
APPENDIX 1 – GRIEVANCE FORM



Tokyo Electric Power Services Co., Ltd.

Stakeholder Engagement Plan – 220 kV Transmission Line between Lubango and Moçâmedes, Huíla and Namibe Provinces

Concern/Complaint Reference Number		(for RNT use only): _____	
Full Name of individual or organization/community (an individual's name to be inserted if complainant agrees).³		_____	
Contact Information: Please indicate by marking the box how you wish to be contacted (in person, by telephone/SMS, by e-mail, by post) and then provide the appropriate contact information.		<input type="checkbox"/> By Post: Please provide full address: _____ _____ <input type="checkbox"/> By Telephone/SMS: _____ <input type="checkbox"/> By E-mail _____ <input type="checkbox"/> In person: Please provide name of village _____	
Preferred language for communication:		<input type="checkbox"/> [Nyaneca-Humbi] <input type="checkbox"/> [Nganguela]	<input type="checkbox"/> [Portuguese] <input type="checkbox"/> [Other: _____]
Description of your concern/complaint:		What happened? Where did it happen? Who did it happen to? What has been the consequence for you?	
Frequency of cause/s of your concern/complaint:		<input type="checkbox"/> Single incident (date _____) <input type="checkbox"/> Happened more than once (how many times? _____) <input type="checkbox"/> On-going (currently experiencing problem)	
What would you like to see happen to resolve your concern/complaint?		_____	
Signature	_____	Date	_____

³ A complaint can be submitted anonymously.

**APPENDIX 2 – EXAMPLE
OF KEY DATA TO BE RECORDED
IN A GRIEVANCE REGISTER**



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Grievance ID	Name/address	Concern or complaint	Response mechanism	Answer	Status	Response accepted (yes/ no?)	Appeal decision accepted (yes/ no?)
Format as year.mm.dd and concern/ complaint number (e.g. 21.03.25:#01)	Insert name and address of the person submitting a concern or complaint (if provided)	Summary of the concern or complaint	Personal letter, e-mail, telephone call/ SMS, orally backed up by letter, information board announcement.	Summary of the response.	Date of response, identify whether the grievance is addressed and closed.	Yes/ No.	Yes/ No.

**APPENDIX 3 – GRIEVANCE
TRACKING AND CLOSE-OUT
FORM**



Stakeholder Engagement Plan – 220 kV Transmission Line between Lubango and Moçâmedes, Huíla and Namibe Provinces

REGISTRATION DETAILS

COMPLAINT REGISTRATION No. _____

(No. to be taken from complaints log)

DATE RECEIVED _____

LOCATION

(Province, Municipality, District, Commune, Community and Village)

Complainant (Name) _____

Telephone Number _____

Address (If Applicable) _____

PART 2: GRIEVANCE DESCRIPTION

CATEGORY OF GRIEVANCE (please circle the appropriate category)

- Property (built structures) damage
- Land encroachment
- Access restriction
- Damage to land/crops
- Damage to livestock
- Water availability/quantity (e. g. supply disruption)
- Water quality (e.g. pollution)
- Noise/air quality (including dust)
- Resettlement/valuation/compensation
- Traffic/vehicle behaviour (e. g. speeding)
- Other (Specify)

DETAILS OF GRIEVANCE:



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RISK OF GRIEVANCE (please circle as appropriate)

- High
- Medium
- Low
- Insignificant

PART 3: PROPOSED RESPONSE/ CORRECTIVE ACTION

Immediate Action _____ Date for completion

Responsible Person:

Signature: _____ Date: _____

Long term Action _____ Date for completion

Responsible Person:

Signature: _____ Date: _____

Other resolution details

PART 4: VERIFICATION OF CORRECTIVE ACTION

Follow up details (If applicable)

Closed out (Yes/No): _____

Signatures:

Complainant: _____ Date: _____

TEPSCO Representative: _____ Date: _____

APPENDIX 4 – GRIEVANCE

REGISTER LOG SAMPLE



Tokyo Electric Power Services Co., Ltd.

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No.	Grievance #	Date Received	Access Point	Received by	Complainant name	Gender	Community / Village of Origin	Brief complaint/grievance description	Category

Acknowledgement date	Rapid response by	Associated Dpt/contractor/third party	Complaint owner	Proposed resolution/feedback to complaint	Preliminary resolution date	Satisfied with the process (yes/no)?	If not, why?	Conclusive resolution date

Satisfied with the outcome (yes/no)?	If not, why?	Category

APPENDIX 5 – NEWSPAPER ADVERTS

  			
ANGOLA			
PROJECTO LINHA DE TRANSPORTE 220 KV LUBANGO-MOÇÂMEDES ESTUDOS DE IMPACTE AMBIENTAL E SOCIAL NAS PROVÍNCIAS DA HUÍLA E NAMIBE			
ANÚNCIO GERAL SOBRE ENCONTRO DE AUSCULTAÇÃO PÚBLICA			
<p>Como parte do processo de elaboração do Estudo de Impacte Ambiental e Social para a construção, instalação e operação do projecto da Linha de Transporte de Electricidade de 220 KV entre o Lubango e Moçâmedes, a RNT vem, por meio desta, convidar todos os interessados a participar nos encontros de auscultação sobre o referido projecto, que terão lugar com realce para os da tabela abaixo:</p>			
Município	Data	Horário	Local
Lubango	23/02	8h30	Administração Municipal do Lubango
Humpata	24/02	8h30	Administração Municipal da Humpata
Arimba	24/02	14h00	Administração Comunal da Arimba
Moçâmedes	25/02	8h30	Administração Municipal de Moçâmedes
Kapangombe (Bibala)	25/02	14h00	Administração Comunal de Kapangombe
<p>De modo virtual (teleconferência) os interessados também podem participar via plataforma ZOOM: link: https://us02web.zoom.us/j/83445536249?pwd=K3hnOFhmeXVtbjhCWGh3T2JnbUptZz09; ID: 834 4553 6249; Senha:LT220KV)</p> <p>Para informações adicionais ou para obter uma cópia do Documento Informativo queiram, por favor, usar os seguintes contactos: Telefone: 923595093/939401303; Correio electrónico: apinto@rnt.co.ao / holisticos.@holisticos.co.ao</p> <p>O período para comentários e perguntas estará aberto até ao dia 5 de Março de 2021.</p> <p>RNT-E.P., (Rede Nacional de Transporte de Electricidade) Gaveto entre a Via Expressa e a Estrada da Camama, próximo à subestação eléctrica da Camama. Tel.: +244 222 704 400 www.rnt.co.ao</p>			
(500.0222)-MPI/PP-2/2			



Tokyo Electric Power Services Co., Ltd.

Encontro de Auscultação das Partes Interessadas para Projecto da Linha de Transmissão de Electricidade de 220 kV Lubango – Moçâmedes

Município	Data	Horário	Local
Lubango	23/02	8h30	Adm. Municipal do Lubango
Humpata	24/02	8h30	Adm. Municipal da Humpata
Arimba	24/02	14h00	Adm. Comunal da Arimba
Moçâmedes	25/02	8h30	Adm. Municipal de Moçâmedes
Kapangombe (Bibala)	25/02	14h00	Adm. Comunal de Kapangombe



zoom

ID: 834 4553 6249

SENHA: LT220KV

CONSULTORIA AMBIENTAL

**APPENDIX 6 –
BACKGROUND INFORMATION
DOCUMENT**

APPENDIX 7 - POWERPOINT PRESENTATION

APPENDIX 8 – MINUTES OF THE MEETINGS



HOLÍSTICOS

CONSULTORIA AMBIENTAL

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Soluções Ambientais para um Futuro Sustentável

APPENDIX 3
LIST OF BIRDS OF NAMIBE AND HUÍLA
PROVINCES

BIRDS OF NAMIBE AND HUÍLA										ECOREGIONS									
ORDER	Family	REF	SCIENTIFIC NAME	COMMON NAME	NOME COMUM	IUCN ¹	ENDEMISM ²	SEASONALITY ³	RISK ⁴	ABUNDANCE ⁵	LIKELIHOOD ⁶	ABUNDANCE ⁷	LIKELIHOOD ⁸	ABUNDANCE ⁹	LIKELIHOOD ¹⁰	ABUNDANCE ¹¹	LIKELIHOOD ¹²	ABUNDANCE ¹³	LIKELIHOOD ¹⁴
										ANGOLAN HIGHLANDS	ESCAPMENT		MOPANE WOODLANDS		ARID SAVANNA		NAMIB DESERT		
STRUTHIONIFORMES	Struthionidae	1	<i>Struthio camelus</i>	Common Ostrich	Avestruz-comum	LC	WS	R	L	N	U	N	U	N	U	R	U	U	U
GALLIFORMES	Numididae	2	<i>Numida meleagris</i>	Helmeted Guineafowl	Pintada da Guiné	LC	WS	R	M	C	R	C	R	C	R	C	L	U	P
		3	<i>Guttera pucherani</i>	Crested Guineafowl	Pintada-de-poupa	LC	WS	R	L	R	U	U	U	N	U	N	U	N	U
		4	<i>Peliperdix coqui</i>	Coqui Francolin	Francolim-das-pedras	LC	WS	R	M	C	P	C	P	U	P	R	U	N	U
	Phasianidae	5	<i>Scleroptila levaillantii</i>	Red-winged Francolin	Francolim-d'asa-vermelha	LC	WS	R	M	U	U	U	U	N	U	N	U	N	U
		6	<i>Scleroptila gutturalis</i>	Orange River Francolin	Francolim-dourado	LC	WS	R	M	N	U	N	U	N	U	U	R	U	P
		7	<i>Scleroptila finschi</i>	Finsch's Francolin	Francolim de Finsch	LC	NE	R	M	U	P	U	P	N	U	N	U	N	U
		8	<i>Dendroperdix sephaena</i>	Crested Francolin	Francolim-de-poupa	LC	WS	R	M	U	P	U	P	U	P	N	U	N	U
		9	<i>Pternistis swierstrai</i>	Swierstra's Francolin	Francolim-da-montanha	EN	ES	R	M	U	P	N	U	N	U	N	U	N	U
		10	<i>Pternistis adspersus</i>	Red-billed Spurrow	Francolim-de-bico-vermelho	LC	WS	R	M	N	U	N	U	U	U	U	U	N	U
		11	<i>Pternistis afer</i>	Red-necked Spurrow	Francolim-de-gola-vermelha	LC	WS	R	M	C	R	C	R	C	R	U	P	R	U
		12	<i>Pternistis hartlaubi</i>	Hartlaub's Francolin	Francolim de Hartlaub	LC	NE	R	M	N	U	U	P	U	P	U	U	U	U
		13	<i>Pternistis griseostriatus</i>	Grey-striped Francolin	Francolim-de-listras-cinzentas	LC	ES	R	M	N	U	U	U	N	U	N	U	N	U
		14	<i>Coturnix coturnix</i>	Common Quail	Codomiz-comum	LC	WS	M	L	U	P	U	P	U	U	N	U	N	U
		15	<i>Coturnix delegorguei</i>	Harlequin Quail	Codomiz-arlequim	LC	WS	M	L	U	P	U	P	U	U	N	U	N	U
		16	<i>Excalfactoria adansonii</i>	Blue Quail	Codomiz-azul	LC	WS	M	L	R	U	R	U	U	N	U	N	U	N
ANSERIFORMES	Anatidae	17	<i>Dendrocygna viduata</i>	White-faced Whistling Duck	Pato-assobiador-de-faces-brancas	LC	WS	R	M	C	R	U	U	C	U	U	U	U	
		18	<i>Dendrocygna bicolor</i>	Fulvous Whistling Duck	Pato-assobiador-aruiado	LC	WS	R	M	U	R	U	U	U	U	U	U	U	
		19	<i>Thalassornis leucanotus</i>	White-backed Duck	Pato-de-dorso-branco	LC	WS	R	M	U	P	U	U	R	U	R	U	U	
		20	<i>Plectropterus gambensis</i>	Spur-winged Goose	Pato-ferrão	LC	WS	R	H	C	R	U	U	U	U	U	U	U	
		21	<i>Sarkidiornis melanotos</i>	Knob-billed Duck	Pato-de-carúncula	LC	WS	R	H	U	P	U	U	U	U	U	U	U	
		22	<i>Alopochen aegyptiaca</i>	Egyptian Goose	Ganso do Egito	LC	WS	R	H	C	P	U	U	U	U	U	U	U	
		23	<i>Nettion auritus</i>	African Pygmy Goose	Pato-orelhudo	LC	WS	R	H	C	P	U	U	U	U	R	U	U	
		24	<i>Anas capensis</i>	Cape Teal	Marreco do Cabo	LC	WS	R	M	U	R	U	U	U	U	U	U	U	
		25	<i>Anas sparsa</i>	African Black Duck	Pato-preto-africano	LC	WS	R	M	U	P	U	U	U	U	R	U	U	
		26	<i>Anas undulata</i>	Yellow-billed Duck	Pato-de-bico-amarelo	LC	WS	R	M	C	R	U	U	U	U	U	U	U	
		27	<i>Anas erythrorhynchos</i>	Red-billed Teal	Marreco-de-bico-vermelho	LC	WS	R	M	C	R	U	U	C	U	U	U	U	
		28	<i>Spatula hottentota</i>	Hottentot Teal	Marreco-hotentote	LC	WS	R	M	U	U	U	U	U	U	U	U	U	
		29	<i>Spatula smithii</i>	Cape Shoveler	Pato-trombeteiro do Cabo	LC	WS	R	M	U	U	U	U	U	U	U	U	U	
		30	<i>Nettion erythrophthalma</i>	Southern Pochard	Zarro-africano	LC	WS	R	M	U	P	U	U	U	U	U	U	U	
CAPRIMULGIFORMES	Caprimulgidae	31	<i>Caprimulgus rufigena</i>	Rufous-cheeked Nightjar	Noitibó-de-faces-ruivas	LC	WS	M	L	U	U	U	C	P	C	P	C	P	
		32	<i>Caprimulgus pectoralis</i>	Fiery-necked Nightjar	Noitibó-de-pescoço-dourado	LC	WS	R	L	C	P	C	P	C	P	U	U		
		33	<i>Caprimulgus tristigma</i>	Freckled Nightjar	Noitibó-sardento	LC	WS	R	L	U	U	U	U	P	U	P	U		
		34	<i>Caprimulgus fossii</i>	Square-tailed Nightjar	Noitibó de Moçambique	LC	WS	M	L	C	P	C	P	C	P	C	P		
		35	<i>Macrodipteryx vexillarius</i>	Pennant-winged Nightjar	Noitibo-de-balanceiros	LC	WS	M	L	U	U	U	U	R	U	N	U		
	Apodidae	36	<i>Cypsiurus parvus</i>	African Palm Swift	Andorinhão-das-palmeiras	LC	WS	R	L	C	R	C	R	C	L	C	P	C	
		37	<i>Tachymartus melba</i>	Alpine Swift	Andorinhão-real	LC	WS	M	L	C	R	C	R	U	P	U	U		
		38	<i>Tachymartus aequatorialis</i>	Mottled Swift	Andorinhão-malhado	LC	WS	M	L	U	P	U	P	U	P	U	U		
		39	<i>Apus apus</i>	Common Swift	Andorinhão-preto-europeu	LC	WS	R	L	C	R	C	L	C	P	C	P		
		40	<i>Apus barbatus</i>	African Black Swift	Andorinhão-preto-africano	LC	WS	M	L	R	U	R	U	R	U	R	U		
MUSOPHAGIFORMES	Musophagidae	41	<i>Apus bradfieldi</i>	Bradfield's Swift	Andorinhão de Bradfield	LC	WS	R	L	U	P	U	R	U	P	C	P		
		42	<i>Apus affinis</i>	Little Swift	Andorinhão-pequeno	LC	WS	R	L	A	R	A	R	C	R	C	P		
		43	<i>Apus horus</i>	Horus Swift	Andorinhão-das-barreiras	LC	WS	R	L	U	U	U	U	U	R	U			
		44	<i>Apus caffer</i>	White-rumped Swift	Andorinhão-cafre	LC	WS	R	L	U	U	U	U	U	U	P	U		
		45	<i>Corythaixoides concolor</i>	Grey Go-away-bird	Tauraco mascarado	LC	WS	R	L	N	U	N	U	C	U	C	U		
		46	<i>Tauraco erythrolophus</i>	Red-crested Tauraco	Tauraco de crista vermelha	LC	ES	R	L	N	U	N	U	N	U	N	U		
OTIDIFORMES	Otididae	47	<i>Tauraco shallowi</i>	Shallow's Tauraco	Turaco de Shallow	LC	WS	R	L	C	P	U	R	U	N	U	N		
		48	<i>Ardeotis kori</i>	Kori Bustard	Abetarda-gigante	NT	WS	R	H	N	U	N	U	R	U	U	U		
		49	<i>Neotis ludwigii</i>	Ludwig's Bustard	Abetarda-de-Ludwig	EN	WS	R	H	N	U	N	U	N	U	R	U		
		50	<i>Neotis denhami</i>	Denham's Bustard	Abetarda-de-Denham	NT	WS	R	H	R	U	N	U	N	U	N	U		
		51	<i>Heterotetrax rueppellii</i>	Rüppell's Bustard	Abetarda de Rüppell	LC	WS	R	H	N	U	N	U	N	U	U	C		
		52	<i>Lophotis ruficrista</i>	Red-crested Bustard	Sisao-de-poupa-vermelha	LC	WS	R	H	N	U	N	U	C	P	C	U		
		53	<i>Afrotis afraoides</i>	Northern Black Koorhan	Sisao-cambalhota	LC	WS	R	H	N	U	N	U	N	U	N	U		
		54	<i>Lisotis melanogaster</i>	Black-bellied Bustard	Abetarda-de-barriga-preta	LC	WS	R	H	C	P	U	P	C	P	C	U		
		55	<i>Centropus senegalensis</i>	Senegal Coucal	Cucal-do Senegal	LC	WS	R	L	N	U	N	U	U	C	P	U		
		56	<i>Centropus superciliosus</i>	White-browed Coucal	Cucal-de-sobrancelhas	LC	WS	R	L	C	R	C	L	C	P	C	P		
CUCULIFORMES	Cuculidae	57	<i>Clamator glandarius</i>	Great Spotted Cuckoo	Cuco-rabilongo-grande	LC	WS	M	L	U	U	U	U	U	U	P	U		
		58	<i>Clamator levaillantii</i>	Levaillant's Cuckoo	Cuco da Cafraria	LC	WS	M	L	C	P	C	P	C	P	U			
		59	<i>Clamator jacobinus</i>	Jacobin Cuckoo	Cuco-jacobino	LC	WS	M	L	C	P	C	P	C	P	U			
		60	<i>Chrysococcyx caprius</i>	Diederick Cuckoo	Cuco-bronzeado-maior	LC	WS	M	L	C	L	C	R	C	L	C			
		61	<i>Chrysococcyx klaas</i>	Klaas's Cuckoo	Cuco-bronzeado-menor	LC	WS	R	L	C	P	C	P	U	R	U			
		62	<i>Cuculus clamosus</i>	Black Cuckoo	Cuco-preto	LC	WS	M	L	C	U	U	U	U	R	U			
		63	<i>Cuculus solitarius</i>	Red-chested Cuckoo	Cuco-de-peito-vermelho	LC	WS	M	L	C	L	C	L	C	P	U			
		64	<i>Cuculus gularis</i>	African Cuckoo	Cuco-africano	LC	WS	M	L	C	P	C	P	C	P	R			
PTERCLIFORMES	Pteroclididae	65	<i>Pterocles namaqua</i>	Namaqua Sandgrouse	Cortiçol da Namáqua	LC	WS	R	H	N	U	N	U	U	U	P	C		
		66	<i>Pterocles binctus</i>	Double-banded Sandgrouse	Cortiçol de duas bandas	LC	WS	R	H	N	U	N	U	C	P	C			
COLUMBIFORMES	Columbidae	67	<i>Columba livia</i>	Rock Dove	Pombo-doméstico	LC	WS	R	M	C	R	C	R	C	L	C	L		
		68	<i>Columba arquatrix</i>	African Olive Pigeon	Pombo-d'olho-amarelo	LC	WS	R	M	U	P	U	P	R	U	N			
		69	<i>Columba guinea</i>	Speckled Pigeon	Pombo da guinea	LC	WS	R	M	N	U	N	U	N	U	U			
		70	<i>Streptopelia semitorquata</i>	Red-eyed Dove	Rola-de-olhos-vermelhos	LC	WS	R	M	A	R	A	R	A	L	C			
		71	<i>Streptopelia capicola</i>	Ring-necked Dove	Rola do Cabo	LC	WS	R	L	A	L	A	R	A	R	C			
		72	<i>Spilopelia senegalensis</i>	Laughing Dove	Rola do Senegal	LC	WS	R	L	U	R	U	P	C	R	A			
		73	<i>Streptopelia decipiens</i>	Mourning Collared Dove	Rola-gemadora	LC	WS	R	L	N	U	N	U	U	U	U			
		74	<i>Turtur chalcospilus</i>	Emerald-spotted Wood Dove	Rola-esmeraldina	LC	WS	R	L	A	R	A	R	C	R	C			
		75	<i>Turtur tympanistris</i>	Tambourine Dove	Rola-de-papo-branco	LC	WS	R	L	N	U	U	P	N	U	N			
		76	<i>Oena capensis</i>	Namaqua Dove	Rola-rabilonga	LC	WS	R	L	U	U	U	U	C	P	C			
		77	<i>Treron calvus</i>	African Green Pigeon	Pombo-verde-africano	LC	WS	R	M	U	U	C	U	U	N	U			

BIRDS OF NAMIBE AND HUÍLA										ECOREGIONS											
ORDER	Family	REF	SCIENTIFIC NAME	COMMON NAME	NOME COMUM	IUCN ¹	ENDEMISM ²	SEASONALITY ³	RISK ⁴	ABUNDANCE ⁵	LIKELIHOOD ⁶	ABUNDANCE ⁷	LIKELIHOOD ⁸	ABUNDANCE ⁹	LIKELIHOOD ¹⁰	ABUNDANCE ¹¹	LIKELIHOOD ¹²	ABUNDANCE ¹³	LIKELIHOOD ¹⁴		
										ANGOLAN HIGHLANDS	ESCAPMENT	MOPANE WOODLANDS	ARID SAVANNA	NAMIB DESERT							
GRUIFORMES	Rallidae	78	<i>Crex egregia</i>	African Crake	Codomizão-africano	LC	WS	M	L	U	U	U	U	N	U	N	U	U	U	U	
		79	<i>Amurornis flavirostra</i>	Black Crake	Franga-d'água-preta	LC	WS	R	L	C	U	C	U	C	U	C	U	U	U	U	
		80	<i>Porzana pusilla</i>	Baillon's Crake	Franga-d'água-pequena	LC	WS	R	L	U	U	U	U	R	U	N	U	N	U	U	
		81	<i>Porzana porzana</i>	Spotted Crake	Franga-d'água-grande	LC	WS	M	L	N	U	N	U	R	U	N	U	N	U	U	
		82	<i>Porphyrio madagascariensis</i>	African Swampphen	Caimão-africano	LC	WS	R	M	R	U	R	U	U	U	U	U	U	U	U	U
		83	<i>Porphyrio alleni</i>	Allen's Gallinule	Caimão de Allen	LC	WS	M	M	U	U	U	U	U	U	U	U	U	U	U	U
		84	<i>Gallinula chloropus</i>	Common Moorhen	Galinha-d'água-comum	LC	WS	R	M	U	R	U	U	C	U	U	U	U	U	U	
		85	<i>Gallinula angulata</i>	Lesser Moorhen	Galinha-d'água-pequena	LC	WS	M	M	U	U	U	U	U	U	U	U	U	U	U	
PHOENICOPTERIFORMES	Phoenicopteridae	87	<i>Phoenicopterus roseus</i>	Greater Flamingo	Flamingo-comum	LC	WS	R	H	N	U	N	U	N	U	R	U	U	U		
		88	<i>Phoeniconaias minor</i>	Lesser Flamingo	Flamingo-pequeno	NT	WS	R	H	N	U	N	U	N	U	R	U	U	U		
	Podicepsidae	89	<i>Tachybaptus ruficollis</i>	Little Grebe	Mergulhão-pequeno	LC	WS	R	L	C	R	C	U	C	U	C	U	C	U		
		90	<i>Podiceps cristatus</i>	Great Crested Grebe	Mergulhão-de-crista	LC	WS	R	M	R	U	R	U	R	U	R	U	R	U		
		91	<i>Podiceps nigricollis</i>	Black-necked Grebe	Mergulhão-de-pescoço-preto	LC	WS	M	L	N	U	N	U	N	U	N	U	R	U		
		92	<i>Totanus sylvaticus</i>	Common Buttonquail	Toirão-comum	LC	WS	R	L	C	P	C	P	C	P	C	U	U	U		
		93	<i>Burhinus vermiculatus</i>	Water Thick-knee	Alcaravão-d'água	LC	WS	R	L	C	P	C	P	C	P	C	U	C	U		
		94	<i>Burhinus capensis</i>	Spotted Thick-knee	Alcaravão do Cabo	LC	WS	R	L	C	P	C	P	C	R	C	P	C	P		
CHARADRIFORMES	Haematopodidae	95	<i>Haematopus moquini</i>	African Oystercatcher	Ostraceiro-preto-africano	LC	WS	R	M	N	U	N	U	N	U	N	U	U	U		
		96	<i>Himantopus himantopus</i>	Black-winged Stilt	Pemilongo	LC	WS	R	L	U	U	U	U	U	U	R	U	C	U		
	Recurvirostridae	97	<i>Recurvirostra avosetta</i>	Pied Avocet	Alfaiate	LC	WS	R	L	U	U	U	U	U	U	R	U	C	U		
		98	<i>Vanellus armatus</i>	Blacksmith Lapwing	Abibe-pretilbranco	LC	WS	R	L	C	P	C	P	C	P	U	U	U	U		
	Charadriidae	99	<i>Vanellus coronatus</i>	Crowned Lapwing	Abibe-coroadado	LC	WS	R	L	U	P	U	P	C	P	U	P	R	U		
		100	<i>Vanellus senegallus</i>	African Wattled Lapwing	Abibe-carunculado	LC	WS	R	L	C	P	C	P	C	P	U	U	U	U		
		101	<i>Pluvialis squatarola</i>	Grey Plover	Tarambola-cinzenta	LC	WS	M	M	N	U	N	U	N	U	U	U	C	U		
		102	<i>Charadrius hiaticula</i>	Common Ringed Plover	Borrelho-grande-de-coleira	LC	WS	M	L	C	U	C	U	C	U	C	U	C	U		
		103	<i>Charadrius pecuarius</i>	Kittlitz's Plover	Borrelho-do-gado	LC	WS	M	L	C	P	C	P	C	P	C	U	C	U		
		104	<i>Charadrius tricollaris</i>	Three-banded Plover	Borrelho-de-três-golas	LC	WS	M	L	C	U	C	U	C	U	U	U	U	U		
		105	<i>Charadrius marginatus</i>	White-fronted Plover	Borrelho de testa branca	LC	WS	M	L	N	U	N	U	N	U	N	U	A	U		
		106	<i>Charadrius pallidus</i>	Chestnut-banded Plover	Borrelho pallido	LC	WS	M	L	N	U	N	U	N	U	N	U	C	U		
		107	<i>Rostratula benghalensis</i>	Greater Painted-snipe	Narceja-pintada	LC	WS	M	M	U	U	U	U	R	U	N	U	N	U		
		108	<i>Actophilornis africanus</i>	African Jacana	Jacana-africana	LC	WS	R	L	C	R	C	U	C	U	C	U	C	U		
	Scolopacidae	109	<i>Numenius phaeopus</i>	Whimbrel	Maçarico-galego	LC	WS	M	M	R	U	R	U	R	U	R	U	C	U		
		110	<i>Numenius arquata</i>	Eurasian Curlew	Maçarico-real	NT	WS	M	M	N	U	N	U	N	U	N	U	U	U		
		111	<i>Limosa lapponica</i>	Bar-tailed Godwit	Fuseio	NT	WS	M	M	N	U	N	U	N	U	N	U	U	U		
		112	<i>Arenaria interpres</i>	Ruddy Turnstone	Rola-do-mar	LC	WS	M	M	N	U	N	U	N	U	N	U	C	U		
		113	<i>Calidris canutus</i>	Red Knot	Seixoeira	LC	WS	M	M	N	U	N	U	N	U	N	U	C	U		
		114	<i>Calidris pugnax</i>	Ruff	Combatente	LC	WS	M	L	U	P	U	U	U	U	U	U	C	U		
		115	<i>Calidris ferruginea</i>	Curlew Sandpiper	Pilrito-de-bico-comprido	LC	WS	M	L	U	U	U	U	U	U	U	U	C	U		
		116	<i>Calidris alba</i>	Sanderling	Pilrito-sanderlingo	LC	WS	M	L	N	U	N	U	N	U	N	U	C	U		
		117	<i>Calidris minuta</i>	Little Stint	Pilrito-pequeno	LC	WS	M	L	C	U	C	U	C	U	C	U	A	U		
		118	<i>Gallinago nigripennis</i>	African Snipe	Narceja-africana	LC	WS	M	L	U	P	U	U	U	U	R	U	R	U		
		119	<i>Gallinago media</i>	Great Snipe	Narceja-real	NT	WS	M	L	R	U	R	U	R	U	R	U	R	U		
		120	<i>Tringa stagnatilis</i>	Marsh Sandpiper	Perma-verde-fino	LC	WS	M	L	C	U	C	U	C	U	C	U	C	U		
		121	<i>Tringa nebularia</i>	Common Greenshank	Perma-verde-comum	LC	WS	M	L	C	P	C	U	C	U	C	U	C	U		
		122	<i>Tringa ochropus</i>	Green Sandpiper	Maçarico-bique-bique	LC	WS	M	L	C	U	C	U	C	U	U	U	U	U		
		123	<i>Tringa totanus</i>	Common Redshank	Perma-vermelha-comum	LC	WS	M	L	N	U	N	U	N	U	N	U	U	U		
		124	<i>Tringa glareola</i>	Wood Sandpiper	Maçarico-bastardo	LC	WS	M	L	C	P	C	U	C	U	C	U	C	U		
		125	<i>Actitis hypoleucos</i>	Common Sandpiper	Maçarico-das-rochas	LC	WS	M	L	C	P	C	U	C	U	C	U	C	U		
		126	<i>Philomachus pugnax</i>	Ruff	Combatente	LC	WS	M	L	U	U	U	U	U	U	U	U	C	U		
	Glareolidae	127	<i>Cursorius temminckii</i>	Temminck's Courser	Corredor de Temminck	LC	WS	R	L	C	R	C	P	C	P	C	P	C	P		
		128	<i>Cursorius rufus</i>	Burchell's Courser	Corredor de Burchell	LC	WS	R	L	N	U	N	U	N	U	U	P	C	L		
		129	<i>Rhinoptilus africanus</i>	Double-banded Courser	Corredor-de-duas-golas	LC	WS	R	L	N	U	N	U	N	U	N	U	U	P		
		130	<i>Rhinoptilus chalcopiterus</i>	Bronze-winged Courser	Corredor-asa-de-bronze	LC	WS	M	L	U	U	U	U	R	U	N	U	N	U		
	Stercorariidae	131	<i>Stercorarius parasiticus</i>	Arctic Skua	Moleiro-parasítico	LC	WS	M	L	N	U	N	U	N	U	N	U	U	U		
		132	<i>Stercorarius pomarinus</i>	Pomarine Skua	Moleiro-pomarine	LC	WS	M	L	N	U	N	U	N	U	N	U	U	U		
	Laridae	133	<i>Rynchops flavirostris</i>	African Skimmer	Talha-mar-africano	NT	WS	M	L	N	U	N	U	R	U	U	U	U	U		
		134	<i>Xema sabini</i>	Sabine's Gull	Gaiivota de Sabine	LC	WS	M	L	N	U	N	U	N	U	N	U	C	U		
		135	<i>Chroicocephalus cirrocephalus</i>	Gray-hooded Gull	Gaiivota-de-cabeça-cinza	LC	WS	M	L	N	U	N	U	N	U	N	U	C	U		
		136	<i>Larus dominicanus</i>	Kelp Gull	Gaiivota-austral	LC	WS	R	L	N	U	N	U	N	U	N	U	C	U		
		137	<i>Onychoprion fuscatus</i>	Sooty Tern	Andorinha-do-mar-escuro	LC	WS	M	L	N	U	N	U	N	U	N	U	R	U		
		138	<i>Sternula balaenarum</i>	Damara Tern	Gaiivota de Damara	VU	NE	M	L	N	U	N	U	N	U	N	U	C	U		
		139	<i>Hydroprogne caspia</i>	Caspian Tern	Gaiivota-de-bico-vermelho	LC	WS	M	H	N	U	N	U	N	U	N	U	C	U		
		140	<i>Chlidonias hybrida</i>	Whiskered Tern	Gaiivota-de-faces-brancas	LC	WS	M	L	N	U	N	U	N	U	N	U	C	U		
		141	<i>Chlidonias leucopterus</i>	White-winged Tern	Gaiivota-d'asa-branca	LC	WS	M	L	U	U	U	U	U	U	U	U	C	U		
		142	<i>Chlidonias niger</i>	Black Tern	Gaiivota-preta	LC	WS	M	L	N	U	N	U	N	U	N	U	C	U		
143		<i>Sterna hirundo</i>	Common Tern	Andorinha-do-mar-comum	LC	WS	M	L	N	U	N	U	N	U	N	U	A	U			
144		<i>Sterna artica</i>	Arctic Tern	Andorinha-do-mar-do-Ártico	LC	WS	M	L	N	U	N	U	N	U	N	U	C	U			
145		<i>Thalasseus sandwicensis</i>	Sandwich Tern	Andorinha-do-mar-de-ponta-branca	LC	WS	M	L	N	U	N	U	N	U	N	U	C	U			
146		<i>Thalasseus bergii</i>	Great Crested Tern	Andorinha-do-mar-de-crista	LC	WS	M	M	N	U	N	U	N	U	N	U	U	U			
147	<i>Thalasseus maximus</i>	Royal Tern	Garajau-real	LC	WS	M	M	N	U	N	U	N	U	N	U	C	U				
SPHENESCIFORMES	Spheniscidae	148	<i>Spheniscus demersus</i>	Jackass Penguin	Pingüim do cabo	LC	WS	M	L	N	U	N	U	N	U	N	U	U			
PROCELLARIFORMES	Oceanitidae	149	<i>Oceanites oceanicus</i>	Wilson's Storm-petrel	Painho de Wilson	LC	WS	M	L	N	U	N	U	N	U	N	U	U			
		150	<i>Thalassarche chlororhynchus</i>	Yellow-nosed Albatross	Albatroz-de-nariz-amarelo	EN	WS	M	L	N	U	N	U	N	U	N	U	R			
	Diomedelidae	151	<i>Thalassarche cauta</i>	White-capped Albatross	Albatroz-arisco	NT	WS	M	L	N	U	N	U	N	U	N	U	R			
		152	<i>Hydrobatodes leucorhous</i>	Leach's Storm-petrel	Painho-de-cauda-forcada	VU	WS	M	L	N	U	N	U	N	U	N	U	U			
	Procellariidae	153	<i>Ardenna grisea</i>	Sooty Shearwater	Pardela-preta	NT	WS	M	L	N	U	N	U	N	U	N	U	U			
154	<i>Colonyctris diomedea</i>	Scopoli's Shearwater	bobó-grande	LC	WS	M	L	N	U	N	U	N	U	N	U	U					

BIRDS OF NAMIBE AND HUÍLA										ECOREGIONS										
ORDER	Family	REF	SCIENTIFIC NAME	COMMON NAME	NOME COMUM	IUCN ¹	ENDEMISM ²	SEASONALITY ³	RISK ⁴	ABUNDANCE ⁵	LIKELIHOOD ⁶	ABUNDANCE ⁷	LIKELIHOOD ⁸	ABUNDANCE ⁹	LIKELIHOOD ¹⁰	ABUNDANCE ¹¹	LIKELIHOOD ¹²	ABUNDANCE ¹³	LIKELIHOOD ¹⁴	
										ANGOLAN HIGHLANDS	ESCAPMENT	MOPANE WOODLANDS	ARID SAVANNA	NAMIB DESERT						
PELECANIFORMES	Ciconiidae	155	<i>Calonectris borealis</i>	Cory's Shearwater	Cagarra	LC	WS	M	L	N	U	N	U	N	U	N	U	N	U	U
		156	<i>Mycteria ibis</i>	Yellow-billed Stork	Cegonha-de-bico-amarelo	LC	WS	M	H	U	P	U	U	U	U	P	R	U	N	U
		157	<i>Anastomus lamelligerus</i>	African Openbill	Bico-aberto	LC	WS	R	H	U	U	R	U	R	U	U	N	U	N	U
		158	<i>Ciconia nigra</i>	Black Stork	Cegonha-preta	LC	WS	M	H	U	P	U	P	R	U	N	U	N	U	
		159	<i>Ciconia abdimii</i>	Abdim's Stork	Cegonha de Abdim	LC	WS	M	H	U	P	R	U	R	U	N	U	N	U	
		160	<i>Ciconia episcopus</i>	Woolly-necked Stork	Cegonha-episcopal	LC	WS	M	H	C	P	U	P	U	U	U	U	N	U	
		161	<i>Ciconia ciconia</i>	White Stork	Cegonha-branca	LC	WS	M	H	R	U	R	U	R	U	N	U	N	U	
		162	<i>Ephippiorhynchus senegalensis</i>	Saddle-billed Stork	Jabiru	LC	WS	R	H	R	U	R	U	R	U	N	U	N	U	
		163	<i>Leptoptilos crumenifer</i>	Marabou Stork	Marabu	LC	WS	R	H	U	P	U	P	U	P	R	U	N	U	
		164	<i>Morus capensis</i>	Cape Gannet	Atobá-do-cabo	EN	WS	M	L	N	U	N	U	N	U	N	U	C	U	
	Phalacrocoracidae	165	<i>Microcarbo africanus</i>	Reed Cormorant	Corvo-marinho-africano	LC	WS	R	M	C	R	C	U	C	U	C	U	C	U	
		166	<i>Phalacrocorax capensis</i>	Cape Cormorant	Corvo marinho do cabo	EN	WS	M	M	N	U	N	U	N	U	N	U	C	U	
		167	<i>Phalacrocorax lucidus</i>	White-breasted Cormorant	Corvo-marinho-de-peito-branco	LC	WS	R	M	U	U	U	U	U	U	U	U	C	U	
	Anhingidae	168	<i>Anhinga rufa</i>	African Darter	Mergulhão-serpente	LC	WS	R	M	U	U	U	U	U	U	N	U	N	U	
		169	<i>Threskiornis aethiopicus</i>	African Sacred Ibis	Ibis-sagrado	LC	WS	R	M	C	P	C	P	U	U	U	U	U	U	
	Threskiornithidae	170	<i>Bastrychia hagedash</i>	Hadada Ibis	Singanga	LC	WS	R	M	R	U	R	U	N	U	N	U	N	U	
		171	<i>Plegadis falcinellus</i>	Glossy Ibis	Ibis-preto	LC	WS	R	H	R	U	R	U	N	U	N	U	N	U	
		172	<i>Platalea alba</i>	African Spoonbill	Colhereiro-africano	LC	WS	M	H	R	U	R	U	U	U	U	U	U	U	
		173	<i>Ixobrychus minutus</i>	Little Bittern	Garçate-comum	LC	WS	R	L	U	U	U	U	U	U	U	U	U	U	
	Ardeidae	174	<i>Ixobrychus sturmi</i>	Dwarf Bittern	Garçate-anão	LC	WS	R	L	R	U	R	U	U	U	U	U	N	U	
		175	<i>Nycticorax nycticorax</i>	Black-crowned Night Heron	Goraz-comum	LC	WS	R	M	R	U	R	U	U	U	U	U	N	U	
		176	<i>Gorsachius leuconotus</i>	White-backed Night Heron	Goraz-de-dorso-branco	LC	WS	R	M	R	U	N	U	N	U	N	U	N	U	
		177	<i>Butorides striata</i>	Striated Heron	Garça-de-dorso-verde	LC	WS	R	L	C	U	C	U	C	U	U	U	U	U	
178		<i>Ardeola ralloides</i>	Squacco Heron	Papa-ratos-comum	LC	WS	R	L	C	U	C	U	C	U	C	U	U	U		
179		<i>Bubulcus ibis</i>	Western Cattle Egret	Garça-boleira	LC	WS	R	L	A	R	A	R	C	R	C	L	C	L		
180		<i>Ardea cinerea</i>	Grey Heron	Garça-real	LC	WS	R	M	C	R	C	L	C	P	C	P	C	P		
181		<i>Ardea melanocephala</i>	Black-headed Heron	Garça-de-cabeça-preta	LC	WS	R	M	C	R	C	R	C	L	C	L	C	R		
182		<i>Ardea goliath</i>	Goliath Heron	Garça-gigante	LC	WS	R	M	R	U	R	U	U	U	U	U	R	U		
183		<i>Ardea purpurea</i>	Purple Heron	Garça-vermelha	LC	WS	R	M	C	P	C	U	C	U	C	U	C	U		
184		<i>Ardea alba</i>	Great Egret	Garça-branca-grande	LC	WS	R	L	U	U	U	U	U	U	U	U	U	U		
185		<i>Ardeola rufiventris</i>	Rufous-bellied Heron	Garça-de-barriga-vermelha	LC	WS	R	L	R	U	N	U	N	U	N	U	N	U		
186		<i>Egretta intermedia</i>	Intermediate Egret	Garça-branca-intermédia	LC	WS	R	L	U	U	U	U	U	U	U	U	U	U		
187		<i>Egretta ardesiaca</i>	Black Heron	Garça-preta	LC	WS	R	L	U	U	U	U	U	U	U	U	U	U		
188		<i>Egretta garzetta</i>	Little Egret	Garça-branca-pequena	LC	WS	R	L	C	R	C	P	C	P	C	P	A	P		
189		<i>Scopus umbretta</i>	Hamerkop	Pássaro-martelo	LC	WS	R	L	C	R	C	R	C	P	C	P	C	P		
Pelecanidae	190	<i>Pelecanus onocrotalus</i>	Great White Pelican	Pelicano-branco	LC	WS	R	H	N	U	N	U	R	U	U	U	C	U		
	191	<i>Pelecanus rufescens</i>	Pink-backed Pelican	Pelicano-cinzento	LC	WS	R	H	U	U	N	U	U	U	U	U	C	U		
ACCIPITRIFORMES	Sagittariidae	192	<i>Sagittarius serpentarius</i>	Secretarybird	Secretário	VU	WS	R	H	U	P	U	U	R	U	R	U	U		
		193	<i>Pandion haliaetus</i>	Western Osprey	Águia-pesqueira	LC	WS	M	M	U	U	U	U	U	U	U	U	C	R	
	Accipitridae	194	<i>Pernis apivorus</i>	European Honey Buzzard	Bútio-vespeiro	LC	WS	M	M	U	U	U	U	U	R	U	N	U		
		195	<i>Aviceda cuculoides</i>	African Cuckoo-Hawk	Gavião-cuco	LC	WS	R	M	R	U	R	U	N	U	N	U	N	U	
		196	<i>Macheiramphus alcinus</i>	Bat Hawk	Gavião-morcegueiro	LC	WS	R	M	R	U	R	U	N	U	N	U	N	U	
		197	<i>Elanus caeruleus</i>	Black-winged Kite	Peneireiro-cinzento	LC	WS	R	L	C	R	C	R	C	P	C	P	C	P	
		198	<i>Milvus migrans</i>	Black Kite	Milhafre-preto-comum	LC	WS	M	M	U	U	U	U	U	U	U	U	U	U	
		199	<i>Milvus aegyptius</i>	Yellow-billed Kite	Milhafre-preto-de-bico-amarelo	LC	WS	R	M	A	R	A	L	C	P	C	P	C	P	
		200	<i>Haliaeetus vocifer</i>	African Fish Eagle	Pigargo-africano	LC	WS	R	M	U	P	R	U	C	U	C	U	C	P	
		201	<i>Gypohierax angolensis</i>	Palm-nut Vulture	Abutre-das-palmeiras	LC	WS	R	H	R	U	R	C	P	U	U	C	P	C	
		202	<i>Neophron percnopterus</i>	Egyptian Vulture	Abutre do Egípto	EN	WS	R	H	R	U	R	U	R	U	R	U	R	U	
		203	<i>Necrosyrtes monachus</i>	Hooded Vulture	Abutre-de-capuz	CR	WS	R	H	N	U	N	U	N	U	R	U	R	U	
		204	<i>Gyps africanus</i>	White-backed Vulture	Grifo-de-dorso-branco	CR	WS	R	H	N	U	N	U	N	U	R	U	R	U	
		205	<i>Trigonoceps occipitalis</i>	White-headed Vulture	Abutre-de-cabeça-branca	CR	WS	R	H	N	U	N	U	N	U	N	U	N	U	
		206	<i>Torgos tracheliotus</i>	Lappet-faced Vulture	Abutre-real	EN	WS	R	H	N	U	N	U	R	U	R	U	U	U	
		207	<i>Circaetus pectoralis</i>	Black-chested Snake Eagle	Águia-cobreira-de-peito-preto	LC	WS	R	M	C	P	C	P	C	R	C	R	C	P	
		208	<i>Circaetus cinereus</i>	Brown Snake Eagle	Águia-cobreira-castanha	LC	WS	R	M	C	P	C	P	C	P	C	P	C	U	
		209	<i>Circaetus cinerascens</i>	Western Banded Snake Eagle	Águia-cobreira-de-cauda-branca	LC	WS	M	M	C	U	C	U	C	U	U	U	R	U	
		210	<i>Terathopus ecaudatus</i>	Bateleur	Águia-bailarina	NT	WS	R	H	C	P	C	P	C	P	U	U	U	U	
		211	<i>Circus aeruginosus</i>	Western Marsh Harrier	Tartaranhão-ruivo-dos-pauis	LC	WS	M	H	N	U	N	U	N	U	N	U	N	U	
		212	<i>Circus ranivorus</i>	African Marsh Harrier	Tartaranhão-dos-pântanos	LC	WS	R	H	N	R	N	U	N	U	N	U	N	U	
		213	<i>Circus macrourus</i>	Pallid Harrier	Tartaranhão-pálido	LC	WS	M	H	N	U	N	U	N	U	N	U	N	U	
		214	<i>Polyboroides typus</i>	Gymnogene	Secretário-pequeno	LC	WS	R	M	C	L	C	R	C	R	C	P	U	U	
215	<i>Melierax canorus</i>	Pale Chanting Goshawk	Açor-cantor-pálido	LC	WS	R	L	N	U	U	P	C	P	C	R	C	P			
216	<i>Melierax metabates</i>	Dark Chanting Goshawk	Açor-cantor-escuro	LC	WS	R	L	C	P	U	P	U	U	N	U	N	U			
217	<i>Micronisus gabar</i>	Gabar Goshawk	Gavião-palrador	LC	WS	R	L	U	U	U	U	C	P	C	P	U	U			
218	<i>Accipiter tachiro</i>	African Goshawk	Açor-africano	LC	WS	R	L	C	P	C	P	C	U	U	U	R	U			
219	<i>Accipiter badius</i>	Shikra	Gavião-chica	LC	WS	R	L	U	U	U	U	U	P	U	U	N	U			
220	<i>Accipiter minullus</i>	Little Sparrowhawk	Gavião-pequeno	LC	WS	R	L	U	P	C	R	U	P	U	U	N	U			
221	<i>Accipiter ovampensis</i>	Ovambo Sparrowhawk	Gavião do Ovambo	LC	WS	R	L	U	U	U	U	U	U	R	U	N	U			
222	<i>Accipiter melanoleucus</i>	Black Sparrowhawk	Açor-preto	LC	WS	R	L	U	U	C	P	U	U	R	U	N	U			
223	<i>Accipiter rufiventris</i>	Rufous-breasted Sparrowhawk	Gavião-ruivo	LC	WS	R	L	N	U	R	U	N	U	N	U	N	U			
224	<i>Kaupifalco monogrammicus</i>	Lizard Buzzard	Gavião-papa-lagartos	LC	WS	R	L	C	P	C	P	C	L	C	P	C	P			
225	<i>Buteo buteo</i>	Common Buzzard	Bútio-comum	LC	WS	M	M	C	L	C	L	C	P	C	P	C	P			
226	<i>Buteo auguralis</i>	Red-necked Buzzard	Bútio-de-capuz-vermelho	LC	WS	R	M	C	P	C	P	U	U	R	U	N	U			
227	<i>Buteo augur</i>	Augur Buzzard	Bútio-augur	LC	WS	R	M	U	P	C	R	C	R	C	P	C	P			
228	<i>Aquila pomarina</i>	Lesser Spotted Eagle	Águia-pomarina	LC	WS	M	H	N	U	R	U	N	U	N	U	N	U			
229	<i>Aquila rapax</i>	Tawny Eagle	Águia-fulva	VU	WS	M	H	U	U	U	U	R	U	R	U	R	U			
230	<i>Aquila verreauxii</i>	Verreaux's Eagle	Águia-preta	LC	WS	R	H	C	P	C	L	U	P	U	U	C	U			
231	<i>Aquila spilogaster</i>	African Hawk-Eagle	Águia-domínio	LC	WS	R	M	C	U	C	P	C	U	U	U	R	U			

BIRDS OF NAMIBE AND HUÍLA										ECOREGIONS											
ORDER	Family	REF	SCIENTIFIC NAME	COMMON NAME	NOME COMUM	IUCN ¹	ENDEMISM ²	SEASONALITY ³	RISK ⁴	ABUNDANCE ⁵	LIKELIHOOD ⁶	ABUNDANCE ⁷	LIKELIHOOD ⁸	ABUNDANCE ⁹	LIKELIHOOD ¹⁰	ABUNDANCE ¹¹	LIKELIHOOD ¹²	ABUNDANCE ¹³	LIKELIHOOD ¹⁴		
										ANGOLAN HIGHLANDS	ESCARPMENT	MOPANE WOODLANDS	ARID SAVANNA	NAMIB DESERT							
STRIGIFORMES	Tytonidae	232	<i>Hieraetus wahlbergi</i>	Wahlberg's Eagle	Águia de Wahlberg	LC	WS	M	M	C	P	C	P	C	P	C	P	C	P	U	
		233	<i>Hieraetus pennatus</i>	Booted Eagle	Águia-calçada	LC	WS	M	M	R	U	U	P	R	U	R	U	R	U	R	U
		234	<i>Hieraetus ayresii</i>	Ayres's Hawk-Eagle	Águia de Ayres	LC	WS	M	M	U	U	U	U	U	U	R	U	R	U	N	U
		235	<i>Polemaetus bellicosus</i>	Martial Eagle	Águia-marcial	VU	WS	R	M	U	U	U	U	C	P	C	P	C	P	U	U
		236	<i>Stephanoaetus coronatus</i>	Crowned Eagle	Águia-coroadada	NT	WS	R	M	N	U	R	U	N	U	N	U	N	U	N	U
		237	<i>Lophoetus occipitalis</i>	Long-crested Eagle	Águia-de-penacho	LC	WS	R	M	R	U	U	P	R	U	N	U	N	U	N	U
		238	<i>Tyto alba</i>	Western Barn Owl	Coruja-das-torres	LC	WS	R	L	C	P	C	P	C	P	C	P	C	P	C	U
STRIGIFORMES	Strigidae	239	<i>Otus senegalensis</i>	African Scops Owl	Mochó-d'orelhas-africano	LC	WS	R	L	C	U	C	U	C	U	U	U	U	N	U	
		240	<i>Ptilopsis granti</i>	Southern White-faced Owl	Mochó-de-faces-brancas	LC	WS	R	L	N	U	R	U	U	U	U	U	U	U	U	
		241	<i>Bubo africanus</i>	Spotted Eagle-Owl	Bufo-malhado	LC	WS	R	L	C	U	C	U	C	U	U	U	U	U	U	
		242	<i>Bubo lacteus</i>	Verreaux's Eagle-Owl	Bufo-leitoso	LC	WS	R	L	U	U	U	U	U	U	R	U	N	U		
		243	<i>Strix woodfordii</i>	African Wood Owl	Coruja-da-floresta	LC	WS	R	L	U	U	C	P	U	P	R	U	N	U		
		244	<i>Glaucidium perlatum</i>	Pearl-spotted Owlet	Mochó-perlado	LC	WS	R	L	N	U	R	U	U	U	C	P	U	U		
		245	<i>Glaucidium capense</i>	African Barred Owlet	Mochó-barrado	LC	WS	R	L	U	U	R	U	N	U	N	U	N	U		
		246	<i>Asio capensis</i>	Marsh Owl	Coruja-dos-pântanos	LC	WS	R	L	U	U	R	U	N	U	N	U	N	U		
COLIIFORMES	Coliidae	247	<i>Colius castanotus</i>	Red-backed Mousebird	Rabo-de-junco de Angola	LC	ES	R	L	U	R	C	R	U	R	N	U	N	U		
		248	<i>Colius striatus</i>	Speckled Mousebird	Rabo de junco estriado	LC	WS	R	L	N	U	N	U	U	U	U	U	N	U		
		249	<i>Urocolius indicus</i>	Red-faced Mousebird	Rabo de juncos se faces vermelhas	LC	WS	R	L	N	U	R	U	C	R	C	R	C	P		
TROGONIFORMES	Trogonidae	250	<i>Apaloderma narina</i>	Narina Trogon	Republicano-comum	LC	WS	R	L	R	U	U	U	R	U	N	U	N	U		
BUCEROTIFORMES	Upipidae	251	<i>Upupa africana</i>	African Hoopoe	Poupa-africana	LC	WS	R	L	C	P	C	P	C	P	C	P	C	P	U	
		252	<i>Phoeniculus cyanomelas</i>	Violet Wood Hoopoe	Zombeteiro-de-Damara	LC	WS	R	L	N	U	U	U	C	P	C	P	C	P	U	
	Phoeniculidae	253	<i>Phoeniculus purpureus</i>	Green Wood Hoopoe	Zombeteiro-de-bico-vermelho	LC	WS	R	L	C	U	U	U	N	U	N	U	N	U		
		254	<i>Rhinopomastus aterrimus</i>	Black Scimitarbill	Zombeteiro-preto	LC	WS	R	L	U	U	C	U	C	R	U	U	N	U		
	Bucerotidae	255	<i>Bucorvus leadbeateri</i>	Southern Ground Hornbill	Calau-gigante	VU	WS	R	H	U	U	U	U	U	U	U	U	U	R	U	
		256	<i>Tockus alboterminatus</i>	Crowned Hornbill	Calau-coroadado	LC	WS	R	L	C	P	C	R	C	P	C	U	U	U		
		257	<i>Tockus pallidirostris</i>	Pale-billed Hornbill	Calau-de-bico-marfim	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U		
		258	<i>Tockus nasutus</i>	African Grey Hornbill	Calau-cinzento	LC	WS	R	L	U	U	U	U	U	R	U	U	R	U		
		259	<i>Tockus bradfieldi</i>	Bradfield's Hornbill	Calau de Bradfield	LC	WS	R	L	N	U	N	U	U	U	R	U	N	U		
		260	<i>Tockus monteiri</i>	Monteiro's Hornbill	Calau de Monteiro	LC	WS	R	L	N	U	N	U	C	R	C	L	C	P		
		261	<i>Tockus erythrorhynchus</i>	Red-billed Hornbill	Calau-de-bico-vermelho	LC	WS	R	L	N	U	R	U	N	U	N	U	N	U		
		262	<i>Tockus damarensis</i>	Damara Hornbill	Calau-de-Damara	LC	WS	R	L	N	U	N	U	C	P	C	R	U	U		
		263	<i>Tockus leucomelas</i>	Southern Yellow-billed Hornbill	Calau-de-bico-amarelo	LC	WS	R	L	N	U	U	U	C	R	C	P	U	U		
		264	<i>Bycanistes bucinator</i>	Trumpeter Hornbill	Calau-trombeteiro	LC	WS	R	M	U	U	R	U	N	U	N	U	N	U		
CORACIFORMES	Coraciidae	265	<i>Coracias naevius</i>	Purple Roller	Rolieiro-de-sobrancelhas-brancas	LC	WS	R	L	U	U	C	P	C	P	C	R	U	U		
		266	<i>Coracias caudatus</i>	Lilac-breasted Roller	Rolieiro-de-peito-lilás	LC	WS	R	L	C	P	C	P	C	P	C	P	C	P		
		267	<i>Coracias spatulatus</i>	Racket-tailed Roller	Rolieiro-cauda-de-raquete	LC	WS	R	L	R	U	N	U	N	U	N	U	N	U		
		268	<i>Coracias garrulus</i>	European Roller	Rolieiro-europeu	LC	WS	M	L	R	U	R	U	N	U	N	U	N	U		
		269	<i>Eurystomus glaucurus</i>	Broad-billed Roller	Rolieiro-de-bico-amarelo	LC	WS	M	L	U	U	C	P	C	P	C	P	C	U		
		Alcedinidae	270	<i>Halcyon leucocephala</i>	Grey-headed Kingfisher	Pica-peixe-de-barrete-cinzento	LC	WS	R	L	U	U	U	U	R	U	N	U	N	U	
	271		<i>Halcyon albiventris</i>	Brown-hooded Kingfisher	Pica-peixe-de-barrete-castanho	LC	WS	R	L	U	U	C	R	U	U	N	U	N	U		
	272		<i>Halcyon chelicuti</i>	Striped Kingfisher	Pica-peixe-riscado	LC	WS	R	L	C	P	C	P	C	P	C	P	C	U		
	273		<i>Halcyon senegalensis</i>	Woodland Kingfisher	Pica-peixe-dos-bosques	LC	WS	R	L	C	P	C	P	C	P	C	P	C	U		
	274		<i>Ispidina picta</i>	African Pygmy Kingfisher	Pica-peixe-pigmeu	LC	WS	R	L	U	U	C	P	U	U	R	U	N	U		
	275		<i>Corythornis cristatus</i>	Malachite Kingfisher	Pica-peixe-de-poupa	LC	WS	R	L	C	U	C	U	C	R	U	U	U	U		
	276		<i>Alcedo semitorquata</i>	Half-collared Kingfisher	Pica-peixe-de-colar	LC	WS	R	L	R	U	N	U	N	U	N	U	N	U		
	277		<i>Megaceryle maxima</i>	Giant Kingfisher	Pica-peixe-gigante	LC	WS	R	L	U	U	U	U	U	U	R	U	N	U		
	278	<i>Ceryle rudis</i>	Pied Kingfisher	Pica-peixe-malhado	LC	WS	R	L	C	L	C	U	C	U	C	U	U	U			
Meropidae	279	<i>Merops hirundineus</i>	Swallow-tailed Bee-eater	Abelharuco-andorinha	LC	WS	R	L	C	P	C	P	C	R	C	U	U	U			
	280	<i>Merops pusillus</i>	Little Bee-eater	Abelharuco-dourado	LC	WS	M	L	C	R	C	P	C	P	C	P	C	U			
	281	<i>Merops bullockoides</i>	White-fronted Bee-eater	Abelharuco-de-testa-branca	LC	WS	R	L	C	U	U	U	U	U	U	U	N	U			
	282	<i>Merops persicus</i>	Blue-cheeked Bee-eater	Abelharuco-persa	LC	WS	M	L	C	P	C	P	U	P	U	P	U	P			
	283	<i>Merops superciliosus</i>	Olive Bee-eater	Abelharuco-oliváceo	LC	WS	M	L	U	U	U	P	C	P	C	P	C	R			
	284	<i>Merops apiaster</i>	European Bee-eater	Abelharuco-europeu	LC	WS	M	L	C	L	C	R	C	R	C	P	C	P			
	285	<i>Merops nubicoides</i>	Southern Carmine Bee-eater	Abelharuco-róseo	LC	WS	M	L	U	U	R	U	N	U	N	U	N	U			
LYBIIDAE	286	<i>Gymnabucco calvus vernayi</i>	Naked-faced Barbet	Barbaças-careca de Angola	LC	ER	R	L	R	U	R	U	N	U	N	U	N	U			
	287	<i>Stactolaema anchietae</i>	Anchietae's Barbet	Barbaças de Anchietae	LC	NE	R	L	R	U	N	U	N	U	N	U	N	U			
	288	<i>Pogoniulus coryphaea</i>	Western Tinkerbird	Barbadinho-da-montanha	LC	WS	R	L	U	U	U	U	N	U	N	U	N	U			
	289	<i>Pogoniulus bilineatus</i>	Yellow-rumped Tinkerbird	Barbadinho-d'uropiglio-limão	LC	WS	R	L	N	U	R	U	N	U	N	U	N	U			
	290	<i>Pogoniulus chrysoconus</i>	Yellow-fronted Tinkerbird	Barbadinho-de-testa-amarela	LC	WS	R	L	C	U	C	P	C	P	C	U	U	U			
	291	<i>Tricholaema leucomelas</i>	Acacia Pied Barbet	Barbaças das acacia	LC	WS	R	L	N	U	U	U	C	R	C	R	C	U			
	292	<i>Lybius leucocephalus leucogaster</i>	White-headed Barbet	Barbaças-de-cabeça-branca de Angola	LC	ER	R	L	R	U	R	U	N	U	N	U	N	U			
	293	<i>Lybius minor</i>	Black-backed Barbet	Barbaças de Levaillant	LC	WS	R	L	N	U	R	U	N	U	N	U	N	U			
	294	<i>Lybius torquatus</i>	Black-collared Barbet	Barbaças-de-colar-preto	LC	WS	R	L	C	P	C	R	C	R	C	P	C	P			
	295	<i>Trochophonus vaillantii</i>	Crested Barbet	Barbaças-de-poupa	LC	WS	R	L	R	U	N	U	N	U	N	U	N	U			
PICIFORMES	Indicatoridae	296	<i>Prodotiscus zambesiae</i>	Green-backed Honeybird	Indicador-elegante-de-dorso-verde	LC	WS	R	L	R	U	N	U	N	U	N	U	N	U		
		297	<i>Prodotiscus regulus</i>	Brown-backed Honeybird	Indicador elegante-de-dorso-castanho	LC	WS	R	L	U	U	C	U	U	R	N	U	N	U		
		298	<i>Indicator meliphilus</i>	Pallid Honeyguide	Indicador-pequeno-pálido	LC	WS	R	L	R	U	N	U	N	U	N	U	N	U		
		299	<i>Indicator minor</i>	Lesser Honeyguide	Indicador-pequeno-de-cabeça-cinzenta	LC	WS	R	L	R	U	C	U	U	U	N	U	N	U		
		300	<i>Indicator variegatus</i>	Scaly-throated Honeyguide	Indicador-malhado-castanho	LC	WS	R	L	R	U	U	U	N	U	N	U	N	U		
		301	<i>Indicator indicator</i>	Greater Honeyguide	Indicador-grande	LC	WS	R	L	U	U	C	U	C	U	U	U	N	U		
	Picidae	302	<i>Jynx ruficollis</i>	Red-throated Wryneck	Torcicolo-de-garganta-castanha	LC	WS	R	L	R	U	R	U	N	U	N	U	N	U		
		303	<i>Campethera calliata</i>	Green-backed Woodpecker	Pica-pau-de-dorso-verde	LC	WS	R	L	R	U	R	U	N	U	N	U	N	U		
		304	<i>Campethera bennettii</i>	Bennett's Woodpecker	Pica-pau de Bennett	LC	WS	R	L	U	U	U	U	N	U	N	U	N	U		
		305	<i>Campethera abingoni</i>	Golden-tailed Woodpecker	Pica-pau-de-cauda-dourada	LC	WS	R	L	C	U	C	P	C	P	C	P	U	U		
		306	<i>Dendrapicus fuscescens</i>	Cardinal Woodpecker	Pica-pau-cardeal	LC	WS	R	L	C	U	C	P	C	P	C	P	U	U		
307	<i>Dendrapicus namaquus</i>	Bearded Woodpecker	Pica-pau-de-bigodes	LC	WS	R	L	U	U	C	U	U	U	N	U	N	U				
308	<i>Dendrapicus griseocephalus</i>	Olive Woodpecker	Pica-pau-de-cabeça-cinzenta	LC	WS	R	L	R	U	U	U	N	U	N	U	N	U				

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										ANGOLAN HIGHLANDS	ESCAPMENT	MOPANE WOODLANDS	ARID SAVANNA	NAMIB DESERT								
FALCONIFORMES	Falconidae	309	<i>Falco rupicolus</i>	Rock Kestrel	Peneireiro-vulgar-africano	LC	WS	R	L	C	L	C	P	C	R	C	R	C	R	U		
		310	<i>Falco naumanni</i>	Lesser Kestrel	Peneireiro-das-torres	LC	WS	M	L	R	U	U	U	R	U	R	U	R	U	R	U	
		311	<i>Falco rupicoloides</i>	Greater Kestrel	Peneireiro de olho branco	LC	WS	R	L	N	U	N	U	R	U	U	U	C	U	U	U	
		312	<i>Falco ardsiaecus</i>	Grey Kestrel	Francelho-cinzento	LC	WS	R	L	R	U	U	U	U	U	U	U	R	U	R	U	
		313	<i>Falco dickinsoni</i>	Dickinson's Kestrel	Francelho de Dickinson	LC	WS	M	L	U	U	U	U	R	U	N	U	N	U	U	U	
		314	<i>Falco vespertinus</i>	Red-footed Falcon	Falção-vespertino	NT	WS	M	L	U	U	U	U	R	U	N	U	N	U	U	U	
		315	<i>Falco chicquera</i>	Red-necked Falcon	Falção-de-nuca-vermelha	LC	WS	R	L	U	U	U	U	U	U	U	U	U	R	U	U	
		316	<i>Falco subbuteo</i>	Eurasian Hobby	Ógea-euroasiática	LC	WS	M	L	N	U	N	U	N	U	N	U	R	U	U	U	
		317	<i>Falco cuvierii</i>	African Hobby	Ógea-africana	LC	WS	R	L	U	U	C	U	U	U	U	U	R	U	U	U	
		318	<i>Falco biarmicus</i>	Lanner Falcon	Alfaneque	LC	WS	R	M	C	P	C	R	C	P	C	R	C	R	C	R	U
		319	<i>Falco peregrinus</i>	Peregrine Falcon	Falção-peregrino	LC	WS	M	M	C	U	C	P	U	R	U	U	U	U	U	U	
		PSITACIFORMES	Psittacidae	320	<i>Poicephalus rueppellii</i>	Rüppell's Parrot	Papagaio de Rüppell	LC	WS	R	L	N	U	N	U	C	U	C	P	U	U	U
				321	<i>Poicephalus meyeri</i>	Meyer's Parrot	Papagaio de Meyer	LC	NE	R	L	C	U	U	U	U	U	N	U	N	U	U
		PASSERIFORMES	Platysteriidae	322	<i>Agapornis roseicollis</i>	Rosy-faced Lovebird	Republicano-de-faces-rosadas	LC	NE	R	L	C	P	U	U	U	C	U	C	P	U	U
				323	<i>Batis pririt</i>	Pirit Batis	Batis de Pirit	LC	WS	R	L	N	U	N	U	U	U	C	R	C	U	U
				324	<i>Batis molitor</i>	Chinspot Batis	Batis-comum	LC	WS	R	L	C	U	C	P	U	U	U	U	N	U	U
				325	<i>Batis minulla</i>	Angola Batis	Batis de Angola	LC	NE	R	L	U	U	U	U	N	U	N	U	N	U	U
				326	<i>Lanioturdus torquatus</i>	White-tailed Shrike	Picaço-palrador	LC	WS	R	L	R	U	C	P	C	R	C	U	U	U	U
				327	<i>Dyaphorophya concreta</i>	Yellow-bellied Wattle-eye	Papa-moscas-de-olheiras-de-barriga-amarela	LC	WS	R	L	R	U	U	U	N	U	N	U	N	U	U
328	<i>Platysteira albibron</i>			White-fronted Wattle-eye	Papa-moscas de olheiras de testa branca	LC	ES	R	L	N	U	R	U	N	U	N	U	N	U	U		
329	<i>Malacothraupis blanchoti</i>			Grey-headed Bushshrike	Picaço-de-cabeça-cinzenta	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U	U		
330	<i>Chlorophanes sulfurepectus</i>			Orange-breasted Bushshrike	Picaço-de-peito-laranja	LC	WS	R	L	C	U	C	P	C	P	C	R	C	U	U		
331	<i>Telophorus zeylonus</i>			Bokmakierie	Picaço-das-acácias	LC	WS	R	L	N	U	N	U	C	R	C	P	C	P	U		
332	<i>Tchagra australis</i>			Brown-crowned Tchagra	Picaço-assobiador-de-coroa-castanha	LC	WS	R	L	C	R	C	P	C	P	U	U	R	U	U		
333	<i>Tchagra senegalus</i>			Black-crowned Tchagra	Picaço-assobiador-de-coroa-preta	LC	WS	R	L	C	P	C	P	C	P	U	U	R	U	U		
334	<i>Bocagia minuta</i>			Marsh Tchagra	Picaço-assobiador-dos-pântanos	LC	WS	R	L	U	U	R	U	N	U	N	U	N	U	U		
335	<i>Dryocopus cubla</i>			Black-backed Puffback	Picaço-de-almofadinha-austral	LC	WS	R	L	C	U	C	P	C	P	U	U	R	U	U		
336	<i>Laniarius aethiopicus</i>			Tropical Boubou	Picaço tropical	LC	WS	R	L	C	R	U	R	N	U	N	U	N	U	U		
337	<i>Laniarius bicolor</i>			Swamp Boubou	Picaço-dos-pântanos	LC	WS	R	L	N	U	C	L	C	R	C	L	U	U	U		
338	<i>Laniarius atrococcineus</i>			Crimson-breasted Shrike	Picaço-preto-e-vermelho	LC	WS	R	L	R	U	N	U	U	U	R	U	N	U	U		
339	<i>Nilous afer</i>			Brubru	Brubru	LC	WS	R	L	N	U	U	C	U	C	P	U	U	U	U		
340	<i>Prionops plumatus</i>			White-crested Helmetshrike	Atacador-branco	LC	WS	R	L	C	U	C	P	C	R	C	P	U	U	U		
341	<i>Prionops retzii</i>			Retz's Helmetshrike	Atacador-preto de Retz	LC	WS	R	L	C	U	U	U	R	U	N	U	N	U	U		
342	<i>Campephaga quisalana</i>			Purple-throated Cuckooshrike	Picaço cuco de garganta purpura	LC	WS	R	L	N	U	U	U	N	U	N	U	N	U	U		
343	<i>Campephaga flava</i>			Black Cuckooshrike	Lagarteiro-preto	LC	WS	M	L	U	U	U	U	N	U	N	U	N	U	U		
344	<i>Urolestes melanoleucus</i>			Maggie Shrike	Picaço-rabilongo	LC	WS	R	L	N	U	N	U	U	U	U	U	N	U	U		
345	<i>Eurocephalus angulitimens</i>			Southern White-crowned Shrike	Picaço-de-coroa-branca	LC	WS	R	L	N	U	N	U	U	U	C	U	U	U	U		
346	<i>Lanius souzae</i>			Souza's Shrike	Picaço de Souza	LC	WS	R	L	R	U	N	U	N	U	N	U	N	U	U		
347	<i>Lanius collurio</i>			Red-backed Shrike	Picaço-de-dorso-ruivo	LC	WS	M	L	N	U	N	U	U	U	R	U	N	U	U		
348	<i>Lanius minor</i>			Lesser Grey Shrike	Picaço-cinzento-pequeno	LC	WS	M	L	R	U	U	U	R	U	R	U	N	U	U		
349	<i>Lanius humeralis</i>			Northern Fiscal Shrike	Picaço-fiscal-comum	LC	WS	R	L	A	R	C	R	N	U	N	U	N	U	U		
350	<i>Lanius collaris</i>			Southern Fiscal Shrike	Picaço-fiscal-de-sobrancelha-branca	LC	WS	R	L	N	U	C	P	C	R	C	R	C	R	U		
351	<i>Oriolus oriolus</i>			Eurasian Golden Oriole	Papa-figos-europeu	LC	WS	M	L	R	U	R	U	U	U	N	U	N	U	U		
352	<i>Oriolus auratus</i>			African Golden Oriole	Papa-figos-africano	LC	WS	M	L	U	U	U	U	U	U	N	U	N	U	U		
353	<i>Oriolus larvatus</i>			Black-headed Oriole	Papa-figos-de-cabeça-preta-oriental	LC	WS	R	L	C	R	C	R	C	R	C	U	U	U	U		
354	<i>Dicrurus ludwigii</i>			Square-tailed Drongo	Drongo-de-cauda-quadrada	LC	WS	R	L	N	U	U	U	N	U	N	U	N	U	U		
355	<i>Dicrurus adsimilis</i>			Fork-tailed Drongo	Drongo-de-cauda-forçada	LC	WS	R	L	C	R	C	P	C	L	C	L	C	U	U		
356	<i>Terpsiphone viridis</i>			African Paradise Flycatcher	Papa-moscas-do-paraiso-comum	LC	WS	M	L	C	R	C	R	C	R	C	U	U	U	U		
357	<i>Corvus capensis</i>			Cape Crow	Gralha do Cabo	LC	WS	R	L	U	U	R	U	U	U	C	R	U	U	U		
358	<i>Corvus albus</i>			Pied Crow	Corvo-seminarista	LC	WS	R	L	A	R	C	R	C	R	C	R	C	R	U		
359	<i>Elminia albicauda</i>			White-tailed Blue Flycatcher	Azulinho-de-cauda-branca	LC	WS	R	L	U	U	U	U	N	U	N	U	N	U	U		
360	<i>Melaniparus leucomelas</i>			White-winged Black Tit	Chapim-preto-d'asa-branca	LC	WS	R	L	C	P	U	U	N	U	N	U	N	U	U		
361	<i>Melaniparus rufiventris</i>	Rufous-bellied Tit	Chapim-arruivado	LC	WS	R	L	R	U	N	U	N	U	N	U	N	U	U				
362	<i>Melaniparus carpi</i>	Carp's Tit	Chapim de Carp	LC	WS	R	L	N	U	N	U	U	R	C	P	C	U	U				
363	<i>Melaniparus niger</i>	Southern Black Tit	Chapim-preto-meridional	LC	WS	R	L	N	U	N	U	U	U	R	U	N	U	U				
364	<i>Melaniparus cinerascens</i>	Ashy Tit	Chapim cinzento	LC	WS	R	L	N	U	N	U	U	U	C	P	C	U	U				
365	<i>Melaniparus griseiventris</i>	Miombo Tit	Chapim-do-miombo	LC	WS	R	L	R	U	N	U	N	U	N	U	N	U	U				
366	<i>Anthoscopus minutus</i>	Cape Penduline Tit	Pássaro-do-algodão do Cabo	LC	WS	R	L	N	U	N	U	U	U	U	U	N	U	U				
367	<i>Anthoscopus caroli</i>	Grey Penduline Tit	Pássaro-do-algodão-cinzento	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U	U				
368	<i>Mirafra passerina</i>	Monotonous Lark	Cotovia-monótona	LC	WS	R	L	N	U	N	U	U	U	U	R	U	U	U				
369	<i>Mirafra africana</i>	Rufous-naped Lark	Cotovia-de-nuca-vermelha	LC	WS	R	L	C	R	C	R	C	P	C	P	U	U	U				
370	<i>Mirafra rufocinnamomea</i>	Flappet Lark	Cotovia-das-castanholas	LC	WS	R	L	C	P	C	U	U	U	N	U	N	U	U				
371	<i>Mirafra angolensis</i>	Angola Lark	Cotovia de Angola	LC	NE	R	L	R	U	N	U	N	U	N	U	N	U	U				
372	<i>Ammodramus grayi</i>	Gray's Lark	Cotovia da Namíbia	LC	NE	R	L	N	U	N	U	N	U	N	U	R	U	U				
373	<i>Certhilauda benguelensis</i>	Benguela Long-billed Lark	Cotovia-de-bico-comprido de Benguela	LC	NE	R	L	N	U	N	U	N	U	C	R	C	R	U				
374	<i>Calendulauda sabota</i>	Sabota Lark	Cotovia sabota	LC	WS	R	L	N	U	N	U	U	R	C	R	C	R	U				
375	<i>Calendulauda africanoides</i>	Fawn-coloured Lark	Cotovia-cor-d'areia	LC	WS	R	L	N	U	N	U	U	U	C	U	C	U	U				
376	<i>Spizocorys starki</i>	Stark's Lark	Cotovia de Stark	LC	WS	R	L	N	U	N	U	C	P	C	R	C	R	U				
377	<i>Pinarocorys nigricans</i>	Dusky Lark	Cotovia-sombria	LC	WS	M	L	U	U	N	U	N	U	N	U	N	U	U				
378	<i>Chersomanes albobasata</i>	Spike-heeled Lark	Cotovia-esporada	LC	WS	R	L	C	U	U	U	U	U	C	R	C	R	U				
379	<i>Calandrella cinerea</i>	Red-capped Lark	Cotovia-de-barrete-vermelho	LC	WS	R	L	U	U	U	U	U	U	C	P	C	P	U				
380	<i>Eremopterix verticalis</i>	Grey-backed Sparrow-Lark	Cotovia-pardal-de-dorso-cinzento	LC	WS	R	L	N	U	N	U	C	U	C	P	C	R	U				
381	<i>Pycnonotus tricolor</i>	Dark-capped Bulbul	Brimblau-comum	LC	WS	R	L	A	R	A	R	U	U	N	U	N	U	U				
382	<i>Pycnonotus nigricans</i>	Black-fronted Bulbul	Brimblau-de-olhos-vermelhos	LC	WS	R	L	N	U	R	U	C	P	C	R	C	R	U				
383	<i>Chlorocichla flaviventris</i>	Yellow-bellied Greenbul	Tuta-amarela	LC	WS	R	L	U	U	R	C	R	C	R	C	P	U	U				
384	<i>Phyllastrephus cabanisi</i>	Cabanis's Greenbul	Tuta de Cabanis	LC	WS	R	L	R	U	R	U	N	U	N	U	N	U	U				
385	<i>Phyllastrephus fulviventris</i>	Pale-olive Greenbul																				

BIRDS OF NAMIBE AND HUÍLA										ECOREGIONS									
ORDER	Family	REF	SCIENTIFIC NAME	COMMON NAME	NOME COMUM	IUCN ¹	ENDEMISM ²	SEASONALITY ³	RISK ⁴	ABUNDANCE ⁵	LIKELIHOOD ⁶								
										ANGOLAN HIGHLANDS	ESCAPMENT	MOPANE WOODLANDS	ARID SAVANNA	NAMIB DESERT					
		386	<i>Neolestes torquatus</i>	Black-collared Bulbul	Bulbul-piçango	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U
		387	<i>Psalidoprocne pristoptera</i>	Black Saw-wing	Andorinha-preta-comum	LC	WS	M	L	U	R	C	R	U	U	N	U	N	U
		388	<i>Pseudhirundo griseopyga</i>	Grey-rumped Swallow	Andorinha-d'uropigio-cinzento	LC	WS	M	L	U	R	U	U	R	U	N	U	N	U
		389	<i>Riparia cincta</i>	Banded Martin	Andorinha-das-barreiras-grande	LC	WS	R	L	U	U	U	U	U	U	R	U	R	U
		390	<i>Riparia paludicola</i>	Plain Martin	Andorinha-das-barreiras-africana	LC	WS	M	L	N	U	N	U	U	U	U	U	C	U
		391	<i>Hirundo rustica</i>	Barn Swallow	Andorinha-das-chaminés	LC	WS	M	L	C	P	C	P	C	P	C	P	C	P
		392	<i>Hirundo angolensis</i>	Angola Swallow	Andorinha de Angola	LC	WS	R	L	C	R	C	U	R	U	N	U	N	U
		393	<i>Hirundo smithii</i>	Wire-tailed Swallow	Andorinha-cauda-de-aramé	LC	WS	R	L	C	R	C	U	C	U	C	U	U	U
		394	<i>Hirundo dimidiata</i>	Pearl-breasted Swallow	Andorinha-de-peito-pérola	LC	WS	M	L	C	U	C	R	U	U	N	U	N	U
		395	<i>Ptyonoprogne fuligula</i>	Rock Martin	Andorinha-das-rochas-africana	LC	WS	R	L	C	P	A	R	C	R	C	U	C	R
		396	<i>Delichon urbicum</i>	Common House Martin	Andorinha-dos-beirais	LC	WS	M	L	C	P	C	P	C	P	C	P	C	P
		397	<i>Cecropis cuculata</i>	Greater Striped Swallow	Andorinha-estriada-grande	LC	WS	M	L	U	R	R	U	N	U	N	U	N	U
		398	<i>Cecropis abyssinica</i>	Lesser Striped Swallow	Andorinha-estriada-pequena	LC	WS	M	L	A	R	A	R	C	R	C	R	C	P
		399	<i>Cecropis semirufa</i>	Red-breasted Swallow	Andorinha-de-peito-ruivo	LC	WS	M	L	C	P	C	P	C	U	C	U	U	U
		400	<i>Cecropis senegalensis</i>	Mosque Swallow	Andorinha-das-mesquitas	LC	WS	M	L	C	U	C	U	C	P	C	P	C	U
		401	<i>Petrochelidon spilodera</i>	South African Cliff Swallow	Andorinha-rupestre-sul-africana	LC	WS	M	L	R	U	R	U	N	U	N	U	N	U
		402	<i>Petrochelidon rufigula</i>	Red-throated Cliff Swallow	Andorinha-rupestre-de-cara-vermelha	LC	NE	M	L	U	U	U	U	N	U	N	U	N	U
		403	<i>Achaetops pycnopygius</i>	Rockrunner	Salta-pedras	LC	NE	R	L	R	U	U	P	U	P	U	U	U	U
		404	<i>Melocichla mentalis</i>	Moustached Grass Warbler	Rouxinol-do-capim-de-bigodes	LC	WS	R	L	R	U	N	U	N	U	N	U	N	U
		405	<i>Sylvietta virens</i>	Green Crombec	Felosa-verde	LC	WS	R	L	N	U	R	U	N	U	N	U	N	U
		406	<i>Sylvietta rufescens</i>	Long-billed Crombec	Rabicurta-de-bico-comprido	LC	WS	R	L	N	U	R	U	C	R	C	P	U	U
		407	<i>Sylvietta ruficapilla</i>	Red-capped Crombec	Rabicurta-de-barrete-vermelho	LC	WS	R	L	R	U	N	U	N	U	N	U	N	U
		408	<i>Phylloscopus trochilus</i>	Willow Warbler	Felosa-musical	LC	WS	M	L	C	P	C	P	C	P	C	P	U	U
		409	<i>Acrocephalus rufescens</i>	Greater Swamp Warbler	Rouxinol-grande-dos-pântanos	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U
		410	<i>Acrocephalus gracillirostris</i>	Lesser Swamp Warbler	Rouxinol-pequeno-dos-pântanos	LC	WS	R	L	N	R	N	U	U	U	U	U	N	U
		411	<i>Acrocephalus arundinaceus</i>	Great Reed Warbler	Rouxinol-grande-dos-caniços	LC	WS	M	L	U	U	U	U	R	U	N	U	N	U
		412	<i>Acrocephalus schoenobaenus</i>	Sedge Warbler	Felosa-dos-juncos	LC	WS	M	L	U	U	U	U	U	U	U	U	U	U
		413	<i>Acrocephalus baeticatus</i>	African Reed Warbler	Rouxinol-dos-caniços-africano	LC	WS	M	L	U	U	U	U	U	U	U	U	U	U
		414	<i>Hippolais icterina</i>	Icterine Warbler	Felosa-icterina	LC	WS	M	L	C	P	C	R	U	U	U	U	U	U
		415	<i>Bradypterus baboecala</i>	Little Rush Warbler	Felosa-dos-juncos-africana	LC	WS	R	L	U	U	U	U	U	U	R	U	N	U
		416	<i>Schoenicola brevirostris</i>	Fan-tailed Grassbird	Felosa-de-cauda-larga	LC	WS	M	L	U	U	R	U	N	U	N	U	N	U
		417	<i>Cisticola erythropus</i>	Red-faced Cisticola	Fuinha-de-faces-vermelhas	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U
		418	<i>Cisticola bulliens</i>	Bubbling Cisticola	Fuinha-sussurrante	LC	NE	R	L	N	U	C	P	C	P	A	L	C	P
		419	<i>Cisticola aberrans</i>	Rock-loving Cisticola	Fuinha-preguiçosa	LC	WS	R	L	R	U	N	U	N	U	N	U	N	U
		420	<i>Cisticola chiniana</i>	Rattling Cisticola	Fuinha-chocalheira	LC	WS	R	L	A	R	U	U	N	U	N	U	N	U
		421	<i>Cisticola rufilatus</i>	Tinkling Cisticola	Fuinha-rabirruiva	LC	WS	R	L	N	U	N	U	U	U	U	U	N	U
		422	<i>Cisticola lais</i>	Wailing Cisticola	Fuinha-chorona	LC	WS	R	L	C	R	C	R	N	U	N	U	N	U
		423	<i>Cisticola subruficapilla</i>	Grey-backed Cisticola	Fuinha-de-dorso-cinzento	LC	WS	R	L	N	U	N	U	N	U	U	U	C	R
		424	<i>Cisticola timmiens</i>	Levaillant's Cisticola	Fuinha-zunidora	LC	WS	R	L	C	U	U	U	N	U	N	U	N	U
		425	<i>Cisticola juncidis</i>	Zitting Cisticola	Fuinha-dos-juncos	LC	WS	R	L	U	U	U	U	U	U	R	U	R	U
		426	<i>Cisticola aridulus</i>	Desert Cisticola	Fuinha do deserto	LC	WS	R	L	N	U	N	U	U	U	C	R	C	R
		427	<i>Cisticola brachypterus</i>	Short-winged Cisticola	Fuinha-d'asa-curta	LC	WS	R	L	C	U	C	U	U	U	N	U	N	U
		428	<i>Cisticola fulvicapilla</i>	Neddicky	Fuinha-de-cabeça-ruiva	LC	WS	R	L	C	R	C	P	C	U	U	U	U	U
		429	<i>Cisticola marginatus</i>	Winding Cisticola	Fuinha-equatorial	LC	WS	R	L	R	U	N	U	N	U	N	U	N	U
		430	<i>Cisticola pipiens</i>	Chirping Cisticola	Fuinha-chilreante	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U
		431	<i>Cisticola robustus</i>	Stout Cisticola	Fuinha-robusta	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U
		432	<i>Cisticola natalensis</i>	Croaking Cisticola	Fuinha do Natal	LC	WS	R	L	U	U	R	U	N	U	N	U	N	U
		433	<i>Cisticola textrix</i>	Cloud Cisticola	Fuinha-das-nuvens	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U
		434	<i>Cisticola cinnamomeus</i>	Pale-crowned Cisticola	Fuinha-de-coroa-pálida	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U
		435	<i>Cisticola ayresii</i>	Wing-snapping Cisticola	Fuinha de Ayres	LC	WS	R	L	C	U	C	U	U	N	U	N	U	U
		436	<i>Prinia subflava</i>	Tawny-flanked Prinia	Prinia-de-flancos-castanhos	LC	WS	R	L	C	P	C	P	C	U	U	U	R	U
		437	<i>Prinia flavicans</i>	Black-chested Prinia	Prinia-de-colar-preto	LC	WS	R	L	N	U	N	U	C	P	C	L	C	P
		438	<i>Apalis flavida</i>	Yellow-breasted Apalis	Apalis-de-peito-amarelo	LC	WS	R	L	U	U	C	U	C	P	C	P	C	U
		439	<i>Apalis cinerea</i>	Grey Apalis	Apalis-cinzenta	LC	WS	R	L	C	P	C	R	N	U	N	U	N	U
		440	<i>Apalis alticola</i>	Brown-headed Apalis	Apalis-de-cabeça-castanha	LC	WS	R	L	R	U	N	U	N	U	N	U	N	U
		441	<i>Camaroptera brevicaudata</i>	Grey-backed Camaroptera	Camaroptera-de-dorso-cinzento	LC	WS	R	L	C	R	C	R	C	R	U	U	R	U
		442	<i>Camaroptera harterti</i>	Hartert's Camaroptera	Camaroptera de Angola	LC	WS	R	L	N	U	R	U	N	U	N	U	N	U
		443	<i>Calamanastes undosus</i>	Miombo Wren-Warbler	Felosa-carriça-do-miombo	LC	WS	R	L	U	U	R	U	N	U	N	U	N	U
		444	<i>Calamanastes fasciolatus</i>	Barred Wren Warbler	Felosa-barrada	LC	WS	R	L	N	U	N	U	U	C	U	U	U	U
		445	<i>Eremomela icteropygialis</i>	Yellow-bellied Eremomela	Eremomela-de-barriga-amarela	LC	WS	R	L	U	U	C	R	C	U	C	U	C	U
		446	<i>Eremomela salvadorii</i>	Salvadori's Eremomela	Eremomela de Salvadori	LC	WS	R	L	R	U	N	U	N	U	N	U	N	U
		447	<i>Eremomela atricollis</i>	Black-necked Eremomela	Eremomela-de-colar	LC	WS	R	L	R	U	N	U	N	U	N	U	N	U
		448	<i>Eremomela scotops</i>	Green-capped Eremomela	Eremomela-de-barrete-verde	LC	WS	R	L	U	U	U	U	C	U	R	U	N	U
		449	<i>Eremomela usticollis</i>	Burnt-necked Eremomela	Eremomela-de-garganta-castanha	LC	WS	R	L	N	U	U	U	C	U	C	U	U	U
		450	<i>Turdoides jardineii</i>	Arrow-marked Babbler	Zaragateiro-castanho	LC	WS	R	L	C	U	U	R	U	N	U	N	U	U
		451	<i>Turdoides melanops</i>	Black-faced Babbler	Zaragateiro-de-faces-pretas	LC	WS	R	L	N	U	N	U	U	U	U	U	N	U
		452	<i>Turdoides gymnogenys</i>	Bare-cheeked Babbler	Zaragateiro de faces nuas	LC	WS	R	L	N	U	N	U	U	U	U	U	N	U
		453	<i>Turdoides hartlaubii</i>	Hartlaub's Babbler	Zaragateiro de Hartlaub	LC	WS	R	L	C	R	C	R	C	U	U	U	N	U
		454	<i>Pseudalcippe abyssinica</i>	African Hill Babbler	Felosa-das-montanhas	LC	WS	R	L	R	U	N	U	N	U	N	U	N	U
		455	<i>Sylvia borin</i>	Garden Warbler	Felosa-das-figueiras	LC	WS	M	L	C	U	C	U	C	U	C	U	U	U
		456	<i>Zosterops senegalensis</i>	African Yellow White-eye	Olho-branco-amarelo	LC	WS	R	L	C	U	C	P	C	P	U	U	N	U
		457	<i>Hylia australis</i>	Southern Hylia	Hiliota-meridional	LC	WS	R	L	C	U	C	P	C	U	N	U	N	U
		458	<i>Hylia flavigaster</i>	Yellow-bellied Hylia	Hiliota-de-papo-amarelo	LC	WS	R	L	C	U	U	U	U	U	N	U	N	U
		459	<i>Salpornis spilonotus</i>	Spotted Creeper	Trepadeira-malhada	LC	WS	R	L	U	U	R	U	N	U	N	U	N	U
		460	<i>Creatophora cinerea</i>	Wattled Starling	Estorninho-carunculado	LC	WS	R	L	U	U	U	C	P	C	U	U	U	U
		461	<i>Lamprolornis nitens</i>	Cape Glossy Star															

BIRDS OF NAMIBE AND HUÍLA										ECOREGIONS									
ORDER	Family	REF	SCIENTIFIC NAME	COMMON NAME	NOME COMUM	IUCN ¹	ENDESMISM ²	SEASONALITY ³	RISK ⁴	ANGOLAN HIGHLANDS		ESCARPMENT		MOPANE WOODLANDS		ARID SAVANNA		NAMIB DESERT	
										ABUNDANCE ⁵	LIKELIHOOD ⁶								
		463	<i>Lamprolornis mevesii</i>	Meves's Starling	Estorninho-rabilongo-azul	LC	WS	R	L	N	U	N	U	C	P	U	N	U	U
		464	<i>Lamprolornis australis</i>	Burchell's Starling	Estorninho de Burchell	LC	WS	R	L	N	U	N	U	U	U	N	U	N	U
		465	<i>Lamprolornis acuticaudus</i>	Sharp-tailed Starling	Estorninho-de-cauda-acuminada	LC	NE	R	L	U	U	N	U	N	U	N	U	N	U
		466	<i>Cinnyricinclus leucogaster</i>	Violet-backed Starling	Estorninho-de-dorso-violeta	LC	WS	M	L	C	R	C	R	C	R	C	U	U	U
		467	<i>Onychognathus nabouroup</i>	Pale-winged Starling	Estorninho de asa palida	LC	WS	R	L	N	U	N	U	C	R	C	U	C	P
		468	<i>Neocichla gutturalis</i>	Babbling Starling	Estorninho-d'asa-branca	LC	WS	R	L	R	U	U	U	U	U	U	U	U	U
	Buphagidae	469	<i>Buphagus africanus</i>	Yellow-billed Oxpecker	Pica-bois-de-bico-amarelo	LC	WS	R	L	U	U	U	U	C	R	C	P	U	U
	Turdidae	470	<i>Psophocichla litsitsirupa</i>	Groundscraper Thrush	Tordo-de-peito-malhado	LC	WS	R	L	C	P	C	P	C	R	U	U	N	U
		471	<i>Turdus libonyana</i>	Kurichane Thrush	Tordo-chichario	LC	WS	R	L	C	P	C	P	U	U	R	U	N	U
		472	<i>Sheppardia bocagei</i>	Bocage's Akalat	Pisco de Bocage	LC	NE	R	L	U	U	U	U	N	U	N	U	N	U
		473	<i>Cossypha heuglini</i>	White-browed Robin-Chat	Cossifa de Heuglin	LC	WS	R	L	C	U	C	R	C	R	U	U	N	U
		474	<i>Cossypha natalensis</i>	Red-capped Robin-Chat	Cossifa do Natal	LC	WS	M	L	U	U	C	U	R	U	N	U	N	U
		475	<i>Cossypha ansorgei</i>	Angola Cave Chat	Chasco-das-fumas	LC	NE	R	L	C	R	C	R	N	U	N	U	N	U
		476	<i>Erythropygia poena</i>	Kalahari Scrub Robin	Rouxinol-do-mato do Kalahari	LC	WS	R	L	N	U	N	U	U	U	C	R	C	P
		477	<i>Erythropygia barbata</i>	Miombo Scrub Robin	Rouxinol-do-mato-do-miombo	LC	WS	R	L	R	U	U	U	U	U	U	U	U	U
		478	<i>Erythropygia leucophrys</i>	White-browed Scrub Robin	Rouxinol-do-mato-estriado	LC	WS	R	L	C	R	C	R	C	R	C	P	C	U
		479	<i>Saxicola torquatus</i>	African Stonechat	Cartaxo-comum	LC	WS	R	L	A	R	C	P	C	U	U	U	R	U
		480	<i>Oenanthe pileata</i>	Capped Wheatear	Chasco-de-barrete	LC	WS	R	L	U	U	U	U	U	U	R	U	R	U
		481	<i>Oenanthe monticola</i>	Mountain Wheatear	Chasco-montês	LC	WS	R	L	N	U	N	U	U	U	C	R	C	R
		482	<i>Oenanthe familiaris</i>	Familiar Chat	Chasco-familiar	LC	WS	R	L	U	P	C	R	U	U	U	U	U	U
		483	<i>Myrmecocichla nigra</i>	Sooty Chat	Chasco-formigueiro-preto	LC	WS	R	L	C	P	C	P	U	U	N	U	N	U
		484	<i>Myrmecocichla arnotti</i>	Arnot's Chat	Chasco de Arnot	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U
		485	<i>Emarginata schlegelii</i>	Karoo Chat	Chasco do Karoo	LC	WS	R	L	N	U	N	U	U	U	C	R	C	R
		486	<i>Emarginata tractrac</i>	Tractrac Chat	Chasco-páldo	LC	WS	R	L	N	U	N	U	U	U	C	R	C	R
	Muscicapidae	487	<i>Cichladasa ruficauda</i>	Red-tailed Palm Thrush	Tordo-das-palmeiras-de-cauda-vermelha	LC	NE	R	L	C	U	C	P	U	U	R	U	N	U
		488	<i>Monticola brevipes</i>	Short-toed Rock Thrush	Melro-das-rochas-de-dedos-curtos	LC	WS	R	L	C	P	U	U	U	U	C	P	U	U
		489	<i>Monticola angolensis</i>	Miombo Rock Thrush	Melro-das-rochas-do-miombo	LC	WS	R	L	C	P	U	U	N	U	N	U	N	U
		490	<i>Namibornis herero</i>	Herero Chat	Chasco de Herero	LC	NE	R	L	N	U	N	U	N	U	N	U	R	U
		491	<i>Diotroornis brunneus</i>	Angola Slaty Flycatcher	Papa-moscas-de-Angola	LC	ES	R	L	C	U	U	U	N	U	N	U	N	U
		492	<i>Melaenornis pammelaina</i>	Southern Black Flycatcher	Papa-moscas-preto-meridional	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U
		493	<i>Bradornis pallidus</i>	Pale Flycatcher	Papa-moscas-páldo	LC	WS	R	L	C	P	C	P	C	P	U	U	N	U
		494	<i>Bradornis infuscatus</i>	Chat Flycatcher	Papa-moscas-chasco	LC	WS	R	L	N	U	N	U	C	P	C	R	C	R
		495	<i>Bradornis mariquensis</i>	Mariqua Flycatcher	Papa-moscas do Marico	LC	WS	R	L	N	U	N	U	C	U	U	U	N	U
		496	<i>Muscicapa striata</i>	Spotted Flycatcher	Papa-moscas-cinzento	LC	WS	M	L	C	P	C	P	C	R	C	P	C	P
		497	<i>Muscicapa caerulescens</i>	Ashy Flycatcher	Papa-moscas-azulado	LC	WS	R	L	U	U	U	C	U	N	U	N	U	U
		498	<i>Muscicapa adusta</i>	African Dusky Flycatcher	Papa-moscas-sombrio	LC	WS	R	L	U	U	U	U	N	U	N	U	N	U
		499	<i>Muscicapa boehmi</i>	Böhm's Flycatcher	Papa-moscas de Böhm	LC	WS	R	L	N	U	N	U	N	U	N	U	N	U
		500	<i>Myioparus plumbeus</i>	Grey Tit-Flycatcher	Papa-moscas-de-leque	LC	WS	R	L	U	U	U	U	U	U	U	U	N	U
		501	<i>Ficedula hypoleuca</i>	European Pied Flycatcher	Taralhão-europeu	LC	WS	M	L	R	U	N	U	N	U	N	U	N	U
		502	<i>Ficedula albicollis</i>	Collared Flycatcher	Taralhão-de-colar	LC	WS	M	L	U	U	N	U	N	U	N	U	N	U
		503	<i>Anthreptes anchietae</i>	Anchieta's Sunbird	Beija-flor de Anchieta	LC	WS	R	L	U	U	R	U	N	U	N	U	N	U
		504	<i>Anthreptes languemarei</i>	Western Violet-backed Sunbird	Beija-flor-violeta	LC	WS	R	L	U	U	U	U	N	U	N	U	N	U
		505	<i>Hedydipna collaris</i>	Collared Sunbird	Beija-flor-de-colar	LC	WS	R	L	N	U	R	U	N	U	N	U	N	U
		506	<i>Cyanomitra olivacea</i>	Olive Sunbird	Beija-flor-oliváceo	LC	WS	R	L	N	U	C	R	N	U	N	U	N	U
		507	<i>Chalcomitra amethystina</i>	Amethyst Sunbird	Beija-flor-preto	LC	WS	R	L	U	U	C	U	U	U	N	U	N	U
		508	<i>Chalcomitra senegalensis</i>	Scarlet-chested Sunbird	Beija-flor-de-peito-escarlata	LC	WS	R	L	C	P	C	P	C	R	C	P	C	U
		509	<i>Nectarinia kilimensis</i>	Bronzy Sunbird	Beija-flor-bronzeado	LC	WS	R	L	U	U	U	U	N	U	N	U	N	U
		510	<i>Nectarinia bocagii</i>	Bocage's Sunbird	Beija-flor de Bocage	LC	NE	R	L	R	U	N	U	N	U	N	U	N	U
		511	<i>Cinnyris mariquensis</i>	Mariqua Sunbird	Beija-flor de Marico	LC	WS	R	L	N	U	N	U	C	U	C	U	N	U
		512	<i>Cinnyris manaensis</i>	Miombo Double-collared Sunbird	Beija-flor-do-miombo	LC	WS	R	L	R	U	N	U	N	U	N	U	N	U
		513	<i>Cinnyris ludovicensis</i>	Ludwig's Double-collared Sunbird	Beija-flor-das-montanhas	LC	ES	R	L	C	R	C	P	N	U	N	U	N	U
		514	<i>Cinnyris bifasciatus</i>	Purple-banded Sunbird	Beija-flor-de-peito-roxo	LC	WS	R	L	U	U	U	U	U	R	C	U	U	U
		515	<i>Cinnyris oustaleti</i>	Oustalet's Sunbird	Beija-flor de Oustalet	LC	NE	R	L	U	U	N	U	N	U	N	U	N	U
		516	<i>Cinnyris talatala</i>	White-bellied Sunbird	Beija-flor-de-barriga-branca	LC	WS	R	L	C	P	C	U	C	U	U	U	N	U
		517	<i>Cinnyris venustus</i>	Variable Sunbird	Beija-flor-de-barriga-amarela	LC	WS	R	L	C	R	C	P	U	U	N	U	N	U
		518	<i>Cinnyris fuscus</i>	Dusky Sunbird	Beija-flor-sombrio	LC	WS	R	L	N	U	N	U	C	R	C	R	C	R
		519	<i>Cinnyris cupreus</i>	Copper Sunbird	Beija-flor-cobreado	LC	WS	R	L	C	U	C	P	U	U	N	U	N	U
	Passeridae	520	<i>Passer domesticus</i>	House Sparrow	Pardal-dos-telhados	LC	WS	R	L	A	L	C	R	C	P	A	P	C	R
		521	<i>Passer diffusus</i>	Southern Grey-headed Sparrow	Pardal-de-cabeça-cinzenta-meridional	LC	WS	R	L	C	R	C	P	C	P	C	P	C	P
		522	<i>Passer mottensis</i>	Great Sparrow	Pardal-grande	LC	WS	R	L	N	U	N	U	U	U	C	P	C	P
		523	<i>Passer melanurus</i>	Cape Sparrow	Pardal-do-cabo	LC	WS	R	L	N	U	N	U	N	U	C	R	C	R
		524	<i>Gymnoris superciliosus</i>	Yellow-throated Petronia	Pardal-de-pint' amarela	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U
	Ploceidae	525	<i>Bubalornis niger</i>	Red-billed Buffalo Weaver	Teceão de bico vermelho	LC	WS	R	L	N	U	U	U	C	R	A	R	U	U
		526	<i>Plocepasser mahali</i>	White-browed Sparrow Weaver	Teceão de sobranceira branca	LC	WS	R	L	N	U	N	U	C	R	C	P	U	U
		527	<i>Plocepasser ruficapulatus</i>	Chestnut-mantled Sparrow Weaver	Teceão-pardal-de-manto-castanho	LC	WS	R	L	U	U	U	U	U	N	U	N	U	
		528	<i>Sporopipes squamifrons</i>	Scaly-feathered Finch	Teceão-de-testa-malhada	LC	WS	R	L	N	U	N	U	C	U	C	R	C	P
		529	<i>Ploceus intermedius</i>	Lesser Masked Weaver	Teceão pequeno de mascarilla	LC	WS	R	L	U	U	U	U	C	U	C	P	C	P
		530	<i>Ploceus nigrimentus</i>	Black-chinned Weaver	Teceão-de-mento-preto	LC	NE	R	L	R	U	N	U	N	U	N	U	N	U
		531	<i>Ploceus ocellatus</i>	Spectacled Weaver	Teceão-de-lunetas	LC	WS	R	L	U	U	C	P	C	U	C	U	C	U
		532	<i>Ploceus xanthops</i>	Holub's Golden Weaver	Teceão-dourado	LC	WS	R	L	C	P	C	R	U	U	U	U	U	U
		533	<i>Ploceus velatus</i>	Southern Masked Weaver	Teceão-de-máscara	LC	WS	R	L	C	P	C	P	C	R	C	U	C	U
		534	<i>Ploceus cucullatus</i>	Village Weaver	Teceão-malhado	LC	WS	R	L	A	R	A	R	C	P	C	U	C	U
		535	<i>Ploceus superciliosus</i>	Compact Weaver	Teceão-compacto	LC	WS	R	L	U	U	R	U	N	U	N	U	N	U
		536	<i>Ploceus rubiginosus</i>	Chestnut Weaver	Teceão castanho	LC	WS	M	L	N	U	N	U	U	U	U	U	U	U
		537	<i>Ploceus angolensis</i>	Bar-winged Weaver	Teceão-d'asas-riscadas	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U
		538	<i>Ploceus bicolor</i>	Dark-backed Weaver	Teceão-das-florestas	LC	WS	R	L	C	U	C	P	U	U	U	U	N	U
		539	<i>Anaplectes rubriceps</i>	Red-headed Weaver	Teceão-de-cabeça-vermelha	LC	WS	R	L	U	U	U	U	U	U	U	U	U	U

