdoides plebejus</i>	Brown Babbler	LC

Appendix D: Flora species Expected to occur in the project area

Family	Scientific Name	Common Name	Growth form	IUCN
<i>Chromolaena odorata</i>	<i>Ipomoea alba</i>	Moonflower		LC
<i>Ceiba pentandra</i>	<i>Ficus sycomorus</i>			LC
<i>Bambusa vulgaris</i>	<i>Uapaca heudelotti</i>			LC
<i>Piliostigma thonningii</i>	<i>Berlinia grandiflora</i>			LC
<i>Elaeis guineensis</i>	<i>Gardenia ternifolia</i>			LC
<i>Milicia excelsa</i>	<i>Harungana madagascariensis</i>			LC
<i>Xylopi aethiopica</i>	<i>Parkia biglobosa</i>	African Locust Beans		LC
<i>Chromolaena odorata</i>	<i>Uapaca mole</i>			LC
<i>Ceiba pentandra</i>	<i>Chamaecrista mimosoides</i>	Fish-bone Cassia		LC
<i>Bambusa vulgaris</i>	<i>Nuclea latifolia</i>			LC
<i>Piliostigma thonningii</i>	<i>Hevea brasiliensis</i>	Rubber Tree		LC
<i>Elaeis guineensis</i>	<i>Cleistopholis patens</i>			LC
<i>Milicia excelsa</i>	<i>Treculia Africana</i>	African Breadfruit		LC
<i>Xylopi aethiopica</i>	<i>Ansellia Africana</i>	Leopard Orchid		VU
<i>Albizia adianthifolia</i>	<i>Pavetta leonensis</i>	Kansibomba		EN
<i>Combretum grandiflorum</i>	<i>Newbouldia laevis</i>			LC
<i>Uapaca heudelotii</i>	<i>Tetrapleura chevalieri</i>			LC
<i>Terminalia catappa</i>	<i>Coelocaryon sphaerocarpum</i>			NT
<i>Allophylus africanus</i>	<i>Voacanga thouarsii</i>			LC
<i>Annona senegalensis</i>	<i>Heterotis rotundifolia</i>			LC
<i>Treculia africana</i>	<i>Macaranga heudelotii</i>			LC
<i>Pennisetum purpureum</i>	<i>Combretum platypterum</i>			LC
<i>Andropogon tectorum</i>	<i>Vitex madiensis</i>			LC
<i>Cantinoa americana</i>	<i>Terminalia leiocarpa</i>			LC
<i>Dioscorea hirtiflora</i>	<i>Pavetta platycalyx</i>			VU
<i>Rungia eriostachya</i>	<i>Nymphaea heudelotii</i>			LC
<i>Azelia africana</i>	<i>Garcinia quadrifaria</i>			LC
<i>Dichrostachys cinerea</i>	<i>Blighia sapida</i>			LC
<i>Lophira lanceolata</i>	<i>Xylopi longipetala</i>			LC
<i>Chromolaena odorata</i>	<i>Terminalia avicennioides</i>			LC
<i>Chromolaena odorata</i>	<i>Ficus thonningii</i>			LC
<i>Ceiba pentandra</i>	<i>Cola nitida</i>	Kola nut		LC

