TANZANIA ELECTRIC SUPPLY COMPANY LIMITED

KENYA-TANZANIA 400KV POWER INTERCONNECTION PROJECT

REPORT OF UPDATED FINAL RESETTLEMENT ACTION PLAN INCLUDING ARUSHA SUBSTATION

Prepared by: Institute of Resources Assessment
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Tanzania

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This report was updated by Institute of Resources Assessment (IRA) under supervision of Prof. Faustin Maganga accompanied with a resource persons Mr. Emmanuel Sassi and Sixbert Mwanga succeeding the initial RAP report previously produced by team of expert mentioned in the next page, which did not include Arusha substation Plot.

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LIST OF ABBREVIATIONS AND ACRONYMS

AACC	Aluminum Alloy Conductor
ACC	Africa Conservation Centre
ACZ	Agro-climatic Zone
AfDB	African Development Bank
AMREF	African Medical and Research Foundation
ASALs	Arid and semi-arid lands
BP	Bank Procedures
bp	before present
BPO	Business Process Outsourcing
CBOs	Community Based Organisations
CMS	Convention on Conservation of Migratory Species of Wild Animals
CNH	Critical Natural Habitat
CPP	Consultation and Public Participation
DEC	District Environmental Committee
DED	District Executive Director
DLB	District Land Board
DOE	Division of Environment
EA	Environmental Audit
EAC	East Africa Community
EAPP	East Africa Power Pool
EARG	East Africa Resource Group Limited
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMCA	Environmental Management and Coordination Act

EMF	Electro-magnetic Field
EMP	Environmental Management Plan
EPZ	Export Processing Zone
ERB	Electricity Regulatory Board
ERC	Energy Regulatory Commission
ERMIS	Environmental Research, Mapping and Information Systems in Africa
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
FGM	Female genital mutilation
GDP	Gross Domestic Production
GIS	Geographic Information System
GSW	Galvanized Steel Ground Wire
GTZ	Gesellschafet für Internationale Zausammenarbeit
ICROSS	International Community for Relief of Starvation and Suffering
ICT	Information and Communications Technology
IDPs	Internally Displaced Persons
IDPD	Indigenous Peoples' Development Plan
ILRI	International Livestock Research Institute
IPPs	Independent Power Producers
IUCN	International Union for Conservation of Nature
JICA	Japanese International Cooperation Agency
LRS	Livelihood Restoration Strategy
MSA	Middle Stone Age
MTP	Medium-Term Plan
MYWO	Maendeleo ya Wanawake Organization
NBI	Nile Basin Initiative

NCA	Ngorongoro Conservation Area
NCAA	Ngorongoro Conservation Area Authority
NELSAP	Nile Equatorial Lakes Subsidiary Action Program
NEMC	National Environmental Management Council
NGOs	Non-Governmental Organisations
NHSDP	National Human Settlements Development Policy
NLC	National Land Commission
NLTF	National Land Trust Fund
OP	Operational Policy
OPD	Out Patient Department
OPGW	Optical Ground Wire
OSBP	One-Stop-Border-Post
PAPs	Project Affected Persons
PCRs	Physical Cultural Resources
PIU	Project Implementation Unit
PMU	Project Management Unit
RAP	Resettlement Action Plan
REA	Rural Electrification Authority
REP	Rural Electrification Programme
RI	Resettlement Instrument
ROW	Right of Way
SEA	Strategic Environmental Assessment
SEO	Site Environmental Officer
TANESCO	Tanzania Electricity Supply Company
TL	Transmission line
TNP	Tarangire National Park

USAID	United States Agency for International Development
VESC	Valued Environmental and Social Component
VPO	Vice-President Office
WB	World Bank
WMA	Wildlife Management Area
WRMA	Water Resources Management Authority

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The ESIA and RAP teams express their gratitude especially to the District Executive Officers and other officials at the regional and national level of both countries for providing the teams with information and recommendations about how the project should be integrated to its environment. Comments and concerns from officers and members of NGOs and CBOs were also very valuable and were integrated to these reports.

We also wish to express our gratitude to the village leaders and village people for their support and patience when answering our many questions during this study.

Finally, the teams wish to express their thanks to TANESCO and NELSAP officers, members of the WORLD BANK, the representatives of the Norwegian Embassy and other members of the PMC, for their support, guidance and advice at each steps of this study.

EXECUTIVE SUMMARY

1 INTRODUCTION

The Governments of Kenya and Tanzania, under the auspices of the Nile Basin Initiative / Nile Equatorial Lakes Subsidiary Action Programme (NELSAP), have carried out a feasibility study and detailed design for a power line to interconnect the power grid systems of Kenya and Tanzania. The whole study consists of Feasibility Study, Environmental and Social Impact Assessment (ESIA), Resettlement Action Plan (RAP), Detailed Design and Tender Documents of the Kenya – Tanzania Power Interconnection. The study is composed of two consultancies: (i) Feasibility Study and Detailed Design and (ii) ESIA & RAP. GENIVAR has been given the mandate of conducting the ESIA & RAP studies for the 400 kV transmission line extending between Isinya (Kenya) and Singida (Tanzania).

The general objective of the project is to increase transit capacities and flexibility of operation of the grid and to improve sustainable electricity supply in Kenya, Tanzania and the East Africa Power Pool (EAPP). Today, the rate of access of electricity is around 23% in Kenya and 21% in Tanzania. The interconnection project will enhance economic and social development in the region by improving quality and increasing energy availability. The project will provide a more sustainable energy supply for both countries and will increase power supplies to areas lacking electricity. The project will then help reducing the duration and frequency of power interruptions in both countries including Nairobi, Isinya, Arusha, Manyara, Dodoma and Singida regions. It will help reducing power system and technical losses to meet the existing and increasing power demand in the whole area.

This report presents the outcomes of the RAP framework on the final corridor route including the proposed Arusha substation. It consists of twelve main chapters: 1- introduction were the project background and objectives of the RAP are presented; 2-project description which present the review of the corridor alternatives and description of the selected corridor; 3- Institutional and legal framework related to land acquisition and PAP compensation; 4-Consultation activities with the description of PAP's and other stakeholder concerns and comments; 5- Existing social conditions of the communities and households affected by the project; 6-Potential social impacts; 7-Valuation and compensation measures; 8- Income and livelihood restoration strategies; 9- Institutional arrangements for RAP implementation; 10-Monitoring, reviews and evaluation of RAP implementation; 11 Grievances Mechanisms; 12 RAP implementation and schedule.

2 PROJECT DESCRIPTION

2.1 Line Route and Corridor Alternatives

At the stage of the preliminary study, different corridors were compared except for the section from Isinya to Arusha (Map 1) for which the Terms of Reference focused on reviewing the line route proposed by BKS-Acres in 2002. A local optimization of this line route was however carried out during this detailed study, in collaboration with RSWI, in charge of the Detailed Design and Tender Documents. This final optimization was made to avoid the most sensitive elements, such as schools, churches, etc., and to minimize the need to construct new access tracks.

Between Arusha and Singida substations, three corridors (A-B-C) were compared (Map1).

The criteria used for the design and the selections of the least impact corridor were:

1. Technical: topography, watercourses, soils, access, poorly drained and floodable sectors, airports, power line and road crossings, number of angles, etc.;
2. Environmental: vegetation, protected areas, main watercourses, birds and mammals migratory corridors, fauna reproduction areas, etc.;
3. Socioeconomic: number of villages affected, tourism infrastructure (lodges, etc.), permanent agriculture (coffee, fruits, etc.), livestock, tree plantations, military grounds, etc.

For technical and environmental reasons, Corridor B was preferred due to its direct route from the proposed Arusha substation to Singida substation. Also, for about 207 km of the 301 km between Arusha and Singida, the proposed corridor follows the existing 220 kV transmission line, which reduces environmental and social impacts. On this portion of the transmission line, the width of the corridor will be reduced from 90 m to 70 m. Corridor B is also the shortest alternative with the fewest number of angle points and least amount of technical constraints and problematic zones, therefore costs associated with this option should be less.

Corridor B also presents the following positive environmental aspects identified during stakeholders meetings:

- There are less potential cultural heritage sites in Corridor B than in the other corridors;
- There are less farms and settlements in Corridor B than in Corridor A;
- Even if there are a number of migratory corridors in Corridor B, especially between Tarangire and Manyara Lake National Parks, it will have a minimal impact on this issue compared to Corridors A and C;
- Corridor B is already impacted by the presence of another transmission line, a maintenance road is already present and can be used for both lines;
- Makuyuni, which is located at a little more than 1 km west of Corridor B, is an Export Processing Zone (EPZ) for the region as it is the main junction to Arusha, Babati, tourist circuits, Mwanga and Musoma. Additional power will thus represent an advantage for the development of this area.

The length of the selected transmission line corridor is about 505 km (Isinya – Arusha = 204 km and Arusha – Singida = 301 km) with about 90 km in Kenya and 415 km in Tanzania.

2.2 Environmental Considerations

Environmental considerations were integrated in the design of the transmission line and taken into account in the technical feasibility study (RSWI, 2012). As detailed in the technical feasibility study (RSWI, 2012), the transmission line is designed to comply with international standards regarding audible noise, electric and magnetic fields, corona, as well as interference with radio and television signal.

The technical feasibility study (RSWI, 2012) also discusses different alternatives related to tower design, span and foundations to minimize cost, ensure mechanical capacity of the towers, wire and other equipments.

2.3 Construction and Operation Requirements

For technical reasons related to the network construction and operation, the line requires a right-of-way (ROW) 90 m in Tanzania. It is in the middle of this ROW, from where all structures will have to be removed, that the line will be built. Between Arusha and Singida, where the new 400 kV transmission line will parallel an existing 220 kV power line, the requisite ROW width will be reduced to 70 m.

During construction, it will be necessary to establish temporary construction camps and access roads where required. The location and extent of these components are however not known at this stage of the project.

2.4 Project Cost and Schedule

The total project cost calculated in June 2012 value and allowing for 5% physical contingency and using an average inflation of 5% per year is estimated at 240.3 M USD (49.3 M USD for Kenya and 191 M USD for Tanzania. The RAP, LRS implementation and Monitoring budget which includes all costs involved in the execution of all RAP and LRS activities. The estimated total budget is: **39,980,379.09**Construction will extend to two years.

3 INSTITUTIONAL AND LEGAL FRAMEWORK

3.1 Institutional Actors as regard to Population Resettlement and Compensation

The institutional actor for population resettlement and compensation is the Ministry of Lands, Housing and Human Settlements Development. This Ministry is mainly responsible for land use planning, surveying and demarcating land/parcel/farms, and provision of land ownership and tenancy in both rural and urban areas. Within the Ministry, there is a Chief Government Valuer who is responsible among other things to ensure that prior to compensation of assets to any Project Affected Persons (PAPs), valuation reports are prepared according to the Land Act of 1999.

3.2 Legal and Regulatory Framework

As policies and laws that are related to resettlement social issues they are:

- National Land Policy, 1995 (revised in 1997);
- Land Acquisition and Resettlement Policy;
- Land Act, 1999;
- Village Land Act No. 5 of 1999;
- The Land Regulation (2001);
- The Land Disputes Courts Act No. 2 of 2002.

3.3 Regional and International Funder Policies, Procedures and Guidelines

3.3.1 Regional Organizations Relevant to the Project

The East African Community treaty is unifying the five East African Countries of Kenya, Uganda Tanzania, Rwanda and Burundi.

3.3.2 International Agreements and Treaties

3.3.2.1 African Development Bank

The environmental and social policies of the African Development Bank (AfDB) were developed over the years and evolved to support the main objective of the AfDB to provide assistance to African Regional Member Countries in their economic and social development. The AfDB's Involuntary Resettlement Policy, 2003 is applicable to the project.

3.3.2.2 World Bank Safeguard Policies

The World Bank environmental and social conservation policies include both Operational Policies (OP) and the Bank's Procedures (BP). Conservation policies are designed to protect environment and society against potential negative effects of projects, plans, programs and policies. The OP 4.12 Involuntary Resettlement procedure is applicable to the compensation and resettlement aspect of the project.

4 CONSULTATIONS

4.1 Meetings at National and Regional Levels

The purposes of these meetings were to introduce the project to the relevant stakeholders and gather their feedback and opinion about the project. The stakeholders expressed their concerns about the project, which were duly recorded. They also advised on the best way to approach the community members.

The following national and regional stakeholders were met:

- Tanzania National Parks;
- African Wildlife Foundation;
- Longido District Council;
- Longido Community Integrated Programme (LOOCIP);
- Arusha District Council;
- Arusha Municipal Council;
- Monduli District Council;
- Babati Municipal Council;
- Babati District Council;
- Singida District Council;
- Karatu District Council;
- Kondoa District Council;
- Kiteto District Council;
- Simanjiro District Council;
- TANESCO;
- Ministry of Lands and Human Settlement;
- Ministry of Natural Resources and Tourism;
- Ministry of Defence;
- TANROADs;
- Ministry of Energy and Minerals;

- National Environmental Management Council;
- Ministry of Health and Social Welfare;
- Ministry of Water and Irrigation;
- Tanzania Civil Aviation Authorities.

Most of the stakeholders consulted concur with the proposed development in view that the proposed power interconnection project will improve power supplies, stabilize the quality of the electricity and provide diverse source of power in the region. Some stakeholders also expressed their concerns regarding impacts on wildlife corridors and local biodiversity, impact on soil stability in erosion-prone areas.

4.2 Community Meetings

Community meetings were organized with the help of the local leadership. These consultations were carried out at different levels. Local leaders were provided with pamphlets summarising the project, which were circulated in the community. They also informed the community about the upcoming activities of the project (household and community surveys). The chiefs mobilized the community for the public meetings.

During these community meetings, the communities were informed of the project through presentations and distribution of the project pamphlet. In particular, presentations covered: project background, objectives of the project, ongoing and expected activities of the RAP, purpose of the meeting, the need for cooperation from the community and expected compensation, how the compensation will be done, what qualifies for compensation and expected timetable for other activities. During the meetings, the community was taken through the community questionnaire, to which answers were provided through discussion and consensus. Following the presentations, the community was given time to ask questions, seek clarifications, raise opinions and make comments. Most of the issues/questions raised were answered or clarified apart from a few (but relatively unimportant) technical ones about electricity, construction of towers, etc. The community was assured that their concerns would be addressed accordingly.

55 community meetings were held in the villages included in the transmission line ROW. Preoccupations rose during these meetings mainly concerned.

- Local employment;
- Compensation;
- Scarcity of land;
- Community benefits;
- Impacts on infrastructure;
- Land use.

4.2.1 Consultation of Project Affected Persons

A face-to-face interview was conducted with the head of household or another adult member of the household available at the time of the visit to fill the household questionnaire.

Socioeconomic information was collected about household members, livelihood, income and production, land ownership, livestock, crops, trees, as well as principal and secondary structures. Concerns rose about the wayleave and how the transmission line project could affect the households were also gathered. A control group was also formed of people that will not be affected by the project but who are living in the same area.

A total number of people consulted were 574 for the transmission line, substation and access road which completed the household survey. While the Project Affected People were 518 for transmission line and 37 people for substation area.

5 DESCRIPTION OF THE PROJECT AFFECTED AREAS: CENSUS OF COMMUNITIES AND HOUSEHOLDS AFFECTED BY THE WAYLEAVE

5.1 Characteristics of communities crossed

The total population of the villages/sub-locations crossed by way-leave is estimated at 82 500 or 5% of the districts population. The study area covers three regions: Arusha, Manyara and Singida and cuts across 53 villages.

Arusha, Longido and part of Babati District, are dominated by the Maasaï ethnic group while in the Singida region the dominant ethnic group is Nyaturu. In a part of Manyara region, especially in Hanang District, the dominant ethnic group is Iraq.

The people living in the project area subscribe to two main religious beliefs, Christians (61.3%) and Muslims (20.3%). The proportion with Traditional belief is 18.3%.

The three regions included in the project area share some similarities in their cultures and economic activities. For the Arusha and Manyara regions, people are mainly livestock keepers and farmers, while in the Singida region, farming is the main economic activity.

The majority of the people in the project area are involved in the following occupations; farming of food and cash crops 51.2%, livestock keeping 24.5%, business and civil service 14%. It was also revealed that 98% of the total population practise agriculture with other occupations such as civil servants and business.