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									ANGOLAN HIGHLANDS		ESCARPMENT		MOPANE WOODLANDS		ARID SAVANNA		NAMIB DESERT		
ORDER	Family	REF	SCIENTIFIC NAME	COMMON NAME	NOME COMUM	IUCN ¹	ENDEMISM ²	SEASONALITY ³	RISK ⁴	ABUNDANCE ⁵	LIKELIHOOD ⁶								
		540	<i>Quelea erythropus</i>	Red-headed Quelea	Quelea-de-cabeça-vermelha	LC	WS	R	L	C	U	U	U	N	U	N	U	N	U
		541	<i>Quelea quelea</i>	Red-billed Quelea	Quelea-de-bico-vermelho	LC	WS	R	L	C	P	C	P	C	U	C	U	N	U
		542	<i>Euplectes hordeaceus</i>	Black-winged Red Bishop	Cardeal-tecelão-de-coroa-vermelha	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U
		543	<i>Euplectes orix</i>	Southern Red Bishop	Bispo de testa preta	LC	WS	R	L	C	R	C	P	C	P	C	P	U	U
		544	<i>Euplectes afer</i>	Yellow-crowned Bishop	Cardeal-tecelão-amarelo	LC	WS	R	L	C	P	C	P	U	U	U	U	U	U
		545	<i>Euplectes capensis</i>	Yellow Bishop	Cardeal-tecelão-d'uropigio-amarelo	LC	WS	R	L	C	U	U	U	U	U	U	U	N	U
		546	<i>Euplectes axillaris</i>	Fan-tailed Widowbird	Viúva-de-espáduas-vermelhas	LC	WS	R	L	C	U	U	U	N	U	N	U	N	U
		547	<i>Euplectes macroura</i>	Yellow-mantled Widowbird	Viúva-de-manto-amarelo	LC	WS	R	L	C	U	N	U	N	U	N	U	N	U
		548	<i>Euplectes hartlaubi</i>	Marsh Widowbird	Viúva de Hartlaub	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U
		549	<i>Euplectes aureus</i>	Golden-backed Bishop	Bispo de dorso amarelo	LC	ES	R	L	N	U	U	U	N	U	U	U	U	U
		550	<i>Euplectes albonotatus</i>	White-winged Widowbird	Viúva-d'asa-branca	LC	WS	R	L	U	U	C	P	C	P	C	L	C	P
		551	<i>Euplectes ardens</i>	Red-collared Widowbird	Viúva-de-colar-vermelho	LC	WS	R	L	C	P	C	U	U	N	U	N	U	U
		552	<i>Euplectes progne</i>	Long-tailed Widowbird	Viúva-rabilonga	LC	WS	R	L	C	U	U	U	N	U	N	U	N	U
		553	<i>Pytilia afra</i>	Orange-winged Pytilia	Maracachão-d'asa-dourada	LC	WS	R	L	C	P	U	U	N	U	N	U	N	U
		554	<i>Pytilia melba</i>	Green-winged Pytilia	Maracachão-d'asa-verde	LC	WS	R	L	C	P	C	P	C	R	C	P	C	P
		555	<i>Lagonosticta nitidula</i>	Brown Firefinch	Peito-de-fogo-castanho	LC	WS	R	L	C	P	U	U	N	U	N	U	N	U
		556	<i>Lagonosticta senegala</i>	Red-billed Firefinch	Peito-de-fogo-de-bico-vermelho	LC	WS	R	L	C	P	C	P	C	P	C	P	C	P
		557	<i>Lagonosticta rhodopareia</i>	Jameson's Firefinch	Peito-de-fogo de Jameson	LC	WS	R	L	C	R	C	R	U	U	R	U	N	U
		558	<i>Uraeginthus angolensis</i>	Blue Waxbill	Peito-celeste	LC	WS	R	L	A	L	A	R	C	R	C	P	C	P
		559	<i>Granatina granatina</i>	Violet-eared Waxbill	Monsenhor	LC	WS	R	L	C	P	C	U	C	R	C	P	U	U
		560	<i>Coccygia bocagei</i>	Angolan Waxbill	Bico-de-lacre de Angola	LC	ES	R	L	C	P	C	P	C	P	U	U	U	U
		561	<i>Estrilda perreini</i>	Grey Waxbill	Cinzentinho-comum	LC	WS	R	L	U	U	C	U	N	U	N	U	N	U
		562	<i>Estrilda thomensis</i>	Cinderella Waxbill	Cinzentinho de Angola	LC	NE	R	L	U	P	C	U	U	N	U	N	U	U
		563	<i>Estrilda paludicola</i>	Fawn-breasted Waxbill	Bico-de-lacre-de-cabeça-cinzenta	LC	WS	R	L	U	U	C	P	U	U	N	U	N	U
		564	<i>Estrilda astrild</i>	Common Waxbill	Bico-de-lacre-comum	LC	WS	R	L	C	R	C	P	C	P	C	P	C	P
		565	<i>Estrilda erythronotos</i>	Black-faced Waxbill	Bico-de-lacre-de-faces-pretas	LC	WS	R	L	N	U	N	U	C	U	N	U	N	U
		566	<i>Amadina fasciata</i>	Cut-throat Finch	Degolado-comum	LC	WS	R	L	N	U	N	U	U	U	U	U	N	U
		567	<i>Amadina erythrocephala</i>	Red-headed Finch	Degolado-de-cabeça-vermelha	LC	WS	R	L	N	U	N	U	C	P	C	P	C	P
		568	<i>Amandava subflava</i>	Orange-breasted Waxbill	Bico-de-lacre-de-peito-laranja	LC	WS	R	L	U	U	U	N	U	N	U	N	U	U
		569	<i>Ortygospiza gabonensis</i>	Black-chinned Quailfinch	Bico-de-lacre-codorniz-de-máscara	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U
		570	<i>Ortygospiza fuscocrissa</i>	African Quailfinch	Bico-de-lacre-codorniz-africano	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U
		571	<i>Paludipasser locustella</i>	Locust Finch	Bico-de-lacre-gafanhoto	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U
		572	<i>Lonchura cucullata</i>	Bronze Mannikin	Freirinha-bronzeada	LC	WS	R	L	A	R	A	L	C	R	C	P	C	U
		573	<i>Lonchura fringilloides</i>	Maggie Mannikin	Freirinha-maior	LC	WS	R	L	U	U	U	N	U	N	U	N	U	U
		574	<i>Vidua chalybeata</i>	Village Indigobird	Viúva-azul	LC	WS	R	L	C	P	C	P	C	U	U	U	U	U
		575	<i>Vidua purpurescens</i>	Purple Indigobird	Viúva-púrpura	LC	WS	R	L	C	R	C	U	U	U	U	U	U	U
		576	<i>Vidua macroura</i>	Pin-tailed Whydah	Viúvina	LC	WS	R	L	C	P	C	R	C	P	C	P	C	P
		577	<i>Vidua paradisaea</i>	Long-tailed Paradise Whydah	Viúva-do-paráiso-rabilonga	LC	WS	R	L	C	P	C	P	C	P	C	U	C	U
		578	<i>Vidua obtusa</i>	Broad-tailed Paradise Whydah	Viúva-do-paráiso-rabilarga	LC	WS	R	L	U	U	R	U	N	U	N	U	N	U
		579	<i>Motacilla flava</i>	Western Yellow Wagtail	Alvéola-amarela	LC	WS	M	L	C	U	C	U	C	U	U	U	R	U
		580	<i>Motacilla capensis</i>	Cape Wagtail	Alvéola do Cabo	LC	WS	R	L	C	U	C	U	C	U	U	U	R	U
		581	<i>Motacilla clara</i>	Mountain Wagtail	Alvéola-rabilonga	LC	WS	R	L	C	U	C	U	R	U	N	U	N	U
		582	<i>Motacilla aguimp</i>	African Pied Wagtail	Alvéola-pretibranca	LC	WS	R	L	C	P	C	P	C	U	C	U	C	U
		583	<i>Macronyx fuelleborni</i>	Fülleborn's Longclaw	Sentinel de Fülleborn	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U
		584	<i>Anthus cinnamomeus</i>	African Pipit	Petinha-do-capim	LC	WS	R	L	C	U	U	U	C	U	U	U	N	U
		585	<i>Anthus nyssae</i>	Wood Pipit	Petinha-das-matas	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U
		586	<i>Anthus vaalensis</i>	Buffy Pipit	Petinha-creme	LC	WS	M	L	C	U	C	U	N	U	N	U	N	U
		587	<i>Anthus leucophrys</i>	Plain-backed Pipit	Petinha-de-dorso-liso	LC	WS	R	L	C	R	C	P	N	U	N	U	N	U
		588	<i>Anthus lineiventris</i>	Striped Pipit	Petinha-estriada	LC	WS	R	L	U	U	U	U	U	R	U	N	U	U
		589	<i>Anthus similis</i>	Long-billed Pipit	Petinha de bico comprido	LC	WS	R	L	N	U	N	U	N	U	U	U	C	P
		590	<i>Serinus flavivertex</i>	Yellow-crowned Canary	Canário-amarelo-das-montanhas	LC	WS	R	L	C	P	N	U	N	U	N	U	N	U
		591	<i>Crithagra capistrata</i>	Black-faced Canary	Canário-de-faces-pretas	LC	WS	R	L	C	U	C	P	N	U	N	U	N	U
		592	<i>Crithagra atragularis</i>	Black-throated Canary	Canário-de-garganta-preta	LC	WS	R	L	U	U	U	C	C	P	C	P	U	U
		593	<i>Crithagra mozambica</i>	Yellow-fronted Canary	Canário de Moçambique	LC	WS	R	L	C	R	C	L	C	P	C	P	C	P
		594	<i>Crithagra flaviventris</i>	Yellow Canary	Canário-de-barriga-amarela	LC	WS	R	L	C	P	U	U	N	U	N	U	N	U
		595	<i>Crithagra sulphurata</i>	Brimstone Canary	Canário-girassol	LC	WS	R	L	C	P	C	P	U	U	N	U	N	U
		596	<i>Crithagra albogularis</i>	White-throated Canary	Canário de garganta branca	LC	WS	R	L	N	U	N	U	N	U	C	R	C	P
		597	<i>Crithagra gularis</i>	Streaky-headed Seedeater	Canário-de-cabeça-estriada	LC	WS	R	L	R	U	N	U	N	U	N	U	N	U
		598	<i>Crithagra burtani</i>	Thick-billed Seedeater	Canário-cinzentto-das-montanhas	LC	WS	R	L	U	U	N	U	N	U	N	U	N	U
		599	<i>Emberiza impetuani</i>	Lark-like Bunting	Escrevedeira-cotovia	LC	WS	R	L	C	U	C	U	C	U	C	R	C	P
		600	<i>Emberiza tahapisi</i>	Cinnamon-breasted Bunting	Escrevedeira-das-pedras	LC	WS	R	L	A	L	C	R	C	R	C	U	U	U
		601	<i>Emberiza flaviventris</i>	Golden-breasted Bunting	Escrevedeira-de-peito-dourado	LC	WS	R	L	C	R	C	P	C	P	U	U	N	U
		602	<i>Emberiza cabanisi</i>	Cabanis's Bunting	Escrevedeira de Cabanis	LC	WS	R	L	U	U	R	U	N	U	N	U	N	U
		603	<i>Fringillaria capensis</i>	Cape Bunting	Escrevedeira do cabo	LC	WS	R	L	N	U	N	U	R	U	C	U	C	P
										72		58		58		35		25	160
										117		122		105		104		70	142
										189		180		163		139		95	302

1 (IUCN): LC - Least Concern; DD - Data Deficient; NT - Near Threatened; VU - Vulnerable; EN - Endangered; CR - Critically Endangered

2 (ENDEMISM): WS - Widespread Species; ES - Endemic Species; NE - Near Endemic Species

3 (SEASONALITY): R - Resident; M - Migratory

4 (RISK): H - High; M - Medium; L - Low

5 (ABUNDANCE): A - Abundant; C - Common; U - Uncommon; R - Rare; N - Not Present

6 (LIKELIHOOD): R - Recorded; L - Likely to be recorded; P - Possible to be recorded; U - Unlikely to be recorded

NOTE: The abundance is subjectively ascribed to a given ecoregion for the whole province, while the likelihood refers to the study area

APPENDIX 4

LIST OF REPTILES OF NAMIBE AND HUÍLA

PROVINCES

REPTILES OF NAMIBE AND HUÍLA							ECOREGIONS											
							ANGOLAN HIGHLANDS		ESCARPMENT		MOPANE WOODLANDS		ARID SAVANNA		NAMIB DESERT			
Ordem	Família	NR	Nomes Científicos	Nomes em Inglês	Nomes em Português	IUCN ¹	ENDESMIS ²	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	
Chelonia	Pelomedusidae	1	<i>Pelomedusa subrufa</i>	Helmeted Terrapin	Tartaruga-de-capacete	NE	WS	C	L	C	U	C	U	C	U	C	U	
		2	<i>Pelusios nanus</i>	African Dwarf Mud Turtle	Tartaruga-de-plastrão-articulado-anã	NE	WS	R	P	N	U	N	U	N	U	N	U	
		3	<i>Pelusios rhodesianus</i>	Variable Mud Turtle	Tartaruga-de-plastrão-articulado-variavel	LC	WS	R	P	N	U	N	U	N	U	N	U	
	Testudinidae	4	<i>Kinixys belliana</i>	Bell's Hinge-Back Tortoise	Cágado-de-carapaça-articulada-de-bell	NE	WS	C	P	C	U	R	U	N	U	N	U	
		5	<i>Stigmochelys pardalys</i>	Leopard Tortoise	Tartaruga-leopardo	LC	WS	U	U	U	U	C	P	C	P	C	U	
Crocodylia	Crocodylidae	6	<i>Trionyx triunguis</i>	African Softshell Turtle	Tartaruga-de-carapaça-mole-do-nilo	VU	WS	N	U	N	U	N	U	U	U	U	U	
		7	<i>Crocodylus niloticus</i>	Nile Crocodile	Crocodilo-do-nilo	LC	WS	U	U	U	U	C	U	C	U	C	U	
Squamata	Gekkonidae	8	<i>Afroedura donveae</i>	Iona Flat Gecko	Osga-achatada do Iona	NE	ES	N	U	N	U	N	U	N	U	C	U	
		9	<i>Afroedura praedicta</i>	Serra da Neve Flat Gecko	Osga-achatada da Serra da Neve	NE	ES	N	U	U	U	N	U	N	U	N	U	
		10	<i>Afroedura vazpintorum</i>	Coastal Flat Gecko	Osga-achatada-costeira	NE	ES	C	L	C	R	C	P	C	R	C	P	
		11	<i>Arogecko ansorgii</i>	Ansorge's Gecko	Osga-de-dedos-de-folha-de-ansorge	NE	ES	N	U	N	U	N	U	C	U	R	U	
		12	<i>Condodactylus fitzsimonsi</i>	Button-Scaled Thick-Toed Gecko	Osga-de-escamas-de-botão	NE	WS	N	U	N	U	U	U	C	R	C	R	
		13	<i>Condodactylus pulitzeri</i>	Pulitzer's Thick-Toed Gecko	Osga-de-pulitzer	NE	WS	C	R	C	R	C	R	C	R	C	R	
		14	<i>Condodactylus laevigatus</i>	Button-Scaled Thick-Toed Gecko	Osga-de-fisher	NE	WS	N	U	N	U	U	U	C	U	N	U	
		15	<i>Hemidactylus mabouia</i>	Tropical House Gecko	Osga-tropical-das-casas	NE	WS	C	R	C	P	C	L	C	P	C	L	
		16	<i>Hemidactylus cf. benguelensis</i>	Benguela Tropical Gecko	Osga-tropical de Benguela	NE	ES	C	L	C	L	C	R	U	U	U	U	
		17	<i>Hemidactylus vernayi</i>	Vernay's Tropical Gecko	Osga-tropical de Vernay	NE	ES	N	U	N	U	N	U	R	U	U	U	
		18	<i>Kolekanos pluncaudus</i>	Feather-Tailed Gecko	Osga-de-cauda-de-pluma	NE	ES	N	U	N	U	N	U	N	U	U	R	
		19	<i>Lygodactylus baptistai</i>	Serra da Neve Dwarf Gecko	Osga-anã-diurna da Serra da Neve	NE	ES	N	U	U	U	U	U	N	U	N	U	
		20	<i>Lygodactylus lawrencei</i>	Lawrence's Dwarf Gecko	Osga-anã-de-Lawrence	NE	WS	N	U	N	U	N	U	U	U	U	U	
		21	<i>Lygodactylus nyanyeka</i>	Nyaneka Dwarf Gecko	Osga-anã-diurna Nyaneka	NE	WS	C	R	C	P	C	P	C	P	U	U	
		22	<i>Pachydactylus angolensis</i>	Angolan Thick-Toed Gecko	Osga-de-dedos-grossos-de-angola	NE	ES	N	U	U	U	U	U	C	R	C	U	
		23	<i>Pachydactylus caraculicus</i>	Angolan Banded Thick-Toed Gecko	Osga-de-dedos-grossos-do-caraculo	NE	WS	N	U	N	U	R	U	C	P	C	R	
		24	<i>Pachydactylus oreophilus</i>	Kaokoland Rock Gecko	Osga-de-dedos-grossos-do-kaokoved	NE	WS	N	U	C	U	C	U	C	R	C	L	
		25	<i>Pachydactylus punctatus</i>	Speckled Thick-Toed Gecko	Osga-de-dedos-grossos-sarapintada	NE	WS	C	P	C	P	C	P	C	R	C	P	
		26	<i>Pachydactylus scherzi</i>	Scherz's Thick-Toed Gecko	Osga-de-dedos-grossos-de-scherzi	NE	WS	U	U	R	U	N	U	N	U	N	U	
		27	<i>Pachydactylus rangei</i>	Namib Web-Footed Gecko	Osga-de-dedos-grossos-com-membrana-nos-dedos	NE	WS	N	U	N	U	N	U	N	U	U	U	
		28	<i>Pachydactylus scutatus</i>	Scaly Thick-Toed Gecko	Osga-de-dedos-grossos-de-escamas-grande	NE	WS	N	U	N	U	N	U	N	U	U	U	
		29	<i>Pachydactylus vanzyli</i>	Namib Desert Gecko	Osga-com-membranas-nos-dedos-de-van-zyl	NE	WS	N	U	N	U	N	U	N	U	U	U	
		30	<i>Pachydactylus rugosus</i>	Common Rough Gecko	Osga-rugosa	NE	WS	N	U	N	U	N	U	N	U	R	U	
		31	<i>Rhoptropus afer</i>	Namib Day Gecko	Osga-diurna-do-namibe-comum	NE	WS	N	U	N	U	C	P	C	P	C	P	
		32	<i>Rhoptropus barnardi</i>	Barnard's Namib Day Gecko	Osga-diurna-do-namibe-de-barnard	NE	WS	N	U	N	U	C	P	C	R	C	L	
		33	<i>Rhoptropus biporosus</i>	FitzSimons' Namib Day Gecko	Osga-diurna-do-namibe-de-dois-poros	NE	WS	N	U	N	U	C	R	C	P	C	P	
		34	<i>Rhoptropus boultoni</i>	Boulton's Namib Day Gecko	Osga-diurna-do-namibe-de-boulton	NE	WS	N	U	N	U	C	R	C	R	C	P	
		35	<i>Rhoptropus montanus</i>	Mountain Namib Day Gecko	Osga-diurna-do-namibe-montana	NE	WS	C	R	C	R	N	U	N	U	N	U	
		36	<i>Rhoptropus sp.</i>	Namib Day Gecko sp.	Osga-diurna-do-namibe sp.	NE	ES	C	P	C	R	C	P	C	P	U	U	
		37	<i>Rhoptropus taeniosticus</i>	Angolan Namib Day Gecko	Osga-diurna-do-namibe-de-angola	NE	ES	N	U	N	U	N	U	C	U	C	R	
		Amphisbaenidae	38	<i>Dalophia pistillum</i>	Blunt-Tailed Worm Lizard	Anfisbena-de-cauda-curta-do-zambeze	NE	WS	U	U	N	U	N	U	N	U	N	U
			39	<i>Monopeltis anchietae</i>	Anchieta's Worm Lizard	Anfisbena-de-focinho-de-pá-de-anchieta	NE	WS	U	U	N	U	N	U	N	U	N	U
			40	<i>Monopeltis perplexus</i>	Wedge-Snouted Worm Lizard	Anfisbena-de-focinho-de-pá-confusa	NE	ES	R	U	N	U	N	U	N	U	N	U
		Lacertidae	41	<i>Ichnotropis bivittata bivittata</i>	Angolan Rough-Scale Lizard	Lagarto-de-escala-áspera-angolana	NE	WS	C	U	U	U	U	N	U	N	U	
			42	<i>Ichnotropis bivittata pallida</i>	Cape Rough-Scaled Lizard	Lagarto-áspero-escaninho-pálido	NE	ER	U	U	N	U	U	N	U	N	U	
			43	<i>Heliobolus lugubris</i>	Bushveld Lizard	Lagarto-de-bushveld	NE	WS	N	U	N	U	C	P	C	P	N	U
			44	<i>Meroles squamulosa</i>	Common Rough-Scaled Lizard	Lagarto-comum-de-escama-áspera	NE	WS	N	U	N	U	N	U	N	U	N	U
	45		<i>Meroles anchietae</i>	Anchieta's Dune Lizard	Lagarto-das-dunas-de-anchieta	NE	WS	N	U	N	U	N	U	N	U	U	U	
	46		<i>Meroles reticulatus</i>	Reticulate Sand Lizard	Lagarto-de-areia-reticulado	NE	WS	N	U	N	U	N	U	N	U	C	U	
	47		<i>Nucras tessellata</i>	Western Sandveld Lizard	Lagarto-de-sandveld-ocidental	NE	WS	U	U	U	U	U	U	U	U	N	U	
	48		<i>Pedioplanis benguelensis</i>	Bocage's Sand Lizard	Lagarto-de-areia-de-bocage	NE	WS	N	U	N	U	U	U	U	C	U	N	
	49		<i>Pedioplanis haackei</i>	Haacke's Sand Lizard	Lagarto-de-areia-de-haacke	NE	ES	N	U	N	U	C	R	C	R	U	U	
	50		<i>Pedioplanis serodioi</i>	Serodio's Sand Lizard	Lagarto-de-areia-de-huntley	NE	ES	N	U	N	U	U	R	U	U	U	U	
	Cordylidae	51	<i>Chamaesaura miopropus</i>	Zambian Snake Lizard	Lagarto-do-capim-do-norte	NE	WS	R	U	N	U	N	U	N	U	N	U	
		52	<i>Cordylus angolensis</i>	Angolan Girdled Lizard	Lagarto-espinhoso-de-angola	NE	ES	R	U	N	U	N	U	N	U	N	U	
		53	<i>Cordylus machadoi</i>	Machado's Girdled Lizard	Lagarto-espinhoso-de-machado	NE	NE	C	P	C	P	N	U	N	U	N	U	
		54	<i>Cordylus namakuyus</i>	Kaokoveld Girdled Lizard	Lagarto-espinhoso-do-kaokoveld	NE	ES	N	U	N	U	N	U	C	P	C	U	
		55	<i>Cordylus phonolithos</i>	Serra da Neve Girdled Lizard	Lagarto-espinhoso da Serra da Neve	NE	ES	N	U	U	U	N	U	N	U	N	U	
	Gerrhosauridae	56	<i>Cordylus subdellatus</i>	Dwarf Plated Lizard	Lagarto-de-placa-anão	LC	WS	R	U	R	U	U	U	C	R	C	U	
		57	<i>Gerrhosaurus nigrolineatus</i>	Black-Lined Plated Lizard	Lagarto-de-placas-de-linhas-pretas	NE	WS	C	L	C	L	U	U	U	U	N	U	
		58	<i>Gerrhosaurus skoogi</i>	Desert Plated Lizard	Lagarto-de-placas-do-deserto	LC	WS	N	U	N	U	N	U	N	U	U	U	
		59	<i>Matobosaurus maltzahni</i>	Western Giant Plated Lizard	Lagarto-de-placas-gigante-ocidental	NE	WS	N	U	R	U	U	U	C	R	C	P	
		60	<i>Eumecia anchietae anchietae</i>	Western Serpentine Skink	Lagarto-serpentina-ocidental	NE	WS	U	U	R	U	N	U	N	U	N	U	
		61	<i>Mochlus sundevallii</i>	Sundevall's Writhing Skink	Lagarto-retorcido-de-undevall	LC	WS	U	U	U	U	C	U	C	U	C	U	
		62	<i>Panaspis mocamedensis</i>	Moçamedes Snake-Eyed Skink	Lagarto-de-olhos-cobra de Moçamedes	NE	WS	N	U	N	U	C	U	U	U	N	U	
		63	<i>Panaspis cabindae</i>	Cabinda Snake-Eyed Skink	Lagarto-de-olhos-cobra-de-cabinda	DD	WS	C	U	C	P	N	U	N	U	N	U	
		64	<i>Panaspis wahlbergii</i>	Wahlberg's Snake-Eyed Skink	Lagarto-de-olhos-de-cobra-de-wahlberg	NE	WS	C	U	U	U	N	U	N	U	N	U	
		65	<i>Sepsina angolensis</i>	Angolan Reduced-Limb Skink	Lagarto-angolano-de-membros-reduzidos	NE	WS	C	U	U	U	U	U	N	U	N	U	
		66	<i>Sepsina copei</i>	Cope's Reduced-Limb Skink	Lagarto-de-membros-reduzidos-do-cope's	NE	ES	N	U	N	U	N	U	U	U	U	U	
		67	<i>Trachylepis acutilabris</i>	Wedge-Snouted Skink	Lagarto-com-focinho-de-cunha	NE	WS	N	U	R	U	C	R	C	R	C	R	
		68	<i>Trachylepis albopunctata</i>	Angolan Variable Skink	Lagarto-angolano-variável	NE	WS	C	P	C	P	C	P	U	U	N	U	
		69	<i>Trachylepis bayonii</i>	Bayão's Skink	Lagarto-do-bayão	DD	WS	C	U	U	U	U	U	N	U	N	U	
		70	<i>Trachylepis binotata</i>	Ovambo Tree Skink	Lagarto-de-árvore-ovambo	NE	WS	U	U	C	U	C	U	C	U	U	U	
		71	<i>Trachylepis chimbana</i>	Chimba Skink	Lagarto-de-chimba	NE	WS	C	U	C	U	C	U	C	U	C	U	
		72	<i>Trachylepis hoeschi</i>	Hoesch's Skink	Lagarto-de-hoesch	NE	WS	N	U	N	U	N	U	C	U	C	R	

REPTILES OF NAMIBE AND HUÍLA							ECOREGIONS										
							ANGOLAN HIGHLANDS		ESCARPMENT		MOPANE WOODLANDS		ARID SAVANNA		NAMIB DESERT		
Ordem	Família	NR	Nomes Científicos	Nomes em Inglês	Nomes em Português	IUCN ¹	ENDEMISM ²	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD
		73	<i>Trachylepis cf. lacertiformis</i>	Bronze Rock Skink	Lagarto-de-bronze	LC	WS	N	U	U	U	C	U	U	U	N	U
		74	<i>Trachylepis laevis</i>	Angolan Blue-Tailed Skink	Lagarto-azul-atado-angolano	NE	WS	N	U	C	U	C	U	C	U	C	U
		75	<i>Trachylepis monardi</i>	Monard's Skink	Lagarto-de-monard	NE	ES	N	U	N	U	N	U	N	U	N	U
		76	<i>Trachylepis occidentalis</i>	Western Three-Striped Skink	Lagarto-de-três-listras-ocidentais	NE	WS	N	U	N	U	N	U	N	U	C	U
		77	<i>Trachylepis punctulata</i>	Speckled Sand Skink	Lagarto-de-areia-salpicada	NE	WS	N	U	U	U	C	U	C	U	C	U
		78	<i>Trachylepis sulcata</i>	Western rock Skink	Lagarto-ocidental-das-rochas	NE	WS	C	L	C	R	C	R	C	R	C	L
		79	<i>Trachylepis wahlbergii</i>	Wahlberg's Striped Skink	Lagarto-listrado-de-wahlberg	NE	WS	C	U	N	U	N	U	N	U	N	U
		80	<i>Typhlacontias johnsonii</i>	Johnson's Burrowing Skink	Lagarto-buraqueira-de-johnson	NE	WS	N	U	N	U	N	U	N	U	U	U
		81	<i>Typhlacontias punctatissimus pu</i>	Dotted Blind Dart Skink	Lagarto-de-dardo-cego-pontilhado	NE	WS	N	U	N	U	N	U	N	U	U	U
		82	<i>Typhlacontias punctatissimus bo</i>	Bogert's Dotted Blind Skink	Lagarto-cego-pontilhado-de-bogert	NE	ER	N	U	N	U	N	U	C	U	C	U
		83	<i>Typhlacontias rudebecki</i>	Rudebeck's Blind Dart Skink	Lagarto-de-dardo-cego-de-rudebeck's	NE	ES	N	U	N	U	N	U	N	U	R	U
	Varanidae	84	<i>Varanus albigularis angolensis</i>	Angolan White-Throated Monitor	Monitor-de-savana-angolano	LC	WS	U	U	U	U	C	U	C	U	U	U
		85	<i>Varanus niloticus</i>	Nile Monitor	Sengue	LC	WS	C	L	C	U	C	U	C	U	C	U
	Chamaeleonidae	86	<i>Chamaeleo anchietae</i>	Anchieta's Chameleon	Camaleão-de-angola	LC	WS	U	U	C	P	N	U	N	U	N	U
		87	<i>Chamaeleo dilepis quilensis</i>	Quilo Flap-Neck Chameleon	Camaleão-comum	LC	WS	C	P	C	R	C	P	C	U	U	U
		88	<i>Chamaeleo namaquensis</i>	Namaqua Chameleon	Camaleão-de-namaqua	LC	WS	N	U	N	U	N	U	N	U	R	U
		89	<i>Acanthocercus cyanocephalus</i>	Angolan Tree Agama	Agama-das-arvores-de-angola	LC	WS	U	U	N	U	N	U	N	U	N	U
	Agamidae	90	<i>Agama acauleata</i>	Western Ground Agama	Agama-do-chão	LC	WS	C	R	C	U	C	U	N	U	N	U
		91	<i>Agama anchietae</i>	Anchieta's Agama	Agama-de-anchieta	NE	WS	N	U	N	U	C	R	C	P	C	R
		92	<i>Agama planiceps</i>	Namib Rock Agama	Agama-das-pedras-do-namibe	NE	WS	N	U	N	U	C	P	C	R	C	L
		93	<i>Agama schacki</i>	Schack's Rock Agama	Agama-das-pedras-de-schack	NE	ES	C	R	C	R	N	U	N	U	N	U
	Typhlopidae	94	<i>Afrotyphlops anomalus</i>	Angolan Giant Blind Snake	Cobra-cega-gigante-angolana	NE	ES	U	U	U	U	U	U	U	U	U	U
		95	<i>Afrotyphlops schlegelii</i>	Schlegel's Giant Blind Snake	Cobra-gigante-cega-de-schlegel	NE	WS	C	U	U	U	N	R	N	U	N	U
	Leptotyphlopidae	96	<i>Leptotyphlops scutifrons</i>	Peters' Thread Snake	Cobra-de-roscas-de-peters	NE	WS	C	U	U	U	N	U	N	U	N	U
		97	<i>Namibiana rostrata</i>	Angolan Beaked Thread Snake	Cobra-de-fio-bico-angolano	DD	ES	N	U	N	U	N	U	U	U	U	U
	Pythonidae	98	<i>Python anchietae</i>	Angolan Python	Pitão de Anchieta	LC	NE	N	U	N	U	U	U	U	U	U	U
		99	<i>Python natalensis</i>	Southern African Rock Python	Pitão-do-sul da áfrica	NE	WS	C	U	C	U	C	U	C	U	C	U
	Viperidae	100	<i>Bitis arietans</i>	Puff Adder	Surucucu	NE	WS	C	P	C	P	C	P	C	P	U	U
		101	<i>Bitis caudalis</i>	Horned Adder	Vibora-de-cornuda	NE	WS	N	U	N	U	N	U	C	U	C	U
		102	<i>Bitis gabonica</i>	Gabon Adder	Vibora-do-gabão	NE	WS	N	U	U	U	N	U	N	U	N	U
		103	<i>Bitis heraldica</i>	Angolan Adder	Vibora-angolana	NE	ES	R	U	N	U	N	U	N	U	N	U
		104	<i>Bitis peringueyi</i>	Peringuey's Adder	Vibora-de-peringuey's	LC	WS	N	U	N	U	N	U	N	U	U	U
		105	<i>Causus resimus</i>	Green Night Adder snake	Vibora-nocturna-verde-de-angola	NE	WS	U	U	U	U	N	U	N	U	N	U
		106	<i>Causus rhombeatus</i>	Rhombic Night Adder	Vibora-nocturna-de-focinho-rômbico	NE	WS	C	U	C	U	U	U	N	U	N	U
		107	<i>Aparallactus capensis</i>	Cape Centipede Eater	Comedor-de-centopéia-de-cabo	LC	WS	U	U	N	U	N	U	N	U	N	U
		108	<i>Atractaspis congica</i>	Congo Stiletto Snake	Cobra-estilete-congo	NE	WS	U	U	N	U	N	U	N	U	N	U
		109	<i>Boaedon angolensis</i>	Angolan House Snake	Cobra-da-casa-angolana	NE	ES	C	P	N	U	N	U	N	U	N	U
		110	<i>Boaedon mentalis</i>	Southern Brown House Snake	Cobra-de-casa-castanha-austral	NE	WS	N	U	N	U	N	U	C	P	C	P
		111	<i>Boaedon variegatum</i>	Variiegated House Snake	Cobra-de-casa-variável	NE	ES	N	U	C	P	C	P	C	U	C	U
		112	<i>Hemirhagerrhis viperina</i>	Western Bark Snake	Cobra-de-casca-ocidental	NE	WS	C	U	C	P	C	U	C	U	C	P
		113	<i>Limaformosa capensis</i>	Southern File Snake	Cobra-de-linha-do-sudoeste	LC	WS	N	U	N	U	N	U	N	U	N	U
		114	<i>Lycophidion hellmichi</i>	Hellmich's Wolf Snake	Cobra-lobo-de-hellmich	DD	WS	N	U	N	U	U	U	N	U	N	U
		115	<i>Lycophidion multimaclatum</i>	Spotted Wolf Snake	Cobra-lobo-manchada	NE	WS	C	P	C	U	U	U	U	U	U	U
		116	<i>Prosymna angolensis</i>	Angola Shovel-Snout snake	Cobra-de-angola	LC	WS	C	U	C	U	U	U	U	U	C	U
		117	<i>Prosymna visseri</i>	Visser's Shovel-Snout Snake	Cobra-de-focinho-de-pá-de-visser's	NE	WS	U	U	U	U	U	U	N	U	N	U
		118	<i>Psammophis angolensis</i>	Dwarf Sand Snake	Cobra-de-areia-anão	NE	WS	R	U	N	U	N	U	N	U	N	U
	Lamprophiidae	119	<i>psammophis ansorgii</i>	Link-Marked Sand Racer snake	Cobra-de-areia de Ansorge	NE	ES	C	U	N	U	N	U	N	U	N	U
		120	<i>Psammophis leopardinus</i>	Leopard Sand Snake	Cobra-leopardo-de-areia	NE	WS	C	U	C	P	C	R	C	P	C	P
		121	<i>Psammophis mossambicus</i>	Olive Whip Snake	Cobra-azeitona-de-chicote	NE	WS	C	P	C	P	C	U	U	U	U	U
		122	<i>Psammophis namibiensis</i>	Namib Sand Snake	Cobra-de-areia-do-namibe	NE	WS	N	U	N	U	U	U	C	P	C	P
		123	<i>Psammophis notostictus</i>	Karoo Sand Snake	Cobra-de-areia-karoo	NE	WS	N	U	N	U	C	U	C	U	U	U
		124	<i>Psammophis subtaeniatus</i>	Striped-Bellied Sand Snake	Cobra-da-areia-de-barriga-listrada	LC	WS	C	U	U	U	U	U	N	U	N	U
		125	<i>Psammophis trigrammus</i>	Western Sand Snake	Cobra-de-areia-ocidental	NE	WS	N	U	N	U	R	U	C	P	C	P
		126	<i>Psammophylax acutus</i>	Striped Beaked Snake	Cobra-bicolor-listrada	NE	WS	U	U	N	U	N	U	N	U	N	U
		127	<i>Psammophylax rhombeatus ocel</i>	Spotted Skaapsteker Snake	Cobra-manchada-de-skaapsteker	NE	ES	U	U	N	U	N	U	N	U	N	U
		128	<i>Psammophylax tritaeniatus</i>	Striped Skaapsteker Snake	Cobra-listrada-de-skaapsteker	LC	WS	C	P	U	U	N	U	N	U	N	U
		129	<i>Pseudaspis cana</i>	Mole Snake	Cobra-mole	NE	WS	U	U	N	U	N	U	N	U	N	U
		130	<i>Pythonodipsas carinata</i>	Western Keeled Snake	Cobra-ocidental-de-keeled	NE	WS	N	U	N	U	N	U	C	P	C	P
	Elapidae	131	<i>Aspidelaps lubricus cowlesi</i>	Angolan Coral Snake	Cobra-coral-angolana	NE	WS	U	U	U	U	U	U	N	U	N	U
		132	<i>Dendroaspis polylepis</i>	Black Mamba	Mamba-negra	LC	WS	C	U	C	U	C	U	C	U	N	U
		133	<i>Elapsoidea guntherii</i>	Gunther's Garter Snake	Cobra-de-ligas-de-gunther	NE	WS	R	U	N	U	N	U	N	U	N	U
		134	<i>Elapsoidea semiannulata semian</i>	Angolan Garter Snake	Cobra-de-liga-angolana	NE	WS	C	U	C	U	R	U	N	U	N	U
		135	<i>Naja anchietae</i>	Anchieta's Cobra	Cobra-de-anchieta	NE	WS	C	P	C	U	N	U	N	U	N	U
		136	<i>Naja melanoleuca</i>	Forest Cobra	Cobra-da-floresta-do-centro-de-áfrica	NE	WS	U	U	U	U	N	U	N	U	N	U
		137	<i>Naja nigricincta</i>	Western Barred Spitting Cobra	Cobra-cuspideira-ocidental	NE	WS	N	U	N	U	C	U	C	P	C	P
		138	<i>Naja nigricollis</i>	Black-Necked Spitting Cobra	Cobra-cuspideira-de-pescoço-preto	NE	WS	U	U	U	U	N	U	N	U	N	U
	Colubridae	139	<i>Crotaphopeltis hotamboeia</i>	Red-Lipped Snake	Cobra-de-lábio-vermelho	NE	WS	C	U	C	P	N	U	N	U	N	U
		140	<i>Dasyplectis palmarum</i>	Palm Egg Eater	Cobra-comedora-de-ovo	NE	WS	U	U	U	U	C	P	C	P	C	U
		141	<i>Dasyplectis scabra</i>	Common Egg Eater	Cobra-comedora-de-ovo-comum	LC	WS	C	P	C	P	C	P	C	P	C	U
		142	<i>Dispholidus typus punctatus</i>	Spotted Boomslang	Cobra-de-papo-ás-pintas	NE	WS	C	P	C	P	N	U	N	U	N	U
		143	<i>Dispholidus typus typus</i>	Common Boomslang	Cobra-de-papo-verde	NE	WS	U	U	N	U	U	U	N	U	N	U
		144	<i>Philothamnus angolensis</i>	Angolan Green Snake	Cobra-verde-angolana	NE	WS	C	P	C	P	U	U	U	U	N	U

REPTILES OF NAMIBE AND HUÍLA								ECOREGIONS										
								ANGOLAN HIGHLANDS		ESCARPMENT		MOPANE WOODLANDS		ARID SAVANNA		NAMIB DESERT		
Ordem	Família	NR	Nomes Científicos	Nomes em Inglês	Nomes em Português	IUCN ¹	ENDESMISM ²	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	
		145	<i>Philothamnus dorsalis</i>	Striped Green Snake	Cobra-verde-listrada	NE	WS	N	U	R	U	N	U	N	U	N	U	
		146	<i>Philothamnus heterolepidotus</i>	Slender Green Snake	Cobra-verde-delgada	NE	WS	U	U	N	U	N	U	N	U	N	U	
		147	<i>Philothamnus ornatus</i>	Ornate Green Snake	Cobra-verde-enfeitada	NE	WS	U	U	N	U	N	U	N	U	N	U	
		148	<i>Philothamnus semivariegatus</i>	Spotted Bush Snake	Cobra-verde-com-manchas	NE	WS	C	U	C	U	C	U	C	U	N	U	
		149	<i>Telescopus finkeledei</i>	Damara Tiger Snake	Cobra-tigre-de-damara	NE	WS	N	U	N	U	R	U	N	U	N	U	
		150	<i>Thelotornis capensis oatesi</i>	Oate's Twig Snake	Cobra-dos-ramos-de-oates	LC	WS	R	U	U	U	R	U	N	U	N	U	
	Natricidae	151	<i>Limnophis bicolor</i>	Bicolored Swamp Snake	Cobra-dos-pantanos-as-riscas	NE	WS	U	U	N	U	N	U	N	U	N	U	
		152	<i>Natriciteres bipostocularis</i>	Southwestern Forest Marsh snake	Cobra-dos-charcos-de-broadley	NE	WS	U	U	N	U	N	U	N	U	N	U	
								6		7		11		14		9	32	
								24		18		16		19		18	32	
								30		25		27		33		27	64	

1 (IUCN): LC - Least Concern; DD - Data Deficient; NT - Near Threatened; VU - Vulnerable; EN - Endangered; CR - Critically Endangered

2 (ENDESMISM): WS - Widespread Species; ES - Endemic Species; NE - Near Endemic Species; ER - Endemic Subspecies

3 (ABUNDANCE): A - Abundant; C - Common; U - Uncommon; R - Rare; N - Not Present

4 (LIKELIHOOD): R - Recorded previously; L - Likely to be recorded; P - Possible to be recorded; U - Unlikely to be recorded

NOTE: The abundance is subjectively ascribed to a given ecoregion for the whole province, while the likelihood refers to the study area

APPENDIX 5

LIST OF MAMMALS OF NAMIBE AND
HUÍLA PROVINCES

MAMMALS OF NAMIBE AND HUÍLA								ECOREGIONS										
								ANGOLAN HIGHLANDS		ESCAPMENT		MOPANE WOODLANDS		ARID SAVANNA		NAMIB DESERT		
ORDER	Family	NR	SCIENTIFIC NAME	COMMON NAME	PORTUGUESE NAME	IUCN ¹	ENDEMIC ²	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD ⁴	
Afrosoricida	Tenrecidae	1	<i>Potamogale velox</i>	Giant otter Shrew	Falsa-lontra	LC	WS	R	U	N	U	N	U	N	U	N	U	
		2	<i>Canis adustus</i>	Side-striped Jackal	Chacal-de-flancos-raiados	LC	WS	U	R	R	U	N	U	N	U	N	U	
Carnivora	Canidae	3	<i>Canis mesomelas</i>	Black-backed Jackal	Chacal-de manto-negro	LC	WS	U	U	U	U	U	U	C	P	C	P	
		4	<i>Lycaon pictus</i>	African Wild Dog	Mabeco	EN	WS	R	U	N	U	R	U	N	U	N	U	
		5	<i>Otocyon megalotis</i>	Bat-eared Fox	Toupeira-dourada do Congo	LC	WS	N	U	N	U	U	U	U	U	U	U	U
		6	<i>Vulpes chama</i>	Cape Fox	Raposa-das-areias	LC	WS	N	U	N	U	R	U	U	U	C	R	
		7	<i>Acinonyx jubatus</i>	Cheetah	Chita	VU	WS	N	U	N	U	R	U	R	U	R	U	U
		8	<i>Caracal caracal</i>	Caracal	Caracal	LC	WS	N	U	N	U	U	U	C	U	U	U	U
	Felidae	9	<i>Felis silvestris</i>	Wild Cat	Gato-bravo	LC	WS	C	P	C	P	C	P	C	U	U	U	U
		10	<i>Leptailurus serval</i>	Serval	Serval	LC	WS	U	U	C	P	U	U	U	U	N	U	U
		11	<i>Panthera leo</i>	Lion	Leão	VU	WS	N	U	N	U	R	U	R	U	R	U	U
		12	<i>Panthera pardus</i>	Leopard	Leopardo	VU	WS	R	U	U	U	U	U	U	U	U	U	U
		13	<i>Atilax paludinosus</i>	Marsh Mongoose	Manguço-dos-pântanos	LC	WS	C	P	C	P	U	U	N	U	N	U	U
	Herpestidae	14	<i>Cynictis penicillata</i>	Yellow Mongoose	Manguço-amarelo	LC	WS	N	U	N	U	R	U	U	U	C	U	U
		15	<i>Helogale parvula</i>	Common Dwarf Mongoose	Manguço-anão	LC	WS	C	U	C	U	C	U	U	U	N	U	U
		16	<i>Herpestes ichneumon</i>	Egyptian Mongoose	Saca-rabos	LC	WS	C	P	C	P	C	P	C	U	U	U	U
		17	<i>Herpestes flavescens</i>	Kaokoveld Slender Mongoose	Manguço-vermelho-grande	LC	WS	N	U	N	U	U	U	C	U	C	U	U
		18	<i>Herpestes sanguineus</i>	Common Slender Mongoose	Manguço-vermelho-pequeno	LC	WS	C	P	C	P	C	R	R	U	N	U	U
		19	<i>Ichneumia albicauda</i>	White-tailed Mongoose	Manguço-de-cauda-branca	LC	WS	C	P	C	P	U	U	U	U	N	U	U
		20	<i>Paracynictis selousi</i>	Selous's Mongoose	Manguço de Selous	LC	WS	R	U	R	U	N	U	N	U	N	U	U
		21	<i>Suricata suricatta</i>	Meerkat	Suricata	LC	WS	N	U	N	U	N	U	N	U	U	U	U
		Hyaenidae	22	<i>Crocuta crocuta</i>	Spotted Hyaena	Hiena-malhada	LC	WS	N	U	N	U	R	U	R	U	N	U
	23		<i>Parahyaena brunnea</i>	Brown Hyaena	Hiena-castanha	NT	WS	N	U	N	U	N	U	R	U	U	U	U
24	<i>Proteles cristata</i>		Aardwolf	Protelo	LC	WS	R	U	R	U	U	U	C	R	C	P		
Mustelidae	25	<i>Aonyx capensis</i>	African Clawless Otter	Lontra do Cabo	NT	WS	C	U	U	U	R	U	N	U	N	U	U	
	26	<i>Hydrictis maculicollis</i>	Spotted-necked Otter	Lontra-de-pescoço-malhado	NT	WS	C	U	U	U	C	U	C	U	R	U	U	
	27	<i>Ictonyx striatus</i>	Striped Polecat	Zorrilho	LC	WS	C	U	C	U	C	U	C	U	P	C	U	
	28	<i>Mellivora capensis</i>	Honey Badger	Ratel	LC	WS	U	U	C	U	C	U	C	U	U	U	U	
	29	<i>Poecilogale albinucha</i>	African Striped Weasel	Doninha-listrada	LC	WS	C	U	C	U	C	U	C	U	C	U	U	
Viverridae	30	<i>Civettictis civetta</i>	African Civet	Civeta Africana	LC	WS	C	P	C	P	C	P	C	U	U	U	U	
	31	<i>Genetta angolensis</i>	Miombo Genet	Geneta de Angola	LC	WS	C	P	U	U	U	U	N	U	N	U	U	
	32	<i>Genetta genetta</i>	Common Genet	Geneta-comum	LC	WS	U	U	U	U	C	U	C	R	U	U	U	
	33	<i>Genetta maculata</i>	Large-spotted Genet	Geneta-de-malha-ruiva	LC	WS	C	P	C	P	C	U	U	U	N	U	U	
Cetartiodactyla	Bovidae	34	<i>Aepyceros melampus petersi</i>	Black-faced Impala	Impala-de-face-negra	VU	NE	N	U	N	U	R	U	R	U	N	U	
		35	<i>Antidorcas marsupialis</i>	Springbok	Cabra-de-leque	LC	WS	N	U	N	U	N	U	U	U	C	U	
		36	<i>Madoqua kirkii</i>	Kirk's Dik-dik	Cachine	LC	WS	N	U	N	U	U	U	C	U	C	U	
		37	<i>Connochaetes taurinus</i>	Common Wildebeest	Boi-cavalo	LC	WS	N	U	N	U	R	U	N	U	N	U	
		38	<i>Hippotragus equinus</i>	Roan Antelope	Palanca-ruana	LC	WS	N	U	N	U	R	U	N	U	N	U	
		39	<i>Kobus ellipsiprymnus defassa</i>	Defassa Waterbuck	Quissema	NT	WS	N	U	N	U	N	U	N	U	N	U	
		40	<i>Kobus leche leche</i>	Red Lechwe	Songue	NT	WS	N	U	N	U	N	U	N	U	N	U	
		41	<i>Oreotragus oreotragus</i>	Klipspringer	Cabra-das-pedras	LC	WS	U	U	U	P	U	U	C	U	C	U	
		42	<i>Ourebia ourebi</i>	Oribi	Oribi	LC	WS	N	U	N	U	N	U	N	U	N	U	
		43	<i>Oryx gazella</i>	Gemsbok	Órix	LC	WS	N	U	N	U	N	U	N	U	U	U	
		44	<i>Philantomba monticola</i>	Blue Duiker	Seixa	LC	WS	R	U	C	R	R	U	N	U	N	U	
		45	<i>Raphicerus campestris</i>	Steenbok	Punja	LC	WS	N	U	N	U	C	P	C	P	C	U	
		46	<i>Redunca arundinum</i>	Southern Reedbuck	Nunce	LC	WS	U	U	R	U	R	U	N	U	N	U	
		47	<i>Sylvicapra grimmia</i>	Common Duiker	Cabra-do-mato-comum	LC	WS	C	P	C	P	C	U	U	U	N	U	
		48	<i>Syncerus caffer caffer</i>	Cape Buffalo	Búfalo-preto	NT	WS	N	U	N	U	N	U	R	U	N	U	
		49	<i>Tragelaphus oryx</i>	Common Eland	Gunga	LC	WS	R	U	N	U	R	U	R	U	N	U	
		50	<i>Tragelaphus scriptus</i>	Bushbuck	Golungo	LC	WS	U	U	U	U	U	U	N	U	N	U	
	51	<i>Tragelaphus spekii</i>	Sitatunga	Sitatunga	LC	WS	R	U	N	U	N	U	N	U	N	U		
	52	<i>Tragelaphus strepsiceros</i>	Greater Kudu	Ólongo	LC	WS	N	U	R	U	U	U	C	U	U	U		
	Giraffidae	53	<i>Giraffa camelopardalis</i>	Giraffe	Girafa	VU	WS	N	U	N	U	N	U	R	U	N	U	
	Hippopotamidae	54	<i>Hippopotamus amphibius</i>	Hippopotamus	Hipopótamo	VU	WS	R	U	N	U	R	U	N	U	N	U	
Suidae	55	<i>Phacochoerus africanus</i>	Common Warthog	Facochoero	LC	WS	N	U	N	U	R	U	U	U	N	U		
	56	<i>Potamochoerus larvatus</i>	Bushpig	Porco-do-mato	LC	WS	U	U	C	U	U	U	R	U	N	U		
Chiroptera	Emballonuridae	57	<i>Taphozous mauritanicus</i>	Mauritian Tomb Bat	Morcego-das-sepulturas	LC	WS	U	U	U	U	U	U	U	U	U		
	Miniopteridae	58	<i>Miniopterus natalensis</i>	Natal Long-fingered Bat	Morcego-de-dedos-longos de Natal	LC	WS	U	U	U	U	U	U	U	U	U		
		59	<i>Chaerephon chapini</i>	Pale Free-tailed Bat	Morcego-de-cauda-livre-pálido	LC	WS	N	U	N	U	U	U	C	U	U		
	Molossidae	60	<i>Chaerephon nigeriae</i>	Nigerian Free-tailed Bat	Morcego-de-cauda-livre Nigeriano	LC	WS	N	U	N	U	N	U	N	U	N	U	
		61	<i>Chaerephon ansorgei</i>	Ansorge's Free-tailed Bat	Morcego-de-cauda-livre de Ansorge	LC	WS	N	U	N	U	C	U	C	U	N	U	
		62	<i>Sauromys petrophilus</i>	Roberts's Flat-headed Bat	Morcego-de-cabeça-achatada de Robert	LC	WS	N	U	N	U	N	U	U	U	U	U	
		63	<i>Mops niveiventer</i>	White-bellied Free-tailed Bat	Morcego-de-cauda-livre-de-barriga-bran	LC	WS	C	U	U	U	U	U	N	U	N	U	
		64	<i>Mops condylurus</i>	Angolan Free-tailed Bat	Morcego-de-cauda-livre Angolano	LC	WS	U	U	U	U	R	U	R	U	R	U	
		65	<i>Tadarida aegyptiaca</i>	Egyptian Free-tailed Bat	Morcego-de-cauda-livre do Egito	LC	WS	U	U	U	U	U	U	U	U	U	U	
	Nycteridae	66	<i>Nycteris thebaica</i>	Egyptian Slit-faced Bat	Morcego-de-face-fendida do Egito	LC	WS	N	U	U	U	C	U	C	U	C	U	
Pteropodidae	67	<i>Eidolon helvum</i>	Straw-coloured Fruit Bat	Morcego-cor-de-palha	LC	WS	C	U	U	U	R	U	N	U	N	U		
	68	<i>Epomophorus angolensis</i>	Angolan Epauletted Fruit Bat	Morcego-de-dragonas de Angola	NT	NE	U	U	C	U	C	U	U	U	N	U		
Rhinolophidae	69	<i>Epomophorus wahlbergi</i>	Wahlberg's Epauletted Fruit Bat	Morcego-de-dragonas de Wahlberg	LC	WS	C	U	U	U	R	U	N	U	N	U		
70	<i>Rhinolophus eloquens</i>	Eloquent Horseshoe Bat	Morcego-de-ferradura-eloquante	LC	WS	C	U	N	U	N	U	N	U	N	U			

MAMMALS OF NAMIBE AND HUÍLA								ECOREGIONS									
								ANGOLAN HIGHLANDS		ESCARPMENT		MOPANE WOODLANDS		ARID SAVANNA		NAMIB DESERT	
ORDER	Family	NR	SCIENTIFIC NAME	COMMON NAME	PORTUGUESE NAME	IUCN ¹	ENDEMICISM ²	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD ⁴
Vespertilionidae		71	<i>Rhinolophus damarensis</i>	Damara Horseshoe Bat	Morcego-de-ferradura da Damara	LC	WS	N	U	N	U	C	U	C	U	C	U
		72	<i>Rhinolophus denti</i>	Dent's Horseshoe Bat	Morcego-de-ferradura de Dent	LC	WS	N	U	N	U	R	U	N	U	N	U
		73	<i>Rhinolophus fumigatus</i>	Rüppell's Horseshoe Bat	Morcego-de-ferradura de Rüppell	LC	WS	N	U	N	U	C	U	C	U	N	U
		74	<i>Rhinolophus lobatus</i>	Peters's Horseshoe Bat	Morcego-de-ferradura de Peter	NE	WS	U	U	U	U	U	U	N	U	N	U
		75	<i>Glauconycteris variegata</i>	Variegated Butterfly Bat	Morcego-borboleta-variegata	LC	WS	N	U	N	U	N	U	N	U	N	U
		76	<i>Cistugo seabrai</i>	Angolan Hairy Bat	Morcego de Seabra	LC	WS	N	U	N	U	N	U	U	U	U	U
		77	<i>Eptesicus hottentotus</i>	Long-tailed Serotine	Morcego-hotentote	LC	WS	N	U	U	U	U	U	C	U	U	U
		78	<i>Neoromicia capensis</i>	Cape Serotine	Pipistrelle do Cabo	LC	WS	C	U	C	U	C	U	C	U	U	U
		79	<i>Neoromicia grandidieri</i>	Dobson's Pipistrelle	Pipistrelle de Dobson	DD	WS	U	U	U	U	U	U	U	U	U	U
		80	<i>Neoromicia nana</i>	Bamana Bat	Pipistrelle-anão	LC	WS	N	U	C	U	N	U	N	U	N	U
81	<i>Neoromicia zuluensis</i>	Zulu Serotine	Pipistrelle de Zulo	LC	WS	N	U	U	U	U	U	U	U	N	U		
82	<i>Nycticeinops schlieffeni</i>	Schlieffen's Bat	Pipistrelle de Schlieffen	LC	WS	N	U	U	U	U	U	U	U	N	U		
83	<i>Scotophilus dinganii</i>	Yellow-bellied House Bat	Morcego-das-casas-de-barriga-amarela	LC	WS	N	U	U	U	U	U	U	U	N	U		
Erinaceomorpha	Erinaceidae	84	<i>Atelerix frontalis</i>	Southern African Hedgehog	Ouriço-cacheiro da África Austral	LC	WS	N	U	N	U	U	U	U	N	U	
Hyracoidea	Procaviidae	85	<i>Heterohyrax brucei bocagei</i>	Bush Hyrax	Damão de Bocage	LC	ES	C	R	C	L	P	P	P	U	U	
		86	<i>Procavia capensis</i>	Kaokoveld Rock Dassie	Damão de Welwitsch	LC	WS	N	U	N	U	N	P	P	P	C	R
Logomorpha	Leporidae	87	<i>Lepus victoriae</i>	African Savanna Hare	Lebre-comum Africana	LC	WS	C	R	C	U	C	U	N	U	N	U
		88	<i>Lepus capensis</i>	Cape Hare	Lebre do Cabo	LC	WS	N	U	N	U	U	U	C	P	C	P
		89	<i>Pronolagus randensis</i>	Jameson's Red Rock Hare	Coelho-das-pedras	LC	WS	C	P	U	U	U	U	U	U	U	U
Macroscelidea	Macroscelididae	90	<i>Elephantulus brachyrhynchus</i>	Short-snouted Elephant-shrew	Musaranho-elefante-de-tromba-curta	LC	WS	C	U	C	U	U	U	N	U	N	U
		91	<i>Elephantulus intufi</i>	Bushveld Elephant-shrew	Musaranho-elefante-das-brenhas	LC	WS	N	U	N	U	C	U	C	U	C	U
Perissodactyla	Equidae	92	<i>Equus quagga burchelli</i>	Plains Zebra	Zebra-de-planície	LC	WS	N	U	N	U	R	U	R	U	N	U
		93	<i>Equus zebra hartmannae</i>	Hartmann's Mountain Zebra	Zebra-de-montanha de Hartman	VU	WS	N	U	N	U	N	U	R	U	U	U
	Rhinocerotidae	94	<i>Diceros bicornis bicornis</i>	South-western Black Rhino	Rinoceronte-preto do Cabo	CR	WS	N	U	N	U	R	U	R	U	N	U
Pholidota	Manidae	95	<i>Smutsia temminckii</i>	Temminck's Ground Pangolin	Pangolim de Temminck	VU	WS	U	U	U	U	U	U	U	U	U	
Primates	Cercopithecoidea	96	<i>Cercopithecus mitis mitis</i>	Pluto Monkey	Cercopiteco-azul de Pluto	DD	ER	N	U	C	R	N	U	N	U	N	U
		97	<i>Chlorocebus cynosuros</i>	Malbrouck Monkey	Macaco-de-cara-preta	LC	WS	C	U	C	P	C	P	C	U	N	U
		98	<i>Papio ursinus</i>	Chacma Baboon	Babuino-preto	LC	WS	C	P	C	R	C	R	C	R	C	R
	Galagidae	99	<i>Galago moholi</i>	Southern Lesser Galago	Gálago de Mohol	LC	WS	C	U	C	U	U	U	N	U	N	U
		100	<i>Otolemur crassicaudatus</i>	Garnett's Greater Galago	Gálago de Monteiro	LC	WS	U	U	C	U	C	U	U	U	U	N
Proboscidea	Elephantidae	101	<i>Loxodonta africana</i>	Savanna Elephant	Elefante-de-savana	NE	WS	N	U	N	U	R	U	R	U	N	U
Rodentia	Bathyergidae	102	<i>Fukomys bocagei</i>	Bocage's Mole Rat	Rato-toupeiro de Bocage	LC	NE	N	U	U	U	C	P	C	P	U	U
		103	<i>Fukomys mechowii</i>	Mechow's Mole Rat	Rato-toupeiro de Mechow	LC	WS	C	P	C	U	U	U	N	U	N	U
		104	<i>Graphiurus kelleni</i>	Kellen's Dormouse	Arganz de Kellen	LC	WS	U	U	N	U	N	U	N	U	N	U
	Gliridae	105	<i>Graphiurus rupicola</i>	Stone Dormouse	Arganz-das-pedras	LC	WS	N	U	N	U	C	P	C	P	C	U
		106	<i>Hystrix africaeustralis</i>	Cape Porcupine	Porco-espinho Austral	LC	WS	C	P	C	U	C	P	C	P	U	U
	Muridae	107	<i>Aethomys chrysophilus</i>	Red Rock Rat	Rato-das-rochas-vermelho	LC	WS	C	U	U	U	C	P	C	P	U	U
		108	<i>Dasymys cabrali</i>	Cabral's Marsh Rat	Rato-d'Água de Cabral	NE	ES	N	U	N	U	N	U	N	U	N	U
		109	<i>Dasymys incomtus</i>	African Marsh Rat	Rato-d'Água-dos-pântanos	LC	WS	N	U	N	U	U	U	U	U	U	U
		110	<i>Desmodillus auricularis</i>	Cape Short-eared Gerbil	Gerbilho-de-cauda-curta	LC	WS	N	U	N	U	C	P	C	P	U	U
		111	<i>Gerbilliscus setzeri</i>	Setzer's Hairy-footed Gerbil	Gerbilho de Setzer	LC	WS	N	U	N	U	C	P	C	P	U	U
		112	<i>Gerbilliscus leucogaster</i>	Bushveld Gerbil	Gerbilho de Peter	LC	WS	C	U	C	U	U	U	N	U	N	U
		113	<i>Gerbilliscus paeba</i>	Hairy-footed Gerbil	Gerbilho-de-pés-peludos	LC	WS	N	U	N	U	C	P	C	P	U	U
		114	<i>Mastomys natalensis</i>	Natal Multimammate Mouse	Rato-de-mamilos-múltiplos	LC	WS	A	P	C	P	C	P	C	P	C	U
		115	<i>Mastomys shortridgei</i>	Shortridge's Multimammate Mouse	Rato de Shortridge	LC	WS	U	U	U	U	N	U	N	U	N	U
		116	<i>Mus triton</i>	Gray-bellied Pygmy Mouse	Ratinho-de-barriga-cinzenta	LC	WS	U	U	U	U	U	U	N	U	N	U
		117	<i>Praomys jacksoni</i>	Jackson's Soft-furred Mouse	Rato de Jackson	LC	WS	N	U	U	U	N	U	N	U	N	U
		118	<i>Rhabdomys dilectus</i>	Mesic Four-striped Grass Rat	Rato-de-quatro-estrias-mediano	NE	WS	C	U	U	U	N	U	N	U	N	U
		119	<i>Micaelamys namaquensis</i>	Namaqua Rock Rat	Rato-das-rochas de Namaqua	LC	WS	N	U	N	U	U	U	C	P	C	U
		120	<i>Myomyscus angolensis</i>	Angolan Multimammate Mouse	Rato de Campangombe	LC	ES	C	U	U	U	N	U	N	U	N	U
	121	<i>Zelotomys woosnami</i>	Woosnam's Broad-headed Mouse	Rato de Woosnam	LC	WS	N	U	N	U	N	U	N	U	N	U	
	Nesomyidae	122	<i>Cricetomys ansorgei</i>	Southern Giant Pouched Rat	Rato-gigante de Ansorge	LC	WS	U	U	C	P	U	U	N	U	N	U
		123	<i>Dendromus leucostomus</i>	Monard's Gray African Climbing Mouse	Ratinho-das-árvores de Monard	DD	ES	R	U	N	U	N	U	N	U	N	U
		124	<i>Dendromus melanotis</i>	Gray African Climbing Mouse	Ratinho-das-árvores-cinzento	LC	WS	C	P	C	P	C	U	U	U	N	U
		125	<i>Dendromus mystacalis</i>	Chestnut Climbing Mouse	Ratinho-das-árvores-castanho	LC	WS	N	U	N	U	N	U	N	U	N	U
		126	<i>Dendromus nyikae</i>	Nyika Climbing Mouse	Ratinho-das-árvores de Nyika	LC	WS	U	U	C	U	N	U	N	U	N	U
		127	<i>Saccostomus campestris</i>	Southern African Pouched Mouse	Rato-de-bolsa da África Austral	LC	WS	C	U	C	U	C	U	N	U	N	U
		128	<i>Petromyscus collinus</i>	Pygmy Rock Mouse	Ratinho-das-rochas-pigmeu	LC	WS	N	U	N	U	U	U	C	U	C	P
		129	<i>Petromyscus shortridgei</i>	Shortridge's Rock Mouse	Ratinho-das-rochas de Shortridge	LC	NE	N	U	N	U	U	U	U	U	U	U
		130	<i>Steatomys krebsii</i>	Kreb's Fat Mouse	Rato-gorducho de Kreb	LC	WS	C	P	C	U	C	U	N	U	N	U
		131	<i>Steatomys pratensis</i>	Fat Mouse	Rato-gorducho	LC	WS	C	P	C	P	C	P	N	U	N	U
		132	<i>Steatomys parvus</i>	Tiny Fat Mouse	Rato-gorducho-pequeno	LC	WS	N	U	N	U	U	U	C	U	U	U
	Pedetidae	133	<i>Pedetes capensis</i>	Spring Hare	Cuio	LC	WS	U	U	U	U	C	U	N	U	N	U
		Sciuridae	134	<i>Funisciurus congicus</i>	Congo Rope Squirrel	Esquilo-de-listra-branca	LC	WS	C	P	C	P	C	R	C	P	C
135			<i>Paraxerus boehmi</i>	Boehm's Bush Squirrel	Esquilo de Boehm	LC	WS	N	U	N	U	N	U	R	U	N	U
136	<i>Protoxerus stangeri loandae</i>		African Giant Squirrel	Esquilo-gigante	LC	ER	N	U	U	U	N	U	N	U	N	U	
Soricomorpha	Soricidae	137	<i>Xerus princeps</i>	Damara Ground Squirrel	Esquilo-terrestre de Damara	LC	NE	N	U	N	U	N	U	C	R	C	R
		138	<i>Crocidura erica</i>	Heather Shrew	Musaranho de Dollman	DD	ES	U	U	U	U	N	U	N	U	N	U
		139	<i>Crocidura fuscomurina</i>	Bicolored Musk Shrew	Musaranho-almiscarado-bicolor	LC	WS	U	U	U	U	U	U	U	U	U	U
		140	<i>Crocidura hirta</i>	Lesser Red Musk Shrew	Musaranho-almiscarado-menor	LC	WS	U	U	N	U	N	U	N	U	N	U

MAMMALS OF NAMIBE AND HUÍLA							ECOREGIONS										
							ANGOLAN HIGHLANDS		ESCARPMENT		MOPANE WOODLANDS		ARID SAVANNA		NAMIB DESERT		
ORDER	Family	NR	SCIENTIFIC NAME	COMMON NAME	PORTUGUESE NAME	IUCN ¹	ENDEMICISM ²	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD ⁴
		141	<i>Crocidura mariquensis</i>	Swamp Musk Shrew	Musaranho-almiscarado-dos-pântanos	LC	WS	U	U	C	U	N	U	N	U	N	U
		142	<i>Crocidura nigricans</i>	Blackish White-toothed Shrew	Musaranho-almiscarado de Angola	LC	ES	N	U	N	U	U	U	C	U	U	U
		143	<i>Crocidura olivieri</i>	African giant shrew	Musaranho-almiscarado-gigante	LC	WS	C	U	C	U	C	U	C	U	U	U
		144	<i>Crocidura parvipes</i>	Small-footed Shrew	Musaranho-almiscarado-de-pés-curtos	LC	WS	U	U	N	U	N	U	N	U	N	U
		145	<i>Crocidura nigrofusca</i>	African Black Shrew	Musaranho-almiscarado-preto	LC	WS	N	U	C	U	N	U	N	U	N	U
		146	<i>Suncus varilla</i>	Lesser Dwarf Shrew	Musaranho-anão-menor	LC	WS	N	U	N	U	N	U	N	U	N	U
Tubulidentata	Orycteropodidae	147	<i>Orycteropus after</i>	Aardvark	Jimbo	LC	WS	C	U	C	U	C	U	C	U	C	U
								3		3		3		4		4	13
								18		17		16		16		5	31
								21		20		19		20		9	44

1 (IUCN): LC - Least Concern; DD - Data Deficient; NT - Near Threatened; VU - Vulnerable; EN - Endangered; CR - Critically Endangered

2 (ENDEMICISM): WS - Widespread Species; ES - Endemic Species; NE - Near Endemic Species

3 (ABUNDANCE): A - Abundant; C - Common; U - Uncommon; R - Rare; N - Not Present

4 (LIKELIHOOD): R - Recorded previously; L - Likely to be recorded; P - Possible to be recorded; U - Unlikely to be recorded

NOTE: The abundance is subjectively ascribed to a given ecoregion for the whole province, while the likelihood refers to the study area

APPENDIX 6

LIST OF AMPHIBIANS OF NAMIBE AND
HUÍLA PROVINCES

AMPHIBIANS OF NAMIBE AND HUÍLA										ECOREGIONS							
Ordem	Família	NR	Nomes Científicos	Nomes em Inglês	Nomes em Português	IUCN ¹	ENDESMISM ²	ANGOLAN HIGHLANDS		ESCARPMENT		MOPANE WOODLANDS		ARID SAVANNA		NAMIB DESERT	
								ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD	ABUNDANCE	LIKELIHOOD
Anura	Pipidae	1	<i>Xenopus petersii</i>	Peters' Clawed Frog	Rã - de - unhas - de - Peter	LC	WS	C	P	C	P	C	U	C	U	U	U
	Bufonidae	2	<i>Mertensophryne mocquardi</i>	Mocquard's Toad	Sapo - de - mocquard	LC	WS	N	U	N	U	N	U	N	U	N	U
		3	<i>Poyntonophrynus dombensis</i>	Bocage Toad	Sapo - pigmeu - do - dombe	LC	WS	N	U	N	U	C	U	C	P	C	P
		4	<i>Poyntonophrynus grandisonae</i>	Grandison's Toad	Sapo - pigmeu - de - grandilson	DD	ES	N	U	N	U	N	U	U	P	U	U
		5	<i>Poyntonophrynus pachnodes</i>	Serra da Neve Pygmy Toad	Sapo - pigmeu - da - serra - da - neve	NE	ES	N	U	U	U	N	U	N	U	N	U
		6	<i>Sclerophrys funerea</i>	Angolan Toad	Sapo - escuro	LC	WS	U	U	N	U	N	U	N	U	N	U
		7	<i>Sclerophrys garmani</i>	Garman's Toad	Sapo-de-garman	LC	WS	N	U	N	U	N	U	N	U	N	U
		8	<i>Sclerophrys gutturalis</i>	Guttural Toad	Sapo - guttural	LC	WS	C	R	C	P	C	U	C	U	C	U
		9	<i>Sclerophrys pusilla</i>	Flat-backed Toad	Sapo - de - costas - achatadas	LC	WS	C	L	C	P	C	P	C	P	C	P
		10	<i>Sclerophrys regularis</i>	African Common Toad	Sapo - comum - africano	LC	WS	C	P	C	P	C	U	C	U	C	U
		11	<i>Phrynomantis bifasciatus</i>	Banded Ruber Frog	Rã - de - borracha - de - duas - riscas	LC	WS	U	U	U	U	U	U	N	U	N	U
	12	<i>Phrynomantis annectens</i>	Marbled Rubber Frog	Rã - de - borracha - de - marmoreada	LC	WS	N	U	N	U	U	P	C	R	C	P	
	13	<i>Breviceps adspersus</i>	Common Rain Frog	Rã - da - chuva - comum	NE	WS	U	U	U	U	U	R	N	U	N	U	
	14	<i>Hemisis marmoratus</i>	Marbled Snout-Burrower	Rã - escavadora - da - marmoreada	LC	WS	U	U	U	U	N	U	N	U	N	U	
	15	<i>Hemisis guineensis</i>	Guinea Snout-Burrower	Rã - escavadora - da - guiné	LC	WS	U	U	U	U	N	U	N	U	N	U	
	16	<i>Hyperolius angolensis angolensis</i>	Angolan Reed Frog	Rela-vermelha-de-angola	LC	ER	A	R	C	L	C	U	C	U	N	U	
	17	<i>Hyperolius angolensis insignis</i>	Bicolored Reed Frog	Rela-preta-e-branca-de-angola	LC	ER	A	U	U	U	C	P	C	U	N	U	
	18	<i>Hyperolius benguelensis</i>	Benguela Long Reed Frog	Rela - comprida - de - benguela	LC	WS	C	P	C	U	N	U	N	U	N	U	
	19	<i>Hyperolius bocagei</i>	Bocage's Reed Frog	Rela - de - bocage	LC	WS	N	U	N	U	N	U	N	U	N	U	
	20	<i>Hyperolius chelaensis</i>	Chela Mountain Reed Frog	Rela - da - chela	DD	ES	R	U	N	U	N	U	N	U	N	U	
	21	<i>Hyperolius cinereus</i>	Ashy Reed Frog	Rela - de - monard	LC	ES	C	R	C	U	N	U	N	U	N	U	
	22	<i>Hyperolius concolor</i>	Variable Reed Fro	Rela - variável	LC	WS	R	U	N	U	N	U	N	U	N	U	
	23	<i>Hyperolius nasutus</i>	Large-Nosed Long Reed Frog	Rela - comprida - de - nariz - pontiagado	LC	WS	A	P	C	P	N	P	N	U	N	U	
	24	<i>Kasina kuvangensis</i>	Kuvangu kasina	Kasina - do - kuvango	LC	WS	N	U	N	U	N	U	N	U	N	U	
	25	<i>Kasina senegalensis</i>	Senegal kasina	Kasina - do - senegal	LC	WS	C	P	U	P	N	U	N	U	N	U	
	26	<i>Leptopelis anchietae</i>	Anchieta's Tree Frog	Rã - guinchadora - de - anchieta	LC	ES	C	P	C	R	N	U	N	U	N	U	
	27	<i>Leptopelis bocagii</i>	Bocage's Tree Frog	Rã - arborícola - escavadora - de - bocage	LC	WS	C	P	U	U	N	U	N	U	N	U	
	28	<i>Leptopelis cynamonaeus</i>	Angolan Forest Tree Frog	Rã - arborícola - cor - de - canela	LC	WS	N	U	R	U	N	U	N	U	N	U	
	29	<i>Hildebrandtia ornata</i>	Ornate Frog	Rã - enfeitada - comum	LC	WS	C	U	N	U	N	U	N	U	N	U	
	30	<i>Hildebrandtia ornatissima</i>	Angola Ornate Frog	Rã - enfeitada - de - angola	DD	ES	U	U	U	U	N	U	N	U	N	U	
	31	<i>Ptychadena anchietae</i>	Anchieta's Grass Frog	Rã - foguete - de - danchieta	LC	WS	N	U	R	U	N	U	N	U	N	U	
	32	<i>Ptychadena ansorgii</i>	Ansorge's Grass Frog	Rã - foguete - de - ansorgue	LC	WS	U	U	U	U	N	U	N	U	N	U	
	33	<i>Ptychadena bunoderma</i>	Rough Grass Frog	Rã - foguete - de - pele - rugosa	LC	WS	R	U	N	U	N	U	N	U	N	U	
	34	<i>Ptychadena grandisonae</i>	Grandison's Grass Frog	Rã - foguete - de - grandison	LC	WS	C	P	U	U	N	U	N	U	N	U	
	35	<i>Ptychadena mascareniensis</i>	Mascarene Grass Frog	Rã - foguete - de - pele - rugosa	LC	WS	C	U	N	U	N	U	N	U	N	U	
	36	<i>Ptychadena oxyrhynchus</i>	Sharp-Nosed Grass Frog	Rã - foguete - de - focinho - bicudo	LC	WS	C	U	C	U	U	U	U	U	N	U	
	37	<i>Ptychadena porosissima</i>	Striped Grass Frog	Rã - foguete - do - capim	LC	WS	U	P	P	P	P	P	U	U	N	U	
	38	<i>Phrynobatrachus cryptotis</i>	Cryptic River Frog	Rã - das - poças - críptica	DD	WS	C	U	U	U	N	U	N	U	N	U	
	39	<i>Phrynobatrachus mababiensis</i>	Mababe Puddle Frog	Rã - das - poças - de - mababe	DD	WS	U	U	U	U	N	U	N	U	N	U	
	40	<i>Phrynobatrachus natalensis</i>	Natal Dwarf Puddle Frog	Rã - das - poças - comum	LC	WS	C	P	C	P	C	P	U	U	U	U	
	41	<i>Amietia angolensis</i>	Angola River Frog	Rã - do - rio - de - angola	LC	WS	C	P	C	R	C	U	U	U	N	U	
	42	<i>Pyxicephalus adspersus</i>	Giant Bullfrog	Rã-gigante-austral	LC	WS	N	U	N	U	C	U	N	U	N	U	
	43	<i>Tomopterna cryptotis</i>	Tremelo Sand Frog	Rã - da - areia - críptica	LC	WS	U	U	U	U	C	U	U	U	N	U	
	44	<i>Tomopterna damarensis</i>	Damaraland Sand Frog	Rã - da - areia - da - damara	DD	WS	N	U	N	U	C	U	C	U	U	U	
	45	<i>Tomopterna tandyi</i>	Tandy's Sand Frog	Rã - de - areia - de - Tandy	LC	WS	N	U	N	U	N	U	N	U	N	U	
	46	<i>Tomopterna tuberculosa</i>	Rough Sand Frog	Rã - de - areia - de - pele - rugosa	LC	WS	A	L	C	P	R	U	N	U	N	U	
	47	<i>Ranididae</i>	47	<i>Ammirana darlingi</i>	Darling's White - Lipped Frog	Rã - de - lábios - brancos - de - darling	LC	WS	R	U	N	U	N	U	N	U	

1 (IUCN): LC - Least Concern; DD - Data Deficient; NT - Near Threatened; VU - Vulnerable; EN - Endangered; CR - Critically Endangered

2 (ENDESMISM): WS - Widespread Species; ES - Endemic Species; NE - Near Endemic Species; ER - Endemic Subspecies

3 (ABUNDANCE): A - Abundant; C - Common; U - Uncommon; R - Rare; N - Not Present

4 (LIKELIHOOD): R - Recorded previously; L - Likely to be recorded; P - Possible to be recorded; U - Unlikely to be recorded

NOTE: The abundance is subjectively ascribed to a given ecoregion for the whole province, while the likelihood refers to the study area

3	2	1	1	0	7
13	10	6	3	3	14
16	12	7	4	3	21

APPENDIX 7

Maps of Natural Values and Ecological and
Landscape Sensitivity

ESTUDO DE IMPACTE AMBIENTAL

LINHA DE TRANSMISSÃO DE 220 kV LUBANGO ESTE-NOMBUNGO

CARTA III.1 - Carta dos Valores Naturais e Sensibilidade Ecológico-Paisagística
 Folha III.1.B
 Escala 1:25 000

COMPONENTE CARTOGRÁFICA DE DIAGNÓSTICO



CONVENÇÕES

Valor Natural & Paisagístico

- A Excepcional
- B Muito Elevado
- C Elevado
- D Médio
- E Baixo

Traçado aproximado proposto para a Linha de Transmissão de 220kV planeada

Corredor de 1Km do estudo

Compilação da planimetria desenvolvida a partir de imagens de satélite de muito alta resolução, com dados captados entre 2020 & 2021.

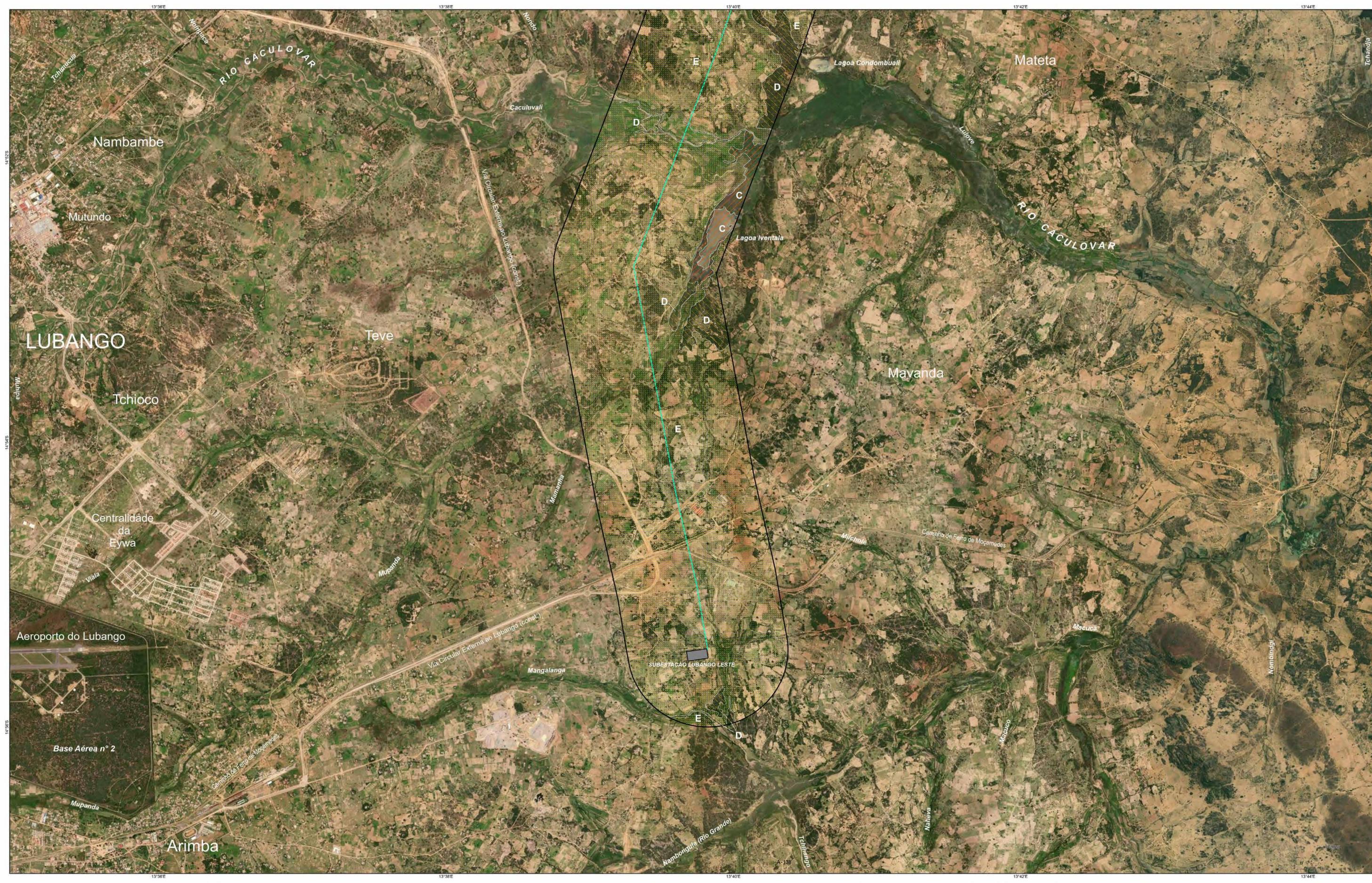
Créditos da imagem base - World Imagery, Esri, Maxar, Earthstar Geographics, USDA FSA, USGS, Aerogrid, IGN, IGP.

Toponímia com base nos elementos oficiais publicados na Carta de Angola, nas suas várias edições.



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 Cópia/RIGHT: Todos os direitos reservados
 Cartografia & SIG: Luis M. Veríssimo V01: 10/2021





ESTUDO DE IMPACTE AMBIENTAL

LINHA DE TRANSMISSÃO DE 220 KV LUBANGO LESTE-NOMBUNGO

CARTA III.1 - Carta dos Valores Naturais e Sensibilidade Ecológico-Paisagística
Folha III.1.A
Escala 1:25 000

COMPONENTE CARTOGRÁFICA DE DIAGNÓSTICO



CONVENÇÕES

Valor Natural & Paisagístico

	A	Excepcional
	B	Muito Elevado
	C	Elevado
	D	Médio
	E	Baixo



Compilação da planimetria desenvolvida a partir de imagens de satélite de muito alta resolução, com dados captados entre 2020 & 2021.

Créditos da imagem base - World Imagery; Esri, Maxar, Earthstar Geographics, USDA FSA, USGS, AeroGRID, IGN, IGP.

Toponímia com base nos elementos oficiais publicados na Carta de Angola, nas suas várias edições.

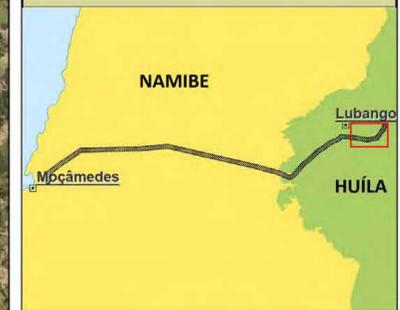




ESTUDO DE IMPACTE AMBIENTAL

LINHA DE TRANSMISSÃO DE 220 kV LUBANGO-MOÇÂMEDES
 CARTA II.1 - Carta dos Valores Naturais e Sensibilidade Ecológico-Paisagística
 Folha II.1.A.1
 Escala 1:25 000

COMPONENTE CARTOGRÁFICA DE DIAGNÓSTICO



CONVENÇÕES

- Valor Natural & Paisagístico**
- A Excepcional
 - B Muito Elevado
 - C Elevado
 - D Médio
 - E Baixo
- Linha de Transmissão de 60KV Implantada
- Traçado aproximado proposto pelo presente estudo para a Linha de Transmissão de 220KV planeada
- Corredor de 1Km do estudo

Compilação da planimetria desenvolvida a partir de imagens de satélite de muito alta resolução, com dados captados entre 2020 & 2021.

Créditos da imagem base - World Imagery, Esri, Maxar, Earthstar Geographics, USDA FSA, USGS, Aerogrid, IGN, IGP.

Toponímia com base nos elementos oficiais publicados na Carta de Angola, nas suas várias edições.



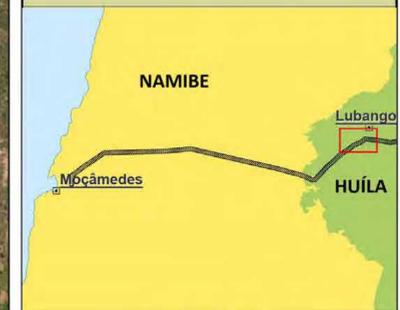


ESTUDO DE IMPACTE AMBIENTAL

LINHA DE TRANSMISSÃO DE 220 KV LUBANGO-MOÇÂMEDES

CARTA II.1 - Carta dos Valores Naturais e Sensibilidade Ecológico-Paisagística
Folha II.1.A.2
Escala 1:25 000

COMPONENTE CARTOGRÁFICA DE DIAGNÓSTICO



CONVENÇÕES

- Valor Natural & Paisagístico**
- A Excepcional
 - B Muito Elevado
 - C Elevado
 - D Médio
 - E Baixo
- Linha de Transmissão de 60KV Implantada
- Traçado aproximado proposto pelo presente estudo para a Linha de Transmissão de 220KV planeada
- Corredor de 1Km do estudo

Compilação da planimetria desenvolvida a partir de imagens de satélite de muito alta resolução, com dados captados entre 2020 & 2021.

Créditos da imagem base - World Imagery, Esri, Maxar, Earthstar Geographics, USDA FSA, USGS, Aerogrid, IGN, IGP.

Toponímia com base nos elementos oficiais publicados na Carta de Angola, nas suas várias edições.

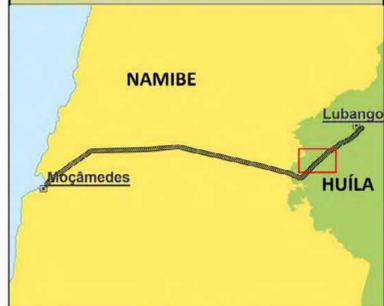


ESTUDO DE IMPACTE AMBIENTAL

LINHA DE TRANSMISSÃO DE 220 KV LUBANGO-MOÇÂMEDES

CARTA II.1 - Carta dos Valores Naturais e Sensibilidade Ecológico-Paisagística
 Folha II.1.B
 Escala 1:25 000

COMPONENTE CARTOGRÁFICA DE DIAGNÓSTICO



CONVENÇÕES

Valor Natural & Paisagístico

- A Excepcional
- B Muito Elevado
- C Elevado
- D Médio
- E Baixo

Linha de Transmissão de 60KV Implantada

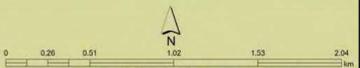
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Corredor de 1Km do estudo

Compilação da planimetria desenvolvida a partir de imagens de satélite de muito alta resolução, com dados captados entre 2020 & 2021.

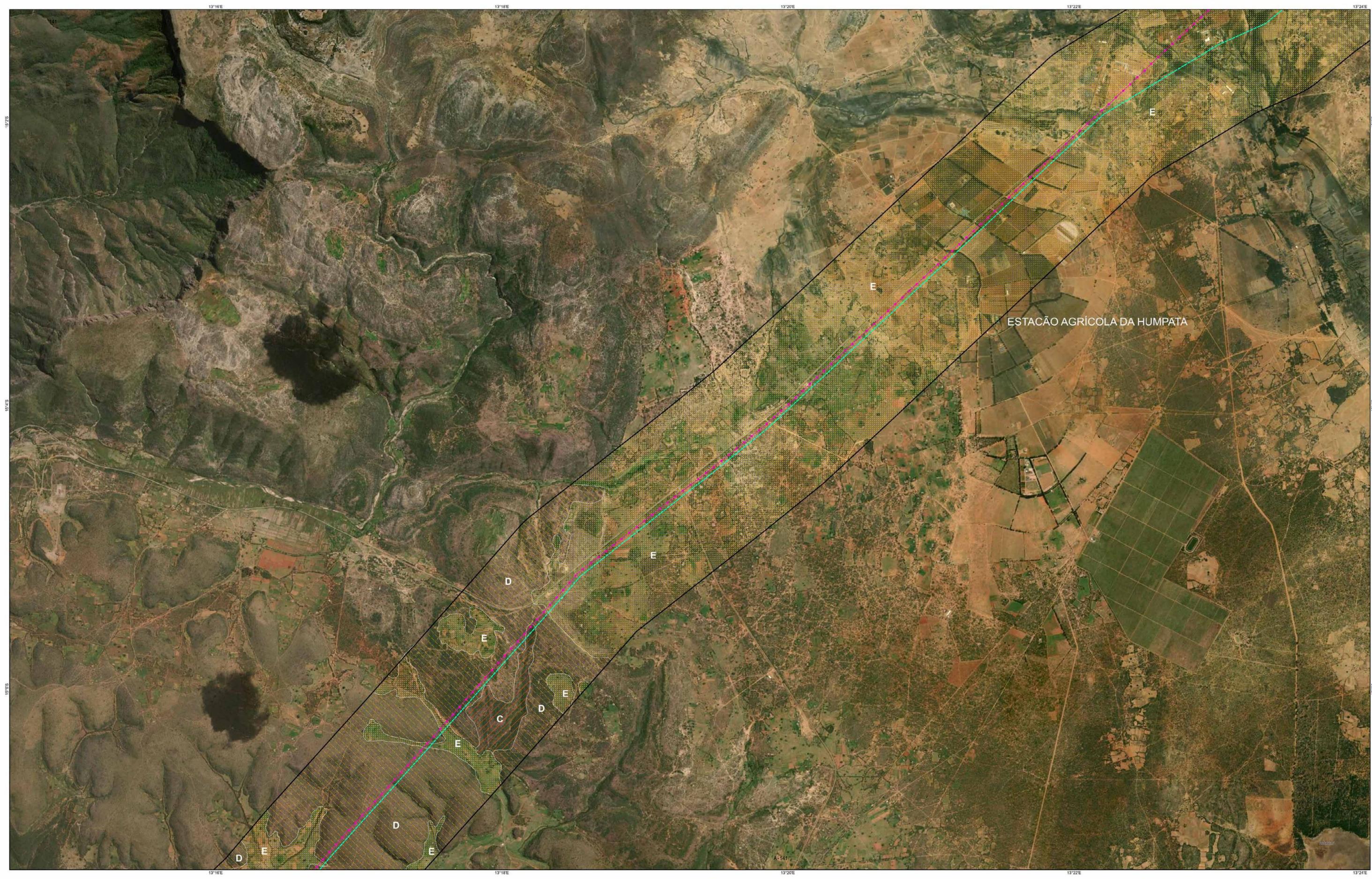
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 Cartografia & SIG: Luis M. Veríssimo

V01-05/2021



ESTUDO DE IMPACTE AMBIENTAL

LINHA DE TRANSMISSÃO DE 220 KV LUBANGO-MOÇÂMEDES

CARTA II.1 - Carta dos Valores Naturais e Sensibilidade Ecológico-Paisagística
Folha II.1.C
Escala 1:25 000

COMPONENTE CARTOGRÁFICA DE DIAGNÓSTICO



CONVENÇÕES

Valor Natural & Paisagístico

- A Excepcional
- B Muito Elevado
- C Elevado
- D Médio
- E Baixo

Linha de Transmissão de 60KV Implantada

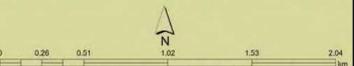
Traçado aproximado proposto pelo presente estudo para a Linha de Transmissão de 220KV planeada

Corredor de 1Km do estudo

Compilação da planimetria desenvolvida a partir de imagens de satélite de muito alta resolução, com dados captados entre 2020 & 2021.

Créditos da imagem base - World Imagery: Esri, Maxar, Earthstar Geographics, USDA FSA, USGS, AeroGRID, IGN, IGP.

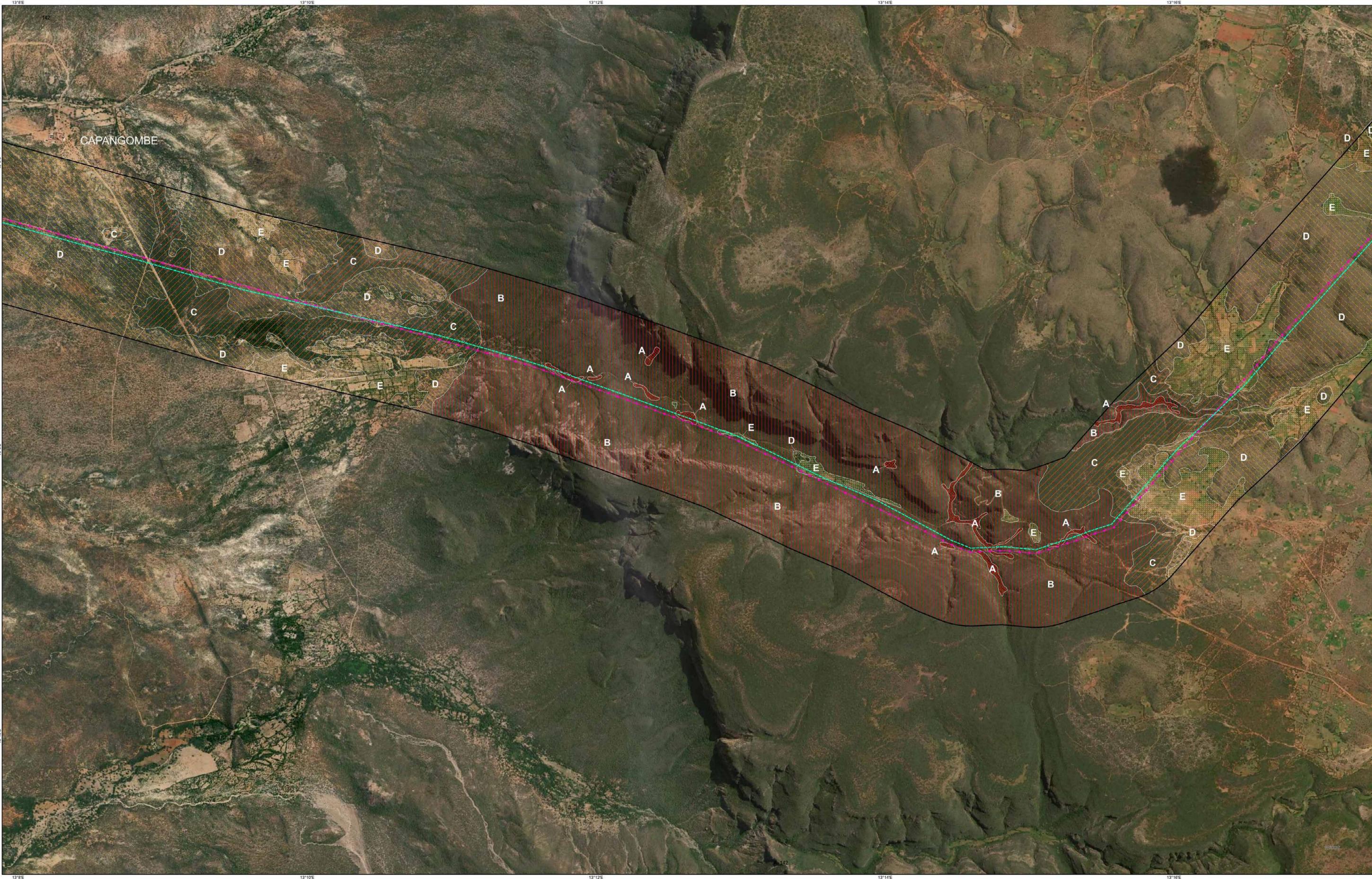
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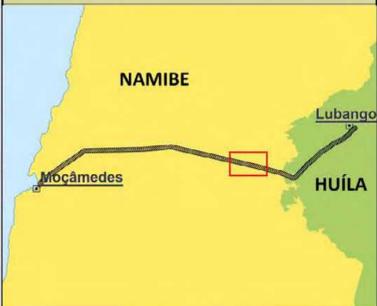


ESTUDO DE IMPACTE AMBIENTAL

LINHA DE TRANSMISSÃO DE 220 KV LUBANGO-MOÇÂMEDES

CARTA II.1 - Carta dos Valores Naturais e Sensibilidade Ecológico-Paisagística
Folha II.1.D
Escala 1:25 000

COMPONENTE CARTOGRÁFICA DE DIAGNÓSTICO



CONVENÇÕES

Valor Natural & Paisagístico

- A Excepcional
- B Muito Elevado
- C Elevado
- D Médio
- E Baixo



Linha de Transmissão de 60KV Implantada



Traçado aproximado proposto pelo presente estudo para a Linha de Transmissão de 220KV planeada



Corredor de 1Km do estudo

Compilação da planimetria desenvolvida a partir de imagens de satélite de muito alta resolução, com dados captados entre 2020 & 2021.

