

GLOSSARY

This section is equivalent to Section iii, acronyms and Section iv, abbreviations, of the legislative structure. If in doubt, please refer to [Table 1.5-1 Environmental Impact Statement Structure](#) on page 1-5.

Symbols	
%	percent
<	less than
>	greater than
°C	degrees Celsius
μ	micro – one millionth, 10 ⁻⁶
μg/L	micrograms per litre (1000 μg/L = 1 mg/L)
μg/m ³	micrograms per cubic metre
μS/cm	microsiemens per centimetre: a unit of electrical conductivity
ρ	fluid (water) density (1000 kg/m ³)
Ω	stream power per unit channel length (W/m)
A	
A	cross-section area of flow in a channel (m ²)
A horizon	surface horizon (topsoil layer) composed of mainly mineral matter with well-incorporated organic matter
AC	airshed use criterion
AfDB	African Development Bank
AGI	aboveground installation
AHAP	area of high archaeological potential
AIDS	acquired immune deficiency syndrome
AIS	alien invasive species
AKSCG	Association of Kilimanjaro Speciality Coffee Growers
anadromous	fish that are born in fresh water then migrate to the ocean as juveniles, where they grow into adults before migrating back into fresh water to spawn
ANC	antenatal care
AOI	area of influence: The area likely to be affected by: <ul style="list-style-type: none"> (i) the project activities and facilities that are directly owned, operated or managed and are a component of the project (ii) impacts from unplanned but predictable developments caused by the project that may occur later or at a different location, or (iii) indirect project impacts on biodiversity or on ecosystem services upon which affected communities' livelihoods are dependent. (Performance Standard (PS) 1, IFC 2012)
AP	aerial photograph

APHA	American Public Health Association
Aquaread	trademark multiparameter water quality probe
aquatic	freshwater habitats or species only in the context of this report
aquifer	stratum or zone below the earth's surface capable of producing water for human use
AREA	drainage basin area (km ²) (a parameter used to calculate the mean annual flood)
ARI	acute respiratory infection
ART	anti-retroviral therapy
ASM	artisanal and small-scale mining
ASPT	average score per taxon, a measure of ecological condition specifically in relation to macroinvertebrate species
A-weighting	'A' weighting is standard weighting of the audible frequencies designed to reflect the response of the human ear to noise. At low and high frequencies, the human ear is not very sensitive, but between 500 Hz and 6 kHz the ear is much more sensitive.
B	
B horizon	subsurface, or originally subsurface horizon, in which the original rock or parent material has been mostly or entirely altered by weathering and soil-forming processes
bajaj	three-wheeler motorcycle taxis
bankfull discharge, level, width	discharge, water level or width of a river whose flow is just contained within the banks
BAU	business as usual
BID	background information document
bioquality	aspect of a plant community's conservation value, derived from the concentration of restricted range species occurring in the community.
Black Star species	plant species of highest conservation concern as a result of their very small global area of occupancy
blasting	assumed use of charges less than 5 kg for the purpose of this project
Blue Star species	plant species of modest conservation concern as a result of their somewhat restricted global range (24 degrees square on average)
BMI	Business Monitor International
BMU	beach management unit
BOD	biochemical oxygen demand
boda boda	motorcycle taxis
bomas	livestock enclosure
BRAC	Building Resources Across Communities
BRNed	Big Results Now in Education
Broader Region	A study area larger than the AOI to provide regional context
BS	British Standard
BTEX	benzene, toluene, ethylbenzene and xylene