There are numerous social service facilities in communities where the proposed line route passes and these include; schools (primary, secondary and only one tertiary), health centres (dispensaries, hospitals), markets, administrative buildings, religious sites (churches and mosques), cemetery, machinery and production centres (grinding mills, sunflower ginnery).

5.1.1 Municipal, community or heritage buildings and sites in the wayleave

There are 23 different buildings located within the wayleave mainly schools and churches.

There are also important community sites located within the wayleave and these include community forests (14), community cemetery (2), ceremonial areas (2), grazing land and farms (4).

5.1.2 Affected households characteristics

A total of 518 households are impacted by the proposed construction of Singida-Isinya Power Interconnection line. While the substation plot is 37.

As the survey showed 87% of the head of households were males compared to only 13% of female head of households. Most of the feminine head of households interviewed are widowed while some are single or divorced.

Ninety nine percent (99%) of the respondents in the ROW are involved in farming where they grow subsistence and cash crops while some 39% are pastoralist. This is followed by businessman at 5%, and civil servant at 1% of households in the ROW who derive their income from formal employment.

5.1.3 Structures Affected by the Wayleave

There are 297 houses and 5 shops, belonging to 213 distinct households, affected by the wayleave. Overall, 253 households or 49% of the total number of affected households have a house or a secondary structure affected.

About 74% of the affected PAPs do not have alternative land to build their affected structures (principal or secondary), either adjacent or within the existing affected land. Those who claim to have no alternative land are mainly those PAPs in urban areas such as Singida or near villages such as Babati and in areas with land scarcity such as those in Dareda-Hanang District. Alternative land will need to be found before reconstruction in those cases.

5.1.4 Fields, Crops and Trees Affected by the Wayleave

A good part of the impacted households (90%) have a cultivated parcel or a farming area affected by the wayleave. A total of 471 interviewed households were growing a crop or small trees in the wayleave.

In total 269 households (52% of affected households) have at least one tree growing higher than 4.5 meters, on their affected parcel.

Cattle and cows are the more prevalent animals that the impacted households have and that use the wayleave.

6 IMPACT OF THE PROJECT ON THE HUMAN ENVIRONMENT

Four main categories of affected people have been identified:

- 253 owners of plots with houses and/or a secondary structure in the wayleave, among them 74% do not have land to rebuild on;
- 471 households have crops or cultivate small trees (banana, etc.) in the wayleave;
- 269 do have at least one tree, growing higher than 4,5 meters, on their affected parcel;
- 326 owners have animals in the wayleave that are free-ranging, fenced or tethered.

A certain number of households are affected by multiple impacts:

- 155 households have grazing fields and/or crops and/or trees and a house or secondary structures affected;
- Households with crop and cultivated trees will be affected temporally by the construction and will lose their trees (if they grow higher than 4.5 meters). Some space under the pylons will be lost for cultivation or grazing;
- The free-ranging animals will not have access to a part of the land temporally during construction.

Owners of plots with houses or other structures in the wayleave will be affected by:

- Loss of land and houses in which they are living;
- Loss of other buildings and structures;
- Productive time lost to participate in the evaluation of impacts and other administrative tasks.

The affected households with houses will also be physically relocated. Most of them do not have available space to relocate their structure on and land must be bought before the reconstruction.

There are 23 community buildings affected along the ROW that need to be reconstructed. In the vast majority of cases, the communities have a piece of land on which it is possible to reconstruct them.

Some community sites are also affected and, in particular, community forests that need to be compensated for. A reforestation program is proposed to this effect (see the project ESIA report).

7 VALUATION AND COMPENSATION

The RAP, LRS implementation and Monitoring budget is summarised in the table below. This includes all costs involved in the execution of all RAP and LRS activities. The total budget is: **39,980,379.09 USD** The only RAP activities that are planned for a longer period (about 3 years) are the monitoring and evaluation activities which are scheduled to be done once a year after completion of major RAP activities.

Table 2 RAP and LRS Implementation and Monitoring Cost

The RAP, LRS implementation and Monitoring budget is summarised in the table below. This includes all costs involved in the execution of all RAP and LRS activities. The total budget is: **39,980,379.09 USD (**Table 12.2).

Resettlement Action Plan (RAP)		
PIU Formation and activities (3 years) This include cost for public information campaign (Pamphlets, public announcement in newspaper, etc.) and compensation for local administrators	930 000 000	1 243 535
Detailed land and household evaluation	434 000 000	280 000
Permanent lost land compensation	39,970,439,000	25,787,380
Resettlement of principal structures (houses, shops, etc.)	4 509 864 500	2 909 590
Resettlement of secondary structures (kitchen, latrine, etc.)	518 070 450	334 239

Community buildings (church, schools, etc.)	1 517 450 000	979 000
Crops compensation	1 730 650 950	1 116 549
Trees compensation	195 258 150	125 973
Arusha substation's land compensation and house	2,942,700,000	1,892,411
Compensation sub-total	**42,913,139,000**	
Contingences 10 %	429,131,390	937,490
Total RAP	**47,204,452,900.00**	
Livelihood Restoration Strategy (LRS)		
Access roads, provision of wells, follow up for providing woman employment (1% of project cost)	2 635 000 000	1 700 000
Rural Electrification Program (cost to provided after study)		205,787
Rural Electrification Study program	320,000,000	206,451
Administration of LRS (10%)	295,500,000	190,032
Total LRS	**3,250,500,000**	**2,095,819**
Total RAP and LRS	**50,454,952,900**	**32,551,582.52**
Inflation rate for next three years 7.3% (historical rate 2012-2014) source National Bureau of Statistics	11,049,634,685	7,128,796.57
Monitoring cost of RAP and LRS (USD 100,000 / year for 3 years	465,000,000	300,000
Total RAP and LRS after inflation	**61,969,587,585**	**39,980,379.09**

Conversion rate: 1 550 Tsh = 1 USD.

8 INCOME AND LIVELIHOOD RESTORATION STRATEGIES

The communities will be impacted negatively mainly through the displacement of community structures and through the effects on some of their community sites (forest, cemetery, etc.).

To minimize these impacts, sufficient time and funds must be allowed to reconstruct the affected structures before the clearing of the wayleave and the erection of the transmission line. In all cases, except if the community leaders choose otherwise, the new structure should be located near the previous one to reduce disruption of community, spatial organisation and services.

The Livelihoods restoration that is proposed could be used to improve, as suggested by the community leaders, public buildings (schools), services (dispensaries), and infrastructures (water supply, roads). Equitable distribution of the fund is very important. Communities should receive their share according to the length of the wayleave within their community and the number of households affected.

Different restoration packages will be required for each of the various categories of PAPs depending on the magnitude of the loss, their levels of vulnerability, their preferences associated to their family characteristics and other circumstances.

Most of the affected households have trees (natural and planted) and some crops that will be destroyed during the construction of the transmission line. In most cases cultivation of crop can be restored except for those trees that can grow higher than 5 meters. The impact is thus minimal and temporary provided that households have enough time to prepare, are duly compensated and receive as much as possible fringe benefits (work for the clearing of land restoration of compacted soil, ownership of wood cut on their plot, etc.).

For those households (253 cases) that have a house or secondary structures affected by the project, a large majority (74%) do not have land available to reconstruct them nearby. The potential impact for these households is more important. All necessary steps should be taken by TANESCO and the Project Implementation Unit (PIU) in charge of compensation and reconstruction follow-up, to buy suitable land for reconstruction, and ensure that enough time for reconstruction and proper compensation is attributed.

9 INSTITUTIONAL ARRANGEMENTS FOR RAP IMPLEMENTATION

Responsibility for the good implementation of this RAP lies with the electricity companies for whom the proposed power infrastructures will be built, that is to say TANESCO (Tanzania).

These companies will thus be responsible for setting-up the Project Implementation Unit (PIU). This structure will take care of the implementation of the RAP, including the monitoring activities and implementation of the CSRF.

A training program must be implemented as part of the PIU setting-up process to enhance awareness among key personnel involved with the supervision of compensation evaluation, procedures and implementation of others mitigation and compensation measures.

10 MONITORING, REVIEWS, AND EVALUATION

Monitoring and evaluation includes: the establishment of socio-economic background data of the affected persons prior to actual land acquisition or physical relocation and regular monitoring of their situation for an extended period of time after land acquisition and relocation.

In addition, qualitative and quantitative evaluations will be made to see whether the resettlers and affected people achieve at minimum their pre-project standard of living as a result of the livelihood restoration programme.

For monitoring, the two PIU will take full responsibility for conducting regular internal monitoring of the land acquisition, resettlement and compensation process and report to the authorities (TANESCO, Lenders, Government officers and community leaders, etc.).

11 GRIEVANCE MECHANISMS

A three steps grievances mechanism is proposed to ensure proper care of PAP's compensation and other possible source of insatisfaction.

This three step mechanism has been design so it is simple, administered as far as possible at the local level, to facilitate access, flexibility and openness to various proofs, taking into account that most of the PAPs have minimal awareness with regard to grievances procedures.

All PAPs and impacted communities will be informed about the grievances procedure and their rights at the implementation stage of the RAP.

Livelihood Restoration Strategy (LRS)

The Namanga-Singida project will have many impacts on land use and on many households. But, for the communities affected, the positive impacts are limited - some jobs and revenues during construction. It is recommended to dedicate some funds to general development objectives, with communities taking the lead in determining which priority project they wish to implement. Consultations with community leaders helped identify these priority projects.

12 RAPS IMPLEMENTATION SCHEDULE

FIGURE 1 RAP IMPLEMENTATION AND FOLLOW-UP SCHEDULE

S/N	Activity	Responsible	Dec - 2013	Jan-2014	Feb-2014	Mar - 2014	Apr-2014	May - 2014	June - 2014	July - 2014	Aug - 2014	Sept - 2014	Octo - 2014	Nove - 2014	Dece - 2014	Jan - 2015	Febr - 2015
1	Demarcation of centre line and boundary limit (Singida- Arusha)	TANESCO															
2	Putting up Control points extension (Namanga – Arusha)	Survey and Mapping Division / TANESCO															
3	Demarcation of centre line and boundary limit (Namanga – Arusha)	TANESCO															
4	Stakeholder's Consultation Meetings on sensitization of what is required to make RAP implementation a success	TANESCO, District Councils (Land Officers, Valuation teams), District Commissioner's and Regional Commissioners representatives,															
5	Valuation of properties for compensation	Government Valuers/TANESCO															
6	Compensation payment	TANESCO in collaboration with Respective Councils															
7	Grievances Redress	TANESCO in collaboration with Respective Councils															
8	Monitoring of RAP and LRS																

NB:

1. Demarcation of Centre line and boundary limit between Singida and Arusha: Completed
2. Putting up of Control Points extension between Namanga and Arusha: Completed

3. Demarcation of centre line and boundary limit between Namanga and Arusha 63km covered by 16th July 2014

4. Compensation payment will be paid directly by TANESCO in collaboration with respective council: It will be paid in phases for each of the District Council in the respective region to avoid long wait by those evaluated first.

5. Monitoring of RAP and LRS – To continue for 3 years

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1 INTRODUCTION

1.1 Project Background

The Governments of Kenya and Tanzania, under the auspices of the Nile Basin Initiative / Nile Equatorial Lakes Subsidiary Action Programme (NELSAP), have intended to carry out a feasibility study and detailed design for a power line to interconnect the power grid systems of Kenya and Tanzania. The whole study consists in Feasibility Study, Environmental and Social Impact Assessment (ESIA), Resettlement Action Plan (RAP), Detailed Design and Tender Documents of the Kenya – Tanzania Power Interconnection. The study is composed of two consultancies: (i) Feasibility Study and Detailed Design and (ii) ESIA & RAP.

The 400 kV transmission line (TL) will extend from Isinya substation in Kenya to Singida substation in Tanzania. The length of the TL is about 505 km (Isinya – Arusha = 204 km and Arusha – Singida = 301 km) with about 90 km in Kenya and 415 km in Tanzania (Map 2.1).

GENIVAR, which is responsible for the second consultancy, has worked in close collaboration with the Consultant in charge of the feasibility study. Particularly, during the prefeasibility study, the corridor analysis was carried out in close cooperation to decide on the best corridor for the technical, environmental and social considerations. The aim of the environmental activities at this stage has been to identify possible corridors and to ensure the environmental and social acceptability of technically viable line routes and to create basis for the decision for implementation.

This approach has allowed considering environmental and socio-economical issues right at the beginning of the project, during the corridor analysis. This proven approach avoids repeated corridors assessment and allows for the fast establishing of acceptable corridors.

The different alternatives were presented to the PMC in Dar es Salaam (13-14 April 2011). The main conclusion of this meeting was an agreement on the corridor recommended by RSWI/GENIVAR.

GENIVAR-ERMIS have thus conducted additional consultations with the communities and stakeholders and a survey of the landowners affected by this alternative line route. These consultations and the survey were held between February 25 and March 12, 2012. The survey showed that the alternative corridor proposed by Ketraco presented a major obstacle: a private airstrip is crossed by the ROW near Bisil. RSWI/GENIVAR has determined a final corridor route to avoid this airstrip.

1.2 Scope and Objectives of the RAP framework

The objective of this framework for the RAP is to provide guidelines in the mitigation of social impacts of the project, including rehabilitation/resettlement operations in order to ensure that the PAPs will not be impoverished by the social impacts of the project and that affected communities receive as much positive benefits as possible.

In order to obtain a precise evaluation of the compensation that need to be provisioned for the implementation of the project a detailed survey of 100% of affected households and land was done; between 80 to 100% of the owners of these affected parcel were interviewed. The communities impacted by the wayleave were consulted and much information on their socioeconomic situation was gathered through interviews with local chiefs and community administrators. This detailed survey was done to ascertain the number of affected structures, sites, crop and trees affected and to determine the level of compensation.

However, because a detailed land survey (with a registered surveyor), including the demarcation of the transmission line corridor, was not done here, the report on the valuation of PAPs' assets presented here must be considered as an estimation. The guidelines provided here will ensure that proper compensation and sufficient preparation time are given to affected communities and households.

A detailed census with a registered surveyor must be done when the RAP will be completed.

Stakeholders on various administrative levels and non-governmental organizations (NGOs) have been consulted in both countries. The results of these consultations are included in the report and summarized in Chapter 4.

This RAP was prepared in concordance with the guidelines of the government of Tanzania, as well as the policies and procedures of the World Bank (WB) (see Chapter 3).

2 PROJECT

2.1 Project Justification

The general objective of the project is to increase transit capacities and flexibility of operation of the grid and to improve a sustainable electricity supply in Kenya, Tanzania and the East Africa Power Pool (EAPP). Today, the rate of access of to electricity is around 23% in Kenya and 14% in Tanzania. The interconnection project will enhance economic and social development in the region by improving quality and increasing energy availability. The project will provide a more sustainable energy supply for both countries and will increase power supplies to areas lacking electricity. The project will then help reduce the duration and frequency of power interruptions in both countries including Nairobi, Isinya, Arusha, Manyara, Dodoma and Singida regions. It will help reduce power system and technical losses to meet the existing and increasing power demand in the whole area.

Indeed, it appears that this initiative will develop rural electrification projects that will increase the electricity connectivity all over the two countries. Higher electricity availability would in turn spur development of small industries, including tourism, and rural-based industries such as agro processing. The benefits of rural electrification are also very significant for the population by serving educational and medical infrastructures.

2.2 Line Route and Corridor Alternatives

At the stage of the preliminary study, different corridors were compared except for the section from Isinya to Arusha (Corridor E) for which the Terms of Reference focused on reviewing the line route proposed by BKS-Acres in 2002.

A local optimization of this line route was carried out during this detailed study, in collaboration with RSWI, in charge of the Detailed Design and Tender Documents. This final optimization avoided the most sensitive elements, such as schools, churches, etc., and minimized the need to construct new access tracks.

Corridor Alternatives between Arusha and Singida Substations

At the initial stage of the project, three corridors (A-B-C) were compared between Arusha and Singida substations. Following this comparison, Corridor B was chosen. The criteria used for the design and the selection of the least impact corridor were:

- Technical: topography, watercourses, soils, access, poorly drained and floodable sectors, airports, power line and road crossings, number of angles, etc.;
- Environmental: vegetation, protected areas, main watercourses, birds and mammals migratory corridors, fauna reproduction areas, etc.;
- Socioeconomic: number of villages affected, tourism infrastructure (lodges, etc.), permanent agriculture (coffee, fruits, etc.), livestock, tree plantations, military grounds, etc.