Créditos da imagem base - World Imagery, Esri, Maxar, Earthstar Geographics, USDA FSA, USGS, Aerogrid, IGN, IGP.

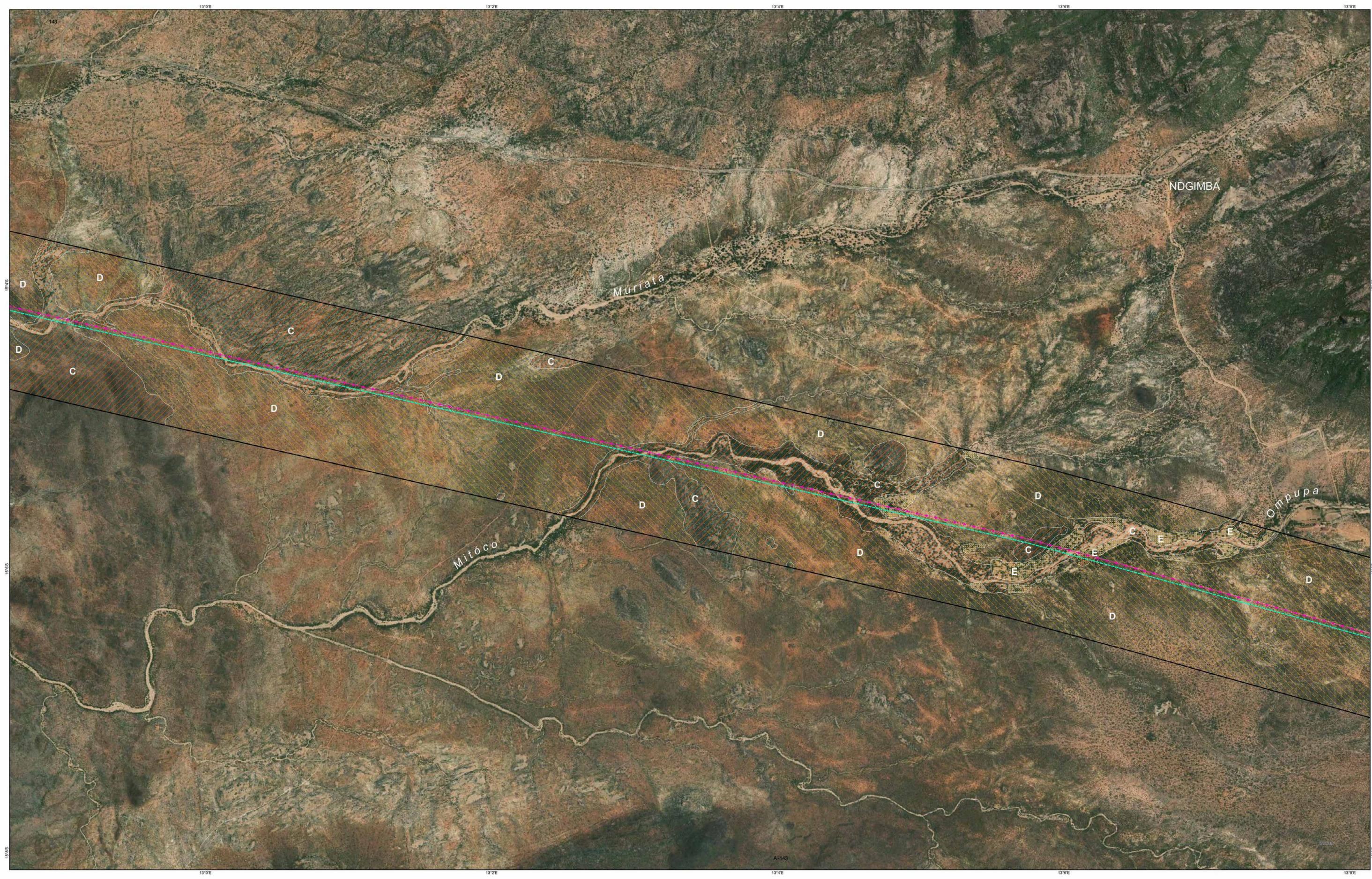
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V01-02/2021

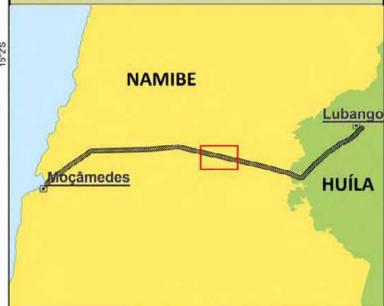


ESTUDO DE IMPACTE AMBIENTAL

LINHA DE TRANSMISSÃO DE 220 KV LUBANGO-MOÇÂMEDES

CARTA II.1 - Carta dos Valores Naturais e Sensibilidade Ecológico-Paisagística
Folha II.1.E
Escala 1:25 000

COMPONENTE CARTOGRÁFICA DE DIAGNÓSTICO

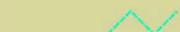


CONVENÇÕES

Valor Natural & Paisagístico

- A Excepcional
- B Muito Elevado
- C Elevado
- D Médio
- E Baixo

Linha de Transmissão de 60KV Implantada



Traçado aproximado proposto pelo presente estudo para a Linha de Transmissão de 220KV planeada



Corredor de 1Km do estudo

Compilação da planimetria desenvolvida a partir de imagens de satélite de muito alta resolução, com dados captados entre 2020 & 2021.

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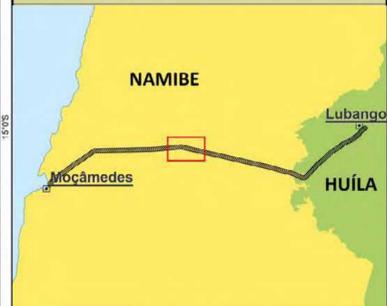
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V01_05/2021

ESTUDO DE IMPACTE AMBIENTAL

LINHA DE TRANSMISSÃO DE 220 KV LUBANGO-MOÇÂMEDES
CARTA II.1 - Carta dos Valores Naturais e Sensibilidade Ecológico-Paisagística
Folha II.1.F
Escala 1:25 000

COMPONENTE CARTOGRÁFICA DE DIAGNÓSTICO



CONVENÇÕES

Valor Natural & Paisagístico

- A Excepcional
- B Muito Elevado
- C Elevado
- D Médio
- E Baixo

Linha de Transmissão de 60KV Implantada

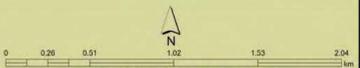
Traçado aproximado proposto pelo presente estudo para a Linha de Transmissão de 220KV planeada

Corredor de 1Km do estudo

Compilação da planimetria desenvolvida a partir de imagens de satélite de muito alta resolução, com dados captados entre 2020 & 2021.

Créditos da imagem base - World Imagery; Esri, Maxar, Earthstar Geographics, USDA FSA, USGS, AeroGRID, IGN, IGP.

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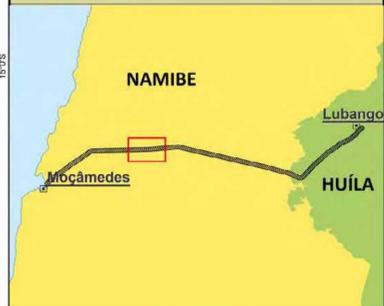
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ESTUDO DE IMPACTE AMBIENTAL

LINHA DE TRANSMISSÃO DE 220 KV LUBANGO-MOÇÂMEDES

CARTA II.1 - Carta dos Valores Naturais e Sensibilidade Ecológico-Paisagística
Folha II.1.G
Escala 1:25 000

COMPONENTE CARTOGRÁFICA DE DIAGNÓSTICO



CONVENÇÕES

Valor Natural & Paisagístico

- A Excepcional
- B Muito Elevado
- C Elevado
- D Médio
- E Baixo

Linha de Transmissão de 60KV Implantada



Traçado aproximado proposto pelo presente estudo para a Linha de Transmissão de 220KV planeada



Corredor de 1Km do estudo

Compilação da planimetria desenvolvida a partir de imagens de satélite de muito alta resolução, com dados captados entre 2020 & 2021.

Créditos da imagem base - World Imagery: Esri, Maxar, Earthstar Geographics, USDA FSA, USGS, AeroGRID, IGN, IGP.

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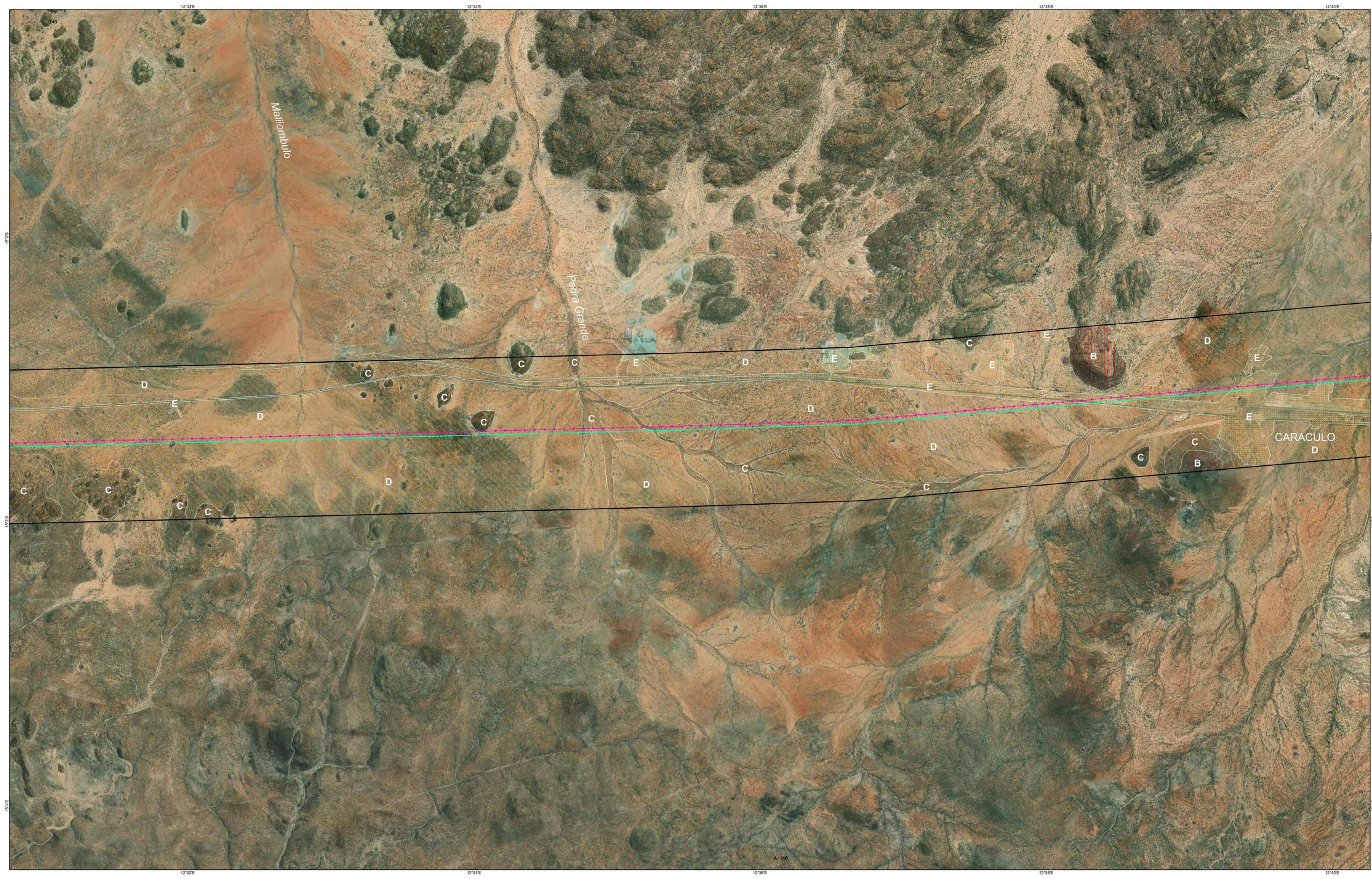


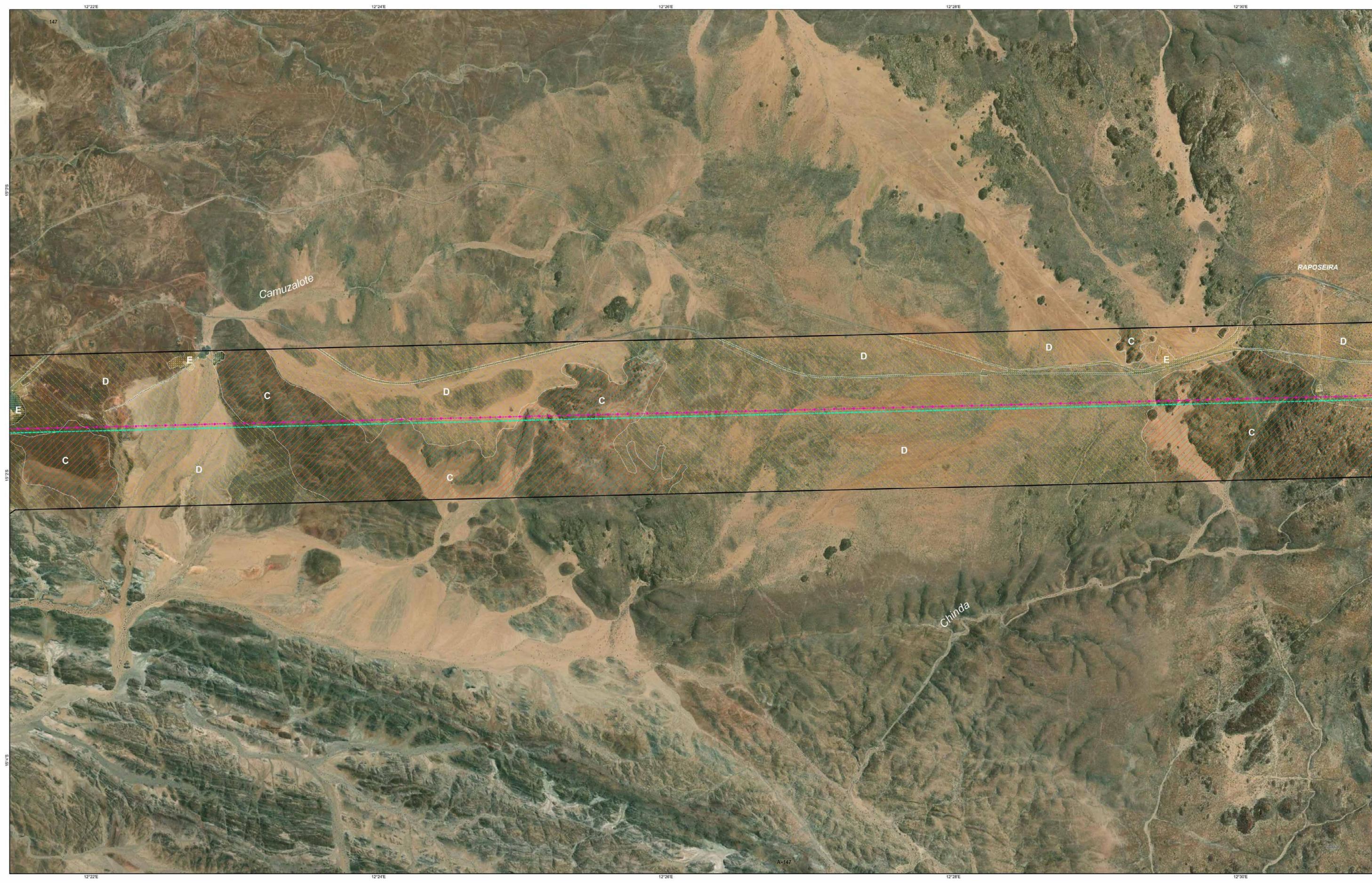
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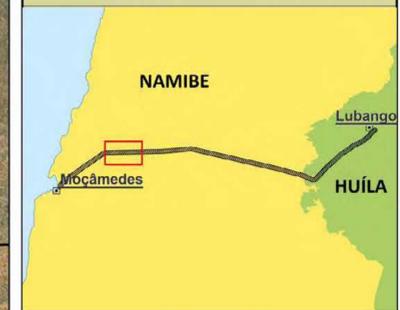


ESTUDO DE IMPACTE AMBIENTAL

LINHA DE TRANSMISSÃO DE 220 KV LUBANGO-MOÇÂMEDES

CARTA II.1 - Carta dos Valores Naturais e Sensibilidade Ecológico-Paisagística
 Folha II.1.H
 Escala 1:25 000

COMPONENTE CARTOGRÁFICA DE DIAGNÓSTICO



CONVENÇÕES

Valor Natural & Paisagístico

- A Excepcional
- B Muito Elevado
- C Elevado
- D Médio
- E Baixo

Linha de Transmissão de 60KV Implantada

Traçado aproximado proposto pelo presente estudo para a Linha de Transmissão de 220KV planeada

Corredor de 1Km do estudo

Compilação da planimetria desenvolvida a partir de imagens de satélite de muito alta resolução, com dados captados entre 2020 & 2021.

Créditos da imagem base - World Imagery: Esri, Maxar, Earthstar Geographics, USDA FSA, USGS, AeroGRID, IGN, IGP.

Toponímia com base nos elementos oficiais publicados na Carta de Angola, nas suas várias edições.

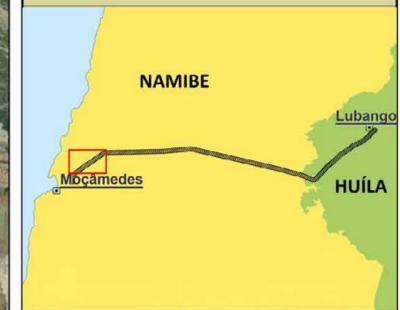
PROJEÇÃO TRANSVERSA DE MERCATOR - WGS84
 C:\P\FR\GHI - Todos os direitos reservados
 Cartografia & SIG: Luis M. Veríssimo V01-05/2021



ESTUDO DE IMPACTE AMBIENTAL

LINHA DE TRANSMISSÃO DE 220 KV LUBANGO-MOÇÂMEDES
 CARTA II.1 - Carta dos Valores Naturais e Sensibilidade Ecológico-Paisagística
 Folha II.1.1
 Escala 1:25 000

COMPONENTE CARTOGRÁFICA DE DIAGNÓSTICO



CONVENÇÕES

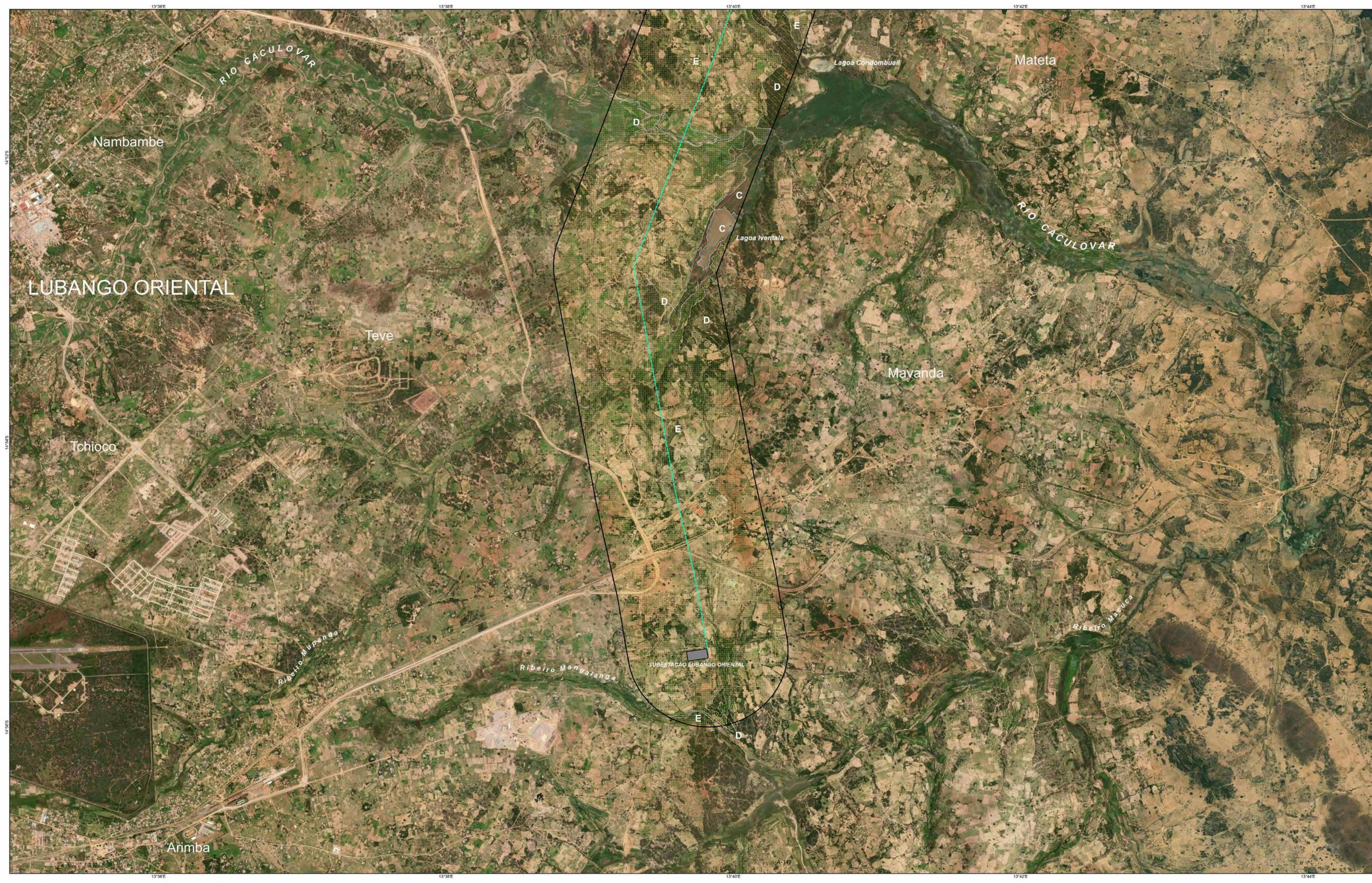
- Valor Natural & Paisagístico**
- A Excepcional
 - B Muito Elevado
 - C Elevado
 - D Médio
 - E Baixo
- Linha de Transmissão de 60KV Implantada
- Traçado aproximado proposto pelo presente estudo para a Linha de Transmissão de 220KV planeada
- Corredor de 1Km do estudo

Compilação da planimetria desenvolvida a partir de imagens de satélite de muito alta resolução, com dados captados entre 2020 & 2021.

Créditos da imagem base - World Imagery, Esri, Maxar, Earthstar Geographics, USDA FSA, USGS, Aerogrid, IGN, IGP.

Toponímia com base nos elementos oficiais publicados na Carta de Angola, nas suas várias edições.





ESTUDO DE IMPACTE AMBIENTAL

LINHA DE TRANSMISSÃO DE 220 KV LUBANGO ESTE-NOMBONGO

CARTA III.1 - Carta dos Valores Naturais e Sensibilidade Ecológico-Paisagística
 Folha III.1.A
 Escala 1:25 000

COMPONENTE CARTOGRÁFICA DE DIAGNÓSTICO



CONVENÇÕES

Valor Natural & Paisagístico

	A	Excepcional
	B	Muito Elevado
	C	Elevado
	D	Médio
	E	Baixo



Compilação da planimetria desenvolvida a partir de imagens de satélite de muito alta resolução, com dados captados entre 2020 & 2021.

Créditos da imagem base - World Imagery, Esri, Maxar, Earthstar Geographics, USDA FSA, USGS, Aerogrid, IGN, IGP.

Toponímia com base nos elementos oficiais publicados na Carta de Angola, nas suas várias edições.



APPENDIX 8
HOLÍSTICOS CERTIFICATE



República de Angola

MINISTÉRIO DA CULTURA, TURISMO E AMBIENTE

GABINETE JURIDICO

CERTIFICADO DE CONSULTORIA AMBIENTAL

N.º 12159922221

O Gabinete Jurídico do Ministério da Cultura, Turismo e Ambiente, atesta que foram cumpridas todas as formalidades legais conducentes ao Registo Técnico da Sociedade de Consultoria Ambiental HOLISTICOS SERVICOS, EST.& CONSULTORIA, LIMITADA, nos termos do Decreto Executivo nº 86/12, de 23 de Fevereiro de 2012, que aprova o Regulamento sobre o Registo Técnico de Sociedade de Consultoria Ambiental.

Emitida em, 25 de Março de 2022	Válida até, 25 de Março de 2023
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Assinatura
 REPÚBLICA DE ANGOLA
 MINISTÉRIO DA CULTURA, TURISMO E AMBIENTE
DANIEL JOÃO JORGE
 Gabinete Jurídico
 LUANDA
 (DIRECTOR DO GABINETE JURÍDICO)



A autenticidade deste documento poderá ser verificada através dos passos a seguir:
 1. Aceda ao Portal MINAMB (<https://sia.minamb.gov.ao/validacaodocumentos>)
 2. Introduza o código RCONST-MT1z0TY2Mzk= no campo "Código de Validação"
 3. Clique em "Pesquisar"
 Número do Certificado: 12159922221



APPENDIX 9

Minutes of the Stakeholder meetings

Lubango - Moçâmedes 220 kV Transmission Line Project	MEETING MINUTES Stakeholder Engagement Meeting					
			Project: P.1649			
VENUE:	Huíla Provincial Government		DATE:	23/02/2021	NUMBER OF PAGES:	9
SUBJECT:	Stakeholder Engagement Meeting	NOTES BY: Nuno Moreira and Eduardo Ferdinand	TIME:	10.00 am to 11.30 am	REVISION:	VR

ANNEXES**Annex 1** – Photographic record**Annex 2** – Attendance list**Annex 3** – List of participants via Zoom**Annex 4** – Power Point Presentation**COPIES SENT TO:**

- National Electricity Transmission Network Company (RNT – E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPSCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Huíla Provincial Government.

ITEM	DESCRIPTION
1	The opening of the ceremony started at 10.00 a.m. in the Huíla Provincial Government conference room. Several entities attended the meeting, with special mention to Nuno Mahapi Dala (Huíla Province Vice-Governor of Technical Services and Infrastructure), Provincial Directors, Communal and Municipal Administrators, and Rúben Januário (Huíla province RNT – E.P. representative) were among those present.
2	The stakeholder engagement meeting was attended by 15 participants. Nuno Mahapi Dala welcomed the attendees, spoke about the Project's significance in terms of the development of the country's center-south region, thanked all those involved in the Project, and greeted those who were following the stakeholder engagement meeting through Zoom's online platform.
3	Rúben Januário (RJ), RNT – E.P. Huíla's representative, introduced the Project's characteristics, clarified the proposed route planned for the passage of high voltage electricity transmission lines (TL), mentioned potential obstacles that could be present along the proposed route, and concluded by emphasizing the Project's importance regarding the national electricity transmission system interconnection strategy. RJ also mentioned that the Project's success would be contingent on the creation of various synergies between the Project team and the Huíla and Namibe provincial governments.
4	Eduardo Ferdinand (EF) mentioned that the stakeholder engagement meeting process is extremely important regarding the materialization of the Project. Referred that RNT – E.P. is promoting the Project in collaboration

ITEM	DESCRIPTION
	with Tokyo Electric Power Services Co. (TEPSCO), with financing from the Japan International Cooperation Agency (JICA). He emphasized that the Project's main goal is to increase electricity supply to the Namibe province while also allowing for the connection of electricity transport systems between the north and centre-south regions.
5	EF explained that the Project addresses the need to transport electricity generated at the Laúca Dam, which is situated in Malanje province and has the capacity to produce more than 2,000 MW, through the Belém do Dango (Huambo), Nombungo, Arimba and later Moçâmedes substations. He also mentioned that the Project would adhere to JICA's Environmental and Social Performance Standards (JICA Guidelines for Environmental and Social Considerations, 2010).
6	<p>EF stated that the objective of the stakeholder engagement meeting is to give interested and potentially affected parties a chance to learn about the Project, offer feedback, and make recommendations regarding its implementation. EF gave a presentation that focused on the following points (see Annex 4 - Presentation):</p> <ul style="list-style-type: none"> • Brief Description of the Project; • Presentation of the country's current Environmental Impact Assessment Process; • Legal and Regulatory Framework; • Environmental and Socio-economic Aspects of the Transmission Line Route; • Expected Environmental and Socio-economic Impacts; • Question and answer session.
7	EF concluded by mentioning that the ongoing environmental studies (EPDA/ESIS) would be prepared in compliance with current legislation, industry best practices, and other JICA guidelines, stressing that the proposed TL route may be altered depending on the severity of any identified environmental and social impacts. He invited those present, including those taking part via Zoom, to provide feedback regarding improving Project related studies.
8	The table below provides a summary of the question and answer session.

Questions and Answer Session Summary

Comment/Question	Answer
<p>Rosário Ima Panzo (RI) – Provincial Director of the Office of Infrastructure and Technical Services.</p> <p>Topics raised:</p> <ul style="list-style-type: none"> - What kind of training do you have in mind for workers who will be hired during the construction phase of the Project? - What is the scope of equipment that will be used during Project implementation at the various construction sites? - What is planned regarding technical assistance? - Is there a financial package in place to compensate for the potential relocation of housing and agricultural sites along the power line's route? 	<p>Rúben Januário (RJ): RNT – E.P.</p> <p>RJ responded by stating that the hiring of national staff, both skilled and unskilled, is planned and that training will be provided. He mentioned that because the Project is still in the technical feasibility pre-study phase, exactly what equipment would be needed is as-yet-unknown.</p> <p>In the case of potential housing relocation along the route of the transmission line (TL), RJ guaranteed that compensation would be provided in a simple and transparent manner. He also stated that the power line's path would avoid as much third-party infrastructure as possible (residential areas, agricultural sites, etc.). However, he noted that there would be cases where this would not be feasible, whereby the Funding Institution (JICA) has very specific rules and standards, and social surveys and meetings with the affected parties would be undertaken in order to ensure that compensation is fair. He added also that a Resettlement and Compensation Plan would be prepared.</p>
<p>Lídia Amaro (LA) – Director of the Provincial Office of Environment, Solid Waste Management, and Community Services.</p> <p>LA suggested that during field work, experts from the Namibe Academy of Fisheries and Marine Sciences be invited to participate, as well as technicians from the Provincial Office of Environment, Solid Waste Management, and Community Services (GPAGRSEC), in order for all to gain more experience and be able to monitor future developments.</p>	<p>Eduardo Ferdinand (EF) – Holísticos.</p> <p>EF stated that the Project is in the Environmental Pre-Feasibility Study and Scoping (EPDA) phase, which is required by law for all category A projects.</p> <p>In terms of the integration of technicians from higher education institutions and GPAGRSEC, EF stated that including them in teams that will conduct the social and environmental surveys would be considered.</p>
<p>Estanislau Paulo (EP) – Deputy Finance Administrator of Lubango Municipality.</p>	<p>Eduardo Ferdinand (EF) – Holísticos.</p>

Comment/Question	Answer
<p>EP inquired whether the compensation process regarding parties affected by the Project in terms of losing agricultural land, as well as whether electricity will be provided to the people living along the line's path.</p>	<p>EF stated that a list would be elaborated detailing current infrastructure along the Project's route that is prone to being affected, with the goal to determining that which will be truly impacted, thus avoiding potential opportunism on the part of local communities. He also said that compensation for the loss of agricultural land and fruit trees would be determined using the Ministry of Agriculture and Fisheries' price table for agricultural products per square meter, and that the entire process would be fair, transparent and honest, thus ensuring that compensation is granted to whom it is owed.</p> <p>EF proposed the creation of working committees between RNT – E.P, the Lubango Municipal Administration and the Huíla provincial directorates.</p> <p>Sxieto Ngonga (SN) – RNT – E.P. SN stated that the planned route will not allow for electricity distribution and that the National Electricity Distribution Company (ENDE) should promote satellite expansion and distribution projects in the future.</p>
<p>Ana Domingos (AD) – Arimba Communal Administrator.</p> <p>AD mentioned that in the recent past, some locations along the Project proposed route had been used for military operations, and suggested contacting the Executive Demining Commission (CED) regarding verifying that no undetonated explosive devices are present in the area.</p>	<p>Ivo D'Ha (ID): RNT – E.P.</p> <p>ID stated that the Executive Demining Committee (CED) had already been contacted regarding verifying that no undetonated explosive devices are present in the area.</p> <p>Eduardo Ferdinand (EF) – Holísticos.</p> <p>EF stated that Project works would only begin following confirmation that the proposed TL route is free of mines and unexploded ordnance devices, and a certificate has been issued stating the same.</p>

Comment/Question	Answer
	<p>Jorge Mendes (JM) – CED (Via Zoom)</p> <p>JM mentioned that during 2019 he had met with the JICA and RNT teams on several occasions to conduct an extensive survey of the proposed TL route area. The number of technical meetings has decreased because of the COVID-19 pandemic. However, said that the Lubango demining brigade is ready to implement the work of checking the Project proposed route for undetonated explosive devices.</p>
<p>With no further questions, Nuno Mahapi Dala (Huíla Province Vice-Governor of Technical Services and Infrastructure) closed the stakeholder engagement meeting by thanking everyone for attending and gave special thanks to entities directly involved in Project implementation, namely RNT – E.P. and Holísticos. He also expressed his belief in the success of the Project, stating that it would be a valuable contribution to the growth of the Huíla and Namibe provinces.</p>	

Annex 1: Photographic record.



Photo 1: Opening of the meeting at the Huíla Provincial Government.



Photo 2: Presentation of the Project by Eduardo Ferdinand.



Photo 3: Contribution of the Provincial Director of Infrastructure.



Photo 4: Contribution of CED via the Zoom platform.

Annex 2: Participants' list.

ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 kV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
FASE 1 (EPDA)

LISTA DE PRESENCAS (LOCAL): GOVERNO DA PROVÍNCIA DA HUÍLA DATA: 23 /FEVEREIRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
José Baranga Luís	ISCED-Huíla	CONSULTOR	933 84 58 40	José Baranga
Francisco Macedo	TDA-Huíla	chefe de departamento	928 45 72 86	Francisco Macedo
Luís Pedro Andre Nguz	RNT-Huíla	Eng: Electrotecnia	948 87 11 97	Luís Pedro Andre Nguz
Leitão Matias Alexandre	RNT-LUANDA	Eng: Ambiental	924 71 53 93	Leitão Matias Alexandre
Ruben S. Saluado Junior	RNT-Huíla	chefe de departamento	923 49 28 61	Ruben S. Saluado Junior
Ivo Dini Santos Paul	RNT-DETS	(Insc). Eng. electric	931 41 71 08	Ivo Dini Santos Paul
Rosário T. M. Paulo	G.P.A. G.B.S. - ESTRUT		934 16 31 28	Rosário T. M. Paulo
Anabela Domingos	Administração Arica	Administradora	92 85 28 73 0	Anabela Domingos
Lidia Amaro	G.P.A. G.B.S. /Huila	Directora	923 79 11 19	Lidia Amaro
Estanislau Paulo	Adm. Mun. Lubango	Adm. Adj. Arrec. Fin.	923 49 18 49	Estanislau Paulo
Jose Arto N. CHIRANSE	G. p. Agricultura	Director	923 52 81 19	Jose Arto N. CHIRANSE
Wilson Samuel Domingos	Adm. Mun. Lubango	Adm. Mun. G. A. Lubango	928 21 44 80	Wilson Samuel Domingos
Eduardo Fedinaid	Holísticos	Eng: Ambiental	925 75 37 14	Eduardo Fedinaid

Página 1 | 1

Annex 3: List of participants via Zoom.

NAME	INSTITUTION	FUNCTION	CONTACT
Pedro Sá	Holísticos	Environmental consultancy	pedro.sa@holisticos.co.ao
Vladimir Russo	Holísticos	Environmental consultancy	vladimir.russo@holisticos.co.ao
Edijair Quaresma	Ministry of Agriculture and Fisheries		
Jorge Mendes	Demining Executive Commission (CED)		
Maria Solo	INAVIC	Assistant Inspector for Civil Aviation Supervision, Department of Aerodromes and Airport Infrastructure	924240880
Yoshisa Kazuhiro	JICA	Environmental consultancy	ysd17910@ideacon.co.jp
Venâncio Paulo	INAVIC		923401731
Moisés Samoli			
António Moniz	RNT – E.P.	Head of Electrical Systems Planning	amoniz@rnt.co.ao
William Gomes	RNT – E.P.	Planning Technician	wgomes@rnt.co.ao
José Mendonça Paulino Barroso	JAVIL Comércio e Indústria, Lda. Civil Construction and Public Works	Architect and Urban Planner	

Lubango – Moçâmedes 220 kV Transmission Line Project	MEETING MINUTES Stakeholder Engagement Meeting						
			Project: P.1649				
VENUE:	Humpata Municipal Administration		DATE:	24/02/2021	NUMBER OF PAGES:	13	
SUBJECT:	Stakeholder Engagement Meeting	NOTES BY:	Nuno Moreira and Eduardo Ferdinand	TIME:	8.30 am to 11.30 am	REVISION:	VR

ANNEXES**Annex 1** – Photographic record**Annex 2** – Attendance list**Annex 3** – List of participants via Zoom**Annex 4** – Power Point Presentation**COPIES SENT TO:**

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- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Huíla Provincial Government.

ITEM	DESCRIPTION
1	The stakeholder engagement meeting began at 830 a.m. with an opening ceremony at the Humpata Municipal Administration amphitheatre. Several entities attended the meeting, with special mention to Carlos Xavier (Humpata Deputy Municipal Administrator), Municipal Directors, Humpata Municipal Administration representatives, the Traditional Authorities of Humpata, and representatives of the National Electricity Transmission Network Company (RNT – E.P.).
2	The stakeholder engagement meeting was attended by 17 participants. Carlos Xavier (Humpata Deputy Municipal Administrator) welcomed those present and mentioned the importance of the Project regarding developing the economy of Huíla province.
3	Ivo D´Ha (ID), RNT – E.P. Huíla province representative, introduced the Project's characteristics, clarified the proposed route planned for the passage of high voltage electricity transmission lines (TL), mentioned potential obstacles that could be present along the proposed route, and concluded by emphasizing the Project's importance regarding the national electricity transmission system interconnection strategy.
4	ID referred also that the success of the Project relies upon synergies between the Project team and the Namibe and Huíla Provincial Governments, passing the conversation to his colleague Sxieto Ngonga (SN), RNT – E.P. transmission line specialist, who explained that the goal of the Project is to increase the electricity supply to Namibe province, where a 220/60 kV substation will be built in order to meet the province's energy needs.

5	ID confirmed that the Project is currently in its technical feasibility pre-study phase and that all recommendations and contributions received at the meeting would be considered during the preparation phase of the Project Feasibility Study.
6	Eduardo Ferdinand (EF) mentioned that a public consultation process is extremely important regarding the materialization of the Project and that RNT – E.P. is promoting the Project in collaboration with Tokyo Electric Power Services Co. (TEPSCO), with financing from the Japan International Cooperation Agency (JICA). He emphasized that the Project's main goal is to increase electricity supply to the Namibe province while also allowing for the connection of electricity transport systems between the north and centre-south regions.
7	EF explained that the Project addresses the need to transport electricity generated at the Laúca Dam, which is situated in Malanje province and has the capacity to produce more than 2,000 MW, through the Belém (Huambo), Nombungo, Arimba and later Moçâmedes substations. He also mentioned that the Project would adhere to JICA's Environmental and Social Performance Standards (JICA Guidelines for Environmental and Social Considerations, 2010).
8	<p>EF stated that the objective of the meeting is to give interested and potentially affected parties a chance to learn about the Project, offer feedback, and make recommendations regarding its implementation. EF gave a presentation that focused on the following points (see Annex 4 - Presentation):</p> <ul style="list-style-type: none"> • Brief Description of the Project; • Presentation of the country's current Environmental Impact Assessment Process; • Legal and Regulatory Framework; • Environmental and Socio-economic Aspects of the Transmission Line Route; • Expected Environmental and Socio-economic Impacts; • Question and answer session.
9	EF concluded by mentioning that the ongoing environmental studies (EPDA/ESIS) would be prepared in compliance with current legislation, industry best practices, and other JICA guidelines, stressing that the line's route may be altered depending on the severity of any identified environmental and social impacts. He invited those present, including those taking part via Zoom, to provide feedback regarding improving Project related studies.
10	The table below provides a summary of the question and answer session.

Questions and Answer Session Summary

Comment/Question	Answer
<p>Gilson Muanza (GM) – Municipal Director of Energy and Water.</p> <p>GM inquired whether the compensation process regarding parties affected by the Project in terms of losing housing and agricultural land and wished to know who would be responsible for organizing such compensation.</p> <p>GM went on to share his gratitude regarding the Project and confirmed that it is welcome.</p>	<p>Sxieto Ngonga (SN): RNT – E.P.</p> <p>In the case of potential housing relocation along the route of the transmission line (TL), SN guaranteed that compensation would be provided in a simple and transparent manner. He also stated that the power line's path would avoid as much third-party infrastructure as possible (residential areas, agricultural sites etc.). However, he noted that there would be cases where this would not be feasible, whereby the Funding Institution (JICA) has very specific rules and standards, and social surveys and meetings with the affected parties would be undertaken in order to ensure that compensation is fair. He added that a Resettlement and Compensation Plan would be prepared.</p> <p>Eduardo Ferdinand (EF) – Holísticos.</p> <p>EF mentioned that during the social field surveys, which will take place between March and April 2021, a thorough mapping of infrastructures and economic activities present in the Project's direct area of influence will be implemented, so as it can be avoided during Project implementation. However, he noted that there would be cases where this would not be feasible, whereby JICA has very specific rules, and as a result a Resettlement and Compensation Plan (RCP) would be elaborated to ensure that families affected by the Project have equal or better conditions than those that were present prior to the Project's development in the region.</p> <p>Ivo D'Ha (ID) – RNT – E.P.</p> <p>ID stressed that small communities of indigenous people and endangered species are of great concern.</p>

Comment/Question	Answer
	<p>Leitão Alexandre (LA) – RNT – E.P.</p> <p>LA stated that, in terms of compensation, RNT must comply with existing regulations, JICA rules, and World Bank safeguards in order for the Project to be implemented effectively, adding that the Administration's support is expected.</p>
<p>César Catomba (CC) – Advisor to the Municipal Administrator</p> <p>Topics raised:</p> <p>What is the Project's monetary worth?</p> <p>Why not use the old (current) line for this Project, given the environmental risk associated with the installation of these new lines?</p> <p>Will this line be able to meet all of Namibe's needs or just some of them?</p> <p>Wouldn't it make sense for the line that passes through Namibe to feed into the Humpata substation, securing the municipality's future growth?</p>	<p>Sxieto Ngonga (SN) – RNT – E.P.</p> <p>SN explained that since the Project is still in its early stages, its overall cost could not be estimated. Cost is generally determined by the number of kilometres of line as well as the type of technology used. He explained that the Project implementation period, which includes the construction of the line from Lubango to Namibe, would be 33 months after all proposals have been accepted.</p> <p>Eduardo Ferdinand (EF) – Holísticos.</p> <p>EF stated that the Project was valued at US\$180 million when it was registered in the MCTA's Integrated Environmental System (SIA), based on a survey made by the JICA Funding Institutions. The JICA team advised that this is a provisional figure due to a variety of variables that will be addressed with RNT – E.P., who may reduce or increase the investment figure. JICA also mentioned that the Project would not be constructed by either JICA or TEPCO, JICA will finance the Project, while TEPCO will design it.</p> <p>The EPC, depending on the Project's public tender, will be able to indicate a Project completion date based on human resources. To prevent incidents occurring related to the TL, including the potential loss of certain bird species due to habitat destruction, it will be necessary to maintain a safety zone devoid of any type of vegetation, such as large trees. Any</p>

Comment/Question	Answer
	<p>social impacts would be linked to changes to the way of life of certain communities, such as those who farm along the route having to cease activity on occasion.</p> <p>EF proposed the creation of working committees between RNT – E.P., the consulting team and the Humpata Municipal Administration in order to respond to communities that are being affected by the TL Project. EF explained that compensation for the loss of agricultural land and fruit trees would be determined using the Ministry of Agriculture and Fisheries' price table for agricultural products per square meter, and that the entire process would be fair, transparent and honest, thus ensuring that compensation is granted to whom it is owed.</p> <p>Ivo D'Ha (ID): RNT – E.P.</p> <p>ID stated that the 220 kV TL from Lubango to Namibe is being installed in order to strengthen the power supply to Namibe. Namibe, which also feeds the towns of Chivinguiro, Bibala, and Chibia, is currently supplying electricity to Humpata via its turbines. He said that the strengthening of the Namibe supply would mean it could be connected to the Humpata substation using a 60 kV TL. In terms of environmental risk, high voltage lines cause very little environmental impact, however, it is generally recommended that they pass through agricultural rather than urban areas in order to prevent vandalism.</p> <p>António Moniz (AM) – RNT – E.P. (Via Zoom)</p> <p>AM stressed that once the Project is no longer in its pre-feasibility phase, it will be easier to determine the cost.</p>

Comment/Question	Answer
	<p>William Gomes (WG) – RNT – E.P. (Via Zoom)</p> <p>WG stated that Project cost regarding the Namibe substation is currently at US\$ 41.6 million, while the Lubango - Namibe TL is estimated at US\$ 95 million.</p>
<p>Cecílio Elindo (CE) – Action for Rural Development and Environment (ADRA), Humpata.</p> <p>Suggested the ability to consistently listen to all interested and affected parties and that all understand how to interpret information from people who are directly affected by the Project. Suggested that background project information be developed in a simpler way so that all parties understand the same.</p> <p>At the end ask for confirmation whether the Nombungo substation will be situated in Hoque and when will the ESIA be concluded and who are the main partners involved in its elaboration?</p>	<p>Eduardo Ferdinand (EF) – Holísticos.</p> <p>EF stated that ongoing stakeholder engagement meetings would be held in order to update all potentially affected parties regarding environmental and social surveys that have yet to be implemented, and that all provided information originated from literature, papers, and electronic portals. The exhaustive surveys will be implemented during March and April 2021, with the full schedule set to be completed by December following the realization of the EPDA and ESIS. After this, Public consultation will be held to present the ESIS Final Report.</p> <p>In terms of collaborators, the team is multidisciplinary and broad. Regarding the province of Huíla, have collaborated with universities and have carefully selected lecturers.</p> <p>Following the presentations, Lídia Amaro, the GPAGRSC Provincial Director, made herself available regarding appointing a field survey technician. Details provided to the impacted communities will always be consistent and transparent. The Funding Institution has prepared a compensation package that will be negotiated with RNT. RNT – E.P already has previous experience with compensation-related programs.</p>
<p>Mateus Baptista (MB) – DMTTMU Director</p> <p>Questioned the sizes of each tower and how will they affect the population?</p>	<p>Eduardo Ferdinand (EF) – Holísticos.</p> <p>EF answered that the towers will cover an area of 15X15 meters and there will be electrical signalling along the entire route that includes distance indicators, as per the Financier's specifications. He</p>

Comment/Question	Answer
	also said that 540 towers will be installed at a distance of 350 meters between them.
<p>Edson Chipal (EC) – Director of the of Integrated Municipalities Intervention Plan (PIIM)</p> <p>Topics raised:</p> <p>- EC inquired whether employment opportunities and how positions would be filled.</p>	<p>Eduardo Ferdinand (EF) – Holísticos.</p> <p>Regarding recruitment, EF stated that the Public Procurement Act requires the use of locally sourced labour and mentioned that the contractor would need to recruit through newspaper advertising, in compliance with RNT and JICA rules and regulations.</p> <p>Leitão Alexandre (LA): RNT – E.P.</p> <p>LA stated that the question of youth employability in the region has been discussed and that the company that wins the bid for Project construction must recruit local talent and implement a training program, as per JICA (the Funding Institution) and RNT criteria.</p>
<p>Elizandra Soma (ES) – Head of Environment Department</p> <p>Topics raised:</p> <p>- Are there any endangered species in the area?</p>	<p>Eduardo Ferdinand (EF) – Holísticos.</p> <p>EF stated that the Tundavala area is well known and is home to several endangered bird species that are important in terms of biodiversity, as well as the area being classified as an IBA 14. Explained that painstaking surveys will be conducted during March and April 2021 to identify biodiversity (vegetation and all types of fauna species), resulting in the team being able to confirm whether any endangered plant and fauna species are present in the area.</p>
<p>Artur dos Santos (AS) – <i>Soba</i> (Traditional authority)</p> <p>AS stated that he appreciates the initiative, but does not know when the electricity will arrive in his area.</p>	<p>Eduardo Ferdinand (EF) – Holísticos.</p> <p>EF stated that Angola has three (3) companies responsible for the electricity sector; Prodel, which only manufactures and operates production units; RNT – E.P., which only transports electricity as far as substations; ENDE, a company that distributes electricity to communities. Considering that the TL will pass through the area, ENDE will be able to establish a plan regarding using the line in the municipality and later developing satellite projects.</p>

Comment/Question	Answer
<p>Carlos Xavier (CX) – Humpata Deputy Municipal Administrator</p> <p>Topics raised:</p> <ul style="list-style-type: none"> - What are the capacities of the future Arimba and Namibe substations? - There are communes that have never received electricity along the transmission line route; will there be the possibility of an extension to enable these communities to have electricity access? - As a reinforcement will be made to the Namibe line, will there be a return of the Namibe - Lubango line? 	<p>Sxieto Ngonga (SN) – RNT – E.P.</p> <p>SN answered by stating that the current 60 kV TL does not have the capacity to supply the demand of the city of Namibe. Therefore, there would be a need to install a 220 kV TL to the north and central system of Laúca that is connected until Huambo, which would also reinforce the future industrial hub of Sacomar.</p> <p>Regarding capacity, studies are still being implemented.</p>
<p>Venâncio Paulo (VP) – National Institute of Civil Aviation (INAVIC) (Via Zoom)</p> <p>Stated that the Humpata landscape is characterized by irregular relief and the TL will pass through a mountainous region of approximately 2,000 meters in altitude that divides Lubango and Namibe.</p> <p>For example, if an aircraft is flying over the area at an altitude of 20,000 feet (8 km) when arriving in this area it will be close to the towers. The concern is to know if the height of the towers will cause any damage during the operations of planes landing and taking off.</p> <p>VP asked for the name of INAVIC Specialist involved in Project.</p>	<p>Ivo D’Ha (ID) – RNT – E.P.</p> <p>ID answered by stating that the height of the towers at the airport entrance has been discussed and that as a result of work implemented with INAVIC technicians, the substation site was moved further away from the airport entrance. He said also that the height of the towers varies between 18, 24 and 30 meters, with the towers becoming shorter as relief rises; adequate signalling is guaranteed regarding aviation safety.</p> <p>Regarding the name of the INAVIC Technician, ID mentioned that RNT collaborated with INAVIC during 2019 to determine the location of the Aida substation and worked with a local technician; Tércio will send the name of the technician to INAVIC.</p> <p>Tércio Cardoso (TC) – RNT – E.P. (Via Zoom)</p> <p>TC added that, in addition to RNT's communication with INAVIC, there are technical norms in force in Angola as well as internationally that stipulate a safety distance from an airport approach. This distance ranges from 5 to 15 kilometres. TC said that the airport approach is safeguarded in theory and</p>

Comment/Question	Answer
	that the team have been working with INAVIC in Luanda, which is regularly contacted for their opinion regarding similar projects in order to guarantee aviation safety.
<p>With no further questions, Carlos Xavier (Humpata Deputy Municipal Administrator) closed the stakeholder engagement meeting by reinforcing that all steps taken at municipal level must be freely communicated. He then thanked everyone for attending and gave special thanks to entities directly involved in Project implementation, namely RNT – E.P. and Holísticos.</p>	

Annex 1: Photographic record.



Photo 1: Opening of the meeting by the Humpata Municipal Deputy Administrator.



Photo 2: Presentation of the Project by Eduardo Ferdinand.



Photo 3: Detail of the public consultation meeting participants.



Photo 4: Contribution by the ADRA representative.

Annex 2: Participants' list.

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Eduardo Frederico	Holisticos	Engº Ambiental	925 75 39 14	
Luís Alexandre	RNT-EP	Engº Ambiental	924715393	
Isabel A. Njanga	RNT-EP	Engº Electrotecnia	948899177	
Irene Santos Paul	RNT-EP	Especialista em sistemas de potência / PSP	981 417 108	
Henrique dos Santos	RNT-EP	Mecânica	924 92 58 84	
Gilson R. L. Muanza	Adm - Humpata	Director	933797356	
César CATOMBA	ADM - HUMPATA	Assessor	921060560	
Cecília Edinda	ADRA HLA	Coord. Municip	924146461	
Marta C. Baptista	DMT M U	DIRECTOR	924054287	
João Joaquim Fernandes	Adm comunal/secc	Administrador	927834530	
Madre Justina Sup-l.	ADM - Humpata	Director	939308328	
Elizabete Soares	ADM - Humpata	chefe de s. ambiental	921949984	
António dos Santos	Saba	Saba	926923556	
Sugita I. K. I. I. I.	ADM - Humpata	chefe de secção	923931477	
Oswaldo Salazar	ADM - Humpata	GEPE	930827718	



LISTA DE PRESENCAS (LOCAL): ADMINISTRAÇÃO MUNICIPAL DA HUÍLA

DATA: 24 /FEVEREIRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
<i>Yolanda Tomuás</i>	<i>Adm. Municipal</i>	<i>Técnica Administrativa</i>	<i>926635875</i>	<i>Yolanda Tomuás</i>
<i>Alfonso J. Xavier</i>	<i>Adm. ADIÇÃO MUNIC</i>	<i>Adm. ADIÇÃO MUNIC</i>	<i>929110463</i>	<i>Alfonso J. Xavier</i>

Annex 3: List of participants via Zoom

NAME	INSTITUTION	FUNCTION	CONTACT
Pedro Sá	Holísticos	Environmental consultancy	pedro.sa@holisticos.co.ao
Vladimir Russo	Holísticos	Environmental consultancy	vladimir.russo@holisticos.co.ao
Edijair Quaresma	Ministry of Agriculture and Fisheries		
Maria Solo	INAVIC	Assistant Inspector for Civil Aviation Supervision, Department of Aerodromes and Airport Infrastructure	924240880
Yoshisa Kazuhiro	JICA	Environmental consultancy	ysd17910@ideacon.co.jp
Venâncio Paulo	INAVIC		923401731
Moisés Samoli			
António Moniz	RNT – E.P.	Head of Electrical Systems Planning	amoniz@rnt.co.ao
William Gomes	RNT – E.P.	Planning Technician	wgomes@rnt.co.ao
Tárcio Cardoso	RNT – E.P.		
José Mendonça Paulino Barroso	JAVIL Comércio e Indústria, Lda. Civil Construction and Public Works	Architect and Urban Planner	

Lubango – Moçâmedes 220 kV Transmission Line Project	MEETING MINUTES Stakeholder Engagement Meeting			
			Project: P.1649	
VENUE:	Arimba Communal Headquarters, Lubango Municipality	DATE:	24/02/2021	NUMBER OF PAGES: 9
SUBJECT:	Stakeholder Engagement Meeting	NOTES BY:	Nuno Moreira and Eduardo Ferdinand	REVISION: VR

ANNEXES

Annex 1 – Photographic record

Annex 2 – Attendance list

Annex 3 – Power Point Presentation

COPIES SENT TO:

- National Electricity Transmission Network Company (RNT – E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPSCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Huíla Provincial Government.

ITEM	DESCRIPTION
1	The opening ceremony of the public consultation meeting started at 3h00 p.m. at the Arimba Communal Administration Community Centre. Several entities attended, with special mention to Ana Domingos (Arimba Communal Administrator), Community Leaders, the Traditional Authorities of Arimba, and representatives from Holísticos and the National Electricity Transmission Network Company (RNT – E.P.). The following individuals were present at the <i>presidium</i> table: Ana Domingos (Arimba Communal Administrator), Ivo D´Ha (RNT - E.P. Huíla representative) and Eduardo Ferdinand (Holísticos representative).
2	The stakeholder engagement meeting was attended by 42 participants. Ana Domingos (AD) welcomed those present and mentioned the importance of the Project regarding developing the economies of Huíla and Namibe provinces. AD noted that she had already heard the same presentation at a meeting held at the Huíla Provincial Government and that now was the time for members of the auscultation council to present their findings in order to guarantee the implementation of the Project without any conflicts. AD stated that many of those present do not speak Portuguese and thus there was a need for simultaneous translation into the local language (Nhaneca-Humbi).
3	Ivo D´Ha (ID), RNT – E.P. Huíla representative, introduced the Project's characteristics, clarified the proposed route planned for the passage of high voltage electricity transmission lines, mentioned potential obstacles that could be present along the proposed route, and concluded by emphasizing the Project's importance regarding the national electricity transmission system interconnection strategy.

4	ID confirmed that the Project is currently in its technical feasibility pre-study phase and that all recommendations and contributions received at the stakeholder engagement meeting would be considered during the preparation phase of the Project Feasibility Study.
5	Eduardo Ferdinand (EF) mentioned that the stakeholder engagement meeting process is extremely important regarding the materialization of the Project. Referred that RNT – E.P is promoting the Project in collaboration with Tokyo Electric Power Services Co. (TEPSCO), with financing from the Japan International Cooperation Agency (JICA). He emphasized that the Project's main goal is to increase electricity supply to the Namibe province while also allowing for the connection of electricity transport systems between the north and centre-south regions.
6	EF explained that the Project addresses the need to transport electricity generated at the Laúca Dam, which is situated in Malanje province and has the capacity to produce more than 2,000 MW, through the Belém do Dango (Huambo), Nombungo, Arimba and later Moçâmedes substations. He also mentioned that the Project would adhere to JICA's Environmental and Social Performance Standards (JICA Guidelines for Environmental and Social Considerations, 2010).
7	<p>EF stated that the objective of the stakeholder engagement meeting is to give interested and potentially affected parties a chance to learn about the Project, offer feedback, and make recommendations regarding its implementation. EF gave a presentation that focused on the following points (see Annex 3 - Presentation):</p> <ul style="list-style-type: none"> • Brief Description of the Project; • Presentation of the country's current Environmental Impact Assessment Process; • Legal and Regulatory Framework; • Environmental and Socio-economic Aspects of the Transmission Line Route; • Expected Environmental and Socio-economic Impacts; • Question and answer session.
8	Sxieto Ngonga (SN) explained that several field studies were conducted along the transmission line route and that it should not pass through the urban areas of the Arimba commune. SN stated that the lines should pass the Omatapalo quarry area and that inhabited areas, cultivated areas, aerial manoeuvring spaces, leisure areas, etc. would be avoided if possible.
9	EF concluded by mentioning that the ongoing environmental studies (EPDA/ESIS) would be prepared in compliance with current legislation, industry best practices, and other JICA guidelines, stressing that the line's route may be altered depending on the severity of any identified environmental and social impacts. He invited those present to provide feedback regarding improving Project related studies.

10	AD (Arimba Communal Administrator) facilitated simultaneous translation of the presentation between the Portuguese and Nhaneca-Humbi languages in order to ensure that all attendees had a clear understanding of the Project. There was no participation via Zoom as internet access was unavailable.
11	The table below provides a summary of the question and answer session.

Questions and Answer Session Summary

Comment/Question	Answer
<p>Calute Tchiquembo (CT) – Traditional Authority</p> <p>CT thanked the Project promoters for taking the initiative to develop the Project in the area and listening to local’s people long before the construction phase began. He suggested that employment opportunities be given to the youth of Arimba commune as the region has high unemployment rates.</p>	<p>Leitão Alexandre (LA): RNT – E.P</p> <p>LA stated that the question of youth employability in the region has been discussed and that the company that wins the bid for Project construction must recruit local talent and implement a training program, as per JICA (the Funding Institution) and RNT criteria.</p> <p>Eduardo Ferdinand (EF) – Holísticos</p> <p>Regarding recruitment, EF stated that the Public Procurement Act requires the use of locally sourced labour and mentioned that the EPC would need recruit through newspaper advertising, in compliance with RNT and JICA rules and regulations.</p>
<p>Pedro Mário (PM) – Member of the Arimba Administration Social Auscultation Council.</p> <p>PM thanked the Project promoters for taking the initiative to develop the Project in the area and questioned whether the construction of the 400 kV transmission line between Belém do Dango substation in Huambo and Nombungo substation in Lubango is already underway.</p>	<p>Sxieto Ngonga (SN): RNT – E.P</p> <p>SN stated that the 400 kV transmission line between the Huambo and Huíla provinces is part of a broader plan which aims to connect other municipalities and provinces, as well as interconnect the network in the southern region (Huíla, Cunene and Republic of Namibia).</p> <p>He informed that the Project works that were set to begin this year had been postponed due to the SARS COVID-19 pandemic. SN predicted that demining work along the proposed route would begin during September 2021, and that once this was complete, work on the towers and transmission lines would begin. He stated that the Project would be completed by 2024.</p>
<p>Ana Domingos (AD) – Arimba Communal Administrator.</p>	<p>Ivo D’Ha (ID): RNT – E.P</p>

Comment/Question	Answer
<p>AD inquired whether the communities in the Nambungo substation's vicinity would be considered for electricity supply.</p> <p>Luís Calapo (LC) – Poaires neighborhood resident.</p> <p>LC inquired whether the Poaires neighborhood, which is adjacent to the Omatapalo Quarry, would receive electricity as a result of the Project.</p>	<p>ID stressed that the sole purpose of the Project is to facilitate the transportation of electricity between the Arimba and Moçâmedes 220/60 kV substations, but added that there are projects underway that should guarantee the supply of electricity to the communities of Nambungo, Oke and Toco.</p> <p>Sxieto Ngonga (SN) – RNT – EP</p> <p>Regarding providing electricity to Arimba's other districts, SN confirmed that the suggestion had been taken into consideration and that details would be shared with RNT – E.P Huíla management.</p>
<p>Domingos Sapalinha (DS) – Arimba Head Office Coordinator.</p> <p>DS requested clarification regarding the involuntary relocation and compensation process, asking what would happen in the event of infrastructure damage caused by third parties (housing, agricultural areas, etc.).</p>	<p>Eduardo Ferdinand (EF) – Holísticos</p> <p>EF stated that JICA takes issues of resettlement and compensation very seriously and will not provide financing until such issues are addressed in compliance with the Agency's regulations and standards. EF emphasized that TL to be installed cannot pass over houses, schools, hospitals and large trees. He mentioned that during the social field surveys, which will take place between March and April 2021, the social team will be mapping all infrastructures and economic activities present in the Project's direct area of influence, so as it could be avoided during Project implementation. However, he noted that there would be cases where this would not be feasible, whereby JICA has very specific standards, and as a result a Resettlement and Compensation Plan (RCP) would be elaborated to ensure that families affected by the Project have equal or better conditions than those that were present prior to Project development.</p> <p>He said also that compensation for the loss of agricultural land and fruit trees would be determined using the Ministry of Agriculture and Fisheries' price table for agricultural products per square meter, and that the entire process would be fair, transparent and honest, thus ensuring that compensation is granted to whom it is owed.</p>

Comment/Question	Answer
	<p>EF proposed the creation of working committees between RNT – E.P., the Lubango Municipal Administration and the Huíla provincial directorates. Concluded by noting that a phase of recording potentially affected infrastructure along the 190 km Project route would be conducted following the mapping process in order to prevent opportunism.</p>
<p>With no further questions, Ana Domingos (Arimba Communal Administrator) closed the stakeholder engagement meeting by thanking everyone for attending and gave special thanks to entities directly involved in Project implementation, namely RNT – E.P. and Holísticos. She also expressed her belief in the success of the Project, stating that it would be a valuable contribution to the growth of the Huíla and Namibe provinces.</p>	

Annex 1: Photographic record.



Photo 1: Detail of the parties present at the meeting.



Photo 2: Meeting opening by Ana Domingos.



Photo 3: Presentation of the Project by Eduardo Ferdinand.



Photo 4: Contribution of Domingos Sapalinha.

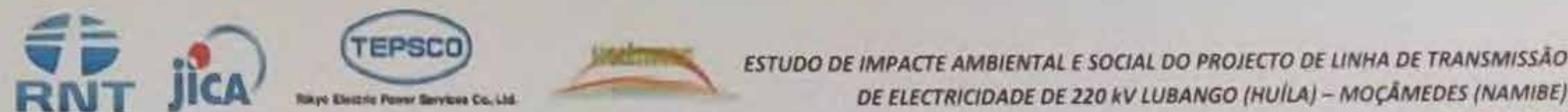


Photo 5: Contribution of Luís Calapo.

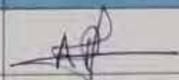
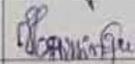


Photo 6: Clarification from Sxieto Ngonga (SN): RNT – E.P.

Annex 2: Participants' list.



LISTA DE PRESENCAS (LOCAL): ADMINISTRAÇÃO COMUM DA KUMBA DATA: 24 / FEVEREIRO / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Ana Paula Mucunze	Adm Animba	Administradora	923528734	
João Tomé Ehimingui	Adm Animba	Administrador adjunto	923432714	
Ana I. e. Troço	chefe de secretaria		924711778	Ana Troço
Pedro maio	cooperativo		923633449	
Iracina Gomes	G & J	Trabalhadora	931656217	Iracina
Margarite Marina Martins	Administração K de kumba	Secretaria	923379331	Margarite Martins
Mamuel Kalica	Seculo do Kambila		9464841263	Mamuel Kalica
Calute Tchiquemba	Seculo do Kambila		930296957	Calute Tchiquemba
Domingos J.	Secretario		936786777	Domingos J.
Guilherme R. Calito	Seculo		927198259	Guilherme R. Calito
Francisco Bula Nphava	H. de Localização		925666812	Francisco Bula Nphava
Maria Rosa Ch. Havo	chefe de Secção	chefe de Secção	934418747	Maria Rosa Ch. Havo
Raquel Manuel	Coordenadora		923785907	Raquel Manuel

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LISTA DE PRESENCAS (LOCAL): ADMINISTRAÇÃO COMUNITÁRIA DE KUMBA

DATA: 24 / FEVEREIRO / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Jose Ngulua	Poiates	Chefe Adjunto	922953087	Jose Ngulua
Jose Francisco	Figueira	Chefe Adjunto	929731277	JF
Isaac Nelo	Mercones	Coop	924587156	Isaac Nelo
Mateus Venancio	Sede	Secretario	949417592	Mateus Venancio
Vieira Manoel	Sede	Estudante	929505019	Vieira
Jose Luis Kals	P. Sede	Chefe da P. Sede	937396709	Luis
Mulheira Kulete	Sede	Coop	930954435	Kulete
Domingos Gabriel Sapilimba	Sede	Coop. B. Sede Kumba	926926680	Sapilimba
Carsona R. Catil	Sede	N. Kumba	927798259	Carsona
Michal Chimuso	ACA	Dr. Gabinete	925-318-663	Michal
Jose Camargua Nelo	ISCED - HUÍLA	CONSELHEIRO SOCIAL	939 845840	Jose
João Paulo	RNT	Exp. Sist. Ténico	781 417408	João
Leitão Alexandre	RNT	Eng. Ambiental	924715393	Leitão

Lubango - Moçâmedes 220 kV Transmission Line Project	MEETING MINUTES Stakeholder Engagement Meeting		
		Project: P.1649	
VENUE: Namibe Provincial Government, Moçâmedes	DATE: 25/02/2021	NUMBER OF PAGES: 14	
SUBJECT: Stakeholder Engagement Meeting	NOTES BY: Nuno Moreira and Eduardo Ferdinand	TIME: 10.00 am to 12.00 pm	REVISION: VR

ANNEXES**Annex 1** – Photographic record**Annex 2** – Participants' list**Annex 3** – List of participants via Zoom**Annex 4** – Power Point Presentation**COPIES SENT TO:**

- National Electricity and Transport Network (RNT – E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPSCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Namibe Provincial Government.

ITEM	DESCRIPTION
1	The opening of the ceremony started at 10h00 a.m. in the Namibe Provincial Government amphitheatre. Several entities attended the meeting, with special mention to Ema Guimarães (Namibe Province Vice-Governor of Technical Services and Infrastructure), Provincial Directors, university teachers and students, the Traditional Authorities of Moçâmedes, ecclesiastical organizations, managers of public and private companies, members of the Moçâmedes Municipal Administration auscultation council and representatives from Holísticos, the Electricity Generation Public Company (PRODEL), the National Electricity Distribution Company (ENDE) and the National Electricity Transmission Network Company (RNT – E.P.).
2	The following individuals were present at the <i>presidium</i> table: Arc. Ema Guimarães (Namibe Province Vice-Governor of Technical Services and Infrastructure), Ivo D'Ha (RNT – E.P. Huíla's representative) and Eduardo Ferdinand (Holísticos representative).
3	The stakeholder engagement meeting was attended by 48 participants. His Excellency Vice-Governor of Technical Services and Infrastructure, Ema Guimarães (EG) welcomed those present and mentioned the importance of the Project regarding developing the economy of Namibe province. She indicated that the Project should result in an increase distribution of electricity to the province of Namibe, benefiting the industrial, hospitality and tourism sectors, before thanking all those involved in the Project and greeting those who were following the meeting through Zoom's online platform.

4	Ivo D'Ha (ID), RNT – E.P. Huíla representative, introduced the Project's characteristics, clarified the route planned for the passage of high voltage electricity transmission lines (220 kV), mentioned potential obstacles that could be present along the proposed route, and concluded by emphasizing the Project's importance regarding the national electricity transmission system interconnection strategy.
5	ID referred also that the success of the Project relies upon synergies between the Project team and the Namibe and Huíla Provincial Governments, passing the conversation to his colleague Sxieto Ngonga (SN), RNT – E.P. electricity transmission line specialist, who explained that the goal of the Project is to increase the electricity supply to Namibe province, where a 220/60 kV substation will be built in order to meet the province's energy needs.
6	ID confirmed that the Project is currently in its technical feasibility pre-study phase and that all recommendations and contributions received at the meeting would be considered during the preparation phase of the Project Feasibility Study.
7	Eduardo Ferdinand (EF) mentioned that the stakeholder engagement meeting process is extremely important regarding the materialization of the Project. Referred that RNT – E.P. is promoting the Project in collaboration with Tokyo Electric Power Services Co. (TEPSCO), with financing from the Japan International Cooperation Agency (JICA). Emphasized that the Project's main goal is to increase electricity supply to the Namibe province while also allowing for the connection of electricity transport systems between the north and centre-south regions.
8	EF explained that the Project addresses the need to transport electricity generated at the Laúca Dam, which is situated in Malanje province and has the capacity to produce more than 2,000 MW, through the Belém do Dango (Huambo), Nombungo, Arimba and later Moçâmedes substations. He also mentioned that the Project would adhere to JICA's Environmental and Social Performance Standards (JICA Guidelines for Environmental and Social Considerations, 2010).
9	<p>EF stated that the objective of the stakeholder engagement meeting is to give interested and potentially affected parties a chance to learn about the Project, offer feedback, and make recommendations regarding its implementation. EF gave a presentation that focused on the following points (see Annex 4 - Presentation):</p> <ul style="list-style-type: none"> • Brief Description of the Project; • Presentation of the country's current Environmental Impact Assessment Process; • Legal and Regulatory Framework; • Environmental and Socio-economic Aspects of the Transmission Line Route; • Expected Environmental and Socio-economic Impacts; • Question and answer session.

10	EF concluded by mentioning that the ongoing environmental studies (EPDA/ESIS) would be prepared in compliance with current legislation, industry best practices, and other JICA guidelines, stressing that the line's route may be altered depending on the severity of any identified environmental and social impacts. He invited those present, including those taking part via Zoom, to provide feedback regarding improving Project related studies.
11	Throughout the meeting, Gerson Santos (journalist and Namibe Provincial Media Office representative) facilitated the meeting between explanations from the different stakeholders.
12	The table below provides a summary of the question and answer session.

Questions and Answer Session Summary

Comment/Question	Answer
<p>Miguel Savazuca (MS) – Provincial Director of Transport Infrastructure</p> <p>MS suggested that the proposed Transmission Line (TL) route pass through Bibala's municipal headquarters in order to exploit the region's mining and industrial sectors, and that it also passes through Kapangombe's communal headquarters, which is set to become a municipality. He concluded by asking for clarification regarding the Project's timeline and start date.</p>	<p>Ivo D'Ha (ID) – RNT – E.P.</p> <p>ID replied stating that studies or evaluations of the Namibe province's energy needs started in 2015, with several institutions in the area consulted for this reason, emphasizing that the Office of Studies, Planning and Statistics (GEPE) provided the Namibe Province Master Plan at the time. He explained that the electricity transmission line is part of a larger strategic strategy to link the country's north and central-southern transmission systems.</p> <p>ID stated that the chosen route for the lines excluded the municipal headquarters of Bibala and Serra da Leba regions due to geomorphological and physiographic complications and that the proposed route is feasible from a technical and economic point of view. He added that there are other active projects regarding the supply of electricity to other municipalities of the Namibe province, citing the Arimba substation in Lubango as an example, which will support Bibala and Humpata. He also stated that other projects should be implemented after the completion of the Huíla - Namibe transmission line,</p>

Comment/Question	Answer
	<p>with emphasis on the electrification of the Camucuio and Mossastes region by 2030.</p> <p>Sxieto Ngonga (SN) – RNT – E.P.</p> <p>SN stated that the implementation of a transmission line project is divided into phases; high voltage lines are initially installed together with substations that enable the voltage to be lowered, after which the distribution of electricity to potential consumers in the cities of Bibala, Moçâmedes and Tômbwa can be implemented. However, said that in order for energy to reach houses, ENDE would have to propose lower voltage line installation and connection projects.</p> <p>Eduardo Ferdinand (EF) – Holísticos</p> <p>EF stated that the proposed global construction schedule for the Project is 30 months, but that the process will only begin after the Funding Institution (JICA) and the Ministry of Culture, Tourism, and Environment approved the Environmental and Social Impact Study. He informed that the Project’s construction phase could begin during 2030 if funding is secured.</p> <p>EF stated that there is not yet an EPC for the Project and that the Japanese company TEPCO is preparing the engineering studies. EF stated also that RNT would hold a public tender to find an EPC with the necessary experience and expertise in order to complete the Project in a timeframe shorter than that proposed in the specifications.</p> <p>Alain Roberto (AR) – ENDE Provincial Director</p> <p>AR stated that the Bibala municipal headquarters currently receives electricity from the Humpata substation, despite various shortcomings. He emphasized that when the Arimba substation is</p>

Comment/Question	Answer
	operational, Bibala would be the first municipality in the Namibe province to benefit. AR stated that ENDE plans to build a 60 kV substation in the Bibala city.
<p>Mendes de Carvalho (MC) – Member of the Moçâmedes Administration Social Auscultation Council.</p> <p>MC thanked the Project promoters for the initiative of developing the Project in the area and holding the stakeholder engagement meetings. He suggested to RNT – E.P that environmental consulting company’s local to the Namibe province should be contracted regarding the elaboration of the Environmental and Social Impact Studies (ESIS) of future projects.</p> <p>MC inquired about the costs of elaboration the ESIS, asking whether the environmental consulting firm developing it will work with regional environmental institutions and/or specialists. He also asked whether Holísticos was chosen directly or whether RNT held a public tender regarding ESIS facilitation.</p> <p>MC inquired whether the existing 60 kV towers could be used for the 220 kV transmission line Project and asked about the Project's budget.</p> <p>Pedro Bangula (PB) – Director of the Provincial Office of Culture, Tourism and Environment.</p> <p>PB stated that communities along the proposed transmission line route would not be able to contribute in a valuable way to the Project and proposed holding the stakeholder engagement meetings at the region's universities, which have scientific communities and students studying electrical and environmental engineering.</p>	<p>Eduardo Ferdinand (EF) – Holísticos</p> <p>EF replied by stating that during 2019, TEPSCO and JICA, two (2) Japanese firms, visited the former Ministry of Environment to learn about the Republic of Angola's Environmental Impact Assessment (EIA) mechanism and whether privately registered companies can provide environmental consulting services. Subsequently, the two (2) companies organized a public tender in which consulting firms were invited to submit technical and commercial proposals, with Holísticos emerging as the winner of the tender to prepare the Project's ESIS.</p> <p>EF stated that the public tender was not promoted by RNT – E.P., but rather by the two (2) Japanese companies, one being the financier (JICA) and the other responsible for engineering (TEPSCO). Regarding the costs associated with the ESIS Report, stated that is confidential.</p> <p>Regarding the company's partnership with regional environmental institutions and specialists, EF confirmed that Holísticos contracts local specialists whenever possible. Mentioned that all partners are consulted in a timely manner, citing as an example the social consultant José Luís, who lives in Lubango and will be a member of the social team involved in mapping communities and infrastructure along the Project's route. EF said that the Project is currently in the Pre-technical Feasibility Study phase and that the line's route may be altered depending on the severity of any identified environmental and social impacts.</p>

Comment/Question	Answer
<p>Mendes de Carvalho (MC) – Member of the Moçâmedes Administration Social Auscultation Council.</p> <p>MC stated that he was very proud to see Angolans involved in the presentation of the Project, emphasizing the presence of Sxieto Ngonga, who was his colleague during university.</p>	<p>Sxieto Ngonga (SN): RNT – E.P.</p> <p>SN stated that Project costs are typically divided into two (2) categories, the first being associated with substation construction and the second with TL construction. Explained that the cost of a TL varies depending on it's the type and length, and that a single kilometre can cost up to 0.12 million USD. He also mentioned that costs are defined according to types of materials used, weather conditions, and any complications that may be encountered along the proposed route, mentioning that the Project will cost over 90,000,000 USD.</p> <p>SN stated that the current 60 kV line towers would not be able to support the 220 kV TL. He also drew attention to the fact that accessibility makes the initiative unfeasible and that a Project of this nature may pose serious risk to populations situated near the Project's route.</p> <p>Eduardo Ferdinand (EF) – Holísticos</p> <p>Due to the importance of the suggestion, EF stated that holding stakeholder engagement meetings at local universities would be taken into consideration.</p>
<p>Pedro Joaquim (PJ) – Provincial Director of the Forestry Development Institute.</p> <p>PJ inquired whether the Project team intends to replant forest biomass that will be removed along the 190 km, along the 45-meter buffer. He recommended that the ESIS incorporate the Forest and Wild Fauna Framework Law.</p>	<p>Eduardo Ferdinand (EF) – Holísticos</p> <p>EF responded by stating that JICA has budgeted for all possible negative impacts related to the Project such as involuntary resettlement, reimbursement for environmental losses, and compensation for damage to the environment or the property of third parties, etc. He mentioned that biomass that will be lost along the route will be replaced by native plant species or those adapted to the region's climatic conditions.</p> <p>He also stated that in cases where the repopulation of vegetation is not feasible, the Namibe Provincial Office of Culture, Tourism, and Environment would</p>

Comment/Question	Answer
	<p>recommend alternative places regarding compensation. EF proposed the creation of working committees between RNT – E.P., the Moçâmedes and Bibala municipal administrations and the Huíla provincial directorates.</p>
<p>Edmilson da Gama (EG) – Lecturer at Namibe's Faculty of Engineering and Technology.</p> <p>EG questioned whether communities located near the electricity transmission line would be supported, as well as inquired whether any electromagnetic effects that may occur due to the operation of the 220 kV high voltage line.</p>	<p>Sxieto Ngonga (SN) – RNT – E.P.</p> <p>Regarding the electricity supply of the Kapangombe and Caraculo region, SN stated that the line planned for the Project would not allow for electricity distribution along its route, however, satellite expansion and distribution projects may be developed in the future, which ENDE should promote. SN mentioned that ENDE-Namibe management intends to install a 25 MW facility in the Caraculo region.</p> <p>Regarding any electromagnetic effects, SN stated that the towers would be 30 to 35 meters tall and that any electromagnetic fields would be negligible at these heights. He also explained that all efforts would be made that the TL does not traverse residential areas.</p>
<p>Fernando Solinho (FS) – Soldosal Manager.</p> <p>FS criticized the slowness of the stakeholder engagement meeting opening, mentioning that participants waited for 57 minutes. However, he thanked the Project promoters and RNT – E.P. for the initiative of developing the Project in the area and listening to locals long before the construction phase began. FS questioned why the TL would not continue to the municipality of Tômbwa and which company would be responsible for maintaining the system during the Project's operational phase.</p>	<p>Alain Roberto (AR) – ENDE Provincial Director.</p> <p>AR mentioned that ENDE is working on interconnection projects and that a 60/15 kV substation will be installed in the city of Tômbwa. He mentioned that the city of Tômbwa will be actually electrified using a set of generators.</p> <p>Ivo D'Ha (ID) – RNT – E.P.</p> <p>ID answered by stating that the maintenance of the electricity transmission system would be the sole responsibility of RNT – E.P and that training would be provided to the line's maintenance technicians.</p>
<p>Pedro Pinheiro (PP) – University lecturer.</p> <p>PP suggested that students from the University of Namibe's electrical engineering department should be included in the program in order to give them the</p>	<p>Leitão Alexandre (LA) – RNT – E.P.</p> <p>LA stated that the question of youth employability in the region has been discussed and that the company that wins the bid for Project construction must recruit</p>

Comment/Question	Answer
<p>opportunity to develop their knowledge and skills. He also asked if the young graduates of the province would be able to benefit from employment opportunities.</p>	<p>local talent and implement a training program, as per JICA (the Funding Institution) and RNT criteria.</p> <p>Regarding the inclusion of students, Engineer LA confirmed that the suggestion had been taken into consideration and that details would be shared with RNT - Huíla and Luanda management.</p>
<p>Pedro Patrício (PP) – University lecturer.</p> <p>PP questioned whether the Project would facilitate the interconnection of substations between the main municipalities of Namibe province.</p>	<p>Sxieto Ngonga (SN) – RNT – E.P.</p> <p>SN responded by stating that a 220/60 kV substation consisting of two (2) 220 kV input panels with a double circuit line would need to be constructed in order to connect the current substations. He explained that a 220 kV output panel is also planned for Sacomar and Tômbwa and that eight (8) output panels are foreseen in order to meet ENDE's energy needs regarding the 60 kV bar.</p>
<p>Wedeirgue Hach (WH) – University lecturer.</p> <p>WH suggested that the Government of Namibe Province urgently start working on the preparation of Land Management Plans and Municipal Master Plans. He explained that, with those plans ready, the province suffered from environmental and social problems related to the Project will be alleviate or less worrisome.</p>	<p>Ema Guimarães (EG) – Vice-Governor</p> <p>EG stated that the Moçâmedes Municipality Master Plan is approaching completion and will include projects promoted by ENDE, RNT - EP, and PRODEL.</p> <p>Ivo D'Ha (ID) – RNT – E.P.</p> <p>ID stated that the RNT engineering team held several meetings in Namibe province at the start of the Project (2015) to ensure the passage of the TL could be successfully implemented.</p>
<p>With no further questions, Ema Guimarães (Namibe Province Vice-Governor of Technical Services and Infrastructure) closed the stakeholder engagement meeting by thanking everyone for attending and gave special thanks to entities directly involved in Project implementation, namely; RNT – E.P. and Holísticos, before stating that the Project will have a major impact on the development of the Namibe province.</p>	

Annex 1: Photographic record.



Photo 1: Detail of the parties present at the meeting.



Photo 2: Meeting opening by Ema Guimarães.



Photo 3: Presentation of the Project by Eduardo Ferdinand.

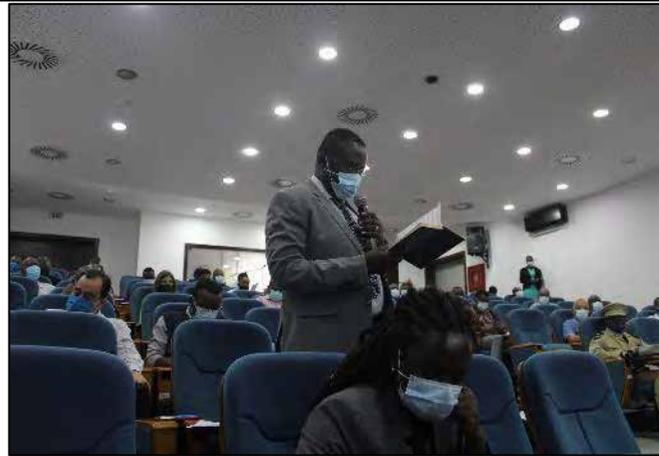


Photo 4: Contribution of Mendes de Carvalho.



Photo 5: Contribution of Leitão Alexandre (RNT – EP).



Photo 6: Explanation from Miguel Savazuca.

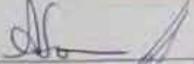
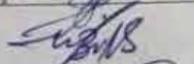
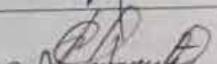
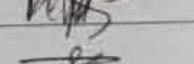
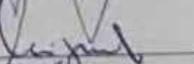
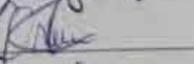
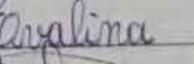
Annex 2: Participants' list.






ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
 DE ELECTRICIDADE DE 220 kV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
 FASE 1 (EPDA)

LISTA DE PRESEÇAS (LOCAL): GOVERNO PROVINCIAL DO NAMIBE DATA: 25 /FEVEREIRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Anice Sousa	Delegacia de Finanças	Delegada 110 V.	923635465	
Francisco Alegria	Secretaria Geral GPN	SA/GPN	923489414	
Pedro Hanguela	G.P.C.T. Ambiente	Director	931732211	
Luís M. B. Brazão	ENR Prov. Transp. M.V	//	923378638	
Manuel A. Kanda Kanda	CFM - EP	Delegada	923618488	
Jerson B. C. Lourenço	SINSE	O/P	940825819	
Pedro Cláudio Pereira	IDF	chef. Dept. Prov.	923659281	
Tânia Simões	GPN - GRH	Director de Gab.	924855326	
Martinho Jamba Nganga	SINPROF	Secretário Provincial	927522924	
António Miguel	GAB. Inspeção	Chefe do Depart.	923520996	
Orlando Mpaoca	Universidade de Namibe	estudante de E.E.T	933036453	
Carolina Lachurica	Universidade de Namibe	Estudante	921270266	
Anaésio Rodino	Universidade de Namibe	Docente	928858205	



LISTA DE PRESENCAS (LOCAL): GOVERNO PROVINCIAL DO NAMIBE

DATA: 25 /FEVEREIRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
FUCA CANIVETE	G.P.A.C.V.P	CHEFE DEPART.	923 402114	<i>Fuca Canivete</i>
Humberto A. Mujete	AMM	Adm. Adjunto	923 48 92 87	<i>Humberto</i>
Manuel S. Beirão	Delegação Finanças	chefe de DRH	926194715	<i>Manuel S. Beirão</i>
André de S. Carvalho	GR DE Integração	chefe de DRMunici	936 101992	<i>André de S. Carvalho</i>
Belarmino Gonçalves	Δ.M.E.A-ADM	chefe de secção	943 14 19 31	<i>Belarmino Gonçalves</i>
Nelson P. S. Bunes	A. M. M	DIR. ENB. AQUA	936-660-792	<i>Nelson P. S. Bunes</i>
Maurício José A. F. F. F.	" "	adj. S. F. F.	94724 01 99	<i>Maurício José A. F. F. F.</i>
Volanda Napalica	Gabinete E.T. Ambiente	Técnica	925476491	<i>Volanda</i>
Roucas Quianga	EPTN	Estudante	934125980	<i>Roucas Quianga</i>
Vicente Maurilveira	ESPTN	Estudante	930048440	<i>Vicente Maurilveira</i>
António Chombembwa	ESPTN	Estudante	925741702	<i>António Chombembwa</i>
Isata T. Lomba	FET-UN	Docente	924054163	<i>I. T. Lomba</i>
Jandira Domingos	FET - UN	Docente	928767881	<i>Jandira Domingos</i>



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
FASE I (EPDA)

LISTA DE PRESENCAS (LOCAL): GOVERNO PROVINCIAL DO NAMIBE

DATA: 25/FEVEREIRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Delfina Calei		Eng. Ambiental	947193402	
Wederique Macete	Universidade de Nbe	Docente	937812622	
José Matilde	PRODEL - EP	chefe de Control	932436236	
MAKUBIKUA NCOIA	PRODEL - EP	CHEFE DEPTO DA CENTRAL	923668964	
Pelo Suministros	SOBRESER	DIR. COMERCIAL	930575444	
Adje Sapi Pedro	Conservatória	Conservadora	934257317	
Alan Roberto	ENDE	DIRECTOR	924285291	
Ketro Linheiro	Universidade de Nbe	Monitor	925062253	
Edmir Fragas	Universidade Nbe	Docente	937700940	
Chiate Chialem	Gp. de T. ST do Namibe	Chefe - Departamento	922884677	
Ana Camacho	Governo Provincial	Assessoria do Governador	924673738	
Jedre Patricia	Universidade de Nbe	Docente	926261592	
Fernando Schinatto	Saldosol	Grante	923454772	



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 1 (EPDA)

LISTA DE PRESENCAS (LOCAL): GILFENO PROVINCIAL DO NAMIBE

DATA: 25 / FEVEREIRO / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Leitão Alexandre	RNT-EP	Eng. Ambiental	924715393	<i>Leitão Alexandre</i>
Muto Nyong		Eng. Electrotécnica	948879197	<i>Muto Nyong</i>
Alfredo Lafelo	ESPTN	Estudante	927864878	<i>Alfredo Lafelo</i>
Ângelo Baltazar	ESPTN	Estudante	943237048	<i>Ângelo Baltazar</i>
Filipe Ndombezi	ESPTN	Estudante	926234946	<i>Filipe Ndombezi</i>
Taxcoadzi Kike	Sala-5-de-Atendimento	Trabalha	926192099	<i>Taxcoadzi Kike</i>
José Balaguna	Holísticos	Consultor para A.S.	933845840	<i>José Balaguna</i>
Nuno Moura	Holísticos	Eng. Ambiental	923431890	<i>Nuno Moura</i>
Eduardo Jardim	Holísticos	Eng. Ambiental	925753714	<i>Ed. Jardim</i>

Annex 3: List of participants via Zoom

NAME	INSTITUTION	FUNCTION	CONTACT
Pedro Sá	Holísticos	Environmental consultancy	pedro.sa@holisticos.co.ao
Vladimir Russo	Holísticos	Environmental consultancy	vladimir.russo@holisticos.co.ao
Edijair Quaresma	Ministry of Agriculture and Fisheries		
Maria Solo	INAVIC	Assistant Inspector for Civil Aviation Supervision, Department of Aerodromes and Airport Infrastructure	924240880
Yoshisa Kazuhiro	JICA	Environmental consultancy	ysd17910@ideacon.co.jp
Venâncio Paulo	INAVIC		923401731
Moisés Samoli			
António Moniz	RNT – E.P.	Head of Electrical Systems Planning	amoniz@rnt.co.ao
William Gomes	RNT – E.P.	Planning Technician	wgomes@rnt.co.ao
Tárcio Cardoso	RNT – E.P.		
José Mendonça Paulino Barroso	JAVIL Comércio e Indústria, Lda. Civil Construction and Public Works	Architect and Urban Planner	

Lubango - Moçâmedes 220 kV Transmission Line Project	MEETING MINUTES Stakeholder Engagement Meeting					
			Project: P.1649			
VENUE:	Bibala Municipal headquarters		DATE:	25/02/2021	NUMBER OF PAGES:	9
SUBJECT:	Stakeholder Engagement Meeting	NOTES BY: Nuno Moreira and Eduardo Ferdinand	TIME:	3.00 pm to 4.30 pm	REVISION:	VR

ANNEXES

Annex 1 – Photographic record

Annex 2 – Attendance list

Annex 3 – Power Point Presentation

COPIES SENT TO:

- National Electricity Transmission Network Company (RNT – E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Namibe Provincial Government.

ITEM	DESCRIPTION
1	The opening ceremony of the stakeholder engagement meeting started at 3h00 p.m. at the Bibala Secondary School Auditorium. Several entities attended, with special mention to Amélia Camunheira (Bibala Municipal Administrator), Municipal Directors, Communal Administrators, the Traditional Authorities of Bibala, and representatives of the National Electricity Transmission Network Company (RNT – E.P.). A committee from the city of Moçâmedes, led by Chiate Chialema (Director of the Provincial Office of Infrastructure and Technical Services) was also present at the meeting.
2	The following individuals were present at the <i>presidium</i> table: Amélia Camunheira (Bibala Municipal Administrator), Ivo D´Ha (RNT – E.P. Huíla’s representative) and Eduardo Ferdinand (Holísticos representative). The stakeholder engagement meeting was attended by 48 participants. Amélia Camunheira (AC) (Bibala Municipal Administrator) welcomed those present and mentioned the importance of the Project regarding developing the economy of Namibe province.
3	Ivo D´Ha (ID), the Huíla province RNT – E.P. representative, introduced the Project's characteristics, clarified the proposed route planned for the passage of high voltage electricity transmission lines (TL), mentioned potential obstacles that could be present along the proposed route, and concluded by emphasizing the Project's importance regarding the national electricity transmission system interconnection strategy.

ITEM	DESCRIPTION
4	<p>ID referred also that the success of the Project relies upon synergies between the Project team and the Namibe and Huíla Provincial Governments, passing the conversation to his colleague Sxieto Ngonga (SN), RNT – E.P. electricity transmission line specialist, who explained that the goal of the Project is to increase the electricity supply to Namibe province, where a 220/60 kV substation will be built in order to meet the province’s energy needs.</p>
5	<p>ID confirmed that the Project is currently in its technical feasibility pre-study phase and that all recommendations and contributions received at the meeting would be considered during the preparation phase of the Project Feasibility Study.</p>
6	<p>Eduardo Ferdinand (EF) mentioned that the stakeholder engagement meeting process is extremely important regarding the materialization of the Project. Referred that RNT – E.P. is promoting the Project in collaboration with Tokyo Electric Power Services Co. (TEPSCO), with financing from the Japan International Cooperation Agency (JICA). Emphasized that the Project's main goal is to increase electricity supply to the Namibe province while also allowing for the connection of electricity transport systems between the north and centre-south regions.</p>
7	<p>EF explained that the Project addresses the need to transport electricity generated at the Laúca Dam, which is situated in Malanje province and has the capacity to produce more than 2,000 MW, through the Belém do Dango (Huambo), Nombungo, Arimba and later Moçâmedes substations. He also mentioned that the Project would adhere to JICA's Environmental and Social Performance Standards (JICA Guidelines for Environmental and Social Considerations, 2010).</p>
8	<p>EF stated that the objective of the stakeholder engagement meeting is to give interested and potentially affected parties a chance to learn about the Project, offer feedback, and make recommendations regarding its implementation. EF gave a presentation that focused on the following points (see Annex 3 - Presentation):</p> <ul style="list-style-type: none"> • Brief Description of the Project; • Presentation of the country's current Environmental Impact Assessment Process; • Legal and Regulatory Framework; • Environmental and Socio-economic Aspects of the Transmission Line Route; • Expected Environmental and Socio-economic Impacts; • Question and answer session.
9	<p>EF concluded by mentioning that the ongoing environmental studies (EPDA/ESIS) would be prepared in compliance with current legislation, industry best practices, and other JICA guidelines, stressing that the line's</p>

ITEM	DESCRIPTION
	route may be altered depending on the severity of any identified environmental and social impacts. He invited those present to provide feedback regarding improving Project related studies. There was no participation via Zoom as internet access was unavailable.
10	The table below provides a summary of the question and answer session.

Questions and Answer Session Summary

Comment/Question	Answer
<p>Carlos Cambongo (CC) – Member of the Bibala Administration Social Auscultation Council.</p> <p>CC thanked the Project promoters and RNT – E.P. for the initiative of developing the Project in the area and listening to locals long before the construction phase began. CC proposed that the Project's proponents use more modern equipment, mentioning that the existing 60 kV transmission line towers between the Lubango and Moçâmedes substations are effected by heavy gusts of wind.</p>	<p>Ivo D'Ha (ID) – RNT – E.P.</p> <p>ID stated that the Project is in its technical feasibility pre-study phase and that several studies would be conducted to ensure that natural phenomena occurring in the region would not affect the Project's high voltage towers.</p>
<p>Justino Mateus (JM) – Member of the Bibala Administration Social Auscultation Council.</p> <p>JM inquired whether the Project promoters could route the 220 kV transmission lines through the 60 kV towers that already exist between the Lubango and Moçâmedes substations, emphasizing that this would result in the Project costing less.</p> <p>JM also stated that in certain areas of Serra da Leba there is no space for another transmission towers along the route of the 60 kV TL, which currently connects Lubango and Moçâmedes.</p>	<p>Sxieto Ngonga (SN): RNT – E.P.</p> <p>SN stated that technological and financial factors were taken into consideration when the corridor was chosen, resulting in the conclusion that the proposed route is the most viable.</p> <p>SN mentioned that restrictions regarding the passage of the high voltage towers in the Serra da Leba region had been taken into consideration and that they would pass six (6) kilometres away from the area in order to prevent any potential technical issues. SN explained that behind Serra da Leba, there is an old road that leads to the Ugra community that will be used for the passage of the towers and the Project's transmission lines.</p> <p>SN stated that the current 60 kV line towers would not support the 220 kV transmission lines. Also drew attention</p>

Comment/Question	Answer
	<p>to the fact that accessibility makes the initiative unfeasible and that a Project of this nature may pose serious risk to populations situated near the Project's route.</p> <p>SN stated that the Project will make use of new technology that is more durable and only utilize equipment that can withstand the region's climatic conditions, as well as mentioning that the towers will be of considerable height. He concluded by stating that the new TL would run parallel to the existing 60 kV TL in certain areas in order to minimize impacts on populations and infrastructure.</p>
<p>António Pomba (AP) – Member of the Bibala Administration Social Auscultation Council.</p> <p>AP stated that there had been many cases of power cable theft reported in the media recently and inquired whether security measures would be implemented in order to prevent future theft or vandalism.</p>	<p>Ivo D´Ha (ID) – RNT – E.P.</p> <p>ID stated that the Project would not utilize copper cables that can be a target for theft. He explained that the towers would be of considerable height and the voltage used would not allow anyone to access the 220 kV TL.</p> <p>ID also explained the risks associated with people vandalizing the towers and high voltage cables. He mentioned that in order to maintain the TL, RNT – E.P. technicians would periodically need to interrupt the line's current.</p>
<p>With no further questions, Amélia Camunheira (Bibala Municipal Administrator) closed the stakeholder engagement meeting and acknowledged the members of the Bibala Municipal Administration Social Consultation Council. She informed those present that the Project would not distribute electricity to communities in the Kapangombe and Caraculo regions, and that these communities may benefit from later projects. She then asked the Project developers to pay attention to pastoral and transhumance's areas in the region during the field surveys.</p>	

Annex 1: Photographic record.



Photo 1: Detail of the parties present at the meeting.



Photo 2: Meeting opening by Amélia Camunheira.



Photo 3: Presentation of the Project by Eduardo Ferdinand.



Photo 4: Contribution of Councillor António Pomba.



Photo 5: Contribution of Councillor Justino Mateus.



Photo 6: Clarification from Sxieto Ngonga (SN) – RNT – E.P.

Annex 2: Participants' list.






ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
 FASE 1 (EPDA)

LISTA DE PRESENCAS (LOCAL): ADMINISTRAÇÃO MUNICIPAL DA BIBELA DATA: 25/FEVEREIRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
António Lomba		Conselheiro	945070784	António Lomba
Justino Matheus Lotia		Membro de conselho	927548857	Justino Lotia
Moisés Namبال		Conselheiro	925456004	Moisés Namبال
Carsten Lomborg		Conselheiro	928498634	Carsten Lomborg
Jacob Amaro Chaves	Adm. Municipal	Dir. G. Ad. Adj. SISE	929666683	Jacob Amaro Chaves
MANUEL XAVIER	AGRICULTURA	DIRECTOR	923451699	Manuel Xavier
Pedro M. Soga - buloba	Adm. Municipal	Director dos Transportes	925969714	Pedro M. Soga
Josamir A. C. KIMUYEWEWE	" "	Director Munic. Pul	923700971	Josamir A. C. KIMUYEWEWE
António Lomba Simoli	" "	" "	936170400	António Lomba Simoli
Justelina Y. A. Buloba	" "	Directora Municipal	936831417	Justelina Y. A. Buloba
Carlos M. Fumini	" "	GEPE	92675249	Carlos M. Fumini
Adelina M. Sabionete	" "	Membro de conselho	924926660	Adelina M. Sabionete
Mundo de K. Simão Buloba	Adm. Mun. Bibela	Dr. do Cab. Administrativa	945953306	Mundo de K. Simão Buloba



LISTA DE PRESENCAS (LOCAL): ADMINISTRAÇÃO MUNICIPAL DA BÍBALA

DATA: 25 / FEVEREIRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Jacquim Tchijipante	Pic - bíbala	Inspectora Criminal	946555188	
Domingos Bual	Bíbala	Coord. Qui-pros	928680648	
Adelino Kunguê Simão	Hospital Municipal	Director do Hospital	926636358	
Benjamim Vambano	Conselho Municipal de Juízes	Secretário executivo	932487762	
Abel Milinko Nkua	Escola de Mahite	Director	923916810	
Manuel F. S. Parate	GNPLA	1.º Secretário	945751022	
Felix Catchiropo Bat	Educação	Inspeção	924929396	
Vindito K. Bando Wilson	Adm. Mun. Bíbala	Dir. Adm.	945953306	
Carlos Heengombe	Educação	Sec. do Ensino	928467924	
Pedro A. C. Tchicanda	Dir. M. Saúde Igua	Director Municipal	928450668	
Jose Carlos Kahine	Director de L. Social	Chefe de Secção	943696700	
Nelito	Parroco da Igreja		929141431	
Jose Sebastião d. Dias	TECH	Pastor - Evangelico	933091847	



LISTA DE PRESENCAS (LOCAL): ADMINISTRAÇÃO MUNICIPAL DA BUBALA

DATA: 25 /FEVEREIRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Carlo Samuel Kaico	Coordenação de Topo	Coordenador	943125158	
Pedro Saluango	Coordenador Municipal	Coordenador	946336238	
Domingos Tchiso	Bomba	Coordenador	922263567	
Fernando Sousa	Livro de Decisões	Coordenador	929147122	
Pedro Igulji Kalkute	ENDE	Responsável	924871056	
Pauline M. Tchivikeni	Mattia	Coordenador		
Paulo Baptista Miguel	Conf. M.	chefe da tabela	930016727	
Gasparalo Comate	Associa	Delegado Municipal	929462989	
António Brito	Coordenador	B. Bemiterio	924136596	
Gerardo Mbebe	Coordenador	B. Feira	946739236	
Móris Mbe Silva	AGT - Bubala	Responsável	924409135	Móris Mbe Silva
Moisés Samuel Tchumvku	Pr IASD	Pastor	936630414	
Cristóvão Nelo	KDA	responsável	925069447	



LISTA DE PRESENCAS (LOCAL): ADMINISTRAÇÃO MUNICIPAL DA BIBALA

DATA: 25 / FEVEREIRO / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Menezes Domingos Camito	Ad. Municipal	Director dos Registos	926636978	Menezes
João Epalanga Ferreira	Professores	Ed. Física	921929604	Epalanga
João Carlos António	—	Conselheiro	923962177	SDA
Maria P. K. Chiumuana	Q. N. S. Bibala	Director Municipal	926589868	Maria
Jose Chucua	Liceu 30 B	Director	924624875	Chucua
Arnaldo Bisos	Rep. do Bairro Huilamb	Presidente Huilamb	928450607	Bisos
Camel B. Ngob	Secretaria PB	Proteção Civil	923287209	Camel
Nuno Mucena	Holisticos	Env. Ambiental	923431890	Nuno
Eduardo Ferdinand	Holisticos	Env. Ambiental	925753914	Eduardo

Potenciais impactes Ambientais e Sociais

Os estudos ambientais e sociais vão identificar os potenciais impactes ambientais e sociais, negativos e positivos, tanto para a fase de construção como de operação. Posteriormente serão propostas medidas de mitigação e compensação adequadas.

Os principais impactes a serem identificados vão incidir sobre os aspectos ambientais (por exemplo, alteração da paisagem, remoção de vegetação, perda e afectação de habitats, alteração do ambiente sonoro, material particulado) e sociais (por exemplo, dinamização socioeconómica, aumento da geração de electricidade, criação de empregos, reassentamento de populações, afectação da sociedade e do uso do solo).

Plano de Gestão Ambiental e Social

Para a mitigação dos potenciais impactes ambientais e sociais será elaborado um Plano de Gestão Ambiental e Social que será apoiado por um conjunto de planos de gestão cujo conteúdo será definido posteriormente. Os planos adicionais estarão relacionados com a gestão das obras, questões de saúde, segurança e ambiente, gestão da biodiversidade, gestão de resíduos, etc. Caso se julgue necessário e tendo em conta os impactes do Projecto poderão ser elaborados Planos de Compensação e de Reassentamento.

Próximos Passos

De forma a complementar o processo do EIAS, serão realizados levantamentos ambientais, socioeconómicos e culturais nas províncias da Huíla e do Namibe e nos municípios abrangidos pelas actividades do Projecto. O esboço do EIAS deverá ser concluído até Dezembro de 2021. Após a finalização do EIAS, o relatório final será submetido às autoridades financiadoras do Projecto e às autoridades governamentais responsáveis pela actividade do Projecto e ambiental em Angola (Ministérios da Energia e Águas e da Cultura, Turismo e Ambiente) para aprovação.



Rede Nacional de Transporte de Electricidade E.P.

Gaveto entre a Estrada da Camama e Via Expressa Junto a Subestação da Camama
Telefone: 222 704 400/923595093

apinto@rnt.co.ao
www.rnt.co.ao



Holísticos, Lda. – Serviços, Estudos & Consultoria

Rua 60, Casa 559, Urbanização Harmonia,
Lar do Patriota, Luanda
Telefones: 927 442 844; 915 034 779

holisticos@holisticos.co.ao
www.holisticos.co.ao



Tokyo Electric Power Services Co., Ltd.

ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 kV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

Documento Informativo

FASE 1 (EPDA)



FEVEREIRO DE 2021



Histórico

A região centro-Sul do território nacional apresenta carências relativamente ao acesso à energia eléctrica da rede pública, principalmente nas áreas distantes dos perímetros urbanos (bairros que surgiram sem planificação urbana) e zonas rurais. Ao nível da província do Namibe apenas as cidades de Moçâmedes e Tômbwa dispõem de electricidade da rede pública com fornecimento regular e estável. Neste contexto, por forma a dar resposta a actual demanda de electricidade na província Rede Nacional de Transporte de Electricidade (RNT – E.P.) em parceria com a empresa japonesa Tokyo Electric Power Services Co., Ltd. (TEPSCO) e com o financiamento da Japan International Cooperation Agency (JICA), pretende construir uma linha de transporte de electricidade de alta tensão (220 kV) que fará ligação entre a Subestação da Arimba no Lubango (na província da Huíla) e a futura Subestação de 220/60 kV de Moçâmedes (na província do Namibe).

Tendo em consideração os potenciais impactes negativos que envolvem os projectos de construção e operação de linhas de transporte de electricidade de alta tensão está a ser desenvolvido o respectivo Estudo de Impacte Ambiental e Social (EIAS) para apoiar o processo de Licenciamento Ambiental de todas as actividades relacionadas com a implementação deste Projecto.

Descrição do Projecto

O Projecto da Linha de Transmissão de 220 kV entre o Lubango e Moçâmedes irá incluir a implantação de uma nova linha de transporte de energia com uma extensão de aproximadamente 190 Km (ver Figura 1), e a construção de uma Subestação de 220/60 kV na cidade de Moçâmedes, no Bairro Aida, com uma área de aproximadamente 7 hectares. A linha de transmissão irá passar por quatro municípios, nomeadamente: Lubango e Humpata na província da Huíla e Bibala e Moçâmedes na província do Namibe. Esta rota passará em paralelamente a actual linha de 60 kV que liga a Subestação da cidade do Lubango à Moçâmedes.

As actividades necessárias e de apoio à execução do Projecto incluirão a instalação dos estaleiros de apoio à obra, sinalização e abertura de acessos, desminagem de possíveis engenhos explosivos não detonados, remoção de vegetação para a obra e faixa de protecção, trabalhos de topografia, trabalhos de construção dos maciços de fundação, montagem das bases, colocação dos apoios e isoladores, colocação de dispositivos de balizagem aérea e a sinalização de advertências diversas.

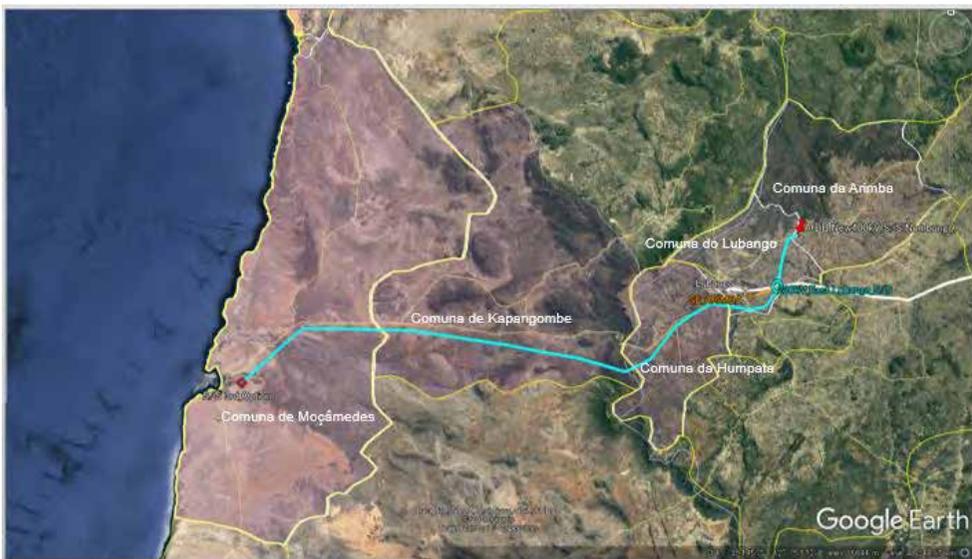


Figura 1: Proposta de traçado da linha de transmissão Lubango - Namibe.

Na fase de operação será constituída uma faixa de reserva de 45 m ao longo da linha, onde o uso da terra será condicionado. Será mantida uma faixa de protecção, na qual não poderão existir construções (escolas e hospitais) ou árvores de porte elevado, requerendo periodicamente actividades de corte ou poda e a manutenção das vias de acesso às torres. A fase de construção irá decorrer entre 24-30 meses. Espera-se que o Projecto tenha uma vida útil de pelo menos 40 anos.

Estudo de Impacte Ambiental e Social

De acordo com o Decreto Presidencial n.º 117/20 de 22 de Abril sobre o Regulamento Geral de Avaliação de Impacte Ambiental e do Procedimento de Licenciamento Ambiental este Projecto é de **Categoria A**. Deste modo, vai ser elaborado um Estudo de Pré-Viabilidade Ambiental e Definição do Âmbito (EPDA) e posteriormente um Estudo de Impacte Ambiental e Social (EIAS). Estes documentos terão em conta a legislação ambiental em vigor e as boas práticas internacionais incluindo as Directrizes Ambientais e Sociais da JICA (2010). O objectivo do EIAS é a identificação e análise prévia de como as actividades do Projecto resultarão em potenciais impactes sobre as componentes ambientais (ar, água, solo, vegetação, fauna, habitats sensíveis, património cultural, etc.) e a qualidade de vida das pessoas e comunidades (incluindo as comunidades etno-linguísticas) que vivem próximo da rota da linha. O EIAS também visa propor medidas para evitar, minimizar ou compensar o ambiente e as comunidades pelos impactes identificados.

A caracterização ambiental e social da área de influência do Projecto será feita através de análise documental, levantamentos de campo, encontros de auscultação e estudos de base especializados para as seguintes componentes:

1. Clima e Meteorologia
2. Geologia e Geomorfologia
3. Fisiografia
4. Pedologia
5. Hidrologia
6. *Habitat*, Flora Terrestre e Fauna
7. Ambiente sonoro
8. Qualidade da Paisagem
9. Uso da Terra
10. Aspectos Socioeconómicos
11. Património Histórico e Cultural
12. Áreas de Conservação Ambiental e Espécies Ameaçadas

Auscultação às Partes Interessadas

A RNT – E.P. com o apoio da Equipa da JICA vão realizar encontros nas províncias da Huíla e do Namibe durante o período entre Fevereiro e Abril de 2021 para apresentar detalhes do Projecto e falar sobre os potenciais impactes ambientais, sociais e culturais (positivos e negativos). Estes encontros servirão também para divulgar amplamente o Projecto e obter informações para o Estudo de Pré-Viabilidade Ambiental e Definição do Âmbito (EPDA). A etapa de auscultação pública é de extrema importância para o processo do EIAS, uma vez que o processo possibilita o exercício conjunto e participativo de identificação de preocupações e expectativas face ao Projecto, avaliação justa e completa dos potenciais impactes do Projecto, bem como a definição de medidas de mitigação adequadas.



Auscultação Pública

Projecto de Linha de Transmissão de Electricidade de 220 kV Lubango (Huíla) – Moçâmedes (Namibe)



AGENDA DO ENCONTRO

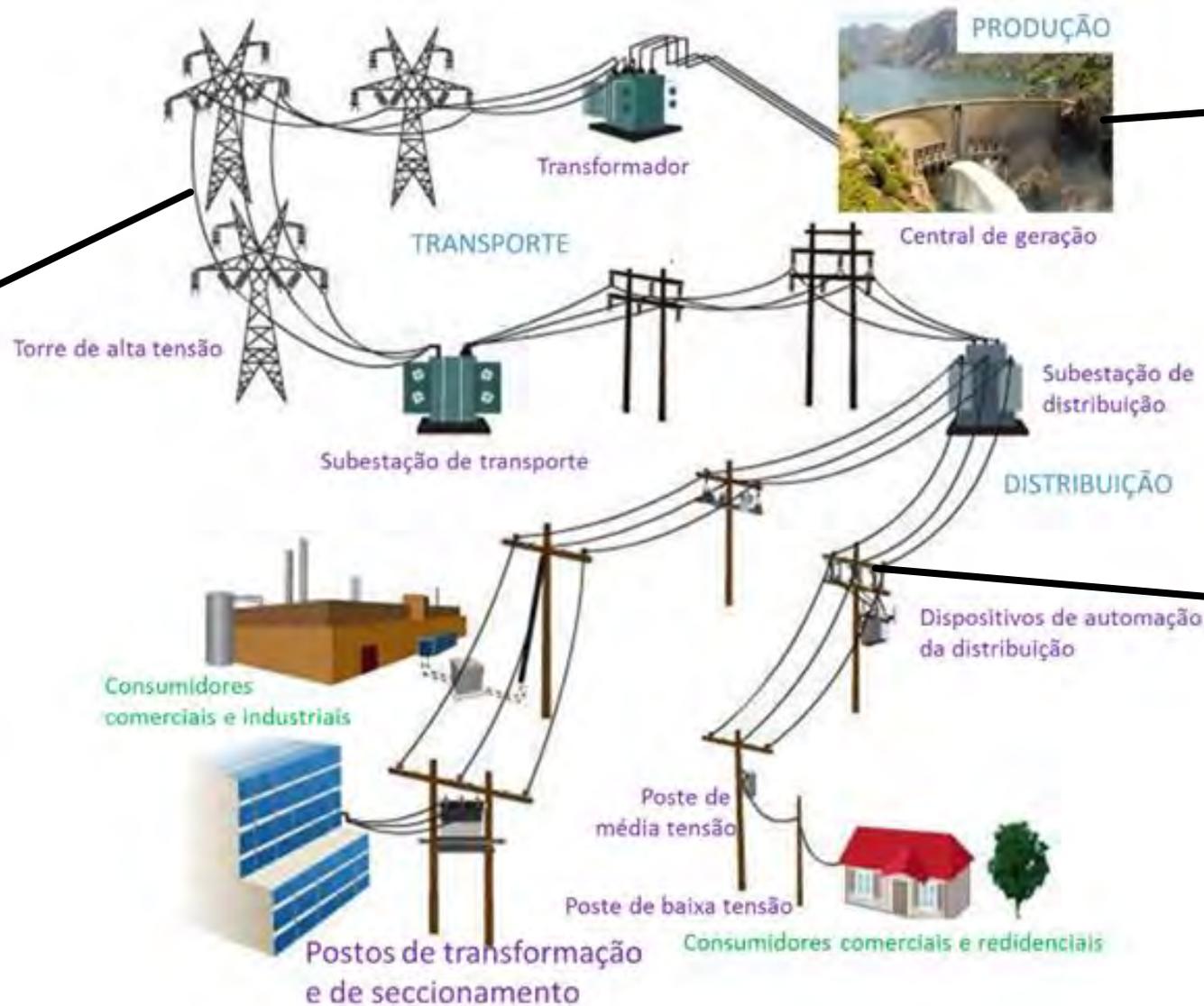
- ▶ **Breve Apresentação do Projecto**
- ▶ **Apresentação do Processo da AIA**
- ▶ **Enquadramento Legal e Directrizes da JICA**
- ▶ **Aspectos Ambientais e Socioeconómicos**
- ▶ **Impactes Ambientais e Socioeconómicos**
- ▶ **Próximos Passos**
- ▶ **Sugestões e Recomendações**



INTRODUÇÃO (1)

- ▶ A Empresa Pública Rede Nacional de Transporte de Electricidade (RNT – E.P.) foi criada no âmbito do Programa de Transformação do Sector Eléctrico através do Decreto Presidencial N.º 305/14 de 20 de Novembro.
- ▶ Ao nível da província do Namibe apenas as cidades de Moçâmedes e Tômbwa dispõem de electricidade da rede pública com fornecimento regular e estável. De forma a dar resposta a demanda de electricidade na província, a RNT, em parceria com a empresa japonesa TEPSCO e com o financiamento da JICA, pretende construir uma linha de transporte de electricidade de alta tensão (220 kV) que fará ligação entre a Subestação da Arimba no Lubango (província da Huíla) e a futura Subestação de 220/60 kV de Moçâmedes (província do Namibe).
- ▶ O projecto endereça a necessidade de transportar a electricidade gerada na central Hidroeléctrica de Laúca, com uma capacidade para produzir mais de 2000 MW, passando pelas Subestações de Belém do Huambo – Subestação de Nombungo – Subestação da Arimba.
- ▶ O traçado da linha de transmissão terá uma extensão de cerca 190 Km.

INTRODUÇÃO (2)

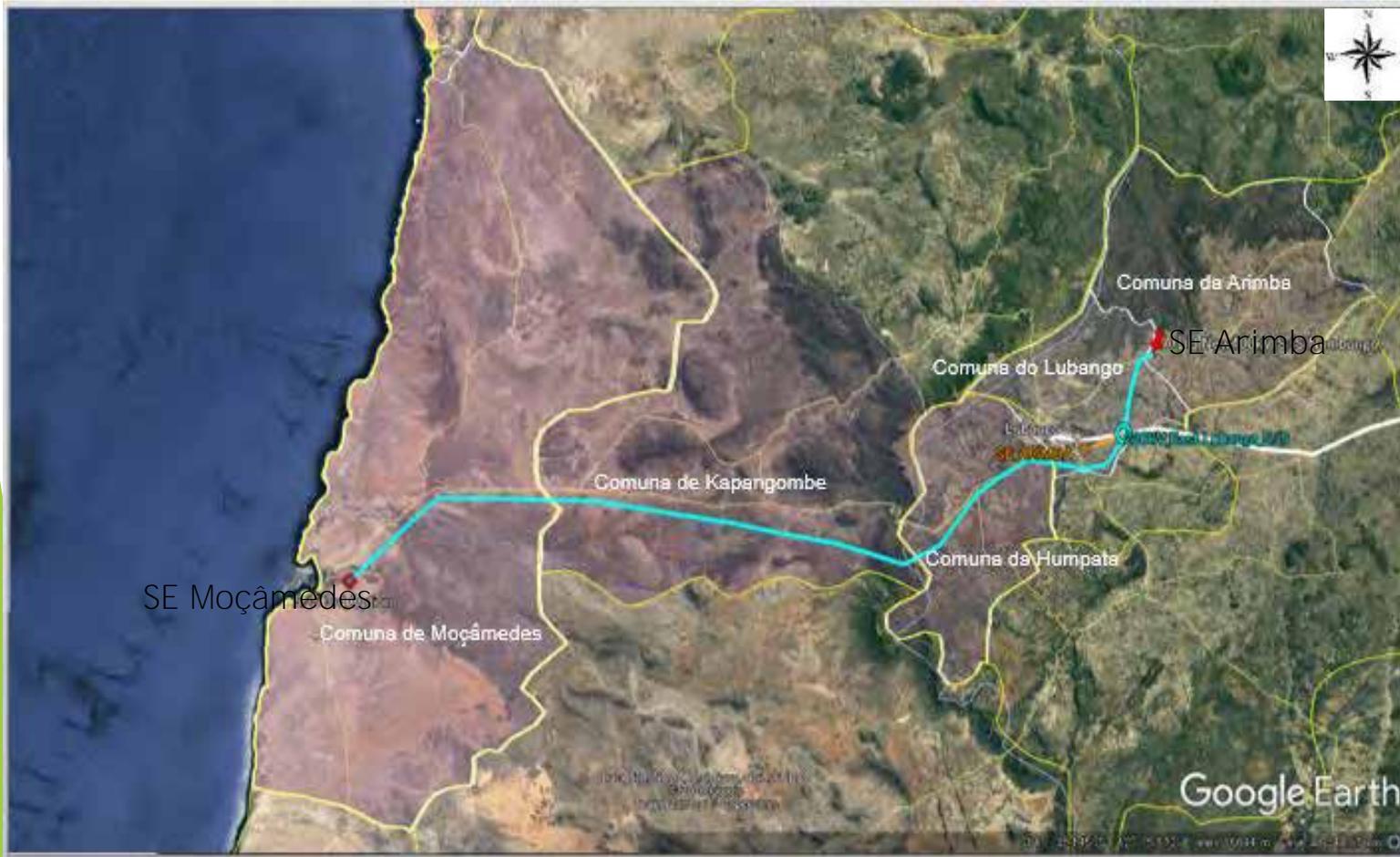


PRODEL - EP

RNT - EP

ENDE

TRAÇADO DO PROJECTO



Mapa da Proposta do Traçado do Projecto.



▶ A linha de transporte de electricidade terá um percurso de cerca de 190 Km e passará pelos seguintes municípios:

- ❖ **Na Huila:** Lubango e Humpata.
- ❖ **No Namibe:** Bibala e Moçâmedes.

PROMOTOR DO PROJECTO

- ▶ O Projecto é promovido pela RNT.
- ▶ A RNT adere os padrões internacionais de qualidade, garantindo a satisfação dos clientes, de acordo os princípios de sustentabilidade económica, técnica, social e ambiental.
- ▶ O Projecto irá aderir os Padrões de Desempenho para Questões Ambientais e Sociais da JICA (*JICA Guidelines for Environmental and Social Considerations*).
- ▶ A empresa Japonesa TEPSCO será responsável pelo desenho do projecto.
- ▶ A RNT manterá um discurso aberto com a sociedade e consultará todas as partes interessadas de forma a identificar e implementar soluções julgadas adequadas para as mesmas.

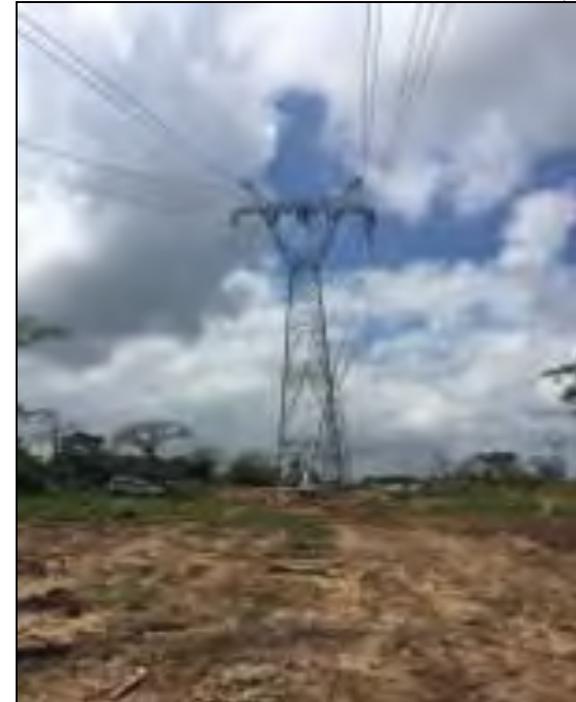


DESCRIÇÃO DO PROJECTO (1)

O traçado da Linha de Transmissão passará paralelamente a actual linha de 60 kV que liga a Subestação da cidade do Lubango à Moçâmedes, evitando atravessar:

- Servidões aeronáuticas ou radioelétricas;
- Áreas urbanas e rurais;
- Áreas sensíveis do ponto de vista ecológico e biológico;
- Locais de património histórico-cultural;
- Locais com a confirmação histórica de comunidades etnolinguísticas.

Entretanto, a localização exacta da linha de transmissão e dos seus apoios só será definida após a realização de estudos mais detalhados incluindo levantamentos topográficos.



DESCRIÇÃO DO PROJECTO (2)

As actividades necessárias ao projecto irão incluir:



Instalação dos estaleiros de apoio à obra.



Desmatação ou criação da faixa de protecção



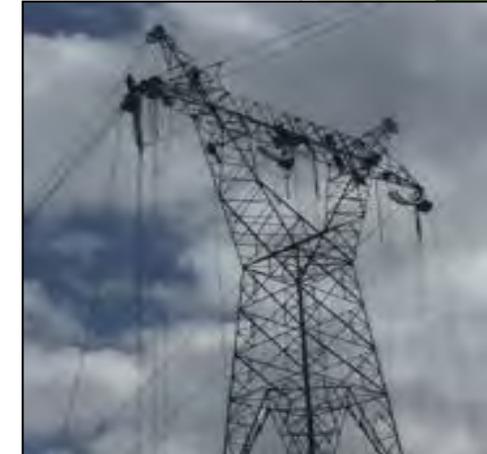
Sinalização



Trabalhos de topografia e de construção civil.



Montagem ou colocação dos apoios



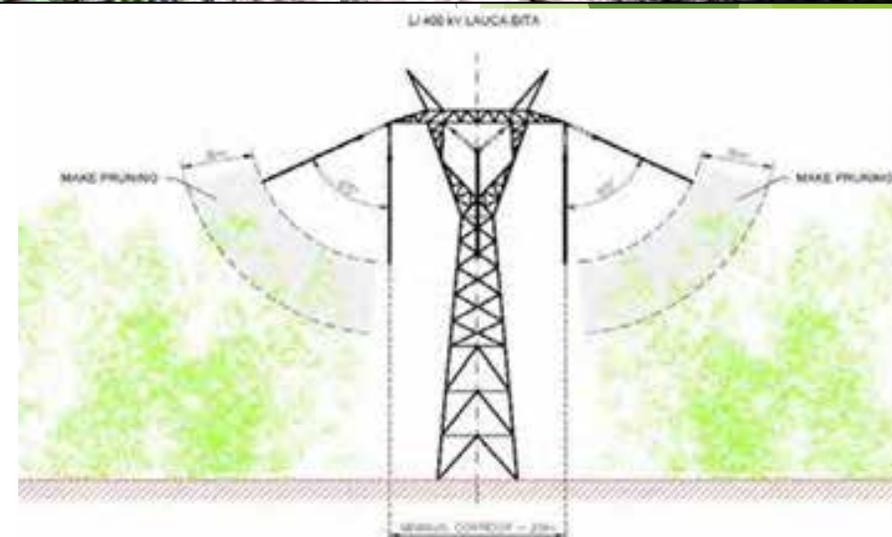
Montagem das torres

As fundações das torres/apoios serão constituídos por maciços independentes em betão.

DESCRIÇÃO DO PROJECTO (3)

Durante a fase de **construção** (30 meses):

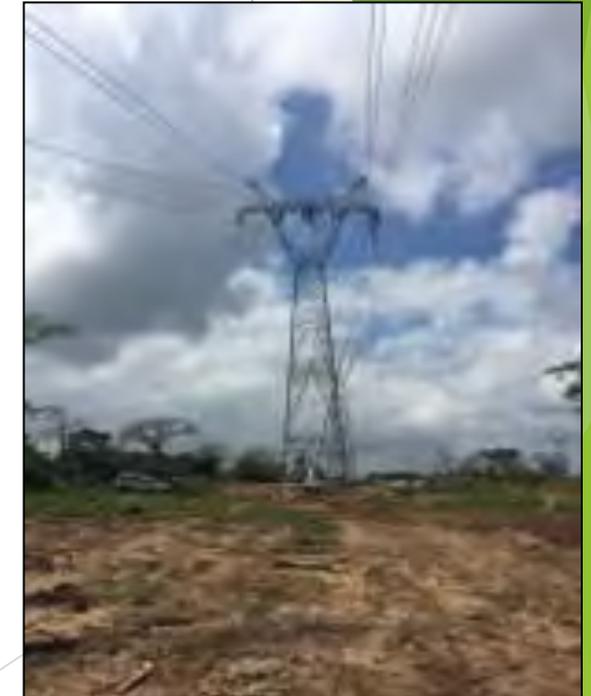
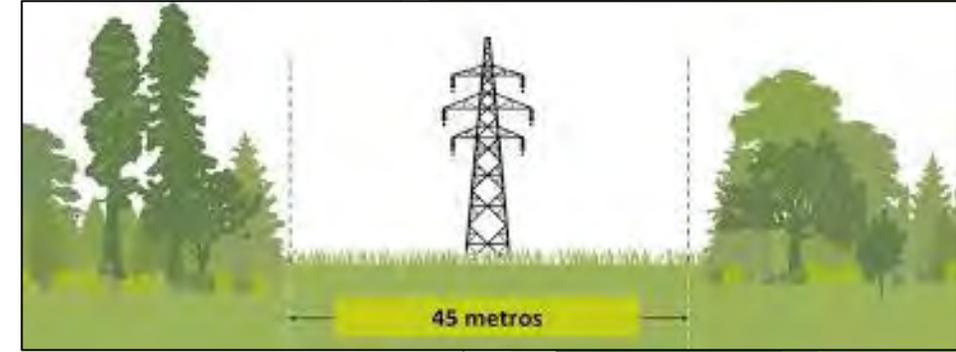
- Desminagem dentro do corredor de 45 metros.
- Avaliação das estruturas existentes no traçado (p.e; casas, lavras, fazendas, estaleiros, etc.).
- Torres serão construídas dentro de uma área de **15x15 m**.
- A distância entre torres será de cerca de **350 metros**.
- Serão construídas **540 torres** ao longo do traçado.
- Serão utilizadas as estradas de acesso já existentes (utilizadas na manutenção da linha de transmissão de 60 kV).



DESCRIÇÃO DO PROJECTO (4)

Durante a fase de **operação** (40 anos):

- Um corredor de 45 m será mantido sem árvores ou edifícios (sendo expressamente proibida a presença de casas, escolas ou hospitais) para assegurar a operação e reduzir riscos de acidentes ou incidentes.
- Um corredor de 5 m para acesso para debaixo da linha será limpa para às actividades de manutenção.
- Será definida uma reserva parcial ao longo da linha de transmissão (22,5 m de cada lado da linha), onde a ocupação e uso da terra será condicionada.
- As operações de manutenção incluirão a verificação do estado da faixa de protecção.



DESCRIÇÃO DO PROJECTO (5)

Subestação

A Subestação de 220/60 kV será construída na cidade de Moçâmedes no Bairro Aida, com uma área de aproximadamente 7 hectares.

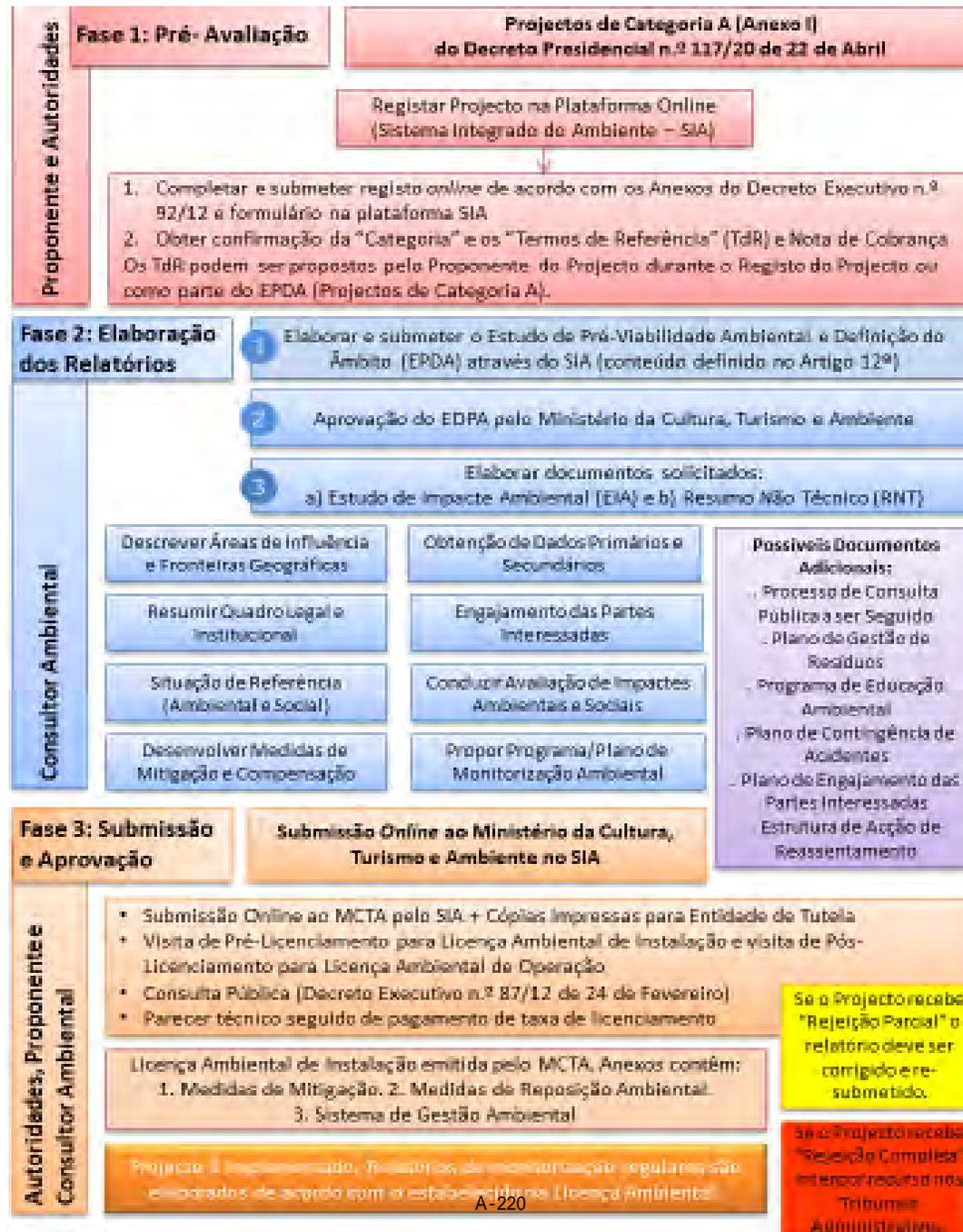
O projecto da subestação de Moçâmedes contempla a construção de um edifício comando, uma casa auxiliar, casas de painéis e dormitórios para os trabalhadores.



Terreno da Futura SE Moçâmedes.



PROCESSO DE AIA EM ANGOLA



ENQUADRAMENTO LEGAL

O EPDA e o EIAS serão elaborados de acordo a legislação vigente na República de Angola, nomeadamente:

Lei de Bases do Ambiente

Regulamento Geral sobre AIA e Procedimento de Licenciamento Ambiental

Regulamento sobre Gestão de Terras

Decreto Executivo sobre Consulta Pública

Lei de Terras

Lei de Expropriação por Utilidade Pública

Lei do Património Cultural

Regulamento sobre Reassentamento

A elaboração do EPDA e do EIAS também terão em consideração as Directrizes Ambientais e Sociais da JICA.

DIRECTRIZES DA JICA

A JICA criou um conjunto de directrizes de forma a garantir a sustentabilidade dos vários Projectos que financia (Directrizes Ambientais e Sociais da JICA).

Possui um conjunto de orientações de operação, que têm de ser implementadas:

- Divulgação das Informações do Projecto.
- Consulta aos Informantes Chave Locais.
- Avaliação Ambiental e Social (Após a Categorização dos Projectos).
- Auscultação Pública às Partes Interessadas e Potencialmente Afectada.
- Preocupação sobre o Ambiente Social e Direitos Humanos.
- Biodiversidade e Ecossistemas.
- Aceitação Social.
- Reassentamento Involuntário e Compensação.
- Comunidades Etnolinguísticas.

LEVANTAMENTOS PREVISTOS PARA MARÇO E ABRIL

Ambiente

- Levantamento da biodiversidade: habitats, flora, fauna e identificação de serviços de ecossistema.
- Registo de imagens fotográficas ao longo do traçado do projecto.
- Registo de coordenadas geográficas de pontos sensíveis no traçado do projecto e na subestação de Moçâmedes.
- Medições da qualidade do ar e o ambiente sonoro ao longo do traçado.

Socioeconómica & Consulta de Partes Interessadas

- Disseminação de informação do projecto e auscultação pública (autoridades a nível municipal e comunidades no traçado da linha).
- Levantamento de informação socioeconómica junto das Administrações Municipais e Comunais.
- Identificação do uso do solo e modo de vida das populações.
- Mapeamento das comunidades etnolinguísticas.
- Identificação do património cultural.

ASPECTOS AMBIENTAIS (1)

Tipos de vegetação existente no traçado do projecto:

- ✓ Floresta de Terras Altas;
- ✓ Pradarias Pantanosas;
- ✓ Matas de Miombo;
- ✓ Savanas;
- ✓ Karoo-Namibe.



A distribuição vegetação são grandemente afectadas por frequentes queimadas, derrube de árvores para a produção de carvão e lenha, para a construção e criação de campos para a agricultura.

ASPECTOS AMBIENTAIS (2)

No que concerne a diversidade das espécies da fauna o registo recai para as seguintes espécies:

- **Aves** (Garça-real, Garça-vaqueira, Garça-de-cabeça-preta, Águia-pesqueira-europeia, Boita-da-Huíla e o Abelharuco pequeno);
- **Mamíferos** (Pacaça, Macaco, Coelho, Paca e Raposa).
- **Anfíbios** (Rela-de-Angola, Rã-foguete-de-nariz-afilado).
- **Répteis** (Lagartixa-variável e a Lagartixa-das-pedras-de-Bocage).



Boita-da-Huíla



Abelharuco-pequeno



Rela-de-Angola



Macaco-de-cara-preta



Lagartixa-das-pedras-de-Bocage

ASPECTOS SOCIAIS (2)

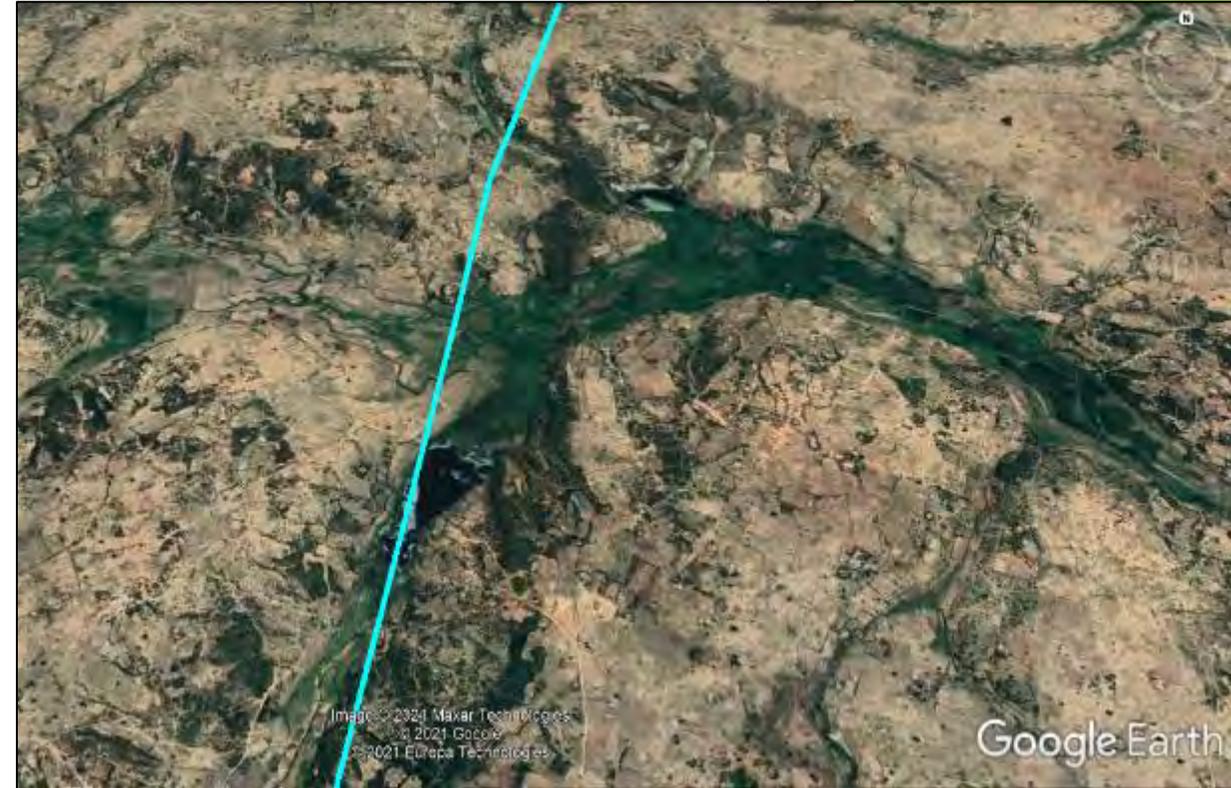
Nas comunas atravessadas pela linha (Arimba, Lubango, Humpata, Kapangombe e Moçâmedes) existem diversos aglomerados populacionais/aldeias com habitações de tipologias distintas e dispersas, nalgumas localidades com reduzido acesso a infra-estruturas de abastecimento de água e electrificação e equipamentos educação e de saúde.

Povoamento



Tipos de Povoamento na área de influência do Projecto.

A-227



Linhas de Água no Traçado.

ASPECTOS SOCIAIS (3)

Povoamento e Estruturas



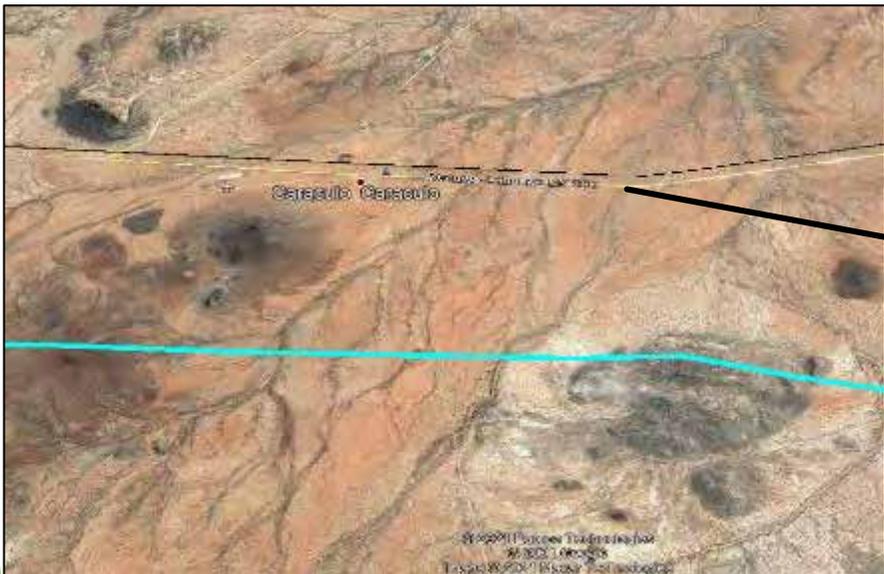
5 Km a Sul da Cidade do Lubango (Ref. Aeroporto da Mukanka).



Troço SE Nombungo – Cidade do Lubango



Serra da Leba.



Estrada Caraculo - Moçâmedes



LT passará a 6 Km da Estrada da Serra da Leba.



Estrada Nacional N.º 280

ASPECTOS SOCIAIS (4)

Povoamento e Estruturas



Área da SE Moçâmedes – Bairro Aida.

Cidade de Moçâmedes.

ASPECTOS SOCIAIS (5)

As principais áreas de actividade económica nas províncias da Huíla e do Namibe são a agropecuária, indústrias extractivas e a pesca artesanal. No caso mais específico das sedes municipais acrescentam-se o comércio, as actividades da administração pública e a construção civil.



Principais Actividades Económicas Desenvolvidas na Área de Influência do Projecto.

RESUMO DOS IMPACTES AMBIENTAIS

POTENCIAIS IMPACTES NEGATIVOS	POTENCIAIS IMPACTES POSITIVOS
Biodiversidade, Habitat Natural e Paisagem	Benefícios socioeconómicos
<ul style="list-style-type: none"> ▪ Perda da vegetação e habitats. ▪ Afastamento de espécies de aves. ▪ Afecção de anfíbios e répteis. ▪ Alteração da qualidade da paisagem natural. 	<ul style="list-style-type: none"> ▪ Criação de emprego directo. ▪ Fomento à industrialização da província do Namibe.
Qualidade da Água e Habitats Aquáticos (construção)	
<ul style="list-style-type: none"> ▪ Afecção da qualidade da água: ▪ Turbidez. ▪ Aumento de metais pesados. 	<ul style="list-style-type: none"> ▪ Fomento ao comércio formal e informal. ▪ Aumento da geração de electricidade.
Ruído, Emissões Atmosféricas e Trânsito (construção)	
<ul style="list-style-type: none"> ▪ Perturbação do ambiente sonoro das comunidades. ▪ Emissão de partículas de poeiras. ▪ Riscos de acidentes rodoviários. 	<ul style="list-style-type: none"> ▪ Dinamização socioeconómica da província do Namibe. ▪ Regeneração urbana da cidade de Moçâmedes.
Uso da terra e propriedade (Construção)	
<ul style="list-style-type: none"> ▪ Afecção dos campos de cultivo e áreas de pastagem. ▪ Afecção de infra-estruturas físicas (casas). ▪ Afecção dos serviços de ecossistemas. 	

PRÓXIMOS PASSOS

- Os encontros de auscultação serão contínuos.
- Elaboração do EPDA para incluir a informação ambiental, socioeconómica, legal e resultados dos encontros de auscultação.
- Elaboração de um Plano de Engajamento das Comunidades e Mecanismo de Reclamação.
- Após a finalização do EPDA, o mesmo será submetido:
 - Às autoridades financiadoras do projecto para aprovação;
 - Ao Ministério da Cultura, Turismo e Ambiente através do Portal SIA para efeitos de licenciamento ambiental.



SUGESTÕES E RECOMENDAÇÕES



Rede Nacional de Transporte de Electricidade E.P.
Gaveto entre a Estrada da Camama e Via Expressa
Junto a Subestação da Camama
Telemóvel: (+244) 222 704 400/923595093
apinto@rnt.co.ao
www.rnt.co.ao



Holísticos, Lda. – Serviços, Estudos & Consultoria
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Luanda
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holisticos@holisticos.co.ao
www.holisticos.co.ao
www.facebook.com/holisticos.angola

220 kV TL Project between Lubango - Moçâmedes	MEETING MINUTES Stakeholder Engagement Meeting						
			Project: P.1649				
VENUE:	Poiares Settlements (Kapandi and Muhaha) in Arimba Communal Headquarters, Lubango Municipality		DATE:	19/04/2021	# OF PAGES	12	
ASSUNTO:	Stakeholder Meeting	Engagement	NOTES BY:	Elayne Miranda and Eduardo Ferdinand		REVISION:	Vladimir Russo

ANEXOS

Appendix 1 – Photographic Record

Appendix 2 – Attendance List

Appendix 3 – Presentation

CÓPIAS ENVIADAS PARA:

- National Electricity Transmission Network Company (RNT – E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Huíla Provincial Government.

ITEM	DESCRIPTION
1	On April 19 th , 2021, a stakeholder engagement meeting was held with the residents of the Poiares settlements (Poiares Kapandi and Muhaha) (Geographic coordinates: 14°55'32.40"S 13°37'56.34"E). The meeting was attended by several entities, with special mention to Mr. João Chissingui (Arimba Commune Deputy Administrator), Ms. Maria Maio (Head of Section of the Social Area of the Arimba Communal Administration), Municipal Directors, representatives of the Administration, members of the Poiares settlements auscultation council, traditional authorities, residents, etc., with representatives from Holísticos (Eduardo Ferdinand, Elayne Miranda, and José Luís) and the RNT - National Electricity Transmission Network Company (Catarino Cosme, Leitão Alexandre, and Henriques dos Santos).
2	The stakeholder engagement meeting was attended by 77 participants (49% of whom were female). Maria Maio (MM), Social Area Head of Section of the Arimba Communal Administration, welcomed those present and explained the importance of the Project in terms of development and boosting the economies of the Huíla and Namibe provinces, mentioning that job opportunities for young people in the settlement would be created and that tourism could be developed in the region. There was a need for simultaneous translation into the local language (Nhaneca-Humbi) as many of those present did not fully understand Portuguese. Mr. João Mulimbi (JM) (Coordinator of Poiares settlements) helped during the translation process.
3	Holísticos' representative, Eduardo Ferdinand (EF) began the presentation by using simplified banners to outline the Project's characteristics and explain the electricity transmission line proposed route before elaborating on ongoing environmental, social and cultural surveys and the potential impacts of the proposed route and how they will be mitigated.

4	<p>EF also mentioned that a stakeholder engagement process is extremely important regarding the materialization of the Project and that RNT is promoting the Project in collaboration with Tokyo Electric Power Services Co. (TEPSCO), with financing from the Japan International Cooperation Agency (JICA). He emphasized that the Project's main goal is to increase electricity supply to the Namibe province while also allowing for the connection of electricity transport systems between the north (highlighting Malanje province) and center-south regions.</p>
5	<p>EF explained that the Project addresses the need to transport electricity generated at the Laúca Dam through the Belém do Dango (Huambo Province), Nombungo and Arimba substations (Huíla Province) and later Moçâmedes substation (Namibe Province). He also mentioned that the Project will adhere to JICA Guidelines for Environmental and Social Considerations (2010).</p>
6	<p>EF stated that the objective of the stakeholder engagement meeting is to give interested and potentially affected parties a chance to learn about the Project, offer feedback, and make recommendations regarding its implementation. EF gave a presentation that focused on the following points (see Annex 3 - Presentation):</p> <ul style="list-style-type: none"> • Brief description of the Project; • Presentation of the country's current environmental impact assessment process; • Project Financier (JICA) legal and regulatory framework; • Environmental and socio-economic aspects of the transmission line route; • Expected environmental and socio-economic Impacts; • Questions and answers session.
7	<p>EF also explained that the Project intends to avoid inhabited spaces, agricultural and livestock areas as well as military and commercial aircraft manoeuvring spaces, transhumance areas, areas that are historically important to ethnolinguistic communities, cemeteries, leisure areas, etc. Concluded the presentation by mentioning that the ongoing environmental studies (Environmental Pre-Feasibility Study and Scoping Report and Environmental and Social Impact Study for the Project) would be prepared in compliance with current legislation, industry best practices, and other JICA guidelines, stressing that the line's route may be altered depending on the severity of any identified environmental and social impacts and topography survey. He invited those present to provide feedback regarding improving Project related technical feasibility studies.</p>
8	<p>It is important to note that the entire meeting was translated between Portuguese and Nhaneca-Humbi in order to ensure that the residents of the Poiars settlements (Kapandi and Muhaha) fully understood all aspects. MM and JM facilitated the translation process.</p>
9	<p>The table below provides a summary of the questions and answers session.</p>

QUESTIONS AND ANSWERS SESSION SUMMARY

Comment/Question	Answer
<p>João Cangola (JC) - Poiares Settlement resident.</p> <p>JC requested clarification regarding the involuntary relocation and compensation process, asking what would happen in the event of damage to third party infrastructure (housing, agricultural and livestock areas, etc.). Informed that in the past they already had a project in which part of the population was affected (cultivation fields) and has not been compensated until today.</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>JICA takes issues of resettlement and compensation very seriously and will not provide financing until such issues are addressed, in compliance with the agency's regulations and standards. The line to be installed cannot pass over houses, agricultural land, cemeteries and large trees. However, would be cases where this would not be feasible, whereby JICA has very specific rules, and as a result, a Resettlement and Compensation Plan (RCP) for affected parties would be elaborated to ensure that families affected by the Project have equal or better conditions than those that were present prior to Project implementation.</p>
<p>Mário Chivia (MC) - Poiares settlement resident.</p> <p>MC questioned whether the Project would deliver electricity to all areas where the transmission line passes or only to the Namibe province.</p>	<p>Catarino Cosme (CC) - RNT</p> <p>There are three (3) companies with responsibility in the energy sector in the country, namely: PRODEL (Production), RNT (Transmission) and ENDE (Distribution). RNT will install the transmission line between Lubango - Moçamedes during the first phase of the Project. This will be followed by the implementation of the distribution phase, during which ENDE, in collaboration with the Huíla and Namibe Provincial Governments and municipal administrations, will evaluate energy demand and develop alternative distribution options from the Moçâmedes substation. However, it was emphasized that currently, the Project will only facilitate the transportation of electricity between the Arimba 220/60 kV substations in Lubango and the new 220/60 kV substation to be installed in the Aida neighbourhood, Moçâmedes.</p>
<p>Mbunta Kangonga (MK) - Poiares settlement resident.</p> <p>MK mentioned that the local population is currently suffering from famine as a result of recurrent droughts in the region and asked whether food assistance would be available regarding the Poiares community.</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>Angolan Government has policies requiring companies that execute state projects to create Social Responsibility Programs in order to safeguard communities. These concerns have been raised and will be forwarded to the Project contractor as soon as the public tender is held.</p>

Comment/Question	Answer
<p>Nkembo Maria (NM) - Poiares village resident.</p> <p>NM stated that many in the settlement only eat wild tubers and requested support regarding famine.</p>	
<p>João Manuel Mulimbe (JM) - Poiares village resident.</p> <p>JM requested clarification regarding the compensation process, asking what would happen in the event of damage to third party infrastructure (housing, agricultural and livestock areas, etc.). Also asked how far the line would run from Poiares settlements.</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>The compensations for the loss of agricultural land and fruit trees would be determined using the Ministry of Agriculture and Fisheries' price table for agricultural products per square meter, and that the entire process would be fair, transparent and honest, thus ensuring that compensation is granted to whom it is owed. Proposed the creation of working committees between RNT, TEPSCO, JICA, the Lubango Municipal Administration and the Huíla Provincial Directorate.</p> <p>Should a house be affected by the Project, it will be assessed and the affected parties may receive a house of equivalent or better specification. The 220 kV TL route is not the final, may be changed, and several studies such as geographical, topography, environmental, social and cultural studies are required to identify the final route and ensure that it does not affect the population's well-being, or if it does, that it is kept to a minimum.</p> <p>A thorough registration process regarding any affected agricultural land, housing and other infrastructure along the 190 km Project route would be conducted in order to prevent any opportunism, which would result in a Resettlement Action Plan being elaborated.</p>
<p>Tchaquenda Tchilombo (TT) - Poiares resident</p> <p>TT reported that staffs from previous projects carried out near the settlement harassed the girls and many were left with their children and the parents fled. Showed enormous dissatisfaction with the constant escapes of paternity.</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>The Project contractor will be obliged to present a policy that includes training programs on health, safety, hygiene and the environment. Staff will be informed regarding the prohibition of harassment women in the settlements, about respecting community customs and traditions, the prohibition of unethical practices and of working when under the influence of alcohol or other illicit substances.</p>

Comment/Question	Answer
	<p>With no further questions, the stakeholder engagement meeting with the Poiaras (Muhaha and Kapandi) settlements was closed by Maria Maio (Head of Section of the Social Area of the Arimba Communal Administration), who thanked everyone for attending, with special mention to the Project promoters; RNT and Holísticos representatives. She also expressed her belief in the success of the Project, stating that it would be a valuable contribution to the growth of the Huíla and Namibe provinces.</p>

APPENDIX 1: PHOTOGRAPHIC RECORD



Photo 1: Detail of the parties present at the stakeholder engagement meeting (SHM) in the Poiars settlements.

Photo 2: Opening of the SHM by Mr. João Chissingui (Arimba Deputy Communal Administrator).

Photo 3: Project disclosure by Mr. Eduardo Ferdinand (Holísticos).

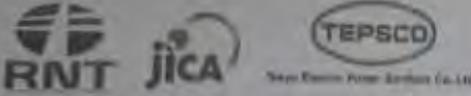


Photo 4: Evidence of women during the SHM.

Photo 5: Mrs. Tchaquenda Tchilombo's intervention.

Photo 6: Responses from Mr. Catarino Cosme (RNT) explanation.

APPENDIX 2: ATTENDANCE LIST.


 ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 kV LUBANGO (HUÍLA) - MOÇÂMEDES (NAMIBE)

LISTA DE PRESENCAS (LOCAL): Aldeia Poiares - Lubango DATA: 19 / ABRIL / 2021

NOME	AFILIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Eduardo Ferdinand	Holísticos	Engº Ambiental	925 755914	Ed. Ferd
João Ramos Ghimionqui	ARA	Administrador Adjunto	923 432414	João Ramos
Caralino Costa	RNI-EP	Sociólogo	912 355412	Caralino Costa
Fátima Alexandre	LNT-EP	Engº Ambiental	929715393	Fátima Alexandre
António Chivungo	Poiares	Campones	92-1601063	
João K. K. Tenhube	Poiares	1º secretário do cap		
António Mário Chirra	Poiares	Professor	923786825	Chirra
Techera Alberto	Poiares	Campones		
Neoi Frederico	Poiares	Campones		
Sopalo daai	Poiares	Campones		
Comte Kapulumbo	Poiares	Campones Ferriteiro		
Toméngos Tcholafera	Poiares	Campones		
António Mule	Poiares	Campones e Kafunde mala		

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ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
 FASE 3 (EPIA)

LISTA DE PRESENCAS (LOCAL): Aldeia Poaires - Lubango **DATA:** 19 / ABRIL / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTO	ASSINATURA
Aida Tchi Lunganela	"	Companesa		
Domingos Manuel	"	Companesa		
Camilita Salopo	"	Companesa		
Maheque Pena	"	Companesa		
Carulchira Kamaga	"	Companesa		
José Luis Kalapo	"	Companesa		
Stavio R. Chiflavo	A.C.A	Chefe de Secção Área Social	934478447	
Tuecha Hungo	Poaires	Companesa		
José Galanga	"	Companesa		
José Dias	Holisticos			
Clayne Miranda	Holisticos	Eng. Ambiental	926964360	Elaine Miranda
Manuel Francisco dos Santos	ANP-EP	de Pesq	92492.2884	






ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 kV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
 FASE 1 (EPDA)

LISTA DE PRESENCAS (LOCAL): Aldeia Poaires - Lubango **DATA:** 19 / ABRIL/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Jambelua Manuel	Poaires	Campones		
Miguel Kitui	"	Campones		
Maria Tiroia	"	Camponesa		
Virgínia Margarida	"	Camponesa		
Niara Rosalina	"	rendedora		
João Matius	"			
Adriano Songa	"	Campones		
Domingos José	"	rendedora		
Caquinda Messias	"	Campones		
Bispo Mungalife	"	Campones		
João Clenda	"	Campones		
Jose Tchombe	"	Campones		
Mário Calume	"	Campones	92822 7721	



LISTA DE PRESENCAS (LOCAL): A. Poçares - Lubango

DATA: 19 / ABRIL/2021

HOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURAS
Cardebe Domingos	Poçares	Campones	929289205	
Manoelme Tchaliwa	"	Campones		
Adriano Souza	Poçares	Responsável do P.	902385598	
João Manuel Hukimzi	Harabalanga Poçares	Campones	921538853	
Tembele Koptara	"	Camponesa		
Francisco Pequeno	"	Campones		
Muhionka Gulo	"	Campones		
Sequelalalume	"	Campones		
Baptista Américo	"	Campones		
Zeipa Manuel	"	Camponesa		
Kuratala Txilata	"	Camponesa		
Teresa Txilumbi	"	"		
Lúcia Tchovetcha	"	Camponesa		






ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 KV LUBANGÓ (HUÍLA) – MOÇÂMEDES (NAMIBE)
 FASE I (EPDA)

LISTA DE PRESENCAS (LOCAL) Apoios - Lubango
DATA: 19 / ABRIL / 2021

NOME	IDENTIFICAÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Tchihunga Haranda	Poiares	Campones		
Angelina Domingos	Poiares	Camponesa		
M'Pelo Boneca	Poiares	Camponesa		
Chira Latoma	"	Camponesa		
Landona Hamfa	"	"		
Nguelica Maluco	"	"		
Lehangunda Tchilombo	"	"		
M'unda Longonga	"	Camponesa		
Bote Paulina	"	Camponesa		
Fernanda Caruho	"	"		
Joaquins da Condição	"	rendedores		
Lanjala Cantate	"	"		
Ke hene Longonga	"	Campones		

220 kV TL Project between Lubango - Moçâmedes	MEETING MINUTES Stakeholder Engagement Meeting						
			Project: P.1649				
VENUE:	Tchiwaya Settlement in Arimba Communal, Lubango Municipality		DATE:	19/04/2021	# OF PAGES	9	
ASSUNTO:	Stakeholder Meeting	Engagement	NOTES BY:	Elayne Miranda and Eduardo Ferdinand		REVISION:	Vladimir Russo

ANEXOS**Appendix 1** – Photographic Record**Appendix 2** – Attendance List**Appendix 3** – Presentation**CÓPIAS ENVIADAS PARA:**

- National Electricity Transmission Network Company (RNT – E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Huíla Provincial Government.

ITEM	DESCRIPTION
1	On April 19 th , 2021, a stakeholder engagement meeting was held with the residents of the Tchiwaya settlement (Geographic coordinates: 14°58'36.34"S 13°35'57.30"E). The meeting was attended by several entities, with special mention to Mr. João Chissingui (Arimba Commune Deputy Administrator), Mrs. Maria Maio (Head of Section of the Social Area of the Arimba Communal Administration), members of the Tchiwaya settlement auscultation council, traditional authorities, residents, etc. The meeting was also attended by representatives from companies Holísticos (Eduardo Ferdinand, Elayne Miranda, and José Luís) and the RNT - National Electricity Transmission Network (Catarino Cosme, Leitão Alexandre, and Henriques dos Santos).
2	The stakeholder engagement meeting was attended by 30 participants, 18 of whom were female (45%). The Arimba Commune Deputy Administrator, Mr. João Chissingui (JC) welcomed those present and explained the importance of the Project in terms of development and boosting the economies of the Huíla and Namibe provinces, mentioning that job opportunities for young people in the settlement would be created and that tourism could be developed in the region. There was a need for simultaneous translation into the local language (Nhaneca-Humbi) as many of those present in meeting did not fully understand Portuguese. Mr. Manuel Cateva (one of the oldest and most respected residents of the Tchiwaya settlement) helped during the translation process.
3	Holísticos' representative, Eduardo Ferdinand (EF) began the presentation by using simplified banners to outline the Project's characteristics and explain the electricity transmission line (TL) proposed route before elaborating on ongoing environmental, social and cultural surveys and the potential impacts of the proposed route and how they will be mitigated.

4	<p>EF also mentioned that a stakeholder engagement process is extremely important regarding the materialization of the Project and that RNT is promoting the Project in collaboration with Tokyo Electric Power Services Co. (TEPSCO), with financing from the Japan International Cooperation Agency (JICA). He emphasized that the Project's main goal is to increase electricity supply to the Namibe province while also allowing for the connection of electricity transport systems between the north (highlighting Malanje province) and center-south regions.</p>
5	<p>EF explained that the Project addresses the need to transport electricity generated at the Laúca Dam through the Belém do Dango (Huambo Province), Nombungo and Arimba substations (Huíla Province) and later Moçâmedes substation (Namibe Province). He also mentioned that the Project will adhere to JICA Guidelines for Environmental and Social Considerations (2010).</p>
6	<p>EF stated that the objective of the stakeholder engagement meeting is to give interested and potentially affected parties a chance to learn about the Project, offer feedback, and make recommendations regarding its implementation. EF gave a presentation that focused on the following points (see Annex 3 - Presentation):</p> <ul style="list-style-type: none"> • Brief description of the Project; • Presentation of the country's current environmental impact assessment process; • Project Financier (JICA) legal and regulatory framework; • Environmental and socio-economic aspects of the transmission line route; • Expected environmental and socio-economic Impacts; • Questions and answers session.
7	<p>EF also explained that the Project intends to avoid inhabited spaces, agricultural and livestock areas as well as military and commercial aircraft manoeuvring spaces, transhumance areas, areas that are historically important to ethnolinguistic communities, cemeteries, leisure areas, etc. Concluded the presentation by mentioning that the ongoing environmental studies (Environmental Pre-Feasibility Study and Scoping Report and Environmental and Social Impact Study for the Project) would be prepared in compliance with current legislation, industry best practices, and other JICA guidelines, stressing that the line's route may be altered depending on the severity of any identified environmental and social impacts and topography survey. He invited those present to provide feedback regarding improving Project related technical feasibility studies.</p>
8	<p>It is important to note that the entire meeting was translated between Portuguese and Nhaneca-Humbi in order to ensure that the residents of the Tchiwaya settlement fully understood all aspects. Manuel Cateva facilitated the translation process.</p>
9	<p>The table below provides a summary of the questions and answers session.</p>

QUESTIONS AND ANSWERS SESSION SUMMARY

Comment/Question	Answer
<p>Tchimone Tchaunga (TT) - Tchiwaya resident. Mpeyo Tchimongua (MT) - Tchiwaya resident.</p> <p>TT and MT praised the government's initiative regarding Project implementation but mentioned that the local population is currently suffering from famine as a result of recurrent droughts in the region. They also requested food support and the installation of infrastructures such as fountains, schools, medical posts, etc.</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>Angolan Government has policies requiring companies that execute state projects to create Social Responsibility Programs in order to safeguard communities. These concerns have been raised and will be forwarded to the Project contractor as soon as the public tender is held.</p> <p>RNT will advise the future contractor to implement the Social Responsibility Program in accordance with social needs and conditions identified by communities along the Project's route.</p>
<p>Domingos Século (DS) - Tchiwaya settlement resident.</p> <p>DS praised the government's initiative regarding Project implementation and expressed gratitude regarding the associated benefits. Requested clarification regarding the involuntary relocation and compensation process, asking what would happen in the event of damage to third party infrastructure (housing, agricultural and pastoral areas, etc.).</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>JICA takes issues of resettlement and compensation very seriously and will not provide financing until such issues are addressed, in compliance with the agency's regulations and standards. The line to be installed cannot pass over houses, agricultural land, cemeteries and large trees. However, would be cases where this would not be feasible, whereby JICA has very specific rules, and as a result, a Resettlement and Compensation Plan (RCP) for affected parties would be elaborated to ensure that families affected by the transmission line Project have equal or better conditions than those that were present prior to Project implementation.</p> <p>The compensations for the loss of agricultural land and fruit trees would be determined using the Ministry of Agriculture and Fisheries' price table for agricultural products per square meter, and that the entire process would be fair, transparent and honest, thus ensuring that compensation is granted to whom it is owed. Proposed the creation of working committees between RNT, TEPSCO, JICA, the Lubango Municipal Administration and the Huíla Provincial Directorates. Should a house be affected by the Project, it will be assessed and the affected parties may receive a house of equivalent or better specification. The</p>

Comment/Question	Answer
	<p>220 kV TL route is not the final, may be changed, and several studies such as geographical, topographical, environmental, social and cultural studies are required to identify the final route and ensure that it does not affect the population's well-being, or if it does, that it is kept to a minimum.</p> <p>A thorough registration process regarding any affected agricultural land, housing and other infrastructure along the 190 km Project route would be conducted in order to prevent any opportunism, which would result in a Resettlement Action Plan being elaborated.</p>
<p>Filipe Sacula (FL) - Tchiwaya settlement resident.</p> <p>FL praised the government's initiative regarding Project implementation and expressed gratitude regarding the associated benefits. Expressed his concern regarding the lack of identity (ID) cards among the youth of the settlement and how this would affect employment opportunities.</p>	<p>Catarino Cosme (CC) - RNT</p> <p>The Tchiwaya settlement coordinators and traditional authorities must ensure that young people obtain ID cards.</p> <p>Eduardo Ferdinand (EF) - Holísticos</p> <p>Employment opportunities would be available to all young people in Tchiwaya settlement, however, for the sake of compliance with the law in force, everyone must present their respective ID cards. All salaries must be bank-based, there will be contributions to Social Security and the payment of Withholding Tax (depending on the salary) and the absence of ID card can be an obstacle to obtaining a job.</p>
<p>Manuel Cateva (MC) - Tchiwaya settlement resident.</p> <p>MC thanked the government for implementing the Project and stated that he would like to see benefits in terms of the growth of the Huíla region.</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>The objective of the 220 kV TL Project is to facilitate the transportation of electricity between the Arimba 220/60 kV in Lubango and the 220/60 kV substations to be installed in Moçâmedes.</p> <p>ENDE may establish future energy distribution projects in collaboration with the Huíla and Namibe Provincial Governments for the communities.</p>
<p>With no further questions, the stakeholder engagement meeting was closed by Mrs. MM (Head of Section of the Social Area of the Arimba Communal Administration), who thanked everyone for attending, with special mention to</p>	

Comment/Question	Answer
	the Project promoters; RNT and Holísticos representatives. She also expressed her belief in the success of the Project, stating that it would be a valuable contribution to the growth of the Huíla and Namibe provinces.

APPENDIX 1: PHOTOGRAPHIC RECORD



Photo 1: Detail of the parties present at the stakeholder engagement meeting (SHM) in the Tchiwaya settlement.



Photo 2: Project disclosure by Eduardo Ferdinand (Holísticos).



Photo 3: Meeting translation in Nyaneca Humbi by Manuel Cateva.



Photo 4: Evidence of women during the SHM.



Photo 5: Mrs. Tchimone Tchaunga's intervention.



Photo 6: Mr. Filipe Sacula's intervention.

APPENDIX 2: ATTENDANCE LIST.






ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 kV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
 FASE 1 (EPOA)

LISTA DE PRESENCAS (LOCAL): Tchicwaya - Lubango DATA: 19 / ABRIL/2021

ADMI	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Eduardo Jardim	Acéstias	Engº Ambiental	925 7539 14	<i>Eduardo Jardim</i>
José Tomás Chisicungu	A.C.A	Administrador C. Adjunto	923 4387 14	<i>José Tomás Chisicungu</i>
Caralino Casmo	RNI - EP	Sociólogo	9123 5541 2	<i>Caralino Casmo</i>
Domingos Casmo	Tchicwaya	Campones	935 0818 26	
Isaia Wachilaka	Tchicwaya	Campones	922 83 66 05	
Henrique Santos	RNT - EP	T.P.E.S.G	924 92 58 34	<i>Henrique Santos</i>
Paulo Alexandre	RNI - EP	Engº Ambiental	924 71 53 93	<i>Paulo Alexandre</i>
Filipe Saucá	Tchicwaya	Campones		
Domingos Tomé	Tchicwaya	Campones		
Rosalina Maria	Tchicwaya	Camponesa	928 42 67 69	
Tchimane Tchicungu	Tchicwaya	Camponesa		
Peio Tchicungu	Tchicwaya	Camponesa		
Theresa Peio	Tchicwaya	Camponesa		



LISTA DE PRESENCAS (LOCAL):

Tchicocopa - Lubango

DATA: 19 / ABRIL/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Maria Tristudo	Tchicocopa	Camponesa		
Maria Pedro	"	Camponesa		
Berlinda Faria	Tchicocopa	Estudante	949 423489	
Djanduca Catiti	"	Camponesa		
Alexandrina Diavelo	"	"		
Carolina Quinta	"	Camponesa		
Josina Maria	"	"		
Manuel Bado	"	Camponesa	921 925 255	
Joaquim Bardo	"	"		
Domingos Helena	"	Camponesa		
Teresa H. Hippo	"	"		
Domingos Nôwala	"	"		
Joaquim Kiamungo	"	Camponesa		



LISTA DE PRESENCAS (LOCAL):

Téli: 6270 - Lubango

DATA: 30 ABRIL/2021

Nome	INSTITUIÇÃO	FUNÇÃO	CONTACTO	ASSINATURA
Romão Mustuê	Telecoopa	Companha		
José Dula	Holísticos	Consultor	933795840	
Stálio R. Chitão	A. C. A	Chefe de Secção	934478847	
Cláudio Miranda	Holísticos	Erg. Ambiental	926964380	

220 kV TL Project between Lubango - Moçâmedes	MEETING MINUTES Stakeholder Engagement Meeting						
			Project: P.1649				
VENUE:	Kapalanga Settlement in Arimba Communal, Lubango Municipality		DATE:	20/04/2021	# OF PAGES	11	
ASSUNTO:	Stakeholder Meeting	Engagement	NOTES BY:	Elayne Miranda and Eduardo Ferdinand		REVISION:	Vladimir Russo

ANEXOS**Appendix 1** – Photographic Record**Appendix 2** – Attendance List**Appendix 3** – Presentation**CÓPIAS ENVIADAS PARA:**

- National Electricity Transmission Network Company (RNT – E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Huíla Provincial Government.

ITEM	DESCRIPTION
1	On April 20 th , 2021, a stakeholder engagement meeting was held with the residents of the Kapalanga settlement (Geographic coordinates: 14°58'27.30"S 13°31'52.07"E). The meeting was attended by several entities, with special mention to Mr. João Chissingui (Arimba Commune Deputy Administrator), Mrs. Maria Maio (Head of Section of the Social Area of the Arimba Communal Administration), members of the Kapalanga settlement auscultation council, traditional authorities, residents, etc. The meeting was also attended by representatives from companies Holísticos (Eduardo Ferdinand, Elayne Miranda, and José Luís) and the RNT - National Electricity Transmission Network (Catarino Cosme, Leitão Alexandre, and Henriques dos Santos).
2	The stakeholder engagement meeting was attended by 42 participants, 14 of whom were female (35%). The Arimba Commune Deputy Administrator, Mr. João Chissingui (JC) welcomed those present and explained the importance of the Project in terms of development and boosting the economies of the Huíla and Namibe provinces, mentioning that job opportunities for young people in the settlement would be created and that tourism could be developed in the region. There was a need for simultaneous translation into the local language (Nhaneca-Humbi) as many of those present in meeting did not fully understand Portuguese. Mr. Luís Malumani (one of the oldest and most respected residents of the Kapalanga settlement) helped during the translation process.
3	Holísticos' representative, Eduardo Ferdinand (EF) began the presentation by using simplified banners to outline the Project's characteristics and explain the electricity transmission line (TL) proposed route before elaborating on ongoing environmental, social and cultural surveys and the potential impacts of the proposed route and how they will be mitigated.

4	<p>EF also mentioned that a stakeholder engagement process is extremely important regarding the materialization of the Project and that RNT is promoting the Project in collaboration with Tokyo Electric Power Services Co. (TEPSCO), with financing from the Japan International Cooperation Agency (JICA). He emphasized that the Project's main goal is to increase electricity supply to the Namibe province while also allowing for the connection of electricity transport systems between the north (highlighting Malanje province) and centre-south regions.</p>
5	<p>EF explained that the Project addresses the need to transport electricity generated at the Laúca Dam through the Belém do Dango (Huambo Province), Nombungo and Arimba substations (Huíla Province) and later Moçâmedes substation (Namibe Province). He also mentioned that the Project will adhere to JICA Guidelines for Environmental and Social Considerations (2010).</p>
6	<p>EF stated that the objective of the stakeholder engagement meeting is to give interested and potentially affected parties a chance to learn about the Project, offer feedback, and make recommendations regarding its implementation. EF gave a presentation that focused on the following points (see Annex 3 - Presentation):</p> <ul style="list-style-type: none"> • Brief description of the Project; • Presentation of the country's current environmental impact assessment process; • Project Financier (JICA) legal and regulatory framework; • Environmental and socio-economic aspects of the transmission line route; • Expected environmental and socio-economic Impacts; • Questions and answers session.
7	<p>EF also explained that the Project intends to avoid inhabited spaces, agricultural and livestock areas as well as military and commercial aircraft manoeuvring spaces, transhumance areas, areas that are historically important to ethnolinguistic communities, cemeteries, leisure areas, etc. Concluded the presentation by mentioning that the ongoing environmental studies (Environmental Pre-Feasibility Study and Scoping Report and Environmental and Social Impact Study for the Project) would be prepared in compliance with current legislation, industry best practices, and other JICA guidelines, stressing that the line's route may be altered depending on the severity of any identified environmental and social impacts and topography survey. He invited those present to provide feedback regarding improving Project related technical feasibility studies.</p>
8	<p>It is important to note that the entire meeting was translated between Portuguese and Nhaneca-Humbi in order to ensure that the residents of the Tchiwaya settlement fully understood all aspects. Manuel Cateva facilitated the translation process.</p>
9	<p>The table below provides a summary of the questions and answers session.</p>

QUESTIONS AND ANSWERS SESSION SUMMARY

Comment/Question	Answer
<p>Francisco Kalupe (FK) - Kapalanga resident.</p> <p>FK praised the government's initiative regarding Project implementation and expressed gratitude regarding the associated benefits. Enquire about the Project schedule.</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>The proposed timetable for the global project construction is 30 months, however, the construction phase will start only after the conclusion and approval of the Environmental and Social Impact Study by the Project financier (JICA) and the Ministry of Culture, Tourism and Environment (MCTA). If the financing is guaranteed, implementation phase could begin during 2023.</p> <p>Currently, the project is undergoing a Technical Pre-Feasibility Analysis phase, RNT experts are studying the best alternatives options for the Project's route and technology. After determining the transmission line route, work will begin during the second quarter of 2022 to map the terrain's topography, geomorphology and locate any possibly unexploded ordnance.</p> <p>A contractor for the Project has yet to be identified, while engineering studies are being prepared by the Japanese firm TEPCO. Subsequently, RNT will hold a public tender to identify a contractor that has the necessary experience to implement the Project, as well as the ability to do so in less time than stipulated in the requirements.</p>
<p>Francisco Niama (FN) - Kapalanga resident.</p> <p>FN praised the government's initiative regarding Project implementation but mentioned that the local population is currently suffering from famine as a result of recurrent droughts in the region. Requested food support and the installation and improvement of infrastructures such as fountains, schools, medical posts, roads access, etc.</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>Angolan Government has policies requiring companies that execute state projects to create Social Responsibility Programs in order to safeguard communities nearby the project area of influence. These concerns have been raised and will be forwarded to the future Project contractor as soon as the public tender is held. RNT will advise also the future contractor to implement the Social Responsibility Program in accordance with social needs and conditions identified by communities along the Project's route.</p>
<p>Luís Manuel (LM) - Kapalanga resident.</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>JICA takes issues of resettlement and compensation very seriously and will not provide financing until such issues are</p>

Comment/Question	Answer
<p>LM praised the government's initiative regarding Project implementation and expressed gratitude regarding the associated benefits. LM requested clarification regarding the involuntary relocation and compensation process, asking what would happen in the event of damage to third party infrastructure (housing, agricultural and livestock areas, etc.).</p> <p>LM requested employment opportunities for young people in the Kapalanga settlement in order to improve their social and economic conditions.</p>	<p>addressed, in compliance with the agency's regulations and standards. The line to be installed cannot pass over houses, hospital, schools, agricultural land, cemeteries and large trees. However, would be cases where this would not be feasible, whereby JICA has very specific rules, and as a result, a Resettlement and Compensation Plan (RCP) for affected parties would be elaborated to ensure that families affected by the transmission line Project have equal or better conditions than those that were present prior to Project implementation.</p> <p>The compensations for the loss of agricultural land and fruit trees would be determined using the Ministry of Agriculture and Fisheries' price table for agricultural products per square meter, and that the entire process would be fair, transparent and honest, thus ensuring that compensation is granted to whom it is owed. Proposed the creation of working committees between RNT, TEPSCO, JICA, the Lubango Municipal Administration and the Huíla Provincial Directorates.</p> <p>Should a house be affected by the Project, it will be assessed and the affected parties may receive a house of equivalent or better specification. The 220 kV TL route is not the final, may be changed, and several studies such as geographical, topography, environmental, social and cultural studies are required to identify the final route and ensure that it does not affect the population's well-being, or if it does, that it is kept to a minimum.</p> <p>The Project budget will take into account any negative impacts that the Project may cause.</p> <p>A thorough registration process regarding any affected agricultural land, housing and other infrastructure along the 190 km Project route would be conducted in order to</p>

Comment/Question	Answer
	<p>prevent any opportunism, which would result in a Resettlement Action Plan being elaborated.</p> <p>It was proposed the creation of multidisciplinary working committees between RNT, TEPCO, JICA, the Humpata and Lubango Municipalities Administrations and the Huíla Provincial Directorates in order to ensure a fair process regarding compensation for damage to agricultural land and potential displacement along the Project's route.</p> <p>Leitão Alexandre (LA) - RNT</p> <p>A public tender will be launched to find the contractor company that will implement the 220 kV Project and 220/60 kV substation in Moçâmedes. In the specifications, the EPC will be required to contract up to 40% of local labour. The contractor must disclose these job opportunities in Jornal de Angola, local radios stations with the highest ratings, safety displays on the workers camps, integrated professional training centres in Huíla and Namibe capital cities, among other means or platforms for dissemination, so that everyone can have access to information.</p>
	<p>Catarino Cosme - RNT</p> <p>The compensations regarding agricultural land, loss of fruit trees and houses would be made transparently, in accordance with the country's administrative and legal norms and international best practice, such as the World Bank standards and JICA guidelines. The Project Financier will not continue with funding unless these problems are evaluated and addressed in advance.</p> <p>The 220 kV TL route is not the final, may be changed, and several studies such as geographical, topography, environmental, social and cultural studies are required to identify the final route and ensure that it does not affect the population's well-being, or if it does, that it is kept to a minimum possible.</p>

Comment/Question	Answer
<p>Observation. During the stakeholder engagement meeting, several issues were raised related to famine and misery, which seriously affects the populations of the Kapalanga settlement, due to frequent droughts. On the other hand, the communities requested the installation and improvement of essential infrastructures in the settlement, such as: drinking water, health centre, road construction, support for subsistence farming, etc.</p>	
	<p>With no further questions, the stakeholder engagement meeting was closed by Mr. João Chissingui (Arimba Commune Deputy Administrator), who thanked everyone for attending, with special mention to the Project promoters; RNT and Holísticos representatives. He also expressed his belief in the success of the Project, stating that it would be a valuable contribution to the growth of the Huíla and Namibe provinces.</p>

APPENDIX 1: PHOTOGRAPHIC RECORD



Photo 1: Detail of the parties present at the stakeholder engagement meeting in the Kapalanga settlement.

Photo 2: Project disclosure by Eduardo Ferdinand (Holísticos).

Photo 3: Question about project made by Mr. Francisco Niama.

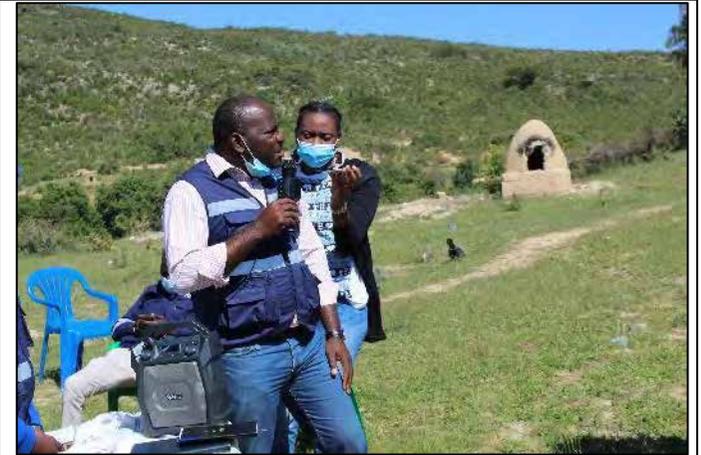


Photo 3: Translation to Nyaneca Humbi by Mr. Luís Manuel.

Photo 5: Intervention by an elderly woman speaking exclusively about the famine and misery in the region.

Photo 6: Catarino Cosme's (RNT) intervention.

APPENDIX 2: ATTENDANCE LIST.






ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
 DE ELECTRICIDADE DE 220 kV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
 FASE 3 (EPDA)

LISTA DE PRESENCAS (LOCAL): Kafalansa - Lubango DATA: 20 / ABRIL / 2021

NOME	INSTITUIÇÃO	FORMAÇÃO	CONTACTOS	ASSINATURA
Luís Miguel Gonçalves	RNT-SP	Tec. P. E. S. G.	924-9258-24	[Signature]
Zeito Alexandre	RNT-EP	Eng. Ambiental	929715393	[Signature]
Eduardo Ferreira	Holísticos	Eng. Ambiental	925 753914	[Signature]
Carolino Costa	RNT-EP	Sociólogo	912355412	[Signature]
Haroldo Ch. Haro	A.C.A	Clube de Seguros	984478747	Haroldo Haro
João Campos Oliveira	Acad	Administrador Adjunto	923433717	[Signature]
Mu Nde Neto	Kafalansa	Campones		
David Namite	Kafalansa	Campones		
Fernando Aguiar	Kafalansa	Campones		
Baltazar Salile	Kafalansa	"		
Franisco Maguinho	"	"		
Salile Munila	"	"		
Juri Paqueta	"	"		



LISTA DE PRESENÇAS (LOCAL): Kapalanka - Lubango

DATA: 20 / ABRIL / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
João Magalhães	Kapalanka	Companheiros		
João Ndjumbula	"	"		
João Lagamba	"	"		
João Ngamba	"	"		
Domingos Antinico	"	"		
João Sapalo	"	"		
João Tschica Lubamba	"	"		
João Luis	"	"		
Alexandre Magalhães	"	"		
João Triapinga	"	"		
Alfredo Seiscentos	"	"		
Isabela Seguro	"	"		
Francisco Kalute	"	"		



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 1 (EPDA)

LISTA DE PRESENCAS (LOCAL): Kafalansa - Lubango

DATA: 30 / ABRIL/2021

NOME	INSTITUIÇÃO	FUNÇÃO	IDENTIFICAÇÃO	ASSINATURA
Francisco Bile	Kafalansa	Campones		
Segunda Tshafona	"	Campones		
Fernanda Tchavira	"	"		
Miguelina Francisco	"	"		
Bilita Paulina	"	"		
Sandra Mualisa	"	"		
Francisca Helena	"	"		
João Xibi	"	"		
Francisco Kaluto	"	"		
Luís Malurani	"	Dirigente da Igreja	922520753	
Gugório Tchavira	"	Campones		
João Sequelo	"	"		
Fátima Salazar	"	Campones		



TEPSCO
Terra Electricidade Namibe Serviços, S.A.

ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 kV LUBANGO (HUÍLA) - MOÇÂMEDES (NAMIBE)

FASE 1 (OPDA)

LISTA DE PRESENCAS (LOCAL): Aldéia Poaires - Lubango

DATA: 19 / ABRIL / 2021

NOME	RESIDÊNCIA	FUNÇÃO	CONTACTOS	ASSISTENTE
Domingos Lauteli	Poaires	Campones		
Joaquim Manuel	"	"		
Vitória Maria	"	Camponesa		
Militina Calume	"	Camponesa		
Caetano Fernando	"	Camponesa		
Neto João Mulombe	"	Campones		
Mateus Domingos	"	Campones		
Tezesa	"	Camponesa		
Vândida Namtuele	"	Camponesa		
João Aricango	"	Campones		
Maablene Sapalo	"	Camponesa		
Tezesa	"	Camponesa		
Andina João muni	"	vendedora		

220 kV TL Project between Lubango - Moçâmedes	MEETING MINUTES Stakeholder Engagement Meeting						
			Project: P.1649				
VENUE:	Heva, Kamba Cristo and Palanca Settlements in Humpata Municipality.		DATE:	21/04/2021	# OF PAGES	13	
ASSUNTO:	Stakeholder Meeting	Engagement	NOTES BY:	Elayne Miranda and Eduardo Ferdinand		REVISION:	Vladimir Russo

ANEXOS**Appendix 1** – Photographic Record**Appendix 2** – Attendance List**Appendix 3** – Presentation**CÓPIAS ENVIADAS PARA:**

- National Electricity Transmission Network Company (RNT – E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Huíla Provincial Government.

ITEM	DESCRIPTION
1	On April 21 th , 2021, a stakeholder engagement meeting was held with the residents of the Heva, Kamba Cristo and Palanca settlements in <i>Jango Comunitário da Palanca</i> (Geographic coordinates: 15°02'16"S 13°20'36"E). The meeting was attended by several entities, with special mention to Mr. Carlos Xavier (Humpata Municipal Deputy Administrator for Technical Area and Infrastructure), Mr. Yuri Chivanja (Palanca Communal Administrator), Municipal Directors, representatives of Humpata Municipal Administration, members of the Heva, Kamba Cristo and Palanca settlements auscultation council, traditional authorities, residents, etc. The meeting was also attended by representatives from companies Holísticos (Eduardo Ferdinand, Elayne Miranda, and José Luís) and the RNT - National Electricity Transmission Network (Catarino Cosme, Leitão Alexandre, and Henriques dos Santos).
2	The stakeholder engagement meeting was attended by 52 participants, eight (8) of whom were female (18%). Humpata Municipal Deputy Administrator for Technical Area and Infrastructure, Mr. Carlos Xavier (CX) welcomed those present and explained the importance of the Project in terms of development and boosting the economies of the Huíla and Namibe provinces, mentioning that job opportunities for young people in the settlements would be created and that tourism could be developed in the region.
3	Holísticos' representative, Eduardo Ferdinand (EF) began the presentation by using simplified banners to outline the Project's characteristics and explain the electricity transmission line (TL) proposed route before elaborating on ongoing environmental, social and cultural surveys and the potential impacts of the proposed route and how they will be mitigated.

4	<p>EF also mentioned that a stakeholder engagement process is extremely important regarding the materialization of the Project and that RNT is promoting the Project in collaboration with Tokyo Electric Power Services Co. (TEPSCO), with financing from the Japan International Cooperation Agency (JICA). He emphasized that the Project's main goal is to increase electricity supply to the Namibe province while also allowing for the connection of electricity transport systems between the north (highlighting Malanje province) and center-south regions.</p>
5	<p>EF explained that the Project addresses the need to transport electricity generated at the Laúca Dam through the Belém do Dango (Huambo Province), Nombungo and Arimba substations (Huíla Province) and later Moçâmedes substation (Namibe Province). He also mentioned that the Project will adhere to JICA Guidelines for Environmental and Social Considerations (2010).</p>
6	<p>EF stated that the objective of the stakeholder engagement meeting is to give interested and potentially affected parties a chance to learn about the Project, offer feedback, and make recommendations regarding its implementation. EF gave a presentation that focused on the following points (see Annex 3 - Presentation):</p> <ul style="list-style-type: none"> • Brief description of the Project; • Presentation of the country's current environmental impact assessment process; • Project Financier (JICA) legal and regulatory framework; • Environmental and socio-economic aspects of the transmission line route; • Expected environmental and socio-economic Impacts; • Questions and answers session.
7	<p>EF also explained that the Project intends to avoid inhabited spaces, agricultural and livestock areas as well as military and commercial aircraft manoeuvring spaces, transhumance areas, areas that are historically important to ethnolinguistic communities, cemeteries, leisure areas, etc. Concluded the presentation by mentioning that the ongoing environmental studies (Environmental Pre-Feasibility Study and Scoping Report and Environmental and Social Impact Study for the Project) would be prepared in compliance with current legislation, industry best practices, and other JICA guidelines, stressing that the line's route may be altered depending on the severity of any identified environmental and social impacts and topography survey. He invited those present to provide feedback regarding improving Project related technical feasibility studies.</p>
8	<p>The table below provides a summary of the questions and answers session.</p>

QUESTIONS AND ANSWERS SESSION SUMMARY

Comment/Question	Answer
<p>António Silva (AS) - Farmer</p> <p>AS thanked the government for implementing the Project and stated that he would like to see benefits in terms of the growth of the centre-south region. He mentioned that the presence of the electricity transmission line could encourage distribution projects in the future, which would benefit the communities of Humpata municipality.</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>The Project team thanked Mr. António Silva for all his contributions.</p>
<p>Daniel Domingos (DD) - Palanca neighbourhood resident.</p> <p>DD requested clarification regarding the involuntary resettlement and compensation process in case of damage to third party infrastructure (for example, housing, agricultural land and livestock areas, etc.).</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>JICA takes issues of resettlement and compensation very seriously and will not provide financing until such issues are addressed, in compliance with the agency's regulations and standards. The line to be installed cannot pass over houses, hospital, schools, agricultural land, cemeteries and large trees. However, would be cases where this would not be feasible, whereby JICA has very specific rules, and as a result, a Resettlement and Compensation Plan (RCP) for affected parties would be elaborated to ensure that families affected by the transmission line Project have equal or better conditions than those that were present prior to Project implementation.</p> <p>The compensations for the loss of agricultural land and fruit trees would be determined using the Ministry of Agriculture and Fisheries' price table for agricultural products per square meter, and that the entire process would be fair, transparent and honest, thus ensuring that compensation is granted to whom it is owed. Proposed the creation of working committees between RNT, TEPSCO, JICA, the Lubango Municipal Administration and the Huíla Provincial Directorates.</p> <p>Should a house be affected by the Project, it will be assessed and the affected parties may receive a house of equivalent or better specification. The 220 kV TL route is</p>

Comment/Question	Answer
	<p>not the final, may be changed, and several studies such as geographical, topography, environmental, social and cultural studies are required to identify the final route and ensure that it does not affect the population's well-being, or if it does, that it is kept to a minimum.</p> <p>The Project budget will take into account any negative impacts that the Project may cause.</p> <p>A thorough registration process regarding any affected agricultural land, housing and other infrastructure along the 190 km Project route would be conducted in order to prevent any opportunism, which would result in a Resettlement Action Plan being elaborated.</p> <p>It was proposed the creation of multidisciplinary working committees between RNT, TEPSCO, JICA, the Humpata and Lubango Municipalities Administrations and the Huíla Provincial Directorates in order to ensure a fair process regarding compensation for damage to agricultural land and potential displacement along the Project's route.</p> <p>Catarino Cosme (CC) - RNT</p> <p>Compensation regarding agricultural land, loss of fruit trees and house would be made transparently, in accordance with the country's administrative and legal norms and international best practice, such as the World Bank standards and JICA guidelines. The Project Financier will not continue with funding unless these problems are evaluated and addressed in advance.</p> <p>The final transmission line route must avoid urban areas (houses), agricultural land, cultural and historical sites, as well as grazing areas and historical transhumance sites. However, should the transmission line route cause any disruption, all affected infrastructure would be registered, assessed and the persons will be compensated.</p>

Comment/Question	Answer
<p>Elizabeth António (EA) - Palanca neighbourhood resident.</p> <p>EA praised the government's initiative regarding Project implementation. However, she mentioned that electricity distributed by ENDE is currently insufficient and does not meet the consumption needs of the Palanca neighbourhood. She questioned if the Project would improve this situation.</p> <p>Abel Pedro (AP) - Palanca neighbourhood resident.</p> <p>AP stated that an ENDE representative should be part of the Project support team in order to resolve customer issues. He Said that ENDE's lack of communication regarding inadequate electricity supply has driven residents to resort to illegal/unsafe means of obtaining electricity.</p>	<p>Catarino Cosme (CC) - RNT</p> <p>In a first phase, the implementation of the 220 kV transmission line and 220/60 kV substation in Moçâmedes would benefit the Namibe province.</p> <p>There are three (3) companies with responsibility in the energy sector in the country: PRODEL (Production), RNT (Transmission) and ENDE (Distribution). RNT will install the transmission line between Lubango - Moçâmedes during the first phase of the Project. This will be followed by the implementation of the distribution phase, during which ENDE, in collaboration with the Huíla and Namibe Provincial Governments and municipal administrations, will evaluate energy demand and develop alternative distribution options from the Moçâmedes substation. However, it was emphasized that currently, the Project will only facilitate the transportation of electricity between the Arimba 220/60 kV substations in Lubango and the new 220/60 kV substation to be installed in the Aida neighbourhood, Moçâmedes.</p> <p>It was mentioned that District of Palanca will be shortly beneficiary by energy provided by Humpata substation.</p>
<p>Francisco José (FJ) - Palanca neighbourhood resident.</p> <p>FJ asked for clarification regarding risks the 220 kV transmission line could pose to nearby communities.</p>	<p>Catarino Cosme (CC) - RNT</p> <p>In terms of safety, the towers would be 30-35 meters above ground level and any effects of electromagnetic fields at these altitudes would be negligible. A concerted effort will be made to avoid the lines crossing residential areas. As a safety precaution, people should not perform any activities near the towers' designated location.</p> <p>Smart safety, warning, and emergency sensors will be mounted on power transmission lines and the transmission system will be automatically interrupted if the cables become damaged or weather conditions become extreme. It is recommended that no permanent infrastructure, such</p>

Comment/Question	Answer
	as homes, schools, hospitals or churches be constructed within the vicinity of the transmission line (45 meters).
<p>Sónia Adelaide (SA) - Palanca neighbourhood resident.</p> <p>SA mentioned that the neighbourhood has been without electricity for many years and that other communities are waiting for electricity to be distributed. He said that with the presence of the transmission line in the area and the Humpata substation in full operation, satellite electricity distribution projects could be promoted by ENDE, benefiting the neighbourhoods of Heva, Kamba Cristo, and the entire Palanca region (Headquarters).</p>	<p>Catarino Cosme (CC) - RNT</p> <p>ENDE would not be able to satisfy the existing electricity demand in the Humpata region without the intervention of a Project of this scale. ENDE needs to implement electricity transmission programs in order to upgrade substations and increase electricity supply to customers. The Project will be a valuable asset to the entire south-central region, and future communities will benefit from additional projects that will inevitably arise as a result of the 220 kV transmission line implementation.</p>
<p>Mbwale Tchilola (MT) - Palanca neighbourhood resident.</p> <p>MT questioned whether the route of the 220 kV transmission line would run parallel with the 60 kV line or whether a different crossing point would be established. He reiterated that the armed conflict in the country ended more than 15 years ago and that the campaign to identify unexploded ordnance explosives could delay the project's execution schedule.</p>	<p>Catarino Cosme (CC) - RNT</p> <p>The 220 kV transmission line would run parallel to the 60 kV line wherever possible. The route may be changed and several studies, such as geomorphological, topography, environmental, and social studies are required to identify the final route and ensure that it does not affect the population's well-being, or if it does, that it is kept to a minimum.</p> <p>Demining process is critical regarding the Project as Angola has been through several years of violent conflict and the transmission line route will pass through areas that are yet unused by the population. There will be an international public tender to select the Project contractor and several firms will refuse to send bids unless the National Executive Commission for Demining inspects the area and issues a demining certificate, thus alleviating concerns regarding property and the safety of personnel. It was highlighted the importance of this process.</p> <p>Eduardo Ferdinand (EF) - Holísticos</p> <p>The proposed timetable for the global project construction is 30 months, however, the construction phase will start only after the conclusion and approval of the</p>

Comment/Question	Answer
	<p>Environmental and Social Impact Study Report by the Project financier (JICA) and the Ministry of Culture, Tourism and Environment. If the financing is guaranteed, implementation phase could begin during 2023.</p> <p>Currently, the project is undergoing a Technical Pre-Feasibility Analysis phase, RNT experts are studying the best alternatives options for the Project's route and technology. After determining the transmission line route, work will begin during the second quarter of 2022 to map the terrain's topography, geomorphology and locate any possibly unexploded ordnance.</p> <p>A contractor for the Project has yet to be identified, while engineering studies are being prepared by the Japanese firm TEPSCO. Subsequently, RNT will hold a public tender to identify a contractor that has the necessary experience to implement the Project, as well as the ability to do so in less time than stipulated in the requirements.</p> <p>Meanwhile, stakeholder engagement meetings with residents of villages and neighbourhoods near the transmission line proposed route will be held continuously throughout the implementation phase of the Project and a Stakeholder Engagement Plan will be developed.</p>
<p>Elizabeth António (EA) - Palanca resident. Abel Pedro (AP) - Palanca neighbourhood resident. Sónia Adelaide (SA) - Palanca neighbourhood resident.</p> <p>EA, AP and SA expressed their dissatisfaction regarding the quality of electricity currently supplied by ENDE in the Palanca region.</p> <p>António Sapalo (AS) - Heva neighbourhood coordinator.</p> <p>AS praised the government's initiative regarding Project implementation. However, he mentioned that</p>	<p>Carlos Xavier (CX) - Deputy Municipal Administrator</p> <p>The Integrated Intervention Programme in Municipalities (PIIM) is implementing various projects in Humpata municipality regarding the development of critical infrastructure that cover the Palanca neighbourhood, such as the new Humpata substation, which currently also provides electricity to the municipalities of Chibia and Bibala as well as several Water Bore Projects that will benefit local communities. All complaints regarding electricity supply had been very well noted. He invited residents of the Heva, Kamba Cristo and Palanca neighbourhoods to visit the Humpata Municipal</p>

Comment/Question	Answer
the 60 kV electricity transmission lines pass through many neighbourhoods and that communities still remain without electricity.	Administration to learn more about the various projects that have been recommended for the region under PIIM.
Observation. During the stakeholder engagement meeting, several issues were raised concerns regarding electricity distributed by ENDE in region.	
With no further questions, the stakeholder engagement meeting was closed by Mr. Carlos Xavier (Humpata Municipal Deputy Administrator), who thanked everyone for attending, with special mention to the Project promoters; RNT and Holísticos representatives. He also expressed his belief in the success of the Project, stating that it would be a valuable contribution to the growth of the Huíla and Namibe provinces.	