BWO	Basin Water Officer
C	
C ₁₀ –C ₄₀	total hydrocarbons
CAIT	Climate Access Indicators Tool, the World Resource Institute's online climate data explorer
Calcic Solonetz	dense, strongly structured, clayey subsurface horizon that has a high proportion of adsorbed sodium and, in some cases, magnesium ions; sodic soil; often found on flat gently sloping grassland; high pH; majority land use is grassland
Cambisol	other soils having a cambic B horizon or an umbric A horizon which is more than 25 cm thick.
cascade	tumbling white water, for example, waterfalls. Substrate is usually bedrock or possibly boulders
CBO	community-based organisation
CCHP	comprehensive council health plan
CCRO	certificate of customary rights of occupancy
CDT	community-directed treatment
CDTI	community-directed treatment with ivermectin
CES	cultural ecosystem services, the adoption of ecosystem services to cultural heritage
CF	coating facility
CFU	colony forming units (bacteria)
CFU/100 ml	colony forming units (unit of measurement of abundance of coliform bacteria) per 100 millilitres
CH ₄	Methane
CHA	critical habitat assessment
Chromic Cambisol	Cambisols are characterised by slight or moderate weathering of the parent material and by the absence of appreciable quantities of illuviated clay, organic matter, aluminium or iron compounds; more common where weathering is slow; make good agricultural land and can be among the most productive soil on Earth. Strongly weathered; dominated by kaolinites and oxides. Cambisols that have a strong brown to red B horizon (rubbed soil has a hue of 7.5YR and a chroma of more than 4, or a hue redder than 7.5YR)
Chromic Luvisol	description of soil classification: higher clay content in subsoil than topsoil; podzolic; common on flat or gently sloping land. Fertile, high silt content and prone to erosion on slopes. Having a strong brown to red B horizon (rubbed soil has a hue of 7,5YR and a chroma of more than 4, or a hue redder than 7,5YR)
CHS	community health staff
CHT	cultural heritage Tanzania
CITES	Convention for the International Trade of Endangered Species on Wild Fauna and Flora
cm	Centimetre

CMS	Convention on the Conservation of Migratory Species of Wild Animals, aka Convention on Migratory Species
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent, a standard unit for measuring GHG emissions (carbon footprints). The impact of each different greenhouse gas is expressed in terms of the amount of CO ₂ that would create the same amount of warming. A GHG emission consisting of different greenhouse gases can be expressed as a single number.
COD	chemical oxygen demand
COPD	chronic obstructive pulmonary disease
COWABAMA	collective warehousing-based marketing
CPUE	catch per unit effort, an indirect measure of species abundance
CRO	customary rights of occupancy
CVL	certificate of village
D	
dala dala	minibus taxis
dB	Decibel
dB(A)	A-weighted decibel
dB(lin)	zero or flat weighted decibel
DED	district executive director
DEM	digital elevation model
DIA	direct impact area
diagnostic horizon	soil horizon, some or all of whose properties are used for classification purposes in the FAO Soil Legend
diffusion tube	plastic monitoring tubes for inorganic compounds – they work by molecular diffusion, with compounds moving from an area of high concentration (air) to an area of low concentration (tube), where the compounds collect on the absorbent at the end of the tube.
DIN	German Institute for Standardisation
DMU	discrete management unit – defined in IFC PS6 as an area with a definable boundary within which the biological communities or management matters have more in common with each other than they do with those in adjacent areas
DO	dissolved oxygen (mg/L or % saturation)
DRC	Democratic Republic of Congo
DTCIDC	Danish Trade Council for International Development and Cooperation
Dystric Gleysol	description of soil classification: soils saturated with groundwater for long enough periods to develop features of reduction and re-oxidation characterised by grey and rust-coloured mottles. Having a base saturation (by NH ₄ OAc) of less than 50%, at least in some part of the soil between 20 and 50 cm from the surface

E	
EAC	East African Community
EACOP	East African Crude Oil Pipeline
EBA	Endemic Bird Area, identified by BirdLife International as being important for habitat-based bird conservation because it contains the habitats of restricted-range bird species
EC	electrical conductivity ($\mu\text{S}/\text{cm}$)
EEZ	exclusive economic zone
EHAs	environmental health areas
EIA	environmental impact assessment
EMA	Environmental Management Act
ENSO	El Niño–Southern Oscillation
ERU	existing road upgrade
ESIA	environmental and social impact assessment
Eutric Leptosol	very shallow soil over hard rock or highly calcareous material or a deeper soil that is extremely gravelly and/or stony. Soils with a base saturation of more than 50%
Eutric Planosol	soils having an albic E horizon overlying a slowly permeable horizon (for example, an argillic or natric B horizon showing an abrupt textural change, a heavy clay, a fragipan) within 125 cm of the surface; showing hydromorphic properties at least in a part of the E horizon. Soils with a base saturation of more than 50%
Eutric Vertisol	soils which, after the upper 20 cm are mixed, have 30% or more clay in all horizons to at least 50 cm from the surface; at some period in most years have cracks at least 1 cm wide at a depth of 50 cm, unless irrigated. Soils with a base saturation of more than 50%
F	
FAO	Food and Agriculture Organization of the United Nations
Fault	fracture or fracture zone along which there has been displacement of the sides relative to another parallel to the fracture
FBO	faith-based organisations
FDI	foreign direct investment
Ferralic Cambisol	Cambisols are characterised by slight or moderate weathering of the parent material and by the absence of appreciable quantities of illuviated clay, organic matter, aluminium or iron compounds; more common where weathering is slow; make good agricultural land and can be among the most productive soil on Earth. Strongly weathered; dominated by kaolinites and oxides. Ferralic properties
Ferralsol	strongly weathered soils of the humid tropics with high iron and aluminium oxide contents
ferricretes	sand and gravel cemented by iron oxide
FGD	focus group discussion
FGM	female genital mutilation
FINCA	Fighting Poverty with Microfinance and Social Enterprises