For technical reasons, Corridor B was preferred due to its direct route from the proposed Arusha substation to Singida substation. Also, for about 207 km of the 301 km between Arusha and Singida, the proposed corridor follows the existing 220 kV transmission line, which reduces environmental and social impacts. Corridor B is also the shortest alternative with the fewest number of angle points and least amount of technical constraints and problematic zones, therefore costs associated with this option should be less.

The following positive aspects were also identified during stakeholders meetings:

- There are less potential cultural heritage sites in Corridor B than in the other corridors;
- There are less farms and settlements in Corridor B than in Corridor A;
- Even if there are a number of migratory corridors in Corridor B, especially between Tarangire and Manyara Lake National Parks, it will have a minimal impact on this issue compared to Corridors A and C;
- Corridor B is already impacted by the presence of another transmission line, a maintenance road is already present and can be used for both lines, the width of the ROW for this new line is also minimised because it shares its space with the existing 220 kV line;
- Makuyuni, which is located at a little more than 1 km west of Corridor B, is an Export Processing Zone (EPZ) for the region as it is the main junction to Arusha, Babati, tourist circuits, Mwanga and Musoma. Additional power will thus represent an advantage for the development of this area.

The final corridor is about 505 km long (Map 2.1).

2.3 Description of the Corridor

As per the Terms of Reference, the first corridor considered between Isinya and Arusha was the one proposed by BKS-Acres (2002). Following the site visit in

January 2011, the route of this corridor was optimized to consider the environmental and social issues and specially to minimize relocation and compensation needs and impacts on landscape.

2.3.1 Description of the Corridor's Tanzanian Section, from the Tanzanian Border to Singida Substation

The Tanzanian section of the corridor has a total length of about 415 km. The corridor crosses the border at Namanga and ends at Singida substation. To make its description easier, this portion of corridor was divided into 14 sections (Maps 4 to 17, Appendix 1).

2.3.1.1 Section Tanzanian Border – E17 (Map 4)

This section changes to a southwest direction and continues to follow road A104 for 20,7 km. The beginning of this section passes east of the city of Namanga. Throughout this section, the corridor crosses several streams and tracks. Between angles E11D and E11E, the corridor crosses road A104 from east to west. From angle E11E to angle E17, the corridor passes just to the north of the village of Kimokouwa.

Population is dense around the village of Namanga but light elsewhere in the section and access to the corridor remains good.

The vegetation in the area consists of grasslands and shrubs. Terrain profile in the region is hilly throughout most of the section.

2.3.1.2 Section E17 – E21 (Map 5)

From angle E17, the corridor takes to a southern direction for 38,8 km following the route of road A104. From angle E17 to angle E19, the corridor crosses several streams and tracks and also loops around Longido National Forest Reserve, with the corridor located about 2 km to the west of the village of Longido. Angle E18 is located near the Olkaju Lo Murwak River and the corridor follows it until just after E19 where it crosses the river. From angle E19, the corridor cuts a few tracks, the Tanganyet and Nondona Rivers between E20 and E21.

Terrain vegetation in this section consists mainly of shrub lands. From E17, the terrain profile drops to angle E20 and from there the terrain is hilly and ascending.

Longido National Forest Reserve is the only protected areas in this portion of the corridor.

Between angle E20 and E21, near Lariboro, the corridor crosses the Kilimanjaro-Lake Natron wildlife corridor, which connects the two protected areas (see section 5.2.6.1).

2.3.1.3 Section E21 – E31 (Map 6)

This section is 24 km long. From E21 to E27A, the corridor generally keeps to a southern direction and follows A104's route. Then, from E27A to E31, the corridor takes a western trajectory.

The beginning of this section, at angle E21, is located west of Enduimer Wildlife Management Area. Between angles E21 and E22 and just after E22, the corridor cuts several tracks and zones of seasonal swamps. The Lemanda River and a few other streams are then traversed between angles E22 and E23. Mount Kilimanjaro, with its highest peak at an altitude of about 5 900 m, is at a distance of approximately 73 km from angle E23. Most of the corridor in this section, as well as adjacent sections, is positioned to the west of road A104 so that the landscape of this beautiful region is not disturbed. Between E26 and E27A, the corridor crosses the Lamarida River and road A104. Between E27A and E28, road A104 is crossed a second time. At angle E28, the corridor passes by Arusha National Park, to the west. The Lalaiririwar River and several streams are then cut between angles E28 and E29. Continuing its path, the corridor traverses several other streams between angles E29 and E30 that are running off Mount Oldonyo Sambu, located west of the corridor. A few rivers are also crossed by the corridor between E30 to E31.

The region is lightly populated along the corridor path but access is still simple due to road A104 and various tracks.

Similar to the previous section, vegetation is mainly shrub lands. The terrain profile is undulating.

2.3.1.4 Section E31 – B8 (Map 7)

This section goes in a southern direction for 30 km that is from E31 to Arusha substation (Photo 2.3). After angle E31, the corridor crosses the Xandasikirlit River and begins to diverge from road A104, not far from angle E32. The region becomes densely populated in this section and numerous tracks are crossed and located nearby making access to the corridor easy. Angle E44 is located about 2,5 km to the east of the village of Mkulat. This section has many angle points in order to avoid populated areas.

The corridor bypasses the Loilenok Hills between angles E41B and E45. An existing transmission line is crossed at angle E45, which can be found at less than 4 km west of the Arusha airport. The population is less dense between E41B and E45 but after E45, the corridor cuts road A104 and the population begins to increase as well as the agriculture. Several tracks are crossed. Angle E47 is located about 1 km to the southeast of the village of Kisongo. The proposed Arusha substation is about 12 km west of Arusha city center and is located at a junction with the existing Arusha-Singida 220 kV transmission line.

The land is heavily cultivated with some patches of woods, plantations, grass and shrubs lands.

The terrain profile in this section is hilly but generally descending to reach an elevation of about 1 375 m at the proposed Arusha substation.

From Arusha substation to B8, the corridor follows a western direction for 6 km.

Photo 2.1 Selected Location for Arusha Substation

The topography of this portion of corridor is relatively flat. This portion of corridor starts by passing between two small hills, in the area of the community Laiwilokwin, and then, goes through the Ardai Plains. Several rivers and streams are crossed throughout this section.

The area is lightly populated and several main tracks and trails are located nearby and are also crossed, therefore access is easy. Between angles B7 and B8, the corridor cuts road A104.

Vegetation in the region consists mainly of agricultural lands and grasslands. Maasaï presence is important and the area is crossed by their cattle. A few agricultural fields are crossed as well as inhabited areas.

2.3.1.5 Section B8 – B13A (Map 8)

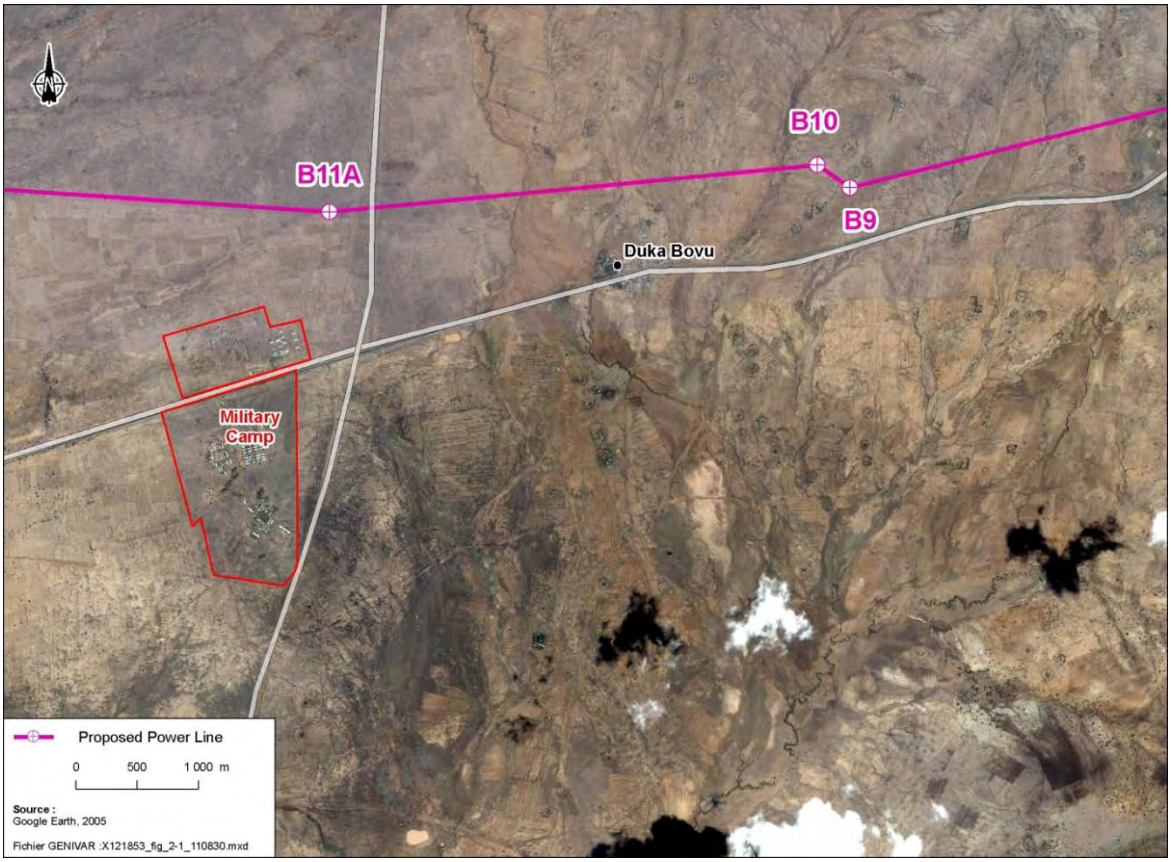
This section goes west for about 29,9 km. The corridor crosses the Olemusa and Ardai Rivers between angles B8 and B11B. It also crosses the road going North to Monduli, as well as other secondary roads. The corridor also crosses an existing power line near the town of Duka Bovu (Photo 2.4), between angles B9 and B10. A few other rivers and tracks are crossed between B11B and B13A.

The corridor passes through the military grounds situated between the road A104 and Monduli (Figure 2.1). This military camp is already crossed by the existing 220 kV line from Arusha to Singida.

The topography of this section is quite flat as it mainly crosses the Ardai plains. This portion of corridor is also very lightly populated.

Photo 2.2 Landscape near Duka Bovu, Monduli District

Figure 2.1 Corridor Located North of the Military Camp, Monduli District



There are no cultural heritage sites in this portion of corridor. The nearest site is a prehistoric pseudo dam, located at about 6 km from the corridor.

There are no protected areas in this corridor. The nearest being the Monduli Forest Reserve located at about 12 km north of the corridor.

2.3.1.6 Section B13A – B16A (Map 9)

This portion of corridor is approximately 28 km long. It is located in a relatively flat sector, although more hilly than the previous portion of corridor. It starts on the southern border of Eluanata-Naja Swamp and generally follows the route of the main road A104, without crossing it. However, the corridor crosses several secondary roads as well as Road B142, located in Makuyuni. This corridor also crosses an existing power line at a few locations.

After angle B13A, the corridor crosses the Esikiria and Ayaiyai Rivers and a few tracks between angles B13A and B15A. The corridor begins to follow the Kaimisi River from angle B14B and crosses it just before angle B15A. The corridor also cuts a few streams and tracks. At angle B15D, road B142 is crossed by the transmission line. Just before angle B16A, located about 1,5 km to the northwest of the village of Makuyuni, the corridor crosses the Makuyuni and Olikeju Leposhar Rivers. Not far

after B16, the corridor passes through a seasonal swamp. Several other streams are crossed.

This portion of proposed corridor does not pass through any villages. Land use is mainly characterized by natural environments and a few agricultural fields. Inhabited areas are avoided, as only a few buildings are present in the corridor.

There are no protected areas in the corridor. The corridor passes at more or less 10 km south of the Burko Forest Reserve and Essiminger Forest Reserve.

There are no cultural heritage sites in this portion of corridor. The only site located in the vicinity of the corridor is AR 7, Makuyuni. It is located at about 3 km from the corridor.

2.3.1.7 Section B16A – B21D (Map 10)

This portion of corridor has an approximate total length of 31 km. It follows the route of road A104. This road is sometimes included in the corridor and the power line crosses road 104 three times, that is between B16A and B17A, B18A and B18B, B18B and B19A. The beginning of this section is located west of road A104 and it ends east of road A104.

A river is cut between angles B17A and B18A. Just before B19A, the Oltukai River, a few streams and tracks, as well as a seasonal swamp are crossed.

The section is lightly populated along A104's route and access to the corridor is easy due to the proximity of road A104 and the various tracks in the region. The corridor also remains parallel to the existing 220 kV line throughout the section.

The corridor passes east of Kwa Kuchinia, a few buildings are present in the corridor. The corridor also passes south of Minjingu and includes only a few buildings. Minjingu is the only source of phosphate fertilizer in Tanzania. The phosphate plant is located about 1 km west of the corridor, along the A104 and south of Kwa Kuchinia.

Terrain vegetation consists of a mixture of agricultural lands and plantations but mostly grasslands and shrubs. Agricultural lands are mainly located near the community of Kwa Kuchinia.

In this section of corridor, two wildlife corridors are crossed (see section 5.2.6.1). The Manyara Ranch – Lake Natron corridor is crossed in the vicinity of angle B20C. This wildlife corridor starts in the Tarangire National Park, passes through Manyara Ranch and continues northward towards Lake Natron. The other wildlife corridor is the Tarangire – Manyara Corridor, which is crossed between angles B19A and B21C. This wildlife corridor lies between both national parks.

2.3.1.8 Section B21D – B23B (Map 11)

The total length of this portion of corridor is 29,9 km. It is located in a flat area. There are no villages crossed by the corridor. In fact, it passes south of Vilima Vitatu and Madukani.

The corridor cuts very few tracks. Access is however easy since the corridor follows the route of road A104. It is located at about 1 to 3 km east of A104.

There are no protected areas in the proposed corridor. The corridor passes between Lake Manyara National Park – located to the north-west – and Tarangire Game Reserve – located to the south-east –. It also passes west of Lake Burungi, which is in the process of becoming a Wildlife Management Area.

2.3.1.9 Section B23B – B27E (Map 12)

This section is approximately 31,5 km-long. It starts at angle B23B, at about 2 km east of Madwa. It passes at less than 3 km west of Babati at angle B25D, to end a few kilometres further south-west at angle B27E.

The corridor follows the route of road A104 until the village of Babati. The corridor crosses road A104 at angle B23F. Near this angle, a few streams are crossed, including the Ingri and Sanga Rivers. Several other streams and tracks are also crossed between B24A and B27D. At angle B27A, the corridor follows the route of road B143. This road is crossed by the proposed transmission line at angle B27C.

The corridor generally stays parallel to the existing 220 kV line with the two lines sharing the same ROW, except for a few location where they shifts way in order to avoid dwellings. The region is lightly populated and access is good due to the location of roads A104 and B143.

There are no protected areas and no cultural heritage sites in this portion of corridor.

The land use in this portion of corridor is mainly composed of agricultural fields (Photo 2.5) – towards the end of the section – and natural environments. The vegetation is characterized by the presence of more forest patches than in the previous corridors.

Photo 2.3 Agriculture between B24 and B25

At Batati, there is a substation were the existing 220 kV Arusha-Singida line is connected. From the substation, a power line crosses to Magugu, Mbulu and Karatu and another one connects Babati substation to Kondoa and Kibaya.

2.3.1.10 Section B27E – B34B (Map 13)

This portion of corridor has a total length of 33,5 km. It follows a western trajectory until Ndareda, around angle B30A, and then goes south until the end of this section, at angle B34B, east of Endasak.

The corridor generally stays parallel to the existing 220 kV line with the two lines sharing the same ROW, except for a few locations where they shift away in order to avoid dwellings. The region is lightly populated and access is good due to the location of road B143.

The corridor follows the route of road B143. It crosses the road between B27F and B27G, between B27J and B30A, between B30B and B31, as well as between B32C and B33A.