APPENDIX 1: PHOTOGRAPHIC RECORD



Photo 1: Opening of the meeting by the Deputy Municipal Administrator of Humpata Eng. Carlos Xavier.

Photo 2: Project disclosure by Eduardo Ferdinand (Holísticos).

Photo 3: Question about project made by Mr. António Sapalo.



Photo 3: Entities present at the stakeholder engagement meeting.

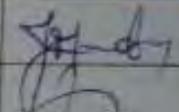
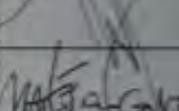
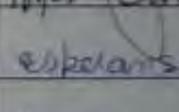
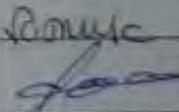
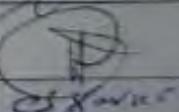
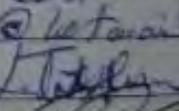
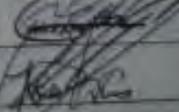
Photo 5: Intervention by Mrs. Elizabeth António.

Photo 6: Mr. Catarino Cosme's (RNT) intervention.

APPENDIX 2: ATTENDANCE LIST.


ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
 FASE 1 (EPDA)

LISTA DE PRESENCAS (LOCAL): HEVA DATA: 21 / ABRIL / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
José Mendonça	MED	Professor	929644130	
José Pedro	Palc			
António José de Jesus	R	Campanha	924052017	
António José de Jesus		Fazendeiro	936899852	
Maria Francisca Cabral	Município Municipal de Lubango	Município Municipal de Lubango	934459257	
Esperanças + Calu	adm. municipal	elétrico local D.P.G	939091661	
Ronilda A. Rebel	adm. municipal	Técnica Administrativa	9211856371	
Quintino Casca	LNI-EP	Sociólogo	912355412	
António Xavier de Sousa	RNT-EP	TEPESCO	924525734	
Carlos Xavier	ADM-HPIA	ADJUDO MUNICIPAL	929110467	
Luís Alexandre	RNT-EP	Eng. Ambiental	927725393	
Yuri J. @ Oliveira	ANCA	adm. Lubango	913788087	
José Gonçalves	Políticos	Político	933845840	



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 3 (EPDA)

LISTA DE PRESENCAS (LOCAL):

Palanca

DATA: 21 / ABRIL / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
José T. Vital	Palanca	Solha	924051796	[Signature]
José Marcelo	Palanca	carreiros	-	[Signature]
Mbuyale Tchutuba	Saude	Mulherista	928840045	[Signature]
Francisca José	Palanca	Estudante	947821095	Francisca
Yana de Carvalho	Palanca		940141799	Yana
Alfêzilio Pedro	Palanca	Professor	926636888	Alfêzilio Pedro
Marcelino Bruno	Palanca	lamponeiros	929697141	[Signature]
Ernesto Tyofila	Palanca	lamponeiros	928121919	
José Pedro Carolo	Palanca	lamponeiros		[Signature]
Luís Filipe Gamali	Palanca	Professor	923699201	[Signature]
António Partimura	Palanca	Estudante	92600025	[Signature]
João Patena	Palanca	ETA-lamponeiros	934565531	[Signature]
Paulo António Carim	Administração H. Palanca	Unidade H. Palanca	934459257	[Signature]



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 1 (EPDA)

LISTA DE PRESENCAS (LOCAL):

Palanca

DATA: 21 / ABRIL / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Rosendo A. Abel	Adm. Municipal	Técnico Administrativo	922 856252	Rosendo
Esperança da D.O.M. Cale	Adm. Municipal	chef de Secção A.D.M	939 091661	Esperanças
Domingos Bone	Palanca	Fiscal da Pira	927 463934	
Jose Pedro Tussabo	Palanca	Técnico	925 475426	JTB
Fernando Tchapiça	Palanca	Capitão	938 435803	
João Baptista Hanyá	Palanca	Secur	947 424069	
Luís G. Mumbua	Palanca	Fiscal	944 375455	
António Gabriel	Palanca	Fiscal	92391449	A-1
José Matete	Palanca - Húila	Motociclista	936 459707	
LEOPOLDO KAITA	ETA - PALANCA	RESPON. CL	92 7918432	KAITA
Segundo M. Obuale	Palanca	Comunidade	931066445	
Fca Eduardo	Polícia	Comandante do comando	944568098	Autos
Fernando M. Salvo	Palanca	Comunidade	937 831298	



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 1 (EPOA)

LISTA DE PRESENCAS (LOCAL):

Palanca

DATA: 21 / ABRIL / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Elisabeth António	Palanca	Doméstica	940868838	
Pedro Mainola	Administração	Fiscal	940994664	
Vicente J. Tadeu	Polícia Nacional	chefe S. Administrativo	925070578	Tadeu
Arnaldo Assis	Palanca		943702062	Arnaldo
Nelson Alberto	Palanca	Pedreiro		
Pedro Soma	Palanca	Pedreiro		
João Pedro	Palanca	Ex-Combatente		
José J. Kambya	Palanca	SOBA	926638944	
Marcosaria Magalhães	Palanca	Carboneles	936138527	
Daniel Domingos	Palanca	Companha		
Tomás António	Palanca	Capitão	969385162	
Isabel Almeida	Palanca	Administradora	926961560	
Elayne Miranda	Holísticos	Eng. Ambiental		

220 kV TL Project between Lubango - Moçâmedes	MEETING MINUTES Stakeholder Engagement Meeting						
			Project: P.1649				
VENUE:	Jamba Settlement in Humpata Municipality.		DATE:	21/04/2021	# OF PAGES	12	
ASSUNTO:	Stakeholder Meeting	Engagement	NOTES BY:	Elayne Miranda and Eduardo Ferdinand		REVISION:	Vladimir Russo

ANEXOS**Appendix 1** – Photographic Record**Appendix 2** – Attendance List**Appendix 3** – Presentation**CÓPIAS ENVIADAS PARA:**

- National Electricity Transmission Network Company (RNT – E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Huíla Provincial Government.

ITEM	DESCRIPTION
1	On April 21 th , 2021, a stakeholder engagement meeting was held with the residents of Jamba settlement (Geographic coordinates: 15°00'00.4"S 13°24'21.9"E). The meeting was attended by several entities, with special mention to Mr. Carlos Xavier (Humpata Municipal Deputy Administrator for Technical Area and Infrastructure), Mr. José Hequele (Humpata Communal Administrator), Municipal Directors, representatives of Humpata Municipal Administration, members of the Jamba settlement auscultation council, traditional authorities, residents, etc. The meeting was also attended by representatives from companies Holísticos (Eduardo Ferdinand, Elayne Miranda, and José Luís) and the RNT - National Electricity Transmission Network (Catarino Cosme, Leitão Alexandre, and Henriques dos Santos).
2	The stakeholder engagement meeting was attended by 64 participants, 19 of whom were female (28%). Humpata Municipal Deputy Administrator for Technical Area and Infrastructure, Mr. Carlos Xavier (CX) welcomed those present and explained the importance of the Project in terms of development and boosting the economies of the Huíla and Namibe provinces, mentioning that job opportunities for young people in the settlement would be created and that tourism could be developed in the region. There was a need for simultaneous translation into the local language (Nhaneca-Humbi) as many of those present did not fully understand Portuguese. Mr. José Emilio (Soba of Jamba settlement) helped during the translation process.
3	Holísticos' representative, Eduardo Ferdinand (EF) began the presentation by using simplified banners to outline the Project's characteristics and explain the electricity transmission line (TL) proposed route before elaborating on ongoing environmental, social and cultural surveys and the potential impacts of the proposed route and how they will be mitigated.

4	<p>EF also mentioned that a stakeholder engagement process is extremely important regarding the materialization of the Project and that RNT is promoting the Project in collaboration with Tokyo Electric Power Services Co. (TEPSCO), with financing from the Japan International Cooperation Agency (JICA). He emphasized that the Project's main goal is to increase electricity supply to the Namibe province while also allowing for the connection of electricity transport systems between the north (highlighting Malanje province) and center-south regions.</p>
5	<p>EF explained that the Project addresses the need to transport electricity generated at the Laúca Dam through the Belém do Dango (Huambo Province), Nombungo and Arimba substations (Huíla Province) and later Moçâmedes substation (Namibe Province). He also mentioned that the Project will adhere to JICA Guidelines for Environmental and Social Considerations (2010).</p>
6	<p>EF stated that the objective of the stakeholder engagement meeting is to give interested and potentially affected parties a chance to learn about the Project, offer feedback, and make recommendations regarding its implementation. EF gave a presentation that focused on the following points (see Annex 3 - Presentation):</p> <ul style="list-style-type: none"> • Brief description of the Project; • Presentation of the country's current environmental impact assessment process; • Project Financier (JICA) legal and regulatory framework; • Environmental and socio-economic aspects of the transmission line route; • Expected environmental and socio-economic Impacts; • Questions and answers session.
7	<p>EF also explained that the Project intends to avoid inhabited spaces, agricultural and livestock areas as well as military and commercial aircraft manoeuvring spaces, transhumance areas, areas that are historically important to ethnolinguistic communities, cemeteries, leisure areas, etc. Concluded the presentation by mentioning that the ongoing environmental studies (Environmental Pre-Feasibility Study and Scoping Report and Environmental and Social Impact Study for the Project) would be prepared in compliance with current legislation, industry best practices, and other JICA guidelines, stressing that the line's route may be altered depending on the severity of any identified environmental and social impacts and topography survey. He invited those present to provide feedback regarding improving Project related technical feasibility studies.</p>
8	<p>It is important to note that the entire meeting was translated between Portuguese and Nhaneca-Humbi in order to ensure that the residents of the Jamba settlement fully understood all aspects. Mr. José Emilio (JE) facilitated the translation process.</p>
9	<p>The table below provides a summary of the questions and answers session.</p>

QUESTIONS AND ANSWERS SESSION SUMMARY

Comment/Question	Answer
<p>Eduardo Henriques (EH) - Jamba neighborhood resident.</p> <p>EH questioned whether electricity that the Project plans to transport will come from the Laúca Dam. He also questioned whether the Project would support the region's communities, citing electricity distribution to the Jamba neighborhood as an example.</p> <p>Francisco Cambanti (FC) - Jamba neighborhood resident.</p> <p>FC questioned whether the population would benefit from the passing of the transmission line near the neighborhood.</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>The electricity that the Project plans to transport will come from the Laúca Dam, which is already connected to the Belém do Dango substation in Huambo province. A 400 kV electricity transmission line will be implemented to Lubango at Nombungo substation, which will allow the implementation of the Arimba substation, and the development of the Project presented.</p> <p>Regarding the Jamba neighborhood electricity supply, the planned transmission line will not facilitate the distribution of low voltage electricity along its route. However, in future there may be satellites projects for constructions of substation, expansion, and distribution that should be promoted by ENDE.</p> <p>Catarino Cosme (CC) - RNT</p> <p>In a first phase, the implementation of the 220 kV transmission line and 220/60 kV substation in Moçâmedes would benefit the Namibe province.</p> <p>Actually, there are three (3) companies with responsibility in the energy sector in the country: PRODEL (Production), RNT (Transmission) and ENDE (Distribution). RNT will install the transmission line during the first phase of the Project. This will be followed by the implementation of the distribution phase, during which ENDE, in collaboration with the Huíla and Namibe Provincial Governments and municipal administrations, will evaluate energy demand and develop alternative distribution options from the Moçâmedes substation. However, it was emphasized that currently, the Project will only facilitate the transportation of electricity between the Arimba 220/60 kV substations in Lubango and the new 220/60 kV substation to be installed in the Aida neighborhood, Moçâmedes.</p>

Comment/Question	Answer
	It was mentioned that Jamba settlement will be shortly beneficiary by energy provided by Humpata substation.
<p>José Kolela (JK) - Jamba neighborhood resident.</p> <p>JK asked for clarification regarding risks the 220 kV transmission line could pose to nearby communities.</p>	<p>Catarino Cosme (CC) - RNT</p> <p>In terms of safety, the towers would be 30-35 meters above ground level and any effects of electromagnetic fields at these altitudes would be negligible. A concerted effort will be made to avoid the lines crossing residential areas. As a safety precaution, people should not perform any activities near the towers' designated location.</p> <p>Smart safety, warning, and emergency sensors will be mounted on power transmission lines and the transmission system will be automatically interrupted if the cables become damaged or weather conditions become extreme. It is recommended that no permanent infrastructure, such as homes, schools, hospitals or churches be constructed within the vicinity of the transmission line (45 meters).</p>
<p>João Chivangulula (JC) - Jamba neighborhood resident.</p> <p>JC inquired whether the existing 60 kV towers could be used for the 220 kV transmission line Project and asked about the Project's budget.</p>	<p>Catarino Cosme (CC) - RNT</p> <p>The current 60 kV line towers would not be able to support the 220 kV TL. He also drew attention to the fact that accessibility makes the initiative unfeasible, and that a Project of this nature may pose serious risk to populations situated near the Project's route.</p>
	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>It was explained that during the Project implementation potential impacts may arise associated with evictions, and temporary loss of cultivation and livestock areas, and that JICA takes issues of resettlement and compensation very seriously and will not provide financing until such issues are addressed, in compliance with the agency's regulations and standards. The line to be installed cannot pass over houses, hospital, schools, agricultural land, cemeteries and large trees. However, would be cases where this would not be feasible, whereby JICA has very specific rules, and as a result, a Resettlement and Compensation Plan (RCP) for affected parties would be elaborated to ensure that</p>

Comment/Question	Answer
	<p>families affected by the Project have equal or better conditions than those that were present prior to Project.</p> <p>The compensations for the loss of agricultural land and fruit trees would be determined using the Ministry of Agriculture and Fisheries' price table for agricultural products per square meter, and that the entire process would be fair, transparent and honest, thus ensuring that compensation is granted to whom it is owed. The amount of compensation to be paid regarding areas deemed affected will be determined by the amount of agricultural product generated from present species and not by annual output as claimed by the farmer, with the possibility of production costs being offered to the farmer.</p> <p>Should a house be affected by the Project, it will be assessed and the affected parties may receive a house of equivalent or better specification. The 220 kV TL route is not the final, may be changed, and several studies such as geomorphological, topography, environmental, social and cultural studies are required to identify the final route and ensure that it does not affect the population's well-being, or if it does, that it is kept to a minimum.</p> <p>The Project budget will take into account any negative impacts that the Project may cause. A thorough registration process regarding any affected agricultural land, housing and other infrastructure along the 190 km Project route would be conducted in order to prevent any opportunism.</p> <p>It was proposed the creation of multidisciplinary working committees between RNT, TEPCO, JICA, the Humpata and Lubango Municipalities Administrations and the Huíla Provincial Directorates in order to ensure a fair process regarding compensation for damage to agricultural land and potential displacement along the Project's route.</p>

Comment/Question	Answer
	<p>With no further questions, the stakeholder engagement meeting was closed by Mr. Carlos Xavier (Humpata Municipal Deputy Administrator), who thanked everyone for attending, with special mention to the Project promoters; RNT and Holísticos representatives. He also expressed his belief in the success of the Project, stating that it would be a valuable contribution to the growth of the Huíla and Namibe provinces.</p>

APPENDIX 1: PHOTOGRAPHIC RECORD

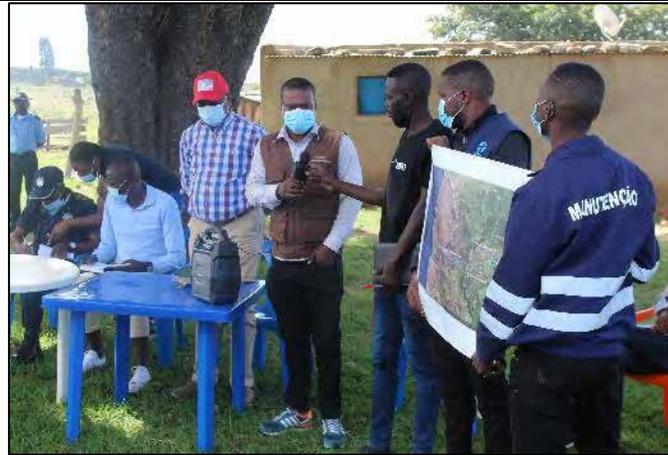


Photo 1: Opening of the meeting by the Deputy Municipal Administrator of Humpata Eng. Carlos Xavier.

Photo 2: Project disclosure by Eduardo Ferdinand (Holísticos).

Photo 3: Jamba settlement coordinators.



Photo 3: Intervention by Mr. João Chivangulula.

Photo 5: Intervention by Mr. José Kolela.

Photo 6: Mr. Catarino Cosme's (RNT) intervention.

APPENDIX 2: ATTENDANCE LIST.

ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
PAGE 3 (EPISK)

LISTA DE PRESENCAS (LOCAL): Jamba A 2 DATA: 24 /ABRIL/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Henrique Damasceno	RNT-EP	T. PESC	324 92 58 24	
Carolina Costa	RNT-EP	Socióloga	912355412	
Paulo Alexandre	RNT-EP	Eng. Ambiental	924715393	
Conceição R. Abel	adm. municipal	Técnicas Administrativas	902856254	
Esperança Sale	adm. municipal	diplom. local de m	939091661	
Manuel Francisco Camar	Administração Municipal	Director. M. Local	934459257	
José Joaquim	Administração Municipal	Administrativa	937834530	
Luca Eduardo Mogueira	Polícia N.C.L	Comandante Comunal	544568028	
Tomás Sacares	Administração Comunal	fiscal	943-02-54-81	
Eng. Manuel Kalala	Jamba 1	Seculo	944740399	
Manuel C. Camar	Jamba A	MORSA	92 5756019	
José Baptista Herculano	Jamba-1	capores		
Henrique Fátima	Jamba-1	capores	949367000	



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 1 (EPDA)

LISTA DE PRESENCAS (LOCAL):

Jamba A 12

DATA:

21

/ABRIL/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Maxia Silva	Jamba 1	Lamponeira		
Eduardo H Bonmati	Água da chela	operador	924875384	Eduardo
André G. Soares	"	"	744 04 290294	
Mateus P. Sebastião	Água da chela	Estimador	925807629	
André Jamba	Nessa Terra	Estimador		
João Tchiranguela	Nessa Terra	Operador de Máquinas	924313346	
Albino Jamba	Água da chela	Operador de Máquinas	934692727	
Jose Pedro Mahuque	Jamba A	Lamponeira	948259898	
António Fialente	Água da chela	Operador de Máquinas	927295271	
Jose Muale	"	"	926380055	
Fernando Francisco	"	"	923739948	
Manuel Bento	"	"	938086349	
Katite Rui mundo	"	Estimador	923707590	



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 kV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
FASE 1 (EPIA)

LISTA DE PRESENCAS (LOCAL):

Jumbo 4.1.2

DATA: 24 / ABRIL/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Eduardo Ferdinand	Holísticas	Eng. Ambiental	925753914	[Assinatura]
Artur dos Santos	Solva	Solva	996923558	[Assinatura]
Dominique Francisco	Campones			
Linda António	Campones			
Artur Tomás	Fábrica de Açúcar	Operário		
António Tavares	Nossa Terra	Susanaes		
António Lourenço	Campones			
Maria Luísa	Campones			
Maria de Fátima				
Maria Augusta	Campones			
Mercúria Mendes	Campones			
Rosário Eze	Campones			
Maria Luísa	Campones			

Nome	Instituição	Função	Contactos	Assinatura
Dulcem F. N. Cassau	Jamba - 1	Operador M. Chela	926 700 707	<i>[Assinatura]</i>
Espalo Borges D. João	Jamba - 1	Operador M. Agua chela	947 834 823	<i>[Assinatura]</i>
Serafim Katiti	Jamba - 1	Operador M. Chela	92264 1274	<i>[Assinatura]</i>
William João Mário Lopes	Jamba - 1			
MBALE Tchubungo	Jamba 1		92372 9355	
Manuel T. Kringo	Jamba I	Operador M. do M	94669 7042	
Carlos Sampaio	Jamba 1	operador de	93389 4213	
Jose Emiliano Korman	Jamba - 1	Ataqueiro	94004 0130	
Paulo Junqueira	Jamba I	Camões		
Fátima Kula	"	Companha		
Isabel Tchocobora	"	"	934 2237 13	
Carolina Adriana	Agua da chela	Cozinheira		
Maria Manuel	Jamba - 1			






ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
 FASE 1 (EPDA)

LISTA DE PRESENCAS (LOCAL): Jamba 1 e 2 DATA: 21 / ABRIL / 2021

NOME	POSTO-LICITA	FUNÇÃO	CONTACTO	ASSINATURA
João França	Artefício da chela	Técnico de Produção	946 046 224	
Aleardi Adão	Água da chela	Estivador	924 9056 45	
Justino Tavares	"	Operador d' Máquinas	923 2522 85	
João Luís	"	"	926 06 9926	
João Balomite	Fazenda Jamba	Motociclista	926 06 4624	
Leite Tavares	Jamba - 2	Camponesa		
Linda António	"	"		
Luiza Rai mundo	"	"		
→ José Emilia Paula		Coordenador de Área Administrativa	92400 9255	
Luís Xavier	ADPA APTA	ADPA municipal	929 1104.67	Luís X.
José Casimiro	Holísticas	Consultor	933 84 5840	(Signature)
Elayne Miranda	Holísticas	Eng. Ambiental	926 96 13 80	(Elayne Miranda)

220 kV TL Project between Lubango - Moçâmedes	MEETING MINUTES Stakeholder Engagement Meeting						
			Project: P.1649				
VENUE:	Camponês Settlement in Humpata Municipality.		DATE:	21/04/2021	# OF PAGES	11	
ASSUNTO:	Stakeholder Meeting	Engagement	NOTES BY:	Elayne Miranda and Eduardo Ferdinand		REVISION:	Vladimir Russo

ANEXOS**Appendix 1** – Photographic Record**Appendix 2** – Attendance List**Appendix 3** – Presentation**CÓPIAS ENVIADAS PARA:**

- National Electricity Transmission Network Company (RNT – E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPSCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Huíla Provincial Government.

ITEM	DESCRIPTION
1	On April 21 th , 2021, a stakeholder engagement meeting was held with the residents of Camponês settlement in Humpata communal headquarters (Geographic coordinates: 15°00'16"S 13°23'14"E). The meeting was attended by several entities, with special mention to Mr. Carlos Xavier (Humpata Municipal Deputy Administrator for Technical Area and Infrastructure), Mr. José Hequele (Humpata Communal Administrator), Municipal Directors, representatives of Humpata Municipal Administration, members of the Camponês settlement auscultation council, traditional authorities, residents, etc. The meeting was also attended by representatives from companies Holísticos (Eduardo Ferdinand, Elayne Miranda, and José Luís) and the RNT - National Electricity Transmission Network (Catarino Cosme, Leitão Alexandre, and Henriques dos Santos).
2	The stakeholder engagement meeting was attended by 56 participants, 21 of whom were female (42%). Humpata Municipal Deputy Administrator for Technical Area and Infrastructure, Mr. Carlos Xavier (CX) welcomed those present and explained the importance of the Project in terms of development and boosting the economies of the Huíla and Namibe provinces, mentioning that job opportunities for young people in the settlement would be created and that tourism could be developed in the region.
3	Holísticos' representative, Eduardo Ferdinand (EF) began the presentation by using simplified banners to outline the Project's characteristics and explain the electricity transmission line (TL) proposed route before elaborating on ongoing environmental, social and cultural surveys and the potential impacts of the proposed route and how they will be mitigated.

4	<p>EF also mentioned that a stakeholder engagement process is extremely important regarding the materialization of the Project and that RNT is promoting the Project in collaboration with Tokyo Electric Power Services Co. (TEPSCO), with financing from the Japan International Cooperation Agency (JICA). He emphasized that the Project's main goal is to increase electricity supply to the Namibe province while also allowing for the connection of electricity transport systems between the north (highlighting Malanje province) and centre-south regions.</p>
5	<p>EF explained that the Project addresses the need to transport electricity generated at the Laúca Dam through the Belém do Dango (Huambo Province), Nombungo and Arimba substations (Huíla Province) and later Moçâmedes substation (Namibe Province). He also mentioned that the Project will adhere to JICA Guidelines for Environmental and Social Considerations (2010).</p>
6	<p>EF stated that the objective of the stakeholder engagement meeting is to give interested and potentially affected parties a chance to learn about the Project, offer feedback, and make recommendations regarding its implementation. EF gave a presentation that focused on the following points (see Annex 3 - Presentation):</p> <ul style="list-style-type: none"> • Brief description of the Project; • Presentation of the country's current environmental impact assessment process; • Project Financier (JICA) legal and regulatory framework; • Environmental and socio-economic aspects of the transmission line route; • Expected environmental and socio-economic Impacts; • Questions and answers session.
7	<p>EF also explained that the Project intends to avoid inhabited spaces, agricultural and livestock areas as well as military and commercial aircraft manoeuvring spaces, transhumance areas, areas that are historically important to ethnolinguistic communities, cemeteries, leisure areas, etc. Concluded the presentation by mentioning that the ongoing environmental studies (Environmental Pre-Feasibility Study and Scoping Report and Environmental and Social Impact Study for the Project) would be prepared in compliance with current legislation, industry best practices, and other JICA guidelines, stressing that the line's route may be altered depending on the severity of any identified environmental and social impacts and topography survey. He invited those present to provide feedback regarding improving Project related technical feasibility studies.</p>
8	<p>The table below provides a summary of the questions and answers session.</p>

QUESTIONS AND ANSWERS SESSION SUMMARY

Comment/Question	Answer
<p>Paulo Calenga (PC) - Camponês neighborhood resident.</p> <p>PC mentioned that his home is very close to the Humpata substation, and wondered if he would be moved regarding safety.</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>The Humpata substation is an asset under the management of ENDE, and thus only ENDE will be able to decide whether houses close to the substation will be displaced for safety reasons.</p> <p>Carlos Xavier (CX) - Deputy Municipal Administrator</p> <p>During the construction phase of the Humpata substation, some families were displaced or relocated and others were compensated. The whole process was implemented in a transparent, and accessible manner as demonstrated by the fact that Paulo Calenga's brother was financially compensated for giving up a portion of his land during the construction phase of the substation. Thus far, affected parties have not expressed any dissatisfaction with the current process.</p>
<p>Lágrima Joaquim (LJ) - Camponês resident.</p> <p>LJ requested clarification regarding the involuntary relocation, and compensation process, asking what would happen in the event of damage to third party infrastructure (house, agricultural and pastoral areas).</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>JICA takes issues of resettlement and compensation very seriously and will not provide financing until such issues are addressed, in compliance with the agency's regulations and standards. The line to be installed cannot pass over houses, hospital, schools, agricultural land, cemeteries and large trees. However, would be cases where this would not be feasible, whereby JICA has very specific rules, and as a result, a Resettlement and Compensation Plan (RCP) for affected parties would be elaborated to ensure that families affected by the transmission line Project have equal or better conditions than those that were present prior to Project implementation.</p> <p>The compensations for the loss of agricultural land and fruit trees would be determined using the Ministry of Agriculture and Fisheries' price table for agricultural products per square meter, and that the entire process would be fair, transparent and honest, thus ensuring that compensation is granted to whom it is owed.</p>

Comment/Question	Answer
	<p>Should a house be affected by the Project, it will be assessed and the affected parties may receive a house of equivalent or better specification. The 220 kV TL route is not the final, may be changed, and several studies such as geomorphological, topography, environmental, social and cultural studies are required to identify the final route and ensure that it does not affect the population's well-being, or if it does, that it is kept to a minimum.</p> <p>The Project budget will take into account any negative impacts that the Project may cause. A thorough registration process regarding any affected agricultural land, housing and other infrastructure along the 190 km Project route would be conducted in order to prevent any opportunism, which would result in a Resettlement Action Plan being elaborated.</p> <p>It was proposed the creation of multidisciplinary working committees between RNT, TEPCO, JICA, the Humpata and Lubango Municipalities Administrations and the Huíla Provincial Directorates in order to ensure a fair process regarding compensation for damage to agricultural land and potential displacement along the Project's route.</p> <p>Catarino Cosme (CC) - RNT</p> <p>Compensation regarding agricultural land, loss of fruit trees and house would be made transparently, in accordance with the country's administrative and legal norms and international best practice, such as the World Bank standards and JICA guidelines. The Project Financier will not continue with funding unless these problems are evaluated and addressed in advance.</p> <p>The final transmission line route must avoid urban areas (houses), agricultural land, cultural and historical sites, as well as grazing areas and historical transhumance sites. However, should the transmission line route causes any</p>

Comment/Question	Answer
	disruption, all affected infrastructure would be registered, assessed and the persons will be compensated.
<p>Adilson Garcia (AG) - Camponês resident.</p> <p>AG asked for clarification regarding risks the 220 kV transmission line could pose to nearby communities. He mentioned that many homes are situated below the 60 kV line.</p>	<p>Catarino Cosme (CC) - RNT</p> <p>In terms of safety, the towers would be 30-35 meters above ground level and any effects of electromagnetic fields at these altitudes would be negligible. A concerted effort will be made to avoid the lines crossing residential areas. As a safety precaution, people should not perform any activities near the towers' designated location.</p> <p>Smart safety, warning, and emergency sensors will be mounted on power transmission lines and the transmission system will be automatically interrupted if the cables become damaged or weather conditions become extreme. It is recommended that no permanent infrastructure, such as homes, schools, hospitals or churches be constructed within the vicinity of the transmission line (45 meters).</p>
<p>Laurinda Teresa (LT) - Camponês resident.</p> <p>LT approached representatives from the Humpata Municipal Administration, and asked whether an informal market could be established in the Camponês neighborhood.</p>	<p>Carlos Xavier (CX) - Deputy Municipal Administrator</p> <p>The Integrated Intervention Programme in Municipalities (PIIM) is implementing various projects in Humpata municipality headquarters regarding the development of critical infrastructure that cover some neighbourhoods, such as the new Humpata substation, which currently also provides electricity to the municipalities of Chibia and Bibala as well as several Water Bore Projects that will benefit local communities. All complaints regarding to implantation informal market in Camponês settlement had been very well noted.</p> <p>He invited residents of the Camponês settlement to visit the Humpata Municipal Administration to learn more about the various projects that have been recommended for the region under PIIM.</p>
<p>With no further questions, the stakeholder engagement meeting was closed by Mr. Carlos Xavier (Humpata Municipal Deputy Administrator), who thanked everyone for attending, with special mention to the Project promoters; RNT and Holísticos representatives. He also expressed his belief in the success of the Project, stating that it would be a valuable contribution to the growth of the Huíla and Namibe provinces.</p>	

APPENDIX 1: PHOTOGRAPHIC RECORD

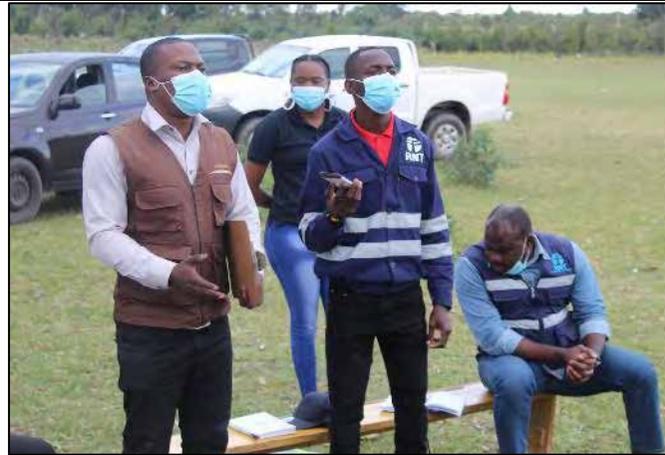


Photo 1: Opening of the meeting by the Deputy Municipal Administrator of Humpata Eng. Carlos Xavier.

Photo 2: Project disclosure by Eduardo Ferdinand (Holísticos).

Photo 3: Female groups present in the stakeholder engagement meeting in Camponês settlement.



Photo 3: Intervention by Ms. Laurinda.

Photo 5: Intervention by Mr. Paulo Calenga.

Photo 6: Catarino Cosme's (RNT) intervention.

APPENDIX 2: ATTENDANCE LIST.


ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
 FASE 1 (EPDA)

LISTA DE PRESENCAS (LOCAL): Bairro Lambões DATA: 24 / ABRIL / 2021

NOME	INSTITUCIONAL	FUNÇÃO	CONTACTOS	ASSINATURA
Carlos Xavier	DOMI HPTA	DD FIDAVIC.	929 110467	Carlos X.
Manoel Francisco Carmona	Administração H. Municipal	Director Fiscalizador	934459257	Manoel Francisco
Abel K. Abel	Admin. Municipal	Formador Administrativo	920 856252	Abel
Esperança Salu	Admin. Municipal	Alfabetizadora D.C.M	999031661	Esperança
José Joaquim	Admin. Municipal	Administrador	927834530	José
Tomás Sacais	Admin. Municipal	Fiscal	943-02-5481	Tomás
Esau Eduardo Nogueira	Polícia Nacional	Comandante Comunal	944568098	Esau
Eduardo Nogueira	Admin. Municipal	MATERIA. de AMM	926 190887	Eduardo
José Gonçalves	Holístico	Consultor	933 84 5840	José
Manuel Malhado	B. Lambões	Lambões	946 883607	Manuel
* Artur dos Santos	B. "	Sofa (pink 42, 30)	926 923556	Artur
* Ernesto Danilo	B. "	Lambões	925 833124	Ernesto
Maria Maria	"	Lambões		Maria



LISTA DE PRESENCAS (LOCAL):

Bairro Lubango

DATA: 02 / ABRIL / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Beatriz Caudido	Camponesa			
Isabelte Jesus	Doméstica			
Estevão Mousaque	Camponês			
João Minguito	Camponês			
João Salvador	Vendedor			
Mário Ernesto	Vendedor			
Fernando Bieudo			933093829	Fernando
Maria da Tueda de	Camponesa		926299256	Maria Tueda de
Joana Kawimo	Camponesa			
Maria da C. Xavier	" "	" "		
Alberto Tchimbango	" "	" "		
Daniel M. Tchipseta	" "	" "		
Maria Ndora	" "	" "		



LISTA DE PRESENCAS (LOCAL):

Bauro Campones

DATA: 21 / ABRIL / 2021

NOME	INSTITUIÇÃO	PROFISSÃO	CONTACTOS	ASSINATURA
Eduardo Ferrel	Adistricos	Eng. Ambiental	925 95 3914	[Assinatura]
Francisco Bili Loulo	Educação	Professor	922 07 6545	Frank
Tepe Wachito	Tia da Cruz	Lavadeira		
Paxepal Tchizupela	Adm. Mun. Huila	Cozinheiro		
Gabriel C. Luis	Educação	Professor	949927934	[Assinatura]
Antonio Dainca	Polícia	Afrente	947553414	[Assinatura]
Tchissoco Edels	Médico			
Kagalo Muecaylo	Campones			
Bilina henxengo	Doméstica			
Teresa de Jesus	Educação	Professora		
Guilherme Cassava	Doméstica			
Léguina Jorquin	Doméstica			
Máris China	Vendedora			

SOBRE	INSTITUIÇÃO	FUNÇÃO	CONTACTO	TELEFONO
Jambela Mandandi	B. Camponés	Camponesa		
Gloriana Joana	"	"		
Miguel Teresa	"	"		
Manuel Ngongo	"	-		
João Kalwale	"	Pedreiro		
João Baptista Vieira	"	Berçadeira	949 000 751	
Abel Sola	"	Campones		
Sofia Rosa	"	Negociante	925 475507	
Francisca Tchifungo	"	Camponesa		
Rosária Lu Namde	"	Doméstica	948 280 60	
Névo Fulasse	"	Campones		
Laurinda Teresa	"	Doméstica	949 47 41 27	
Fernando Tchifule	"	Campones		






ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) - MOÇÂMEDES (NAMIBE)
 FASE 1 (EPDA)

LISTA DE PRESENCAS (LOCAL): Bairro Campones DATA: 24 / ABRIL / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	SINOPSE
Carolina Costa	RNT-EP	Sociólogo	912355412	Carolina Costa
Delfino Alexandre	RNT-EP	Eng. Ambiental	924715393	Delfino Alexandre
Amigues Associação dos Pais	RNT-EP	Pro PESC	924925284	Amigues Associação dos Pais
Elayne Miranda	Holisticos	Eng. Ambiental	926964360	Elayne Miranda

220 kV TL Project between Lubango - Moçâmedes	MEETING MINUTES Stakeholder Engagement Meeting						
			Project: P.1649				
VENUE:	Calumue Settlement in Humpata Municipality.		DATE:	22/04/2021	# OF PAGES	11	
ASSUNTO:	Stakeholder Meeting	Engagement	NOTES BY:	Elayne Miranda and Eduardo Ferdinand		REVISION:	Vladimir Russo

ANEXOS**Appendix 1** – Photographic Record**Appendix 2** – Attendance List**Appendix 3** – Presentation**CÓPIAS ENVIADAS PARA:**

- National Electricity Transmission Network Company (RNT – E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPSCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Huíla Provincial Government.

ITEM	DESCRIPTION
1	On April 22 th , 2021, a stakeholder engagement meeting was held with the residents of Calumue settlement (Calumue headquarters) (Geographic coordinates: 14°57'43"S 13°28'48"E). The meeting was attended by several entities, with special mention to Mr. Carlos Xavier (Humpata Municipal Deputy Administrator for Technical Area and Infrastructure), Mr. Yuri Chivanja (Palanca Communal Administrator), Municipal Directors, representatives of Humpata Municipal Administration, members of the Calumue settlement auscultation council, traditional authorities, residents, etc. The meeting was also attended by representatives from companies Holísticos (Eduardo Ferdinand, Elayne Miranda, and José Luís) and the RNT - National Electricity Transmission Network (Catarino Cosme, Leitão Alexandre, and Henriques dos Santos).
2	The stakeholder engagement meeting was attended by 36 participants, six (6) of whom were female (24%). Humpata Municipal Deputy Administrator for Technical Area and Infrastructure, Mr. Carlos Xavier (CX) welcomed those present and explained the importance of the Project in terms of development and boosting the economies of the Huíla and Namibe provinces, mentioning that job opportunities for young people in the settlement would be created and that tourism could be developed in the region.
3	Holísticos' representative, Eduardo Ferdinand (EF) began the presentation by using simplified banners to outline the Project's characteristics and explain the electricity transmission line (TL) proposed route before elaborating on ongoing environmental, social and cultural surveys and the potential impacts of the proposed route and how they will be mitigated.

4	<p>EF also mentioned that a stakeholder engagement process is extremely important regarding the materialization of the Project and that RNT is promoting the Project in collaboration with Tokyo Electric Power Services Co. (TEPSCO), with financing from the Japan International Cooperation Agency (JICA). He emphasized that the Project's main goal is to increase electricity supply to the Namibe province while also allowing for the connection of electricity transport systems between the north (highlighting Malanje province) and center-south regions.</p>
5	<p>EF explained that the Project addresses the need to transport electricity generated at the Laúca Dam through the Belém do Dango (Huambo Province), Nombungo and Arimba substations (Huíla Province) and later Moçâmedes substation (Namibe Province). He also mentioned that the Project will adhere to JICA Guidelines for Environmental and Social Considerations (2010).</p>
6	<p>EF stated that the objective of the stakeholder engagement meeting is to give interested and potentially affected parties a chance to learn about the Project, offer feedback, and make recommendations regarding its implementation. EF gave a presentation that focused on the following points (see Annex 3 - Presentation):</p> <ul style="list-style-type: none"> • Brief description of the Project; • Presentation of the country's current environmental impact assessment process; • Project Financier (JICA) legal and regulatory framework; • Environmental and socio-economic aspects of the transmission line route; • Expected environmental and socio-economic Impacts; • Questions and answers session.
7	<p>EF also explained that the Project intends to avoid inhabited spaces, agricultural and livestock areas as well as military and commercial aircraft manoeuvring spaces, transhumance areas, areas that are historically important to ethnolinguistic communities, cemeteries, leisure areas, etc. Concluded the presentation by mentioning that the ongoing environmental studies (Environmental Pre-Feasibility Study and Scoping Report and Environmental and Social Impact Study for the Project) would be prepared in compliance with current legislation, industry best practices, and other JICA guidelines, stressing that the line's route may be altered depending on the severity of any identified environmental and social impacts and topography survey. He invited those present to provide feedback regarding improving Project related technical feasibility studies.</p>
8	<p>The table below provides a summary of the questions and answers session.</p>

QUESTIONS AND ANSWERS SESSION SUMMARY

Comment/Question	Answer
<p>Marcelino Gaspar (MG) - Calumue resident.</p> <p>MG requested clarification regarding the involuntary resettlement and compensation process in case of damage to third party infrastructure (for example, housing, agricultural land and livestock areas, etc.).</p> <p>Joaquim Kapetula (JK) - Calumue resident.</p> <p>JK questioned whether areas have already been designated regarding the resettlement of families, the suitability of such areas as eviction sites and whether the Project will affect residents' homes.</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>JICA takes issues of resettlement and compensation very seriously and will not provide financing until such issues are addressed, in compliance with the agency's regulations and standards. The line to be installed cannot pass over houses, hospital, schools, agricultural land, cemeteries and large trees. However, would be cases where this would not be feasible, whereby JICA has very specific rules, and as a result, a Resettlement and Compensation Plan (RCP) for affected parties would be elaborated to ensure that families affected by the transmission line Project have equal or better conditions than those that were present prior to Project implementation.</p> <p>The compensations for the loss of agricultural land and fruit trees would be determined using the Ministry of Agriculture and Fisheries' price table for agricultural products per square meter, and that the entire process would be fair, transparent and honest, thus ensuring that compensation is granted to whom it is owed. The amount of compensation to be paid regarding areas deemed affected will be determined by the amount of agricultural product generated from present species and not by annual output as claimed by the farmer, with the possibility of production costs being offered to the farmer.</p> <p>Should a house be affected by the Project, it will be assessed and the affected parties may receive a house of equivalent or better specification. The 220 kV TL route is not the final, may be changed, and several studies such as geomorphological, topography, environmental, social and cultural studies are required to identify the final route and ensure that it does not affect the population's well-being, or if it does, that it is kept to a minimum. The Project budget will take into account any negative impacts that the Project may cause.</p>

Comment/Question	Answer
	<p>A thorough registration process regarding any affected agricultural land, housing and other infrastructure along the 190 km Project route would be conducted in order to prevent any opportunism. Following this process, two (2) plans will be created, namely a Resettlement and Compensation Action Plan and an Affected Parties Quality of Life Restoration Plan.</p> <p>No houses census has been implemented regarding affected parties as the final transmission line route has yet to be decided. Therefore, there is no need at this time to allocate areas for houses regarding families who may be impacted by the Project.</p> <p>It was proposed the creation of multidisciplinary working committees between RNT, TEPCO, JICA, the Humpata and Lubango Municipalities Administrations and the Huíla Provincial Directorates in order to ensure a fair process regarding compensation for damage to agricultural land and potential displacement along the Project's route.</p>
<p>José Mateus (JM) - Calumue neighborhood resident (Traditional Leader)</p> <p>JM enquired about the 220 kV Transmission Line final route.</p>	<p>Catarino Cosme – RNT</p> <p>The 220 kV transmission line would run parallel to the 60 kV line wherever possible, the proposed route shown is not the final. The route may be changed and several studies, such as pedology, geomorphology, topography, environmental, and social studies are required to identify the final route and ensure that it does not affect the population's well-being, or if it does, that it is kept to a minimum as possible.</p> <p>The final transmission line route must avoid urban areas (houses), agricultural land, cultural and historical sites, as well as grazing areas and historical transhumance sites. However, should the transmission line route causes any disruption, all affected infrastructure would be registered, evaluated and the persons will be compensated.</p>

Comment/Question	Answer
	<p>Compensation regarding agricultural land, loss of fruit trees, and houses would be made transparently, in accordance with the country's administrative and legal norms and international best practice, such as the World Bank standards and JICA guidelines. The Project Financier will not continue with funding unless these problems are correctly assessed and addressed in advance.</p>
<p>Afonso Yecula (AY) - Calumue neighborhood resident.</p> <p>AY praised the government's initiative regarding Project implementation. However, he mentioned that electricity distributed by ENDE is currently insufficient and does not meet the consumption needs of the Calumue neighborhood. He asked whether electricity provided by the Project would improve this situation.</p>	<p>Catarino Cosme (CC) - RNT</p> <p>In a first phase, the implementation of the 220 kV transmission line and 220/60 kV substation in Moçâmedes would benefit the Namibe province.</p> <p>Actually, there are three (3) companies with responsibility in the energy sector in the country: PRODEL (Production), RNT (Transmission) and ENDE (Distribution). RNT will install the transmission line between Lubango - Moçâmedes during the first phase of the Project. This will be followed by the implementation of the distribution phase, during which ENDE, in collaboration with the Huíla and Namibe Provincial Governments and municipal administrations, will evaluate energy demand and develop alternative distribution options from the Moçâmedes substation. However, it was emphasized that currently, the Project will only facilitate the transportation of electricity between the Arimba 220/60 kV substations in Lubango and the new 220/60 kV substation to be installed in the Aida neighborhood, Moçâmedes.</p> <p>It was mentioned that Calumue settlement will be shortly beneficiary by energy provided by Humpata substation.</p>
<p>Welwitschia Casimiro (WC) - Calumue resident.</p> <p>WC stated that there is currently no access to drinking water or public grid electricity where he lives.</p>	<p>Catarino Cosme (CC) - RNT</p> <p>The main objective of the Project is the implementation and operation of a 220 kV transmission line and 200/60 kV substation in Moçâmedes. However, Angolan Government has policies requiring companies that execute state projects to create Social Responsibility Programs in order</p>

Comment/Question	Answer
<p>Marcelino Gaspar (MG) - Calumue resident.</p> <p>MG stated that the Municipal Administration has failed to provide a rationale for the lack of water in the Calumue neighborhood.</p>	<p>to safeguard communities. These concerns have been raised and will be forwarded to the Project contractor as soon as the public tender is held.</p> <p>RNT will advise the future contractor to implement the Social Responsibility Program in accordance with social needs, and conditions identified by communities along the Project's route.</p> <p>The contractor will also be able to target his social responsibility program in other sectors, with the distribution of drinking water, and the improvement of electricity being an obligation of the local government.</p> <p>Carlos Xavier (CX) - Deputy Municipal Administrator</p> <p>The Integrated Intervention Programme in Municipalities (PIIM) is implementing various projects in Humpata municipality regarding the development of critical infrastructure that cover the Palanca neighborhood, such as the new Humpata substation, which currently also provides electricity to the municipalities of Chibia and Bibala as well as several Water Bore Projects that will benefit local communities. All complaints regarding electricity supply had been very well noted. All residents of the Calumue settlement were invited to visit the Humpata Municipal Administration to learn more about the various projects that have been recommended for the region under PIIM.</p>
<p>Afonso Yecula (AY) - Calumue neighborhood resident.</p> <p>AY requested ongoing stakeholder engagement meetings with nearby communities during the Project's implementation phase in order to ensure their well-being and the Project's long-term viability.</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>Currently, the project is undergoing a Technical Pre-Feasibility Analysis phase, RNT experts are studying the best alternatives options for the Project's route and technology. After determining the transmission line route, work will begin during the second quarter of 2022 to map the terrain's topography, geomorphology and locate any possibly unexploded ordnance.</p>

Comment/Question	Answer
	<p>A contractor for the Project has yet to be identified, while engineering studies are being prepared by the Japanese firm TEPCO. Subsequently, RNT will hold a public tender to identify the EPC that has the necessary experience to implement the Project, as well as the ability to do so in less time than stipulated in the requirements.</p> <p>Meanwhile, stakeholder engagement meetings with residents of villages and neighbourhoods near the transmission line proposed route will be held continuously throughout the implementation phase of the Project and a Stakeholder Engagement Plan will be developed.</p>
<p>Observation. During the stakeholder engagement meeting, several issues were raised concerns regarding electricity distributed by ENDE in region.</p>	
<p>With no further questions, the stakeholder engagement meeting was closed by Mr. Carlos Xavier (Humpata Municipal Deputy Administrator), who thanked everyone for attending, with special mention to the Project promoters; RNT and Holísticos representatives. He also expressed his belief in the success of the Project, stating that it would be a valuable contribution to the growth of the Huíla and Namibe provinces.</p>	

APPENDIX 1: PHOTOGRAPHIC RECORD



Photo 1: Opening of the meeting by the Deputy Municipal Administrator of Humpata Eng. Carlos Xavier.

Photo 2: Project disclosure by Eduardo Ferdinand (Holísticos).

Photo 3: Calumue residents in SHM.



Photo 3: Intervention by Mr. Marcelino Gaspar.

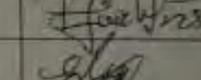
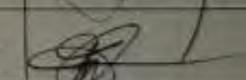
Photo 5: Intervention by Mr. Joaquim Kapetula.

Photo 6: Intervention by Mr. José Mateus (Soba).

APPENDIX 2: ATTENDANCE LIST.


ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
 FASE 1 (EPTDA)

LISTA DE PRESENCAS (LOCAL): BAIRRO CALUNDE DATA: 22.0 / ABRIL/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTO	ASSINATURA
José Bernardino Luís	Holísticos	Consultar	933845840	
Paulo Henrique	RNT-EP	Eng. Ambiental	929715393	
Fernando Santos	RNT-EP	Eng. PESQ	924925884	
Fernando Ventura	P. N. Huíla	Coord. da 152 Esq.	924090294	
Eduardo Manj	ADM HUMBATA	COORDENADOR ADM	926190887	
Joaquim Kapatula	Residente	Residente	923928311	
Juvêncio Ichipandica	Residente	Residente	926198669	
Francisco d'Alala	Residente	Electricista geral	924924533	
Jose Salomão	Residente		929694568	
João A. Kálite	Residente		940580271	
João Manuel	Residente		948215591	
Venância José	Residente		949049090	
Elyne Miranda	Holísticos	Eng. Ambiental	926964360	



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 1 (EPOA)

LISTA DE PRESENCAS (LOCAL):

Bairro Calumbe

DATA: 29 / ABRIL / 2021

NOME	RESIDENCIA	FUNÇÃO	CONTACTO	ASSINATURA
Estebanço da A.O.M. Gale	ndom municipal	chefe de sector A.C.M	939091661	Estebanço
Samuel - K. Abel	ndom. municipal	técnicos administrativos	904856254	Samuel
Carlos Xavier	ADDA. HPCA	ADDA MUNIC.	929110467	Carlos Xav.
Aurora L. Tolucalate	Municipal	Professora	921468361	Aurora
Mania Juliana Maria Dias	Municipal	Professora	923654361	Mania, Juliana
José Mateus	Bairro Calumbe	Coordenador	936918672	José Mateus
Júlio Augusto	Calumbe	Mecânico	946706999	
Afonso de Kula	"	Electricista	927450005	
Abelcio Tshotua	"	Guarda	946680421	
Colmira L.H. Gentile	He "	Comerciante	922879302	Colmira Gentile
Edna Tenapaná	"	Comfones	927740114	
João Francisco	ETA	Comalizador	944637390	
João A. Lourenço	Bairro Calumbe	de tozeiro	929473140	






ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
 FASE 1 (EPIA)

LISTA DE PRESENCAS (LOCAL): Bairro Calumbe **DATA:** 02 / ABRIL/2021

NOME	INSTITUCIONAL	FUNÇÃO	CONTACTOS	ASSINATURA
Thi luanda Augusto	3º Calumbe	Negociante	948 25 48 49	
João Francisco	"	Pedreiro	929 71 49 65	
Paulina Gaspar	CFRL	Eng. de Oly	931 71 86 02	
José Selba	3º Calumbe	Motociclista	932 70 26 32	
Haruul Chingora	"	Estudante	923 93 42 97	
João Nêido	"	Motociclista	942 28 23 90	
Laudinaizo Fundado	"	Estudante	926 49 98 89	
José Pedro Calenga	CFRL	Servilheiro	931 73 67 00	
Serafim Casalta	3º Calumbe	Campones	944 69 82 45	
Eduardo Ferdinal	Holísticos	Eng. Ambiental	925 75 35 14	<i>E. J. A.</i>

220 kV TL Project between Lubango - Moçâmedes	MEETING MINUTES Stakeholder Engagement Meeting						
			Project: P.1649				
VENUE:	Onculuvala Settlement in Humpata Municipality.		DATE:	22/04/2021	# OF PAGES	14	
ASSUNTO:	Stakeholder Meeting	Engagement	NOTES BY:	Elayne Miranda and Eduardo Ferdinand		REVISION:	Vladimir Russo

ANEXOS**Appendix 1** – Photographic Record**Appendix 2** – Attendance List**Appendix 3** – Presentation**CÓPIAS ENVIADAS PARA:**

- National Electricity Transmission Network Company (RNT – E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPSCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Huíla Provincial Government.

ITEM	DESCRIPTION
1	On April 22 th , 2021, a stakeholder engagement meeting was held with the residents of Onculuvala settlement in Humpata communal headquarters (Geographic coordinates: 15°03'14"S 13°20'36"E). The meeting was attended by several entities, with special mention to Mr. Carlos Xavier (Humpata Municipal Deputy Administrator for Technical Area and Infrastructure), Mr. José Hequele (Humpata Communal Administrator), Municipal Directors, representatives of Humpata Municipal Administration, members of the Onculuvala settlement auscultation council, traditional authorities, residents, etc. The meeting was also attended by representatives from companies Holísticos (Eduardo Ferdinand, Elayne Miranda, and José Luís) and the RNT - National Electricity Transmission Network (Catarino Cosme, Leitão Alexandre, and Henriques dos Santos).
2	The stakeholder engagement meeting was attended by 72 participants, 31 of whom were female (45%). Humpata Municipal Deputy Administrator for Technical Area and Infrastructure, Mr. Carlos Xavier (CX) welcomed those present and explained the importance of the Project in terms of development and boosting the economies of the Huíla and Namibe provinces, mentioning that job opportunities for young people in the settlement would be created and that tourism could be developed in the region. There was a need for simultaneous translation into the local language (Nhaneca-Humbi) as many of those present did not fully understand Portuguese. Mr. Agostinho Tchiputo (Soba of Onculuvala settlement) helped during the translation process.
3	Holísticos' representative, Eduardo Ferdinand (EF) began the presentation by using simplified banners to outline the Project's characteristics and explain the electricity transmission line (TL) proposed route before

	elaborating on ongoing environmental, social and cultural surveys and the potential impacts of the proposed route and how they will be mitigated.
4	EF also mentioned that a stakeholder engagement process is extremely important regarding the materialization of the Project and that RNT is promoting the Project in collaboration with Tokyo Electric Power Services Co. (TEPSCO), with financing from the Japan International Cooperation Agency (JICA). He emphasized that the Project's main goal is to increase electricity supply to the Namibe province while also allowing for the connection of electricity transport systems between the north (highlighting Malanje province) and center-south regions.
5	EF explained that the Project addresses the need to transport electricity generated at the Laúca Dam through the Belém do Dango (Huambo Province), Nombungo and Arimba substations (Huíla Province) and later Moçâmedes substation (Namibe Province). He also mentioned that the Project will adhere to JICA Guidelines for Environmental and Social Considerations (2010).
6	EF stated that the objective of the stakeholder engagement meeting is to give interested and potentially affected parties a chance to learn about the Project, offer feedback, and make recommendations regarding its implementation. EF gave a presentation that focused on the following points (see Annex 3 - Presentation): <ul style="list-style-type: none"> • Brief description of the Project; • Presentation of the country's current environmental impact assessment process; • Project Financier (JICA) legal and regulatory framework; • Environmental and socio-economic aspects of the transmission line route; • Expected environmental and socio-economic Impacts; • Questions and answers session.
7	EF also explained that the Project intends to avoid inhabited spaces, agricultural and livestock areas as well as military and commercial aircraft manoeuvring spaces, transhumance areas, areas that are historically important to ethnolinguistic communities, cemeteries, leisure areas, etc. Concluded the presentation by mentioning that the ongoing environmental studies (Environmental Pre-Feasibility Study and Scoping Report and Environmental and Social Impact Study for the Project) would be prepared in compliance with current legislation, industry best practices, and other JICA guidelines, stressing that the line's route may be altered depending on the severity of any identified environmental and social impacts and topography survey. He invited those present to provide feedback regarding improving Project related technical feasibility studies.
8	It is important to note that the entire meeting was translated between Portuguese and Nhaneca-Humbi in order to ensure that the residents of the Onculuvala settlement fully understood all aspects. Mr. Agostinho Tchiputo (AT) facilitated the translation process.

9	The table below provides a summary of the questions and answers session.
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QUESTIONS AND ANSWERS SESSION SUMMARY

Comment/Question	Answer
<p>António Mangangá (AM) - Onculuvala resident.</p> <p>AM requested clarification regarding the involuntary resettlement and compensation process, asking what would happen in the event of damage to third party infrastructure (houses, agricultural, and pastoral areas). He mentioned that there was no negotiation facility regarding parties affected by the Project when the current 60 kV electricity transmission line was installed during colonial times.</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>JICA takes issues of resettlement and compensation very seriously, and will not provide financing until such issues are addressed, in compliance with the agency's regulations and standards. The line to be installed cannot pass over houses, hospital, schools, agricultural land, cemeteries, and large trees. However, would be cases where this would not be feasible, whereby JICA has very specific rules, and as a result, a Resettlement and Compensation Plan (RCP) for affected parties would be elaborated to ensure that families affected by the transmission line Project have equal or better conditions than those that were present prior to Project implementation.</p> <p>The compensations for the loss of agricultural land, and fruit trees would be determined using the Ministry of Agriculture and Fisheries' price table for agricultural products per square meter, and that the entire process would be fair, transparent and honest, thus ensuring that compensation is granted to whom it is owed.</p> <p>Should a house be affected by the Project, it will be assessed and the affected parties may receive a house of equivalent or better specification. The 220 kV TL route is not the final, may be changed, and several studies such as geomorphological, topography, environmental, social and cultural studies are required to identify the final route and ensure that it does not affect the population's well-being, or if it does, that it is kept to a minimum.</p> <p>The Project budget will take into account any negative impacts that the Project may cause.</p>

Comment/Question	Answer
	<p>A thorough registration process regarding any affected agricultural land, housing and other infrastructure along the 190 km Project route would be conducted in order to prevent any opportunism, which would result in a Resettlement Action Plan being elaborated.</p> <p>It was proposed the creation of multidisciplinary working committees between RNT, TEPCO, JICA, the Humpata and Lubango Municipalities Administrations and the Huíla Provincial Directorates in order to ensure a fair process regarding compensation for damage to agricultural land, and potential displacement along the Project's route.</p>
<p>Francisco Calenga (FC) – Onculuvala resident.</p> <p>FC questioned whether the Onculuvala neighborhood community would benefit from the implementation of the electricity transmission lines in the area in terms of electricity provision.</p>	<p>Catarino Cosme (CC) – RNT</p> <p>The implementation of the 220 kV transmission line, and 220/60 kV substation in Moçâmedes will benefit the Namibe province as it would meet the province's current demand for electricity, which is critical in terms of economic, social, and tourism growth in the region.</p> <p>Actually, there are three (3) companies with responsibility in the energy sector in the country: PRODEL (Production), RNT (Transmission) and ENDE (Distribution). RNT will install the transmission line between Lubango - Moçâmedes during the first phase of the Project. This will be followed by the implementation of the distribution phase, during which ENDE, in collaboration with the Huíla and Namibe Provincial Governments and municipal administrations, will evaluate energy demand and develop alternative distribution options from the Moçâmedes substation. However, it was emphasized that currently, the Project will only facilitate the transportation of electricity between the Arimba 220/60 kV substations in Lubango and the new 220/60 kV substation to be installed in the Aida neighborhood, Moçâmedes.</p> <p>It was also mentioned that Onculuvala settlement, including others settlements in Humpata communal</p>

Comment/Question	Answer
	headquarters, will be shortly beneficiary by energy provided by Humpata substation.
<p>João Hilucobanle (JH) - Onculuvala resident.</p> <p>JH praised the government's initiative regarding Project implementation. However, he mentioned that the local population is currently suffering from famine as a result of recurrent droughts in the region. JH requested food support as well as the installation, and improvement of critical infrastructure such as drinking water, schools, and health care.</p> <p>Tchongolola Culengalenga (TC) - Onculuvala neighborhood resident.</p> <p>TC acknowledged JH's request and FC's enquiry. TC mentioned that the Food Aid Program provided to some communities in the region should also take into consideration the Onculuvala neighborhood residents.</p>	<p>Catarino Cosme – RNT</p> <p>The main objective of the 220 kV TL Project is to facilitate the transportation of electricity between the 220/60 kV Arimba substation in Lubango (Huila) and the 220/60 kV substation to be installed in Moçâmedes (Namibe). However, Angolan Government has policies requiring companies that execute state projects to create Social Responsibility Programs in order to safeguard communities. These concerns have been raised, and will be forwarded to the Project EPC as soon as the public tender is held.</p> <p>RNT will advise the future contractor to implement the Social Responsibility Program in accordance with social needs and conditions identified by communities along the Project's route. However, The EPC's social responsibility initiative may be focused on other sectors as the local government is responsible for the distribution of drinking water, electricity, and agricultural products.</p> <p>Carlos Xavier (CX) - Deputy Municipal Administrator</p> <p>There are several Projects for the improvement of infrastructures within the scope of PIIM, which will be developed in Onculuvala settlement (including other settlements around the Humpata headquarters), gives an example of the Water Hole Project for the benefit of local communities. However, the other social complaints were noted. He invited residents of Onculuvala to visit the Administration to learn more about the various projects that have been recommended for the region under PIIM.</p> <p>The Government of the Province of Huila is only providing food support to communities in the Bata-Bata region in order to work on the migration of young children to Lubango, who are constant targets of sexual exploitation.</p>

Comment/Question	Answer
<p>Alexandre Ngulupia (AN) - Onculuvala resident.</p> <p>AN asked whether the Project would provide employment opportunities, and reported that 50% of the youth in the region are unemployed.</p>	<p>Catarino Cosme (CC) – RNT</p> <p>A public tender will be launched to find the EPC that will implement the 220 kV Project and 220/60 kV substation in Moçâmedes. In the specifications, the EPC will be required to contract up to 40% of local labour. The EPC must disclose these job opportunities in Jornal de Angola, local radios stations with the highest ratings, safety displays on the workers camps, integrated professional training centres in Huíla and Namibe capital cities, among other means or platforms for dissemination, so that everyone can have access to information.</p> <p>Eduardo Ferdinand (EF) - Holísticos</p> <p>Currently, the project is undergoing a Technical Pre-Feasibility Analysis phase, RNT experts are studying the best alternatives options for the Project's route and technology. After determining the transmission line route, work will begin during the second quarter of 2022 to map the terrain's topography, geomorphology, and locate any possibly unexploded ordnance.</p> <p>An EPC for the Project has yet to be identified, while engineering studies are being prepared by the Japanese firm TEPCO. Subsequently, RNT will hold a public tender to identify an EPC that has the necessary experience to implement the Project, as well as the ability to do so in less time than stipulated in the requirements.</p> <p>Meanwhile, stakeholder engagement meetings with residents of villages and neighbourhoods near the transmission line proposed route will be held continuously throughout the implementation phase of the Project and a Stakeholder Engagement Plan will be developed.</p>
<p>Observation. During the stakeholder engagement meeting, several issues were raised related to famine and misery, which seriously affects the populations of the Onculuvala settlement, due to frequent droughts. On the other hand, the communities requested the installation, and improvement of essential infrastructures in the settlement, such as: drinking water, health centre, support for subsistence farming, and livestock.</p>	

Comment/Question	Answer
	<p>With no further questions, the stakeholder engagement meeting was closed by Mr. Carlos Xavier (Humpata Municipal Deputy Administrator), who thanked everyone for attending, with special mention to the Project promoters; RNT and Holísticos representatives. He also expressed his belief in the success of the Project, stating that it would be a valuable contribution to the growth of the Huíla and Namibe provinces.</p>

APPENDIX 1: PHOTOGRAPHIC RECORD



Photo 1: Presence of female during the stakeholder engagement meeting in Onculuvala Settlement.



Photo 2: Project disclosure by Eduardo Ferdinand (Holísticos).

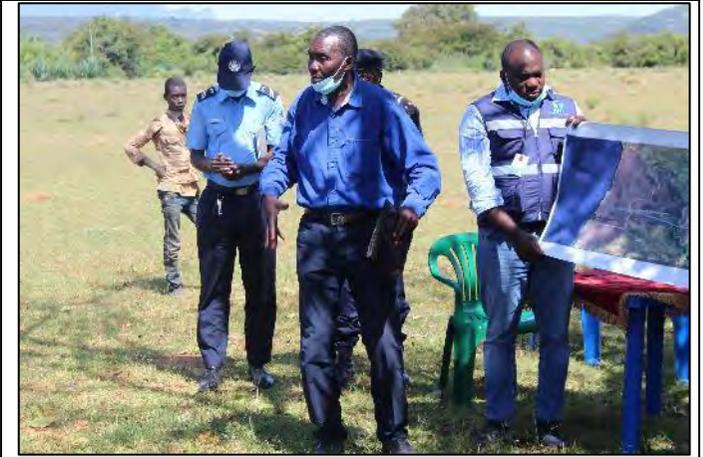


Photo 3: Translation to Nyaneca Humbi by Mr. Agostinho Tchiputo (Soba and coordinator of Onculuvala settlement).



Photo 3: Project team (Humpata Municipal Administration representatives, Holísticos, RNT teams and police authorities).



Photo 5: Young people present in the stakeholder engagement meeting in Onculuvala Settlement.

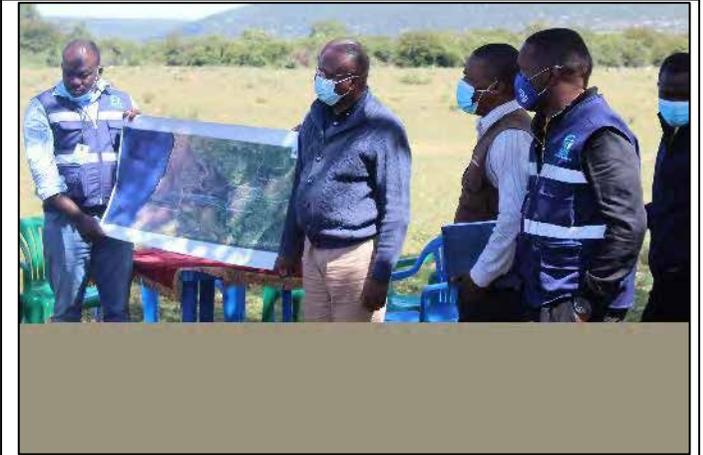
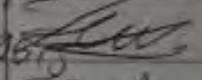
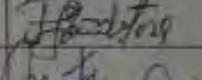
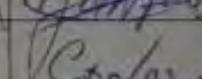


Photo 6: Carlos Xavier's (Humpata Municipal Deputy Administrator) intervention.

APPENDIX 2: ATTENDANCE LIST.


ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 KV LUBANGO (HUILA) - MOÇÂMEDES (NAMIBE)
 FASE 1 (EPDA)

LISTA DE PRESENCAS (LOCAL): BAIRO ONCULUVALA **DATA:** 22 / ABRIL / 2021

NOME	INSTITUIÇÃO	MUNICÍPIO	CONTACTOS	ASSINATURA
CATARINO CASHE	RNT - EP	SOCIÓLOGO	912355412	
Zola Eduardo Magalhaes	Polícia Nacional	Comandante Comunal	944568095	
Fernando Ventura	P.N. Huila/Horolito	Quilte de 153 Esq	924090284	
Manuel Francisco Coimbra	Administração Municipal	Admin. Municipal Fiscal	984459257	
799 J. J. J. J.	Administração Com. S. S.	Administradora	927834530	
Vitor Xavier	ADTA - HPTA	ADTA - HPTA	929110467	Cor/03 X.
Caruso K. Abel	adm. municipal	Técnico Adm. Municipal	924856152	Caruso
Estevão S. S.	Adm. municipal	el. S. S. S. S. S. S.	939031661	Estevão S. S.
Ajosinho Tchiputo	fba da Ania	fba da Ania	940436446	Onkuluvale
Fernando Sanyta	Campes	Campes	947159869	Onkuluvale
Seo	Campes	Campes	"	"
José Manuel Tchilunda	Campes	Campes	"	"
Mário Vilela	Campes	Campes	"	"



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUILA) - MOÇÂMEDES (NAMIBE)

FASE 1 (EMDA)

LISTA DE PRESENCAS (LOCAL):

Onculumbi

DATA: 02 / ABRIL / 2021

NOME	INSTITUIÇÃO	TITULO	CONTACTOS	ASSINATURA
João Myango		P. Campones		
Alexandre Gulupia		Agricultor	947 83 28 56	
João Tumpu		P. campones	947 93 97 83	
Jermendes Apolito Castro	Unidade III	Secretário	945 73 19 54	[Assinatura]
João Kapito		Campones		
Teodoro Kalandu		Campones		
Teodoro Calunga		"		
Elisa MBale	Onculumbi	"		
Isidoro Gelola	"	Campones		
Dionísio Talulo	"	"		
Teodoro Ndengar	"	"		
Augusta Tealulo	"	"		



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 1 (EPDA)

LISTA DE PRESENCAS (LOCAL):

BAIRRO ONCULUVALA

DATA: 22 / ABRIL / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	SIGNATURA
Agostinho Tórcelo Tchikho	ONCULUVALA	Camponês	11 4	6
José Maguinho Saba	ONCULUVALA	Camponês	928 68 4447	1
M. Louçã Muteza Nates	ONCULUVALA	Camponês	911	
José José Louçã Muteza	ONCULUVALA	Camponês	11 11	
Chilica Kalidê	ONCULUVALA	Camponês	11 17	
Keura de M. Jantá Lou	D. e M. Energia e Água	chefe de Secção	944211404	"
Valentin K. Tchicóto		Professor	926223620	Valentin
José Camaguala Reis	Holísticos	consultor	933895840	José
Isordina Xalina	ONCULUVALA	Camponês		
Xisa Capeta	"	"		
Tchicóto Capeta	"	"		
Helena Tchicóto	"	"		
Maria Helena	"	"		



LISTA DE PRESENCAS (LOCAL):

Dneulumbi

DATA: 29 / ABRIL / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTO	ASSINATURA
Domingos Domingos				
Alvo De Leo			946.73 80 82	
Tchilongo Corrala				
Manuel Kanda				
António Manganga		Companhos	939 48 39 95	
Heteca Tchafinga		Tecno Pedreiro		
Kristine João da Costa		Companhos	941 24 47 41	
Manuel Acafo		"		
José Tombe la		"		
Jorge Tchilosa		"		
Adelina Tchilombata		"		
Maria Augusto		"		
Jaime Tchifunga		"		



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 1 (EPOA)

LISTA DE PRESENCAS (LOCAL):

Ochenta

DATA: 02 / ABRIL / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	SIGNATURA
Salala Ken	B= Ochenta	Campones		
Pedro Cassula	"	"		
Luis Ngongo	"	Campones		
João MBuale	"	Campones		
Catchinga Mbeia	"	Campones		
Eloise Miranda	Holisticos	Eng Ambiental	926 96 13 60	Eloise Miranda
Eduardo Ferdinand	Holisticos	Eng Ambiental	925 75 39 14	EF

220 kV TL Project between Lubango - Moçâmedes	MEETING MINUTES Stakeholder Engagement Meeting						
			Project: P.1649				
VENUE:	Aída Neighborhood in the Forte Santa Rita Commune, Moçâmedes municipality (Namibe Province).		DATE:	23/04/2021	# OF PAGES	11	
ASSUNTO:	Stakeholder Meeting	Engagement	NOTES BY:	Elayne Miranda and Eduardo Ferdinand		REVISION:	Vladimir Russo

ANEXOS**Appendix 1** – Photographic Record**Appendix 2** – Attendance List**Appendix 3** – Presentation**CÓPIAS ENVIADAS PARA:**

- National Electricity Transmission Network Company (RNT – E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Namibe Provincial Government.

ITEM	DESCRIPTION
1	On April 23 th , 2021, a stakeholder engagement meeting was held with the residents of the Aída Neighborhood in <i>Jango Comunitário do Bairro Aída</i> (Geographic coordinates: 15°10'53.69"S 12°11'29.16"E). The meeting was attended by several entities, with special mention to Ms. Marília Inácio (Forte Santa Rita Communal Administrator), representatives of Moçâmedes Municipal Administration, members of Aída Neighborhood auscultation council, traditional authorities, residents, etc. The meeting was also attended by representatives from companies Holísticos (Eduardo Ferdinand, Elayne Miranda, and José Luís) and the RNT - National Electricity Transmission Network (Catarino Cosme, Leitão Alexandre, and Henriques dos Santos).
2	The stakeholder engagement meeting was attended by 49 participants, ten (10) of whom were female (23%). Forte Santa Rita Communal Administrator, Ms. Marília Inácio (MI) welcomed those present and explained the importance of the Project in terms of development and boosting the economies of the Huíla and Namibe provinces, mentioning that job opportunities for young people in the settlements would be created and that tourism could be developed in the region.
3	Holísticos' representative, Eduardo Ferdinand (EF) began the presentation by using simplified banners to outline the Project's characteristics and explain the electricity transmission line (TL) proposed route before elaborating on ongoing environmental, social and cultural surveys and the potential impacts of the proposed route and how they will be mitigated.
4	EF also mentioned that a stakeholder engagement process is extremely important regarding the materialization of the Project and that RNT is promoting the Project in collaboration with Tokyo Electric Power

	Services Co. (TEPSCO), with financing from the Japan International Cooperation Agency (JICA). He emphasized that the Project's main goal is to increase electricity supply to the Namibe province while also allowing for the connection of electricity transport systems between the north (highlighting Malanje province) and center-south regions.
5	EF explained that the Project addresses the need to transport electricity generated at the Laúca Dam through the Belém do Dango (Huambo Province), Nombungo and Arimba substations (Huíla Province) and later Moçâmedes substation (Namibe Province). He also mentioned that the Project will adhere to JICA Guidelines for Environmental and Social Considerations (2010).
6	<p>EF stated that the objective of the stakeholder engagement meeting is to give interested and potentially affected parties a chance to learn about the Project, offer feedback, and make recommendations regarding its implementation. EF gave a presentation that focused on the following points (see Annex 3 - Presentation):</p> <ul style="list-style-type: none"> • Brief description of the Project; • Presentation of the country's current environmental impact assessment process; • Project Financier (JICA) legal and regulatory framework; • Environmental and socio-economic aspects of the transmission line route; • Expected environmental and socio-economic Impacts; • Questions and answers session.
7	EF also explained that the Project intends to avoid inhabited spaces, agricultural and livestock areas as well as military and commercial aircraft manoeuvring spaces, transhumance areas, areas that are historically important to ethnolinguistic communities, cemeteries, leisure areas, etc. Concluded the presentation by mentioning that the ongoing environmental studies (Environmental Pre-Feasibility Study and Scoping Report and Environmental and Social Impact Study for the Project) would be prepared in compliance with current legislation, industry best practices, and other JICA guidelines, stressing that the line's route may be altered depending on the severity of any identified environmental and social impacts and topography survey. He invited those present to provide feedback regarding improving Project related technical feasibility studies.
8	The table below provides a summary of the questions and answers session.

QUESTIONS AND ANSWERS SESSION SUMMARY

Comment/Question	Answer
<p>Geraldo Cabinda (GC) - Aída resident.</p> <p>GC questioned the benefits of the Aída neighborhood when the substation be implemented in the region, mentioning whether it could benefit from the electricity transformed into the substation.</p>	<p>Catarino Cosme – RNT</p> <p>The construction of the 220/60 kV substation will benefit the entire municipality of Moçâmedes because it aims to respond to the current demand for electricity that the province of Namibe really needs for its development.</p> <p>Actually, there are three (3) companies with responsibility in the energy sector in the country: PRODEL (Production), RNT (Transmission) and ENDE (Distribution). RNT will install the transmission line during the first phase of the Project. This will be followed by the implementation of the distribution phase, during which ENDE, in collaboration with the Namibe Provincial Government and Moçâmedes Municipal Administrations, will evaluate energy demand and develop alternative distribution options from the Moçâmedes substation.</p> <p>The Aída neighborhood may be one of the beneficiaries, even due to its proximity to the substation. However, the idea was reinforced that the Project at this stage is exclusively for the transmission of electricity between 220/60 kV Arimba substation in Lubango and the future 220/60 kV substation in Moçâmedes.</p>
<p>Fernando Rafael (FR) – Aída resident</p> <p>FR questioned whether, with the implementation of the Project, there will be an improvement in the current conditions of the access road to the Aída neighborhood.</p>	<p>Catarino Cosme – RNT</p> <p>The main objective of the 220 kV TL Project is to facilitate the transportation of electricity between the 220/60 kV Arimba substation in Lubango (Huila) and the 220/60 kV substation to be installed in Moçâmedes. However, Angolan Government has policies requiring companies that execute state projects to create Social Responsibility Programs in order to safeguard communities. These concerns have been raised, and will be forwarded to the Project EPC as soon as the public tender is held.</p> <p>RNT will advise the future Project EPC to implement the Social Responsibility Program in accordance with social</p>

Comment/Question	Answer
	<p>needs and conditions identified by communities along the Project's route. However, The EPC's social responsibility initiative may be focused on other sectors as the local government is responsible for repairing, and improving road infrastructure.</p> <p>Marília Inácio (MI) – Communal Administrator</p> <p>The Integrated Intervention Programme in Municipalities (PIIM) is implementing various strategic and satellites projects in Moçâmedes municipality. The access road to the Aída neighborhood as soon as possible will be rehabilitated. However, only earthmoving, and soil compaction will be carried out at this stage.</p>
<p>Joaquim Matias (JM) – Aída resident.</p> <p>JM asked about the involuntary resettlement process and compensation for damage to third party infrastructure (houses, agricultural crops, and livestock areas). In case of potential damage, the annual production of the farmer will be paid or only the production that the cultivated land presents.</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>JICA takes issues of resettlement and compensation very seriously and will not provide financing until such issues are addressed, in compliance with the agency's regulations and standards. The line to be installed cannot pass over houses, hospital, schools, agricultural land, cemeteries and large trees. However, would be cases where this would not be feasible, whereby JICA has very specific rules, and as a result, a Resettlement and Compensation Plan (RCP) for affected parties would be elaborated to ensure that families affected by the transmission line Project have equal or better conditions than those that were present prior to Project implementation.</p> <p>The compensations for the loss of agricultural land and fruit trees would be determined using the Ministry of Agriculture and Fisheries' price table for agricultural products per square meter, and that the entire process would be fair, transparent and honest, thus ensuring that compensation is granted to whom it is owed. However, the amount to be paid for the crops mapped as affected will depend on the production of agricultural products by species that it presents and not on the basis of the annual</p>

Comment/Question	Answer
	<p>production that the farmer exclaims that he produces. Paid production will be offered to the farmer.</p> <p>Should a house be affected by the Project, it will be assessed and the affected parties may receive a house of equivalent or better specification. The 220 kV TL route is not the final, may be changed, and several studies such as geographical, topography, environmental, social and cultural studies are required to identify the final route and ensure that it does not affect the population's well-being, or if it does, that it is kept to a minimum.</p> <p>The Project budget will take into account any negative impacts that the Project may cause.</p> <p>A thorough registration process regarding any affected agricultural land, housing and other infrastructure along the 190 km Project route would be conducted in order to prevent any opportunism, which would result in a Resettlement Action Plan being elaborated.</p> <p>It was proposed the creation of multidisciplinary working committees between RNT, TEPSICO, JICA, the Humpata and Lubango Municipalities Administrations and the Huíla Provincial Directorates in order to ensure a fair process regarding compensation for damage to agricultural land and potential displacement along the Project's route.</p>
<p>Salomé Simivangue (SS) – Aída resident.</p> <p>SC asked about the beginning of the process of recruiting workers for the Project.</p>	<p>Eduardo Ferdinand (EF) - Holísticos</p> <p>The proposed timetable for the global project construction is 30 months, however, the construction phase will start only after the conclusion and approval of the Environmental and Social Impact Study by the Project financier (JICA) and the Ministry of Culture, Tourism and Environment (MCTA). If the financing is guaranteed, implementation phase could begin during 2023.</p>

Comment/Question	Answer
	<p>A public tender will be launched to find the EPC that will implement the 220 kV Project and 220/60 kV substation in Moçâmedes. In the specifications, the EPC will be required to contract up to 40% of local labour. The EPC must disclose these job opportunities in Jornal de Angola, local radios stations with the highest ratings, safety displays on the workers camps, integrated professional training centres in Huíla and Namibe capital cities, among other means or platforms for dissemination, so that everyone can have access to information.</p>
<p>António Mateus (AM) – Aída resident.</p> <p>AM informed that he dominates the region and knows free areas where the electricity transmission line will be able to cross without having to displace anything. He informed that the Residents' Committees of Aída Neighborhoods 18 and headquarters will be able to assist Project promoters in mitigating possible conflicts over land occupation or the conquest of the right of way for the Project.</p>	<p>Catarino Cosme – RNT</p> <p>Thanked the support provided by the Residents' Committees of the Aída Neighborhoods.</p> <p>The 220 kV transmission line would run parallel to the 60 kV line wherever possible. The route presented is not the final, and may be changed and several studies, such as geomorphological, topography, environmental, and social studies are required to identify the final route and ensure that it does not affect the population's well-being, or if it does, that it is kept to a minimum.</p>
<p>Mulungua Bringó (MB) – Aída resident.</p> <p>MB praised the project and thanked the promoters for their initiative to develop the project in the region, and to engage to the communities long before the construction phase, a practice that had not been done before. The Residents' Committees of the Aída Neighborhoods are willing to help the Project team.</p>	<p>Catarino Cosme – RNT</p> <p>The Project team thanked Mr. Mulungua Bringó for all his contributions.</p>
<p>With no further questions, the stakeholder engagement meeting was closed by Ms. Marília Inácio (Forte Santa Rita Communal Administrator), who thanked everyone for attending, with special mention to the Project promoters; RNT and Holísticos representatives. She also expressed her belief in the success of the Project, stating that it would be a valuable contribution to the growth of the Huíla and Namibe provinces.</p>	

APPENDIX 1: PHOTOGRAPHIC RECORD



Photo 1: Opening of the meeting by Ms. Marília Emilio (Forte Santa Rita Communal Administrator).



Photo 2: Project disclosure by Eduardo Ferdinand (Holísticos).



Photo 3: Entities present at the stakeholder engagement meeting.

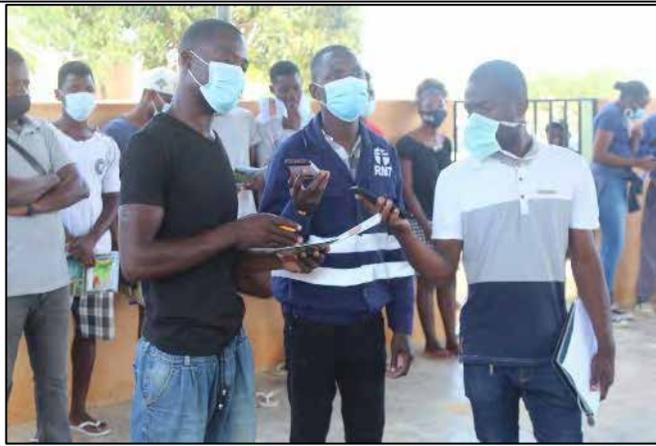


Photo 4: Intervention by Mr. Joaquim Matias.

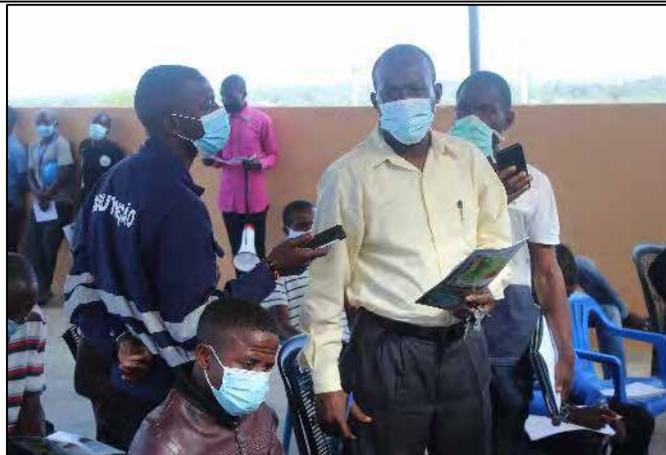


Photo 5: Intervention by Mr. António Matias.

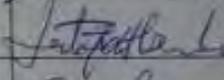
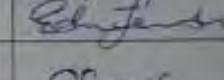


Photo 6: Mr. Catarino Cosme's (RNT) intervention.

APPENDIX 2: ATTENDANCE LIST.


ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE) FASE 1 (EPDA)

LISTA DE PRESENCAS (LOCAL): Bairro Aida DATA: 23 /ABRIL/2021

NOME	INSTITUIÇÃO	FUNÇÃO	IDENTIFICADOR	ASSINATURA
Carolina Cosme	RNT-EP	Sociologia	912355412	
Luís Alexandre	RNT-EP	Eng. Ambiental	924715373	
Eduardo Tedinal	Holísticos	Eng. Ambiental	925753914	
Paulina Inácio	Administração	Administradora	923704792	
Henrique Duarte da Silva	RNT-EP	Eng. PEGG	924.98.58.84	
Augusto Lima	Bairro Aida		944264456	
Gabriel Machado	Bairro Aida	Comerciante	955716442	
Paulino Evambé	Bairro Aida	Guarda	9418548079	
António Jango	Bairro Aida	Mobiliário	928365445	
Manuel Lima	Bairro Aida	Comerciante	941194217	
Carolina Gomes	Administração	Directora Adjunta	933247131	
Jonas Manuel da Silva	Administração	Chief de Projecto	924848035	
António Agostinho	Bairro Aida	Produtor	963730097	



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) - MOÇÂMEDES (NAMIBE)

FASE 3 (EPDA)

LISTA DE PRESENCAS (LOCAL):

Bairro Aida

DATA: 09 / ABRIL / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Antonio Gabriel	Bairro Aida	Mecanico	928815248	
Niguel Carvalho Alves			924114638	
Miguel D. Pereira	Bairro Aida	matavista	944399855	
Angelino Domingos	Bairro Aida	seguranca	940157554	
Rosalina Nganda	Bairro Aida	Costureira	935684681	
Zilito Estambuco	Bairro Aida	Estudante	924679782	
Jose Luis Miguel	Bairro Aida	Estudante	924803654	
João Lopes	Bairro Aida	Estudante	935366692	
Domingos Capela	Bairro Aida		946416657	
João Alfredo	"	Estudante	921619154	
Miguel N. S. G. A.	"	Campos	"	
João Carlos	"	seguranca Escola		
Adão Balbante	"	Reformado		



LISTA DE PRESENCAS (LOCAL):

Bairro Aida

DATA: 23 / ABRIL/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Gertruda Cambinda	Bairro Aida	Tenente Coronel B.18	943367550	Cambinda
Paulina da Rainha	Bairro Aida	Coordenadora B.1	935354662	Mulungwa
António F. Hatus	Bairro Aida	Agente. DN	926074520	Hatus
Belarmino Que	D.M.E.A	CHEFE DE SECTO	943141931	
Emelinda José de	Com. Social	chefe de secc	979271970	
José da Silva	Bairro Aida	adido	925255333	
José Agostinho Venâncio	Bairro Aida	FISCAL	730254632	
Salomé Imácio	Bairro Aida	Domestica	931318344	Salomé
Judith Elias	Bairro Aida	Domestica	926342786	Judith
Minsiendi Jango	Bairro Aida	Radio Técnico	936329314 943777838	Jango
Luzia Sandra	Bairro Aida			
Alino Karito	"	Campones		
Henrique António	Bairro Aida	Mulherita	926302914	



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 kV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 1 (EPDA)

LISTA DE PRESENCAS (LOCAL):

Bairro Aida

DATA: 23 / ABRIL / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Victoria Agostinho	Bairro Aida	Estudante		Victoria
1000 Camati	Bairro Aida	Condutor	939958885	Camati
Manuel Santana	Bairro Aida	Estudante		Santana
Joaquim Joh. Matias		Pedreiro	932413128	Matias
Raul A. Erasmzi		Estudante	938296604	Erasmzi
Paulino Erasmzi		Estudante	945321556	Erasmzi
Manuel Hipopótamo		Reformado		
Fernanda Soares Cantinho	Bairro Aida	Sq. Presidente da Assent.	926942042	
Elayne Miranda	Holística	Eng. Ambiental	926964300	Elayne Miranda
José Bernardino Dias	Holísticos	Consultor	933845840	José Bernardino

220 kV TL Project between Lubango - Moçâmedes	MEETING MINUTES Stakeholder Engagement Meeting					
		Project: P.1649				
VENUE:	Poiares Muhaha Settlement in Arimba Communal Headquarters, Lubango Municipality.	DATE:	14/09/2021	# OF PAGES	9	
ASSUNTO:	Stakeholder Engagement Meeting (Phase 3)	NOTES BY:	Elayne Miranda and Eduardo Ferdinand	TIME:	09h40 10h50	REVISION: Vladimir Russo

ANEXOS**Appendix 1** – Photographic Record**Appendix 2** – Attendance List**Appendix 3** – Presentation**CÓPIAS ENVIADAS PARA:**

- National Electricity Transmission Network Company (RNT – E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Huíla Provincial Government.

ITEM	DESCRIPTION
1	On September 14 th , 2021, a stakeholder engagement meeting was held with the residents of the Poiares Muhaha settlement, the opening ceremony of the stakeholder engagement meeting started at 09:40 am at Poiares Muhaha Primary School No. 24 (14°55'40.4 "S 13°39'25.1 "E). The meeting was attended by several entities, with special mention to Mr. João Chissingui (Arimba Commune Deputy Administrator), representatives of the Arimba Communal Administration, members of the Poiares settlement auscultation council, traditional authorities, residents, etc., with representatives from Holísticos (Eduardo Ferdinand and Elayne Miranda), the RNT - National Electricity Transmission Network Company (Catarino Cosme and Pedro Pereira) and JICA – Japan International Cooperation Agency (Junco Fujiwara, Junich Arakawa and Hélder Cassoma).
2	The stakeholder engagement meeting was attended by 39 participants (24.9% of whom were female). The Arimba Commune Deputy Administrator, Mr. João Chissingui (JM) welcomed those present and explained the importance of the Project in terms of development and boosting the economies of the Huíla and Namibe provinces, mentioning that job opportunities for young people in the settlement would be created and that tourism could be developed in the region. There was a need for simultaneous translation into the local language (Nhaneca-Humbi) as many of those present did not fully understand Portuguese. Mr. Luís Kapalo (LP) (Coordinator of Poiares Muhaha settlement) helped during the translation process.
3	Holísticos' representative, Eduardo Ferdinand (EF) began the presentation by using simplified banners to outline the Project's characteristics and explain the 220 kV electricity transmission line proposed route and the construction of two (2) substations (East Lubango and New Namibe Substations), before elaborating on

	<p>ongoing environmental, social and cultural surveys and the potential impacts of the proposed route and how they will be mitigated. He mentioned that in parallel to the preparation of the Environmental and Social Impact Assessment (ESIA) Report, the preparation of a Resettlement and Compensation Plan is also underway and that during the months of October and November all settlements, public and private properties that are within the Project's 45 meter buffer zone will be mapped and the owners surveyed.</p>
4	<p>EF mentioned that during the course of the surveys, questionnaires will be administered to the heads of households in the presence of their wives and children, and that the entire process will be carried out in a transparent manner observing, where possible and where applicable, current Angolan legislation, JICA guidelines and international best practices. He stressed that in the event that infrastructure or property was potential affected (e.g. ploughs, houses, grazing areas, industrial facilities, etc.), the affected parties would be adequately compensated for the damage. He mentioned that a resettlement committee will be created with the inclusion of various institutions of the Executive at the level of Huila province with the objective of guaranteeing transparency, honesty, and a fair assessment of potentially affected infrastructures.</p>
5	<p>EF also mentioned that a stakeholder engagement process is extremely important regarding the materialization of the Project and that RNT is promoting the Project in collaboration with Tokyo Electric Power Services Co. (TEPSCO), with financing from the Japan International Cooperation Agency (JICA). He emphasized that the Project's main goal is to increase electricity supply to the Namibe province while also allowing for the connection of electricity transport systems between the north (highlighting Malanje province) and center-south regions.</p>
6	<p>EF explained that the Project addresses the need to transport electricity generated at the Laúca Dam through the Belém do Dango (Huambo Province), Nombungo and East Lubango substations (Huíla Province) and later New Namibe substation (Namibe Province). During his explanation, EF also noted the 60 kV Transmission Line Project that will be built between the East Lubango substation and the future Arimba substation, which will be implemented on the land adjacent to the Arimba Thermal Power Plant, said that the project is being promoted by the Electricity Distribution Public Company (ENDE), and that as soon as the final route is completed stakeholder engagement meetings will also be held to disclosure the Project to interested parties and potentially affected. He also mentioned that the two (2) Projects will adhere to JICA Guidelines for Environmental and Social Considerations (2010), and others international best practices.</p>
7	<p>EF stated that the objective of the stakeholder engagement meeting is to give interested and potentially affected parties a chance to learn about the Project, offer feedback, and make recommendations regarding its implementation. EF gave a presentation that focused on the following points (see Annex 3 - Presentation):</p> <ul style="list-style-type: none"> • Brief description of the Project; • Presentation of the country's current environmental impact assessment process;

	<ul style="list-style-type: none"> • Project Financier (JICA) legal and regulatory framework; • Environmental and socio-economic aspects of the transmission line route; • Expected environmental and socio-economic Impacts; • Resettlement and compensation for damage along the right-of-way; • Survey applied to the head of household using questionnaires; • Question and answer session.
8	EF also explained that the Project intends to avoid inhabited spaces, agricultural and livestock areas as well as military and commercial aircraft manoeuvring spaces, transhumance areas, areas that are historically important to ethnolinguistic communities, cemeteries, leisure areas, etc. Concluded the presentation by mentioning that the ongoing environmental studies (Environmental and Social Impact Assessment for the Project) would be prepared in compliance with current legislation, industry best practices, and other JICA guidelines. He invited those present to provide feedback regarding improving Project related technical feasibility studies.
9	It is important to note that the entire meeting was translated between Portuguese and Nhaneca-Humbi in order to ensure that the residents of the Poiars Muhaha settlement fully understood all aspects.
10	The table below provides a summary of the questions and answers session.
NOTE	During the stakeholder engagement meeting, the residents of Poiars Muhaha settlement mentioned that during the construction of a small irrigation dam in the region, some residents had their crops affected and so far they had not received any compensation from the promoters of the same Project.

QUESTION AND ANSWER SESSION SUMMARY

Comment/Question	Answer
<p>José Isaac (JI) – Poiars Muhaha settlement resident.</p> <p>JI requested clarification regarding the resettlement and compensation process, asking what would happen in the event of damage to third-party infrastructure (housing, agricultural and livestock areas, etc.).</p>	<p>Eduardo Ferdinand (EF) – Holísticos</p> <p>JICA takes resettlement and compensation process extremely seriously and will not provide financing until such issues are properly addressed by RNT and implemented in accordance with current national legislation and JICA requirements. The line to be installed cannot pass over houses, agricultural land, schools, hospitals, cemeteries and large trees over 8 m in height. However, would be cases where this would not be feasible, for which both current Angolan legislation on resettlement and JICA guidelines have very explicit rules/guidelines, and that a Resettlement and Compensation Plan (ARAP) for potentially affected parties is</p>

Comment/Question	Answer
	<p>currently being developed in order to ensure that families affected by the transmission line Project have equal or better conditions than those that were present prior to Project implementation.</p> <p>During the initial phase, only infrastructures located within a 45 m of the Project buffer or right-of-way (RoW) will be compensated, meaning that anyone located outside of this zone will not be compensated.</p> <p>The compensations for the loss of agricultural land and fruit trees would be determined using the Ministry of Agriculture and Fisheries' price table for agricultural products per square meter, and that the entire process would be fair, transparent and honest, thus ensuring that compensation is granted to whom it is owed. Between October and November, a team would map the Project's route, survey private infrastructure within a 45 m of the Project buffer, and conduct a census of the entire community, including its socioeconomic profile.</p> <p>Should a house be affected by the Project, it will be assessed and the affected parties may receive a house of equivalent or better specification. The 220 kV TL will be developer to ensure that it does not affect the population's well-being, or if it does, that it is kept to a minimum.</p>
	<p>Catarino Cosmo (CC) – RNT</p> <p>Should a house be affected by the 220 kV Project, it would be evaluated and the affected parties may receive a house of equivalent or better specification.</p> <p>Drew the participants' attention to acts of opportunism, noting that only affected and previously registered parties would be compensated for the affections of their houses, agricultural land, and other structures. If a house is completely or partially affected, the form of negotiation or compensation would only involve a single house. The financial compensation for house resettlement will be</p>

Comment/Question	Answer
	<p>avoided as a result of lessons learned from other RNT supported projects, citing an example of how some people preferred to acquire electrical appliances and consumer goods and later found themselves unable to build a house.</p> <p>Urged those present to widely publicize the meeting in order to keep absent residents informed about the Project.</p>
<p>With no further questions, the meeting was closed by João Chissingui, Arimba Deputy Communal Administrator, who thanked everyone for attending, with special mention to the Project promoters; RNT, JICA and Holísticos.</p>	

APPENDIX 1: PHOTOGRAPHIC RECORD



Photo 1: Detail of those present at the stakeholder engagement meeting Poiaras Muhaha village (Phase 3).

Photo 2: Opening of the meeting by the Arimba Deputy Communal Administrator, Mr. João Chissingui.

Photo 3: Presentation of the Project by Eduardo Ferdinand (Holísticos).



Photo 4: Presence of female at the meeting.

Photo 5: Intervention by Mr. José Isaac.

Photo 6: Clarification from Mr. Catarino Cosme (RNT).

APPENDIX 2: ATTENDANCE LIST.






ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
 DE ELECTRICIDADE DE 220 kV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
 FASE 3 (EIAS)

LISTA DE PRESENCAS (LOCAL): Pombas Hulaba / Escola Primária 2024 DATA: 21 /SETEMBRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
NBute Ntchimboto				
Jose Manuel				
Rodriga Calega				
Jose Chimwenha				
Antonio Tchombe				
Antonio Manuel				
Jose Calega				
Domingos NBute				
Camilo NDONGA				
Carlos Manuel				
Domingos Sefalo				
Madeira Jose				
Alberto Tchleua				



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 3 (EIAS)

LISTA DE PRESENCAS (LOCAL): Paixões Mubalho / Escola Primária nº24

DATA: 24 /SETEMBRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
João Manuel				
Nehama de Fátima				
Sapalo Nambela				
Adriana Tchindele				
Fátima Cordeiro				
Catila José				
Sapalo Nambela				
Segunde Sapalo				
Tuyala Tchiqueres				
Carreira				
Augusto Domingos				
Caetano MBA				
Manuel Ferreira				



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) - MOÇÂMEDES (NAMIBE)

FASE 3 (EIAS)

LISTA DE PRESENCAS (LOCAL): Parques Nubala / Escola nº24

DATA: 14 / SETEMBRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Quirido Luis				
Lupex				
Jose Luis Calape		Chefe da povoação	933-816-390	Jose Luis Calape
João Gomes Brimigui	AIC-A	Administrador da escola	983 43 2774	João Gomes Brimigui
Ysack				
CAIALINO CASNE	RNT-EP	Sociólogo	912355412	Caialino Casne
Pedro Soares	RNT-EP	Facilitador Social	938966728	Pedro Soares
Guilherme A. J. Nazuelo	RNT-EP	MOTORISTA	937131567	Guilherme Nazuelo
JUNKO FUJIWARI	JICA Team	Social		Junko Fujiwari
Junich ARABANO	JICA Team	Transmissão linha		Junich Arabano
Cosommo	JICA Team	Interprete	9240899990	Cosommo
Flayre Miranda	Holisticos	Coord. Ambiental junior	926964360	Flayre Miranda
Eduardo Jardim	Holisticos	Eng. Ambiental	925753919	Eduardo Jardim

220 kV TL Project between Lubango - Moçâmedes	MEETING MINUTES Stakeholder Engagement Meeting					
		Project: P.1649				
VENUE:	Figueira Neighbourhood in Arimba Commune, Lubango Municipality.	DATE:	14/09/2021	# OF PAGES	10	
ASSUNTO:	Stakeholder Engagement Meeting (Phase 3)	NOTES BY:	Elayne Miranda and Eduardo Ferdinand	TIME:	14h00 16h00	REVISION: Vladimir Russo

ANEXOS**Appendix 1** – Photographic Record**Appendix 2** – Attendance List**Appendix 3** – Presentation**CÓPIAS ENVIADAS PARA:**

- National Electricity Transmission Network Company (RNT – E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Huíla Provincial Government.