<i>Bambusa vulgaris</i>	<i>Diospyros mespiliformis</i>	African Ebony		LC
<i>Piliostigma thonningii</i>	<i>Dichrostachys cinerea</i>			LC
<i>Elaeis guineensis</i>	<i>Cassia sieberiana</i>			LC
<i>Milicia excelsa</i>	<i>Alchornea hirtella</i>	Forest Bead-string		
<i>Xylopia aethiopica</i>	<i>Dialium guineense</i>			LC
<i>Albizia adianthifolia</i>	<i>Melochia corchorifolia</i>	Chocolate Weed		LC
<i>Combretum grandiflorum</i>	<i>Lipotriche tithonioides</i>	Simandou Daisy		EN
<i>Uapaca heudelotii</i>	<i>Nauclea diderrichii</i>			NT
<i>Terminalia catappa</i>	<i>Azelia Africana</i>			VU
<i>Allophylus africanus</i>	<i>Monodora myristica</i>	African nutmeg		LC
<i>Annona senegalensis</i>	<i>Osmunda regalis</i>	Royal Fern		LC
<i>Treculia africana</i>	<i>Phragmites australis</i>	Common Reed		LC
<i>Pennisetum purpureum</i>	<i>Milicia regia</i>	Iroko		VU
<i>Chromolaena odorata</i>	<i>Milicia excelsa</i>	African Teak		NT
<i>Ceiba pentandra</i>	<i>Entandrophragma angolense</i>	Tiama Mahogany		NT
<i>Bambusa vulgaris</i>	<i>Mitragyna stipulosa</i>			NT
<i>Piliostigma thonningii</i>	<i>Cyperus intactus</i>			LC
<i>Elaeis guineensis</i>	<i>Elaeis guineensis</i>	African Oil Palm		LC
<i>Milicia excelsa</i>	<i>Annona senegalensis</i>			LC
<i>Xylopia aethiopica</i>	<i>Uapaca guineensis</i>			LC
<i>Albizia adianthifolia</i>	<i>Panicum subalbidum</i>	Elbow Buffalo Grass		LC
<i>Combretum grandiflorum</i>	<i>Paratheria prostrate</i>			LC
<i>Uapaca heudelotii</i>	<i>Combretum Grandiflorum</i>	Bushwillow		
<i>Terminalia catappa</i>	<i>Combretum Micranthum</i>			LC
<i>Allophylus africanus</i>	<i>Daniellia oliveri</i>			LC
<i>Annona senegalensis</i>	<i>Musanga cecropioides</i>	Umbrella Tree		LC
<i>Treculia africana</i>	<i>Cenchrus unisetus</i>	Natal Grass		LC
<i>Pennisetum purpureum</i>	<i>Vitex grandifolia</i>			LC
<i>Andropogon tectorum</i>	<i>Guiera senegalensis</i>			LC
<i>Cantinoa americana</i>	<i>Xylopia aethiopica</i>	Custard Apples		LC
<i>Dioscorea hirtiflora</i>	<i>Anthocleista djalonensis</i>	Cabbage Tree		LC
<i>Rungia eriostachya</i>	<i>Ficus exasperata</i>			LC
<i>Azelia africana</i>	<i>Pentaclethra macrophylla</i>	African Oil Bean		LC
<i>Dichrostachys cinerea</i>	<i>Ngon Ndamba</i>	Funtumia Africana		LC
<i>Lophira lanceolata</i>	<i>Lovoa trichilioides</i>	African Walnut		LC

<i>Chromolaena odorata</i>	Piper guineense			LC
<i>Ceiba pentandra</i>	Mimosa pigra			LC
<i>Bambusa vulgaris</i>	Vitex doniana	Black Plum		LC
<i>Piliostigma thonningii</i>	Terminalia glaucescens	Glaucous Badamier		LC
<i>Elaeis guineensis</i>	Bombax buonopozense			LC
<i>Milicia excelsa</i>	Alchornea cordifolia			LC
<i>Xylopia aethiopica</i>	Ficus sycomorus			LC
<i>Albizia adianthifolia</i>	Oxytenanthera abyssinica	West African Bamboo		
<i>Combretum grandiflorum</i>	Ageratum conyzoides	Goatweed		
<i>Uapaca heudelotii</i>	Tamarindus indica	Tamarind		
<i>Terminalia catappa</i>	Chromolaena odorata	Chromolaena		
<i>Allophylus africanus</i>	Ceiba pentandra	Silk Cotton Tree		
<i>Annona senegalensis</i>	Bambusa vulgaris	Common Bamboo		
<i>Treculia africana</i>	<i>Piliostigma thonningii</i>	Cattle Foot		
<i>Pennisetum purpureum</i>	Sarcocephalus latifolius	African Peach		
<i>Andropogon tectorum</i>	<i>Albizia adianthifolia</i>	Flat-Crown		LC
<i>Cantinoa americana</i>	<i>Napoleonaea vogelii</i>			LC
<i>Dioscorea hirtiflora</i>	<i>Erythrophleum suaveolens</i>	Red Wood		
<i>Rungia eriostachya</i>	Terminalia Catappa	Tropical Almond		
<i>Azelia africana</i>	<i>Dioscorea hirtiflora</i>	Wild yam		LC
<i>Dichrostachys cinerea</i>	<i>Lophira Lanceolata</i>	Dwarf Red Ironwood		