FO	farmers' organisations
FR	forest reserve
fractures	breaks in rocks due to intense folding or faulting
FYDP	five-year development plan
G	
G	acceleration due to gravity (9.81 m/s ²)
gauged watercourse	watercourse on which a river gauging station is located. A river gauging station is a location where flow and water quality are monitored by hydrologists and environmental scientists
GCI	global competitiveness index
GCM	Global Climate Model
GDP	gross domestic product
GHG	greenhouse gases
GHI	geneticlobal heat index – a measure of the conservation importance of vegetation. High index represents higher importance. A continuous metric used to measure <i>bioquality</i>
GIIP	good international industry practice
GIS	geographic information system
Gleysol	soils saturated with groundwater for long enough periods to develop features of reduction and re-oxidation characterised by grey and rust-coloured mottles
glide	flowing water with an unbroken or undisturbed surface
Gold Star species	plant species of high conservation concern as a result of their small global area of occupancy
GoT	Government of Tanzania
GPS	global positioning system
GR	game reserve
Green Star species	plant species of no conservation concern with respect to their area of occupancy. Could be of concern owing to other characteristics, such as local use, or ecological dominance.
H	
h	Hour
H ₂ S	hydrogen sulphide
ha	Hectare
Haplic Phaeozem	wet grassland and forest soil. Dark soil rich in organic matter. High base saturation. Porous, fertile soil; makes excellent farmland
HAT	human African trypanosomiasis
HDD	horizontal directional drilling
HDI	Human Development Index
HGV	heavy goods vehicle
HHs	household survey

HIA	health impact assessment
hr	Hour
humic	having an organic carbon content of 5% or more as a weighted average in the fine earth fraction to a depth of 50 cm from the mineral soil surface
I	
IBA	Important Bird Area, identified by BirdLife International as being of global importance for the conservation of bird populations, using an internationally agreed set of criteria
ICH	intangible cultural heritage
ID	identification
IEC	International Electrotechnical Commission
IFC	International Finance Corporation
IIA	indirect impact area
ILO	International Labour Organisation
IMF	International Monetary Fund
INDC	intended nationally determined contribution, a term used under the United Nations Framework Convention on Climate Change (UNFCCC) for reductions in greenhouse gas emissions that all UNFCCC signatories were asked to publish in the lead-up to the 2015 United Nations Climate Change Conference held in Paris
IOM	International Organisation for Migration
IPCC	Intergovernmental Panel on Climate Change
IPT	intermittent preventive treatment
IRC	International Rescue Committee
IRCPT	Inter-Religious Council for Peace Tanzania
IRS	indoor residual spraying
ISO	International Organization for Standardization
ITCZ	inter-tropical convergence zone
ITN	insecticide treated net
IUCN	International Union for Conservation of Nature
J	
JICA	Japan International Cooperation Agency
K	
KBA	key biodiversity area, a site that contributes to the global persistence of biodiversity; identified using 11 criteria across five categories
keystone species	one that has a disproportionate effect on its environment relative to its biomass and whose removal initiates significant changes in ecosystem structure and loss of biodiversity
kg	kilogram
kgm ⁻²	kilograms per square metre