ITEM	DESCRIPTION
1	On September 14 th , 2021, a stakeholder engagement meeting was held with the residents of the Figueira Neighbourhood, the opening ceremony of the stakeholder engagement meeting started at 16h00 PM, under a tree that also serves as a primary school for the Nambungula community (14°59'51.8"S 13°33'29.3"E). The meeting was attended by several entities, with special mention to Mr. João Chissingui (Arimba Commune Deputy Administrator), representatives of the Arimba Communal Administration, members of the Figueira Neighbourhood auscultation council, traditional authorities, residents, etc., with representatives from Holísticos (Eduardo Ferdinand and Elayne Miranda), the RNT - National Electricity Transmission Network Company (Catarino Cosme and Pedro Pereira) and JICA – Japan International Cooperation Agency (Junco Fujiwara, Junich Arakawa and Hélder Cassoma).
2	The stakeholder engagement meeting was attended by 25 participants (with no female participation). The Arimba Commune Deputy Administrator, Mr. João Chissingui (JM) welcomed those present and explained the importance of the Project in terms of development and boosting the economies of the Huíla and Namibe provinces, mentioning that job opportunities for young people in the neighbourhood would be created and that tourism could be developed in the region.
3	Holísticos' representative, Eduardo Ferdinand (EF) began the presentation by using simplified banners to outline the Project's characteristics and explain the 220 kV electricity transmission line proposed route and the construction of two (2) substations (East Lubango and New Namibe Substations), before elaborating on ongoing environmental, social and cultural surveys and the potential impacts of the proposed route and how they will be mitigated. He mentioned that in parallel to the preparation of the Environmental and Social Impact

	<p>Assessment (ESIA) Report, the preparation of a Resettlement and Compensation Plan is also underway and that during the months of October and November all settlements, public and private properties that are within the Project's 45 meter buffer zone will be mapped and the owners surveyed.</p>
4	<p>EF mentioned that during the course of the surveys, questionnaires will be administered to the heads of households in the presence of their wives and children, and that the entire process will be carried out in a transparent manner observing, where possible and where applicable, current Angolan legislation, JICA guidelines and international best practices. He stressed that in the event that infrastructure or property was potential affected (e.g. ploughs, houses, grazing areas, industrial facilities, etc.), the affected parties would be adequately compensated for the damage. He mentioned that a resettlement committee will be created with the inclusion of various institutions of the Executive at the level of Huila province with the objective of guaranteeing transparency, honesty, and a fair assessment of potentially affected infrastructures.</p>
5	<p>EF also mentioned that a stakeholder engagement process is extremely important regarding the materialization of the Project and that RNT is promoting the Project in collaboration with Tokyo Electric Power Services Co. (TEPSCO), with financing from the Japan International Cooperation Agency (JICA). He emphasized that the Project's main goal is to increase electricity supply to the Namibe province while also allowing for the connection of electricity transport systems between the north (highlighting Malanje province) and center-south regions.</p>
6	<p>EF explained that the Project addresses the need to transport electricity generated at the Laúca Dam through the Belém do Dango (Huambo Province), Nombungo and East Lubango substations (Huila Province) and later New Namibe substation (Namibe Province). During his explanation, EF also noted the 60 kV Transmission Line Project that will be built between the East Lubango substation and the future Arimba substation, which will be implemented on the land adjacent to the Arimba Thermal Power Plant, said that the project is being promoted by the Electricity Distribution Public Company (ENDE), and that as soon as the final route is completed stakeholder engagement meetings will also be held to disclosure the Project to interested parties and potentially affected. He also mentioned that the two (2) Projects will adhere to JICA Guidelines for Environmental and Social Considerations (2010), and others international best practices.</p>
7	<p>EF stated that the objective of the stakeholder engagement meeting is to give interested and potentially affected parties a chance to learn about the Project, offer feedback, and make recommendations regarding its implementation. EF gave a presentation that focused on the following points (see Annex 3 - Presentation):</p> <ul style="list-style-type: none"> • Brief description of the Project; • Presentation of the country's current environmental impact assessment process; • Project Financier (JICA) legal and regulatory framework; • Environmental and socio-economic aspects of the transmission line route;

	<ul style="list-style-type: none"> • Expected environmental and socio-economic Impacts; • Resettlement and compensation for damage along the right-of-way; • Survey applied to the head of household using questionnaires; • Question and answer session.
8	EF also explained that the Project intends to avoid inhabited spaces, agricultural and livestock areas as well as military and commercial aircraft manoeuvring spaces, transhumance areas, areas that are historically important to ethnolinguistic communities, cemeteries, leisure areas, etc. Concluded the presentation by mentioning that the ongoing environmental studies (Environmental and Social Impact Assessment for the Project) would be prepared in compliance with current legislation, industry best practices, and other JICA guidelines. He invited those present to provide feedback regarding improving Project related technical feasibility studies.
9	The table below provides a summary of the questions and answers session.
NOTE	During the stakeholder engagement meeting the residents of the Figueira neighbourhood mentioned that during the construction of the beer factory in the region, the factory's promoters promised to help the neighbourhood with the supply of potable water, electricity, fertilisers and seeds for agricultural development, however, these promises have so far not been kept.

QUESTION AND ANSWER SESSION SUMMARY

Comment/Question	Answer
<p>Ernesto Kiluke (EK) – Nambungula resident.</p> <p>EK mentioned the region's current social problems. He discussed experiences related to projects developed in the region, highlighting promises of community support that have yet to be fulfilled. He indicated that the community is not opposed to the Project, but he pleaded for sincerity during the resettlement process in light of the local authorities and businesspersons' repeated acts of dishonesty.</p>	<p>Catarino Cosmo (CC) – RNT</p> <p>The Angolan Government has policies requiring companies that are awarded public sector projects to develop Social Responsibility Programs in order to safeguard communities in areas of influence. As well as this, JICA takes resettlement and financial compensation for any damages extremely seriously and will not provide financing until such issues are properly addressed by RNT and implemented in accordance with current national legislation and JICA requirements.</p> <p>RNT is a public company responsible for the high voltage electricity transmission line as well as the improvement of the transportation system and all associated infrastructure, and urged those in attendance not to associate RNT or the stakeholder engagement meeting's objectives with promises made by other political leaders and businesspersons. Sought examples of similar projects undertaken by RNT in other</p>

Comment/Question	Answer
	<p>parts of the country in order to reassure those present regarding concerns related to the Project's right-of-way through the Figueira region.</p> <p>PRODEL (Production), RNT (Transmission) and ENDE (Distribution) are the three (3) companies responsible for the country's energy sector. RNT will install the Lubango-Moçamedes 220 kV electricity transmission line during the first phase of the Project. This will be followed by the implementation of the distribution phase, during which ENDE, in collaboration with the Huíla Provincial Government and municipal administrations, will evaluate energy demand and develop alternative distribution options from the Arimba substation. However, it was emphasized that the Project will only facilitate the transportation of electricity between the 220/60 kV East Lubango substation to 220/60 kV New Namibe substation to be installed in Moçâmedes.</p> <p>Eduardo Ferdinand (EF) – Holísticos</p> <p>RNT, JICA and Holísticos are not affiliated with any political party and make no promises regarding infrastructure implementation in the community. Was expressed regret that promises had remained unfulfilled. A 45 meters (RoW) buffer free of obstructions will be required along the proposed transmission line route, and this buffer of RoW will contain the towers and high-voltage lines, but would not contain any permanent infrastructure such as houses, churches, schools, hospitals, etc. The farmers would be able to return to their cultivation areas following the construction of the towers and lines, as long as they do not cultivate near the towers or plant fruit trees taller than 8 meters.</p>
<p>Francisco Pinto (FP), Isidro Xitangue (IX) and José de Jesus (JJ) – Nambungula residents.</p> <p>FP, IX and JJ requested clarification regarding the resettlement and compensation process, asking what would happen in the event of damage to third-party</p>	<p>Eduardo Ferdinand (EF) – Holísticos</p> <p>JICA takes resettlement and compensation process extremely seriously and will not provide financing until such issues are properly addressed by RNT and implemented in accordance with current national legislation and JICA requirements. The line to be installed cannot pass over</p>

Comment/Question	Answer
<p>infrastructure (housing, agricultural and livestock areas, etc.).</p>	<p>houses, agricultural land, schools, hospitals, cemeteries and large trees over 8 m in height. However, would be cases where this would not be feasible, for which both current Angolan legislation on resettlement and JICA guidelines have very explicit rules/guidelines, and that a Resettlement and Compensation Plan (ARAP) for potentially affected parties is currently being developed in order to ensure that families affected by the transmission line Project have equal or better conditions than those that were present prior to Project implementation.</p> <p>During the initial phase, only infrastructures located within a 45 m of the Project buffer or right-of-way (RoW) will be compensated, meaning that anyone located outside of this zone will not be compensated.</p> <p>The compensations for the loss of agricultural land and fruit trees would be determined using the Ministry of Agriculture and Fisheries' price table for agricultural products per square meter, and that the entire process would be fair, transparent and honest, thus ensuring that compensation is granted to whom it is owed. Between October and November, a team would map the Project's route, survey private infrastructure within a 45 m of the Project buffer, and conduct a census of the entire community, including its socioeconomic profile.</p> <p>Should a house be affected by the Project, it will be assessed and the affected parties may receive a house of equivalent or better specification. The 220 kV TL will be developer to ensure that it does not affect the population's well-being, or if it does, that it is kept to a minimum.</p>
	<p>Catarino Cosmo (CC) – RNT</p> <p>Should a house be affected by the 220 kV Project, it would be evaluated and the affected parties may receive a house of equivalent or better specification.</p>

Comment/Question	Answer
	<p>Drew the participants' attention to acts of opportunism, noting that only affected and previously registered parties would be compensated for the affections of their houses, agricultural land, and other structures. If a house is completely or partially affected, the form of negotiation or compensation would only involve a single house. The financial compensation for house resettlement will be avoided as a result of lessons learned from other RNT supported projects, citing an example of how some people preferred to acquire electrical appliances and consumer goods and later found themselves unable to build a house.</p> <p>Urged those present to widely publicize the meeting in order to keep absent residents informed about the Project.</p>
<p>With no further questions, the meeting was closed by João Chissingui, Arimba Deputy Communal Administrator, who thanked everyone for attending, with special mention to the Project promoters; RNT, JICA and Holísticos.</p>	

APPENDIX 1: PHOTOGRAPHIC RECORD



Photo 1: Opening of the SHM by the Arimba Deputy Communal Administrator, Mr. João Chissingui.

Photo 2: Project presentation by Eduardo Ferdinand (Holísticos).

Photo 3: Questioning by Mr. José de Jesus.



Photo 4: Detail of people present at the meeting.

Photo 5: Mr. Francisco Pinto's questioning.

Photo 6: Intervention of Mr. Catarino Cosme (RNT).

APPENDIX 2: ATTENDANCE LIST.





ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE) FASE 3 (EIAS)

LISTA DE PRESENCAS (LOCAL): Prédio da Figueira / Av. 1000 / Aldeia de Namfundo, DATA: 14 /SETEMBRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Domingos Francisco				
Luís Augusto				
António Carlos	ANMA D.M. Avulso	Chefe de Paroquia	936 96 02 05	António Carlos
João Gomes Estivador	A.C.A	Administrador	923 43 2774	João Gomes
Pedro Pereira	RNT-EP	fac. Social	938 96 6120	Pedro Pereira
Jose Jesus				
Ernesto Raposo				
João Quinquela				
Jose Tchingué				
Junko Fujiwara	JICA Team	Social		[Signature]
Junichi ARAKAWA	JICA Team	Transmission Line		[Signature]
Carssomoi	JICA Team	Trabalhos	924 08 9990	[Signature]



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 kV LUBANGO (HUÍLA) - MOÇÂMEDES (NAMIBE)

FASE 3 (EIAS)

LISTA DE PRESENCAS (LOCAL): Barroco Figueira/Asimba/Aldeia Kombokumbi

DATA: 24 /SETEMBRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Ernesto Hiluco		Município/Morador		
Jorge Bieçalo		"		
José Tchikungu		"		
Arturino Catubá		"		
Isidro Tchitang		"		
Cesar Pia		"		
Domingos Catiti		"		
Francisco Pio		"		
Jerônimo André		"		
António Queim		"		
José Francisco	ADMA Ilumba	Chefe da povoação e Guarda-chuva do Barro	928 73 12 77	
Daniel Francisco				
Francisco Dolesso				



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 3 (EIAS)

LISTA DE PRESENCAS (LOCAL): Prisão da Figueira / Areinho / Aldeia Kombengula DATA: 14 /SETEMBRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Manuel Sapsa	Moxalor			
Eduardo Fedinand	Holsticos	Eng. Ambiental	925 753914	<i>[Signature]</i>
Flayme Minamoto	Holsticos	Coord. Ambiental g. n.º	926 96 8360	FMitanda

220 kV TL Project between Lubango - Moçâmedes	MEETING MINUTES Stakeholder Engagement Meeting					
		Project: P.1649				
VENUE:	Onculuvala Settlement in Humpata Commune, Humpata Municipality.	DATE:	16/09/2021	# OF PAGES	9	
ASSUNTO:	Stakeholder Engagement Meeting (Phase 3)	NOTES BY:	Elayne Miranda and Eduardo Ferdinand	TIME:	09h30 11h00	REVISION: Vladimir Russo

ANEXOS**Appendix 1** – Photographic Record**Appendix 2** – Attendance List**Appendix 3** – Presentation**CÓPIAS ENVIADAS PARA:**

- National Electricity Transmission Network Company (RNT – E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPSCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Huíla Provincial Government.

ITEM	DESCRIPTION
1	On September 16 th , 2021, a stakeholder engagement meeting was held with the residents of the Onculuvala settlement, the opening ceremony of the stakeholder engagement meeting started at 09h30 am, under a tree in community (15°03'14"S 13°20'36"E). The meeting was attended by several entities, with special mention to Mr. José Hequele Fernando (Humpata Communal Administrator), representatives of the Humpata Municipal Administration, members of the Onculuvala settlement auscultation council, traditional authorities, residents, etc., with representatives from Holísticos (Eduardo Ferdinand and Elayne Miranda) and the RNT - National Electricity Transmission Network Company (Catarino Cosme and Pedro Pereira).
2	The stakeholder engagement meeting was attended by 37 participants, 12 of them were female (26.5%). The Humpata Communal Administrator, Mr. José Hequele Fernando welcomed those present and explained the importance of the Project in terms of development and boosting the economies of the Huíla and Namibe provinces, mentioning that job opportunities for young people in the settlement along the transmission line route would be created and that tourism could be developed in the region. There was a need for simultaneous translation into the local language (Nhaneca-Humbi) as many of those present did not fully understand Portuguese. Mr. Francisco Kalenga (resident in Onculuvala settlement) helped during the translation process.
3	Holísticos' representative, Eduardo Ferdinand (EF) began the presentation by using simplified banners to outline the Project's characteristics and explain the 220 kV electricity transmission line proposed route and the construction of two (2) substations (East Lubango and New Namibe Substations), before elaborating on ongoing environmental, social and cultural surveys and the potential impacts of the proposed route and how they will be mitigated. He mentioned that in parallel to the preparation of the Environmental and Social Impact

	<p>Assessment (ESIA) Report, the preparation of a Resettlement and Compensation Plan is also underway and that during the months of October and November all settlements, public and private properties that are within the Project's 45 meter buffer zone will be mapped and the owners surveyed.</p>
4	<p>EF mentioned that during the course of the surveys, questionnaires will be administered to the heads of households in the presence of their wives and children, and that the entire process will be carried out in a transparent manner observing, where possible and where applicable, current Angolan legislation, JICA guidelines and international best practices. He stressed that in the event that infrastructure or property was potential affected (e.g. ploughs, houses, grazing areas, industrial facilities, etc.), the affected parties would be adequately compensated for the damage. He mentioned that a resettlement committee will be created with the inclusion of various institutions of the Executive at the level of Huila province with the objective of guaranteeing transparency, honesty, and a fair assessment of potentially affected infrastructures.</p>
5	<p>EF also mentioned that a stakeholder engagement process is extremely important regarding the materialization of the Project and that RNT is promoting the Project in collaboration with Tokyo Electric Power Services Co. (TEPSCO), with financing from the Japan International Cooperation Agency (JICA). He emphasized that the Project's main goal is to increase electricity supply to the Namibe province while also allowing for the connection of electricity transport systems between the north (highlighting Malanje province) and center-south regions.</p>
6	<p>EF explained that the Project addresses the need to transport electricity generated at the Laúca Dam through the Belém do Dango (Huambo Province), Nombungo and East Lubango substations (Huila Province) and later New Namibe substation (Namibe Province). During his explanation, EF also noted the 60 kV Transmission Line Project that will be built between the East Lubango substation and the future Arimba substation, which will be implemented on the land adjacent to the Arimba Thermal Power Plant, said that the project is being promoted by the Electricity Distribution Public Company (ENDE), and that as soon as the final route is completed stakeholder engagement meetings will also be held to disclosure the Project to interested parties and potentially affected. He also mentioned that the two (2) Projects will adhere to JICA Guidelines for Environmental and Social Considerations (2010), and others international best practices.</p>
7	<p>EF stated that the objective of the stakeholder engagement meeting is to give interested and potentially affected parties a chance to learn about the Project, offer feedback, and make recommendations regarding its implementation. EF gave a presentation that focused on the following points (see Annex 3 - Presentation):</p> <ul style="list-style-type: none"> • Brief description of the Project; • Presentation of the country's current environmental impact assessment process; • Project Financier (JICA) legal and regulatory framework; • Environmental and socio-economic aspects of the transmission line route;

	<ul style="list-style-type: none"> • Expected environmental and socio-economic Impacts; • Resettlement and compensation for damage along the right-of-way; • Survey applied to the head of household using questionnaires; • Question and answer session.
8	EF also explained that the Project intends to avoid inhabited spaces, agricultural and livestock areas as well as military and commercial aircraft manoeuvring spaces, transhumance areas, areas that are historically important to ethnolinguistic communities, cemeteries, leisure areas, etc. Concluded the presentation by mentioning that the ongoing environmental studies (Environmental and Social Impact Assessment for the Project) would be prepared in compliance with current legislation, industry best practices, and other JICA guidelines. He invited those present to provide feedback regarding improving Project related technical feasibility studies.
9	The table below provides a summary of the questions and answers session.

QUESTION AND ANSWER SESSION SUMMARY

Comment/Question	Answer
<p>Maravilhoso Kalenga (MK) – Onculuvala resident.</p> <p>MK requested clarification regarding the resettlement and compensation process, asking what would happen in the event of damage to third-party infrastructure (housing, agricultural and pastoral areas, etc.).</p> <p>MK asked for clarification regarding risks the 220 kV transmission line could pose to nearby communities.</p>	<p>Eduardo Ferdinand (EF) – Holísticos</p> <p>JICA takes resettlement and compensation process extremely seriously and will not provide financing until such issues are properly addressed by RNT and implemented in accordance with current national legislation and JICA requirements. The line to be installed cannot pass over houses, agricultural land, schools, hospitals, cemeteries and large trees over 8 m in height. However, would be cases where this would not be feasible, for which both current Angolan legislation on resettlement and JICA guidelines have very explicit rules/guidelines, and that a Resettlement and Compensation Plan (ARAP) for potentially affected parties is currently being developed in order to ensure that families affected by the transmission line Project have equal or better conditions than those that were present prior to Project implementation.</p> <p>During the initial phase, only infrastructures located within a 45 meters of the Project buffer or right-of-way (RoW) will be compensated, meaning that anyone located outside of this zone will not be compensated.</p>

Comment/Question	Answer
	<p>The compensations for the loss of agricultural land and fruit trees would be determined using the Ministry of Agriculture and Fisheries' price table for agricultural products per square meter, and that the entire process would be fair, transparent and honest, thus ensuring that compensation is granted to whom it is owed. Between October and November, a team would map the Project's route, survey private infrastructure within a 45 m of the Project buffer, and conduct a census of the entire community, including its socioeconomic profile.</p> <p>Should a house be affected by the Project, it will be assessed and the affected parties may receive a house of equivalent or better specification. The 220 kV TL will be developed to ensure that it does not affect the population's well-being, or if it does, that it is kept to a minimum.</p> <p>Catarino Cosme (CC) – RNT</p> <p>In terms of safety, the towers would be over 35 meters above ground level and any effects of electromagnetic fields at these altitudes would be negligible. A concerted effort will be made to avoid the lines crossing residential areas. As a safety precaution, people should not perform any activities near the towers' designated location.</p> <p>Smart safety, warning, and emergency sensors will be mounted on power transmission lines and the transmission system will be automatically interrupted if the cables become damaged or weather conditions become extreme. It is recommended that no infrastructure of permanent character, such as houses, schools, hospitals or churches be constructed inside the transmission line RoW (45 meters).</p>
	<p>Catarino Cosmo (CC) – RNT</p> <p>Should a house be affected by the 220 kV Project, it would be evaluated and the affected parties may receive a house of equivalent or better specification.</p>

Comment/Question	Answer
	<p>Drew the participants' attention to acts of opportunism, noting that only affected and previously registered parties would be compensated for the affections of their houses, agricultural land, and other structures. If a house is completely or partially affected, the form of negotiation or compensation would only involve a single house. The financial compensation for house resettlement will be avoided as a result of lessons learned from other RNT supported projects, citing an example of how some people preferred to acquire electrical appliances and consumer goods and later found themselves unable to build a house.</p> <p>Urged those present to widely publicize the meeting in order to keep absent residents informed about the Project.</p>
<p>NOTA. During the stakeholder engagement meeting, several issues were raised related to famine and misery, which seriously affects the populations of the Onculuvala settlement, due to frequent droughts. On the other hand, the communities requested the installation and improvement of essential infrastructures in the settlement, such as: drinking water, health centre, road construction, support for subsistence farming, etc.</p>	
<p>With no further questions, the stakeholder engagement meeting was closed by Mr. José Hequele Fernando (Humpata Communal Administrator), who thanked everyone for attending, with special mention to the Project promoters; RNT and Holísticos representatives. He also expressed his belief in the success of the Project, stating that it would be a valuable contribution to the growth of the Huíla and Namibe provinces.</p>	

APPENDIX 1: PHOTOGRAPHIC RECORD



Photo 1: Detail of the women from Onculuvala present at the stakeholder engagement meeting.

Photo 2: Project presentation by Eduardo Ferdinand (Holísticos).

Photo 3: Translation of the meeting into the local language by resident Francisco Kalenga.



Photo 4: Presence of residents present at the meeting.

Photo 5: Detail of the men and women from Onculuvala present at the stakeholder engagement meeting.

Photo 6: Intervention of Mr. Catarino Cosme (RNT).

APPENDIX 2: ATTENDANCE LIST.






ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
 DE ELECTRICIDADE DE 220 kV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
 FASE 3 (EIAS)

LISTA DE PRESENCAS (LOCAL): Drauluvola DATA: 16 /SETEMBRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Agostinho das Santos	Drauluvola	Operador / ^{Dir. Bionica} Águas		
João A. F. Pequeno	R. N. T. EP	P. C. S. G	937131567	João Pequeno
Paulo Pereira	R. N. T. - EP	fac. Social	938966126	Paulo Pereira
Dantão Kalanga	Motorista	Camfones		
Paulo Manuel	"	Camfones	943033703	Paulo
Francisco Tchihela	"	Camfones		
Julho Thalanga	"	"		
João Eculo	"	"		
Sezenda Luis	"	"		
Grório Kalanga	"	"		
Bruno Kalute	"	"		



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 3 (EIAS)

LISTA DE PRESENCAS (LOCAL):

Onduluvah

DATA: 06 / SETEMBRO / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Keurua G. M. Santa Rosa	Administração Municipal	chefe de secção	944 211 404	Keurua G. M. Santa Rosa
Jose Joazele	Admin. Comunal Sene	Administrador	907 834 530	Jose Joazele
Edgwe Miranda	Holísticos	Consult. Amb. Júnior	906 964 380	Edgwe Miranda
Eduardo Juliano	Holísticos	Eng. Ambiental	925 75 3914	Eduardo Juliano
Carolina Casca	RNI-EP	Sociólogo	912 353 412	Carolina Casca
Luis Paulo	Moradato	Negociante		
Cecilia Beringo	Moradato	Camponesa		
Maria Teresa	Camponesa/Moradato			
Malungula Kapingo	Moradato	Camponesa		
Fernanda Holicofa	"	"		
Nambule Beringo	"	"		
Feliciano Hebrão	"	Campones		
Adilson Luis	"	Campones		



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 3 (EIAS)

LISTA DE PRESENCAS (LOCAL):

Onculumbala

DATA: 16 / SETEMBRO / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Maria de Fátima	Moredos	Lavadeira - Belo Shilo		
Maria Niquilina	"	Moladora MOPM		
Sialungu Kalenga	"	Camponesa		
João Mangala	"	Campones/Pedreiro		
Teófilo Pedro	"	Camponesa		
Angélica Ximfoto	"	"		
Jaime Ximfonga	"	Campones		
Luís Sampa	"	Campones		
Artur João Cabrita	"	Segurança - Nossa Terra		
Eugénio Darsala	"	Campones - Pedreiro		
Maravilhesa Kalenga	"	Técnico de Electricidade	935808011	
João Ximfonga	"	Campones/Coordenador	984263613	
José Chimbali	"	Campones	926964448	

220 kV TL Project between Lubango - Moçâmedes	MEETING MINUTES Stakeholder Engagement Meeting					
			Project: P.1649			
VENUE:	Jamba II, Sames and Camponês Settlements in Humpata Commune (headquarters), Humpata Municipality.		DATE:	16/09/2021	# OF PAGES	16
ASSUNTO:	Stakeholder Engagement Meeting (Phase 3)	NOTES BY: Elayne Miranda and Eduardo Ferdinand	TIME:	14h00 16h00	REVISION:	Vladimir Russo

ANEXOS**Appendix 1** – Photographic Record**Appendix 2** – Attendance List**Appendix 3** – Presentation**CÓPIAS ENVIADAS PARA:**

- National Electricity Transmission Network Company (RNT).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Huíla Provincial Government.

ITEM	DESCRIPTION
1	On September 16 th , 2021, a stakeholder engagement meeting was held with the residents of the Jamba II Sames and Camponês settlements (the settlements have been joined together because administratively they belong to the same area and have a single Soba and Coordinator) in Humpata headquarters. The opening ceremony of the stakeholder engagement meeting started at 14h00, under a tree in Camponês settlement (15°00'58.6"S 13°23'15.5"E). The meeting was attended by several entities, with special mention to Mr. José Hequele Fernando (Humpata Communal Administrator), Mrs. Keura Rosa (Municipal Department of Energy and Water), representatives of the Humpata Municipal Administration, members of the Jamba II, Sames and Camponês settlements auscultation council, traditional authorities, residents, etc., with representatives from Holísticos (Eduardo Ferdinand and Elayne Miranda) and the RNT - National Electricity Transmission Network Company (Catarino Cosme and Pedro Pereira).
2	The stakeholder engagement meeting was attended by 65 participants, with 33 participants from the Sames settlement, 14 participants from the Jamba II settlement and six (6) from the Camponês settlement. A total of 22 female (40%) participated in the meeting. The Humpata Communal Administrator, Mr. José Hequele Fernando (JF) welcomed those present and explained the importance of the Project in terms of development and boosting the economies of the Huíla and Namibe provinces, mentioning that job opportunities for young people in the settlement along the transmission line route would be created and that tourism could be developed in the region. Mr. JF mentioned that it was not the first time that the three (3) communities were being engaged, highlighting the first stakeholder engagement meeting held at the same location in April 2021 on the same Project (Phase 2).

3	<p>Holísticos' representative, Eduardo Ferdinand (EF) began the presentation by using simplified banners to outline the Project's characteristics and explain the 220 kV electricity transmission line proposed route and the construction of two (2) substations (East Lubango and New Namibe Substations), before elaborating on ongoing environmental, social and cultural surveys and the potential impacts of the proposed route and how they will be mitigated. He mentioned that in parallel to the preparation of the Environmental and Social Impact Assessment (ESIA) Report, the preparation of a Resettlement and Compensation Plan is also underway and that during the months of October and November all settlements, public and private properties that are within the Project's 45 meter buffer zone will be mapped and the owners surveyed.</p>
4	<p>EF mentioned that during the course of the surveys, questionnaires will be administered to the heads of households in the presence of their wives and children, and that the entire process will be carried out in a transparent manner observing, where possible and where applicable, current Angolan legislation, JICA guidelines and international best practices. He stressed that in the event that infrastructure or property was potential affected (e.g. ploughs, houses, grazing areas, industrial facilities, etc.), the affected parties would be adequately compensated for the damage. He mentioned that a resettlement committee will be created with the inclusion of various institutions of the Executive at the level of Huila province with the objective of guaranteeing transparency, honesty, and a fair assessment of potentially affected infrastructures.</p>
5	<p>EF also mentioned that a stakeholder engagement process is extremely important regarding the materialization of the Project and that RNT is promoting the Project in collaboration with Tokyo Electric Power Services Co. (TEPSCO), with financing from the Japan International Cooperation Agency (JICA). He emphasized that the Project's main goal is to increase electricity supply to the Namibe province while also allowing for the connection of electricity transport systems between the north (highlighting Malanje province) and center-south regions.</p>
6	<p>EF explained that the Project addresses the need to transport electricity generated at the Laúca Dam through the Belém do Dango (Huambo Province), Nombungo and East Lubango substations (Huila Province) and later New Namibe substation (Namibe Province). During his explanation, EF also noted the 60 kV Transmission Line Project that will be built between the East Lubango substation and the future Arimba substation, which will be implemented on the land adjacent to the Arimba Thermal Power Plant, said that the project is being promoted by the Electricity Distribution Public Company (ENDE), and that as soon as the final route is completed stakeholder engagement meetings will also be held to disclosure the Project to interested parties and potentially affected. He also mentioned that the two (2) Projects will adhere to JICA Guidelines for Environmental and Social Considerations (2010), and others international best practices.</p>
7	<p>EF stated that the objective of the stakeholder engagement meeting is to give interested and potentially affected parties a chance to learn about the Project, offer feedback, and make recommendations regarding its implementation. EF gave a presentation that focused on the following points (see Annex 3 - Presentation):</p>

	<ul style="list-style-type: none"> • Brief description of the Project; • Presentation of the country's current environmental impact assessment process; • Project Financier (JICA) legal and regulatory framework; • Environmental and socio-economic aspects of the transmission line route; • Expected environmental and socio-economic Impacts; • Resettlement and compensation for damage along the right-of-way; • Survey applied to the head of household using questionnaires; • Question and answer session.
8	EF also explained that the Project intends to avoid inhabited spaces, agricultural and livestock areas as well as military and commercial aircraft manoeuvring spaces, transhumance areas, areas that are historically important to ethnolinguistic communities, cemeteries, leisure areas, etc. Concluded the presentation by mentioning that the ongoing environmental studies (Environmental and Social Impact Assessment for the Project) would be prepared in compliance with current legislation, industry best practices, and other JICA guidelines. He invited those present to provide feedback regarding improving Project related technical feasibility studies.
9	The table below provides a summary of the questions and answers session.
NOTE	The residents engaged praised the initiative of RNT for conducting another stakeholder engagement meeting for Project disclosure.

QUESTION AND ANSWER SESSION SUMMARY

Comment/Question	Answer
<p>Maria da Piedade (MP) – Camponês resident.</p> <p>MP requested additional information about the Project's route in order to determine whether it will pass through any of the neighborhoods represented at the meeting.</p>	<p>Eduardo Ferdinand (EF) – Holísticos</p> <p>The Project's route will pass close to the three (3) settlements invited to the stakeholder engagement meeting, but was not specify the precise location of the high-voltage towers position. The final TL route only will be presented after topography work had been completed, and the geomorphologic and pedology conditions studied.</p>
<p>José Kavela (JK) – Sames resident.</p> <p>JK requested clarification regarding the resettlement and compensation process, asking what would happen in the event of damage to third-party infrastructure (housing, agricultural and livestock areas, etc.).</p>	<p>Eduardo Ferdinand (EF) – Holísticos</p> <p>JICA takes resettlement and compensation process extremely seriously and will not provide financing until such issues are properly addressed by RNT and implemented in accordance with current national legislation and JICA requirements. The line to be installed cannot pass over houses, agricultural land, schools, hospitals, cemeteries and</p>

Comment/Question	Answer
	<p>large trees over 8 m in height. However, would be cases where this would not be feasible, for which both current Angolan legislation on resettlement and JICA guidelines have very explicit rules/guidelines, and that a Resettlement and Compensation Plan (ARAP) for potentially affected parties is currently being developed in order to ensure that families affected by the transmission line Project have equal or better conditions than those that were present prior to Project implementation.</p> <p>During the initial phase, only infrastructures located within a 45 meters of the Project buffer or right-of-way (RoW) will be compensated, meaning that anyone located outside of this zone will not be compensated.</p> <p>The compensations for the loss of agricultural land and fruit trees would be determined using the Ministry of Agriculture and Fisheries' price table for agricultural products per square meter, and that the entire process would be fair, transparent and honest, thus ensuring that compensation is granted to whom it is owed. Between October and November, a team would map the Project's route, survey private infrastructure within a 45 m of the Project buffer, and conduct a census of the entire community, including its socioeconomic profile.</p> <p>Should a house be affected by the Project, it will be assessed and the affected parties may receive a house of equivalent or better specification. The 220 kV TL will be developer to ensure that it does not affect the population's well-being, or if it does, that it is kept to a minimum.</p>
<p>Laurinda Teresa (LT) – Sames neighborhood resident.</p> <p>LT questioned whether the Project's electricity would be distributed to the communities surrounding the municipal headquarters of Humpata before asking for clarification regarding risks the 220 kV transmission line could pose to nearby communities.</p>	<p>Catarino Cosmo (CC) – RNT</p> <p>RNT is a public company responsible for the high voltage electricity transmission line as well as the improvement of the transportation system and all associated infrastructure.</p> <p>PRODEL (Production), RNT (Transmission) and ENDE (Distribution) are the three (3) companies responsible for the</p>

Comment/Question	Answer
	<p>country's energy sector. RNT will install the Lubango-Moçamedes 220 kV electricity transmission line during the first phase of the Project. This will be followed by the implementation of the distribution phase, during which ENDE, in collaboration with the Huíla Provincial Government and municipal administrations, will evaluate energy demand and develop alternative distribution options from the Arimba substation. However, it was emphasized that the Project will only facilitate the transportation of electricity between the 220/60 kV East Lubango substation to 220/60 kV New Namibe substation to be installed in Moçâmedes.</p> <p>In terms of safety, the towers would be over 35 meters above ground level and any effects of electromagnetic fields at these altitudes would be negligible. A concerted effort will be made to avoid the lines crossing residential areas. As a safety precaution, people should not perform any activities near the towers' designated location.</p> <p>Smart safety, warning, and emergency sensors will be mounted on power transmission lines and the transmission system will be automatically interrupted if the cables become damaged or weather conditions become extreme. It is recommended that no infrastructure of permanent character, such as houses, schools, hospitals or churches be constructed inside the transmission line RoW (45 meters).</p> <p>Should a house be affected by the 220 kV Project, it would be evaluated and the affected parties may receive a house of equivalent or better specification.</p> <p>Drew the participants' attention to acts of opportunism, noting that only affected and previously registered parties would be compensated for the affections of their houses, agricultural land, and other structures. If a house is completely or partially affected, the form of negotiation or compensation would only involve a single house.</p>

Comment/Question	Answer
	<p>The financial compensation for house resettlement will be avoided as a result of lessons learned from other RNT supported projects, citing an example of how some people preferred to acquire electrical appliances and consumer goods and later found themselves unable to build a house.</p> <p>Urged those present to widely publicize the meeting in order to keep absent residents informed about the Project.</p>
<p>With no further questions, the stakeholder engagement meeting was closed by Mr. José Hequele Fernando (Humpata Communal Administrator), who thanked everyone for attending, with special mention to the Project promoters; RNT and Holísticos representatives. He also expressed his belief in the success of the Project, stating that it would be a valuable contribution to the growth of the Huíla and Namibe provinces.</p>	

APPENDIX 1: PHOTOGRAPHIC RECORD



Photo 1: Detail of the parties present at the public hearing meeting.

Photo 2: Project presentation by Eduardo Ferdinand (Holísticos).

Photo 3: Opening of the stakeholder engagement meeting by the Humpata Communal Administrator Mr. José Hequele.



Photo 4: Presence of women at the meeting.

Photo 5: Intervention by Mr José Kavela.

Photo 6: Catarino Cosme (RNT).

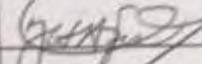
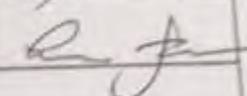
APPENDIX 2: ATTENDANCE LIST.






ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
 DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
 FASE 3 (EIAS)

LISTA DE PRESENCAS (LOCAL): Lamfonas (Humfota) DATA: 16 /SETEMBRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Maria da Piedade	Lamfonas	Reformada-Idosa		
Januário Muneputi	Componês	Estudante		
André Pedro	Componês	Soba		
Graçiano Faustino	Componês	Lamfonas		
Keusa B.M. Lanta Bar	Administração Municipal	chefe de Recepção	944211404	Keusa Lanta Bar
Carolina Costa	ENI-SP	Societa	912335412	
Jose Roque A. Sousa	Administração Municipal	Administrador	927834530	
Elayne Miranda	Holisticos	Consult. Ambiental	926961360	EMiranda
Eduardo Jardim	Holisticos	Eng: Ambiental	925755914	



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 kV LUBANGO (HUÍLA) - MOÇÂMEDES (NAMIBE)
FASE 3 (EIAS)

LISTA DE PRESENCAS (LOCAL):

JAMBA II (Humbata)

DATA: 46 / SETEMBRO / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Francisco Domingos	JAMBA II	Campones		
José Celso Gomes	II	II		
Sofia Segunda	II	II		
Maria Madalena	II	II		
Maria Matos	II	II		
Elva Sofia	II	II		
Pedro Pereira	RNT-EP	fac. Social	98966725	Pedro Pereira
Carolina Costa	RNT-EP	Sociólogo	912355402	Carolina Costa



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) - MOÇÂMEDES (NAMIBE)

FASE 3 (EIAS)

LISTA DE PRESENCAS (LOCAL): Barro Camponês (Humbeto)

DATA: 16 / SETEMBRO / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Nivilsa de S. Ehitata	Camponês	Estudante	929035882	
Selma S. Kuxipa	Camponês	Professora	939005709	
Paulo Jesus	RNT-EP	Fac. Social	938966006	<i>Paulo Jesus</i>



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 3 (EIAS)

LISTA DE PRESENCAS (LOCAL):

Jamba 2 (Humfala)

DATA: 26 /SETEMBRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Tchahicungu Pequeno	Jamba 2	Lampões		
José António Miranda	Manuais, Jamba			
Tcha pingo	Manuel Jamba	Lampões		
Gustavo Faustino				
Keura b. M. Santa Rosa	Administração Municipal	chefe de secção	944211404	Keura Santa Rosa
José Joazele A. Paula	Administração Municipal	Administrador	927834530	José Joazele A. Paula
Ebène Miranda	Holísticos	Coord. Amb. Júnior	906964360	Ebène Miranda
Edoardo Ferdinand	Holísticos	Eng. Ambiental	925753914	Edoardo Ferdinand



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 3 (EIAS)

LISTA DE PRESENCAS (LOCAL):

Jamba 2 (Humpota)

DATA: 16 /SETEMBRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Keura b. M. Luta. Ron	Administracão Municipal	chefe de Seção	944211404	Keura b. M. Luta. Ron
José Joaquim A. Soares	Administracão Municipal	Administrador	927834530	José Joaquim A. Soares
Paulina Camelo	Jamba 2		921176873	Paulina Camelo
Camilo Casmo	(SO) RNT-EP	Sociólogo	912355412	Camilo Casmo
Teresa Hapoti	Jamba 2	Camponesa		Teresa Hapoti
Raul Moisés Tufuilo	Jamba II	Professor	926265580	Raul Moisés Tufuilo
Estevão Mulangu	Jamba II	Professor		Estevão Mulangu
Serafim Hatiti	Jamba II	Campones	939076183	Serafim Hatiti
Francisca Estilva	Comunidade SAAM	Camponesa		Francisca Estilva
José Alberto Lomeia	Bairro SAAM	Pedreiro	946 811 393	José Alberto Lomeia
Luana Hapoti	Jamba 2	Camponesa		Luana Hapoti
Albino Dembo	II	II		Albino Dembo
Arindo Hendjange	Bairro SAAM			Arindo Hendjange



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMÍBE)

FASE 3 (EIAS)

LISTA DE PRESENCAS (LOCAL):

Somes (Humfote)

DATA: 16 / SETEMBRO / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Bofia Rosa	Somes	Negociante		
Maria Salomé	"	Negociante		
Maria Passul	"	Companheira		
Kalenga Leonardo	"	Professor		
Faustina Elsa	Somes	Enfermeira		
João Pereira	RNT-EP	Fac. Social	938966126	João Pereira
Eduardo Jérial	Holísticos	Eng. Ambiental	925755714	



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 kV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 3 (EIAS)

LISTA DE PRESENCAS (LOCAL): Sames (Humfata)

DATA: 18 /SETEMBRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Fernando Kafalau	Sames	Campones		
Campe Maria José	Sames	Camponesa		
Maria Campe	Sames	Camponesa		
Catarina dos Anjos	Sames	Li		
Jose Kabela				
Sebastião Inac		Professor		
Jorge Torre Guernaya		Estudante		
Luizino doc. Joaqui		Domestica		
Emilio do Giedda		Domestico		
Dália R. Frederic		Domestico		
Emmanuel Bernese				
Jose Costa Faria		Professor		
Ernesto Daniel		Pedagogo		



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 3 (EIAS)

LISTA DE PRESENCAS (LOCAL): Somes (Humbato)

DATA: 16 / SETEMBRO / 2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Agostinho Catekipuca	Somes	Político		
António Joaquim	"	Político		
João Roberto Vieira	"	Serralheiro		
Adão Guil T. Gacalo	"	Mecânico		
Augusto Domingos	"	Político		
Alberto Tumbango	"	Mecânico		
Aminda Niranga	"	Negociante		
Manuel Machado	"	Electricista		
Trabalhador				
Domingos Katchama	"	Electricista		
Francisca Ishifunga	"	Negociante		
Josefina Jank Luo	"	Comércio - Bolo Sel		
Laurinda Teresa	"	Doméstica - Estação		

220 kV TL Project between Lubango - Moçâmedes	MEETING MINUTES Stakeholder Engagement Meeting					
			Project: P.1649			
VENUE:	Heva de Cima Settlement in Humpata Commune, Humpata Municipality.		DATE:	17/09/2021	# OF PAGES	10
ASSUNTO:	Stakeholder Engagement Meeting (Phase 3)	NOTES BY: Elayne Miranda and Eduardo Ferdinand	TIME:	09h00 10h30	REVISION:	Vladimir Russo

ANEXOS**Appendix 1** – Photographic Record**Appendix 2** – Attendance List**Appendix 3** – Presentation**CÓPIAS ENVIADAS PARA:**

- National Electricity Transmission Network Company (RNT – E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Huíla Provincial Government.

ITEM	DESCRIPTION
1	On September 17 th , 2021, a stakeholder engagement meeting was held with the residents of the Heva de Cima settlement, the opening ceremony of the stakeholder engagement meeting started at 09h00 am (14°58'58.4"S 13°27'41.3"E). The meeting was attended by several entities, with special mention to Mr. José Pedro Mussanha and Pedro Maúnda, Fiscal Agents of the Palanca Communal Administration (representing the Palanca Communal Administrator, Mr. Yuri Chivanja), members of the Heva de Cima settlement auscultation council, settlement coordinators, traditional authorities, and residents, etc. Also present at the meeting were representatives from Holísticos companies (Eduardo Ferdinand and Elayne Miranda), the National Electricity Transmission Network (RNT - Catarino Cosme and Pedro Pereira) and the Japan International Cooperation Agency (JICA - Junko Fujiwara, and Hélder Cassoma).
2	The stakeholder engagement meeting was attended by 25 participants, seven (7) of them were female (20%). Alternately, the head of the Fiscal Office of Palanca Communal Administration, Mr. José Pedro Mussanha and the chief of the Heva de Cima settlement, Mr. Mongalipe Chico welcomed those present and briefly explained the importance of the Project from the point of view of development and boosting the economy of the provinces of Huíla and Namibe, the job opportunities for young people of the Heva de Cima settlement and others along the proposed transmission line route, and the promotion of tourism development in the region. Mr. Mongalipe Chico (Traditional Authorities – Soba) mentioned that it was not the first time that the community was being engaged, highlighting the first stakeholder engagement meeting held at <i>Jango Comunitário</i> in the Palanca community headquarters in April 2021 about the same Project.

3	<p>Holísticos' representative, Eduardo Ferdinand (EF) began the presentation by using simplified banners to outline the Project's characteristics and explain the 220 kV electricity transmission line proposed route and the construction of two (2) substations (East Lubango and New Namibe Substations), before elaborating on ongoing environmental, social and cultural surveys and the potential impacts of the proposed route and how they will be mitigated. He mentioned that in parallel to the preparation of the Environmental and Social Impact Assessment (ESIA) Report, the preparation of a Resettlement and Compensation Plan is also underway and that during the months of October and November all settlements, public and private properties that are within the Project's 45 meter buffer zone will be mapped and the owners surveyed.</p>
4	<p>EF mentioned that during the course of the surveys, questionnaires will be administered to the heads of households in the presence of their wives and children, and that the entire process will be carried out in a transparent manner observing, where possible and where applicable, current Angolan legislation, JICA guidelines and international best practices. He stressed that in the event that infrastructure or property was potential affected (e.g. ploughs, houses, grazing areas, industrial facilities, etc.), the affected parties would be adequately compensated for the damage. He mentioned that a resettlement committee will be created with the inclusion of various institutions of the Executive at the level of Huila province with the objective of guaranteeing transparency, honesty, and a fair assessment of potentially affected infrastructures.</p>
5	<p>EF also mentioned that a stakeholder engagement process is extremely important regarding the materialization of the Project and that RNT is promoting the Project in collaboration with Tokyo Electric Power Services Co. (TEPSCO), with financing from the Japan International Cooperation Agency (JICA). He emphasized that the Project's main goal is to increase electricity supply to the Namibe province while also allowing for the connection of electricity transport systems between the north (highlighting Malanje province) and center-south regions.</p>
6	<p>EF explained that the Project addresses the need to transport electricity generated at the Laúca Dam through the Belém do Dango (Huambo Province), Nombungo and East Lubango substations (Huila Province) and later New Namibe substation (Namibe Province). During his explanation, EF also noted the 60 kV Transmission Line Project that will be built between the East Lubango substation and the future Arimba substation, which will be implemented on the land adjacent to the Arimba Thermal Power Plant, said that the project is being promoted by the Electricity Distribution Public Company (ENDE), and that as soon as the final route is completed stakeholder engagement meetings will also be held to disclosure the Project to interested parties and potentially affected. He also mentioned that the two (2) Projects will adhere to JICA Guidelines for Environmental and Social Considerations (2010), and others international best practices.</p>
7	<p>EF stated that the objective of the stakeholder engagement meeting is to give interested and potentially affected parties a chance to learn about the Project, offer feedback, and make recommendations regarding its implementation. EF gave a presentation that focused on the following points (see Annex 3 - Presentation):</p>

	<ul style="list-style-type: none"> • Brief description of the Project; • Presentation of the country's current environmental impact assessment process; • Project Financier (JICA) legal and regulatory framework; • Environmental and socio-economic aspects of the transmission line route; • Expected environmental and socio-economic Impacts; • Resettlement and compensation for damage along the right-of-way; • Survey applied to the head of household using questionnaires; • Question and answer session.
8	EF also explained that the Project intends to avoid inhabited spaces, agricultural and livestock areas as well as military and commercial aircraft manoeuvring spaces, transhumance areas, areas that are historically important to ethnolinguistic communities, cemeteries, leisure areas, etc. Concluded the presentation by mentioning that the ongoing environmental studies (Environmental and Social Impact Assessment for the Project) would be prepared in compliance with current legislation, industry best practices, and other JICA guidelines. He invited those present to provide feedback regarding improving Project related technical feasibility studies.
9	The table below provides a summary of the questions and answers session.
NOTE	During the stakeholder engagement meeting, the residents of Heva de Cima settlement mentioned that during the implementation of the 30 kV Transmission Line Project (ENDE Project) in the settlement, along the RoW some ploughs/crops were affected, however, so far the owners of these ploughs will not receive any compensation from the promoter of the Project. They informed that they are annoyed with the State projects, because in many of them the promoters promised to help the Heva de Cima settlement with the supply of drinking water and electricity, and such promises have not been fulfilled so far.

QUESTION AND ANSWER SESSION SUMMARY

Comment/Question	Answer
<p>Mongalipe Chico (MC) – Heva de Cima Soba.</p> <p>MC praised the Project promoters for the initiative. Regarding the resettlement and compensation processes, he stated that each affected party has the right to negotiate in their own way or in the manner they believe is just. He pleaded with the community to maintain calm, emphasizing that compensation will be limited to houses and farms within a 45 meter Project buffer or those that may be impacted by other</p>	<p>Eduardo Ferdinand (EF) – Holísticos</p> <p>The Project team was grateful for the contribution of Mongalipe Chico, Soba of the Heva de Cima neighborhood.</p>

Comment/Question	Answer
<p>activities. Others who are unaffected will be able to maintain their normal ways of life.</p>	
<p>Carlos Tchali (CT) and Tito Joaquim (TJ) – Heva de Cima residents.</p> <p>CT and TJ enquired about the Project’s route in order to determine whether it would pass through the Heva de Cima Settlement.</p>	<p>Eduardo Ferdinand (EF) – Holísticos</p> <p>The Project’s route, mentioning that it will pass through the Heva de Cima settlement, but was not elaborate on the specific location of the high-voltage towers. The final route would be presented to the communities along its length only after topography work and a study of the geomorphological and pedological conditions had been completed.</p>
<p>Manuel Tchabela (MT) – Heva de Cima resident.</p> <p>MT inquired about the resettlement process and potential compensation for damage to agricultural land as it is the primary source of subsistence/income for families in the Heva de Cima.</p>	<p>Eduardo Ferdinand (EF) – Holísticos</p> <p>JICA takes resettlement and compensation process extremely seriously and will not provide financing until such issues are properly addressed by RNT and implemented in accordance with current national legislation and JICA requirements. The line to be installed cannot pass over houses, agricultural land, schools, hospitals, cemeteries and large trees over 8 m in height. However, would be cases where this would not be feasible, for which both current Angolan legislation on resettlement and JICA guidelines have very explicit rules/guidelines, and that a Resettlement and Compensation Plan (ARAP) for potentially affected parties is currently being developed in order to ensure that families affected by the transmission line Project have equal or better conditions than those that were present prior to Project implementation.</p> <p>During the initial phase, only infrastructures located within a 45 meters of the Project buffer or right-of-way (RoW) will be compensated, meaning that anyone located outside of this zone will not be compensated.</p> <p>The compensations for the loss of agricultural land and fruit trees would be determined using the Ministry of Agriculture and Fisheries' price table for agricultural products per square meter, and that the entire process would be fair, transparent and honest, thus ensuring that compensation is granted to whom it is owed. Between October and November, a team</p>

Comment/Question	Answer
	<p>would map the Project's route, survey private infrastructure within a 45 m of the Project buffer, and conduct a census of the entire community, including its socioeconomic profile.</p> <p>Should a house be affected by the Project, it will be assessed and the affected parties may receive a house of equivalent or better specification. The 220 kV TL will be developer to ensure that it does not affect the population's well-being, or if it does, that it is kept to a minimum.</p>
<p>Raimundo Belo (RB) – Heva resident.</p> <p>RB alluded to the region's current social problems. He discussed his experiences with projects developed in the region that included promises of community support that were never fulfilled, including farmers whose fields were impacted by the 30 kV transmission line project that received no compensation. He stated that one of the transmission line poles is located within his property and that he has not been consulted by the Project managers, nor does he benefit from the electricity that the lines supply.</p> <p>He stated that the community is not opposed to the RNT promoted project, but he pleaded for sincerity during the resettlement process due to the local authorities' repeated acts of dishonesty.</p>	<p>Catarino Cosmo (CC) – RNT</p> <p>The Angolan Government has policies requiring companies that are awarded public sector projects to develop Social Responsibility Programs in order to safeguard communities in areas of influence. As well as this, JICA takes resettlement and financial compensation for any damages extremely seriously and will not provide financing until such issues are properly addressed by RNT and implemented in accordance with current national legislation and JICA requirements.</p> <p>RNT is a public company responsible for the high voltage electricity transmission line as well as the improvement of the transportation system and all associated infrastructure, and urged those in attendance not to associate RNT or the stakeholder engagement meeting's objectives with promises made by other political leaders and businesspersons. Sought examples of similar projects undertaken by RNT in other parts of the country in order to reassure those present regarding concerns related to the Project's right-of-way through the Figueira region.</p> <p>PRODEL (Production), RNT (Transmission) and ENDE (Distribution) are the three (3) companies responsible for the country's energy sector. RNT will install the Lubango-Moçamedes 220 kV electricity transmission line during the first phase of the Project. This will be followed by the implementation of the distribution phase, during which ENDE, in collaboration with the Huíla Provincial Government</p>

Comment/Question	Answer
	<p>and municipal administrations, will evaluate energy demand and develop alternative distribution options from the Arimba substation. However, it was emphasized that the Project will only facilitate the transportation of electricity between the 220/60 kV East Lubango substation to 220/60 kV New Namibe substation to be installed in Moçâmedes.</p> <p>Eduardo Ferdinand (EF) – Holísticos</p> <p>RNT, JICA and Holísticos are not affiliated with any political party and make no promises regarding infrastructure implementation in the community. Was expressed regret that promises had remained unfulfilled. A 45 meters (RoW) buffer free of obstructions will be required along the proposed transmission line route, and this buffer of RoW will contain the towers and high-voltage lines, but would not contain any permanent infrastructure such as houses, churches, schools, hospitals, etc. The farmers would be able to return to their cultivation areas following the construction of the towers and lines, as long as they do not cultivate near the towers or plant fruit trees taller than 8 meters.</p>
	<p>Catarino Cosmo (CC) – RNT</p> <p>Should a house be affected by the 220 kV Project, it would be evaluated and the affected parties may receive a house of equivalent or better specification.</p> <p>Drew the participants' attention to acts of opportunism, noting that only affected and previously registered parties would be compensated for the affections of their houses, agricultural land, and other structures. If a house is completely or partially affected, the form of negotiation or compensation would only involve a single house. The financial compensation for house resettlement will be avoided as a result of lessons learned from other RNT supported projects, citing an example of how some people preferred to acquire electrical appliances and consumer goods and later found themselves unable to build a house.</p>

Comment/Question	Answer
	Urged those present to widely publicize the meeting in order to keep absent residents informed about the Project.
With no further questions, the meeting was closed by José Pedro Mussanha, the head of the Communal Fiscal Office of Palanca, who thanked everyone for attending, with special mention to the Project promoters; RNT, JICA and Holísticos.	

APPENDIX 1: PHOTOGRAPHIC RECORD



Photo 1: Opening of the meeting by Mr. José Pedro Mussanha.

Photo 2: Project presentation by Eduardo Ferdinand (Holísticos).

Photo 3: Intervention of Mr. Catarino Cosme (RNT).



Photo 4: Detail of people present at the meeting.

Photo 5: Additional explanation of the Project route by FE.

Photo 6: Group of women present at the meeting.

APPENDIX 2: ATTENDANCE LIST.





 ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE) FASE 3 (EIAS)

LISTA DE PRESENCAS (LOCAL): HEVA de Lima (Mumpato) DATA: 17 /SETEMBRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Munguife CHICO		SOBA	939007064	
Joaquim Casco		Camponês		
Manuel Casua		traba. Soc. Comunit		
Sequinhis Antimulo		Camponês		
Carlos SICHALI		chefar	924 073938	
Jose Pedro Kussamben		Fiscal	925475926	
Manuel Tchispele		Camponês		
Pedro T. Maiundo		fiscal	940672392	
Manuel Tchinydela		Camponês		
Raimundo Belo		''		
Tito Calola		''		
Tchinyak Muancunda		''		
Maria Watchito		''		



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 3 (EIAS)

LISTA DE PRESENÇAS (LOCAL): Horra do Poma / Huambo

DATA: 17 /SETEMBRO/2021

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Elena tehinoue		Campeã		
Rosa Liambai		"		
Manuel tehinoue		Campeã		
ALBERTO FRANCISCO		Campeã e Pedreiro		
João Matangus		" "		
Paulo Pires	RNT-EP	fec. Social	938966726	Paulo Pires
Paulo J. F. Spizuelo	RNT-EP	Motorista	937131567	Paulo Spizuelo
CAROLINA CASME	RNT-EP	Sociólogo	912355412	Carolina Casme
Junko FUJIWARA	JICA Team	Social		Junko Fujiwara
CASSIMA	JICA Team	Interfante	924080990	Cassima
Eduardo Ferdinand	Holística	eng: Ambiental	925955914	Eduardo Ferdinand
Edygo Miranda	Holística	Consult. Amb. Júnior	926964360	Edygo Miranda



Tokyo Electric Power Services Co., Ltd.

Auscultação Pública

**Projecto de Linha de Transmissão de Electricidade de 220 kV
Lubango (Huíla) – Moçâmedes (Namibe)**



Setembro de 2021





AGENDA DO ENCONTRO

- ▶ Breve Apresentação do Projecto
- ▶ Apresentação do Processo de AIA
- ▶ Enquadramento Legal e Directrizes da JICA
- ▶ Aspectos Ambientais e Socioeconómicos
- ▶ Impactes Ambientais e Socioeconómicos
- ▶ Reassentamento Involuntário
- ▶ Próximos Passos
- ▶ Sugestões e Recomendações





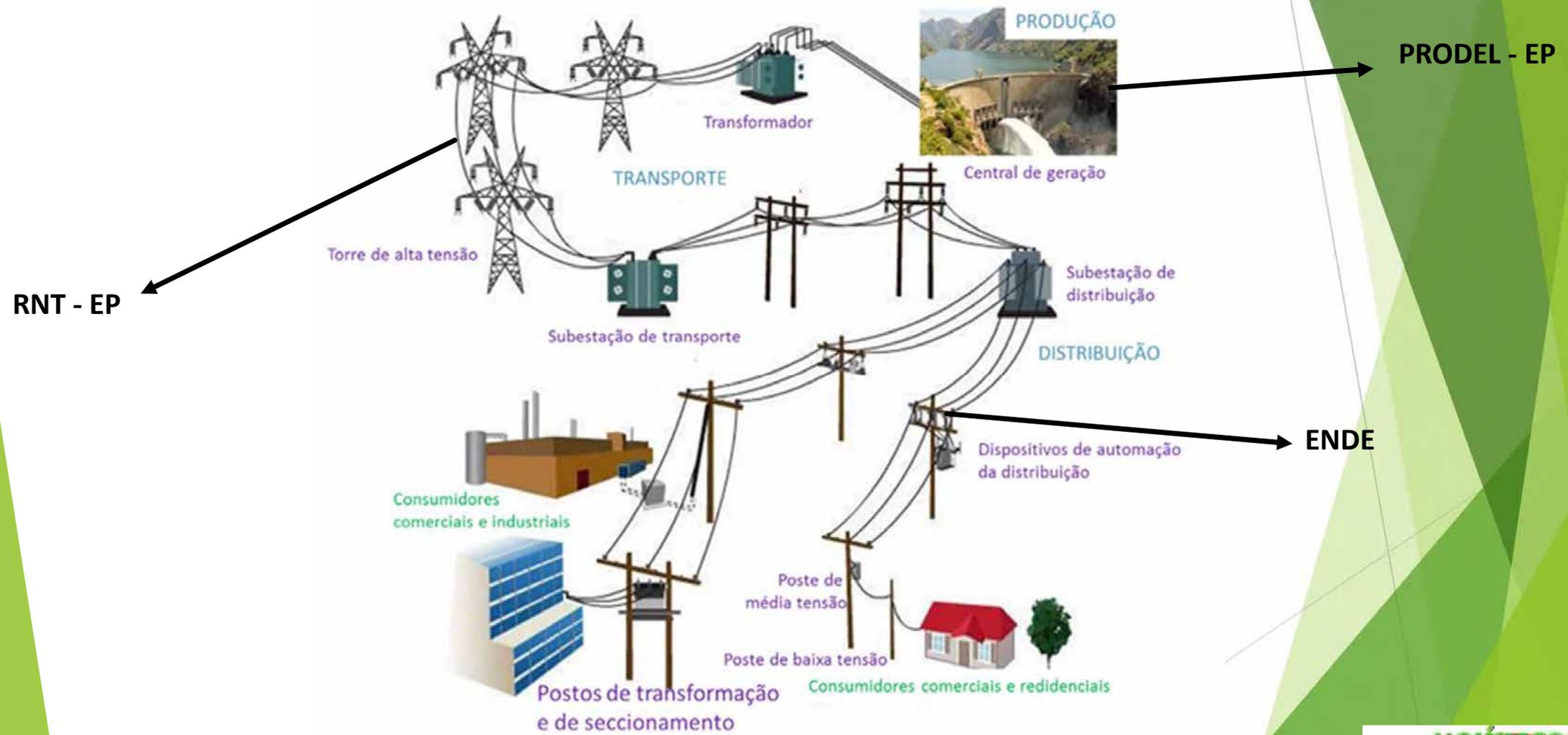
INTRODUÇÃO (1)

- ▶ A Empresa Pública Rede Nacional de Transporte de Electricidade (RNT – E.P.) foi criada no âmbito do Programa de Transformação do Sector Eléctrico através do Decreto Presidencial N.º 305/14 de 20 de Novembro.
- ▶ Ao nível da província do Namibe apenas as cidades de Moçâmedes e Tômbwa dispõem de electricidade da rede pública com fornecimento regular e estável. De forma a dar resposta a demanda de electricidade na província, a RNT, com o financiamento da JICA e em parceria com a empresa japonesa TEPSCO, pretende construir uma linha de transporte de electricidade de alta tensão (220 kV) que fará ligação entre a Subestação do Nombungo e Lubango Oriental (província da Huíla) e a futura Subestação Novo Namibe de 220/60 kV (província do Namibe).
- ▶ O projecto endereça a necessidade de transportar a electricidade gerada na central Hidroeléctrica de Laúca, com uma capacidade para produzir mais de 2000 MW, passando pelas Subestações de Belém do Huambo – Subestação de Nombungo – Subestação Lubango Oriental – Subestação Novo Namibe.
- ▶ O traçado da linha de transmissão terá uma extensão de cerca 205 Km.





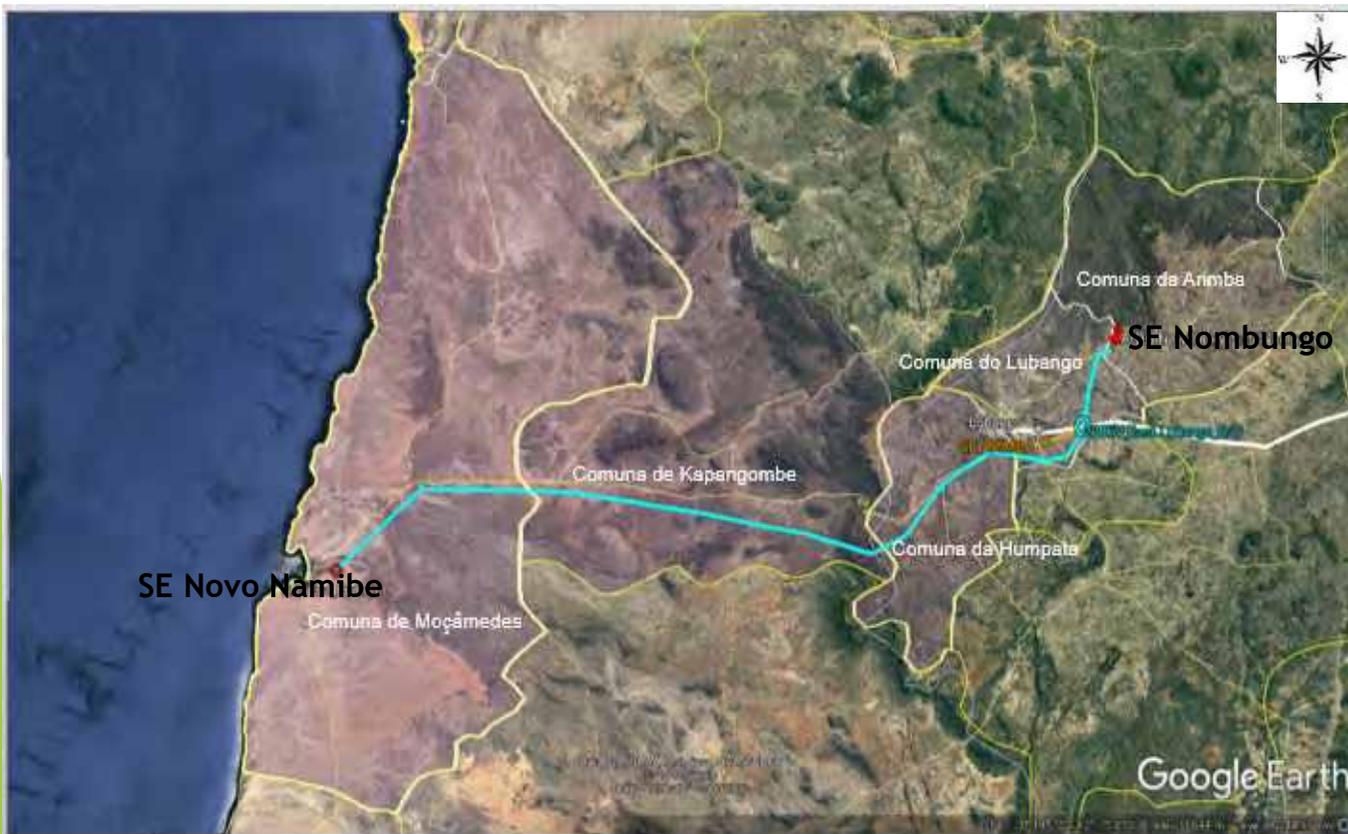
INTRODUÇÃO (2)



Esquema da Gestão de Projectos de Electricidade no País



TRAÇADO DO PROJECTO



Mapa da Proposta do Traçado do Projecto.



- ▶ A linha de transporte de electricidade terá um percurso de cerca de 205 Km e passará pelos seguintes municípios:
 - ❖ **Na Huíla:** Lubango e Humpata.
 - ❖ **No Namibe:** Bibala e Moçâmedes.



PROMOTOR DO PROJECTO

- ▶ O Projecto é promovido pela RNT.
- ▶ A RNT adere os padrões internacionais de qualidade, garantindo a satisfação dos clientes, de acordo os princípios de sustentabilidade económica, técnica, social e ambiental.
- ▶ O Projecto irá aderir os Padrões de Desempenho para Questões Ambientais e Sociais da JICA (*JICA Guidelines for Environmental and Social Considerations*).
- ▶ A empresa Japonesa TEPCO será responsável pelo desenho do projecto.
- ▶ A RNT manterá um discurso aberto com a sociedade e consultará todas as partes interessadas de forma a identificar e implementar soluções julgadas adequadas para as mesmas.



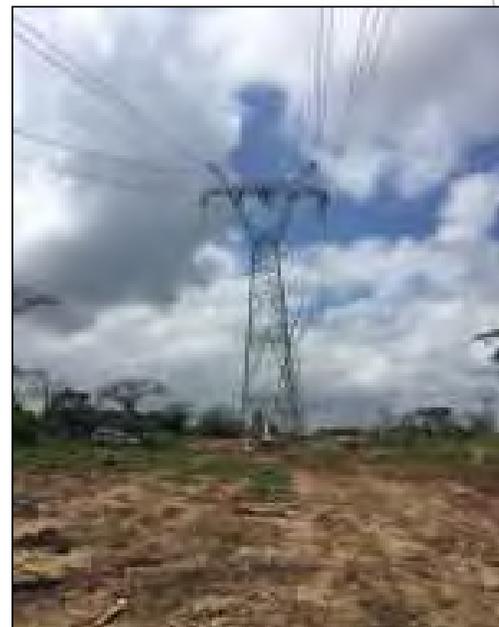


DESCRIÇÃO DO PROJECTO (1)

O traçado da Linha de Transmissão, aonde necessário, passará paralelamente a actual linha de 60 kV que liga a Subestação da cidade do Lubango à Moçâmedes, evitando atravessar:

- Servidões aeronáuticas ou radioelétricas;
- Áreas urbanas e rurais;
- Áreas sensíveis do ponto de vista ecológico e biológico;
- Locais de património histórico-cultural;
- Locais com a confirmação histórica de comunidades etnolinguísticas.

Entretanto, a localização exacta da linha de transmissão e dos seus apoios só será definida após a realização de estudos mais detalhados incluindo levantamentos topográficos.





DESCRIÇÃO DO PROJECTO (2)

As actividades necessárias ao projecto irão incluir:



Instalação dos estaleiros de apoio à obra.



Desmatação ou criação da faixa de protecção



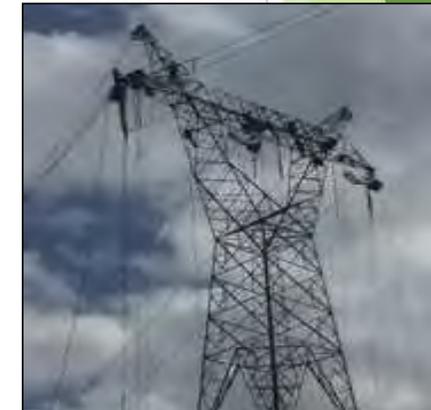
Sinalização



Trabalhos de topografia e de construção civil.



Montagem ou colocação dos apoios



Montagem das torres

As fundações das torres/apoios serão constituídos por maciços independentes em betão.

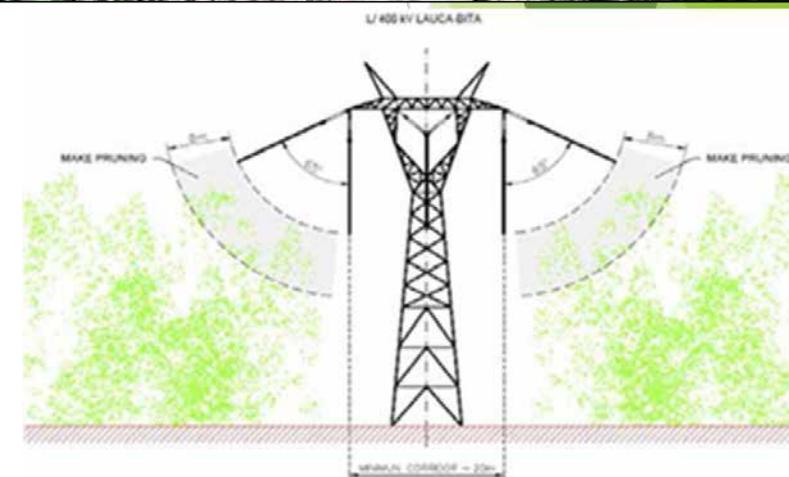




DESCRIÇÃO DO PROJECTO (3)

Durante a fase de **construção** (30 meses):

- Desminagem dentro do corredor de 45 metros.
- Avaliação das estruturas existentes no traçado (p.e; casas, lavras, fazendas, estaleiros, etc.).
- Torres serão construídas dentro de uma área de **15x15 m**.
- A distância entre torres será de cerca de **350 metros**.
- Serão construídas **540 torres** ao longo do traçado.
- Aonde possível, serão utilizadas as estradas de acesso já existentes (utilizadas na manutenção da linha de transmissão de 60 kV).

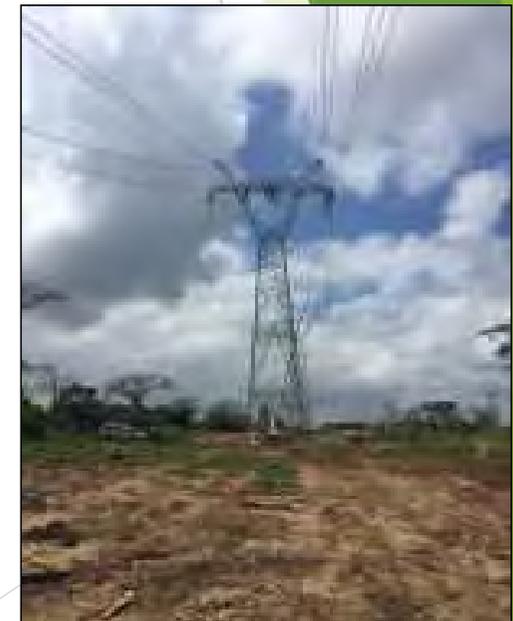
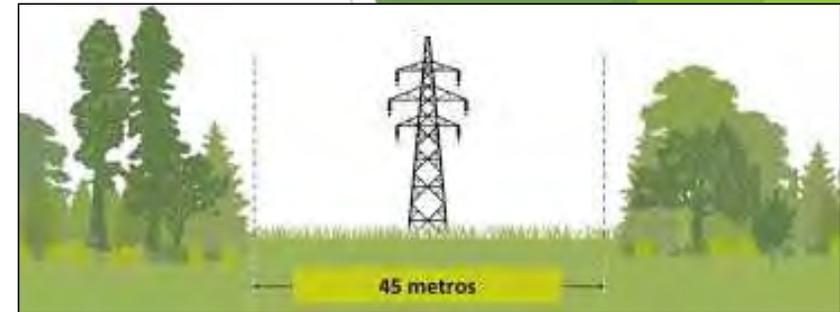




DESCRIÇÃO DO PROJECTO (4)

Durante a fase de **operação** (40 anos):

- Um corredor de 45 m será mantido sem árvores ou edifícios (sendo expressamente proibida a presença de casas, escolas ou hospitais) para assegurar a operação e reduzir riscos de acidentes ou incidentes.
- Um corredor de 5 m para acesso para debaixo da linha será limpa para às actividades de manutenção.
- Será definida uma reserva parcial ao longo da linha de transmissão (22,5 m de cada lado da linha), onde a ocupação e uso da terra será condicionada.
- As operações de manutenção incluirão a verificação do estado da faixa de protecção.





DESCRIÇÃO DO PROJECTO (5)

Subestação

A Subestação Novo Namibe de 220/60 kV será construída na cidade de Moçâmedes no bairro Aida, com uma área de aproximadamente 7 hectares.

O projecto da subestação contempla a construção de um edifício comando, uma casa auxiliar, casas de painéis e dormitórios para os trabalhadores.

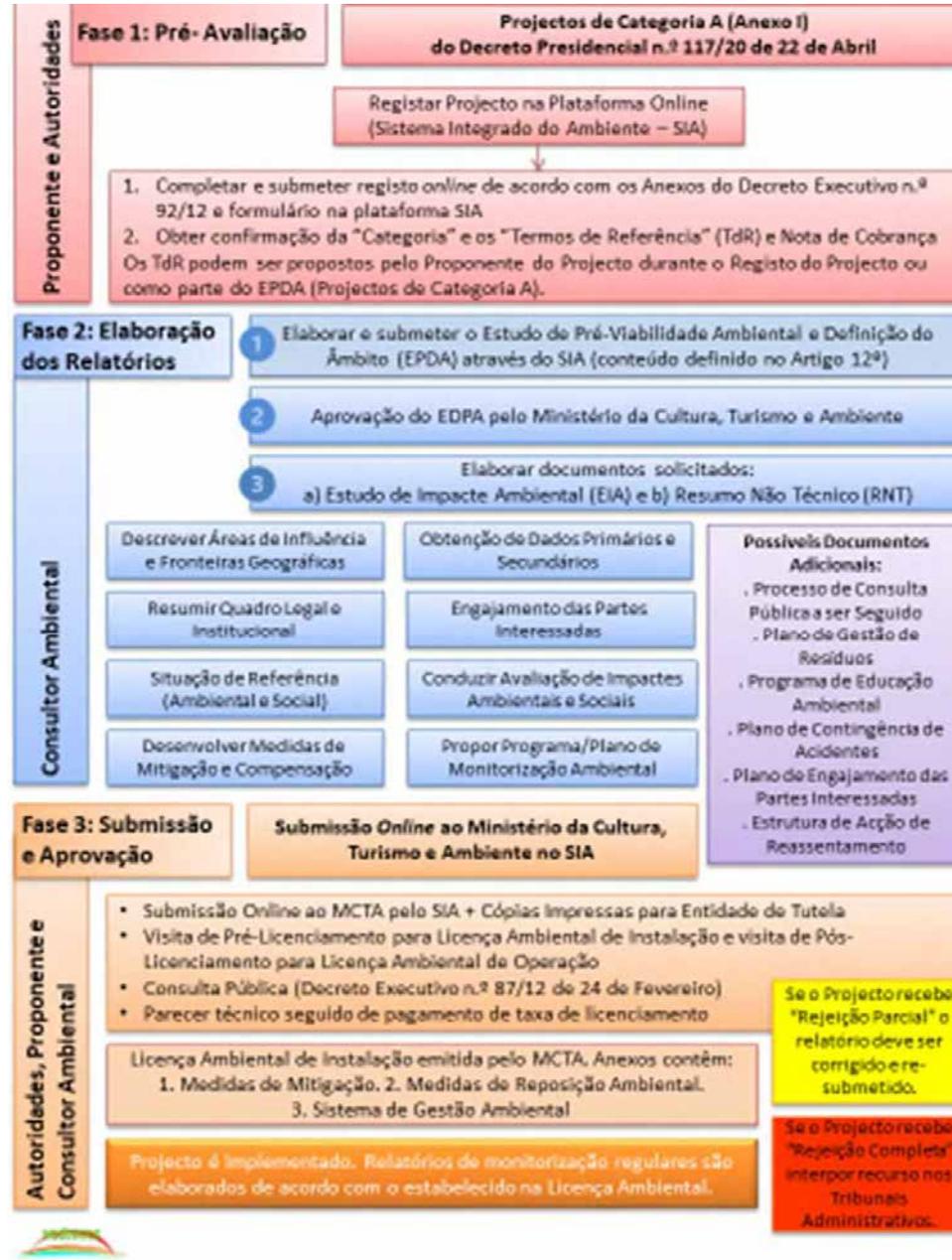


Terreno da Futura SE Novo Namibe.





PROCESSO DE AIA EM ANGOLA





ENQUADRAMENTO LEGAL

O EPDA e o EIAS serão elaborados de acordo a legislação vigente na República de Angola, nomeadamente:

Lei de Bases do Ambiente

Regulamento Geral sobre AIA e Procedimento de Licenciamento Ambiental

Regulamento sobre Gestão de Terras

Decreto Executivo sobre Consulta Pública

Lei de Terras

Lei de Expropriação por Utilidade Pública

Lei do Património Cultural

Regulamento sobre Reassentamento

A elaboração do EPDA e do EIAS também terão em consideração as Directrizes Ambientais e Sociais da JICA.





DIRECTRIZES DA JICA

A JICA criou um conjunto de directrizes de forma a garantir a sustentabilidade dos vários Projectos que financia (Directrizes Ambientais e Sociais da JICA).

Possui um conjunto de orientações de operação, que têm de ser implementadas:

- Divulgação das Informações do Projecto.
- Consulta aos Informantes Chaves Locais.
- Avaliação Ambiental e Social (Após a Categorização dos Projectos).
- Auscultação Pública às Partes Interessadas e Potencialmente Afectada.
- Preocupação sobre o Ambiente Social e Direitos Humanos.
- Biodiversidade e Ecossistemas.
- Aceitação Social.
- Reassentamento Involuntário e Compensação.
- Comunidades Etnolinguísticas.

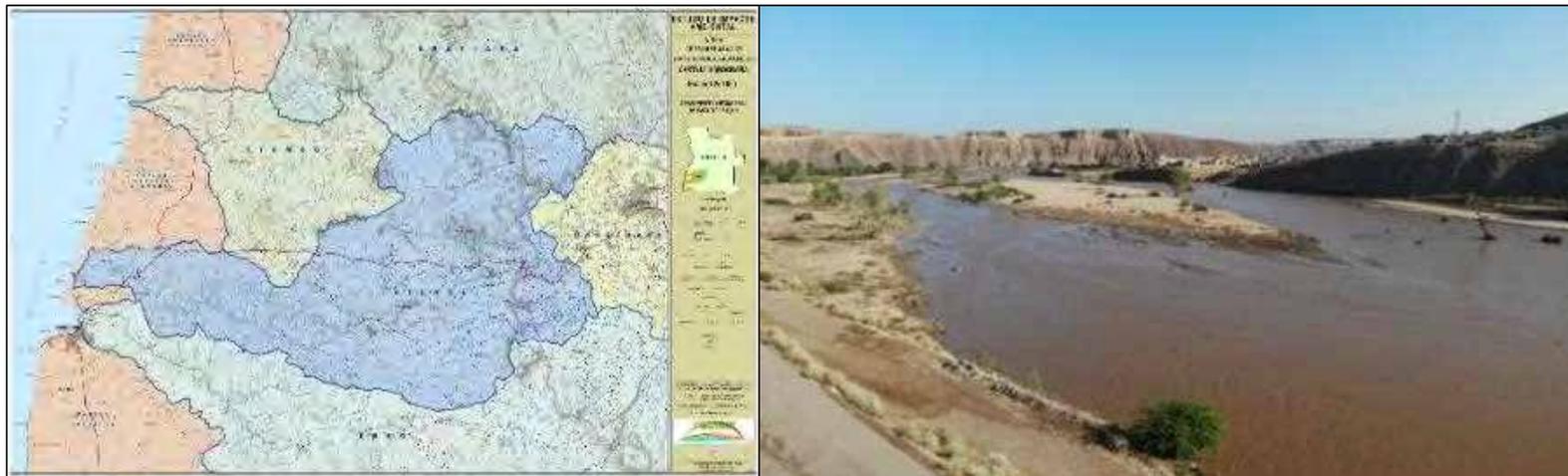




ASPECTOS AMBIENTAIS (1)

O clima do traçado do Projecto é impulsionado por diferenças de habitats e vários micro-habitats. Existe uma variedade de Solos ao longo do traçado com destaque para os solos ferralíticos, leptosolos, regossolos, luvisolos, calcissolos, cambissolos os fluvisolos aluviais (solos aluvionais).

O traçado abrange 7 ecorregiões com diversidade enorme de comunidades vegetais: mata de miombo, matas de escarpas, savana mopone, deserto de Kaokoveld, etc. Existência de mamíferos (macacos, rato-da-mata e golungo) répteis (cobras, agamas e lagartixas) e anfíbios (sapos). 113 espécies de aves foram observadas no traçado. Os recursos hídricos na região encontram-se no sentido Norte-Sul os rios Bentiaba, Giraúl, Bero, Curoca e Cunene.



Principais recursos hídricos observados na região do Projecto.

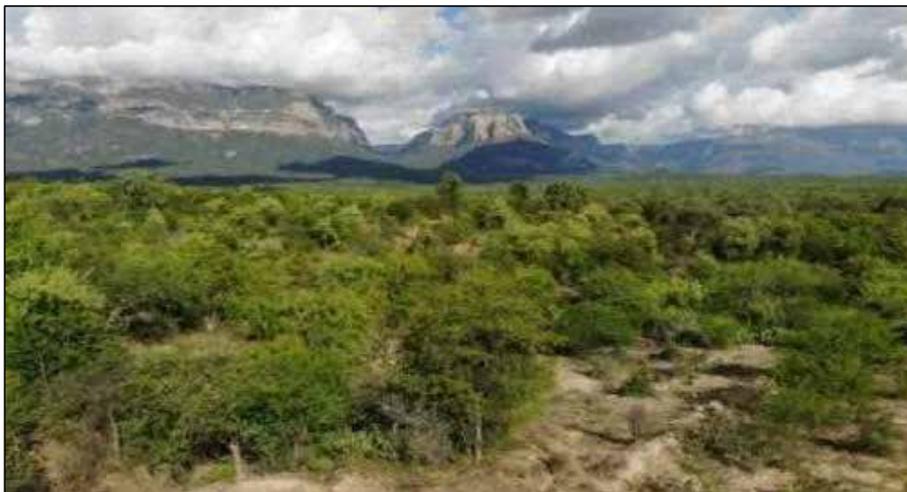




ASPECTOS AMBIENTAIS (2)

Tipos de vegetação existente no traçado do projecto:

- ✓ Floresta de Terras Altas;
- ✓ Pradarias Pantanosas;
- ✓ Matas de Miombo;
- ✓ Savanas;
- ✓ Karoo-Namibe.



ASPECTOS AMBIENTAIS (3)

Fauna



Guarda-rios-comum



Falcão-peregrino



Boita-da-Huíla



Abelharuco-pequeno



Rela-de-Angola



Macaco-de-cara-preta

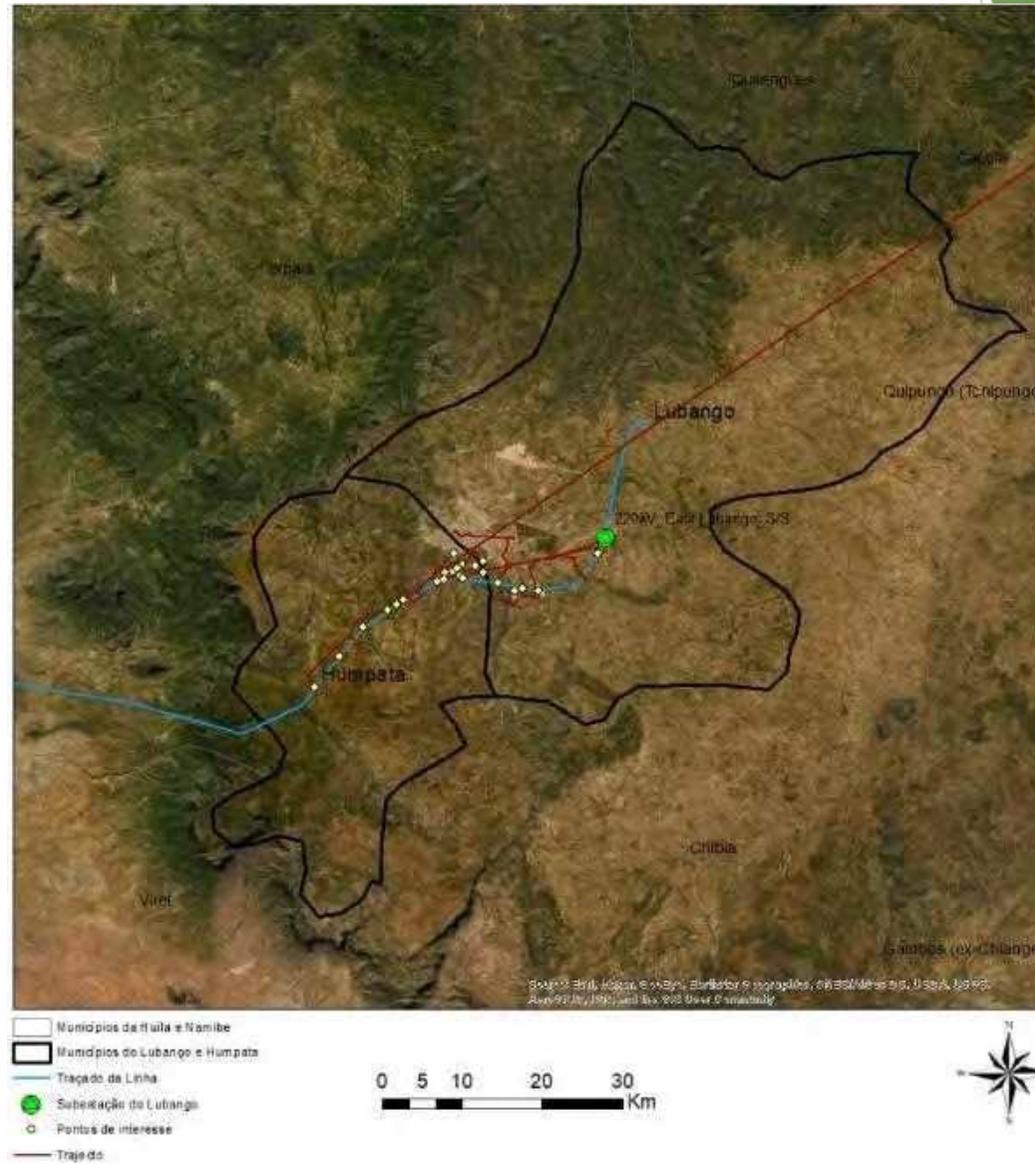


Lagartixa-das-pedras-de-Bocage



ASPECTOS SOCIAIS (1)

Comunidades Mapeadas no traçado.



População



ASPECTOS SOCIAIS (2)

Foram mapeadas 12 comunidades rurais ao longo do traçado do Projecto e na proximidade das subestações do Lubango Oriental e Novo Namibe. As comunidades mapeadas são: Poaires Muhaha, Poaires Kapandi, Tchiwaya, Kapalanga (município do Lubango), Calumue, Kamba Cristo, Heva, Jamba I, Camponês, Onculuvala (município da Humpata) e o Bairro Aída (município de Moçâmedes).

As 12 comunidades rurais têm uma população estimada em cerca de 46 957 habitantes (22 378 homens e 24 576 mulheres). As populações pertencem maioritariamente a etnia Nyaneca-Humbi, e dedicam-se essencialmente a agricultura familiar, pecuária e o comércio informal.



Aldeia Kapalanga.



Mercado das Mangueiras.



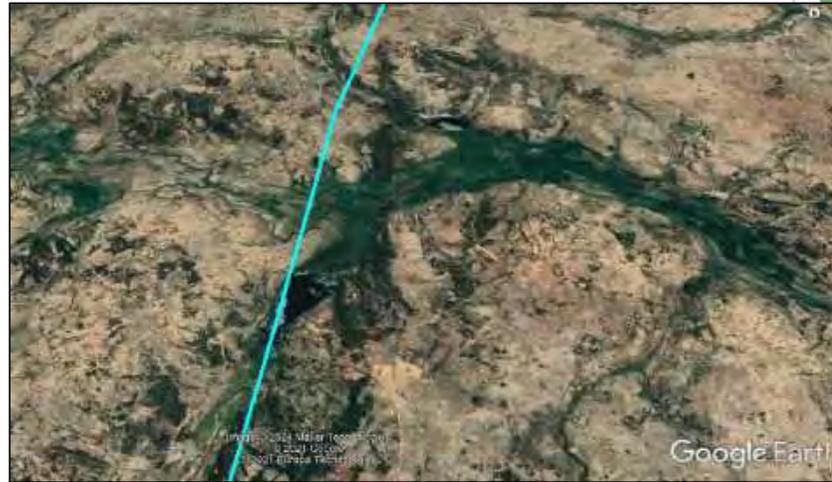
HOLÍSTICOS

CLASSIFICAÇÃO AMBIENTAL



ASPECTOS SOCIAIS (3)

Povoamento e Estruturas



Tipos de Povoamento na área de influência do Projecto.





ASPECTOS SOCIAIS (4)

Povoamento e Estruturas



Área da SE Novo Namibe – Bairro Aida

Cidade de Moçâmedes.





Encontros de Auscultação Pública (1)

A RNT, em parceria com a Holísticos, com o apoio das equipas da JICA e TEPSCO, realizou vários encontros de auscultação pública com as partes interessadas nas províncias da Huíla e do Namibe durante o período entre 23 a 25 de Fevereiro de 2021 (Fase 1) e 19 a 23 de Abril de 2021 (Fase 2).

Auscultação



Encontros com as autoridades administrativas – Fase 1





Encontros de Auscultação Pública (2)

Auscultação



Encontros com as autoridades tradicionais e comunidades – Fase 2





LEVANTAMENTOS PREVISTOS PARA SETEMBRO - NOVEMBRO

Ambiente

- Levantamento adicionais da biodiversidade: habitats, flora e fauna.
- Registo de imagens fotográficas ao longo do traçado do Projecto.
- Confirmação de pontos sensíveis no traçado do Projecto.
- Medições da qualidade do ar e o ambiente sonoro ao longo do traçado.

Socioeconómica & Consulta de Partes Interessadas

- Disseminação de informação do Projecto e auscultação pública (comunidades potencialmente afectadas pelo reassentamento involuntário).
- Inquérito/Censo com as comunidades potencialmente afectadas.
- Mapeamento e cadastramento das infra-estruturas potencialmente afectadas.
- Confirmação dos patrimónios culturais e locais sagrados potencialmente afectados pelo traçado do Projecto.



RESUMO DOS IMPACTES AMBIENTAIS

POTENCIAIS IMPACTES NEGATIVOS	POTENCIAIS IMPACTES POSITIVOS
<p>Biodiversidade, Habitat Natural e Paisagem</p> <ul style="list-style-type: none"> ▪ Perda da vegetação e habitats. ▪ Afastamento e/ou afectação de espécies de aves. ▪ Afectação de anfíbios e répteis. ▪ Alteração da qualidade da paisagem natural. 	<p>Benefícios socioeconómicos</p> <ul style="list-style-type: none"> ▪ Criação de emprego directo. ▪ Fomento à industrialização da província do Namibe.
<p>Qualidade da Água e Habitats Aquáticos (construção)</p> <ul style="list-style-type: none"> ▪ Afectação da qualidade da água: ▪ Turbidez. ▪ Aumento de metais pesados. 	<ul style="list-style-type: none"> ▪ Fomento ao comércio formal e informal. ▪ Aumento da geração de electricidade. ▪ Segurança e melhoria das vias de acesso.
<p>Ruído, Emissões Atmosféricas e Trânsito (construção)</p> <ul style="list-style-type: none"> ▪ Perturbação do ambiente sonoro das comunidades. ▪ Emissão de partículas de poeiras. ▪ Riscos de acidentes rodoviários. ▪ Risco de electrocução. 	<ul style="list-style-type: none"> ▪ Dinamização socioeconómica da província do Namibe. ▪ Regeneração urbana da cidade de Moçâmedes.
<p>Uso da Terra Propriedade e Reassentamento Involuntário</p> <ul style="list-style-type: none"> ▪ Afectação dos campos de cultivo e áreas de pastagem. ▪ Afectação de infra-estruturas físicas (casas). ▪ Afectação dos serviços de ecossistemas. ▪ Alteração pontual do Modo de Vida. 	



PRÓXIMOS PASSOS

- Mapeamento e Inquérito das Comunidades no Traçado do Projecto, com base numa possível actualização do traçado.
- Elaboração do Plano de Acção de Reassentamento alinhado com as boas práticas internacionais e linhas de orientação da JICA.
- Conclusão do Plano de Engajamento das Comunidades e Mecanismo de Reclamação.
- Conclusão do Relatório de Estudo de Impacte Ambiental e Social (EIAS).
- Após a finalização do EIAS, o mesmo será submetido:
 - Às autoridades financiadoras do projecto para aprovação;
 - Ao Ministério da Cultura, Turismo e Ambiente através do Portal SIA para efeitos de licenciamento ambiental.





Ikiyo Electric Power Services Co., Ltd.

SUGESTÕES E RECOMENDAÇÕES



Rede Nacional de Transporte de Electricidade E.P.

Gaveto entre a Estrada da Camama e Via Expressa

Junto a Subestação da Camama

Telemóvel: (+244) 222 704 400/923595093

apinto@rnt.co.ao

www.rnt.co.ao



Holísticos, Lda. – Serviços, Estudos & Consultoria

Rua 60, Casa 559, Urbanização Harmonia, Lar do Patriota,

Luanda

Telefones: 927 442 844; 915 034 779

holisticos@holisticos.co.ao

www.holisticos.co.ao

www.facebook.com/holisticos.angola



220 kV Transmission Line Project between Lubango - Moçâmedes	MEETING MINUTES Stakeholder Engagement		
		Project: P.1649	
VENUE: Humpata Recreational and Cultural Center	DATE: 15/06/2022	NUMBER OF PAGES: 14	
SUBJECT: Stakeholder Engagement Meeting (Phase 4).	NOTES BY: Elayne Miranda e Eduardo Ferdinand	TIME: 09h30 to 11h00 am	REVISION: Vladimir Russo

ANNEXES

Annex 1 – Photographic Record

Annex 2 – Attendance List

Annex 3 – Presentation

COPIES SENT TO:

- National Electricity Transmission Network Company (RNT - E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPESCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Government of Namibe Province.
- Government of Huíla Province.

ITEM	DESCRIPTION
1	The stakeholder engagement meeting was held on June 8 th , 2022, with representatives of the Humpata Municipal Administration, traditional authorities of the region, civil society, residents and other stakeholders. The opening ceremony of the stakeholder engagement meeting started at 09h30 at the Humpata Recreational and Cultural Center (15° 1'0.35 "S 13°22'47.08 "E). The meeting was attended by several entities with special emphasis on Mr. Nelson dos Santos (Deputy Municipal Administrator of Humpata for Social and Economic Area), Mr. José Hequele Fernando (Communal Administrator of Humpata), representatives of municipal and communal administrations and representatives of Holísticos companies (Eduardo Ferdinand and Elayne Miranda), the National Electricity Transmission Network Company (RNT - Catarino Cosme, Leitão Alexandre, Romualdo Pimentel and Manuel Domingos).
2	The stakeholder engagement meeting was attended by 53 participants, ten (10) of whom were women (18%). His Excellency Deputy Municipal Administrator of Humpata for Social and Economic Area, Mr. Nelson dos Santos (NS) welcomed those present, spoke about the importance of the Project from the point of view of development and boosting the economy of the provinces of Huíla and Namibe. Knowing that many of those present do not understand clearly and transparently the Portuguese language was translated into the local language Nhaneca-Humbi.
3	The RNT representative, Catarino Cosme, after introducing his colleagues and RNT work team members, presented a Project overview. He stated that the stakeholder engagement meeting with stakeholders is now in its fourth phase, and that the main objective was to present the results of the Environmental and Social

	Impact Study of the Project and receive the participant's suggestions and recommendations. He said that the meeting is extremely important for the Project implementation.
4	The representative of Holísticos, Eduardo Ferdinand (EF) in his Power Point presentation of the Project on the 220 kV electricity transmission line Project and the construction of two (2) substations (Lubango East Substation and New Namibe) he started with an introduction on the main characteristics of the Project. He provided an explanation of the currently proposed route for the power transmission lines (has also highlighted the various location alternatives studied), the main results of the environmental, social and cultural field surveys, the potential environmental, social and cultural impacts (negative and positive) associated with the Project and the respective mitigation and compensation measures.
5	EF also mentioned the census and registration of the parties potentially affected by the Project along the route of the transmission line, carried out in November 2021 by Holísticos. He presented the results and referred to the importance of the Abbreviated Resettlement Action Plan (ARAP), which is being concluded, and the Project Environmental and Social Management Plan.
6	EF indicated that the stakeholder engagement process is extremely important regarding for the Project implementation. He also mentioned that the Project is promoted by National Electricity Transmission Network Company (RNT, in collaboration with Tokyo Electric Power Services Co., Ltd. (TEPSCO) (a Japanese company) and with financing from the Japan International Cooperation Agency (JICA). He stressed that the main objective of the project is to improve the power supply to Huíla and Namibe Province, as well as to provide for the connection of the electricity transmission systems between the North and Centre-South regions.
7	EF explained that the Project addresses the need to transport the electricity generated at the Laúca Dam located in the province of Malanje. It can produce more than 2,000 MW to be supplied through Belém do Dango Substation, located in the Province of Huambo, and Nombungo, Lubango Leste substations, in the Province of Huíla and subsequently Novo Namibe Substation, in Moçâmedes. He also said that the Project will be aligned with the JICA Performance Standards for Environmental and Social Considerations (JICA Guidelines for Environmental and Social Considerations, 2010). Regarding the stakeholder engagement meeting, EF mentioned that the objective was to provide stakeholders with the opportunity to learn about the Project, make suggestions and recommend feasible mitigation measures and compensations (technical, environmental, social and cultural) in order to ensure the sustainability of the Project.
8	EF's presentation focused on the following points (see Annex 3 - Presentation): <ul style="list-style-type: none"> • Brief Project Description (location and its execution alternatives); • Presentation of the Environmental Impact Assessment Process in force in the country; • Legal Framework and Requirements of the Project Funder (JICA);

	<ul style="list-style-type: none"> • Environmental and Socioeconomic Aspects of the 220 kV Transmission Line Route; • Results of the Registration of Potentially Affected Parties (Questionnaires to Heads of Households); • Abbreviated Resettlement Action Plan (ARAP); • Environmental and Socio-Economic Impact Assessment and related mitigation measures; • Involuntary Resettlement and financial compensation for damages or right-for power lines passage; • Angolan Entities involved in the Project Compensation Process; • Environmental and Social Management Plan; • Question and Answer Session.
9	EF also explained that the project intends to avoid as much as possible inhabited areas, cultivated areas, commercial and military aircraft manoeuvring spaces, grazing areas, transhumance areas used by ethno linguistic communities, areas with historical experience of ethno linguistic communities, cemeteries, recreation areas, etc. He concluded the presentation, mentioning that the report on the Project Environmental and Social Impact Study is currently being validated by the Project Sponsor (RNT) and funding entity (JICA), and will later be submitted to the supervising entities, namely, Ministry of Energy and Water and the Ministry of Culture, Tourism and Environment) for environmental licensing purposes.
10	The summary of the question and answer session is shown in the following table.