Several streams and tracks are crossed throughout this section of corridor. In the portion between angles B27E and B27H, the corridor crosses two forested areas. Dareda swamp is crossed near angle B27J, in the vicinity of the village of Ndareda. Another swamp is also crossed at the end of this section, between angles B33A and B34B.

Land use in this section is mainly agricultural with small settlements and villages disseminated along the main road. There are very few natural environments (Photo 2.6). Although this portion of corridor passes through some inhabited areas, it

avoids the most densely populated areas, such as Ndareda, Masekaroda and Endasak.

There are no protected areas or cultural sites in this corridor. Only one site, DD10 – Kandaga, has been identified at a little less than 10 km to the east of the corridor.

Photo 2.4 Landscape between B27F and B27G

2.3.1.11 Section B34B – B40E (Map 14)

This section goes south-west for 23 km. It starts east of Endasak at angle B34B and ends south-east of Katesh, at angle B40E. The corridor generally stays parallel to the existing 220 kV line with the two lines sharing the same ROW, except for a few locations where they shifts way in order to avoid dwellings. The region is lightly populated as it avoids the villages of Endasak and Katesh. Access is however easy mainly because of the presence of road B143. In fact, this section of corridor generally follows the route of this road.

Throughout this section, a few streams and tracks are cut. The portion between B40A and B40E is located in a marshy area and passes between a few lakes.

As for the previous section, land use is mainly agricultural with small settlements and villages disseminated along the main road.

2.3.1.12 Section B40E – B50B (Map 15)

This section of corridor is 36,9 km long. The topography of this portion of corridor is rugged in certain areas. The proposed corridor avoids however the most elevated areas. It generally follows road B143 and crosses it one time, at angle B45A. It also crosses several tracks and trails, thus access is simple.

A few small lakes and rivers are crossed by this section of corridor, namely the Endamudik River between angles B47B and B49A.

Land use is mainly composed of agricultural lands and more or less densely forested areas. The portion of corridor from angle B45A to B50B is located west of an important forested area.

There are no protected areas and no heritage cultural sites in this portion of corridor.

As for the previous section, it is lightly populated. In fact, the end of this section ends at about 6 km south of Endesh.

The corridor in this section might be adjusted to use the same ROW as the existing 220 kV line. This will be done in the feasibility stage, as the existing line will be surveyed and positioned using geographic information system (GIS).

2.3.1.13 Section B50B – B58B (Map 16)

This section of corridor is about 23 km long. It generally follows road B143 and crosses this road four times, *i.e.* between B50B and B51A, between B51B and B52A, between B53A and B53B, between B53B and B55. It also crosses numerous tracks and trails. This corridor passes at about 6 km south of Endesh and about 5 km north of Ngimu. The topography of this portion of corridor is relatively rugged and rocky outcrops are found in the corridor.

As for the last part of the previous portion of corridor, the beginning of this portion of corridor (from B50B to B55) follows an important forested area, located to the south. Although there are a few undeveloped areas within the corridor, there are very few forested areas in the corridor.

Land use is mainly composed of agricultural fields. There are few buildings present in the corridor, mainly in the vicinity of road B143 (Photo 2.7).

There are no protected areas or cultural heritage sites in this portion of corridor.

The corridor in this section, as well as in the previous sections, might be adjusted to use the same ROW as the existing 220 kV line. This will be done in the feasibility stage, as the existing line will be surveyed and positioned using GIS.

Photo 2.5 Existing 220 kV and Dwellings between B53B and B55

2.3.1.14 Section B58B – Singida Substation (Map 17)

This last section of corridor has a total length of 27,6 km. It follows the route of road B143 and crosses it at angle B61A. At this point, the corridor is located south of B143. This section goes south-west from angle B60A to B61A and then takes a western direction until Singida substation. A number of tracks and trails are present in the corridor, thus access is easy. This section of corridor parallels the existing 220 kV line ROW.

In general, the topography is elevated between B58B and B61A, and then the corridor is in the plain until the substation. Near B60A, especially in the southwest, there is a formation of boulder rocks (Photo 2.8).

Before arriving at the existing Singida substation, located approximately 2,5 km to the south of the village centre, the Magipandwa River is traversed not far after angle B65A.

The region is lightly populated in the beginning of the section but becomes denser as the corridor approaches the village of Singida. The terrain is a mix of agricultural land and savannah. The existing Singida substation is located at the south end of the city. Now the substation is surrounded by the development of the town and will be very soon totally encircled by buildings (Photo 2.9).

Photo 2.6 Boulders between B60A and B61A

Photo 2.7 Singida Substation Surrounded by Buildings

There are no protected areas or cultural heritage sites in this portion of corridor.

The corridor in this section, as well as in the previous sections, might be adjusted to use the same ROW as the existing 220 kV line. This will be done in the feasibility stage, as the existing line will be surveyed and positioned using GIS.

2.4 Project Components

2.4.1 Voltage Level

The main backbone power transmission system comprises 220 kV, 132 kV and 66 kV transmission power lines.

Considering the projected power transfers between Kenya and Tanzania, and the existing network layout and voltage levels, 400 kV proves to be the optimal voltage solution for this interconnection. This enables a maximum transfer of 1 250 MW.

2.4.2 Number of Circuits

A double-circuit line gives increased transmission capacity and better reliability compared to a single-circuit line but requires about a 45% higher investment. Furthermore, a double-circuit line is more flexible in planning maintenance procedures in the line itself and with the substations as well.

2.4.3 Phase Conductors

All Aluminium Alloy Conductor (AAAC) has been used in Africa in countries where ice loads are not expected and where there is no firm commitment to any particular conductor type. Its usage is justified because of its strength, necessary for very long spans and very heavy loadings.

2.4.4 Ground Wires

According to the electrical requirements, like earth fault currents, one steel wire with a cross section of 70 mm^2 should be sufficient. This wire type is also used as earth wire in both countries.

The high reliability requirements of the line shall be considered when designing the protection against lightning. The average height of highest phase conductor from ground is about 50 m.

When using two ground wires instead of one, the weight of the tower decreases, and total line costs including earth wires will be a cheaper solution than a higher tower with one ground wire. Therefore, a two ground wire solution is recommended. In this case, one ground wire is assumed to be optical ground wire (OPGW) and the other conventional galvanized steel ground wire (GSW).

2.4.5 Tower Types

The line route of the interconnection line is mostly flat or slightly hilly, only short sections are slightly mountainous.

The self-supported steel lattice towers with steel grillage foundations or concrete foundations are used in Tanzania. Both of these foundations types are possible for the interconnection line.

For cost estimation purposes, a normal suspension tower has been designed. The number of heavier towers has been estimated (angle and terminal towers) and taken into account in transmission line cost estimates.

A concise geotechnical survey is planned to be conducted as part of the technical team's mandate in the next phase of their study. At this stage of the project, no precise tower designs have been proposed for wetlands. Following the geotechnical survey, appropriate tower design will be considered during the technical team's next phase.

Photo 2.8 Example of a 400 kV Transmission Line

2.4.6 Foundations

Both steel grillage and concrete foundations are commonly used for high voltage overhead transmission lines in Tanzania. Concrete foundations in some locations would be more expensive, mainly due to very high transport costs. Materials such as cement, rebar steel, crushed stones and to some extent proper sand would have to be brought by manpower in some tower locations Generally, steel grillage foundations are basically acceptable technical solution, as long as there is no damage to the galvanizing and all steel to be buried is painted with two layers of bituminous paint for extra protection. In the event of unfavourable soil acidity (corrosive environment), which normally is rare in this part of Africa, concrete foundations are the only solution.

As a conclusion, the foundations are mostly concrete foundations for the suspension towers but steel grillage type shall be used in special conditions, too. The foundations of tensions and terminal towers shall be of concrete.

As previously mentioned, a concise geotechnical survey is planned to be conducted as part of the mandate of the technical team in the next phase of their study. As a preliminary design two main types of foundation are anticipated to accommodate expected soil conditions: slab foundation with reinforced concrete body and rock-anchored concrete block. The first type of foundation is adequate for firm or rigid clay soils, firm or rigid laterite soils, medium to large grained alluvial formations lying above the water table, and diggable bedrock. The second one is used when bedrock too hard to be excavated by a mechanical shovel is found. Rock-anchored concrete blocks are then required to support the towers.

2.4.7 Clearing of Right-Of-Way

To observe the standards used by TANESCO, the ROW width is proposed to be set to a maximum of 90 m.

When sensitive environmental components are present (forests, plantations, etc.), the ROW width to be completely deforested may be reduced by 5 or 10 m. Nevertheless, vegetation without the potential to grow beyond 5 m at maturity will not be tolerated, including possible danger trees outside the ROW. Although this approach with respect to maintenance aspects could be found hard to accept, experience from other projects in the region has shown that by engaging the local communities along the line in maintenance and monitoring of the line, these ROW requirements could be achieved. This approach is also generally effective to reduce theft of steel bracing and grounding materials from towers to a minimum[1].

Again, utilization of the terrain when selecting the final line route and spotting the towers are factors which, if skilfully performed, could further reduce the clearance requirements.

With an estimated ruling span for the 400 kV line of approximately 350 m, the tower heights (from top of foundation to the cross arm) would range from 48 to 50 m.

1

2.5 Construction and Operation Requirements

For technical reasons related to the network construction and operation, the line requires a ROW 90 m. It is in the middle of this ROW, from where all structures will have to be removed, that the line will be built.

There is no high voltage transmission line from Isinya to Arusha but where it exists in Tanzania, the 220 kV line has a ROW that is 60 m wide. As mentioned above, according to the criteria that are in use by TANESCO, the ROW width which is required to build a new 400 kV line is 90 m. In the section of the new 400 kV line built in parallel to the existing 220 kV line between Arusha and Singida, the additional requisite wayleave width would be reduced to 70 m. In fact, the juxtaposition of the two ROWs will permit that the total width of the two ROWs be reduced to 130 m (60 m for the existing 220 kV line and 70 m for the new 400 kV line) instead of 150 m (60 m for the existing 220 kV line and 90 m for the new 400 kV line).

In addition, TANESCO, which is responsible for maintenance, is well advised to be in good terms with the ROW owners and users so as to provide them with responsibility for vegetation control in their ROW section. This kind of agreement allows the user to go on carrying out his/her activities (*e.g.* agriculture, livestock farming, plantations, etc.) as far as they are not dangerous to the network operation since, for the operating manager, they favour the reduction of theft and vandalism risks on the line.

During construction, it would be necessary to establish temporary construction camps and access roads where required. The location and extent of these components are not known at the moment.

2.6 Project Cost and Schedule

The total project cost calculated in June 2012 value and allowing for 5% physical contingency and using an average inflation of 5% per year is estimated at 191 M USD.

It does include a cost for the mitigation program for environmental and socio-economic impacts of the project, covering compensation for the loss of permanent and temporary assets and Livelihood Restoration Strategy (LRS) and an Environmental and Social Management Plan

Construction will extend to two years.

3 INSTITUTIONAL AND LEGAL FRAMEWORK

This section focuses on the legal and institutional requirements related to land right acquisition for the ROW and compensation of PAPS.

The larger institutional and legal framework appropriate to the environmental sector and the implementation of the project is described in the ESIA report.

3.1 Tanzania

3.1.1 Institutional Framework

The institutional actor for population resettlement and compensation is the Ministry of Lands, Housing and Human Settlements Development. This Ministry is mainly responsible for land use planning, surveying and demarcating land/parcel/farms, and provision of land ownership and tenancy in both rural and urban areas. Within the Ministry, there is a Chief Government Valuer who is responsible among other things to ensure that prior to compensation of assets to any Project Affected Persons (PAPs), valuation reports are prepared according to the Land Act of 1999. Therefore, after a valuer has prepared a valuation report, the report is sent to the Chief valuer for approval.

3.1.2 Legal and Regulatory Framework

3.1.2.1 National Policies

National Land Policy, 1995 (revised in 1997)

The main objective of the National Land Policy (URT, 1997) is to address the various and ever-changing land use needs. The Policy aims “to promote and ensure a secure land tenure system, to encourage the optimal use of land resources and to facilitate broad-based social and economic development without endangering the ecological balance of the environment” (ibid: 5). Specific objectives are outlined in the Land Policy. However, the following are directly related to the proposed transmission project:

- Ensure that existing rights in land, especially customary rights of small holders (i.e. peasants and herdsmen who are the majority of the population in the country), are recognized, clarified, and secured in law;
- Set limits on land ownership which will later be translated into statutory limits to prevent or avoid the phenomenon of land concentration (i.e. land being held by few individuals);
- Ensure that land is put to its most productive use to promote rapid social and economic development of the country;
- Protect land resources from degradation for sustainable development.

Land Acquisition and Resettlement Policy

There is no Resettlement Policy in Tanzania. The resettlement process at TANESCO is guided by the Land Regulations of 2001. The draft National Resettlement Policy Framework which was prepared in 2003 based on the World Bank's OP 4.12 on Involuntary Resettlement requires that:

1. Involuntary resettlement should be avoided or minimized where feasible by seeking viable alternative designs;
2. If not feasible, resettlement activities should be conceived and executed as sustainable development programs to benefit the PAPs;
3. Displaced persons should be fully consulted and participate in planning and implementing resettlement programs; and
4. Displaced persons should be assisted in improving their livelihoods and standards of living to at least pre-displacement.

3.1.2.2 National Laws

Land Act, 1999

This Act lays down fundamental principles for occupying and using the land. Among them is the principle that any land user shall ensure that land is used productively and that any such use complies with the principles of sustainable development.

Tanzanian land falls under three categories, namely:

- Reserved Land is land set aside for wildlife, forests, marine parks, etc., and the ways these areas are managed is explained in the laws that protect each sector (e.g. Wildlife Conservation Act, National Parks Ordinance, Marine Parks and Reserves Act, etc.). Specific legal regimes govern these lands under the laws used to establish them;
- Village Land includes all land inside the boundaries of registered villages, where the Village Councils and Village Assemblies are given power to manage. The Village Land Act gives the details of how this is to be done;
- General Land is land, which is neither reserved land nor village land and is therefore managed by the Commissioner. The Land Act is governing this land.

The Land Act of 1999 (Section 34) also states that where a right of occupancy includes land which is occupied by persons under customary law, and those persons are to be moved or relocated, they must be compensated for loss of interest in the land and for other losses. They also have the right to reap crops that are sown before any notice for vacating that land is given. The Land Act (Section 156) requires that with regard to communal right of way in respect of way-leave, compensation shall be paid to any person for use of land, who is in lawful or actual occupation of that land, for any damage caused to crops or buildings and for the land and materials taken or used for the works. Requirements for the assessment of compensation are provided in the Land (Assessment of the Value of Land for Compensation) Regulations of 2001. Valuation must be done by a qualified and authorized valuer.

The basic principle governing compensation is that none of the PAP should be made worse off by the project displacements. According to the Tanzanian legislation, market values should be applied when valuing the affected houses and structures. Households losing their residential premises are entitled to an "Accommodation allowance" to cover the cost of renting another premise for up to 36 months, while purchasing or building a new house. In case of no active rental markets, estimation of the monthly renting rates may also need to be done using alternative methods.

Compensation is granted to those having annual and perennial crops, including fruit trees. The values are assessed through a market value approach as proposed in the legislation, in particular under Section 179 of the Land (Assessment of the Value of Land for Compensation) Regulations, 2001 and are available at the Government district valuers offices.

In the absence of a formal Resettlement Policy, the following legal instruments provide the legal framework for compensation and resettlement in Tanzania:

- The Land Act (1999);
- The Land Regulations (2001);
- The Village Land Act (1999);
- The Local Government (District Authorities) Act;
- The Local Government (Urban Authorities) Act;
- The Land Acquisition Act (1967);
- The Town and Country Planning Ordinance cap 378;
- The National Energy Policy of Tanzania (2003);
- The Environment Management Policy (1997) and Act (2004).

Village Land Act No. 5 of 1999

The Village Land Act No. 5 of 1999 (URT, 1999) governs village land and all matters related to land tenure under the Village Councils. Section 8 (1), (2) and (3) of the Act empowers the Village Council to manage all village lands in accordance with the principles of a trustee with the villagers being the beneficiaries. In exercising these functions, the Village Council is required to have regard to the following principles:

- Sustainable development and the relationship between land use, other natural resources and the environment in and contiguous to the village;
- The need to consult with and take account of or comply with the decisions or orders of any public officer or public authority with jurisdiction over any matter in the area where the village is; and
- The need to consult with and take into account the views of other local authorities with jurisdiction over the village.