KII	key informant interview
km	kilometre
km/h	kilometre per hour
km ²	square kilometre
KNCU	Kilimanjaro Native Cooperation Union
KP	kilometre point
kVa	kilovolt-ampere
L	
L	litre
L _{10(T)}	noise level exceeded for 10% of the time of the measurement duration; often taken to represent traffic-related noise
L _{90(T)}	noise level exceeded for 90% of the time of the measurement duration; often taken to represent the ambient or background noise level.
Leptosol	coarse and thin, probably gravely, maybe thin layer of peat; common on slopes; can be fertile but prone to erosion
L _{eq(T)}	sound level in decibels equivalent to the total sound energy measured over a stated period of time. T is over a general period of time where a number illustrates a specific averaging or measurement period (typically Leq, 1hr).
LESCO	Labour, Social and Economic Council
LF	lymphatic filariasis
LIDAR	light detection and ranging: an airborne or satellite-borne detection system that works on the principle of radar, but uses light from a laser and is used to map topography
linear weighting (zero weighting or flat weighting)	'l' or 'z' or '0' sound level meter frequency weighting, flat over a frequency range that must be stated. No weighting is applied.
LLIN	long-lasting insecticidal nets
L _{max}	root mean squared maximum level of a noise source or given environment.
LNG	liquefied natural gas
loam	soil that is not predominantly sand, silt, or clay is called "loam"
LOF	load-out facility
L _p	sound pressure level
LUCF	land use change and forestry (a sector in national greenhouse gas inventories)
Luvisol	characterised by a surface accumulation of humus overlying an extensively leached layer that is nearly devoid of clay and iron-bearing minerals. Below the latter lies a layer of mixed clay accumulation that has high levels of available nutrient ions comprising calcium, magnesium, sodium, or potassium.
L _w	sound power level
M	

m	metre
m/s	metres per second
m ³	cubic metres
m ³ /s	cubic metre per second
macrophyte	aquatic plant that is easily visible with the naked eye
MAF	mean annual flood. The mean annual flood has a theoretical statistical return period of 2.3 years.
MANET	Mazingira Network Tanzania
masl	metres above sea level
mbgl	metre below ground level
MCPY	main camp and pipe yard
MDA	mass drug administration
MDG	millennium development goals
mEq/100 g	milliequivalents per 100 grams
MFEA	Ministry of Finance and Economic Affairs
mg	milligram
mg/kg	milligrams per kilogram
mg/L	milligrams per litre
MIC	middle income country
MIC	maximum instantaneous charge
Micro-blasting	assumed use of charges less than 1 kg for the purpose of this project
midstream bar	raised area of the substrate forming a mound or hump running along the middle of the channel. The upper part may or may not be exposed above the water surface
migratory [fish]	fish that undertake longitudinal movements within rivers or between lakes and rivers or the sea and rivers usually for spawning (reproduction) purposes. See also anadromous and potamodromous
min	minute
mL	millilitre
MLFD	Ministry of Livestock and Fisheries Development
mm	millimetre
mm/a	millimetres per annum
MMR	maternal mortality rate
mms ⁻¹	millimetre per second
MoHSW	ministry of health and social welfare
MOW	Ministry of Works
MOWI	Ministry of Water and Irrigation
MS/m	megasiemens per metre
MSF	Médecins sans Frontières

MST	marine storage terminal
MtCO _{2e}	million metric tonnes of carbon dioxide equivalent
MVIWATA	Mtando wa Vikundi vya Wakulima Tanzania (The National Network of Small-Scale Farmers Groups)
MW	megawatt
MYA	million years ago
N	
n	roughness factor in the Manning uniform flow equation
NA	not applicable
NCA	Norwegian church
NCD	noncommunicable diseases
ND	no data
NEMC	National Environment Management Council (Tanzania)
nephelometer	instrument for measuring the size and concentration of particles suspended in a liquid or gas, especially by means of the light they scatter
NER	net enrolment ratios
NFR	Nature Forest Reserve
NGO	nongovernmental organisation
NHIF	National Health Insurance Fund
NICTBB	National ICT Broadband Backbone
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides – a generic term for the nitrogen oxides that are most relevant for air pollution, namely nitric oxide (NO) and nitrogen dioxide (NO ₂). Calculated as the sum of the volumetric concentrations of these substances and, when in mass terms, reported as NO ₂
NREP	National Rural Electrification Programme
NSGRP	National Strategy For Growth And Reduction of Poverty
NSSF	national social security fund
NTD	neglected tropical disease
NTLP	national tuberculosis and leprosy programme
NTU	nephelometric turbidity unit
O	
O ₃	ozone
OA	open area, a type of legally protected area in Tanzania
octas	unit of measurement used to describe the amount of <i>cloud</i> cover at any given location. Ranging from 0 to 8
OHS	occupational health and safety
orthophoto	an aerial photograph or image geometrically corrected such that the scale is uniform: the photo has the same lack of distortion as a map.