Question & Answer Session Summary

Comment/Question	Answer
<p>Mahini Mapole (MM) – Residing in Jamba II neighborhood.</p> <p>Mahini Mapole commended RNT's initiative for the implementation of the Project and pointed out its benefits for the future. He said that special attention should be given to the conservation of the Boers cemeteries that located inside Jamba Farm.</p>	<p>Eduardo Ferdinand – Holísticos.</p> <p>EF mentioned that the two (2) cemeteries mapped along the TL Project route will be scrupulously avoided.</p> <p>He spoke of the sentimental and cultural value that the Boers and Onculuvala cemeteries represent for the people who have their beloved ones buried there, and of the historical value of the Boers cemetery. He mentioned these cemeteries are outside the current project right-of-way and thus will not be affected. For future projects and RNT will take measures to prevent the lines from passing through the spaces of cemeteries. He stressed that the exhumation processes are very difficult to follow because it is extremely complex under current Angolan legislation, as it involves the creation of multidisciplinary teams including the involvement of administrative authorities, traditional</p>

Comment/Question	Answer
	<p>authorities, family members of the deceased and church entities, etc.</p> <p>Catarino Cosme – RNT</p> <p>He mentioned that the route of the transmission line is not definitive and that a set of studies will be carried out to define the final route. He said that the Project promoter wants the negative impact to be minimized as much as possible, and has presented technical solutions, such as the installation of bypass towers, etc. However, he stressed that in the future if the cost-benefit analysis shows that it is feasible to place one or two towers inside the perimeter of the cemeteries, a work committee will be created between RNT, the Humpata Municipal Administration and the provincial directorates of Huíla, in order to facilitate the process of exhumation and transfer to another cemetery to be indicated by the local authorities. However, this is not the case of this project.</p>
<p>Agostinho Tchiputo (AT) – Onculuvala Village Head.</p> <p>AT commended the Project initiative and pointed out that the youth of the Onculuvala neighborhood have been putting pressure on the issue of employment. He suggested that stakeholder engagement meetings should be held with the families identified as potentially affected by the Project (farmers, property and land owners, etc.). The aim is to provide a better clarification of the Project and its potential negative and positive impacts before the implementation of the reconfirmation work of the affected people and the beginning of possible compensation.</p> <p>AT clarified that he is not against the placement of one or two towers within the perimeter of the Onculuvala village cemetery, as long as the traditional authorities and families are previously consulted and the exhumation occurs in accordance with local tradition and other legal rules in force in Angola. He requested</p>	<p>Eduardo Ferdinand – Holísticos</p> <p>He thanked the Head Agostinho Tchiputo from the Onculuvala Village for his suggestions.</p> <p>He explained in detail the route of the transmission line from Arimba to Moçâmedes, and that the same route will not pass through densely populated regions and pointed out that in the municipality of Humpata, from the commune of Palanca bypass, the route of the 220 kV transmission line will always be parallel to the existing 60 kV transmission line, thus avoiding social conflicts related to the occupation of habitable and agricultural land.</p> <p>He explained in detail the registration work of the potentially affected parties carried out in November 2021 along the route of the presented Project. He also said that for safety reasons and in order to comply with international standards, houses, schools, hospitals, church and other permanent</p>

Comment/Question	Answer
<p>that RNT to share the final layout of the Project so that the traditional authorities can avoid possible defrauders, who choose to build houses in order to be compensated.</p>	<p>infrastructures cannot be permitted on the 220 kV Project easement (45 m).</p> <p>He emphasized that the presented route is not definitive and a set of studies will be carried out to determine its final route. He highlighted the studies of soils, geology, topography, geomorphology, etc. He stressed that before the implementation of the Project, RNT, JICA and TEPSCO will also take into consideration the cost-benefit effect before the compensation decision, in order to avoid making the Project extremely expensive, due to the compensation and physical resettlement process.</p>
<p>Manuel Mandante (MM) – Resident of the Jamba II neighborhood</p> <p>Manuel Mandante questioned about the resettlement and compensation process should the tower be installed on his land with potential affectation to his home.</p>	<p>Catarino Cosme – RNT</p> <p>He mentioned that only the physical infrastructures (for example houses) that are within the Project 45-meter easement will be compensated. Therefore, people whose property is not located within this area will not be compensated.</p> <p>In case a house is relocated by the Project, a registration and a value assessment (benchmark) based on the market price will be carried out. The affected people will be entitled to receive a house that will be built within the safety limits. It will have the same or even better conditions than the property currently existing along the Project route.</p> <p>Eduardo Ferdinand – Holísticos.</p> <p>The Project is being funded by JICA and it takes very seriously the issues of involuntary resettlement (due to damage caused to other people’s infrastructure and property relocation), as such, fair compensation shall be paid. Failure to address these issues properly, and compensate people, under the Angolan Legislation in force, and where applicable, JICA’s requirements, shall imply the full funding not be provide.</p>

Comment/Question	Answer
	<p>He indicated that the 220 kV electricity transmission line planned to be installed between the substations of Nombungo, Lubango East and New Namibe cannot overhead houses, schools, hospitals and large trees, always in compliance with the recommendations from the national legislation. However, he explained that there will be situations where this cannot be avoided, so the RNT and JICA have very explicit technical standards for these situations. An Abbreviated Resettlement Action Plan is being developed for potentially affected people to ensure that families affected by the Project will have the same or better living conditions and social welfare than prior to the Project development in the region.</p> <p>The compensation due for lost farms and fruit trees will be according to crop price table per square meter or hectare released by the then Ministry of Agriculture and Fisheries (National Agriculture Directorate), and all the terms will be duly agreed upon, signed and executed in a transparent and honest manner. In order to ensure that the potentially affected parties shall compensated accordingly.</p> <p>However, the value to be paid for the farms mapped to be affected will depend in the agriculture produce per species that they present and not on the annual produce. At the end of all registration process in connection with the affected farms and compensation, the monetary amount of the agricultural produce will be provided to the farmer (owner of the farm), and the deadlines for the collection of the production shall be established.</p> <p>In case a house is relocated by the Project, a registration and a value assessment based on the national market price (benchmark) shall be carried out and the affected parties may receive a house with the same or even better conditions than the house currently existing along the Project route. During the construction of houses, the recommendations or</p>

Comment/Question	Answer
	requests of the affected families in terms of finishing and adjustment of the rooms will also be taken into consideration.
<p>Alexandre Kalupia (AG) – Onculuvala Resident.</p> <p>AG asked about the issue of employability of people of said community.</p>	<p>Catarino Cosmo – RNT</p> <p>He informed that during the public tender for the Project, the RNT will include in the specifications the clause of hiring at least 40% of the local labor force for the Project corridor in order to promote employability and professional training to the youth of said region. He highlighted that it is required to hire qualified and non-qualified labor, and the opportunities for non-qualified work will all be provided for the youth, as long as they meet the minimum qualifications to provide the work</p> <p>Eduardo Ferdinand – Holísticos.</p> <p>He sought examples of similar projects implemented by RNT in other parts of the country to reassure those present regarding the creation of job opportunities for young people within the scope of the Project implementation in the region.</p>
<p>Amadeu Mateus (AM) – Onculuvala neighborhood resident.</p> <p>Amadeu Mateus questioned if the project would benefit the Onculuvala neighborhood.</p>	<p>Eduardo Ferdinand – Holísticos.</p> <p>He said that the Project is exclusively for the transport of electricity between the 220/60 kV Lubango East Substation and the 220/60 kV New Namibe Substation to be built in Moçâmedes. He clarified that under the Transformation Program of the National Electricity Sector three Angolan companies are responsible for providing support services to the sector, namely: PRODEL (Production), RNT (Transmission) and ENDE (Distribution). Firstly, RNT will build the Lubango-Moçâmedes electricity transmission line. Then it will follow the distribution phase, in which ENDE in collaboration with the Provincial Government of Huila and the municipal administrations will analyze the demand for energy and create alternatives for its distribution from the substations of Nombungo and Lubango. However, it was stressed that the project is exclusively for the transport of electricity between 220/60 kV Lubango East Substation and</p>

Comment/Question	Answer
	<p>220/60 kV New Namibe Substation to be built in Moçâmedes.</p> <p>He also pointed out that in parallel to the presented 220 kV transmission line Project, a 60 KV electricity transmission line between the Lubango East and Arimba Substations is underway. They should benefit Huíla province, which, which will benefit from the fact that the city of Humpata is near Lubango.</p>
<p>There being no further questions, the meeting was closed by Mr. José Hequele Fernando (Communal Administrator of Humpata), thanking everyone for their presence, particularly the entourage of the Project's promoters.</p>	

Annex1: Photographic Record.



Photo 1: Detail of those present at the stakeholder engagement meeting in Humpata municipality (Phase 4).

Photo 2: Opening of the stakeholder engagement meeting by the Deputy Municipal Administrator of Humpata, Mr. Nelson dos Santos.

Foto 3: Presentation of the Project by Eduardo Ferdinand (Holísticos) and traduction.



Photo 4: Intervention by Soba Agostinho Tchiputo.

Photo 5: Intervention by Mr. Amadeu Mateus.

Foto 6: Intervention by Mr. Alexandre Kalupia.

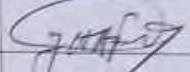
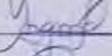
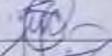
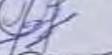
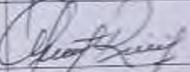
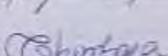
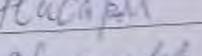
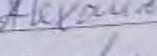
Annex 2: Attendance List.






ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
 DE ELECTRICIDADE DE 220 KV LUBANGO (HUILA) - MOÇÂMEDES (NAMIBE)
 FASE 4 (EIAS)

LISTA DE PRESENCAS (LOCAL): Humpata (Centro Cultural) DATA: 08 / JUNHO/2022

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Nelson B.G. dos Santos	Administração Municipal	Adm. Adjunto	922 969182	
gosp' Flezele	Administração Comunal	Adm. Comunal	927 034530	
Argentina Mando	Administ. Municipal	Chefe de Secção Energia	924 053016	
Yemios blharo	Administ. Municipal	Sec. Adm. Adjunto	923 10456	
Francisco Gabriel	ADM - Humpata	Sr. GCS	924 857862	
Roberto Floris	ADM - Humpata	S. Geral	925 664370	
Alberto R. Antolinho	ADM - Humpata	Chefe. Sec. S.B	925475205	
Rouisa Chimbara	Adm. C. sede	Administr. Adjunto	93698 10 52	
Agostinho Tchiputa	Onkuluvala	Soba	940 436 446	
Verissimo o / Jaco	Onkuluvada	Cardenador		
Alexandre N. Gulipia	ONKULUVALA		941922115	
Amador S. Motus	ONKULUVALA	Secretaria	939 506551	
gosp' Kalenga	Onkuluvada			

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ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 KV LUBANGO (HUILA) – MOÇÂMEDES (NAMIBE)
 FASE 4 (EIAS)

LISTA DE PRESENCAS (LOCAL): Humpata (Centro Cultural)

DATA: 08 / JUNHO / 2022

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Doliceia Nandjezi	Onculuvala			
Maria Teresa	Onculuvala			
Augusta Hiluwo	Onculuvala			
Paula Manuel Telitundji	Rio Vaba			
Augusto Mucongo	Onculuvala, Mutundo	Sociólogo/Buro Mutundo		
José Memeto	Jamba I	Chefe de Produção	930396080	
Mahini Makole	Jamba II	coord. Ass. e pla. TIA	325786454	
João Domingos	Jamba II	Pedreiro	94633459	
José Telivensi	Jamba II	Estudante	937271178	
António Karibau	Jamba II	Estudante		
Memeta Manuel	Jamba II	Estudante		
Armando A. Candeiga	Administrador	Técnico	926737310	
Joaquim Chapinga	Onculuvala	Laborês		



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) - MOÇÂMEDES (NAMIBE)

PAGE 4 (EMIS)

LISTA DE PRESENCAS (LOCAL): Hermafrota (Centro Cultural)

DATA: 07 / JUNHO / 2022

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Elías A. F. Hoquale	R.N.T	MOTORISTA	937131567	<i>[Signature]</i>
Manuel Domingos	R.N.T	Técnico Planeamento	922285845	<i>[Signature]</i>
Romualdo Pimentel	RNT-EP	Técnico de Q&SA	943696862	<i>[Signature]</i>
Berlão Alexandre	RNT-EP	Técnico de Ambiente	924715393	<i>[Signature]</i>
Helder dos Santos	Polícia Nacional	Chefe de divisão	915471096	<i>[Signature]</i>
Delvino de Azevedo	Administração	Chefe de Secção	935964400	<i>[Signature]</i>
João Manuel Tchimbo	Onkuluvola	Compones		
Diamantino Afonso	Companhia	Coordenador	930019389	<i>[Signature]</i>
Benedito Inácio	Jamba II	Compones		
José Eduardo Casquil	Jamba II	Coordenador	929973894	
Paulino S. O. O.	Jamba II		941673423	
Mustafi Calenga	Jamba II		942025825	
Luís A. Lando	Jamba 2	Político	932605998	






Tokyo Electric Power Services Co., Ltd.

ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
 FASE 4 (EIAS)

LISTA DE PRESENCAS (LOCAL): Humboya (Centro Cultural)

DATA: 08 /JUNHO/2022

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Antonio Koi Kumbwa	Jamba 2	Tradutor		
Manuel D'Angelo	Jamba 2			
António Korilopale Mafosa	Jamba 2	Kabanes	927186693	
Miguel Manuel Afepela	Jamba 2	Companh	949027795	
Ebigne Miranda	Holisticos	Eng. Ambiental	926961360	Ebigne Miranda
Catalino Costa	RNI-EP	Sociologo	912355412	
Jose S. Katumbela	Ontikulwala	Coordenador	932233594	Jose S. Katumbela
Nichiquia Kessai	Jamba 2	Companh	923214078	Nichiquia
Manuel Mandati	Jamba 2	Motociclista	926018970	
Yoon Kaul papila Duti	SAMH	Estudante	930652425	
Benedite	Katumbela	Companh		
Jaao Pequerrino	Jamba 2	Companh		
Jose Catito	Jamba 2	Companh		

220 kV Transmission Line Project between Lubango - Moçâmedes		MEETING MINUTES Stakeholder Engagement			
		Project: P.1649			
LOCAL:	Bibala Municipality Headquarters - Bibala Secondary School Auditorium.	DATE:	16/06/2022	NUMBER OF SHEETS:	15
SUBJECT:	Stakeholder Engagement Meeting (Phase 4)	NOTES BY:	Elayne Miranda & Eduardo Ferdinand	TIME:	10h00 am to 12h00 pm
				REVISION:	Vladimir Russo

ANNEXES

Annex 1 – Photographic Record

Annex 2 – Attendance List

Annex 3 – Presentation

CÓPIAS ENVIADAS PARA:

- National Electricity Transmission Network Company (RNT - E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPESCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Government of Namibe Province.
- Government of Huíla Province.

ITEM	DESCRIPTION
1	On June 9 th , 2022 a stakeholder engagement meeting was held in the municipality of Bibala. The opening ceremony of the stakeholder engagement meeting for the 220 kV Electricity Transmission Line Project between the provinces of Huíla and Namibe started at 10h00 in the Auditorium of the Bibala Secondary School. The meeting was attended by several entities with special emphasis on Amélia Camunheira (Municipal Administrator of Bibala), Pedro Hangula (Provincial Director of Culture, Tourism and Environment), Municipal Directors and public companies in the region of Bibala, Communal Administrators, Traditional Authorities of Bibala and representatives of Holísticos company (Eduardo Ferdinand and Elayne Miranda), the National Electricity Transmission Network Company (RNT - Catarino Cosme, Alexandre Leitão, Romualdo Pimentel and Manuel Domingos).
2	The stakeholder engagement meeting was attended by 69 participants (15% of whom were female). Her Excellency Amélia Camunheira (Bibala's Municipal Administrator) welcomed the participants, stating that it was not the first time that the municipality was consulted. She mentioned other meetings that have been held within the scope of the Project. She spoke of the importance of the Project for Namibe Province development and in order to boost its economy.
3	The RNT representative, Catarino Cosme, after introducing his colleagues and RNT work team members, presented a Project overview. He stated that the stakeholder engagement meeting with stakeholders is now in its fourth phase, and that the main objective was to present the results of the Environmental and Social Impact Study of the Project and receive the participant's suggestions and recommendations. He said that the meeting is extremely important for the Project implementation.

4	<p>The representative of Holísticos, Eduardo Ferdinand (EF) in his Power Point presentation of the Project on the 220 kV electricity transmission line Project and the construction of two (2) substations (Lubango East Substation and New Namibe) he started with an introduction on the main characteristics of the Project. He provided an explanation of the currently proposed route for the power transmission lines (has also highlighted the various location alternatives studied), the main results of the environmental, social and cultural field surveys, the potential environmental, social and cultural impacts (negative and positive) associated with the Project and the respective mitigation and compensation measures.</p>
5	<p>EF also mentioned the census and registration of the parties potentially affected by the Project along the route of the transmission line, carried out in November 2021 by Holísticos. He presented the results and referred to the importance of the Abbreviated Resettlement Action Plan, which is being concluded, and the Project Environmental and Social Management Plan.</p>
6	<p>EF indicated that the stakeholder engagement process is extremely important regarding for the Project implementation. He also mentioned that the Project is promoted by National Electricity Transmission Network Company (RNT, in collaboration with Tokyo Electric Power Services Co., Ltd. (TEPSCO) (a Japanese company) and with financing from the Japan International Cooperation Agency (JICA). He stressed that the main objective of the project is to improve the power supply to Huíla and Namibe Province, as well as to provide for the connection of the electricity transmission systems between the North and Centre-South regions.</p>
7	<p>EF explained that the Project addresses the need to transport the electricity generated at the Laúca Dam located in the province of Malanje. It can produce more than 2,000 MW to be supplied through Belém do Dango Substation, located in the Huambo Province, and Nombungo, Lubango Leste substations, in the Province of Huíla and subsequently Novo Namibe Substation, in Moçâmedes. He also said that the Project will be aligned with the JICA Performance Standards for Environmental and Social Considerations (JICA Guidelines for Environmental and Social Considerations, 2010). Regarding the stakeholder engagement meeting, EF mentioned that the objective was to provide stakeholders with the opportunity to learn about the Project, make suggestions and recommend feasible mitigation measures and compensations (technical environmental, social and cultural) in order to ensure the sustainability of the Project.</p>
8	<p>EF's presentation focused on the following points (see Annex 3 - Presentation):</p> <ul style="list-style-type: none"> • Brief Project Description (location and its execution alternatives); • Presentation of the Environmental Impact Assessment Process in force in the country; • Legal Framework and Requirements of the Project Funder (JICA); • Environmental and Socioeconomic Aspects of the 220 kV Transmission Line Route; • Results of the Registration of Potentially Affected Parties (Questionnaires to Heads of Households);

	<ul style="list-style-type: none"> • Abbreviated Resettlement Action Plan (ARAP); • Environmental and Socio-Economic Impact Assessment and related mitigation measures; • Involuntary Resettlement and financial compensation for damages or right-for power lines passage; • Angolan Entities involved in the Project Compensation Process; • Environmental and Social Management Plan; • Question and Answer Session.
9	EF also explained that the Project intends to avoid as much as possible inhabited areas, cultivated areas, commercial and military aircraft manoeuvring spaces, grazing areas, transhumance areas used by ethno linguistic communities, areas with historical experience of ethno linguistic communities, cemeteries, recreation areas, etc. He concluded the presentation, mentioning that the report on the Project Environmental and Social Impact Study is currently being validated by the Project Sponsor (RNT) and funding entity (JICA), and will later be submitted to the supervising entities, namely, Ministry of Energy and Water and the Ministry of Culture, Tourism and Environment) for environmental licensing purposes.
10	The summary of the question and answer session is shown in the following table.

Question and Answer Session Summary

Comment/Question	Answer
<p>Dário Tomás (DT) – ADPP “Ajuda de Desenvolvimento de Povo para Povo”.</p> <p>DT questioned the safety distances of the Project in relation to houses, ploughs, schools and if the route of the Project should cross the area of the Fenda da Tundavala. He also questioned if Babila Municipality Babila will benefit from the Project.</p> <p>Bernar Aleluia (BA) – Advisor.</p> <p>BA requested the interconnection between the very high voltage electricity transmission and distribution Projects. He questioned whether the communities near the Project route will benefit from that electricity.</p> <p>Remidor Nanga (RN) – Municipal Fire Chief.</p> <p>RN requested possibility of power distribution to the communities living in the Project route be analyzed.</p>	<p>Catarino Cosme - RNT.</p> <p>He mentioned that only physical infrastructure (e.g. houses and schools) that are within the Project 45 meter easement will be compensated, so infrastructures that are not within this area will not be compensated.</p> <p>If a house is relocated by the Project, there will be a registration and evaluation of its market value, and the affected parties will be able to receive a house that will be built within safety limits, with the same or even better conditions than the displaced person’s house living along the Project route.</p> <p>He stressed that the Project is exclusively for the transport of electricity between the 220/60 kV Lubango East Substation and the New Namibe 220/60 kV Substation to be built in Moçâmedes. He clarified that under the Transformation Program of the National Electricity Sector three Angolan companies are responsible for providing</p>

Comment/Question	Answer
	<p>power production and distribution services in the country, namely: PRODEL (Production), RNT (Transmission) and ENDE (Distribution). In the first phase RNT will build the Lubango-Moçâmedes electricity transmission line. Then it will move to the distribution phase, in which ENDE in collaboration with the Provincial Government of Namibe and municipal administrations will analyze the demand for energy and create alternatives for its distribution from Moçâmedes Substation. However, it was emphasized that the project is exclusively for the transport of electricity between the Lubango East 220/60 kV Substation and New Namibe 220/60 kV Substation to be built in Moçâmedes.</p> <p>Eduardo Ferdinand – Holísticos.</p> <p>He explained in detail the route of the transmission line from Arimba to Moçâmedes. He said that it will not pass through the region of Fenda da Tundavala or Serra da Leba. He also highlighted the importance of the two (2) regions from the environmental point of view (IBA0023 of Fenda da Tundavala) and the historical-cultural heritage and tourism.</p>
<p>Amélia Camunheira (AC) - Bibala's Municipal Administrator.</p> <p>AC questioned the technical viability of the municipal seat of Bibala and the regions of Muinho and Caraculo benefiting from the energy transported by the Project.</p>	<p>Catarino Cosme – RNT.</p> <p>He said that the funding requested from JICA by the Angolan government includes only the power transport from the Nombungo and Lubango East substations (in the province of Huila) to New Namibe Substation in Moçâmedes (in the province of Namibe). Subsequently, additional funding will be requested for satellite projects for electricity distribution to other municipalities in Namibe Province.</p> <p>Manuel Domingos – RNT.</p> <p>The Angolan government, through the Ministry of Energy and Water, has drawn up a program for the electrification of all the country's municipalities and some nearby communes using hybrid and photovoltaic plants. Experimental projects are underway in the Province of Cabinda.</p>
<p>Jones Mutimo (JM) – Municipal Director of Education.</p>	<p>Catarino Cosme – RNT.</p>

Comment/Question	Answer
<p>JM questioned if the agreement between the Angolan Government and JICA includes the award of scholarships to Angolan students. He questioned whether the <i>Instituto Médio Agrário do Kapangombe</i> (Kapangombe High School for Agriculture Sciences) will benefit from the electricity transported by the Project.</p>	<p>He stressed that the funding requested from JICA by the Angolan government includes only the transportation of power from the Nombungo and Lubango East Substations (in the province of Huila) to the New Namibe Substation in Moçâmedes (in the province of Namibe).</p> <p>As for social issues (scholarship), he informed that the presentation of Social Responsibility Programs will be required from all contractors bidding for the Project construction. However, RNT cannot any responsibility that it cannot fulfil.</p>
<p>Pedro Hangula (PH) – Director of the Provincial Office of Culture, Tourism and Environment.</p> <p>PH requested additional clarification on the resettlement and compensation process for parties affected by the Project. He questioned about the environmental recovery of the areas potentially affected by the Project construction.</p> <p>He informed that the current exploration of ornamental rocks in the Caraculo region has affected air quality and that recent studies have indicated that the well-being of the communities is affected. He requested that measures be taken to avoid the proliferation of particulate matter in the Project so as not to worsen the current condition of the region.</p>	<p>Eduardo Ferdinand – Holísticos.</p> <p>The Project is being funded by JICA and JICA takes the issues of involuntary resettlement (for damage to Third parties' infrastructures and means of sustenance) and fair compensation very seriously, and will not provide full funding to the Project unless these issues are properly analyzed, avoided or compensated under the Angolan law currently in force and applicable JICA requirements.</p> <p>He stressed that the 220 kV electricity transmission line planned to be installed between the Nombungo, Lubango East and New Namibe substations cannot overhead houses, schools, hospitals and large trees, or exceed 35 meters high. However, he explained that there will be situations where this cannot be avoided, so RNT and JICA have very explicit technical standards for these situations. An Abbreviated Resettlement Action Plan (ARAP) is being developed for potentially affected parties to ensure that families affected by the Project will have the same or better living conditions and social welfare than prior to the Project development in the region.</p> <p>The compensation for the lost farms and fruit trees will be made according to the crop price table per square meter or hectare produced by the then Ministry of Agriculture and Fisheries (National Agriculture Directorate). All the terms will</p>

Comment/Question	Answer
	<p>be duly agreed upon, signed and executed in a transparent and honest manner, in order for the relevant compensation be guaranteed to the potentially affected parties.</p> <p>However, the value to be paid for the farms mapped as affected will be depend on the agricultural produce per species that they present and not on the annual produce that the farmer claims to produce. At the end of the whole registration process of the affected farms and relevant compensation, the monetary amount of the agricultural produce will be offered to the farmer (owner of the farm), with deadlines established for the collection of the produce.</p> <p>In case a house is affected by the Project, there will be a registration and evaluation of its value in the national market and the affected parties may receive a house with the same or even better conditions than the house of the displaced person existing along the Project route. During the construction of the houses, the recommendations or requests of the affected families in terms of finishing and adjustment of the rooms will also be taken into consideration.</p> <p>Regarding the vegetation removed in the Project route, EF responded that JICA has contemplated a budget for all the negative effects that the Project may cause from involuntary resettlement, compensation for environmental damage and third-party property, etc. Regarding the plant biomass that will be removed in the route, he said that the scenario will be to compensate through the insertion of native plant species or those that are adapted to the climatic conditions of the region.</p> <p>He also said that where it is not possible to repopulate the vegetation, the Provincial Directorate of Culture, Tourism and Environment of Namibe should indicate alternative sites for compensation. EF suggested the creation of working</p>

Comment/Question	Answer
	<p>committees between RNT, the municipal administrations of Moçâmedes and Bibala, and the Namibe provincial directorates.</p> <p>Regarding atmospheric pollution in the Caraculo region and its negative effects on the health of the population, EF thanked the information and pointed out that the Environmental and Social Impact Assessment (ESIA) has several measures to mitigate the actions of the EPC likely to produce emissions of atmospheric pollutants (particulate matter) in the local atmosphere. He also mentioned that every six (6) months the EPC will conduct environmental monitoring of the work to ensure its sustainability, and that the environmental installation license to be issued by the Ministry of Culture, Tourism and Environment will also require such practice.</p>
<p>Pedro Hangula (PH) – Director of the Provincial Directorate of Culture, Tourism and Environment.</p> <p>Pedro Hangula questioned whether the power for the project will be sufficient to meet the energy needs of the province of Namibe and if planning was aligned with the various master plans of the province of Namibe.</p>	<p>Eduardo Ferdinand – Holísticos.</p> <p>EF replied that the studies or assessments regarding the energy needs of the Namibe province began in 2015 and several institutions in the region were consulted for this purpose. He highlighted that the Gabinete de Estudos, Planeamento e Estatística (Department of Studies, Planning and Statistics) (“GEPE”) provided at the time the Master Plan of the Namibe Province (he pointed out that the information was shared by the GEPE Namibe team at the stakeholder engagement meeting held with the Government of the Namibe Province in February 2021).</p> <p>He mentioned that the electricity transmission line is part of a broader strategic plan that aims to interconnect the transportation system of the country's Northern and Center-South regions.</p>
<p>Paulino Costa (PC) – Municipal Mobilizer.</p> <p>PC questioned the measures that will be implemented to prevent affected and resettled people from building again in the Project easement.</p>	<p>Catarino Cosme – RNT.</p> <p>During the Project operation phase, RNT will designate a team to monitor the Project route and infrastructure. The route must be cleared for safety and line maintenance reasons.</p>

Comment/Question	Answer
	<p>He informed that RNT will rely on the support of municipal administrations and the National Police to restrict land occupations in the easement strip. He explained the risks and dangers associated with cohabiting with a very high voltage electricity transmission line for human health and welfare. He concluded by sensitizing the attendees and possible opportunists about the risks to families.</p>
<p>There being no further questions, the stakeholder engagement meeting was closed by Her Excellency Amélia Camunheira, Municipal Administrator of Bibala, who made some considerations and provided guidance to the members of the Social Stakeholder Engagement Council of Bibala's Municipal Administration.</p>	

Annex 1: Photographic Record.



Photo 1: Detail of those present at the stakeholder engagement meeting in Bibala municipality (Phase 4).

Photo 2: Opening of the meeting by the Bibala's Municipal Administrator, Amélia Camunheira.

Photo 3: Presentation of the Project by Eduardo Ferdinand (Holísticos).



Photo 4: Bibala Traditional Authorities.

Photo 5: Intervention by Mr. Remidor Nanga, Municipal Fire Chief.

Photo 6: Intervention by Mr. Cristóvão Neto.

Annex 2: Attendance List

ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) - MOÇÂMEDES (NAMIBE)
FASE A (EIAS)

DATA: 09 / JUNHO / 2022

LISTA DE PRESENCAS (LOCAL): Bibala

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Ambrósio Comunheiro	Adm. Mun. Bibala	Adm. Municipal	923 4100 4002	[Signature]
Pedro Harigula	GPCTA	Director	931732211	[Signature]
Gasparino Capra	RNI-EP	Sociólogo	912355412	[Signature]
Victorino Sampaio	Adm. Mun. Pts	Adjunto	937110362	[Signature]
Jander Eduardo	Adm. M. Bibala	Adjunto	923 1090 80	[Signature]
João Loureiro Francisco	Adm. Quilombos	Administrador	923368082	[Signature]
Wihoeva Teres	Adm. Co. Kapungu	Administ. Comunal	9292055176	Wihoeva Teres
Aguinaldo Morfey	Adm. M. Bibala	Coordenador Geral	9291530691	[Signature]
Remédios Nanga	Comite. M. Bombeiras	Comite. M. Bombeiras	936834428	Remédios Nanga
Maria Natália Avelar	Administração H.O.B.	Directora Acc. Social	9381131813	[Signature]
Paiva Aguiar	Adm. Mun. Bibala	Dir. Municipal	928146186	[Signature]
Adelina Kungu Simão	Hospital Municipal	Directora	926636358	[Signature]
Mário M. do S. Silva	AGT-PFB	Chefe do PFB	924409135	Mário Silva

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ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) - MOÇÂMEDES (NAMIBE)

FASE 4 (EIAS)

LISTA DE PRESENCAS (LOCAL): Britala

DATA: 09 / JUNHO / 2022

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Martinho P.D. Silva	Coordenador	Coordenador	927263601	Martinho
Bronisto A. Wacandaenda	Coordenador	Coordenador	922849094	Bronisto
Domingos Pinheiro	Coordenador	Coordenador	927 263567	Pinheiro
Mme. Uandak	Conselheiro	Conselheiro	941556156	Mme. Uandak
António Pomba	Conselheiro	Conselheiro	945090784	António Pomba
Paulino Costa	Coefe	Mobilização Municipal	937572824	Paulino Costa
Manuel Tchitanga	Conselheiro	Conselheiro	985571271	Manuel Tchitanga
José Gaspar	Coordenador	Coordenador	925636482	José Gaspar
Fernando Kapote	Coordenador	Comissão de Operadores	929147122	Fernando Kapote
Helena Masinga	Escreva	Secretaria	940 460 548	Helena Masinga
João Espalanga Passos	Despachante	Eng: Ambiental	921929604	João Espalanga Passos
Luís Fernando	Holísticos	Eng: Ambiental	925 753914	Luís Fernando
Elias A. J. Higuete	2 N.T	Motorista	937131567	Elias A. J. Higuete



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) - MOÇÂMEDES (NAMIBE)

FASE 4 (EIA)

LISTA DE PRESENCAS (LOCAL):

Bibala

DATA: 09 / JUNHO / 2022

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Juvelina Y A Bibala	A.M. Bibala	Dire. Gab. Jurídico	936831417	Juvelina Y A
Paulo Ricardo Tchacanda	D.M. de Moçimbo Água	Director Municipal	928450668	Paulo
Joaquim Tchacanda	A.M. Bibala	Dire. Municipal	923700971	Joaquim Tchacanda
Jose P. S. Marede	A.M. Bibala	Chef. Secção	946558755	Jose Marede
Jose Augusto Fomen	MGD	Dire. Justiça	923534597	Jose
Ericsson Domingos	D.M.E.	Chefe de Secção	926229236	Ericsson
José Nambulo Mutima	D.M.E.	Director	929673787	José
Patrícia da Silva	A.M. Bibala	Dire. Gabinete	934120984	Patrícia
Helena Antero	Escola 25-Velha	Chef. Secretário	928847869	Helena
Yndele K. Ernesto Wilson	Adm. Municipal	D.M. D. D. I.	945855306	Yndele
Manuê Xavier	Adm. Municipal	D.M. Agricultura	923-451649	Manuê
Pedro Munhoz Bibala	Adm. Municipal	Dire. Transportes	928969774	Pedro
Cristóvão Neto	EDA	Responsável	925069447	Cristóvão



Tokyo Electric Power Services Co., Ltd.



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) - MOÇÂMEDES (NAMIBE)

FASE 4 (EIAS)

LISTA DE PRESENCAS (LOCAL): BitallaDATA: 09 / JUNHO / 2022

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Manuel Tebikab	Daba grande	regedor		
Amílcar M. Tchopa	Daba grande	Daba grande	921386719	
Bernardinho Alves	Conselheira	Conselheira	929925710	
Estevão Tavares	ENDE	CHEFE DE EQUIPA	927556612	
Dário Ndjombi	ADPP	coordenador de Emergência	923441076	
Albino Vanthemo	Munhoso	coordenador		
Manuela Bahalia	Mutapeira	coordenador		
Adelina Silvaneto	Lajo misto	Conselheira	924924660	
Lino S. S. S.	Cooperativa	cooperativa	945-570020	
Mário Nambo	Conselheiro	Conselheiro	925456004	
Jão A.P. Tchirau	Conselheiro	Coordenador	947502486	
Angelino Pedro Duó	Conselheiro	Coordenador	928734317	
António Fernandes	conselheiro	conselheiro	939627579	



ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO
DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

FASE 4 (EIAS)

LISTA DE PRESENCAS (LOCAL): Beitaba

DATA: 09 / JUNHO/2022

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
João Alberto Samba	coordenador	coordenador	945011543	
Francis Colunga	Conselheiro	Avenida/Ind.º	936381843	
João Alberto Samba	Conselheiro	Coordenador	945011543	
Jose Maria Dindul	coord. Bairro	coord.	932639634	<i>[Signature]</i>
Dominigos Bual	coord. Bairro	Coord.	928680678	<i>[Signature]</i>
Manuel Cipriano Baptista	Minist. da Ref.ª	Comde Municipal SIC	931386037	<i>[Signature]</i>
Jose Sebastião S. Dias	LECA	Pastor	933091847	<i>[Signature]</i>
Aprone Tchiranga	IESK	Obreiro	931447287	<i>[Signature]</i>
Zacarias Tchiranga	People in Need	Gestor de Projectos	942864066	<i>[Signature]</i>
Frederico Kibangu	Igreja Espiritica	Pastor	948171991	<i>[Signature]</i>
Jose F. W. Cahamba	Igreja Luterana	Lider Espiritual	938963648	<i>[Signature]</i>
Yosi Soma	ADRA	T.D.C	929 929 979	<i>[Signature]</i>
Francisco K. Javela	Escola (Esacacão)	Professor	932250977	<i>[Signature]</i>

220 kV Transmission Line Project between Lubango – Moçâmedes Project and 60 kV Distribution Line Project between the East Lubango and the Arimba substations	MEETING MINUTES Stakeholder Engagement			
		Project: P.1649		
VENUE: Municipal Administration of Lubango (Headquarters)	DATE: 14/06/2022	NUMBER OF PAGES: 9		
SUBJECT: Stakeholder Engagement Meeting - Phase 2 (ENDE) and Phase 4 (RNT)	NOTES BY: Elayne Miranda & Eduardo Ferdinand	TIME: 14h30 to 15h40	REVIEW: Vladimir Russo	

ANNEXES

Annex 1 – Photographic Record

Annex 2 – Attendance List

Annex 3 – Presentation

COPIES SENT TO:

- National Electricity Transmission Network Company (RNT – E.P.).
- National Electricity Distribution Company (ENDE - E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Government of the Province of Huíla.
- Government of Namibe Province.

ITEM	DESCRIPTION
1	On June 9 th , 2022, a stakeholder engagement meeting was held with representatives of the Municipal Administration of Lubango and traditional authorities in the region. The opening ceremony of the stakeholder engagement meeting began at 14h30 at the Municipal Administration of Lubango. Several entities were present at the meeting, with special emphasis on the Deputy Municipal Administrator for the Technical Area, Orlando José Bras, the Community Administrator of Arimba, Ana Paula Domingos, Municipal Directors, Traditional Authorities, neighbourhood coordinators and representatives of Holísticos company (Eduardo Ferdinand and Elayne Miranda), the National Electricity Transmission Network Company (RNT - Catarino Cosme, Leitão Alexandre, Romualdo Pimentel and Manuel Domingos) and the National Electricity Distribution Company (ENDE – Nobel Adão).
2	The stakeholder engagement meeting was attended by 20 participants (10% of whom were female). The Deputy Municipal Administrator for the Technical Area, Orlando Bras, welcomed the participants, spoke about the importance of the Project regarding the development and boost of the Arimba commune economy, as well as the municipality of Lubango and the province of Huíla.
3	The RNT representative, Catarino Cosme, succeeded his RNT colleagues, made a brief introduction about the Project, mentioning that the stakeholder engagement meeting with the interested parties is already in its

	<p>fourth phase, and that the main objective was to present the results of the Environmental and Social Impact Study of the Project and obtain suggestions and recommendations from the participants. He classified the meeting as extremely important for the materialization of the Project.</p>
4	<p>Eduardo Ferdinand (EF), who started the presentation of the Project using a power point presentation of the Project for the 220 kV electricity transmission line and the construction of two (2) substations (East Lubango and Novo Namibe substation) and of the 60 kV distribution line Project, as well as the construction of the Arimba substation. He introduced the main characteristics of the Projects, explained the currently proposed route for the passage of the electricity transmission lines (also highlighting the various location alternatives studied), the main results of the environmental, social and cultural field surveys, the potential environmental, social and cultural impacts (negative and positive) associated with the Projects and the respective mitigation and compensation measures.</p>
5	<p>EF also mentioned the census and registration work of the parties potentially affected by the Project along the transmission line route carried out in November (RNT) and December (ENDE) 2021 by the company Holísticos. He also presented the results of the census and registration work and referred to the importance of the Abbreviated Resettlement Action Plan, which is being concluded, and the Project's Environmental and Social Management Plan.</p>
6	<p>EF pointed out that the stakeholder engagement process is extremely important regarding for the materialization of the Project. He said that the Projects are promoted by the National Electricity Transmission Network Company (RNT – E.P.) and the National Electricity Distribution Company (ENDE – E.P) in collaboration with the Japanese company Tokyo Electric Power Services Co., Ltd. (TEPSCO) and with financing from the Japan International Cooperation Agency (JICA). He stressed that the main goal of these Project is to improve the electricity supply to Huíla and Namibe provinces, as well as to enable the connection of electricity transmission systems between the North and Center-South regions.</p>
7	<p>EF explained that the Project addresses the need to transport the electricity generated at the Laúca Dam located in Malanje province - with capacity to produce more than 2000 MW - through the Belém do Dango Substation in Huambo province, and the Nombungo Substation, from East Lubango in the province of Huíla and then from Novo Namibe in Moçâmedes. He further said that the Project will align with the JICA Performance Standards for Environmental and Social Issues (JICA Guidelines for Environmental and Social Considerations, 2010). Regarding the stakeholder engagement meeting, EF mentioned that the objective was to provide interested parties with the opportunity to get to know the Project, make suggestions and recommend feasible mitigation and compensation measures (environmental, social and cultural techniques) in order to guarantee sustainability of the Project.</p> <p>EF made a presentation that focused on the following points (see Annex 3 – Presentation):</p>

	<ul style="list-style-type: none"> • Brief Description of the Project (location and its execution alternatives); • Presentation of the Environmental Impact Assessment Process in force in the country; • Legal Framework and Project Financing Requirements (JICA); • Environmental and Socio-economic Aspects of the 220 kV Transmission Line Layout; • Results of the Census/Registration of Potentially Affected Parties (Questionnaires for Heads of Households); • Abbreviated Resettlement Action Plan (ARAP); • Assessment of Environmental and Socio-economic Impacts and the Respective Mitigation Measures; • Involuntary Resettlement and Financial Compensation for Damages or Right-of-Way of the Lines; • Angolan Entities involved in the Project Compensation Process; • Environmental and Social Management Plan; • Question and Answer session.
8	<p>EF also explained that the Project intends to avoid as much as possible inhabited and cultivated areas, spaces for manoeuvring commercial and military aircraft, pasture areas, areas of transhumance used by ethnolinguistic communities, areas with historical background of ethnolinguistic communities, cemeteries, areas of leisure, etc. He ended the presentation by mentioning that the report of the Environmental and Social Impact Study of the Project and the Simplified Environmental Study are in the validation phase by the Project Promoting entity (RNT) and (ENDE) and financier (JICA), passing then to submission phase to the government authorities responsible for the Project's activity and for the environmental sector in Angola (Ministry of Energy and Water and the Ministry of Culture, Tourism and Environment) for the purposes of environmental licensing.</p>
9	<p>The table below provides a summary of the questions and answers session.</p>

Question and Answer Session Summary

Commentary/Question	Answer
<p>Orlando José Bras (OB) - Deputy Municipal Administrator for the Technical Area.</p> <p>OB praised the Project's initiative and also the presentation and said that the Project is an added value for the Huíla province. He also expressed that he was satisfied with the fact that the issue of compensation for the families that will be potentially affected by the implementation of the Project is safeguarded and with the generation of local employability.</p>	<p>Eduardo Ferdinand – Holísticos.</p> <p>He mentioned that since the Project will not start now, the population will be able to make use of the land for cultivation for the time being. As soon as an exact date for the start of the Project is planned, the RNT will inform the Local and Communal Administrations.</p>

Commentary/Question	Answer
<p>He stressed that the timing of the Project has to be taken into account, due to the end of the dry season, and the need to prepare the land for agriculture.</p>	
<p>Ana Domingos (AD) – Communal Administrator of Arimba.</p> <p>AD praised and was pleased with the Project's initiative because the lack of electricity in the Commune is a major concern. She has been following the Project since 2019, and whenever possible she participates in all meetings.</p>	
<p>Adilson Domingos (AD) – Municipal Director of Energy and Water.</p> <p>AD stressed that there is a need to know the final route of the Project, since it is already beginning to be widely publicized in the municipality, in order to avoid opportunism.</p> <p>He inquired about the resettlement process and compensation in the event of damage to the fields and allocation of houses, facilitating communication between the RNT and the Municipal and Communal Administration.</p>	<p>Eduardo Ferdinand – Holistic</p> <p>He stressed that the route presented is not the final one and that a set of studies will be carried out to determine the final route, highlighting studies of soils, geology, topography, geomorphology, etc. He stressed that before the execution of the Project its promoters will also consider the cost-benefit effect before the compensation decision, so that the Project doesn't become extremely expensive due to the compensation and physical resettlement process.</p> <p>Catarino Cosme – RNT</p> <p>The Project is being financed by JICA and it takes the issues of involuntary resettlement (for damage to infrastructure and allocations to the livelihoods of others) and fair compensation very seriously, and will not provide full Project funding until these issues are correctly analysed, avoided or compensated according to the Angolan legislation in force and where the JICA requirements are applicable.</p> <p>He stressed that the 60 kV electricity distribution line planned to be installed between the East Lubango and Arimba substations cannot pass over houses, schools, hospitals and large trees whose height is greater than 8 m. However, he explained that there will be situations in which this cannot be avoided, for which ENDE and JICA have very explicit technical standards for these situations. An Abbreviated Resettlement Action Plan is being prepared for</p>

Commentary/Question	Answer
	<p>the potentially affected parties, in order to ensure that the Project-affected families have the same or better living conditions and well-being compared to those existing prior to the Project's development in the region.</p> <p>Compensation for lost crops and fruit trees will be carried out in accordance with the crop price table per square meter or hectare produced by the then Ministry of Agriculture and Fisheries (National Directorate of Agriculture), and that everything will be duly agreed, signed and done transparently and honestly so that compensation is guaranteed to potentially affected parties.</p> <p>However, the amount to be paid for the fields mapped as affected will depend on the production of agricultural goods according to their species and not on the basis of the annual production that the farmer claims to produce. At the end of the entire process of registration of the affected field and compensation, the agricultural production monetarily compensated will be offered to the farmer, with deadlines for the collection of production.</p> <p>In the event that a house is allocated by the Project, there will be a registration and assessment of its value in the national market and the affected parties will be able to receive a house with the same conditions or even better than the one evicted along the Project's route.</p> <p>During the construction of the houses, the recommendations or requests of the affected families in terms of finishing and adjusting the partitions will also be taken into account.</p>
<p>Fábio António (FA) – Director of Agriculture</p> <p>FA praised the implementation of the Project, and asked about the distance that agricultural activities should have from the towers.</p>	<p>Catarino Cosme – RNT</p> <p>For the construction phase of the Project, there should be nothing in a 45-meter right-of-way along the Project's route, but after this phase and respecting the limits of the towers,</p>

Commentary/Question	Answer
	it will be possible to do agriculture again, not being possible to plant big trees.

Annex 1: Photographic Record.



Photo 1: Detail of those present at the stakeholder engagement meeting in Lubango (Phase 2 and Phase 4).



Photo 2: Opening of the meeting by the Deputy Administrator for the Technical Area, Orlando José Braz.



Photo 3: Presentation of the Project by Eduardo Ferdinand (Holísticos).



Photo 4: Great Chief (Soba Grande), Tayoka Kalume.



Photo 5: Presentation of Mr. Ernesto Domingos, Coordinator of the Nabungula neighbourhood.



Photo 6: RNT company representatives.

Annex 2: Attendance list.

ENDE JICA TEPSCO 

ESTUDO AMBIENTAL SIMPLIFICADO DO PROJECTO DE PROJECTO DA LINHA DE DISTRIBUIÇÃO DE ELECTRICIDADE DE 60 KV ENTRE A SUBESTAÇÃO DO LUBANGO LESTE E A SUBESTAÇÃO DA ARIMBA

LISTA DE PRESENCAS (LOCAL): Administração Municipal Lubango DATA: 09 / JUNHO / 2022

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Orlando J. Brás	AML	Adm. Mun. Adj. P/ Técnico	924424288	
Artur Manuel Domingos	AML	Secret. Municipal de G.A.	923224480	Artur Manuel
Ana Paula Rodrigues	AML	Adm. Comunal Anacleto	923528734	Ana Paula
João Tomás Brimbitqui	AML	Adm. Adjunto de Arimba	923432211	João Tomás
ERNESTO Domingos		Adj. Coordenado Lubango	943006522	
Fátima Helena Fernandes		Unidade de Arimba		
Francisco Vilaça			935641640	
João Manuel Felício	Bairros Hangalanga	Coordenador	921538993	João Manuel
Márcio Vitor Kaputo	AML	Técnicos de Ambiente	926639235	
Emílio Milanes	Comunidade de Arimba	Coordenador	937435717	Emílio
Dionísio J. Tomás	AML	CHT de Arimba	923931333	Dionísio
Thyago T. Raposo		SOZA Grande	928103654	Thyago
Nádia Adão	ENDE-DEM-RS	Div. Anal. Medicina	925768572	Nádia

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ENDE JICA TEPSCO

ESTUDO AMBIENTAL SIMPLIFICADO DO PROJECTO DE PROJECTO DA LINHA DE DISTRIBUIÇÃO DE ELECTRICIDADE DE 60 KV ENTRE A SUBESTAÇÃO DO LUBANGO LESTE E A SUBESTAÇÃO DA ARIMBA

LISTA DE PRESENCAS (LOCAL): Administração Municipal do Lubango DATA: 09 / JUNHO / 2022

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Clayne Mixenta	Holísticos	Eng. Ambiental	906962360	[Assinatura]
Romulo Pimentel	RNT-EP	Técnico de PSHA	943646862	[Assinatura]
Manuel Domingo	RNT-EP	Técnico de Planeamento	922285345	[Assinatura]
Luís Alexandre	LNT-EP	Técnico de Ambiente	924715393	[Assinatura]
Edoardo Jerónimo	Holísticos	Eng. Ambiental	925755914	[Assinatura]
Fólio António	AMC	Director Agricultura	924380423	[Assinatura]
Catalino Correia	RNT-EP	Sociólogo	912355412	[Assinatura]

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220 kV Transmission Line Project between Lubango - Moçâmedes	MEETING MINUTES Stakeholder Engagement				
			Project: P.1649		
VENUE:	Moçâmedes Municipality - University of Namibe (UNINBE) - Academy of Fisheries and Marine Sciences of Namibe.	DATE:	13/06/2022	NUMBER OF PAGES	11
SUBJECT:	Stakeholder Engagement Meeting (Phase 4)	NOTES BY:	Elayne Miranda & Eduardo Ferdinand	TIME:	11.00 am to 1.00 pm
				REVISION:	Vladimir Russo

ANNEXES**Annex 1** – Photographic Record**Annex 2** – Attendance List**Annex 3** – Presentation**COPIES SENT TO:**

- National Electricity Transmission Network Company (RNT - E.P.).
- Japan International Cooperation Agency (JICA).
- Tokyo Electric Power Services Co., Ltd. (TEPESCO).
- Ministry of Energy and Water (MINEA).
- Ministry of Culture, Tourism and Environment (MCTA).
- Government of Namibe Province.
- Government of Huíla Province.

ITEM	DESCRIPTION
1	On June 10 th , 2022 a stakeholder engagement meeting was held in the municipality of Moçâmedes. The opening ceremony of the stakeholder engagement meeting for the 220 kV Electricity Transmission Line Project between the provinces of Huíla and Namibe began at 11.00 am at UNINBE - Academy of Fisheries and Marine Sciences of Namibe, was attended by several entities with special emphasis on the Architect Ema da Silva (Vice-Governor of the Province of Namibe for Technical Services and Infrastructure), Municipal Directors, public and private companies of the region of Moçâmedes, Community Administrators, Teachers and University Students, Traditional Authorities, ecclesiastical entities in the region, and representatives of companies Holísticos (Eduardo Ferdinand and Elayne Miranda), the National Electricity Transmission Network Company (RNT - Catarino Cosme, Alexandre Leitão, Romualdo Pimentel and Manuel Domingos).
2	The stakeholder engagement meeting was attended by 39 participants (15% of whom were female). Her Excellency Architect Ema da Silva Deputy Governor of the Province of Namibe for Technical Services and Infrastructure welcomed the participants, stating that it was not the first time that the municipality was consulted. She mentioned other meetings that have been held within the scope of the Project. She spoke of the importance of the Project for Namibe Province development and in order to boost its economy.
3	The RNT representative, Catarino Cosme, after introducing his colleagues and RNT work team members, presented a Project overview. He stated that the stakeholder engagement meeting with stakeholders is now in its fourth phase, and that the main objective was to present the results of the Environmental and Social

	<p>Impact Study of the Project and receive the participant's suggestions and recommendations. He said that the meeting is extremely important for the Project implementation.</p> <p>4 The representative of Holísticos, Eduardo Ferdinand (EF) in his Power Point presentation of the Project on the 220 kV electricity transmission line Project and the construction of two (2) substations (Lubango East Substation and New Namibe) he started with an introduction on the main characteristics of the Project. He provided an explanation of the currently proposed route for the power transmission lines (has also highlighted the various location alternatives studied), the main results of the environmental, social and cultural field surveys, the potential environmental, social and cultural impacts (negative and positive) associated with the Project and the respective mitigation and compensation measures.</p> <p>5 EF also mentioned the registration and registration of the parties potentially affected by the Project along the route of the transmission line, carried out in November 2021 by Holísticos. He presented the results and referred to the importance of the Abbreviated Resettlement Action Plan, which is being concluded, and the Project Environmental and Social Management Plan.</p> <p>6 EF indicated that the stakeholder engagement process is extremely important regarding for the Project implementation. He also mentioned that the Project is promoted by National Electricity Transmission Network Company (RNT, in collaboration with Tokyo Electric Power Services Co., Ltd. (TEPSCO) (a Japanese company) and with financing from the Japan International Cooperation Agency (JICA). He stressed that the main objective of the project is to improve the power supply to Huíla and Namibe Province, as well as to provide for the connection of the electricity transmission systems between the North and Centre-South regions.</p> <p>7 EF explained that the Project addresses the need to transport the electricity generated at the Laúca Dam located in the province of Malanje. It can produce more than 2,000 MW to be supplied through Belém do Dango Substation, located in the Province of Huambo, and Nombungo, Lubango Leste substations, in the Province of Huila and subsequently Novo Namibe Substation, in Moçâmedes. He also said that the Project will be aligned with the JICA Performance Standards for Environmental and Social Considerations (JICA Guidelines for Environmental and Social Considerations, 2010). Regarding the stakeholder engagement meeting, EF mentioned that the objective was to provide stakeholders with the opportunity to learn about the Project, make suggestions and recommend feasible mitigation measures and compensations (technical environmental, social and cultural) in order to ensure the sustainability of the Project.</p> <p>EF's presentation focused on the following points (see Annex 3 - Presentation):</p> <ul style="list-style-type: none"> • Brief Project Description (location and its execution alternatives); • Presentation of the Environmental Impact Assessment Process in force in the country; • Legal Framework and Requirements of the Project Funder (JICA);
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	<ul style="list-style-type: none"> • Environmental and Socioeconomic Aspects of the 220 kV Transmission Line Route; • Results of the Registration of Potentially Affected Parties (Questionnaires to Heads of Households); • Abbreviated Resettlement Action Plan (ARAP); • Environmental and Socio-Economic Impact Assessment and related mitigation measures; • Involuntary Resettlement and financial compensation for damages or right-for power lines passage; • Angolan Entities involved in the Project Compensation Process; • Environmental and Social Management Plan; • Question and Answer Session.
8	EF also explained that the project intends to avoid as much as possible inhabited areas, cultivated areas, commercial and military aircraft manoeuvring spaces, grazing areas, transhumance areas used by ethno linguistic communities, areas with historical experience of ethno linguistic communities, cemeteries, recreation areas, etc. He concluded the presentation, mentioning that the report on the Project Environmental and Social Impact Study is currently being validated by the Project Sponsor (RNT) and funding entity (JICA), and will later be submitted to the supervising entities, namely, Ministry of Energy and Water and the Ministry of Culture, Tourism and Environment) for environmental licensing purposes.
9	The summary of the question and answer session is shown in the following table.

Question and Answer Session Summary

Comment/Question	Answer
<p>Emá da Silva (ES) – Vice-Governor of Namibe Province.</p> <p>ES commended the initiative of the Project, the presentation, and said that the Project is an essential element for the economic development of Namibe Province.</p> <p>He questioned the permanent loss of soil resources and restrictions on their use, since the Namibe province has its own characteristics. Few lands with conditions for agriculture need to be preserved, and that people who practice family farming need to be protected during the construction and implementation of the project. He pointed out that the possibility of providing compensation should be assessed, especially the compensation for families whose main means of sustenance and source of income is agriculture.</p>	<p>Eduardo Ferdinand – Holísticos.</p> <p>The Project is being funded by JICA and JICA take the issues of involuntary resettlement (for damage to infrastructure and livelihoods of others) and fair compensation very seriously, and will not provide full funding to the Project unless these issues are properly analysed, avoided or compensated for following current Angolan law and where applicable JICA requirements.</p> <p>He stressed that the 220 kV electricity transmission line planned to be installed between Nombungo, Lubango East Substation and New Namibe Substation cannot overhead houses, schools, hospitals and large trees, always in compliance with the recommendations from the national legislation. However, he explained that there will be situations where this cannot be avoided. In such case, RNT and JICA have very explicit technical standards for these</p>

Comment/Question	Answer
	<p>situations. An Abbreviated Resettlement Action Plan is being developed for potentially affected parties to ensure that families affected by the Project will have the same or better living conditions and social welfare than prior to the Project development in the region.</p> <p>The compensation for the lost farms and fruit trees will be made according to the crop price table per square meter or hectare drawn-up by the Ministry of Agriculture and Fisheries (National Agriculture Directorate). All the terms will be duly agreed upon, signed and executed in a transparent and honest way in order for the compensation to the potentially affected parties be guaranteed.</p> <p>However, the value to be paid for the affected farms will be dependent on their agricultural produce per species and not on their annual produce that the farmer claims to produce. At the end of the whole process of registration of the affected farm and relevant compensation, the monetary amount of the agricultural produce to be compensated will be offered to the farmer (owner of the farm), and deadlines for the collection of the production should be established.</p> <p>In case a house is relocated by the Project, there will be a registration and evaluation of its value in the national market and the affected parties may receive a house with the same or even better conditions than the house of the displaced person existing along the TL route. During the construction of the houses, the recommendations or requests of the affected families in terms of finishing and adjustment of the rooms will also be taken into consideration.</p>
<p>Carlos Cruz (CC) – Moçâmedes’ resident.</p> <p>CC questioned the measures that will be implemented to avoid opportunism. An awareness campaign should be conducted for the people living along the route and within the 45-meter perimeter of the Project.</p>	<p>Catarino Cosme – RNT.</p> <p>Regarding the actions guided primarily by self-interested motives, only the affected and previously registered parties will receive the compensations for the relocation of their houses, farms, and other structures. He emphasized that in case of total or partial relocation of a house, the form of</p>

Comment/Question	Answer
<p>CC asked RNT to also request JICA to provide funding for the construction of an electricity transmission line between the Novo Namibe substation and Tômbwa.</p>	<p>negotiation or compensation will only take the house into consideration. He stressed that the financial compensation in case of resettlement of houses will be avoided due to the lessons learned in other projects promoted by RNT, an example some people preferred to acquire electrical appliances and consumer goods, and later no longer had conditions to build the houses.</p> <p>Manuel Domingos – RNT</p> <p>RNT is seeking funding through the African Development Bank for the electrification of the Tômbwa municipality. The funding will enable a transmission line to be built between the Novo Namibe substation and a future substation in the Tômbwa city.</p> <p>The existing 60 kV line will remain, and will be upgraded, to support the future Caraculo Power Plant.</p> <p>Alain Roberto – ENDE Provincial Director.</p> <p>The actually 60 kV transmission line will be used as a distribution line, and will likely be used to feed the commune of Kapangombe in future. The Project for the construction of two (2) substations (in Moçâmedes and Tômbwa) with the interlinking of a 60 kV line, and the distribution of energy in the municipality of Tômbwa is planned.</p>
<p>Jorge de Sousa (JS) – President of the Namibe Fishing Association.</p> <p>JS suggested that the final report of the Project should be focused on the people to be affected. And special attention should be given to the ethno-linguistic communities of the region. He also said that he expects that the implementation of the project would not make the life of the affected population more difficult (the rural aspect, the cattle traffic, the precariousness of intermittent rivers). At this stage it is necessary to make an inventory of the grazing areas of the communities that will be affected.</p>	<p>Catarino Cosme – RNT</p> <p>This is the 4th time what that is being carried out the stakeholder engagement meetings RNT and Holísticos have been working with the communities so that all the parties may be aware of the Project, and may know how they will be potentially affected by it, and have their feedback on the Project implementation. The Project will only compensate all the infrastructure (houses, farms, stores, etc) that are within the 45 meters right-of-way along the line, and that all the issues are being addressed by the Government, RNT and funding entity as well.</p>

Comment/Question	Answer
<p>He asked about the environmental consulting company (Holísticos), whether it has any previous know-how about the communities to be affected by the Project.</p> <p>He suggested that the Project should be followed up by a multisector committee that would assist in overcoming the difficulties that may arise later.</p>	<p>Eduardo Ferdinand – Holísticos</p> <p>Holísticos is a consulting company founded in 2006, aimed to provide quality and excellence services in the area of environmental consultancy. It consists of a multidisciplinary team formed by environmentalists, biologists and sociologists. For this project, Holísticos hired two sociologists from the Province of Huíla who are acquainted with the habits and customs of the Mumuílas, Mucubais and the Nhaneca-Humbi people. In general, they have conducted social surveys in the Project route. It is a practice of the Holísticos company, whenever possible, to use specialists from the region for specialty work in various areas.</p> <p>All the information that is collected during the stakeholder engagement is taken into consideration and used to enrich the report.</p>
<p>Alfredo Muacahila (AM) – University of Namibe (UNINBE) Deputy Coordinator.</p> <p>AM stressed the importance of the social aspect in the EIAS report. He asked about the air quality monitoring that has been done.</p>	<p>Eduardo Ferdinand – Holísticos</p> <p>For the current ESIA, Holísticos conducted a set of monitoring studies for both environmental noise and air quality. Their results are reflected in the ESIA report. And it will be used as a baseline for the contractor, which is the entity that will be responsible for implementing the Monitoring Plans, under RNT supervision.</p>
<p>Marília Inácio (MI) – Community Administrator of Aida Neighborhood.</p> <p>MI stressed the concern regarding the resettlement of the population. He asked about the registration, so that the Communal Administration could begin to raise awareness among the potentially affected population.</p> <p>How long it will take the construction phase considering the air quality change.</p>	<p>Eduardo Ferdinand – Holísticos</p> <p>He explained in detail the registration of potentially affected parties that was carried out in November 2021 along the route of the Project. He informed that for safety reasons and to comply with international standards, houses, schools, hospitals and other permanent infrastructure cannot be permitted in the 220 kV (45 m) and 60 kV (24 m) Project easement.</p> <p>He emphasized that the route presented is not the final one and that a set of studies will be carried out to determine the final route. He highlighted the studies of soils, geology, topography, geomorphology, etc. He stressed that before</p>

Comment/Question	Answer
	<p>the Project execution, the project promoters will also take into consideration the cost-benefit effect prior to the compensation decision with regard to relevant compensation and physical resettlement process.</p> <p>In the EIAS report a series of mitigation measures were presented for the developer in the construction phase of the Project, in order to be taken into consideration.</p>
<p>There being no further questions for stakeholder meeting was closed by Her Excellency Vice-Governor of the Province of Namibe for Technical Services and Infrastructure, Architect Ema da Silva who gave some considerations and guidance to members of the Board of Social Consultation of the Municipal Administration of Moçâmedes.</p>	

Annex1: Photographic Record.



Photo 1: Detail of those present at the stakeholder engagement meeting in Moçamedes municipality (Phase 4).



Photo 2: Opening of the stakeholder engagement meeting by Architect Ema da Silva (Vice-Governor of the Namibe Province for Technical Services and Infrastructure).



Photo 3: Presentation by Eduardo Ferdinand (Holísticos).



Photo 4: Mrs. Marília Inácio, Community Administrator of the Aída neighbourhood.



Photo 5: Clarification from Mr. Alain Roberto, ENDE's Director.



Photo 6: Clarification from Mr. Catarino Cosme (RNT).

Annex 2: Attendance List.

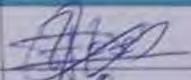
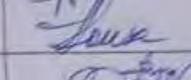
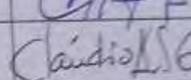
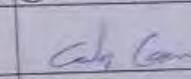
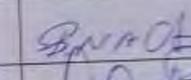
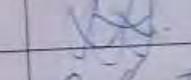
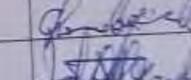
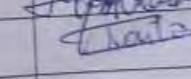





ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 KV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)
 FASE 4 (EIAS)

LISTA DE PRESENCAS (LOCAL): Academia de Pesca e Ciências do Mar do Namibe

DATA: 10 /JUNHO/2022

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
José Francisco Luis	Faculdade de Engenharia	Docente	923026509	
Jorge Helarico de Sousa	AS - Pesca Namibe	Presidente	923325376	
Gabriel Kithim Filip	Administração M. do Trabalho	Director M. Es. Águas	937342739	
Chiate Chialeno	GPIEST	Chefe. Departamento	922884677	
CLÁUDIO GONZA	GAB. Prov. I. S. TÉCNICOS	CHEFE DPTO.	948328168	
Carlos Cassino	GPIEST	Director	938050305	
Luís André	A.P.N	1.º Secretário	938117398	
Octávio Bungululu	Delegação P. Justiça	Chefe de Dpto.	924688859	
Manuel Domingos	RNT	Técnico de Planeamento	922788845	
Romualdo Pimentel	RNT-EP	Técnico de QBSA	943646862	
Diogo Alexandre	RNT-EP	Técnico do Ambiente	924715393	
Paulo Domingas	Governo Prov. Nbe	Técnicos F. P. P. P.	924201519	
Eduardo Ferdinand	Holísticos	Eng. Ambiental	925763944	

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 LISTA DE PRESENÇAS (LOCAL): Academia de Pescas e Linhas do Mar do Namibe

 DATA: 10 JUNHO/2022

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Emmanuel H. da Silva	Gov Provincial do Namibe	VG	930121316	
ALFREDO NORÉ MUACAHUA	UNINBE	Coord. Adjunto	925102644	
Catolino Costa	RNT-EP	Sociólogo	912355412	
ALAN ROBERTO	ENDE/NAMIBE	DIRETOR	92485291	
CARLOS DA R. CRUZ	DEPUTADO(AS-NA)	DEPUTADO	923531386	
OLGÁRIA FERNANDES	Assoc. Jurídica / GPa	DIRETOR DO GABINETE	927643800	
JOSE M. J. JAWINDO	ADM Moçâmedes	ADM Adjunto	924851848	
Miguel Rodrigues Reis	FET UNINBE	Professor	932331320	
Flávio Costa dos Santos	Faculdade de Engenharia	Chefe de Dpto DEEE	930620700	
Raimundo Calele	Faculdade de Engenharia	Dcente	927615816	
Ana Paula Agostinho	INEFOP	Empres. Diretora	930652817	
SIVI ZEFERINO	SOMANGOL	SUPERVISOR	324884221	
Gabriel Vax	Assoc. Jucarente	Coordenador	921828316	



LISTA DE PRESENCAS (LOCAL): Academia de Pastos e Animais do Mondo Namibe

DATA: 10 / JUNHO / 2022

NOME	INSTITUIÇÃO	FUNÇÃO	CONTACTOS	ASSINATURA
Adérito Casaldina Pedro	Comunho de Freguesia	Chefe de Secção	927191585	
Amândio Barata	Partido UNITA	Sec. M. Partido	926756430	
Carlos Moreira	Administração Municipal	Dir. MUN. Energias	923788953	
Carlos José Paçete	Unidade Téc. Prom.	Formador	931766085	
Fernando Solinho	Sociedade Civil	Coordenador	923494472	
Alberto Barbantes	FET-UNIB	Estudante	932590995	
Estevão M. Alexandre	UNIB-FET	Estudante	928515616	
José G. L. Ndala	UNIB-FET	Estudante	927808363	
Teresa N. M. Bernardo	Administração	Directora	925575876	
Paulina Inácio	Adm. Comunal	Adm. Comunal	923704792	
Valentim Geraldo Jordão	GFN	chef. departamento	12772541	
Ilídio E. José	PNQ	Membro Público	543137157	
Elayne Miranda	Holísticos	Eng. Ambiental	926966560	

Plano de Gestão Ambiental e Social

Para a mitigação dos potenciais impactes ambientais, sociais e culturais identificados será elaborado um Plano de Gestão Ambiental e Social que será apoiado por um conjunto de planos de gestão cujo conteúdo será definido posteriormente.

Os planos adicionais estarão relacionados com a gestão das obras, questões de saúde, segurança e ambiente, gestão da biodiversidade, gestão de resíduos, gestão das comunidades etnolinguísticas, gestão de patrimónios culturais (cemitérios), gestão do tráfego, gestão da contratação local, etc. Atendendo a natureza do Projecto foi elaborado um Plano de Acção de Reassentamento para as partes potencialmente afectadas pelas acções do projecto, quer do ponto de vista de reassentamento como do ponto de vista económico.

Próximos Passos

Após a recepção dos comentários por parte das partes afectadas e interessadas no projecto objecto deste processo da Fase 4 de auscultação o Estudo de Impacte Ambiental e Social será concluído e submetido às autoridades financiadoras do Projecto e às autoridades governamentais responsáveis pela actividade do Projecto e ambiental em Angola (Ministérios da Energia e Águas e da Cultura, Turismo e Ambiente) para o competente licenciamento ambiental.

Considerações Finais

De uma forma global, os potenciais impactes negativos sublinhados no EIAs poderão ser mitigados durante a implementação do projecto. No entanto, devem ser implementadas as medidas de mitigação e compensação, assim como a aplicação de boas práticas de gestão ambiental e programas de gestão ambiental. Além disso, espera-se que o seu desenvolvimento, construção e operação crie novas oportunidades de trabalho e traga rendimentos adicionais para as diversas regiões das províncias da Huíla e do Namibe.

	
Rede Nacional de Transporte de Electricidade E.P.	Holísticos, Lda. – Serviços, Estudos & Consultoria
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apinto@rnt.co.ao	holisticos@holisticos.co.ao
www.rnt.co.ao	www.holisticos.co.ao



Tokyo Electric Power Services Co., Ltd.

FASE 4

ESTUDO DE IMPACTE AMBIENTAL E SOCIAL DO PROJECTO DE LINHA DE TRANSMISSÃO DE ELECTRICIDADE DE 220 kV LUBANGO (HUÍLA) – MOÇÂMEDES (NAMIBE)

Documento Informativo



JUNHO DE 2022



Histórico

A região centro-Sul do território nacional apresenta carências relativamente ao acesso à energia eléctrica da rede pública, principalmente nas áreas distantes dos perímetros urbanos (bairros que surgiram sem planificação urbana) e zonas rurais. Ao nível da província do Namibe apenas as cidades de Moçâmedes e Tômbwa dispõem de electricidade da rede pública com fornecimento regular e estável. Neste contexto, por forma a dar resposta a actual demanda de electricidade na província Rede Nacional de Transporte de Electricidade (RNT – E.P.) com o financiamento da Japan International Cooperation Agency (JICA) em parceria com a empresa japonesa Tokyo Electric Power Services Co., Ltd. (TEPSCO) pretende construir uma linha de transporte de electricidade de alta tensão (220 kV) que fará ligação entre a Subestação do Nombungo e a Subestação Oriental no Lubango (na província da Huíla) com a futura Subestação Nova Namibe de 220/60 kV (na província do Namibe).

Tendo em consideração os potenciais impactes negativos que envolvem os projectos de construção e operação de linhas de transporte de electricidade de alta tensão e subestações está a ser desenvolvido o respectivo Estudo de Impacte Ambiental e Social (EIAs) para apoiar o processo de Licenciamento Ambiental de todas as actividades relacionadas com a implementação deste Projecto.

Descrição do Projecto

O Projecto da Linha de Transmissão de 220 kV entre o Lubango e Moçâmedes irá incluir a implantação de uma nova linha de transporte de energia com uma extensão de aproximadamente 196 Km (ver **Figura 1**), que sairá da subestação do Nombungo conectando com a subestação Lubango Oriental e posteriormente ligando-se a subestação Novo Namibe, e a construção de duas subestações de 220/60 kV (Lubango Oriental e Novo Namibe) nas cidades do Lubango e Moçâmedes, respectivamente. Do ponto de vista da divisão administrativa, a nova linha de 220 kV passará por quatro municípios, nomeadamente: Lubango e Humpata na província da Huíla e Bibala e Moçâmedes na província do Namibe. Esta rota passará em alguns pontos em paralelo com a actual linha de 60 kV da ENDE que liga a Subestação do Ferrovias no Lubango à subestação de Moçâmedes.

Está ainda prevista a construção de uma linha de transmissão de 60 kV que ligará a subestação Lubango Oriental com a futura subestação da Arimba, um activo da ENDE, que se prevê construir num espaço lateral a Central Térmica da Arimba gerida pela PRODEL.

As actividades necessárias e de apoio à execução do Projecto incluirão a identificação e desminagem de potenciais engenhos explosivos não detonados no traçado do Projecto, a instalação dos estaleiros de apoio à obra, sinalização de segurança rodoviária e alertas sobre o Projecto, abertura de acessos, remoção de vegetação para a obra e faixa de protecção, trabalhos de topografia, trabalhos de construção dos maciços de fundação, montagem das bases, colocação dos apoios e isoladores, colocação de dispositivos de balizagem aérea e a sinalização de advertências diversas.



Figura 1: Proposta de traçado da linha de transmissão Lubango – Moçâmedes.

Na fase de operação da linha de 220 kV será constituída uma faixa de protecção de 45 metros (22,5 metros de cada lado do local de passagem da linha) onde o uso da terra será condicionado. A linha de 60 kV acompanhará as estradas existentes na região da Arimba.

Estudo de Impacte Ambiental e Social

A implementação do Projecto requer uma licença ambiental nos termos da legislação nacional. De acordo com o Decreto Presidencial n.º 117/20 de 22 de Abril sobre o Regulamento Geral de Avaliação de Impacte Ambiental e do Procedimento de Licenciamento Ambiental este Projecto é de **Categoria A** (confirmado pelo MCTA). Deste modo, foi previamente elaborado um Estudo de Pré-Viabilidade Ambiental e Definição do Âmbito (EPDA) e actualmente está em fase de conclusão a elaboração do Estudo de Impacte Ambiental e Social (EIAS). Estes documentos tiveram em consideração a legislação ambiental em vigor no país e as boas práticas internacionais incluindo as Directrizes de Considerações Ambientais e Sociais da JICA (Abril 2010).

O objectivo do EIAS é a identificação e análise prévia de como as actividades do Projecto resultarão em potenciais impactes sobre as componentes ambientais (geomorfologia, qualidade do ar, água, solo, vegetação, fauna, *habitats* sensíveis, paisagem, património cultural, etc.) e a qualidade de vida das pessoas e comunidades locais (incluindo as comunidades etno-linguísticas), que vivem próximo da rota da linha. O EIAS também visa propor medidas para evitar, minimizar ou compensar o ambiente e as comunidades pelos potenciais impactes negativos identificados.

Foram também feitos levantamentos ambientais e sociais para o tempo seco (Cacimbo) e para o tempo chuvoso com destaque para a Geologia e Geomorfologia, Solos, Hidrologia, Vegetação e Fauna, Aspectos Socioeconómicos, Património Histórico e Cultural.



Figura 8: Zona de passagem da linha de transmissão na comuna da Arimba.

Auscultação às Partes Interessadas

A RNT, em parceria com a Holísticos e com o apoio das equipas da JICA e TEPSCO, realizou vários encontros de auscultação pública com as partes interessadas nas províncias da Huíla e do Namibe durante o período entre 23 a 25 de Fevereiro de 2021 (**Fase 1**) e 19 a 23 de Abril de 2021 (**Fase 2**). Os encontros foram realizados nos Governos das Províncias da Huíla e do Namibe, nas administrações municipais da Humpata, Bibala e na comunal da Arimba e em 12 comunidades, nomeadamente: aldeias Poaires Muhaha e Kapandi, Tchiwaya, Kapalanga (município do Lubango), Calumue, Kamba Cristo, Heva, Palanca, Jamba I, Camponês, Onculuvala (município da Humpata) e bairro Aída (município de Moçâmedes).

Os encontros de auscultação pública com as partes interessadas e potencialmente afectadas serviram para apresentar detalhes do Projecto e falar sobre os potenciais impactes ambientais, sociais e culturais. As equipas envolvidas no Projecto entendem que a etapa de auscultação é de extrema importância para o processo do EIAS, uma vez que possibilita o exercício conjunto e participativo de identificação de preocupações e expectativas face ao Projecto, avaliação justa e completa dos potenciais impactes do Projecto, bem como a definição de medidas de mitigação adequadas.

Encontros adicionais de auscultação foram realizados entre 13 e 17 de Setembro de 2021 (**Fase 3**), tendo sido exclusivamente envolvidas as comunidades que se encontram num raio não superior a 100 metros do traçado da linha de transmissão (50 metros de cada lado do ponto de colocação da torre ou dos cabos da linha de transmissão), incluindo as comunidades cujas lavras ou infra-estruturas estão no traçado do Projecto.

A realização dos encontros de auscultação pública da **Fase 4** vai permitir apresentar os resultados do Estudo de Impacte Ambiental e Social assim como as principais medidas de mitigação e respectivo Plano de Acção Ambiental e Social. Também servirá para apresentar os resultados do Plano de Acção de Reassentamento que foi elaborado em consonância com as boas práticas internacionais e linhas de orientação da JICA (Abril 2010).



Figura 7: Encontros realizados nos Governos das Províncias da Huíla e do Namibe.

Será mantida uma faixa de protecção, na qual não poderão existir construções (escolas, casas e hospitais) ou árvores de porte superior a 8 m. A fase de construção irá decorrer entre 24-30 meses. Espera-se que o Projecto tenha uma vida útil de pelo menos 40 anos.

Caracterização Ambiental

O clima do traçado do projecto é impulsionado por diferenças de *habitats* e vários micro-*habitats* em ambas as províncias, encontrando-se zonas áridas de savana com a predominância das comunidades de *Acacia/Commiphora/Colophospermum* e o deserto de Karoo-Namibe. No traçado do Projecto, os ventos mais fortes sopram no Sul, peculiarmente ao longo da orla costeira do Namibe, enquanto as condições mais a norte são calmas. Do ponto de vista de geomorfologia destaca-se a orla costeira e a zona de escarpa, na região a escarpa da Serra da Chela é muito acentuada, elevando-se 1000 m em Tundavala e Bimbe.

Existe uma variedade de Solos ao longo do traçado com destaque para os solos ferralíticos, leptosolos, regossolos, luvisolos, calcissolos e os cambissolos (solos calcários e calcalíticos), que fornecem solos férteis para culturas (incluindo as «florestas cafeeiras» da Zona de Escarpa); os fluvisolos aluviais (solos aluvionais) em linhas de drenagem de elevado teor orgânico e alta capacidade de retenção de água, adequados para cultivo quando não inundados; argilas de gleissolo (solos hidromórficos), tipicamente ácidos e alagados e ocasionalmente muito extensos – como em planícies inundadas sazonalmente, por exemplo, as planícies aluviais de Bulozí.

O traçado do Projecto abrange várias ecorregiões com diversidade enorme e abundância de comunidades vegetais com destaque para mata de miombo, matas de escarpas, savana mopone, deserto de Kaokoveld, vegetação arbustiva baixa do Karoo-Namibe, etc. Em termos de fauna foi confirmada a existência de mamíferos (macacos, rato-da-mata, civetas e golungos) e de uma variedade de répteis (cobras, agamas e lagartixas) e anfíbios (sapos). Aproximadamente 113 espécies de aves foram observadas no traçado do Projecto, onde se destacam a andua-de-crista-vermelha e o rabo-de-junco-de-dorso-vermelho observadas entre a região do Tchivinguiro e do Bruco (ver **Figura 3**).



Figura 3: Perímetro de Bruco e a ave observada na área de influência do projecto.

Os recursos hídricos na região do Projecto são escassos, devido à pouca pluviosidade, encontrando-se no sentido Norte-Sul os rios Bentiaba, Giraúl, Bero, Curoca e Cunene.



Figura 4: Principais recursos hídricos observados na região do Projecto.

O traçado do Projecto não passará por nenhuma das zonas definidas como sensíveis ou de conservação do ponto de vista ambiental, estando distante dos limites do Parque Nacional do Iona e da IBA A0023 Tundavala e irá apresentar medidas de compensação para a remoção de vegetação que irá ter lugar na zona do Bruco.

Caracterização Social

Durante os levantamentos de campo foram mapeadas 12 comunidades rurais ao longo do traçado do Projecto e na proximidade das subestações do Lubango Oriental e Novo Namibe. As comunidades mapeadas são: Poaires Muhaha, Poaires Kapandi, Tchiwaya, Kapalanga (município do Lubango), Calumue, Kamba Cristo, Heva, Jamba I, Camponês, Onculuvala (município da Humpata) e o Bairro Aída (município de Moçâmedes).



Figura 5: Aldeia Kapalanga.

As 12 comunidades rurais têm uma população estimada em cerca de 46 957 habitantes (22 378 homens e 24 576 mulheres). As populações pertencem maioritariamente a etnia Nyaneca-Humbi, embora fruto de alguma similaridade cultural existam grupos pertencentes a etnia Ovimbundu em menor escala. A língua mais falada nestas comunidades é o Nyaneca-Humbi.

As comunidades presentes no traçado do Projecto dedicam-se essencialmente à agricultura de subsistência familiar, a pecuária (criação de gado bovino, suíno, caprino e galináceos), silvicultura (no fabrico de carvão), a caça furtiva e o comércio informal. Com excepção da etnia Mucubal que se dedica exclusivamente ao pasto (criação do gado bovino) e as actividades nela inerente tais como a produção do leite azedo. Os produtos mencionados acima são maioritariamente comercializados nos mercados informais da região do traçado do Projecto (ver Figura 6), e em frente a Estrada Nacional N.º 280.



Figura 6: Mercado informal das Mangueiras.

Potenciais impactes Ambientais e Sociais

Num Projecto desta natureza e dimensão estão associados potenciais impactes ambientais e socioeconómicos (positivos e negativos) que serão detalhados nos estudos em curso e que estão resumidos de seguida.

Fase de Instalação do Projecto

Positivos: criação de emprego para as comunidades locais, dinamização socioeconómica local e regional, processo de interligação do sistema de energia para o fornecimento de energia à Moçâmedes.

Negativos: afectação dos solos, alteração do ambiente sonoro, emissão de poeiras, alteração da paisagem, remoção da vegetação, afastamento da fauna (aves, répteis), alteração do modo de vida das populações com destaque para lavras e infra-estruturas, potencial reassentamento físico e económico.

Fase de Operação do Projecto

Positivos: aumento da geração de electricidade, fomento à industrialização e do turismo, dinamização socioeconómica, redução do uso de combustíveis fósseis.

Negativos: alteração da paisagem, afectação da avifauna, alteração sazonal do ambiente sonoro (efeito corona), exposição ao campo electromagnético e o risco de electrocussão.



Auscultação Pública – Fase 4

Projecto de Linha de Transmissão de Electricidade de 220 kV Lubango (Huíla) – Moçâmedes (Namibe)



Junho de 2022



AGENDA DO ENCONTRO

- ▶ Breve Apresentação do Projecto
- ▶ Apresentação do Processo de AIA
- ▶ Enquadramento Legal e Directrizes da JICA
- ▶ Aspectos Ambientais e Socioeconómicos
- ▶ Impactes Ambientais e Socioeconómicos
- ▶ Reassentamento Involuntário
- ▶ Próximos Passos
- ▶ Sugestões e Recomendações

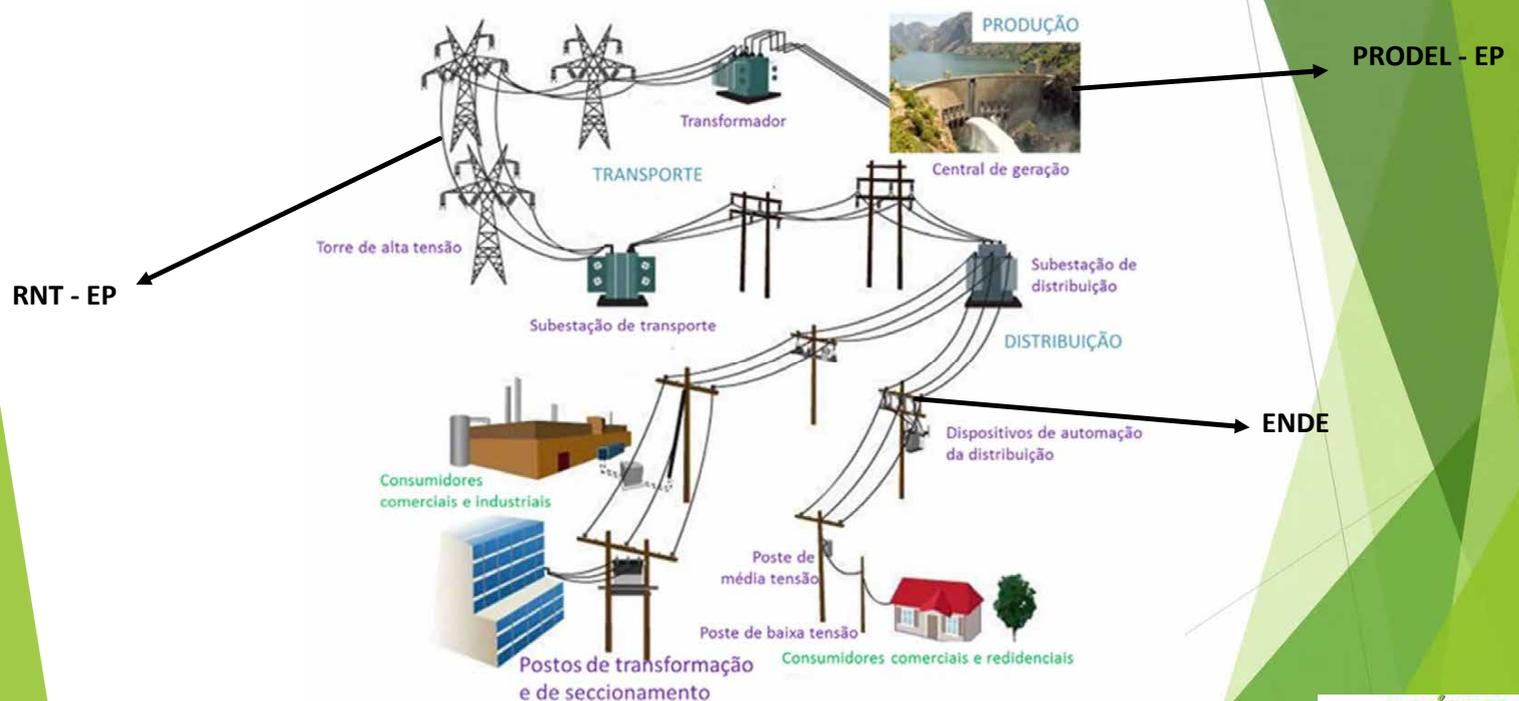


INTRODUÇÃO (1)

- ▶ A Empresa Pública Rede Nacional de Transporte de Electricidade (RNT – E.P.) foi criada no âmbito do Programa de Transformação do Sector Eléctrico através do Decreto Presidencial N.º 305/14 de 20 de Novembro.
- ▶ Ao nível da província do Namibe apenas as cidades de Moçâmedes e Tômbwa dispõem de electricidade da rede pública com fornecimento regular e estável. De forma a dar resposta a demanda de electricidade na província, a RNT, com o financiamento da JICA e em parceria com a empresa Japonesa TEPSCO, pretende construir uma linha de transporte de electricidade de alta tensão (220 kV) que fará ligação entre a Subestação do Nombungo, Subestação do Lubango Leste (província da Huíla) e a futura Subestação Novo Namibe de 220/60 kV (província do Namibe).
- ▶ O Projecto endereça a necessidade de transportar a electricidade gerada na central Hidroeléctrica de Laúca, com uma capacidade para produzir mais de 2000 MW, passando pelas Subestações de Belém do Huambo – Subestação de Nombungo – Subestação Lubango Leste – Subestação Novo Namibe.
- ▶ O traçado da linha de transmissão terá uma extensão de cerca 196 Km.



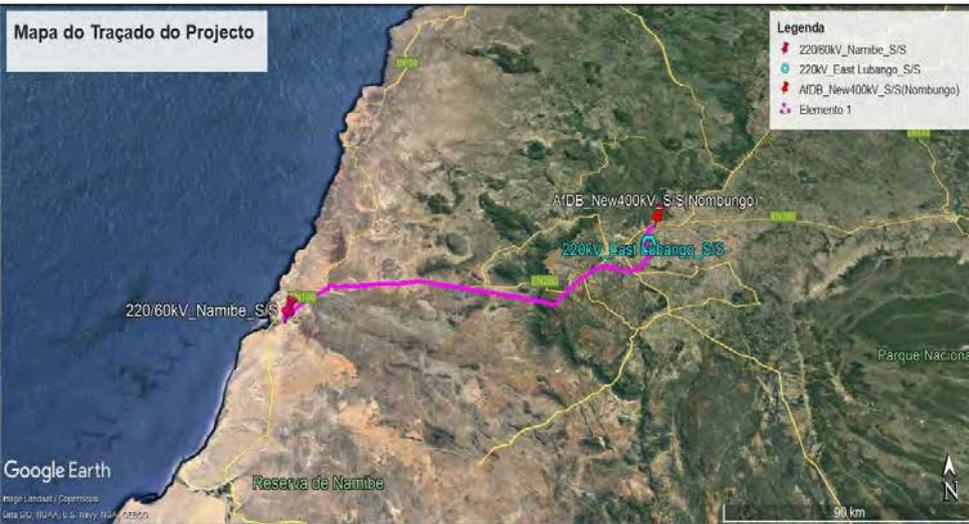
INTRODUÇÃO (2)



Esquema da Gestão de Projectos de Electricidade no País



TRAÇADO DO PROJECTO (3)



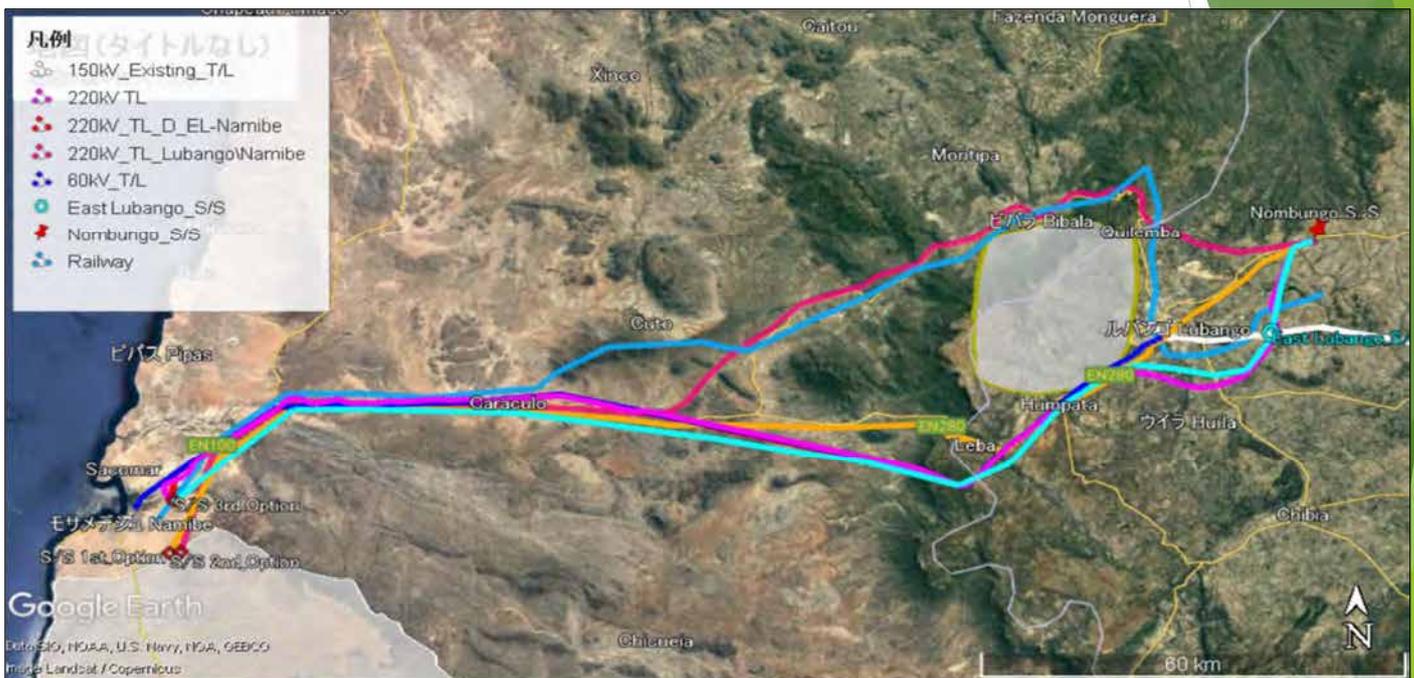
Mapa da Proposta do Traçado do Projecto.

▶ A linha de transporte de electricidade terá um percurso de cerca de 196 Km e passará pelos seguintes municípios:

- ❖ **Na Huíla:** Lubango e Humpata.
- ❖ **No Namibe:** Bibala e Moçâmedes.



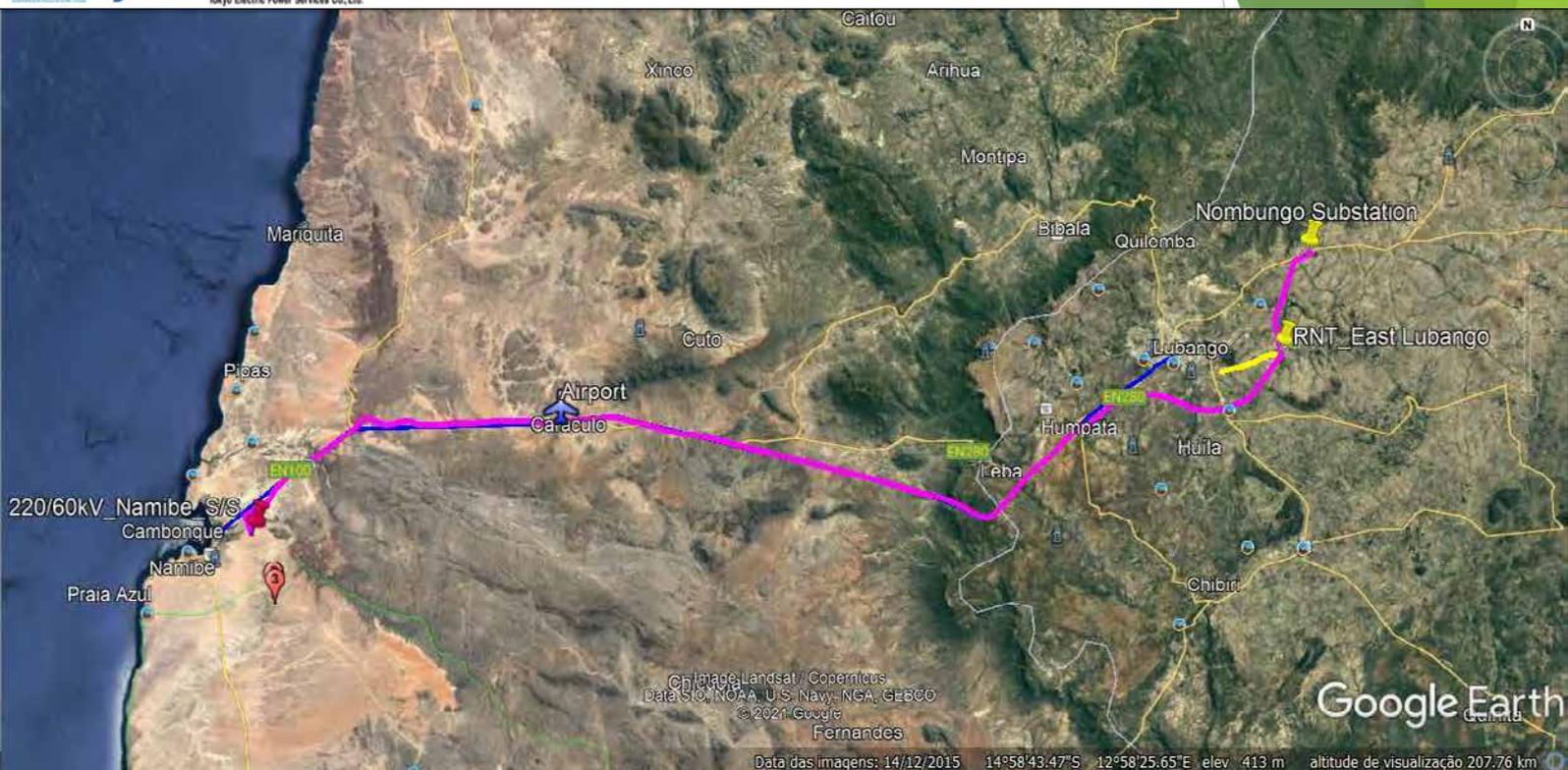
INTRODUÇÃO (4)



Alternativas de passagem das linhas de transmissão estudadas.



TRAÇADO DO PROJECTO (5)



PROMOTOR DO PROJECTO

- ▶ O Projecto é promovido pela RNT.
- ▶ A RNT adere os padrões internacionais de qualidade, garantindo a satisfação dos clientes, de acordo os princípios de sustentabilidade económica, técnica, social e ambiental.
- ▶ O Projecto irá aderir os Padrões de Desempenho para Questões Ambientais e Sociais da JICA (*JICA Guidelines for Environmental and Social Considerations*) de Abril de 2010.
- ▶ A empresa Japonesa TEPCO realizou a concepção preliminar deste Projecto para apoiar a ENDE ao abrigo do contrato com a JICA.
- ▶ A RNT manterá um discurso aberto com a sociedade e consultará todas as partes interessadas de forma a identificar e implementar soluções julgadas adequadas para as mesmas.



DESCRIÇÃO DO PROJECTO (1)

O traçado da Linha de Transmissão, aonde necessário, passará paralelamente a actual linha de 60 kV que liga a Subestação da cidade do Lubango à Moçâmedes, evitando atravessar:

- Servidões aeronáuticas ou radioeléctricas;
- Áreas urbanas e rurais;
- Áreas sensíveis do ponto de vista ecológico e biológico;
- Locais de património histórico-cultural;
- Locais com a confirmação histórica de comunidades etnolinguísticas.

Entretanto, a localização exacta da linha de transmissão e dos seus apoios só será definida após a realização de estudos mais detalhados incluindo levantamentos topográficos, geológicos e pedológicos.



DESCRIÇÃO DO PROJECTO (2)

As actividades necessárias ao projecto irão incluir:



Instalação dos estaleiros de apoio à obra.



Desmatção ou criação da faixa de protecção



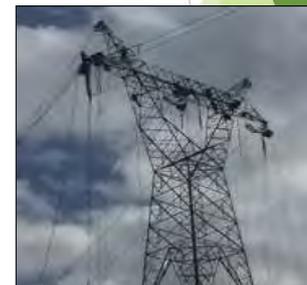
Sinalização



Trabalhos de topografia e de construção civil.



Montagem ou colocação dos apoios



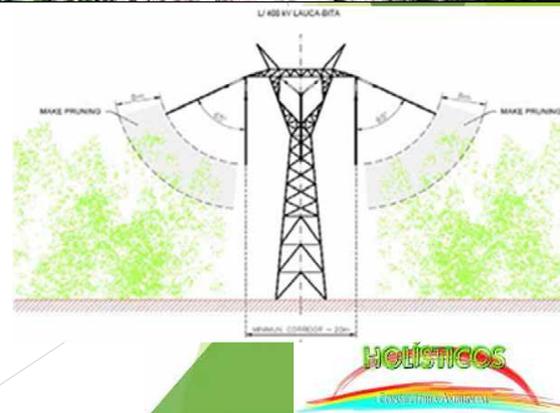
Montagem das torres

As fundações das torres/apoios serão constituídos por maciços independentes em betão.

DESCRIÇÃO DO PROJECTO (3)

Durante a fase de **construção** (30 meses):

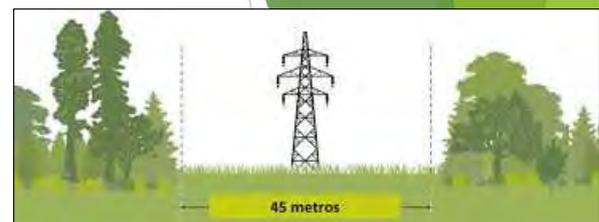
- Desminagem dentro do corredor de 45 metros.
- Avaliação das estruturas existentes no traçado (p.e; casas, lavras, fazendas, estaleiros, etc.).
- Torres serão construídas dentro de uma área de **15x15 m**.
- A distância entre torres será de cerca de **350 metros**.
- Serão construídas **540 torres** ao longo do traçado.
- Aonde possível, serão utilizadas as estradas de acesso já existentes (utilizadas na manutenção da linha de transmissão de 60 kV).