Although the Village Land Act recognizes the role of the Village Councils in terms of management, most of the land in the villages is under individuals through the customary land rights. The right of the individuals to the land must be recognized and

respected and development should not take more than the land it needs for that particular development.

The Land Regulation (2001)

The Land Regulation provides guidance on the issue of compensation. According to Section 10 (1) of the Land (Compensation Claims) Regulation 2001, compensation shall take the form of:

- Monetary compensation;
- Plot of land of comparable quality, extent and productive potential to the land lost;
- A building or buildings of comparable quality, extent and use comparable to the building or buildings lost;
- Plants and seedlings;
- Regular supplies of grain and other basic foodstuffs for a specified time.

The Regulation Assessment of Value for Compensation states "...the basis for assessment of the value of any land shall be the market value of such land". The market value is arrived at by the use of the comparative method and substantiated by actual recent sales of similar properties or by use of income approach or replacement cost method, in case the property is of special nature and not saleable.

The assessment of the value of land and any improvements will be done by a Qualified Valuer and verified by the Chief Valuer of the Government or his/her representative.

In addition, the Regulation defines affected people that are eligible for compensation/ resettlement if some of their properties are affected by a proposed development:

- Holder of right of occupancy;
- Holder of customary right of occupancy whose land has been declared a hazard land;
- Holder of customary and who is moved or relocated because his/her land becomes granted to another person;
- Holder of land obtained as a consequence of disposition by a holder of granted or customary right of occupancy but which is refused a right of occupancy;
- Urban or peri-urban land acquired by the President.

If the person does not agree with the amount or method of payment or is dissatisfied with the time taken to pay compensation, he/she may appeal to the High Court for redress. If proved justifiable, the High Court shall determine the amount and method of payment, determine any additional costs for inconveniences incurred, and order the plaintiff to be paid accordingly.

The Land Disputes Courts Act No. 2 of 2002

Every dispute or complaint concerning land shall be instituted in the Court having jurisdiction to determine land dispute in the given area (Section 3).

The Courts of jurisdiction include:

- The Village Land Council;
- The Ward Tribunal;
- District Land and Housing Tribunal;
- The High Court (Land Division);
- The Court of Appeal of Tanzania.

The Act gives the Village Land Councils powers to resolve land disputes involving village lands (Section 7). If the Council fails to resolve the dispute, the matter can be referred to the Ward Tribunal as established by the Land Act (1999) and the Village Land Act. If any dispute will arise because of this project, the provision of this Act shall be observed.

3.2 International Funder Policies, Procedures and Guidelines

3.2.1 Regional Organizations Relevant to the Project: East African Community

The treaty unifying the three East African Countries of Kenya, Uganda, Tanzania Rwanda and Burundi was signed in November, 30th 1996 by the presidents of the respective countries. Article 101 on Energy states as follow: “The partner states shall adopt policies and mechanisms to promote the efficient exploitation, development, joint research and utilization of various energy resources available within the region.” For the purposes of the above article, the partner states undertook to promote within the community:

- Least cost development and transmission of electric power, efficient exploitation of fossil fuels and utilization of new and renewable energy sources;
- Joint planning, training and research in, and the exchange of information on the exploration, exploitation, development and utilization of available energy resources;
- Development of integrated policy on rural electrification;
- Development of inter-partner state electrical grid inter-connections;
- Construction of oil and gas pipelines;
- Other measures to supply affordable energy to their people taking cognizance of the protection of the environment as provided for by this treaty.

Therefore the proposed 400 kV dual-circuit transmission line and concerns about rural electrification are in line with the provisions of this treaty of the East African countries.

3.2.2 International Agreements and Treaties

3.2.2.1 African Development Bank

The environmental and social policies of the African Development Bank (AfDB) were developed over the years and evolved to support the main objective of the AfDB to provide assistance to African Regional Member Countries in their economic and social development. To reach this objective, the AfDB will ensure that environment and gender issues are mainstreamed in each broad sectoral area and in a fully participatory manner. The AfDB's Involuntary Resettlement Policy, 2003 is applicable to the project.

Involuntary Resettlement Policy, 2003

AfDB has put the Involuntary Resettlement Policy in place and this covers involuntary displacement and resettlement of people caused by an AfDB financed project. This policy applies when a project results in relocation or loss of shelter by the persons residing in the project area, assets being lost or livelihoods being affected.

The primary goal of the Involuntary Resettlement Policy is to ensure that when people must be displaced they are treated equitably, and that they share in the benefits of the project that involves their resettlement. The objectives of the policy are to ensure that the disruption of the livelihood of people in the project's area is minimized, ensure that the displaced persons receive resettlement assistance so as to improve their living standards, provide explicit guidance to AfDB staff and to borrowers, and set up a mechanism for monitoring the performance of the resettlement programs. Most importantly, the resettlement plan should be prepared and based on a development approach that addresses issues of the livelihood and living standards of the displaced person as well as compensation for loss of assets, using a participatory approach at all stages of project design and implementation.

Compensation at the full replacement cost for loss of lands and other assets should be made before projects implementation. The improvement of these living standards should also apply to host communities. In addition, the needs of disadvantaged groups (landless, female headed households, children, elderly, minority, religious and linguistic groups, etc.) must be at the centre of the development approach.

Economic benefits and costs should be applied to determine project feasibility with regard to resettlement. The full costs of resettlement activities necessary to achieve the objectives of the project should be included in the total costs of the project. The costs of resettlement like the costs of other project activities are treated as a charge against the economic benefits; and any net benefits to resettlers (as compared to the "without-project" circumstances) should be added to the benefits stream of the project.

Economic and social considerations should be taken into account in determining the requirements for compensation. Under the present policy, only displaced population having formal legal rights to land or assets and those who can prove entitlement under the country's customary laws are considered and will be fully compensated for

loss of land or other assets. However, a third category of displaced persons who have no recognizable legal right or claim to the land they are occupying in the project area will be entitled to resettlement assistance in lieu of compensation for land. Land, housing, and infrastructure will be provided to the adversely affected population, including, religious and linguistic minorities, and pastoralists who may have usufruct rights to the land or other resources taken for the project.

The developer will be required to prepare a full resettlement plan for any project that involve a significant number of people (200 or more persons) who would need to be displaced with a loss of assets, or access to assets or reduction in their livelihood.

For any project involving the resettlement of less than 200 persons, an abbreviated resettlement plan will be produced. According to the AfDB's disclosure policy and the AfDB's Environmental and Social Assessment Procedures (ESAP, 2001) a full resettlement plan and the abbreviated resettlement plan should be posted in the AfDB's Public Information Centre and the AfDB's web site for public review and comments.

3.2.2.2 World Bank Safeguard Policies

The World Bank environmental and social conservation policies include both Operational Policies (OP) and the Bank's Procedures (BP). Conservation policies are designed to protect environment and society against potential negative effects of projects, plans, programs and policies. The OP 4.12 Involuntary Resettlement procedure is applicable to the compensation and resettlement aspect of the project.

OP. 4.12 Involuntary Resettlement

The World Bank Resettlement Policy (OP 4.12) main objectives are to:

- Avoid or minimize involuntary resettlement whenever feasible;
- Develop resettlement activities as sustainable development programs, providing sufficient investment resources to enable the displaced persons to share in project benefits;
- Meaningfully consult displaced persons and give them opportunities to participate in planning and implementing resettlement programs;
- Assist displaced persons in their efforts to improve their livelihoods and standards of living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation whichever is higher.

This policy is usually applied for projects that require international financing. The World Bank OP 4.12, Annex A (Paragraphs 17-31), describes the scope (level of detail) and the elements that a resettlement plan should include. These include objectives, potential impacts, socioeconomic studies, legal and institutional framework, eligibility, valuation and compensation of losses, resettlement measures, relocation planning, community participation, grievance management procedures, implementation schedule, costs and budgets, and monitoring and evaluation. This report conforms to the Bank's policy requirement on content and structure.

WB OP 4.12.(6a) requires that the resettlement plan includes measures to ensure that displaced persons are (i) informed about their options and rights, (ii) consulted on, offered choices among and provided with technically and economically feasible resettlement alternatives, and (iii) provided prompt and effective compensation at full replacement costs.

WB OP 4.12 (8) requires that particular attention should be paid to the needs of vulnerable groups among those displaced such as those below the poverty line, landless, elderly, women and children, as well as indigenous populations and minorities.

WB.OP 4.12 (13 a) stipulates that any displaced persons and their communities and any host communities receiving them should be provided with timely and relevant information, consulted on resettlement options and offered opportunities to participate in planning, implementing and monitoring the resettlement.

WB OP4.12 (12a) states that payment of cash compensation for lost assets may be appropriate where livelihoods are land-based but the land taken for the project is a small fraction (less than 20%) of the affected asset and the residual is economically viable.

WB OP4.12 Para (6 b & c) state that in case of physical relocation, displaced persons should be (i) provided assistance (such as moving allowances) during relocation; and (ii) provided with residential housing, or housing sites, or, as required, agricultural sites for which a combination of productive potential, locational advantages, and other factors is at least equivalent to the advantages of the old site.

In addition displaced persons should be offered support after displacement, for a transition period, based on a reasonable estimate of the time likely to be needed to restore their livelihood and standards of living; and provided with development assistance in addition to compensation measures such as land preparation, credit facilities, training, or job opportunities.

WB OP4.12 Para 13 (a) requires that appropriate and accessible grievance mechanisms are established to sort out any issues arising.

3.3 Gap Analysis

Some of WBG requirements are not met by certain aspects of the Tanzanian legislations. The two following tables summarises the main differences between Tanzanian law provisions and WBG requirements as per OP4.12, as far as compensation is concerned, for various categories of compensations.

3.3.1 Tanzania

In a number of cases, as shown by the Table 3.1, WBG requirements are more favorable to PAPs than the provisions of Tanzanian law.

Tanesco is committed to fulfil WBG requirements. Appropriate compensation approaches are therefore needed, with a first part of compensation meeting

Tanzanian law requirements, and an additional uplift from TANESCO where needed to comply with WBG requirements, that is if these requirements are not met by the Tanzanian provisions.

Table 3.1 Assets and Guiding Laws from Tanzania and World Bank's Operational Procedures for Compensation

Asset	Tanzania	World Bank OP.4.12
Land	Valuation based upon market value of unimproved land parcel plus a disturbance allowance based on commercial bank interest rates at that particular time.	PAPs will be given an option of having in kind compensation for land.
Permanent/ Traditional houses	Valuation of each case based on the type of materials as well as house deprecation cost, transport for 12 tonnes at a distance of 20 km and renting allowances for 36 months plus a disturbance allowance based on commercial bank interest rates at that particular time.	Structure can be completed at full replacement cost.
Other structures (graves, toilets, plate wrack etc)	Valuation based upon the official district approved compensation rates taking into account the type of materials, age and condition of the house plus a disturbance allowance based on commercial bank interest rates at that particular time.	Replacement costs with additional facilitation for cultural rituals and relocation assistance.
Crops and trees	Valuation based upon the official district or Ministry of agriculture approved compensation and count of trees/crops on the affected land plot plus a 5% disturbance allowance.	For perennial crop a transition period for culture should be taken into account. This period may be more than one year for some crops. For trees a compensation rate should be convene for their permanent loss. For annual crops there is no specific provision. The goal is income restoration.

4 CONSULTATIONS

4.1 Stakeholder Identification and Method of Participation

The meetings began by introducing the persons representing the ESIA-RAP team and were followed by a brief introduction of the project. The presentation included clarification on the nature of the power line and its purpose. There was time allotted to make comments on the project, ask questions and seek clarifications. Most of the people sought to know the source of power for the line and which way the power would be transmitted. It was clarified that the line was part of a network for transmitting power from any source in either country to the other for the purpose of sharing energy in a regional power pool. It was also made clear that the project is one of many other similar projects in the region, as the regional power pool intends to interconnect all Nile Basin countries.

During the meetings, the stakeholders expressed their concerns about the project, which were duly recorded. They also advised on the best way to approach the community members. (The main aspects discussed during the meetings with national and regional stakeholders are presented in appendix 4).

4.1.1.1 Community Meetings

4.1.2 Tanzania

Section 89 of the EMA No. 20 of 2004 provides guidance on public participation issues and states its importance in the ESIA process. Regulation 17 of the EIA Regulations (URT, 2005) provides further directives and procedures for public participation. Stakeholders are all those with a stake in the outcome of a project who participate in decisions on planning and management of the proposed development. Stakeholders share information and knowledge, and may contribute to project activities. Stakeholder involvement is essential in the RAP process. For this project, stakeholders was given a broad definition to encompass all different government agencies, private sector, individuals, CBOs, commercial companies, and all other formal or informal groups.

4.1.2.1 Notification to Stakeholders

Introduction letters were written by TANESCO's Head office to all relevant Regional Administrative Secretaries to first inform them about the project as well as to secure permission to work in the respective districts. These letters were then channelled to the District Executive Director (DED) for the same purpose and to seek appointments to consult the district officials and to undertake consultations in the respective villages. Letters from the DED offices were then distributed to all relevant wards, hamlets, and villages in the rural setting to secure appointments with village government officials as well as local communities. The general public was also notified on the project through meetings and information delivered through their respective village leaders and officials.

Stakeholders and leaders from the Arusha, Manyara and Singida regions were notified first and regional officials directed their respective districts of Arusha, Monduli, Longido for Arusha region; Babati District, Babati Municipal and Hanang for Manyara region and Singida municipal and Singida rural for Singida region. After, the team obtained permits and introduction letters for all villages to be affected by the project. These villages were then notified about the consultation exercise.

The team also consulted various stakeholders including NGOs and CBOs dealing with community development, women development, land and environmental issues, natural resource management and HIV/AIDS program operating within the project area. These consultations intended to generate information on women rights and participation in projects and decision making process, obtain views on how to involve all members of the society, especially marginalized groups such as women, widows, disabled and elders that are considered vulnerable with regards to compensation and resettlement issues. Consulted NGOs include: World Vision, AWF, AFRICARE, Mount Meru Community Based Conservation Organization (OSOTWA) and Engender Health, whereas CBOs consulted include BURUNGE CBO and Korongoro Integrated People Oriented to Conservation (KIPOC). Similarly government agencies such as District Officials, Ministries such as that of Energy and Minerals, Natural Resources and Tourism, Ministry of Defence, Ministry of Health and Social services, Tanzania Civil Aviation Authority, Ministry of Water and Irrigation, as well as the Ministry of Lands and of Human Settlement were consulted to obtain their views regarding the proposed project (the results of these consultations are in the ESIA report of this project) (Table 4.3).