overpressure	overpressure (or blast overpressure or air overpressure) is the pressure caused by a shock wave over and above normal atmospheric pressure.
P	
P	wetted perimeter of a channel (m)
PAC	project-affected community or communities
PAD	project-affected district/districts
PAH	polycyclic aromatic hydrocarbon
PAR	permanent access road
periphyton	freshwater organisms attached or clinging to plants and other objects projecting above the bottom sediments
PES	project environmental standard
PFP	private for profit
pH	numeric scale used to specify the acidity or basicity of an aqueous solution: pH1 is extremely acidic, pH14 is extremely alkaline and pH7 is neutral
Phaeozem	soils having a mollic A horizon. A dark soil with a high base status, but without a calcareous soil horizon within one metre of the soil surface
PIIM	project induced in-migration
PM	particulate matter
PM ₁₀	particulate matter less than 10 µm in diameter
PM _{2.5}	particulate matter less than 2.5 µm in diameter
PML	primary mining licence
pool	still water area, i.e. no discernible flow, usually with a water depth greater than the main channel
PORALG	President's Office – Regional Administration and Local Government
potamodromous	fish that undertake migrations (usually for spawning) entirely in fresh water
PPE	personal protective equipment
PPG	public and publicly guaranteed
PPT	pipeline project team
PRS	pressure reduction station
PS	pumping station
PS6	IFC Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
PTR	pupil teacher ratio
PVC	polyvinyl chloride
PWD	persons with disabilities
PY	pipe yard
Q	

Q	discharge (m ³ /s)
Q _T	peak flood flow with an estimated return period of T years
R	
R	hydraulic radius (m), calculated as the ratio A/P
RAP	resettlement action plan
rapid	fast-flowing water with standing waves and white water. Loud sound
RBS	rapid botanical survey
RDT	rapid diagnostic tests
relict	a relict population is one that occurs in a restricted area but whose original range was far wider during a previous geological epoch
return period	average number of years in the long-term between hydrometeorological events of a similar magnitude
Rhodic Ferralsol	good physical properties, poor fertility, less susceptible to erosion than most other intensely weathered tropical soil. Dominated by low activity iron-rich clay. Red colour
riffle	fast-flowing water with a broken surface and small standing waves but no white water. Some sound
RoW	right-of-way
RPF	resettlement policy framework
RTAs	road traffic accidents
run	flowing water with a broken surface but no wavelets, white water or sound
rural roads	roads that traverse rural areas, generally unsealed and often single tracks
RVF	Rift Valley fever
S	
s	second
S1085	slope of the catchment between the 10th and 85th percentiles of the main stream length between the crossing point and the catchment boundary in the headwater area (m/km)
SARA	service availability and readiness assessment
S _b	channel bed slope (m/m)
scandent	(plant) having a climbing habit
sclerophyll	a woody plant with evergreen leaves that are tough and thick in order to reduce water loss.
S _e	energy slope in a channel (m/m). S _e is approximated by the channel bed slope (S _b).
sealed road	road in Tanzania that may be constructed of tarmac, bitumen or concrete
SGI	small group interview
SGS	African Assay Laboratories Ltd, in Mwanza, Tanzania