DESCRIÇÃO DO PROJECTO (4)

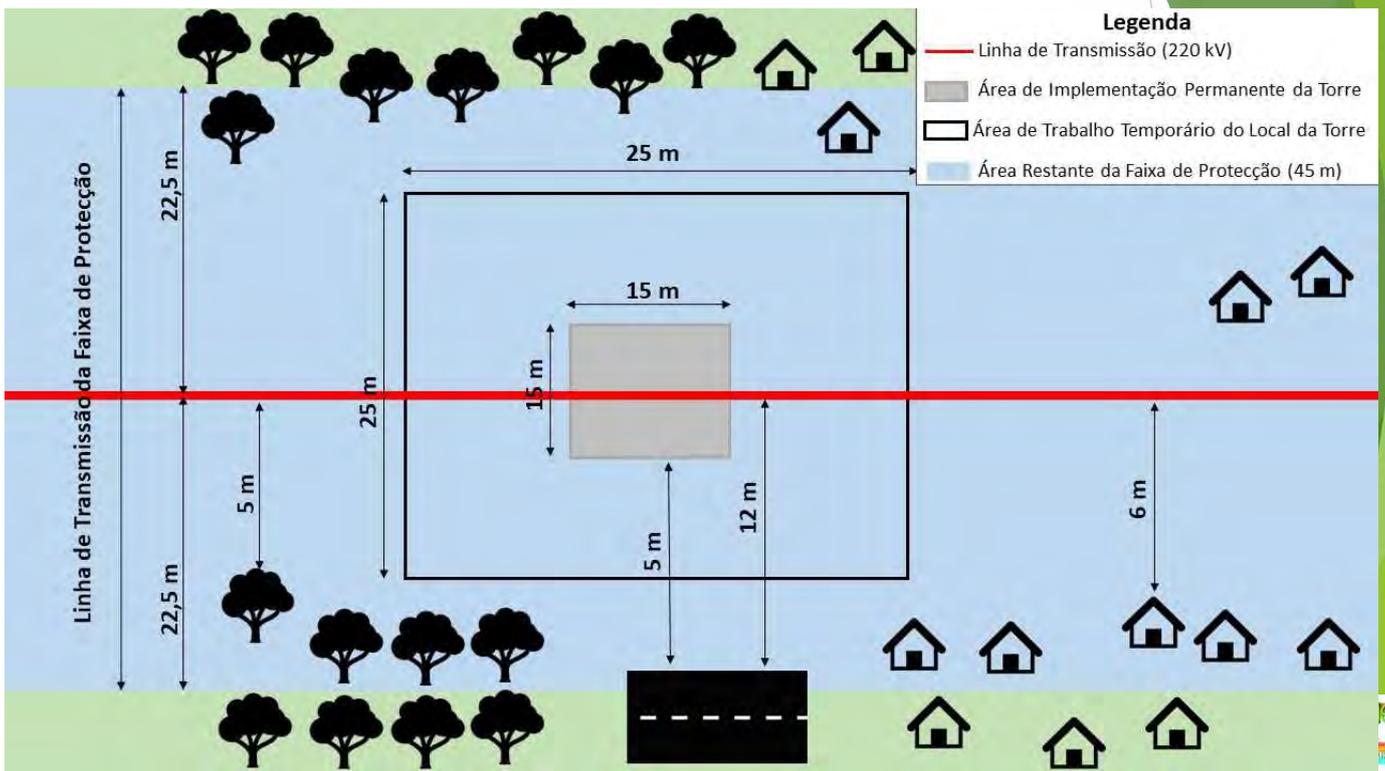
Durante a fase de **operação** (40 anos):

- Um corredor de 45 m será mantido sem árvores ou edifícios (sendo expressamente proibida a presença de casas, escolas ou hospitais) para assegurar a operação e reduzir riscos de acidentes ou incidentes.
- Um corredor de 5 m para acesso para debaixo da linha será limpa para às actividades de manutenção.
- Será definida uma reserva parcial ao longo da linha de transmissão (22,5 m de cada lado da linha), onde a ocupação e uso da terra será condicionada.
- As operações de manutenção incluirão a verificação do estado da faixa de protecção.



DESCRIÇÃO DO PROJECTO (5)

Restrições

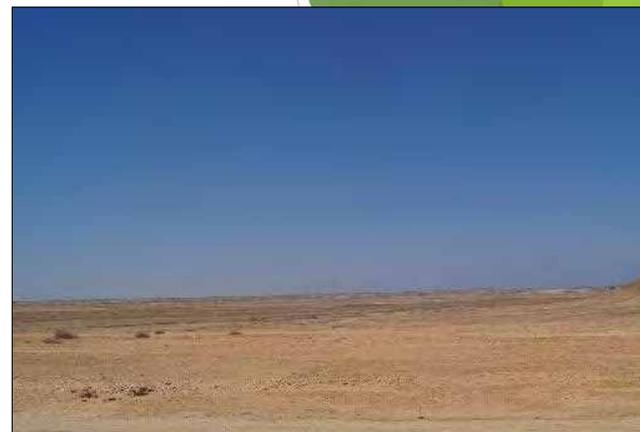


DESCRIÇÃO DO PROJECTO (6)

Subestação

A Subestação Novo Namibe de 220/60 kV será construída na cidade de Moçâmedes no bairro Aida, com uma área de aproximadamente 7 hectares.

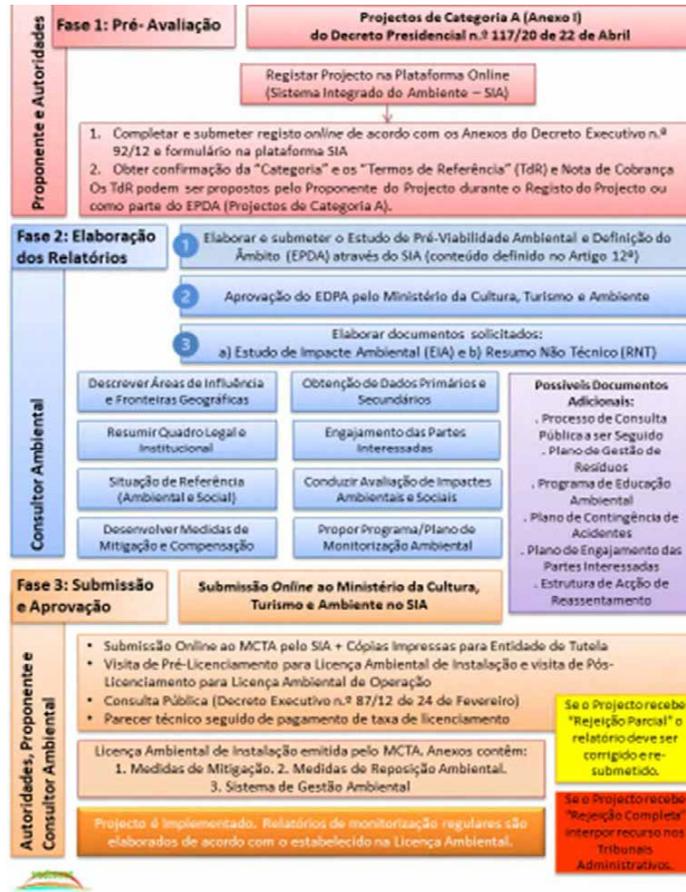
O projecto da subestação contempla a construção de um edifício comando, uma casa auxiliar, casas de painéis e dormitórios para os trabalhadores.



Terreno da Futura SE Novo Namibe.



PROCESSO DE AIA EM ANGOLA



ENQUADRAMENTO LEGAL

O EIAS esta a ser elaborado de acordo a legislação vigente na República de Angola, nomeadamente:

Lei de Bases do Ambiente	Regulamento Geral sobre AIA e Procedimento de Licenciamento Ambiental	Regulamento sobre Gestão de Terras	Decreto Executivo sobre Consulta Pública
Lei de Terras	Lei de Expropriação por Utilidade Pública	Lei do Património Cultural	Regulamento sobre Reassentamento

A elaboração do EIAS também teve em consideração as Directrizes Ambientais e Sociais da JICA.



DIRECTRIZES DA JICA

A JICA criou um conjunto de directrizes de forma a garantir a sustentabilidade dos vários Projectos que financia (Directrizes Ambientais e Sociais da JICA).

Possui um conjunto de orientações de operação, que têm de ser implementadas:

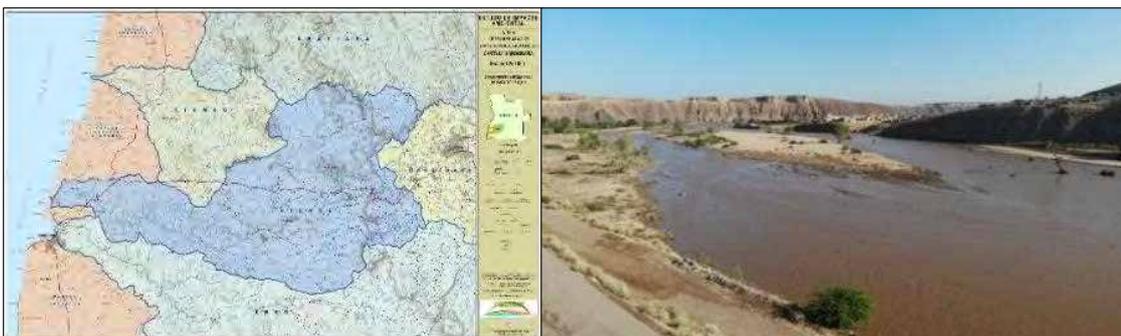
- Divulgação das Informações do Projecto.
- Consulta aos Informantes Chaves Locais.
- Avaliação Ambiental e Social (Após a Categorização dos Projectos).
- Auscultação Pública às Partes Interessadas e Potencialmente Afectada.
- Preocupação sobre o Ambiente Social e Direitos Humanos.
- Biodiversidade e Ecossistemas.
- Aceitação Social.
- Reassentamento Involuntário e Compensação.
- Comunidades Etnolinguísticas.



ASPECTOS AMBIENTAIS (1)

O clima do traçado do Projecto é impulsionado por diferenças de habitats e vários micro-habitats. Existe uma variedade de Solos ao longo do traçado com destaque para os solos ferralíticos, leptosolos, regossolos, luvisolos, calcissolos, cambissolos os fluvisolos aluviais (solos aluvionais).

O traçado abrange 7 ecorregiões com diversidade enorme de comunidades vegetais: mata de miombo, matas de escarpas, savana mopone, deserto de Kaokoveld, etc. Existência de mamíferos (macacos, rato-da-mata e golungo) répteis (cobras, agamas e lagartixas) e anfíbios (sapos). 113 espécies de aves foram observadas no traçado. Os recursos hídricos na região encontram-se no sentido Norte-Sul os rios Bentiaba, Giraúl, Bero, Curoca e Cunene.



Principais recursos hídricos observados na região do Projecto.



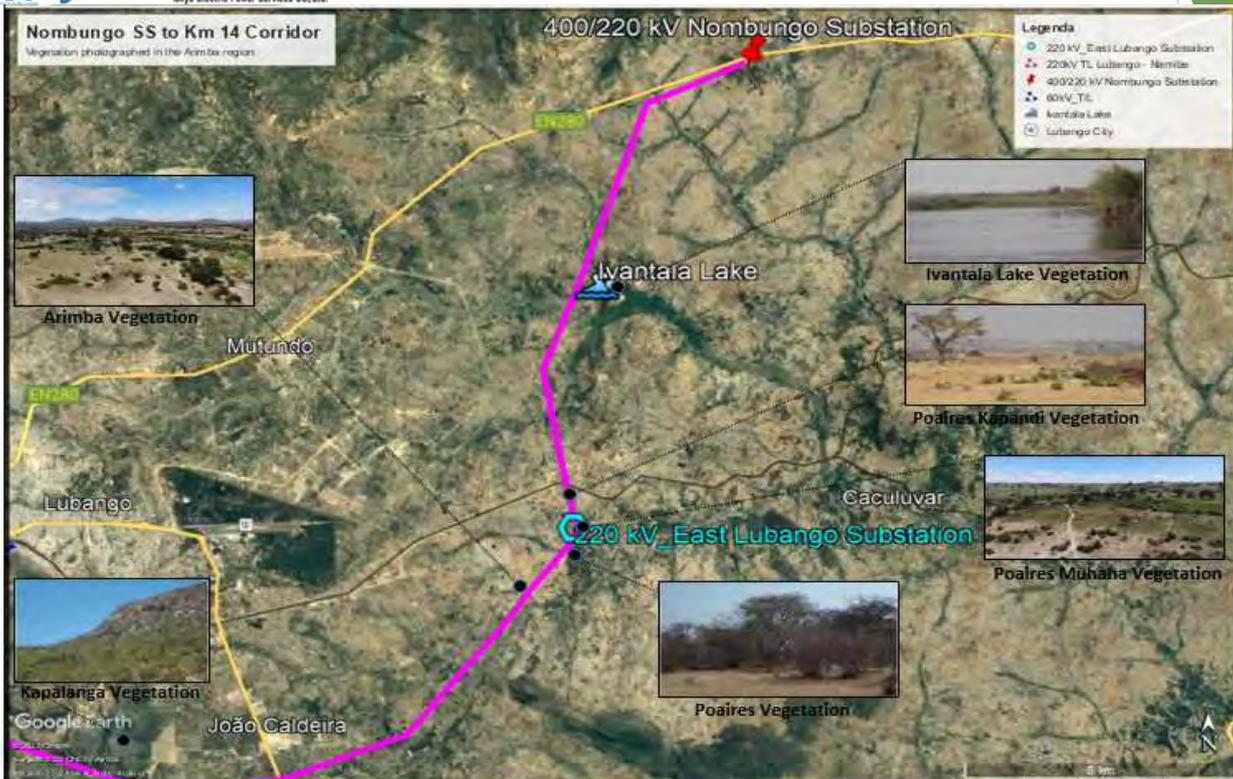
ASPECTOS AMBIENTAIS (2)

Tipos de vegetação existente no traçado do projecto:

- ✓ Floresta de Terras Altas;
- ✓ Pradarias Pantanosas;
- ✓ Matas de Miombo;
- ✓ Savanas;
- ✓ Karoo-Namibe.



ASPECTOS AMBIENTAIS (3)



ASPECTOS AMBIENTAIS (4)

Vegetação



ASPECTOS AMBIENTAIS (5)

Vegetação



ASPECTOS AMBIENTAIS (6)

Fauna



Guarda-rios-comum



Calau-de-Damara



Boita-da-Huíla



Abelharuco-pequeno



Rela-de-Angola



Macaco-de-cara-preta

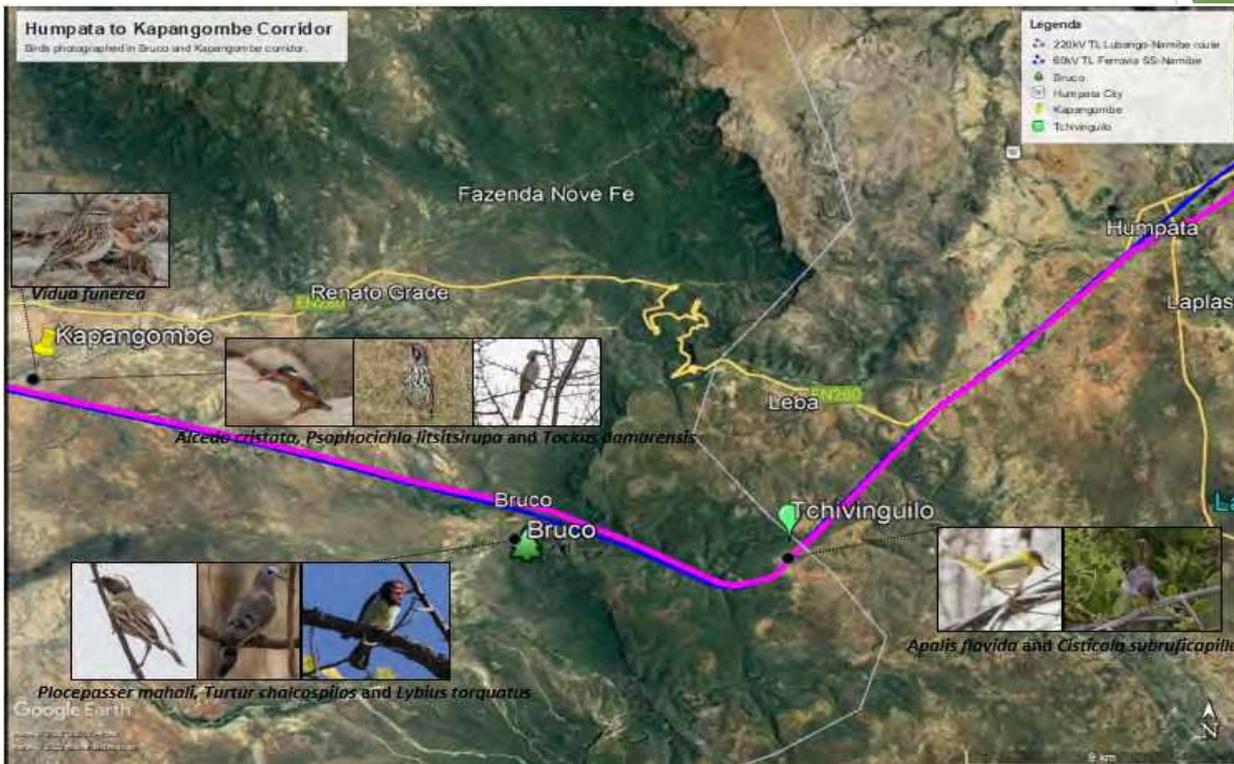


Lagartixa-das-pedras-de-Bocage



ASPECTOS AMBIENTAIS (7)

Fauna

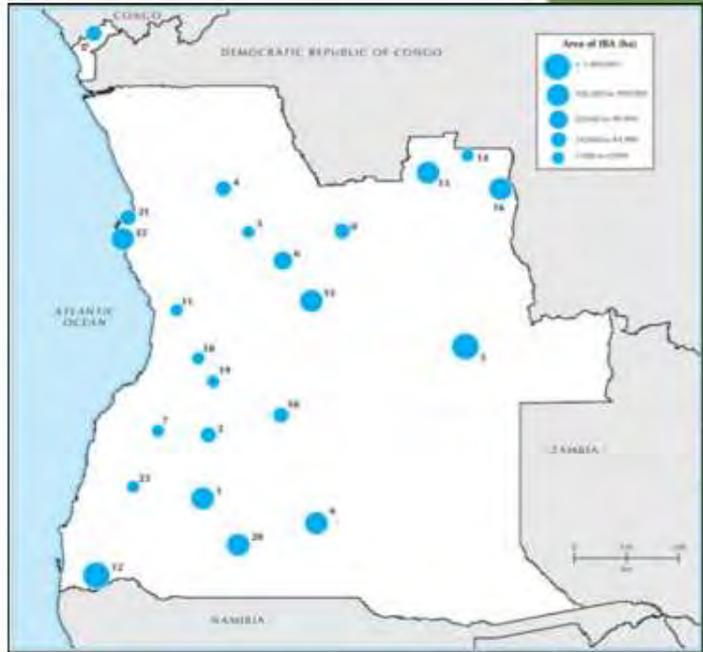


ASPECTOS AMBIENTAIS (10)

Áreas de Conservação Ambiental



Áreas de Conservação em Angola



Áreas Importantes para as Aves e a Biodiversidade em Angola



ASPECTOS SOCIAIS (1)

Comunidades Mapeadas no traçado.

População



ASPECTOS SOCIAIS (2)

Foram mapeadas 12 comunidades rurais ao longo do traçado do Projecto e na proximidade das subestações do Lubango Oriental e Novo Namibe. As comunidades mapeadas são: Poaires Muhaha, Poaires Kapandi, Tchiwaya, Figueira, Kapalanga, (município do Lubango), Calumue, Kamba Cristo, Heva de Cima, Jamba I, Camponês, Onculuvala (município da Humpata) e o Bairro Aída (município de Moçâmedes).

As 12 comunidades rurais têm uma população estimada em cerca de 46 957 habitantes (22 378 homens e 24 576 mulheres). As populações pertencem maioritariamente a etnia Nyaneca-Humbi, e dedicam-se essencialmente a agricultura familiar, pecuária e o comércio informal.

População



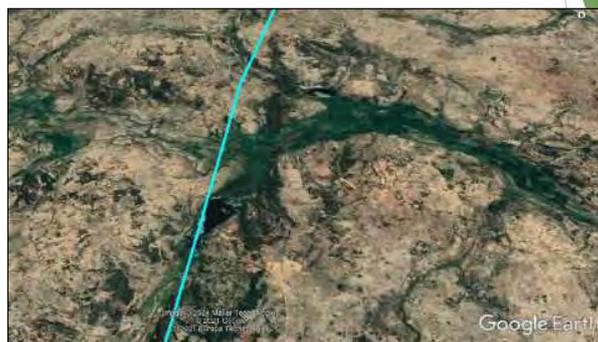
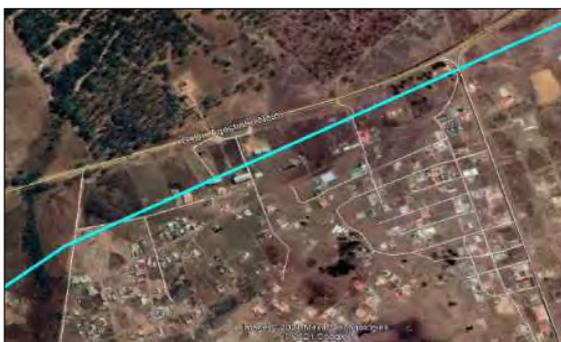
Aldeia Kapalanga.



Mercado das Mangueiras.



ASPECTOS SOCIAIS (3)



Tipos de Povoamento na área de influência do Projecto.

Povoamento e Estruturas



ASPECTOS SOCIAIS (4)



Área da SE Novo Namibe – Bairro Aida

Cidade de Moçâmedes.



Encontros de Auscultação Pública (1)

A RNT, em parceria com a Holísticos, com o apoio das equipas da JICA e TEPSCO, realizou vários encontros de auscultação pública com as partes interessadas nas províncias da Huíla e do Namibe durante o período entre 23 a 25 de Fevereiro de 2021 (Fase 1) e 19 a 23 de Abril de 2021 (Fase 2).



Encontros com as autoridades administrativas – Fase 1



Encontros de Auscultação Pública (2)



Encontros com as autoridades tradicionais e comunidades – Fases 2 e 3.



Objectivo do Estudo do ARAP

- ▶ Para o ARAP foi realizado um censo e aplicação de inquérito aos agregados familiares das comunidades/bairros que eventualmente poderão ser afectadas pelos Projectos, com objectivo:
 - ▶ Avaliar potenciais impactes sociais causados pela implementação dos Projectos;
 - ▶ Identificar e analisar as áreas onde os impactes sociais adversos são previstos e seus graus;
 - ▶ Examinar medidas que satisfaçam os requisitos das Directrizes da JICA para Considerações Ambientais e Sociais emitidas em Abril de 2010; e
 - ▶ Apresentar estimativa de custo para a conclusão e implementação do ARAP.

Área em Questão e Resultados do Estudo (1)

LT 220 kV

- ▶ O trabalho de inquérito/censo teve lugar de 15 a 25 de Novembro de 2021.
- ▶ Para o censo foram escolhidas 12 comunidades que se encontram num raio de 100 metros da proposta do traçado do Projecto de Linhas de Transmissão e foram mapeadas as casas que se encontram dentro da faixa de servidão.
- ▶ Foram administrados 225 questionários para cada chefe de um agregado família.



LD 60 kV

- ▶ A recolha de dados ocorreu, junto das comunidades/ aldeias/bairros atravessadas pelo traçado da linha entre os dias 21 e 23 de Dezembro de 2021.
- ▶ A estratégia consistiu em passar por todos os agregados que se encontravam dentro da faixa de servidão num raio de 45 m.
- ▶ No total foram realizados 102 questionários nos bairros, 11 de Novembro, Gazeta, Lola, Muhaha, Mupanda, Poiares, e Sede.



Área em Questão e Resultados do Estudo (2)

Município do Lubango

COMUNA	ASSENTAMENTOS AFECTADOS PELA LT 220kV ou LD 60kV	Estudadas	No. DE QUESTIONÁRIOS APLICADOS
Arimba	Nombungo	✓	22
	Mateta	✓	24
	Mavanda	✓	13
	Poiares Muhaha	✓	52
	Poiares Kapandi	✓	54
	Km 14	✓	5
	Kapalanga	✓	6
	Figueira	✓	27
	11 de Novembro	✓	16
	Gazeta	✓	10
	Lola	✓	5
	Mupanda	✓	6
	Sede	✓	4
	Arimba Headquarters		
1	14	13	244

Município da Humpata

COMUNA		Estudadas	No. DE QUESTIONÁRIOS APLICADOS
Palanca	Calumue		
	Kamba		
	Heva de Cima	✓	23
	Palanca	✓	2
Humpata	Jamba I	✓	15
	Camponês	✓	18
	Onculuvala	✓	25
2	7	5	83

Município do Namibe

COMUNA		Estudadas	No. DE QUESTIONÁRIOS APLICADOS
Moçâmedes	Aida		
1	1	0	0

TOTAL

COMUNA		Estudadas	No. DE QUESTIONÁRIOS APLICADOS
4	22	18	327

Condições Socioeconómicas da Área de Estudo

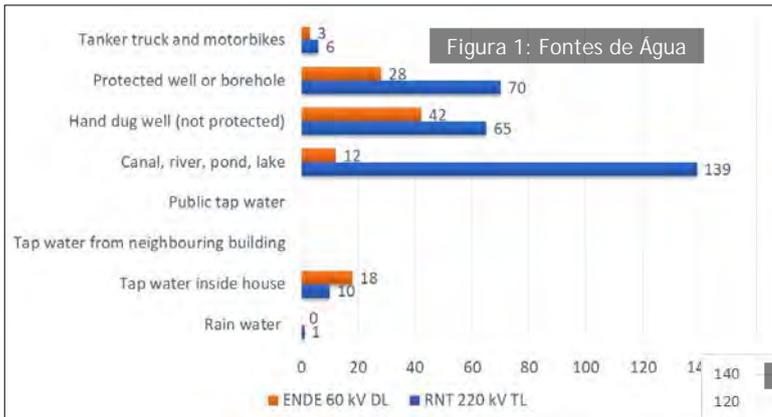


Tabela 1: Doenças (top 5)

220kV TL

Principais Doenças	Número de respostas (questões múltiplas)
1 Malária	199 88,4%
2 Cólera	26 11,6%
3 Febre Tifóide	21 9,3%
4 Febre Amarela	7 3,1%
5 Má Nutrição	4 1,8%

60kV DL

Principais Doenças	Número de respostas (questões múltiplas)
1 Malária	87 85,3%
2 Ferimentos Físicos	3 2,9%
3 Febre Amarela	2 2,0%
4 Tuberculose	2 2,0%
5 Doenças Cardíacas	2 2,0%



Condições Socioeconómicas da Área de Estudo (2)

- ▶ Todas as infraestruturas potencialmente afectadas serão claramente compensadas, nomeadamente:
 - ▶ Casas;
 - ▶ Lavras;
 - ▶ Zonas de pasto;
 - ▶ Fazendas;
 - ▶ Cemitérios.
- ▶ As lavras serão compensadas em função das Tabelas de produtos agrícolas do Ministério da Agricultura e Pescas. Para as demais infraestruturas (Casas) serão contratados especialistas com experiência comprovada no sector imobiliário.

Área de Terra a ser Desmatada

220 kV	Fase de construção	Fase de operação	Observações
LINHA (45 m de largura)	45 m	45 m	-
Faixa de Servidão	5 metros de largura	5 metros de largura	-
Área de Construção	25 m X 25 m	N/A	-
Área das Torres	N/A	15 m X 15 m	Localizado dentro da área de construção
Área de Acesso	6 metros de largura	3 metros de largura	Converter em estrada de manutenção
60 kV	Fase de construção	Fase de operação	Observações
Linha (24 m de largura)	24 m	N/A	-
Faixa de Servidão	3 metros de largura	3 metros de largura	-
Área de Construção	20 m X 20 m	N/A	-
Área das Torres	N/A	8 m X 8 m	Localizado dentro da área de construção
Área de Acesso	6 metros de largura	3 metros de largura	Converter em estrada de manutenção

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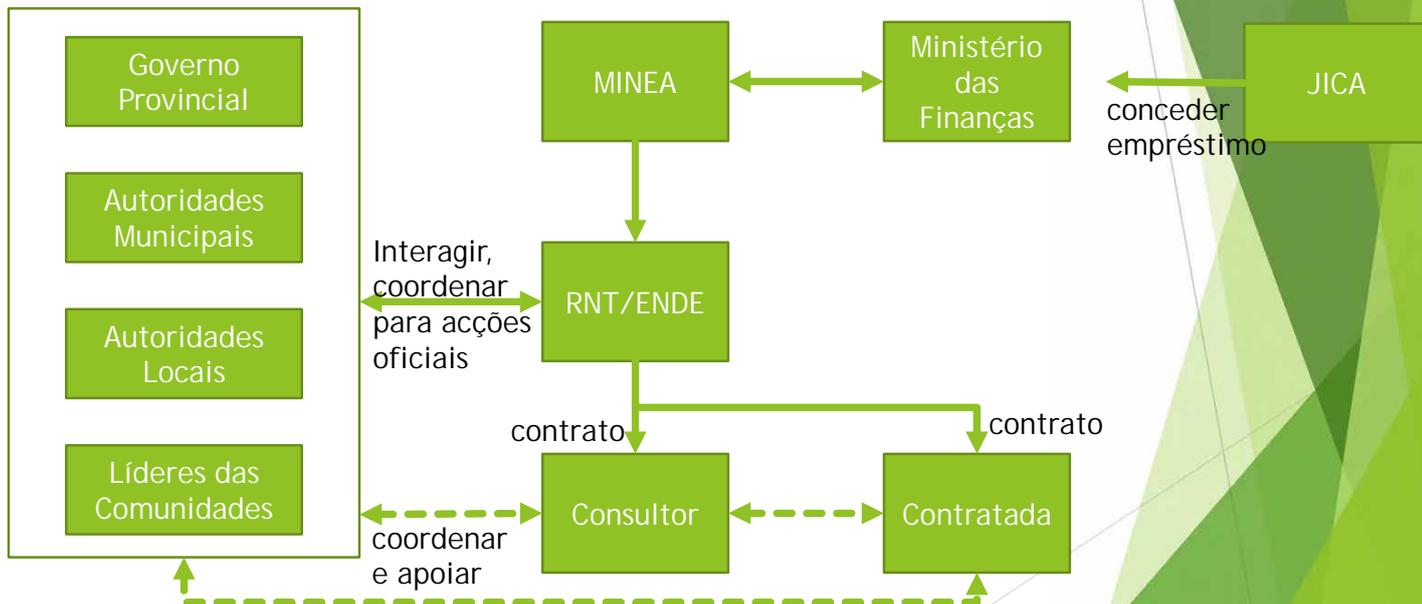


Área, Pessoas e Activos Afectados Antecipados

ACTIVO AFECTADO	CATEGORIA SECUNDÁRIA	220 kV TL	60 kV DL
Proprietários das casas	Categoria 1: Proprietário da casa com direitos consuetudinários (Terra Comunitária Rural).	199 casas (955 pessoas)	2 casas (9 pessoas)
	Categoria 2: Proprietário da casa com direitos de propriedade privada.	5 casas (24 pessoas)	1 casa (5 pessoas)
	Categoria 3: Proprietário de casa em Terreno do Estado do Domínio Público sem direitos legalmente reconhecidos.	21 casas (100 pessoas)	0
Proprietários de terras	Categoria 4: Proprietário da Terra com Direito Consuetudinário (Terra Comunitária Rural).	184 ha (40 pessoas)	10 ha (2 pessoas)
	Categoria 5: Proprietário da Terra com Direito de Propriedade Privada	5.7 ha (2 pessoas)	1.2 ha (1 pessoa)
	Categoria 6: Usuário de Terras em Terras Estatais de Domínio Público sem direitos legalmente reconhecidos.	19 pessoas (94 ha)	3 pessoas (13 ha)
Cultivadores (Usuários da terra)	Categoria 7: Cultivador de Culturas/Árvores com ou sem direitos legalmente reconhecidos.	309 ha	8 ha
	Categoria 8: Cultivador de Cultivo/Árvore sob contrato de parceria.	0	0
Proprietários de bens móveis não residenciais	Categoria 9: Proprietários de outros bens móveis (não residenciais).	0	0
Proprietário de Bens Imóveis Não Residenciais	Categoria 10: Proprietário de outras estruturas físicas (não residenciais)	0	0
Empregados de Estruturas Económicas Afectadas	Categoria 11: Proprietários de Estruturas Económicas Afectadas (ou seja, fábricas).	6 proprietários	1 proprietário
	Categoria 12: Funcionários de Estruturas Económicas Afectadas (ou seja, fábricas).	48 funcionários	5 funcionários



Mecanismo de Implementação

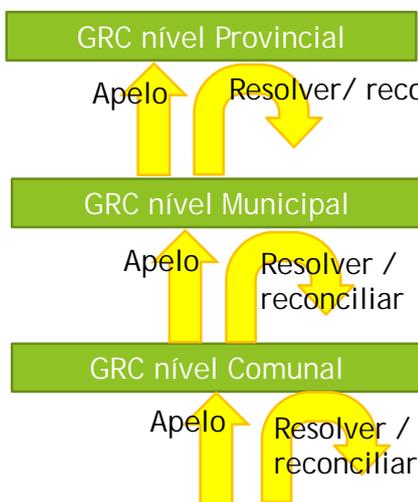


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Mecanismo de Reparação de Queixas

- Um mecanismo de reparação de reclamações deve ser estabelecido, que recebe reclamações relevantes para questões de reassentamento e compensação. Este mecanismo de reclamação foi desenvolvido com os seguintes objectivos



Oficiais de Justiça do Tribunal Provincial
Actuar como juizes ajuda a resolver o conflito

Membros: Gabinete Municipal, Gabinete de Gestão de Projectos (Luanda), Organização da Sociedade Civil:
Resolução por mediação ou conciliação

Membros: Soba, Secretário, Pessoal Comunal, Escritório de Projectos Local
Solucionar as disputas tradicional sobre terras comunitárias de acordo com os costumes locais das comunidades



Data Limite para as Reclamações

- ▶ O objectivo de estabelecer uma data limite é evitar reclamações especulativas dentro da Área do Projecto por pessoas que buscam compensação.
- ▶ De acordo com a legislação angolana, a data limite de elegibilidade é estabelecida após a declaração da expropriação por utilidade pública. Após esta data, qualquer circunstância iniciada pela pessoa afectada não é levada em consideração e, portanto, não é elegível para compensação.
- ▶ Para se alinhar com os requisitos do PS5 da IFC, as Directrizes da JICA e outras melhores práticas internacionais, o Projecto deve estabelecer a data limite para elegibilidade. Esta data deve ser estabelecida assim que as partes forem informadas de que o Projecto foi aprovado e está em andamento.
- ▶ Todas as comunidades afectadas e agregados familiares afectados serão informados da data limite através de diferentes meios que incluirão a publicação desta informação no jornal angolano (Jornal de Angola), emissão de cartas às autoridades municipais e tradicionais e outros meios acessíveis ao partes interessadas e afectadas.
- ▶ Se houver um intervalo de tempo significativo entre a data limite e a data de implementação real (ou seja, mais de um ano), as famílias podem solicitar um inventário actualizado de activos para considerar quaisquer melhorias feitas na terra. Quaisquer novas culturas ou árvores que possam ter sido plantadas e não estejam prontas para colheita antes do início da construção também serão consideradas.



PLANO DE ACÇÃO DE REASSENTAMENTO INVOLUNTÁRIO (1)

Para o censo foram escolhidas 12 comunidades que se encontram num raio de 100 metros da proposta do traçado dos Projectos de Linhas de Transmissão e foram mapeadas as casas que se encontram dentro da faixa servidão.

População

- O trabalho de inquérito/censo teve lugar de 15 a 25 de Novembro de 2021.
- 12 comunidades foram inquiridas durante o Censo.
- Foram administrados 225 questionários para cada chefe de um agregado família.
- A metodologia MCASI - Mobile *Computer-*, com o apoio do *software Kobo Collect e Kobo toolbox*.
- Os inquiridores recrutados para a administração dos questionários foram previamente formados.



PLANO DE ACÇÃO DE REASSENTAMENTO INVOLUNTÁRIO (2)

Constrangimentos

- O facto de as comunidades se levantarem muito cedo para ir às áreas agrícolas, pastagens (incluindo transumância) e várias casas vazias estavam na base deste número abaixo das nossas expectativas.
- Muitas casas no traçado da linha de transmissão proposta estavam vazias, sem habitantes. Estradas de acesso extremamente degradadas (por exemplo, acesso à Kapalanga e Tchiwaya).

População



RESUMO DOS IMPACTES AMBIENTAIS (1)

POTENCIAIS IMPACTES NEGATIVOS	FASES
Solos	
<ul style="list-style-type: none"> ▪ Contaminação dos solos. ▪ Compactação dos solos. ▪ Fomento de processos erosivos. 	Construção
Alteração pontual do Modo de Vida.	
<ul style="list-style-type: none"> ▪ Alteração de hábitos e costumes. ▪ Disputa por serviços de ecossistemas. ▪ Afecção da coesão social 	Construção
Efeito Corona e Radiações	
<ul style="list-style-type: none"> ▪ Descarga de corona e criação de campo electromagnético. 	Operação
Património Cultura	
<ul style="list-style-type: none"> ▪ Afecção de dois cemitérios 	Construção

PLANO DE GESTÃO AMBIENTAL E SOCIAL

Para a implementação deste Projecto foi elaborado um **Plano de Acção Ambiental e Social** que será apoiado por um conjunto de planos onde se destacam os seguintes:



RESUMO DOS IMPACTES AMBIENTAIS (2)

POTENCIAIS IMPACTES NEGATIVOS	POTENCIAIS IMPACTES POSITIVOS
Biodiversidade, Habitat Natural e Paisagem <ul style="list-style-type: none"> Perda da vegetação e habitats. Afastamento e/ou afectação de espécies de aves. Afectação de anfíbios e répteis. Alteração da qualidade da paisagem natural. 	Benefícios socioeconómicos <ul style="list-style-type: none"> Criação de emprego directo. Fomento à industrialização da província do Namibe. Desminagem. Fomento ao comércio formal e informal. Aumento da geração de electricidade. Segurança e melhoria das vias de acesso. Dinamização socioeconómica da província do Namibe. Regeneração urbana da cidade de Moçâmedes.
Qualidade da Água e Habitats Aquáticos (construção) <ul style="list-style-type: none"> Afectação da qualidade da água: Turbidez. Aumento de metais pesados. 	
Ruído, Emissões Atmosféricas e Trânsito (construção) <ul style="list-style-type: none"> Perturbação do ambiente sonoro das comunidades. Emissão de partículas de poeiras. Riscos de acidentes rodoviários. Risco de electrocução. 	
Uso da Terra Propriedade e Reassentamento Involuntário <ul style="list-style-type: none"> Afectação dos campos de cultivo e áreas de pastagem. Afectação de infra-estruturas físicas (casas, fazendas e cemitérios). Afectação dos serviços de ecossistemas. 	

MEDIDAS DE MITIGAÇÃO DA CONTAMINAÇÃO DOS SOLOS E DO AMBIENTE SONORO E VIBRAÇÕES (1)

MEDIDAS DE MITIGAÇÃO PARA CONTAMINAÇÃO DOS SOLOS	MEDIDAS DE MITIGAÇÃO PARA AMBIENTE SONORO E VIBRAÇÕES
<ul style="list-style-type: none"> ▪ Não será permitida a produção de betão ou deposição de resíduos pronto em solo exposto, a central de produção será instalada numa superfície impermeabilizada. ▪ Os combustíveis e outras substâncias perigosas deverão ser armazenadas em tanques de armazenamento à superfície ou em recipientes selados, contidos em uma área vedada e com kits de recolha de lixiviados para recolher descargas e derrames. ▪ Empreiteiro deverá garantir que os absorventes e/ou kits de limpeza estejam disponíveis no local para limpar qualquer derrame. O empreiteiro também deverá garantir que possuem pessoal qualificado para realizar a descontaminação do solo. ▪ Os solos contaminados durante fugas ou derrames de substâncias perigosas deverão ser eliminados como resíduos perigosos e tratados de acordo com os requisitos da lei angolana 	<ul style="list-style-type: none"> ▪ Os trabalhos de construção devem limitar-se apenas ao período diurno. ▪ Todas as máquinas e equipamentos devem ser mantidos em boas condições de funcionamento e devem cumprir os níveis actuais de emissão de ruído associados às boas práticas. Este compromisso deve ser alcançado, tornando-o um componente de acordos contratuais com os empreiteiros de construção. ▪ As reclamações sobre ruído recebidas da comunidade serão registadas e prontamente investigadas e tratadas. Será nomeado um Oficial de Ligação da Comunidade, representando um elemento crítico na gestão dos impactes. ▪ Todos os equipamentos devem ser desligados quando não estiverem em uso.



MEDIDAS DE MITIGAÇÃO DA QUALIDADE DO AR E PAISAGEM (2)

MEDIDAS DE MITIGAÇÃO PARA QUALIDADE DO AR	MEDIDAS DE MITIGAÇÃO PARA PAISAGEM
<ul style="list-style-type: none"> ▪ Deverão ser aplicadas medidas de minimização da emissão de poeiras na fase de construção. Serão usadas medidas como a aspersão de água. ▪ Cumprir os limites de velocidade dos veículos nas estradas e nos estaleiros, para reduzir a emissão de poeiras. ▪ Impor o limite de 40km/h para velocidade dos veículos de transporte em estradas não pavimentadas. ▪ Cargas de materiais finos (inertes, areias e pedras) deverão ser transportados em veículos cobertas com uma lona para evitar a dispersão de poeiras. ▪ Quaisquer reclamações relativas à qualidade do ar recebidas da comunidade serão registadas e prontamente investigadas e tratadas. Será disponibilizado um mecanismo de reclamações para registo das reclamações. 	<ul style="list-style-type: none"> ▪ Evitar o derrube de habitats arbóreos desnecessariamente. ▪ Apenas deverão ser removidas árvores cuja altura ameacem a infraestrutura. ▪ Implementar o controlo da erosão, especialmente em áreas com campos/culturas agrícolas em/adjacentes a fontes de água e outras espécies e habitats importantes.



MEDIDAS DE MITIGAÇÃO DA FLORA E FAUNA (3)

MEDIDAS DE MITIGAÇÃO PARA FLORA E VEGETAÇÃO	MEDIDAS DE MITIGAÇÃO PARA FAUNA
<ul style="list-style-type: none"> ▪ Evitar habitats sensíveis (verificados ao longo do traçado do Projecto por exemplo o rio Giraúl, lagoa Invantala, linhas de drenagem temporária e fontes e vegetação ripícola associada, cumes rochosos). ▪ Localizar os estaleiros em áreas já perturbadas, em vez de afectar novas áreas, o mais longe possível de linhas de água e habitats sensíveis. ▪ Evitar a plantação de espécies de plantas exóticas potencialmente invasoras para fins ornamentais e paisagísticos (e.g., em redor das áreas de estaleiros, subestações, etc.). Com efeito, as espécies alóctones podem propagar-se e tornar-se invasivas, provocando danos ecológicos. ▪ Sempre que possível, deverão ser usados os caminhos/acessos existentes ao longo da área. 	<ul style="list-style-type: none"> ▪ Evitar o derrube de <i>habitats</i> arbóreos (especialmente de árvores com ninhos e locais de poleiro conhecidos, como árvores grandes e / ou mortas). ▪ Evitar a perturbação de aves, especialmente aves de rapina, nos locais de reprodução. ▪ Evitar todas as actividades de "caça furtiva" (por exemplo, recolha de ovos e pássaros). ▪ Evitar o corte excessivo da vegetação ao longo do corredor da linha. Limitar as operações aos caminhos de acesso, evitando o corte geral em toda a área de servidão. ▪ Serão aplicadas medidas para evitar colisões com as aves (por exemplo, bobinas e dispositivos anticolisão).



MEDIDAS DE MITIGAÇÃO PARA REASSENTAMENTO E OPORTUNIDADE DE EMPREGO (4)

MEDIDAS DE MITIGAÇÃO PARA DESALOJAMENTO	MEDIDAS DE MITIGAÇÃO PARA CRIAÇÃO DE EMPREGO
<ul style="list-style-type: none"> ▪ Foi elaborado um Plano de Reassentamento Involuntário que conduzirá o processo de reassentamento e permitirá identificar todas as pessoas/grupos sociais afectados e estabelecerá as formas de compensação mais apropriadas. ▪ O processo de reassentamento será implementado com o envolvimento das Administrações Municipais, dos Sobas locais, das comunidades, populações e/ou grupos sociais afectados. ▪ Às comunidades deverão incluir homens e mulheres a fim de garantir que ambos os sexos encontram um interlocutor com que se sintam confortáveis para apresentar queixas/reclamações; estes elementos deverão ser preferencialmente provenientes das comunidades afectadas e estar familiarizados com os costumes e línguas locais. 	<ul style="list-style-type: none"> ▪ Será Desenvolvido um Plano de Emprego Local para a fase de construção. Esse plano deverá incluir um procedimento para a contratação que garanta que os locais (homens e mulheres) são contratados sempre que possível, segundo um processo justo, consistente e transparente. ▪ O empreiteiro deverá trabalhar com os Sobas para que o processo de recrutamento seja devidamente divulgado e conhecido nas comunidades locais, sendo que deverá ser explicado de que forma homens e mulheres poderão beneficiar do projecto de forma promover o fortalecimento das suas bases económicas. ▪ A criação de emprego deverá ser acompanhada pela protecção dos direitos fundamentais dos trabalhadores, de acordo com os requisitos estabelecidos na legislação nacional (Lei Geral do Trabalho – Lei n.º 7/2015 de 15 de Junho), e demais normas internacionais.

MEDIDAS DE MITIGAÇÃO PARA RESTRIÇÃO DE TERRA E DANOS A PATRIMONIOS CULTURAIS (5)

MEDIDAS DE MITIGAÇÃO PARA RESTRIÇÃO DE TERRAS/ACESSOS	MEDIDAS DE MITIGAÇÃO POR DANOS A PATRIMÓNIOS CULTURAIS DA REGIÃO
<ul style="list-style-type: none"> ▪ Os acessos e os locais para instalação dos estaleiros de apoio às obras serão definidos em concertação com os Sobas locais e as populações/grupos sociais que usam/ocupam a área e/ou os proprietários das fazendas. ▪ A compensação monetário e de terra pela perda de renda e áreas de subsistência é a principal medida de mitigação para lidar com as restrições de acesso temporário ou permanente as áreas de cultivo. O tipo de compensação será, contudo, acordado com os Sobas locais, representantes das populações/grupos sociais afectados e/ou proprietários das fazendas. ▪ Garantir a implementação de um sistema de recepção, encaminhamento e resposta a queixas/reclamações e pedidos de informação, os quais podem ajudar a equacionar a necessidade de implementação de novas medidas. 	<ul style="list-style-type: none"> ▪ Durante o reconhecimento do traçado final o especialista social será acompanhado por representantes das comunidades locais para ajudar na identificação do património e locais culturais. Os Sobas e outros anciãos serão envolvidos, pois são eles detém o conhecimento. ▪ Caso justificável, será elaborado e implementado um Plano de Gestão das Sepulturas. ▪ Caso justificável, será elaborado e implementado um Plano de Gestão de Património Cultural.



PLANOS ADICIONAIS

Para além das medidas de mitigação propostas serão implementadas um conjunto de Planos de forma a garantir a sustentabilidade do Projecto, nomeadamente:

- Plano de Acção de Reassentamento Involuntário.
- Plano de Auscultação Pública com as Partes Afectadas e Interessadas.
- Plano de Comunicação e Responsabilidade Social.
- Programa de Educação Ambiental.
- Plano de Higiene, Saúde e Segurança no Trabalho.
- Plano de Gestão da Construção.
- Plano de Gestão de Resíduos.

Alguns dos Planos acima mencionados estarão integrados no relatório final do EIA e outros serão previamente elaborados pelo empreiteiro antes do início da obra.



CONSIDERAÇÕES FINAIS

- ▶ Este projecto tem um potencial económico e social estratégico para o desenvolvimento da província do Namibe, melhorando o fornecimento de electricidade a vários consumidores, a iluminação urbana e promovendo o turismo e a industrialização.
- ▶ Os potenciais impactes positivos e negativos previstos reflectem-se em pequenas alterações até alterações significativas; mas não há grandes alterações negativas que possam causar impactos negativos significativos no ambiente e na componente social.
- ▶ Uma vez que considerações ambientais e sociais são tomadas para evitar/minimizar os impactos, e as medidas de mitigação propostas são implementadas e as boas práticas são aplicadas, tendo em conta a legislação ambiental actual e as melhores práticas internacionais, incluindo as Directrizes Ambientais e Sociais da JICA (Abril de 2010), espera-se que os impactos negativos sejam mitigados.
- ▶ Será devidamente implementado um programa de monitorização ambiental para preparar as incertezas e será estabelecido um mecanismo de reparação de queixas.
- ▶ Não foram identificados quaisquer impedimentos de ordem ambiental e social para a não execução do **Projecto da Linha de Transmissão de Electricidade de 220 kV entre a subestação do Nombungo até a Subestação do Namibe.**

ESTADO ACTUAL DO PROJECTO

- ▶ Relatório de EIAS:
 - ▶ Às autoridades financiadoras e a RNT têm validado o Projecto;
 - ▶ Está a ser submetido à um processo de auscultação às partes interessadas e afectadas (último evento ocorreu em Setembro de 2021);
 - ▶ Será submetido às autoridades governamentais responsáveis pela actividade do Projecto e ambiental em Angola (Ministério da Energia e Águas e o da Cultura, Turismo e Ambiente respectivamente), para efeitos de licenciamento ambiental.

APPENDIX 10
MONITORING FORM

10-1. Monitoring form for 220kV transmission line

<Pre-construction Phase>

1. Air pollution

- Monitoring item: PM10, PM2.5
- Record: measurements are taken once every three months before and after felling and clearing, at 10 tower locations and at the boundaries of neighboring dwellings and other structures

(Date)

(Location)

(data) item (Unit.)	baseline value	measured value (Average value)	measured value (Max. value)	local standard	Referred to. international standards	Remarks. (e.g. location, frequency and method of measurement)
PM10. ($\mu\text{g}/\text{m}^3$)				-	0.150 (Interim target-1) 0.100 (Interim target-2) 0.075 (Interim target-3) 0.050 (guideline)	Measured by PM meter for 30 minutes
PM2.5 ($\mu\text{g}/\text{m}^3$)				-	0.075 (Interim target-1) 0.050 (Interim target-2) 0.0375 (Interim target-3) 0.025 (guideline)	Measured by PM meter for 30 minutes

2. Water pollution

(1) Wastewater treatment records

- Monitoring item: wastewater treatment status
- Record: once a week at the workers' quarters
- Check the operator's (CND) record ledger

date	point	monitoring item	Status during the reporting period.
		Wastewater treatment status	

(2) Water quality items

- Monitoring item: items in the table below
- Record: record every three months before and after felling and clearing, measurements are taken at 10 river/stream points in the vicinity of the tower location

(Date)

(Location)

Item (unit)	baseline value	measured value (Average value)	measured value (Max. value)	local standard (Surface water)	local standard (Drinking water)	Remarks. (e.g. location, frequency and method of measurement)
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pH (measure of acidity)				5.0-9.0	6.5-8.5 5.5-9.0	Portable pH meter
water temperature (°C)				30	22 25	water thermometer
conductivity (µS/cm at 20°C)				-	1000	conductometer
transparency (cm)				-	-	Transparency meter

3. Soil pollution

- Monitoring item: fuel, lubricating oil and other leaks
- Record: record once a week at the construction site and at the workers' quarters
- Check the operator's (CND) record ledger

Date	point	monitoring item	Status during the reporting period
		Fuel, lubricating oil and other leaks	

4. Noise and vibration

(1) Noise levels

- Monitoring item: noise levels
- Record: measurements are taken once every three months before and after felling and clearing, at 10 tower locations and at the boundaries of neighboring dwellings and other structures

(Date)

(Location)

Item (unit)	baseline value	measured value (Average value)	measurement (Max. value)	local standard	Referred to international standards	Remarks. (e.g. location, frequency and method of measurement)
noise level (dB A)				-	Daytime: 55 dBA Nighttime: 45 dBA Industrial zone: 70 dBA	Measured with sound level meter for 30 minutes

(2) Complaints

- Monitoring item: complaints from municipalities, communes and settlements about noise and vibration
- Record: record as needed

Date	point	Complaint details	action	Remarks (resolution status)

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5. Offensive odors

(1) Odors

- Monitoring item: presence or absence of odors by sensory examination
- Record: once a week at the workers' quarters
- Check the operator's (CND) record ledger

date	point	monitoring item	Status during the reporting period
		odors (sensory)	

(2) Complaints

- Monitoring item: complaints from municipalities, communes and settlements
- Record: record as needed
- Check the operator's (CND) record ledger

Date	point	Complaint details	action	Remarks (resolution status)

6. Waste

- Monitoring item: waste storage and transport conditions
- Record: once a week, at the construction site and workers' quarters, the amount of waste collected and disposed of by item by the waste collection and disposal contractor
- Check the operator's (CND) record ledger

date	point	monitoring item	Status during the reporting period
		Amount collected by contractors	

7. Ecosystems

(1) Flora and fauna

- Monitoring item: plant species and distribution in the clearing and rooting areas and animal occurrence species in the vicinity
- Record: observation of plant and animal occurrence species at eight sites once every six months before and after felling and clearing

date	point	monitoring item	Status during the reporting period
		plant species	
		fauna species	

(2) Birds

- Monitoring item: birds
- Record: once every 6 months before and after logging and clearing, observation of bird occurrence species by random census in Ivantara swamp, Paires, Humpata, Tchivinguiro, Bruco, Capangombe, Caraculo and Moçâmedes

date	point	monitoring item	Status during the reporting period
		bird species present	

(3) Threatened species

- Monitoring item: Threatened species
- Record: record once every three months before and after felling and clearing, random census observations are made twice a.m. and twice p.m. from the road within a 20 km radius near Caraculo, focusing on Ludwig's bustard (*Neotis ludwigii*)

Date	point	monitoring item	Status during the reporting period
		Ludwig's bustard (<i>Neotis ludwigii</i>)	
		Other species	

8. Hydrology

- Monitoring item: trace of erosion
- Record: observation and photography at 10 fixed points, once three months, on tower sites within the slope area of felling of trees and root extrication

date	point	monitoring item	Status during the reporting period

9. Topography and geology

- Monitoring item: status of vegetation recovery and soil erosion

- Record: Observe and photograph and record within the clearing and rooting area on the slopes, once every three months, by setting up 10 towers

Date	point	monitoring item	Status during the reporting period

10. Land acquisition and resettlement

- Monitoring item: impacts on land, residential structures, and places of livelihood due to land acquisition; provision of alternative land and structures; compensation process
- Record: avoid social impacts by plotting private land/uses and residential and other structures on a map during the geological & topological survey and detailed design. If unavoidable, record the status of resettlement and demolition/removal of existing structures due to acquisition, using the following format. See also ARAP Monitoring Form (Annex 10-1).

date	record	outline	Notes (e.g. maps)
	Private land / used land		
	Residential structure		
	Place of livelihood		

(Note) Monitoring points are tower locations and ROW.

date	point	Objects to be acquired and actions (e.g. status of demolition and removal of existing structures)	Notes (e.g. maps)

(Note) Monitoring points are where land is to be acquired out of tower locations and ROW.

11. Existing social infrastructures and services

- Monitoring item: impact of mine exploration and clearance operations on social services
- Record: record as needed, the location of social service facilities (hospitals, churches, schools, community facilities, etc.) should be plotted on a map to confirm the extent of demining work, while avoiding impacts where possible. If unavoidable, record the nature of the impact (e.g. closure or not, time period affected, number of people affected, etc.) using the following format.

Date	point	Impact details	Notes (e.g. maps)

(Note) Monitoring points are tower locations, ROW and surrounding settlements and facilities.

12. Cultural heritage

- Monitoring item: recognized cultural and historical values
- Record: plotting and avoidance of Boer cemeteries and other nearby cultural heritage sites on maps during geomorphological survey and detailed design

Date	date of discovery	detection point	Contents	action	Notes (e.g. maps)

(Note) Monitoring points are tower locations and ROW.

13. Working environment (including occupational safety)

- Monitoring item: Casualties among operators due to mine and UXO explosions
- Record: record the situation, etc., of accidents, as needed, at tower locations and ROW using the following format as a reference.

Date	point of accident	Circumstances and details of accident	Notes (e.g. maps)

14. Accidents

- Monitoring item: Accidents occurred due to mine and UXO explosions
- Record: record the circumstances, etc., of any accidents, as needed, at tower locations, ROW and workshop using the following format as a reference.

date	point of accident	Circumstances and details of the accident	Notes (e.g. maps)

<Construction Phase>**1. Air pollution**

- Monitoring item: PM10, PM2.5
- Record: measurements are taken once every three months before and after the construction of the towers, at 10 tower locations and at the boundaries of neighboring dwellings and other structures

(Date)

(Location)

(data) item (Unit)	baseline value	measured value (Average value)	measured value (Max. value)	local standard	Referred to international standards	Remarks (e.g. location, frequency and method of measurement)
PM10 ($\mu\text{g}/\text{m}^3$)				-	0.150 (Interim target-1) 0.100 (Interim target-2) 0.075 (Interim target-3) 0.050 (guideline)	Measured by PM meter for 30 minutes
PM2.5 ($\mu\text{g}/\text{m}^3$)				-	0.075 (Interim target-1) 0.050 (Interim target-2) 0.0375 (Interim target-3) 0.025 (guideline)	Measured by PM meter for 30 minutes

2. Water pollution**(1) Wastewater treatment records**

- Monitoring item: wastewater treatment status
- Record: record at the workers' quarters, as required
- Check contractor's record ledgers

date	point	monitoring item	Status during the reporting period
		Wastewater treatment status	

(2) Water quality items

- Monitoring item: items in the table below
- Record: measurements are taken at 10 river/stream points in the vicinity of the tower location once every three months before and after the tower construction works

(Date)

(Location)

Item (unit)	baseline value	measured value (Average value)	measured value (Max. value)	local standard (Surface water)	local standard (Drinking water)	Remarks (e.g. location, frequency and method of measurement)
pH (measure of acidity)				5.0-9.0	6.5-8.5 5.5-9.0	Portable pH meter

water temperature (°C)				30	22 25	water thermometer
conductivity (µS/cm at 20°C)				-	1000	conductometer
transparency (cm)				-	-	Transparency meter

3. Soil pollution

- Monitoring item: fuel, lubricating oil and other leaks
- Record: as needed, at construction site, workers' quarters
- Check contractor's record ledgers

date	point	monitoring item	Status during the reporting period
		Fuel, lubricating oil and other leaks	

4. Noise and vibration

(1) Noise level

- Monitoring item: noise level
- Record: measurements are taken once every three months before and after the construction of the towers, at 10 tower locations and at the boundaries of neighboring dwellings and other structures

(Date)

(Location)

Item (unit)	baseline value	measured value (Average value)	measurement (Max. value)	local standard	Referred to international standards	Remarks (e.g. location, frequency and method of measurement)
noise level (dB A)				-	Daytime: 55 dBA Nighttime: 45 dBA Industrial zone: 70 dBA	Measured with sound level meter for 30 minutes

(2) Complaints

- Monitoring item: complaints from municipalities, communes and settlements about noise and vibration
- Record: record as needed

Date	point	Complaint details	action	Remarks (resolution status)

5. Offensive odors

(1) Odors

- Monitoring item: presence or absence of odors by sensory examination
- Record: once a week at the workers' quarters
- Check contractor's record ledgers

Date	point	monitoring item	Status during the reporting period
		odors (sensory)	

(2) Complaints

- Monitoring item: complaints from municipalities, communes and settlements
- Record: record as needed
- Check contractor's record ledgers

Date	point	Complaint details	action	Remarks (resolution status)

6. Waste

- Monitoring item: waste storage and transport conditions
- Record: once a week, at the workers' quarters and construction site, the amount of waste collected and disposed of by item by the waste collection and disposal contractor
- Check contractor's record ledgers

Date	point	monitoring item	Status during the reporting period
		Amount collected by contractors	

7. Ecosystems

(1) Flora and fauna

- Monitoring item: plant species and distribution before and after construction of the towers, and animal occurrence species in the vicinity
- Record: once every 6 months after the start of construction, the occurrence of plant and animal species will be observed at eight sites

date	point	monitoring item	Status during the reporting period
		plant species	

		fauna species	
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(2) Birds

- Monitoring item: birds
- Record: observation of bird occurrence species by random census once every 6 months after the start of construction in Ivantara Swamp, Poiares, Humpata, Tchivinguiro, Bruco, Capangombe, Caraculo, and Moçâmedes.

Date	point	monitoring item	Status during the reporting period
		bird species present	

(3) Threatened species

- Monitoring item: valuable species
- Record: once every three months after the start of construction, random census observations will be carried out twice a day, in the morning and afternoon, from roads within a 20 km radius near Caraculo, focusing on Ludwig's bustard (*Neotis ludwigii*)

Date	point	monitoring item	Status during the reporting period
		Ludwig's bustard (<i>Neotis ludwigii</i>)	
		Other species	

8. Topography and geology

- Monitoring item: status of vegetation recovery and soil erosion
- Record: record once every three months, observations and photographs are made and recorded at 10 points on the towers within the sloping openings and felling rooting areas

date	point	monitoring item	Status during the reporting period

9. Land acquisition and resettlement

- Monitoring item: livelihood level and means of the affected population, resident relations (e.g. grievance redress), site management (e.g. entry restrictions and boundary management), etc.
- Record: record once every three months using the following format; record as needed for resident relations. See also ARAP Monitoring Form (Annex 10-1)

date	point	Livelihood level and means of the affected population	Remarks

(Note) Monitoring points are where the affected population lives and places of livelihood means.

date	point	Complaint details	action	Remarks (resolution status)

(Note) Monitoring points are where the affected population lives and places of livelihood means.

date	point	Site management status	Remarks

(Note) Monitoring points are tower locations and ROW.

10. The Poor

- Monitoring item: resident relations (e.g. complaint handling), employment in construction, etc.
- Record: record as needed for resident relations, at places of local people's living and livelihood means, using the following format. For employment, query the contractor's employment register, etc. once every three months.

date	point	Complaint details	action	Remarks (resolution status)

date	record	Review period and details	Remarks
	Employment registration ledger		

11. Local economies, such as employment and livelihood, etc.

- Monitoring item: livelihood level and means of the affected population, resident relations (e.g. grievance redress, etc.), employment in construction works, etc.

- Record: record once every three months, at places of the affected population and livelihood means using the following format. Record as needed for resident relations; For employment, query the contractor's employment register, etc. once every three months.

date	point	Livelihood level and means of the affected population	Remarks

date	point	Complaint details	action	Remarks (resolution status)

date	record	Review period and details	Remarks
	Employment registration ledger		

12. Land use and utilization of local resource

- Monitoring item: resident relations (e.g. complaint handling), site management (e.g. entry restrictions and boundary management)
- Record: record as needed for resident relations using the following format as a reference for recording; once every three months for site management. See also ARAP Monitoring Form (Annex 10-1)

date	point	Complaint details	action	Remarks (resolution status)

(Note) Monitoring points are where the affected population lives and places of livelihood means.

date	point	Site management status	Remarks

(Note) Monitoring points are tower locations and ROW.

13. Existing social infrastructures and services

- Monitoring item: construction plans (e.g. time, number and frequency of vehicle operations), vehicle operation records, number of traffic accidents, etc.
- Record: record as needed. Query contractor vehicle operation records and accident records

date	point	Review period and details	Remarks
	Construction work plan	e.g. time, number and frequency of vehicle operations	
	Vehicle operation record		
	Accident record	Location, number of accidents and work when accident occurred, etc.	

14. Misdistribution of benefits and damages

- Monitoring item: livelihood level and means of the affected population, resident relations (e.g. grievance redress), etc.
- Record: record once every three months, at concerned villages, using the following format as a reference for recording; record as needed for resident relations.

date	point	Livelihood level and means of the affected population	Remarks

date	point	Complaint details	action	Remarks (resolution status)

15. Local conflicts of interest

- Monitoring item: livelihood level and means of the affected population, resident relations (e.g. grievance redress), etc.
- Record: record once every three months, at concerned villages, using the following format as a reference for recording; record as needed for resident relations.

date	point	Livelihood level and means of the affected population	Remarks

date	point	Complaint details	action	Remarks (resolution status)

16. Cultural heritage

- Monitoring item: recognized cultural and historical value
- Record: record, as needed, any discoveries made at and around tower locations and construction site, and share them with cultural property department.

date	date of discovery	detection point	Contents	action	Month and date of resumption of construction

17. Landscape

- Monitoring item: trees, harmony between hardscape and natural landscapes
- Record: record every three months, visual fixed-point observations and photography are conducted and documented at ROW/ tower locations and at labor camp/materials yard installations

date	point	monitoring item	Status during the reporting period

18. Gender

- Monitoring item: resident relations (e.g. handling of complaints), number and content of instructions to contractors and subcontractors' employees, their participants, etc.
- Record: record resident relations, as needed at concerned villages, using the following format as a reference.

date	point	Complaint details	action	Remarks (resolution status)

Instruction records of contractor and subcontractor employees shall be queried once every three months

date	record	review period and details	remarks
	Records of instructions and guidance	Number, content and participants, etc.	

19. Children's rights

- Monitoring item: resident relations (e.g. handling of complaints), employment in construction works, etc.
- Record: record resident relations, as needed at concerned villages, with reference to the following format. Employment records by contractors are queried every three months as to whether they are employed on construction work.

date	point	Complaint details	action	Remarks (resolution status)

date	record	Review period and details	Remarks
	Employment registration ledger		

20. Infectious diseases such as HIV/AIDS

- Monitoring item: number of diseases and infections, standing medical supplies, number and type of vaccinations, number and content of instructions to contractor and subcontractor employees and number of participants
- Record: refer to contractor health records, equipment ledgers, immunization record and instruction / guidance record every three months

date of occurrence	record	number of occurrences	Remarks
	Health management record	Number of occurrences, etc.	
	Equipment ledger	Number of equipment, etc.	
	Immunization record	Number of immunization, etc.	
	Records of instructions and guidance	Number, content and participants, etc.	

21. Working environment (including occupational safety)

- Monitoring item: Casualties among workers due to mines and UXO explosions; demining work; time, content and number of participants in safety training for contractor and subcontractor employees; availability of PPE; work contents; health status of workers; number of accidents; working hours, etc.

- Record: Record as needed, for accidents due to mine and UXO explosions and demining works, using the following format; Refer to contractor instruction / guidance record, equipment ledgers, work record, health check-up record, accidents and working hours once every three months.

<Record of casualties among workers due to mine and UXO explosions>

Date	point of accident	Details of accident	Notes (e.g. maps)

(Note) Monitoring points are in the construction site.

<Records of demining work>

Date	date of discovery	detection point	Types of mines and unexploded ordnance, etc.	date(s) (e.g. for processing, finishing, etc.)	Month and date of resumption of construction

(Note) Monitoring points are in the construction site.

<Work safety and health>

date	record	review period and details	remarks
	Records of instructions and guidance	Number, content and participants, etc.	
	Equipment ledger	Number of PPE, etc.	
	Work record		
	Health check-up record		
	Accident record	Location, number of accidents and work when accident occurred, etc.	
	Working hour record		

22. Accidents

- Monitoring item: occurrence of accidents due to mines and UXO explosions, demining work, work contents, vehicle operation records, number of accidents, etc.
- Record: Record as needed accidents due to mine and UXO explosions and demining work using the following format as a reference. The status of vehicle operations and accidents occurring

as a result of construction work shall be monitored, as needed, and the contractor's records shall be queried.

<Record of casualties among workers due to mine and UXO explosions>

Date	point of accident	Details of accident	Notes (e.g. maps)

(Note) Monitoring points are in the construction site.

<Records of demining work>

Date	date of discovery	detection point	Types of mines and unexploded ordnance, etc.	date(s) (e.g. for processing, finishing, etc.)	Month and date of resumption of construction

(Note) Monitoring points are in the construction site.

<Accident record>

date	record	review period and details	remarks
	Vehicle operation record		
	Accident record	Location, number of accidents and work when accident occurred, etc.	

<Operation Phase>

1. Water pollution

- Monitoring item: items in the table below
- Record: measurements are taken once every three months at 10 points on rivers/streams in the vicinity of the tower location and the controlled road

(Date)

(Location)

Item (unit)	baseline value	measured value (Average value)	measured value (Max. value)	local standard (Surface water)	local standard (Drinking water)	Remarks (e.g. location, frequency and method of measurement)
pH (measure of acidity)				5.0-9.0	6.5-8.5 5.5-9.0	Portable pH meter
water temperature (°C)				30	22 25	water thermometer

conductivity ($\mu\text{S}/\text{cm}$ at 20°C)				-	1000	conductometer
transparency (cm)				-	-	Transparency meter

2. Noise and vibration

(1) Noise level

- Monitoring item: noise levels
- Record: measurements are taken once every three months at representative points under the line/administrative road, at locations where wind noise is likely to occur and in neighboring settlements

(Date)

(Location)

Item (unit)	baseline value	measured value (Average value)	measurement (Max. value)	local standard	Referred to international standards	Remarks (e.g. location, frequency and method of measurement)
noise level (dB A)				-	Daytime: 55 dBA Nighttime: 45 dBA Industrial zone: 70 dBA	Measured with sound level meter for 30 minutes

(2) Complaints

- Monitoring item: complaints from municipalities, communes and settlements about noise and vibration
- Record: record as needed

Date	point	Complaint details	action	Remarks (resolution status)

3. Ecosystems

(1) Flora and fauna

- Monitoring item: flora and fauna
- Record: observations are made once every three months at 10 tower positions

date	point	monitoring item	Status during the reporting period
		plant species	
		fauna species	

(2) Birds

- Monitoring item: birds
- Record: observations are made every three months in Ivantala swamp, Humpata, Tchivinguiro and Bruco

(3) Threatened species

- Monitoring item: Threatened species
- Record: once every three months, random census observations are made twice a.m. and twice p.m. from the road within a 20 km radius near Caraculo, focusing on Ludwig's bustard (*Neotis ludwigii*)

Date	point	monitoring item	Status during the reporting period
		Ludwig's bustard (<i>Neotis ludwigii</i>)	
		Other species	

4. Hydrology

- Monitoring item: presence or absence of erosion scars and scale of erosion if present
- Record: once every three months, observation and photography will be carried out and recorded at 10 points on the towers at within the felling and felling rooting area on the slope

date	point	monitoring item	Status during the reporting period

5. Topography and geology

- Monitoring item: status of vegetation recovery and soil erosion
- Record: once every three months, observations and photographs are made and recorded at 10 points on the towers in the sloping area within the felling and felling rooting area

date	point	monitoring item	Status during the reporting period

10-2. Monitoring Form for new 220/60 kV New Namibe Substation

<Pre-construction Phase>

1. Air pollution

- Monitoring item: SO₂, NO₂, O₃, PM10, PM2.5
- Record: before and after clearing and rooting Once every six months for one consecutive week, SO₂, NO₂, O₃, once every three months at the proposed site of the new Namibe substation, PM10 and PM2.5 measurements at the boundaries of the substation and adjacent dwellings, etc., and at access roads, respectively.

(Date)

(Location)

(data) item (Unit)	baseline value	measured value (Average value)	measured value (Max. value)	local standard	Referred to international standards	Remarks (e.g. location, frequency and method of measurement)
SO ₂				-	0.125 (Interim target-1) 0.050 (Interim target-2) 0.020 (guideline)	24-hour average
NO ₂				-	0.04	annual average
O ₃				-	0.160 (Interim target-1) 0.100 (guideline)	8-hour average
PM10. (µg/m ³)				-	0.150 (Interim target-1) 0.100 (Interim target-2) 0.075 (Interim target-3) 0.050 (guideline)	Measured by PM meter for 30 minutes
PM2.5 (µg/m ³)				-	0.075 (Interim target-1) 0.050 (Interim target-2) 0.0375 (Interim target-3) 0.025 (guideline)	Measured by PM meter for 30 minutes

2. Water pollution

- Monitoring item: wastewater treatment status
- Record: once a week at the proposed construction site of the new Namibe substation and at the workers' quarters
- Check the operator's (CND) record ledger

Date	point	monitoring item	Status during the reporting period
		Wastewater treatment status	

3. Soil pollution

- Monitoring item: fuel, lubricating oil and other leaks

- Record: once a week at the proposed construction site of the new Namibe substation and at the workers' quarters
- Check the operator's (CND) record ledger

date	point	monitoring item	Status during the reporting period
		Fuel, lubricating oil and other leaks	

4. Noise and vibration

(1) Noise level

- Monitoring item: noise levels
- Record: measurements are taken once every three months before and after clearing and rooting, at the proposed construction site of the new Namibe substation, at the boundaries of neighboring dwellings and other structures, and at the access road

(Date)

(Location)

Item (unit)	baseline value	measured value (Average value)	measurement (Max. value)	local standard	Referred to international standards	Remarks (e.g. location, frequency and method of measurement)
noise level (dB A)				-	Daytime: 55 dBA Nighttime: 45 dBA Industrial zone: 70 dBA	Measured with sound level meter for 30 minutes

(2) Complaints

- Monitoring item: complaints from municipalities, communes and settlements about noise and vibration
- Record: record as needed

Date	point	Complaint details	action	Remarks (resolution status)

5. Offensive odors

(1) Odors

- Monitoring item: presence or absence of odors by sensory examination
- Record: once a week at the proposed construction site of the new Namibe substation and at the workers' quarters
- Check the operator's (CND) record ledger

Date	point	monitoring item	Status during the reporting period
		odors (sensory)	

(2) Complaints

- Monitoring item: complaints from municipalities, communes and settlements
- Record: record as needed
- Check the operator's (CND) record ledger

Date	point	Complaint details	action	Remarks (resolution status)

6. Waste

- Monitoring item: waste storage and transport conditions
- Record: once a week, at the workers' quarters and at the proposed construction site of the new Namibe substation, the amount of waste collected and disposed of by item by the disposal contractor
- Check the operator's (CND) record ledger

Date	point	monitoring item	Status during the reporting period
		Amount collected by contractors	

7. Ecosystems

(1) Flora and fauna

- Monitoring item: flora and fauna
- Record: observations are carried out every six months before and after cutting and clearing, and at the proposed site of the new Namibe substation

Date	point	monitoring item	Status during the reporting period
		plant species	
		Fauna species	

(2) Birds

- Monitoring item: birds

- Record: observations are carried out every six months before and after cutting and clearing, and at the proposed site of the new Namibe substation

Date	point	monitoring item	Status during the reporting period
		bird species present	

8. Topography and geology

- Monitoring item: topographic and vegetation changes and soil erosion
- Record: observation and photography will be carried out and recorded at the new Namibe substation once each before and after felling and clearing

Date	point	monitoring item	Status during the reporting period

9. Working environment (including occupational safety)

- Monitoring item: Casualties among operators due to mines and UXO explosions.
- Record: record the situation, etc., of accidents, as needed, at new Namibe substation using the following format as a reference.

Date	point of accident	Circumstances and details of the accident	Notes (e.g. maps)

10. Accidents

- Monitoring item: Accidents occurred due to mine and UXO explosions
- Record: record the circumstances, etc., of any accidents, as needed, at new Namibe substation and workshop using the following format as a reference.

Date	point of accident	Circumstances and details of the accident	Notes (e.g. maps)

<Construction Phase>

1. Air pollution

- Monitoring item: SO₂, NO₂, O₃, PM10, PM2.5
- Record: once every six months for one consecutive week, SO₂, NO₂ and O₃ at the proposed site of the new Namibe substation; once every three months, PM10 and PM2.5 measurements at the boundaries of the substation and adjacent dwellings and on access roads.

(Date)

(Location)

(data) item (Unit)	baseline value	measured value (Average value)	measured value (Max. value)	local standard	Referred to international standards	Remarks (e.g. location, frequency and method of measurement)
SO ₂				-	0.125 (Interim target-1) 0.050 (Interim target-2) 0.020 (guideline)	24-hour average
NO ₂				-	0.04	annual average
O ₃				-	0.160 (Interim target-1) 0.100 (guideline)	8-hour average
PM10. (µg/m ³)				-	0.150 (Interim target-1) 0.100 (Interim target-2) 0.075 (Interim target-3) 0.050 (guideline)	Measured by PM meter for 30 minutes
PM2.5 (µg/m ³)				-	0.075 (Interim target-1) 0.050 (Interim target-2) 0.0375 (Interim target-3) 0.025 (guideline)	30-minute measurements with PM meter

2. Water pollution

- Monitoring item: wastewater treatment status
- Record: record at construction sites and workers' quarters as required
- Check contractor's record ledgers

date	point	monitoring item	Status during the reporting period
		Wastewater treatment status	

3. Soil pollution

- Monitoring item: fuel, lubricating oil and other leaks
- Record: record at construction sites and workers' quarters as required
- Check contractor's record ledgers

date	point	monitoring item	Status during the reporting period
		Fuel, lubricating oil and other leaks	

4. Noise and vibration

(1) Noise level

- Monitoring item: noise levels
- Record: measurements are taken once every three months at the boundaries of dwellings and other structures in close proximity to the new Namibe substation, and at access roads

(Date)

(Location)

Item (unit)	baseline value	measured value (Average value)	measurement (Max. value)	local standard	Referred to international standards	Remarks (e.g. location, frequency and method of measurement)
noise level (dB A)				-	Daytime: 55 dBA Nighttime: 45 dBA Industrial zone: 70 dBA	Measured with sound level meter for 30 minutes

(2) Complaints

- Monitoring item: complaints from municipalities, communes and settlements about noise and vibration
- Record: record as needed

Date	point	Complaint details	action	Remarks (resolution status)

5. Offensive Odors

(1) Odors

- Monitoring item: presence or absence of odors by sensory examination
- Record: record once a week at the construction site and at the workers' quarters
- Check contractor's record ledgers

date	point	monitoring item	Status during the reporting period
		odors (sensory)	

(2) Complaints

- Monitoring item: complaints from municipalities, communes and settlements
- Record: record as needed
- Check contractor's record ledgers

Date	point	Complaint details	action	Remarks (resolution status)

6. Waste

- Monitoring item: waste storage and transport conditions
- Record: once a week, at the workers' quarters and construction site, the amount of waste collected and disposed of by item by the waste collection and disposal contractor
- Check contractor's record ledgers

date	point	monitoring item	Status during the reporting period
		Amount collected by contractors	

7. Ecosystems

(1) Flora and fauna

- Monitoring item: flora and fauna
- Record: observations are made every three months at the new Namibe substation construction site

Date	point	monitoring item	Status during the reporting period
		plant species	
		fauna species	

(2) Birds

- Monitoring item: birds
- Record: observations are made every three months at the new Namibe substation construction site

date	point	monitoring item	Status during the reporting period
		bird species present	

8. Topography and geology

- Monitoring item: topographical and vegetation changes and soil erosion

- Record: observations and photography are carried out and recorded at the new Namibe substation once every six months

Date	point	monitoring item	Status during the reporting period

9. Existing social infrastructures and services

- Monitoring item: construction plans (e.g. time, number and frequency of vehicle operations), vehicle operation records, number of traffic accidents, etc.
- Record: record as needed. Query contractor vehicle operation records and accident records

date	point	Review period and details	Remarks
	Construction work plan	e.g. time, number and frequency of vehicle operations	
	Vehicle operation record		
	Accident record	Location, number of accidents and work when accident occurred, etc.	

10. Landscape

- Monitoring item: trees, harmony between hardscape and natural landscapes
- Record: record every three months, visual fixed-point observations and photography are conducted and documented at the new Namibe substation and at the workers' camp and material storage installation

Date	point	monitoring item	Status during the reporting period

11. Gender

- Monitoring item: resident relations (e.g. handling of complaints), number and content of instructions to contractors and subcontractors' employees, their participants, etc.
- Record: record resident relations, as needed at concerned villages, using the following format as a guide.

date	point	Complaint details	action	Remarks (resolution status)

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Instruction records of contractor and subcontractor employees shall be queried once every three months.

date	record	review period and details	remarks
	Records of instructions and guidance	Number, content and participants, etc.	

12. Children's rights

- Monitoring item: resident relations (e.g. handling of complaints), employment in construction works, etc.
- Record: record resident relations, as needed at concerned villages, with reference to the following format. Employment records by contractors are queried every three months as to whether they are employed on construction work.

date	point	Complaint details	action	Remarks (resolution status)

date	record	Review period and details	Remarks
	Employment registration ledger		

13. Infectious diseases such as HIV/AIDS

- Monitoring item: number of diseases and infections, standing medical supplies, number and type of vaccinations, number and content of instructions to contractor and subcontractor employees and number of participants.
- Record: once every three months. Query contractor health records, equipment ledgers, immunization record and instruction / guidance record.

date of occurrence	record	number of occurrences	Remarks
	Health management record	Number of occurrences, etc.	
	Equipment ledger	Number of equipment, etc.	
	Immunization record	Number of immunization, etc.	
	Records of instructions and guidance	Number, content and participants, etc.	

14. Working environment (including occupational safety)

- Monitoring item: Casualties among workers due to mines and UXO explosions; demining work; time, content and number of participants in safety training for contractor and subcontractor employees; availability of PPE; work contents; health status of workers; number of accidents; working hours, etc.
- Record: Record as needed, for accidents due to mine and UXO explosions and demining works, using the following format; Refer to contractor instruction / guidance record, equipment ledgers, work record, health check-up record, accidents and working hours once every three months.

<Record of casualties among workers due to mine and UXO explosions>

Date	point of accident	Details of accident	Notes (e.g. maps)

(Note) Monitoring points are in the construction site.

<Records of demining work>

Date	date of discovery	detection point	Types of mines and unexploded ordnance, etc.	date(s) (e.g. for processing, finishing, etc.)	Month and date of resumption of construction

(Note) Monitoring points are in the construction site.

<Work safety and health>

date	record	review period and details	remarks
	Records of instructions and guidance	Number, content and participants, etc.	
	Equipment ledger	Number of PPE, etc.	
	Work record		
	Health check-up record		
	Accident record	Location, number of accidents and work when accident occurred, etc.	
	Working hour record		

15. Accidents

- Monitoring item: occurrence of accidents due to mines and UXO explosions, demining work, work contents, vehicle operation records, number of accidents, etc.
- Record: Record as needed accidents due to mine and UXO explosions and demining work using the following format as a reference. The status of vehicle operations and accidents occurring as a result of construction work shall be monitored, as needed, and the contractor's records shall be queried.

<Record of casualties among workers due to mine and UXO explosions>

Date	point of accident	Details of accident	Notes (e.g. maps)

(Note) Monitoring points are in the construction site.

<Records of demining work>

Date	date of discovery	detection point	Types of mines and unexploded ordnance, etc.	date(s) (e.g. for processing, finishing, etc.)	Month and date of resumption of construction

(Note) Monitoring points are in the construction site.

<Accident record>

date	record	review period and details	remarks
	Vehicle operation record		
	Accident record	Location, number of accidents and work when accident occurred, etc.	

<Operation Phase>

1. Water pollution

- Monitoring item: Status of disposal of wastewater, garbage, fuel, oil, etc. and education implementation
- Record: once every three months at the new Namibe substation

Date	point	monitoring item	Status during the reporting period
		Status of disposal of wastewater, garbage, fuel, oil, etc. Status of education implementation	

2. Noise and vibration

(1) Noise level

- Monitoring item: noise levels
- Record: measurements are taken once every three months at the boundaries of dwellings and other structures in close proximity to the new Namibe substation, and at access roads

(Date)

(Location)

Item (unit)	baseline value	measured value (Average value)	measurement (Max. value)	local standard	Referred to international standards	Remarks (e.g. location, frequency and method of measurement)
noise level (dB A)				-	Daytime: 55 dBA Nighttime: 45 dBA Industrial zone: 70 dBA	Measured with sound level meter for 30 minutes

(2) Complaints

- Monitoring item: complaints from municipalities, communes and settlements about noise and vibration
- Record: record as needed

Date	point	Complaint details	action	Remarks (resolution status)

3. Offensive odors

(1) Odors

- Monitoring item: presence or absence of odors by sensory examination
- Record: record as needed at the new Namibe substation.

Date	point	monitoring item	Status during the reporting period
		odors (sensory)	

(2) Complaints

- Monitoring item: complaints about odors at the new Namibe substation
- Record: record as needed

Date	point	Complaint details	action	Remarks (resolution
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				status)

4. Waste

- Monitoring item: waste storage and transport conditions
- Record: record as needed at the new Namibe substation

Date	point	monitoring item	Status during the reporting period
		Amount collected by contractors	

5. Ecosystems

(1) Flora and fauna

- Monitoring item: flora and fauna
- Record: observations are carried out at the new Namibe substation once every three months.

Date	point	monitoring item	Status during the reporting period
		plant emergent species	
		zoonosis (disease transmissible from animals to humans or vice versa)	

(2) Birds

- Monitoring item: birds
- Record: observations are carried out at the new Namibe substation once every three months.

date	point	monitoring item	Status during the reporting period
		bird species present	

6. Topography and geology

- Monitoring item: topographical and vegetation changes and soil erosion
- Record: observations and photography are carried out and recorded at the new Namibe substation once every six months.

Date	point	monitoring item	Status during the reporting period

10-3. Monitoring Form for East Lubango Substation

<Pre-construction Phase>

1. Air pollution

- Monitoring item: SO₂, NO₂, O₃, PM10, PM2.5
- Record: before and after clearing and rooting once every six months for one consecutive week, SO₂, NO₂, O₃, at the East Lubango substation construction site, every three months, PM10 and PM2.5 measurements at the substation and the boundaries of nearby dwellings and access roads, respectively.

(Date)

(Location)

(data) item (Unit)	baseline value	measured value (Average value)	measured value (Max. value)	local standard	Referred to international standards	Remarks (e.g. location, frequency and method of measurement)
SO ₂					0.125 (Interim target-1) 0.050 (Interim target-2) 0.020 (guideline)	24-hour average
NO ₂					0.04	annual average
O ₃					0.160 (Interim target-1) 0.100 (guideline)	8-hour average
PM10. (µg/m ³)				-	0.150 (Interim target-1) 0.100 (Interim target-2) 0.075 (Interim target-3) 0.050 (guideline)	Measured by PM meter for 30 minutes
PM2.5 (µg/m ³)				-	0.075 (Interim target-1) 0.050 (Interim target-2) 0.0375 (Interim target-3) 0.025 (guideline)	Measured by PM meter for 30 minutes

2. Water pollution

- Monitoring item: wastewater treatment status
- Record: once a week at the East Lubango substation construction site and at the workers' quarters
- Check the operator's (CND) record ledger

date	point	monitoring item	Status during the reporting period
		Wastewater treatment status	

3. Soil pollution

- Monitoring item: fuel, lubricating oil and other leaks

- Record: once a week at the East Lubango substation construction site and at the workers' quarters
- Check the operator's (CND) record ledger

date	point	monitoring item	Status during the reporting period
		Fuel, lubricating oil and other leaks	

4. Noise and vibration

(1) Noise level

- Monitoring item: noise levels
- Record: measurements are taken once every three months before and after clearing and rooting, at the boundary of the East Lubango substation construction site and adjacent dwellings, and at the access road

(Date)

(Location)

Item (unit)	baseline value	measured value (Average value)	measurement (Max. value)	local standard	Referred to international standards	Remarks (e.g. location, frequency and method of measurement)
noise level (dB A)				-	Daytime: 55 dBA Nighttime: 45 dBA Industrial zone: 70 dBA	Measured with sound level meter for 30 minutes

(2) Complaints

- Monitoring item: complaints from municipalities, communes and settlements about noise and vibration
- Record: record as needed

Date	point	Complaint details	action	Remarks (resolution status)

5. Offensive odors

(1) Odors

- Monitoring item: presence or absence of odors by sensory examination
- Record: once a week at the East Lubango substation construction site and at the workers' quarters
- Check the operator's (CND) record ledger

Date	point	monitoring item	Status during the reporting period
		odors (sensory)	

(2) Complaints

- Monitoring item: complaints from municipalities, communes and settlements
- Record: record as needed
- Check the operator's (CND) record ledger

Date	point	Complaint details	action	Remarks (resolution status)

6. Waste

- Monitoring item: waste storage and transport conditions
- Record: once a week, at the workers' quarters and at the East Lubango substation construction site, the amount of waste collected and disposed of by item by the waste collection and disposal contractor
- Check the operator's (CND) record ledger

date	point	monitoring item	Status during the reporting period
		Amount collected by contractors	

7. Ecosystems

(1) Flora and fauna

- Monitoring item: flora and fauna
- Record: observations are made every six months before and after felling and clearing, at the proposed East Lubango substation construction site

date	point	monitoring item	Status during the reporting period
		plant species	
		fauna species	

(2) Birds

- Monitoring item: birds

- Record: observations are made every six months before and after felling and clearing, at the proposed East Lubango substation construction site

Date	point	monitoring item	Status during the reporting period
		bird species present	

8. Topography and geology

- Monitoring item: topographical and vegetation changes and soil erosion
- Documentation: fixed-point observation and photography of the terrain at the East Lubango substation before and after each logging opening and rooting, to be recorded

date	point	monitoring item	Status during the reporting period

9. Working environment (including occupational safety)

- Monitoring item: Casualties among due to mines and UXO explosions.
- Record: record the situation, etc., of accidents, as needed, at the East Lubango substation using the following format as a reference.

Date	point of accident	Circumstances and details of accident	Notes (e.g. maps)

10. Accidents

- Monitoring item: Accidents occurred due to mine and UXO explosions
- Record: record the circumstances, etc., of any accidents, as needed, at the East Lubango substation and workshop using the following format as a reference.

Date	point of accident	Circumstances and details of the accident	Notes (e.g. maps)

<Construction Phase>

1. Air pollution

- Monitoring item: SO₂, NO₂, O₃, PM10, PM2.5
- Record: once every six months before and after the construction of the tower, for one consecutive week; SO₂, NO₂ and O₃ at the East Lubango substation construction site; once every three months; PM10 and PM2.5 measurements at the substation, at the boundaries of dwellings and other structures in the vicinity of the substation and at access roads, respectively.

(Date)

(Location)

(data) item (Unit)	baseline value	measured value (Average value)	measured value (Max. value)	local standard	Referred to international standards	Remarks (e.g. location, frequency and method of measurement)
SO ₂					0.125 (Interim target-1) 0.050 (Interim target-2) 0.020 (guideline)	24-hour average
NO ₂					0.04	annual average
O ₃					0.160 (Interim target-1) 0.100 (guideline)	8-hour average
PM10. (µg/m ³)				-	0.150 (Interim target-1) 0.100 (Interim target-2) 0.075 (Interim target-3) 0.050 (guideline)	Measured by PM meter for 30 minutes
PM2.5 (µg/m ³)				-	0.075 (Interim target-1) 0.050 (Interim target-2) 0.0375 (Interim target-3) 0.025 (guideline)	Measured by PM meter for 30 minutes

2. Water pollution

- Monitoring item: wastewater treatment status
- Record: record at construction sites and workers' quarters as required
- Check contractor's record ledgers

date	point	monitoring item	Status during the reporting period
		Wastewater treatment status	

3. Soil pollution

- Monitoring item: fuel, lubricating oil and other leaks
- Record: record at construction sites and workers' quarters as required
- Check contractor's record ledgers

date	point	monitoring item	Status during the reporting period

			period
		Fuel, lubricating oil and other leaks	

4. Noise and vibration

(1) Noise level

- Monitoring item: noise levels
- Record: measurements are taken once every three months at the boundary of the East Lubango substation and neighboring dwellings, etc., and at access roads.

(Date)

(Location)

Item (unit)	baseline value	measured value (Average value)	measurement (Max. value)	local standard	Referred to international standards	Remarks (e.g. location, frequency and method of measurement)
noise level (dB A)				-	Daytime: 55 dBA Nighttime: 45 dBA Industrial zone: 70 dBA	Measured with sound level meter for 30 minutes

(2) Complaints

- Monitoring item: complaints from municipalities, communes and settlements about noise and vibration
- Record: record as needed

Date	point	Complaint details	action	Remarks (resolution status)

5. Offensive odors

(1) Odors

- Monitoring item: presence or absence of odors by sensory examination
- Record: record once a week at the construction site and at the workers' quarters
- Check contractor's record ledgers

date	point	monitoring item	Status during the reporting period
		odors (sensory)	

(2) Complaints

- Monitoring item: complaints from municipalities, communes and settlements

- Record: record as needed
- Check contractor's record ledgers

Date	point	Complaint details	action	Remarks (resolution status)

6. Waste

- Monitoring item: waste storage and transport conditions
- Record: once a week, at the workers' quarters and construction site, the amount of waste collected and disposed of by item by the waste collection and disposal contractor
- Check contractor's record ledgers

date	point	monitoring item	Status during the reporting period
		Amount collected by contractors	

7. Ecosystems

(1) Flora and fauna

- Monitoring item: flora and fauna
- Record: observations are made every three months at the East Lubango substation construction site

date	point	monitoring item	Status during the reporting period
		plant emergent species	
		zoonosis (disease transmissible from animals to humans or vice versa)	

(2) Birds

- Monitoring item: birds
- Record: observations are made every three months at the East Lubango substation construction site.

date	point	monitoring item	Status during the reporting period
		bird species present	

8. Topography and geology

- Monitoring item: topographic and vegetation changes and soil erosion
- Record: observations and photography are carried out and documented at the East Lubango substation once every six months.

Date	point	monitoring item	Status during the reporting period

9. Existing social infrastructures and services

- Monitoring item: construction plans (e.g. time, number and frequency of vehicle operations), vehicle operation records, number of traffic accidents, etc.
- Record: carried out as required. Query contractor vehicle operation records and accident records.

date	point	Review period and details	Remarks
	Construction work plan	e.g. time, number and frequency of vehicle operations	
	Vehicle operation record		
	Accident record	Location, number of accidents and work when accident occurred, etc.	

10. Landscape

- Monitoring item: trees, harmony between hardscape and natural landscapes
- Record: record every three months, visual fixed-point observations and photography are conducted and documented at the East Lubango substation and at the workers' camp/materials yard installation

date	point	monitoring item	Status during the reporting period

11. Gender

- Monitoring item: resident relations (e.g. handling of complaints), number and content of instructions to contractors and subcontractors' employees, their participants, etc.

- Record: record resident relations, as needed at concerned villages, using the following format as a guide.

date	point	Complaint details	action	Remarks (resolution status)

Instruction records of contractor and subcontractor employees shall be queried once every three months .

date	record	review period and details	remarks
	Records of instructions and guidance	Number, content and participants, etc.	

12. Children's rights

- Monitoring item: resident relations (e.g. handling of complaints), employment in construction works, etc.
- Record: record resident relations, as needed at concerned villages, with reference to the following format. Employment records by contractors are queried every three months as to whether they are employed on construction work.

date	point	Complaint details	action	Remarks (resolution status)

date	record	Review period and details	Remarks
	Employment registration ledger		

13. Infectious diseases such as HIV/AIDS

- Monitoring item: number of diseases and infections, standing medical supplies, number and type of vaccinations, number and content of instructions to contractor and subcontractor employees and number of participants
- Record: refer to contractor health records, equipment ledgers, immunization records and instruction / guidance records every three months.

date of	record	number of occurrences	Remarks

occurrence			
	Health management record	Number of occurrences, etc.	
	Equipment ledger	Number of equipment, etc.	
	Immunization record	Number of immunization, etc.	
	Records of instructions and guidance	Number, content and participants, etc.	

14. Working environment (including occupational safety)

- Monitoring item: Casualties among workers due to mines and UXO explosions; demining work; time, content and number of participants in safety training for contractor and subcontractor employees; availability of PPE; work contents; health status of workers; number of accidents; working hours, etc.
- Record: Record as needed, for accidents due to mine and UXO explosion and demining works, using the following format; refer to contractor instruction / guidance record, equipment ledgers, work record, health check-up record, accidents and working hours every three months.

<Record of casualties among workers due to mine and UXO explosions>

Date	point of accident	Details of accident	Notes (e.g. maps)

(Note) Monitoring points are in the construction site.

<Records of demining work>

Date	date of discovery	detection point	Types of mines and unexploded ordnance, etc.	date(s) (e.g. for processing, finishing, etc.)	Month and date of resumption of construction

(Note) Monitoring points are in the construction site.

<Work safety and health>

date	record	review period and details	remarks
	Records of instructions and guidance	Number, content and participants, etc.	
	Equipment ledger	Number of PPE, etc.	
	Work record		
	Health check-up		

	record		
	Accident record	Location, number of accidents and work when accident occurred, etc.	
	Working hour record		

15. Accidents

- Monitoring item: occurrence of accidents due to mines and UXO explosions, demining work, work contents, vehicle operation records, number of accidents, etc.
- Record: Record as needed accidents due to mine and UXO explosions and demining work using the following format as a reference. The status of vehicle operations and accidents occurring as a result of construction work shall be monitored, as needed, and the contractor's records shall be queried.

<Record of casualties among workers due to mine and UXO explosions>

Date	point of accident	Details of accident	Notes (e.g. maps)

(Note) Monitoring points are in the construction site.

<Records of demining work>

Date	date of discovery	detection point	Types of mines and unexploded ordnance, etc.	date(s) (e.g. for processing, finishing, etc.)	Month and date of resumption of construction

(Note) Monitoring points are in the construction site.

<Accident record>

date	record	review period and details	remarks
	Vehicle operation record		
	Accident record	Location, number of accidents and work when accident occurred, etc.	

<Operation Phase>**1. Water pollution**

- Monitoring item: Status of disposal of wastewater, garbage, fuel, oil, etc., and education implementation
- Record: once every three months at the East Lubango substation

date	point	monitoring item	Status during the reporting period
		Status of disposal of wastewater, garbage, fuel, oil, etc. Status of education implementation	

2. Noise and vibration**(1) Noise level**

- Monitoring item: noise levels
- Record: measurements are taken once every three months at the boundary of the East Lubango substation and neighboring dwellings, etc., and at access roads.

(Date)

(Location)

Item (unit)	measured value (Average value)	measured value (Max. value)	local standard	Referred to international standards	Remarks (e.g. location, frequency and method of measurement)
noise level				Daytime: 55 dBA Nighttime: 45 dBA Industrial zone: 70 dBA	

(2) Complaints

- Monitoring item: complaints from municipalities, communes and settlements about noise and vibration
- Record: record as needed

Date	point	Complaint details	action	Remarks (resolution status)

3. Offensive odors**(1) Odors**

- Monitoring item: presence or absence of odors by sensory examination
- Record: record as needed at the East Lubango substation

Date	point	monitoring item	Status during the reporting period
		odors (sensory)	

(2) Complaints

- Monitoring item: complaints about odors at the East Lubango substation
- Record: record as needed

Date	point	Complaint details	action	Remarks (resolution status)

4. Waste

- Monitoring item: waste storage and transport conditions
- Record: record as needed at the East Lubango substation

Date	point	monitoring item	Status during the reporting period
		Amount collected by contractors	

5. Ecosystems

(1) Flora and fauna

- Monitoring item: flora and fauna
- Record: observations are carried out at the East Lubango substation once every three months

date	point	monitoring item	Status during the reporting period
		plant emergent species	
		zoonosis (disease transmissible from animals to humans or vice versa)	

(2) Birds

- Monitoring item: birds
- Record: observations are carried out at the East Lubango substation once every three months

date	point	monitoring item	Status during the reporting period
		bird species present	

6. Topography and geology

- Monitoring item: status of vegetation recovery and soil erosion
- Record: fixed-point observation and photography of the terrain at the East Lubango substation every six months and record the results

date	point	monitoring item	Status during the reporting period

SUGESTÕES E RECOMENDAÇÕES

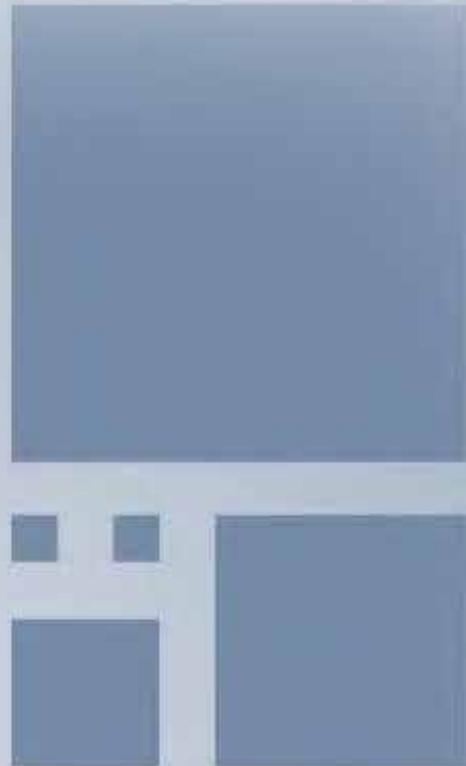


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