Table 4.1 List of Organizations Consulted

Stakeholders meetings – January 20th February 20th 2011		
Tanzania National Parks	Joseph Kessy	Principal Planning Officer
African Wildlife Foundation	Mulengeli Binamungu	Coordinator
Longido District Council	Jacob Lyimo	Environmental Officer
	Elia S. Maika	LNREO
	Stephen Laizer	District Game Officer
	Beatrice Tengi	Community Development Officer
Longido Community Intergrated Programme (LOOCIP)	Peter R. Mushad	Project Coordinator
Arusha District Council	Wencilaus Mtui	District Land Officer
Arusha Municipal Council	Fatuma Kunyonza	Acting Municipal Director
	Mr Kiwera	Municipal Land Officer
	Hanifa Ramadhani	Acting DCDO
Monduli District Council	Geoffrey Luguma	Acting DED
	Twalib Mbasha	DCDO
Babati Municipal Council	Julius Maira	Acting DED
	Mtalemwa Leusi	Planning Officer

	Mary Omary	Sociologist
Babati District Council	Hassan Lugendo	Acting DED
Singida District Council	Pascal Mabiti	District Commissioner
	Enuminata Mwenda	DED
Karatu District Council	Mr Maro	DLNRO
	Stanley Mruma	DEMO
Kondoa District Council	Obadia Mwakasitu	Authorized Land Officer
	Mselem Rashid Aziz	Community Development Officer
Kiteto District Council	Ally R. Zuberi	Valuer
	Daud T. Msinge	Land Officer
	Kulwa J. Mrisho	Community Development Officer
Simanjiro District Council	Baltazari Sulle	Land Officer
	Invocavity Nyaky	Land Surveyor
	Kaanach M. Kaaya	District Community Development Officer

Table 4.3 List of Organizations Consulted (cont'd)

TANESCO	Maneno Katyega	Senior Manager Strategic Planning and Projects
	Mr. Brown	Principal Transmission Engineer
	Brigita Sylvester	Environmental Officer
	Hamis Boby	Senior Land Surveyor
	Said Chilima	Principal Planning Engineer
	Neema Mushi	Transmission Engineer
Ministry of Lands and Human Settlement	Joseph Kleruu	Principal Valuer
	Raphael Chiremeji-	Valuer II
Ministry of Natural Resources and Tourism	Revocatus Bugumba	Senior Conservator of Antiquities
	Sikujua Ramadhani	Conservator of Antiquities
Ministry of Defense	Col. M.A Msuya	Director of Contract and Procurement
	Col. E.F Mangole	Director of Land Use and Land Planning
TANROADs	Zafarani Madayi	Senior Environmentalist
	Hamisi Waziri	Project Engineer
Ministry of Energy and Minerals	Salum Inegeja	Energy Engineer
	Petro Marwa	Energy Engineer
National Environmental Management Council	Renalda Mukandara	Principal Environmental Officer
Stakeholders meetings – October 2011		
Ministry of Health and Social Welfare	Zena Mango	
Tanzania Civil Aviation Authorities	Moses Njovu Grace Kiunsi	Electrical technician Adminitrative officer
Ministry of Water and Irrigation	Christopher Mbawala	Engineer

4.1.2.2 Community Meetings

To ensure that all villagers/residents in affected communities were informed about the project, the team conducted public meetings in all the villages to be crossed by the proposed transmission line (Table 4.4). The team ensured that women attended and participated to the meetings. The meetings were designed to inform the villagers about the project and its potential associated impacts. Villagers were informed of the positive and negative impacts of the project that included loss of land, possibilities of an increased spread of HIV/AIDS, especially during the construction phase, as well

as other environmental and social impacts associated with the proposed project. Villagers were also sensitized regarding their right to be compensated and what could be compensated if they would lose land, crops, and/or houses. Villagers were also given an opportunity to ask questions, raise their concerns and provide information to the team on issues such as availability of land in the village for resettlement purposes, available manpower in the village, developmental project that the power project will support in the village, etc. In a few cases the attendance was low due to different reasons: households were far away in search of green pastures, harvesting, or fetching water.

After conducting village meetings, village officials were interviewed using a community questionnaire to obtain detailed information regarding the village, likely community properties to be affected, their preference concerning benefits from the proposed project, type of wild animals in the area as well as indigenous trees and areas of environmental importance located in the villages. The main aspects discussed during the community meetings are presented in appendix 4.

Photo 4.1 Village Meeting in Singida District

Table 4.2 List of Villages Visited during Community Meetings in Tanzania

Singida Municipal	Misuna	22/06/2011	65
	Kisasida	22/06/2011	19
	Msikii	22/06/2011	34
	Mungumaji	22/06/2011	47
Singida Rural	Kinyangigi	23/06/2011	9
	Kinyamwenda	23/06/2011	55
	Itajia	23/06/2011	45
	Sagara	23/06/2011	33
	Mughamo	22/06/2011	23
	Negamsi	27/06/2011	7
	Malangi	27/06/2011	2
	Matuta	28/06/2011	21
	Sangaiwa	28/06/2011	14
	Vilima vitatu	28/06/2011	34
Babati	Endasago	27/06/2011	13
	Dareda kati	25/06/2011	24
	Mawemairo	28/06/2011	25
	Sigino	27/06/2011	22
	Bagara	27/06/2011	25
	Sarame	28/06/2011	23
	Minjingu	29/06/2011	5
	Olasiti	28/06/2011	15
	Mwada	28/06/2011	49
	Gajal	25/06/2011	22
	Kiongozi	27/06/2011	18

Table 4.4 List of Villages Visited during Community Meetings in Tanzania (cont'd)

	Arri	25/06/2011	25
	Dumbeta	24/06/2011	6
	Endagaw	28/06/2011	24
	Getasang	25/06/2011	11
	Meskron	24/06/2011	33
	Mogitu	24/06/2011	32
Hanang	Nangwa	24/06/2011	16
	Masakta	25/06/2011	35
	Mara	25/06/2011	4
	Masquroda	25/06/2011	11
	Ming'enyi	24/06/2011	13
	Endasak	24/06/2011	22
	Gehandu	24/06/2011	24
	Mbuyuni	29/06/2011	14
	Meserani Juu	29/06/2011	15
Monduli	Arkatani	29/06/2011	4
	Mti Mmojia	29/06/2011	11
	Loosimingiri	30/06/2011	19
	Nanja	30/06/2011	24
	Matevesi	30/06/2011	25
Arusha	Engurutoto	02/07/2011	10
	Likamba	30/06/2011	13
	Losikito	02/07/2011	14
	Engorora	01/07/2011	24
	Longido	01/07/2011	24
	Lemon'go	02/07/2011	33
Longido	Eurendeke	02/07/2011	24
	Lengijave	01/07/2011	23
	Namanga	01/07/2011	20
	Kimokwa	02/07/2011	23
Total			**1 225**

4.1.2.3 Consultation of Project Affected Persons

Project affected persons (PAPs) include all persons whose land will be crossed by the proposed transmission line, which was located using GPS coordinates provided by the technical consultant. The enumerators walked through the proposed wayleave and, with the help of local leaders/knowledgeable persons, identified the landowners of the land. A face-to-face interview was then conducted with the head of household or another adult member of the household available at the time of the visit to fill the household questionnaire (Appendix 3).

Socioeconomic information was collected about household members, livelihood, income and production, land ownership, livestock, crops, trees, as well as principal and secondary structures. Concerns raised about the wayleave and how the transmission line project could affect the households were also gathered. Results from the household survey are presented in Chapter 5.

A total of 537 people completed the household survey, including 518 people that will be affected by the project and 18 people that are part of a control group. This control group is formed of people that will not be affected by the project but who are living in the same area.

4.2 Outcome of the Stakeholder Consultation Process

4.2.1 Tanzania

4.2.1.1 National and Regional Stakeholder Meetings

Most of the stakeholders consulted concur with the proposed development in view that the proposed power interconnection project will improve power supplies, stabilize the quality of the electricity and provide diverse source of power in the region. The two countries involved will benefit in terms of improved industrial development, and reduced power cut problems, particularly on the Tanzanian side, which experiences continuous power rationing country wise.

Some stakeholders are concerned that the proposed power interconnection may negatively affect local biodiversity particularly in wildlife corridors between Arusha National Park and Lake Natron Game controlled area, the Enduimet WMA, Burunge WMA, and other wildlife corridors connecting game reserves, national parks and various forest reserves found in the regions. The proposed development would interfere with the natural habitat and could trigger soil erosions in highlands slopes and cliff particularly when crossing the rift valley at Mto wa Mbu. However, the intensity of damage potentially caused by the proposed development is going to be minor, given the nature of the project and the span between successive pylons. It is thus important to take active mitigation measures to address the foreseen impacts.

The stakeholders were very receptive and open in their discussions, putting a lot of emphasis on compensation/resettlement issues and on impacts on environment and wildlife. The main aspects discussed during the meetings with national and regional stakeholders are presented in Appendix 4.

It should be noted that most PAPs accept the project as they perceive that it will have positive direct and indirect benefits for the local and national economy. However, a few PAPs (3%) accept the project simply because it is a government-supported project and they believe they have no other option.

The main concerns raised in the community meetings are presented in Table 4.6. All the issues discussed in each community meeting are presented in Appendix 4.

Table 4.3 Summary of Issues and Concerns discussed during Community Meetings Tanzania

Local employment	Communities wish that local manpower be hired during construction.
Compensation	Communities with an existing transmission line are concerned that they will not get fair compensation taking examples from similar projects, i.e. Singida - Arusha line and the Singida - Babati road, where the compensation exercise was not well undertaken. PAPs revealed that they need to be guaranteed that this exercise shall be fair and all affected persons involved. Concerns were expressed regarding the mode of compensation, especially for cases where the affected properties are structures. They wonder who will manage the funds and supervise the construction. After being provided with information about options of compensation, i.e. cash or in-kind compensation, most of the village leaders preferred in-kind compensation, as it is difficult to manage funds to construct a public property affected to a similar or more improved standard. Communities are concerned about deriving/establishing prices for compensation. They worry they will not be fully involved or even if they are involved, their recommendations might not be taken into consideration, especially for land value. Therefore, they recommend that they should be fully involved. Similarly, PAPs are indicating that even indigenous trees should be compensated as they have a significant range of economic, cultural and environmental value.
Community benefits	Affected communities wish to directly benefit from the project by being connected to the National Grid. As experience indicates, some communities have a transmission line passing through their village but they are not connected to the transmission line.
Scarcity of land	Land is scarce in areas that have high agricultural potential as well as in villages close to urban areas. PAPs revealed that it may be difficult for them to obtain land of the same quality in the same area due to land scarcity. Areas where there is very fey available land are Misuna-Singida, Endasaki and Katesh-Hanang, and Kisongo-Arusha, Hanang District, villages of Engutoto, Likamba Langijave and Oldonyo Sambu. In Oldonyo Sambu, for instance, areas that can be used for agriculture are very minimal due to erosion and soil type.
Impact on infrastructure	PAPs, local governments as well as District authorities were concerned with the impacts that the project might have to community properties such as schools and water sources. They revealed that their preference would be for the project to consider alternative route to minimise impacts on such properties as in most cases the location of these properties is in areas that has been convenient to the community.
Land use	Some villagers have mentioned that they wish to continue their agricultural activities (crops of livestock) within the wayleave once the project is implemented.

4.2.1.2 Community Consultations among the Maasaï

A significant portion of the transmission line goes through land inhabited by Maasaï. Namanga-Arusha, Monduli and parts of Babati district are dominated by Maasaï. This group is very unique in Tanzania as they are a remaining tribe that is significantly attached to its culture and live by its cultural norms and procedures. During consultations, special respect was given to groups of Maasaï and their requirements were considered.

Discussion with community development officers in all districts dominated by Maasaï helped us work and consult with them. During these meetings, the community development officers worked hand in hand with the team, introduced the project and guided the discussion. In some occasions, explanations were given in Maasaï language.

According to the Maasaï tradition, all issues have to obtain blessing from the Maasaï group of elders, commonly known as *Laigwanani*. The *Laigwanani* must first communicate to the entire community and then the response to the community becomes possible. Failure to engage the elders at all levels of consultations may lead to community refusal to support the project or reject the project all together. For instance, at Ilkuroti village in Arusha, the team had to visit the village three times to make sure they involved the *Laigwanani*.

Photo 4.2 Maasaï Women Attending a Meeting in a Village in Monduli District

Women participation may be limited, as they have to seek consent from their husband. However, during the consultation process, a number of women participated and were asking questions in general meetings organised by village leaders and Maasaï elders. More involvement of the women was through women groups where freedom of expression is very important. Some of the women groups consulted include MWEDO in Longido District and AFNET in Babati District.

4.2.1.3 NGO and CBO Meetings

The main issues raised during the meetings mainly concerned the participation and involvement of the community as well as direct benefits to the local communities (Table 4.7 and Appendix 4)

Table 4.4 Summary of Issues and Concerns discussed during NGO and CBO Meetings, Tanzania

Community participation and involvement	Participation and involvement of the community at all stages of the project development and implementation was important as the community will live with the project in the future. It is important to enhance community participation and involvement of all stakeholders of the project, especially local communities. Similarly, issues concerning compensation have to be open and local communities have to be educated on all consequences of the project, their rights in terms of compensation and how to handle grievances when it comes to filing peoples' complaints.
	Involvement of women, especially during the valuation and compensation processes, is important as in most cases, they are the ones that are mostly affected. For instance, in Monduli and Longido districts, women rarely own land and therefore they are also left out of decision making.
	Involvement of NGOs and CBOs was also raised. They recommend that it is important for project promoters to involve local CBOs in sensitization of local people on issues such as HIV/AIDS, land and gender as well as how to spend their compensation money.
Benefits to the community	The project should ensure direct benefits to local communities, especially to ensure that they benefit from electricity. Most villages to be affected by the project are not connected to the national grid while they do have potential of developing small businesses should they have access to electricity. Therefore it was emphasised that these local communities should be connected to the grid to enable them improve their living standards.

5 DESCRIPTION OF THE PROJECT AFFECTED AREAS: CENSUS OF COMMUNITIES AND HOUSEHOLDS AFFECTED BY THE WAYLEAVE

5.1 Socioeconomic Surveys and Property Registration

A household survey was carried out in order to assess the socioeconomic profile of the affected households as well as to document the impacts of the project. To accomplish this task, a detailed survey questionnaire was used (see Appendix 1). In the first section, general information was collected about household members, livelihood, income and land ownership (section A). The second section focused on the four main impacts of the projects which are: the different type of area or structures that could be affected; animal grazing; crops and trees; principal structures such as houses and shops; as well as secondary structures (section B). The resettlement possibility (available land) has also been assessed in each case. The individual PAP preoccupation with the project was recorded.

Tanzania

The method used to perform the socio-economic survey was as follows:

- First, information about the survey was given to the local authorities (Village Executive Officer and the village chairman) prior to the survey for them to inform the local community;
- Secondly, all the structures, pastures and other affected assets in the proposed wayleave were visually identified. The identification exercise was undertaken in the field and located by using a GPS. The enumerators walked through the proposed wayleave and identified the affected assets and their ownership with the assistance of the owner, a community leader, knowledgeable persons or a neighbor. Thus, 100% of the affected households were identified as well as all the buildings and assets (pasture, wells, etc.). Because of past bad experiences with poorly paid or compensated households for previous projects (see consultations above), certain village chiefs asked the interviewer teams not to take GPS coordinates and precise measures of affected fields and structures. They explained that if coordinates and other measures were taken, impacted households would then expect compensation to be paid within 6 months. The chiefs did not want to be criticized if compensation was not provided as expected to the affected households. They also wished to avoid being pressured to obtain compensations. This has thus forced the team to make approximate evaluations of the size of affected fields and houses and not register the GPS location of the affected structures.
- Meetings with households not impacted by the wayleave were also necessary to obtain socioeconomic information as well as consultation with a control group equivalent to approximately 10% of impacted households. These households were located outside of the wayleave but within the affected area/village.
- To choose which households needed to be interviewed to complete the control group the following procedure was applied: the household, outside the wayleave,

closest to the impacted ones were met; the entire section A of the questionnaire - socioeconomic section - was administered. A total of 19 households were met to constitute the control group (Table 5.2).

- However, not all affected households were consulted. There are various reasons that lead to the survey not completing 100% of total affected households, these include:
  - Economic activities in the project area, i.e. most pastoralist in the Maasaï areas had moved in search of green pastures as we were in the dry season;
  - Other PAPs had moved into their farms that are far from their residential areas for harvesting purpose;
  - The dry season, water was very scarce and many PAPs could not attend the consultation as they had gone to fetch water. These reasons occurred mainly in Hanang in villages such as Dumbeta.

Table 5.1 Number of Impacted and Control Group Households Questionnaires Filled, Tanzania

Households in control group (outside of the way leave)	19
Impacted households	518

5.2 Tanzania

5.2.1 Demographics

The total population of the villages/sub-locations crossed by way-leave is estimated at 82 500 or 5% of the districts population (Table 5.18). In Tanzania, the study area covers three regions: Arusha, Manyara and Singida. The districts crossed by the transmission line corridor are Arumeru, Longido, Arusha, Monduli, Babati, Hanang, Singida Municipal and Singida Rural (Table 5.19). Within these districts, the project cuts across 53 villages.

Table 5.2 Population Distribution in the Villages Crossed by the Wayleave, Tanzania

Number of village/sub-location crossed by way-leave	53
Number of village/sub-location crossed by way-leave with an indigenous population	3[2]

Source: Community questionnaire

Table 5.3 Population Data for Project Districts in 2002, Tanzania

Arusha	281 608
Longido	72 702
Monduli	110 442
Babati	303 013
Hanang	205 133
Singida Municipal	115 000
Singida Rural	402 000
Total Population	**1 489 898**

Source: Tanzania National Census 2002

The Districts that are located in Arusha and Manyara regions, namely Monduli, Arusha, Longido and part of Babati District, are dominated by the Maasaï ethnic group while in the Singida region the dominant ethnic group is Nyaturu. In a part of Manyara region, especially in Hanang District, the dominant ethnic group is Iraqw.