Shannon-Wiener diversity index	an index that characterises species diversity in a community. It accounts for both abundance and evenness of the species present
SIA	social impact assessment
side bar	raised area of the substrate forming a mound or hump running along the edge of the channel that may or may not be connected to the bank. The upper part may not be exposed above the water surface
SLM	sound level meter
SO ₂	sulphur dioxide
soil horizon	layer of soil, usually approximately parallel to the soil surface, with distinct characteristics produced by soil-forming processes
SOP	standard operating procedure
SOTER	Soil and Terrain
SOTERSAF	Soil and Terrain Database for Southern Africa
sp and spp.	abbreviation of species, singular and plural
SRTM	shuttle radar topography mission
SSA	sub-Saharan Africa
star rating	conservation rating for a species derived from the global range of the plant species, in terms of the number of degree squares in which a species is recorded as being present in (worldwide).
STH	soil-treated helminthiasis
STI	sexually transmitted infection
STP	sewage treatment plant
study area	area studied larger than the AOI to provide context
surveys	pre-construction: surveys performed to supplement baseline data collection by company. pre-clearance: surveys done before clearance of right-of-way. performed by the contractor
surface density	calculated as mass per unit area
sympatric	In biology, two species or populations are considered sympatric when they exist in the same geographic area and thus frequently encounter one another.
T	
T	time in years
TANESCO	Tanzania Electricity Supply Company
TANROADS	Tanzania National Road Agency
TANU	Tanganyika African National Union
TAR	temporary access road
TARURA	the rural and urban agency
TASAF	Tanzania Social Action Fund
TAZARA	Tanzania–Zambia railway authority
TB	tuberculosis

TBC	Tanzania Broadcasting Corporation
Tcf	trillion cubic feet
TCGA	Tanganyika Coffee Growers Association
TCGRI	Tanzania coffee research institute
TCH	tangible cultural heritage
TCRA	Tanzania Communications Regulatory Authority
TDS	total dissolved solids (mg/L)
TET	technical education and training
TFR	total fertility rate
TIPER	Tanzania International Petroleum Reserves Limited
TNBS	Tanzania National Bureau of Statistics
TPA	Tanzanian Port Authority
TPDC	Tanzanian Petroleum Development Cooperation
TPH	total petroleum hydrocarbons (mg/L)
TRC	Tanzania Railway Corporation
trunk roads	national or international route linking two or more regional headquarters
TSS	total suspended solids (mg/L)
TTCL	Tanzania Telecommunication Company Limited
TUCTA	Trade Unions Congress of Tanzania
turbidity	measure of the relative clarity of a liquid. It is an optical characteristic of water and an expression of the amount of light that is scattered by material in the water when a light is shone through the water sample
tuyere	mechanism for controlling air flowing into an iron working furnace
TVET	technical vocational education and training
TVPA	trafficking victims protection assistance
TZS	Tanzania shilling
U	
UAE	United Arab Emirates
UKAS	United Kingdom Accreditation Service
umbric horizon	thick, dark-coloured, low base saturation, moderate to high content of organic matter, not massive and hard when dry
Umbric Leptosol	soils with continuous hard rock within 25 cm of the soil surface, or a mollic horizon overlying material with a high calcium content. Normally soils with a dark coloured organic topsoil, a pH of less than 5.5 representing a base saturation of less than 50%
UNESCO	United Nations Educational, Scientific and Cultural Organization
unsealed road	road in Tanzania constructed of earth or gravel
UPE	universal primary education
urban roads	roads that pass through cities, small towns and built up areas

URT	United Republic of Tanzania
USD	United States dollar
UXO	unexploded ordnance
V	
VAT	value added tax
VC	village council
VCT	voluntary counselling testing
VEC	valued environmental and social component
VEO	village executive officer
Vertisol	dark-coloured soils (though they have only moderate humus content) that may also be characterised by salinity and well-defined layers of calcium carbonate or gypsum
VET	vocational education and training
VHF	viral haemorrhagic fevers
VHW	village health workers
VICOBA	village community banks
VIP	ventilated improved pits
VOC	volatile organic compound(s)
W	
W	Watt
WEO	ward executive officer
WGS84	World Geodetic System established in 1984. It is currently the reference system being used by global positioning systems
WGS84 TM35E_S	World Geodetic System 1984 Transverse Mercator zone 35 East-South (the EACOP project map projection)
WHO	World Health Organization
WRB	World Reference Base for Soil Resources
WRBWO	Wami-Ruvu Basin Water Office
WRD	Water Resources Division
WTO	World Trade Organization
WWF	World Wildlife Fund
Y	
YoY	year over year