Other parts of the project area are populated by multi-ethnic groups with varied semi-cultures, languages and religious beliefs. This diversity is more important in areas that have urban characteristics such as Babati and Singida urban as well as at the Namanga village which is at the border of Kenya and Tanzania.

The people living in the project area subscribe to two main religious beliefs, Christians (61,3%) and Muslims (20,3%). The proportion with Traditional belief is 18,3% (Table 5.20).

However, it should be noted that in Tanzania all these religious groups normally live in unity and work together for the development of the area as well as share most social services even if they are owned by a particular religious entity.

[2] Barbaig is an indigenous group found in Hanag District in the villages of Gehandu, Mingenye and Getasang, for Masaai they are scattered in all villages of Monduli District, Arusha District and part of Babati District

Table 5.4 Population Distribution in the Village/Sub-Location Crossed by the Wayleave per Religious Group, Tanzania

Christian	61,3
Muslim	20,3
Traditional religion	18,3
Other religion	0,1
Total population	**82 500**

5.2.2 Occupation

The three regions included in the project area share some similarities in their cultures and economic activities. For the Arusha and Manyara regions, people are mainly livestock keepers and farmers, while in the Singida region, farming is the main economic activity.

The majority of the people in the project area are involved in the following occupations; farming of food and cash crops, livestock keeping, business and civil service (Table 5.21).

Table 5.5 Population Occupation in the Villages Crossed by the Wayleave, Tanzania

Farmer / Stockbreeder	51,2
Pastoralist	24,5
Businessman	10,2
Civil servant	3,8
Workman / Craftsman	2,2
Hunter / Fisherman	0,6
Other	13,0
Total population	82 500

Source: Community Survey.

Except for Singida which is urban, the transmission line will be mostly located in rural areas were agriculture is the major economic activity.

Field data revealed that 24,5% of the total population in the villages crossed by the wayleave are agro-pastoralists and 51,2% practice farming as their unique occupation. It was also revealed that 98% of the total population practise agriculture with other occupations such as civil servants and business. Civil servants are mainly found in the urban areas of Singida, Babati and in the peripheries of the Arusha

Districts. Fishing is concentrated in the major wetlands crossed by the proposed transmission line, in districts such as Babati and Hanang.

5.2.3 Community Services and Structures

There are numerous social service facilities in communities where the proposed line route passes and these include; schools (primary, secondary and only one tertiary), health centres (dispensaries, hospitals), markets, administrative buildings, religious sites (churches and mosques), cemetery, machinery and production centres (grinding mills, sunflower ginnery) (Table 5.22). Most of these facilities are not connected to the national grid except for the machinery and production centres of which 46,2% are connected, mostly in urban areas or villages that are ward centres such as Magugu in Babati District. Other community facilities that are connected are mainly schools with about 36,8% for the secondary ones, 100% for the colleges and also the health centres (hospitals).

Table 5.6 Infrastructures in the Villages Crossed by the Wayleave, Tanzania

School	Primary	88	9,1
	Secondary	38	36,8
	Tertiary	2	100
	Total schools	128	18,8
Health centre	Dispensary	32	28,1
	Hospital	3	100
	Total health centres	35	34,3
Market		26	0
Administrative building		66	24,2
Religious heritage or cultural site	Church	299	7,4
	Mosque	92	18,5
	Other religious site	2	0
	Total religious sites	393	9,9
	Heritage or cultural site/ cemetery	35	2,9
Machinery and production centre		195	46,2

Discussions with most communities revealed the importance of such national and international projects giving priorities to the supply of electricity to social services especially schools and hospitals. The facilities found in the project area are

communally used and therefore provide centres of cohesion that may have influence over other aspects of socio-economic development.

Table 5.23 indicates that there is a diversified workforce and that numerous services are available in the communities from which the project will conscript men and women as service providers during the construction of the proposed transmission line route.

Table 5.7 Workforce and Services in the Villages Crossed by the Wayleave, Tanzania

Workforce	Iron worker, experienced pylon assembler	25
	Carpenter	606
	Welder	213
	Electrician	172
	Truck drivers	680
	Heavy machinery operator	154
	Mechanic	255
	Mason (builder)	977
	Painter	510
	Chainsaw operator	198
	Others (guides, pit constructor, surveyor, tailoring, etc.)	118
Services	Transport of goods or materials / Trucks / Lowry	121
	Mechanical (dealers, repairs, etc.)	55
	Gas / Petroleum products (sales, storage, etc.)	30
	Heavy machinery (crane, bulldozer, excavator, etc.)	39
	Materials (wood, stone, sand, etc.)	107
	Canteens / Restaurant / Kiosk	490
	Hotel / Lodge/Guest house Sleeping place	115
	Lumber (wood) / Timber company	14
	Bank / Mpesa	28
	Post office	2
	Security (people involved in security services)	2 091
	Others	85

These services are available in many communities along the ROW. The most common trade is masons (builders) with 977 people within the communities, followed by truck drivers (680), carpenters (606), and painters (510). Other available workers include mechanics, electricians, welders, and heavy machine operators. Some services required for the construction are available in the communities especially communities in urban areas. Other services required are also available as a result of ongoing construction activities in the area, for instance the construction of the Singida-Babati road and the Babati-Minjingu road. The most common available services include: construction materials such as gravel, guest houses, mechanical services (dealers, repairs, etc.), transportation of goods or materials, canteens and restaurants, heavy machinery (crane, bulldozer, excavator, etc.) and gas and petroleum products.

However, unknown is the effectiveness, efficiency and reliability of these services. The contractor would have to do investigate and assess the services and workforce to ensure that the required services or skills are available before soliciting for workforce and services from outside these communities in the project area. Proof of competencies for these different professions and trade must be given before any job or contract is awarded by the contractor.

5.2.4 Municipal, Community or Heritage Buildings in the Wayleave

From Table 5.24 it can be seen that there are different types of buildings located within the wayleave and these include schools and churches.

Table 5.8 Community Buildings in the Wayleave, Tanzania

School	Permanent	7	100
Church	Permanent	6	100
Mosque	Permanent	1	100
Nursing home	Permanent	2	50
Dam	Permanent	2	NA
CCM office	Permanent	1	100
Market	Permanent	1	100
Maize milling machine		1	100
Other		2	100
Total		**23**	

Source: Community questionnaire.

All mentioned community buildings to be affected by the project are built with permanent material (concrete) but are in different conditions. For instance Mungu Maji Secondary school in Singida District is a new building and well finished. All these will be affected and therefore will require the relocation to a new site. Both schools and churches have their own land to reconstruct (Photos 5.4 and 5.5).

Photo 5.1 Social Services Likely to be Affected by the Project in Singida

Photo 5.2 Social Services Likely to be affected by the Project in Singida

5.2.5 Community Sites and Fields Entirely or Partially Located in the Wayleave

Table 5.25 indicates important community sites located within the wayleave and these include community forests, community cemetery, ceremonial areas, grazing land and farms.

Table 5.9 Community Sites Located in the Wayleave, Tanzania

Community forest	14	Not estimated	NA	NA
Community cemetery	2	Not estimated	100%	100%
Ceremonial / Sacred area	2	Not estimated	100%	50%
District / Government farm	1	Not estimated	NA	NA
School farm	1	Not estimated	NA	NA
Grazing land	3	Not estimated	NA	NA
Water sources	2	Not estimated	NA	NA

Source: Community questionnaire.

Some of the impacts on these sites must be compensated, notably the trees in the community forests and the different farms or grazing areas. For the other sites the line can cross over them or they can be displaced.

These sites belong to respective community members and therefore any major decisions regarding use of these sites for social or economic activity must be sanctioned by villagers, village officials, district officials or clan elders.

Therefore, the Project Implementation Unit must seek consultation with the elders before construction of the line commences. This was also done prior to undertaking the RAP study where all the above mentioned stakeholders were consulted. A solution needs to be found for some sacred areas in cooperation with local communities.

5.2.6 Characteristics of Affected and Control Group Households

It is important to mention that a total of 518 households are impacted by the proposed construction of Singida-Namanga Power Interconnection line.

Table 5.26 presents the socioeconomic characteristics of these households and of the 19 households of the control group.

Table 5.10 Head of Household Characteristics, Tanzania

Gender and average age of the head of households		
Male	87%	90%
Female	13%	10%
Average age of males	48	47
Average age of females	55	63
Average age	49	49
Ethnic group of the head of households		
Nyaturu	45%	16%
Iraq	19%	11%
Maasaï	10%	21%
Muarusha	5%	-
Nyiramba	2%	-
Barbeigi	2%	5%
Mbugwe	7%	26%
Other ethnic groups	10%	21%
Occupation of head of households		
Pastoralist	39%	21%

Businessman	5%	-
Farmer	99%	84%
Civil servant	2%	16%
Workman/Craftman	1%	-
Fisherman	0.2%	-
Stockbreeder	-	-
Other occupation	1.7%	5%
Highest level of education attained		
No education	10%	5%
Primary	84%	74%
Secondary	4%	5%
College	1%	11%
University	0.2%	5%

Source: Household questionnaire

As can be seen in the table above 87% of the head of households were males compared to only 13% of female head of households. Most of the feminine head of households interviewed are widowed while some are single or divorced.

The reason for having many males as head of households compared to females stems from the fact that the project crosses areas were the social structure is largely patriarchal. In these groups women are not given an opportunity to take decisions or to answer questions in the presence of men.

In the project area, the community is organized in such a way that men have the final say on any major decisions regarding social or economic activity as well as answering questions in households. Besides this gender disparity with regards to participating in the questionnaire, this may stem from the fact that the education levels among the females are low compared to males. This has arisen from the fact that families tend to privilege male children due to scarcity of education facilities and therefore literacy levels amongst women found in the responding households were significantly lower.

The average age of correspondence is 49 years indicating that mature people were interviewed and hence that the answers given are reliable and reflecting the situation as it was in the community at the time of the survey.

As indicated in Table 5.26, the project area is populated by multi-ethnic groups with varied semi-cultures, languages and religious beliefs with major ethnic groups including, Nyaturu, Iraq and Maasaï. The varied ethnicity, culture and beliefs contribute to mutual respect and healthy competition, conditions that favour innovation and economic development.

The table also indicates various occupations for households found in the project area (both in the ROW and outside the ROW). Ninety nine percent (99%) of the respondents in the ROW are involved in farming where they grow subsistence and cash crops while some 39% are pastoralist. This is followed by businessman at 5%, and civil servant at 1% of households in the ROW who derive their income from formal employment.

In the project area, there are no minority indigenous people likely to be marginalised by the implementation of this project. However, the project is likely to affect more the households that have a women as head (widowed mainly) (13% of total of affected household), an elderly person (3% of households) or that suffer from a disability (less than 1% of households) There are no underage head of households or landless households affected. Economically, it is estimated that 61% of the affected households can be considered as vulnerable since they do not have enough income to cover at least 1 550Tsh per person per day[3]. There is no specific area with a large concentration of vulnerable households (see more details in section 6.2.5).

The distribution of household age is indicated in Table 5.27. The age distribution by household within the ROW shows that the majority of the members are youth with 50% of the households' members being between 0 to 17 years of age. There are few members (9%) in the age category of above 55 years.

Table 5.11 Age Distribution in Impacted Households, Tanzania

0 to 4 years	10	10	10
5 to 17 years	39	40	40
18 to 35 years	25	25	25
36 to 54 years	17	16	16
55+ years	9	9	9
Total	100	100	100
Average number of members in impacted households		5	
Average number of members in control group households		5	

Source: Household survey, question III.

The household that will be impacted by the project have a significant diverse annual income with most of them (78%) having an income of between Tsh 100 000-5 000 000. Those with income above 5 000 000 are mainly those with multiple economic activities such as agriculture and business and are mainly in urban areas or close to urban areas (Table 5.28).

[3] This estimate is based on the following calculation: average of 5 persons per households X 1550/day X 365 days= 2 830 000 Ksh per year. Only 38% of the affected household have an annual income larger than this estimate.

Table 5.12 Total Annual Monetary Revenue of Affected and Control Group Households, Tanzania

Minimum	40 000	290 000
Maximum	45 070 000	9 900 000
Average	3 819 369	3 579 375

Source: Household survey, question I.

5.2.7 Structures Affected by the Wayleave

There are 297 houses and 5 shops, belonging to 213 distinct households, affected by the wayleave as indicated in the Table 5.29. It should be noted that this number is likely to increase as during the consultation process some PAPs revealed that they are planning to construct new houses in the proposed area.

The houses have on average 3 rooms and 5 persons living in them on a permanent basis.

Table 5.13 Household Principal Structures Located in the Wayleave, Tanzania

House	Permanent	84	3,6	7,2
	Semi-permanent	94	3,0	4,3
	Temporary	119	2,7	4,8
Shop	Permanent	2	2	-
	Semi-permanent	3	2	-
Total principal structures		302		
Total Impacted households with at least one principal structure affected		213		

Source: Household survey.

Data reveal that 84 permanent (cement) houses in the wayleave need to be relocated. The largest number of structures (119) is of traditional (clay and hay) construction (Photos 5.6, 5.7 and 5.8).

The size of land owned by affected households varies depending on location and land use. For instance, in Singida and Babati the size is of 0,25 hectares because most owners utilise the piece of land for residential use only while in areas such as Monduli and Arusha the size is on average of 0,5 hectares as land has multiple use i.e. combining some agricultural activities and residential units.

Photo 5.3 Mixed Structure

Photo 5.4 Modern Structure

Photo 5.5 Modern Structure

Within the ROW there are 414 secondary structures that will be affected by the project (Table 5.30). A total of 226 households or 42% of the total number of affected households have a secondary structure in the wayleave. Toilets / bathrooms, kitchen, secondary residence and animal sheds are the most common secondary structures.

The percentage of respondents indicating that they have land outside the wayleave where such structure could be reconstructed varies considerably according to the type of structure, with most (64%) indicating that they do not have alternative land for such structures.

Overall, 253 households or 49% of the total number of affected households have a house or a secondary structure affected. Most of these secondary structures are associated with a house. In total there are 186 households that have a house and a secondary structure affected. This leaves 27 households that have only a house affected and 40 households that have only a secondary structure affected.

About 74% of the affected PAPs (n.187) do not have alternative land to build their affected structures (principal or secondary), either adjacent or within the existing affected land. Those who claim to have no alternative land are mainly those PAPs in urban areas such as Singida or near villages such as Babati and in areas with land scarcity such as those in Dareda-Hanang District. Alternative land will need to be found before reconstruction in those cases.

Table 5.14 Household Secondary Structures Located in the Wayleave, Tanzania

Toilets / Bathrooms	137	Available
Kitchen	87	
Family cemetery/graves	45	
Animal shed	101	
Fence / Gate[4]	27	Available
Well / Borehole	14	Not available
Other (not specified)	3	-
Total affected structures	414	
Total Impacted households with at least one secondary structure affected	226	

Source: Household survey.

5.2.8 Fields and Crops Affected by the Wayleave

Most districts in the project area are located in areas that are entirely used for agriculture. These include the districts of Singida rural, Hanang, Babati, Monduli and Arusha where the main crops grown include sunflower, maize, millet, beans, paddy and wheat used both as cash crops and food crops.

A good part of the impacted households (90%) have a cultivated parcel or a farming area affected by the wayleave. A total of 471 interviewed households were growing a crop or small trees in the wayleave (Table 5.31).

Rice growing is common in nearly all of the wetlands found in the project area and mainly in Magugu area, Babati District and other parts of Babati. Maize, beans and sunflowers are the most common crops grown in all of the districts to be affected by the project with the exception of Longido. It should be noted that in Longido District only 5% of land is suitable for agriculture. Other common crops are various species of peas that are used as both food and cash crops (Photos 5.9 to 5.12).

Table 5.15 Crops and Small Trees Located in the Wayleave, Tanzania

Annual crops	Maize	349	278,4
	Sugarcane	12	4,6
	Beans	164	248,4
	Cassava	21	29
	Sweet potatoes	7	134
	Garden crops	43	5,6

[4] All fences are of either sisal or *auphorbia*.

	Millet	102	233,6
	Sorghum	86	271,2
	Simsim	212	158
	Sunflower	177	103,2
	Cotton	14	187
	Paddy	58	227,6
	Garden peas	101	72,8
	Pigeon peas	299	172,8
	Banana	109	21,8
	Combretum sp	2	23,3
	Commipora sp	168	36,4
	Xymmania cafra	80	11,6
Trees smaller than 4.5 m and perennial crops	Brachystegia speciformis	98	9,2
	Brachystegia mycrophyllum	34	15,1
	Aloe secundiflora	32	22,1
	Caesalpinia decapetala	27	1,6
	Clerodendrum johnii	34	3,3
	Combretum hereroense	75	1,6
TOTAL	**N/A**	**471**	**2 151,6**

Source: Household survey.

Photo 5.6 Farms in the Wayleave in Arusha District

Photo 5.7 Farms in the Wayleave in Arusha District

Photo 5.8 Farms in the Wayleave in Arusha District

Photo 5.9 Seasonal Crops in the Proposed Wayleave

As for trees growing higher than 4,5 meters, Sisal is the most common especially in the Singida region, where it is used by most locals for fencing. There are 67 households that have sisal plants in the ROW with an average of 700 steams per household. In total 269 households (52% of affected households) have at least one tree growing higher than 4,5 meters, on their affected parcel.

Table 5.16 Trees Higher than 4,5 meters Located in the Wayleave, Tanzania

	Eucalyptus	217
	Guava	89
	Grevellia	312
	Avocado	34
	Acacia xanthophloea	118
	Acacia melifera	23
	Acacia polyacantha	21
	Commiphora africana	219
	Cassia breviata	61
	Combretum molle	82
	Euphorbia triucalii	524
Trees higher than 4,5 m	Mangifera indica	312
	Terminalia brownii	25
	Euphorbia candelabrum	12
	Vitex doniana	9
	Brachystegia speciformis	11
	Ficus sp	21
	Grewia similis	21
	Moringa orifera	32
	Sclerocarya birrea	61
	Syzygium cuminii	68
	Adensonia digitata	27
	Sisal	46 978
TOTAL	**Total number of households: 269**	**49 277**

Trees higher than 4,5 m include mango, avocado, pawpaw, guava Mvule, albizia coliaria, sycomore fig acacia, eucalyptus and acacia. These trees have a significant importance to the affected local communities as they are used for medicine, building materials, firewood, establishing beehives, and shelter.

In the Longido District and parts of Monduli district, the project is located in areas that are mostly used as grazing.

Photo 5.10 Common Permanent Crops in the Proposed Project Area

Cattle and cows are the more prevalent animals that the impacted households have and that use the wayleave (Table 5.33). Chicken are mainly used for household consumption and in a few cases as a source of income for the household.

In the Manyara region the main type of domesticated animal kept is cattle, mainly with the Barbaig ethnic group and in Arusha the Maasaï ethnic group. The average number of cattle varies significantly with each group. Some households having 50 cattle while others with as many as 600 cattle. About 12% of households in Arusha and Babati sectors have an average of 600 cattle.

It should be noted that in these ethnic groups (Maasaï, Barbaig) the number of cattle is a symbol of wealth, though in some case this does not reflect the living standard of that particular household. Other animals include goat, pigs, sheep and donkey that are kept on a small scale.

Table 5.17 Grazing in the Wayleave, Tanzania

Free ranging	Cattle	23	13,8	317
	Chicken	18	24,7	445
	Cow	233	13,5	3 149
	Donkey	51	4,1	211
	Goat	232	18,1	4 191
	Pig	1	-	3
	Sheep	79	9,1	720
Fenced area	Chicken	30	16,8	505
	Cow	17	6,3	107
	Donkey	4	4	16
	Goat	12	9,4	113
	Sheep	7	5,4	38
Tethered	Cow	13	3,5	46
	Donkey	1	2	2
	Goat	6	4,7	28
	Sheep	2	5	10
Impacted households with at least on type of animal grazing in the wayleave		326		

Source: Household survey.

An estimated 326 households of the impacted households will be affected by the project and will have their animals displaced temporarily, during the project construction stage.

6 IMPACT OF THE PROJECT ON THE HUMAN ENVIRONMENT

The following paragraphs summarize the impacts.

Four main categories of affected people have been identified:

- 253 owners of plots with houses and/or a secondary structure in the wayleave, among them 74% do not have land to rebuild on;
- 471 households have crops or cultivate small trees (banana, etc.) in the wayleave;
- 269 do have at least one tree, growing higher than 4,5 meters, on their affected parcel;
- 326 owners have animals in the wayleave that are free-ranging, fenced or tethered.

A certain number of households are affected by multiple impacts:

- 155 households have grazing fields and/or crops and/or trees and a house or secondary structures affected;
- Households with crop and cultivated trees will be affected temporally by the construction and will lose their trees (if they grow higher than 4,5 meters). Some space under the pylons will be lost for cultivation or grazing;
- The free-ranging animals will not have access to a part of the land temporally during construction.

Owners of plots with houses or other structures in the wayleave will be affected by:

- Loss of land and houses in which they are living;
- Loss of other buildings and structures;
- Productive time lost to participate in the evaluation of impacts and other administrative tasks.

The affected households with houses will also be physically relocated. Most of them do not have available space to relocate their structure on and land must be bought before the reconstruction.

There are 23 community buildings affected along the ROW that need to be reconstructed. In the vast majority of cases, the communities have a piece of land on which it is possible to reconstruct them.

Some community sites are also affected and, in particular, community forests that need to be compensated for. A reforestration program is proposed to this effect (see the project ESIA report).

6.1 Tanzania

6.1.1 Impact of the Line

6.1.1.1 General

This section presents a detailed description of the Project impacts. The potential environmental impacts of the installation of the power transmission line from Singida Tanzania to Isinya Kenya were assessed using data collected from field investigations in May-June 2011, consultations with government officials, review of relevant documents and consultation with various stakeholders as well as PAPs. The adverse impacts of the Project will be lessened by the fact that from Singida to Arusha (on a total distance of207 km) the transmission line route will be directed close to an existing line (220 Kv).

6.1.1.2 Houses and Secondary Structures

There are 297 houses and 5 shops belonging to 213 distinct households that are presently located in the wayleave. These houses are classified as modern, traditional or a combination thereof depending on the construction materials used (concrete, adobe, thatch etc).

Within the ROW there are also 414 secondary structures that will be affected by the project. A total of 226 households have a secondary structure in the way leave.

Most of these secondary structures are associated with a house. In total there are 186 households that have a house and a secondary structure affected. This leaves 27 households that have only a house affected and 40 households that have only a secondary structures affected. In total 253 households have a house or a secondary structure affected.

These houses and secondary structures must be displaced. In the highly settled areas and trading centres, many affected households have no extra land on which to reconstruct their structure. However, this is different with households in sparsely settled areas where households have space to reconstruct these structures on their land or an adjacent plot.

As indicated in the survey results, 74% of the affected households do not have land outside the wayleave where they can relocate for rebuilding their structure (principal or secondary). These households need to receive an appropriate site for reconstruction.

With proper displacement procedures, appropriate and cost effective compensation measures undertaken, the impact of the project on those households will be minimized. Proper time and care to assist communities and household is crucial to minimize the impact on these resettlements.

Another potential impact at this stage is the concern of many households with regard to compensation, land acquisition, displacement and social setting as indicated in

community and household surveys of the project area. Communities previous difficult experiences, including the construction of the existing 220 kV transmission line, created different fears (lack of or too small compensation, difficulty of payment, bad behaviour of land surveyors, etc.) for many households. Therefore, it is recommended that adequate time (not less than one year), should be allowed to evaluate and distribute compensation, buying of land for reconstruction in the case were no space is available on the affected parcel and reconstruction properly assessed before any houses be demolished and project related construction activities are initiated.

If this is adequately done the impacts will be minimised and less significant. To this effect a group of professional surveyors, social assistants, community development specialists and agronomists must be in place to help and assist the impacted households and alleviate their fears (see chapter 9 for additional details).

The definitive number of households likely to be displaced will be established during the final property and asset evaluation.

6.1.2 Other Projects in the Area

Radio and Television Reception

Transmission lines do not usually interfere with normal television and radio reception. In some cases, interference is possible at a location very close to the wayleave due to weak broadcast signals or poor receiving equipment, the impact of these is less significant.

6.1.3 Cumulative Impact

There are existing 132 kV and 66 kV transmission lines passing through some of the areas which are already associated with some impacts of loss of land (due to the construction of access roads) or restricted cultivation practices (tree cultivation in the wayleave). The new line will increase the size of the wayleave were these cultivation restrictions apply. However, access roads already present will allow accessing the transmission lines and therefore the impact is already present except for the small portion of the project, mainly from Arusha to Namanga, were there is no existing transmission line.

In addition to transmission lines, other projects such as upgrading of the Singida-Babati-Arusha road to bitumen standard have also been implemented and have caused impacts; most of which are viewed as negative especially regarding compensation.

In the project area, a few projects are currently ongoing and some are planned. Among the most important projects underway is the Iringa – Shinyanga 400 kV transmission line, which will share some facilities with the proposed power interconnection project. The substation at Singida will be used for both projects. Similarly, in some sections, the proposed Isinya –Singida power transmission line run within the same villages as Iringa –Shinyanga transmission line wayleave. For example, the Misuna and Mungu-maji villages are already affected by the other

transmission lines but will again be affected by the new proposed transmission line. The proposed power interconnection line also traverses an area where there is a road project going from Singida to Babati and from Babati to Arusha, up to Namanga. Cumulative impacts emanating from these projects will affect, in part, the communities living along the proposed 400kV transmission line or those crossed by it. Again at Namanga, on the Tanzanian side, there is already an international border project that will also involve relocating of houses and business.

6.1.4 Economic Impact of Construction and Maintenance

Employment

One of the challenges faced by communities affected by the project is lack of alternative economic activities such as employment. Most of them rely on either agriculture or livestock keeping. It is expected that some jobs will be available during the construction of the transmission line for the local population to be employed, mainly as casual labourers.

However, the employment opportunities will be temporary and the community will only benefit during construction phase. The jobs will also be limited because not more than 200 people will be expected to work on the line at any time. Therefore there will be a minimal positive impact on employment as only a few people are likely to be employed. Nonetheless it is recommended that TANESCO and the contractor should encourage local leaders to form a project liaison group to assist them in distributing jobs to local communities.

Infrastructure

In terms of infrastructure, the wayleave is likely to affect health centres, schools and religious institutions. As the community survey showed the following community infrastructures are likely to be impacted and need to be move:

- Seven schools;
- Six churches;
- One mosque;
- One nursing home;
- One CCM Office;
- One market;
- One maize milling centre;
- Two others (function not mentioned).

These infrastructures will be demolished and relocated to sites outside the proposed wayleave. Thus, the impact of the project on these infrastructures will be significant bearing in mind the number of people that use them.

The communities have land outside the ROW to reconstruct these buildings, and the community leaders presented no objection to their displacement if proper valuation and compensation are provided before project activities start.

It is therefore recommended that reconstruction is properly done before any construction of the electric equipment start to avoid any problem and anxieties in the affected communities.

Community Sites

There are 22 community sites that will be affected by the project.

The most important, numerically, are the 14 community forests that will be affected by the wayleave. They are located in Mogithu, Mara, Bagara, Kinyagigi, Mwada, Sigino, Kiongozi, Mawemairo, Mesenanijuu, Vilima vitatu, Kimokowa, Nanja and Minjingu. The exact size and the affected surface areas are not currently available. Additional investigations will thus have to be conducted prior to construction activities. However, in order to minimize the impacts on the communities and compensate for forest losses, a revegetation program will be implemented in affected areas.

In addition to these forests, 2 farms and one community grazing area are affected. Compensation for the damage to crops and soil occurring during construction must be provided to the affected communities.

For the other community sites (cemeteries, sacred areas) community administrators and elders must be consulted to obtain permission to cross-over those sites.

Rural Electrification

The communities crossed by the proposed transmission line (especially trading centres within the ROW that are not connected to the main electricity grid) are in anticipation that they will benefit from this project. The communities request is that from this line several step-down transformers be put in different locations to enable households, health centres, educational institutions (primary, secondary and vocational schools) and sub-county administration headquarters access power supply. With power supplied the community and district leaders believe that there will be accelerated development in their areas of jurisdiction. The fulfilment of these wishes will depend on the pace of the rural electrification programmes and not on the construction of the inter-connexion grid itself.

Currently in Tanzania there is a specific agent under the Ministry of Energy and Minerals known as Rural Energy Agency (REA) that is responsible in ensuring rural areas in Tanzania are connected with the National grid or supplied with electricity. Therefore the project implementer can work closely with REA to ensure that local communities in the project activities benefit directly with the project.

Furthermore, some access to electricity can be provided to local markets, health clinics etc. with ‘decentralize’ means (solar panel, diesel generator). These projects could be financed through the Corporate Social Responsibility Fund (see section 8.3.2.2)

Loss of Land for Farming Activities

Transmission lines can affect farm operations and increase costs for the farm operator. Potential impacts depend on the transmission line design type of farming, care in designing line corridor and construction requirement and precautions.

Construction of transmission line and poles can:

- Create problems for turning field machinery and maintaining efficient fieldwork patterns;
- Create opportunities for weed encroachment;
- Compact soils and damage drain channels
- Result in safety hazards due to pole and guy wire placement;
- Hinder or prevent aerial activities by planes or helicopters;
- Interfere with moving irrigation equipment;
- Hinder future consolidation of farm fields or subdividing land for residential development.

Placement of transmission lines along field edges or between fields where windbreaks have been planted can increase erosion of soils, if the windbreaks must be removed.

Some local communities that will loss land for farming activities especially those with land that is potential for agriculture like in Arusha and Hanang District, local communities requested if TANESCO can allow them to continue with farming under the transmission lines for crops that are less than 5 metres and mostly seasonal crops. Experience from other transmission lines in the country indicate that TANESCO do allow such activities to take place.

Loss of Trees Higher than 5 Metres and Crop Lost

An estimated area of about 26 hectares of land (a 75 m corridor along the stretch from Singida to Arusha along an existing transmission line and a 90 m corridor from Arusha to Namanga-Tanzania), will be affected, essentially during construction.

The number of households with trees, crops in the way leave is 498 or 96% of the affected households. The trees likely to be affected are namely those on woodlots, around homesteads and those scattered in gardens and woodlands within the way leave.

Though in Tanzania TANESCO has once compensated affected land and acquired it for the purpose of implementing a project, that land is considered TANESCO's and no other activity is allowed within the wayleave. Experience shows however that in various parts of the country people do cultivate, mainly seasonal crops, or use the ROW for grazing animals.

We therefore recommend to TANESCO to allow PAPs to pursue these activities that have no impact to the pillars and insure security of the PAP. The farming households can thus pursue most of their activities in the ROW after construction.

In the construction period crops will have to be destroyed or delayed in the wayleave area. It is difficult to assess the exact impact on the annual harvest since the exact period and duration of construction in each locality are not known. For this reason compensation (cash equivalent) of a year of harvesting of the area under cultivation in the wayleave should be given to all the households. In addition, crops that may be removed from land to be temporarily used for construction purposes (camp, access road) will also have to be compensated on the same base (cash equivalent to the value and quantity of crops). The exact amount is not evaluated since at this stage the exact location of camps and others facilities are not known. The contractor will be asked to plan its work and facilities in a way to minimized construction impacts.

Improved Agricultural Storage and Processing

The electricity provided to these communities depend on the pace and success of the rural electrification programmes and not of the construction of this inter-connexion project. It is thus difficult to assess the delays involved in the electrification of the subserviced areas crossed by the project. However if these sectors are eventually connected to the grid it will result in improved storage and processing of agricultural products increasing their market value or their selling period. Storage using refrigerators will preserve fresh food products such as milk products, fruits and vegetables which can be sold or consumed the following days. Grain mills for rice, maize and millet can be set up within the villages of producers instead of taking the products to “mills towns” thus reducing transport costs. These improvements will result, on the long term, to a positive impact of better prices for agricultural products and better incomes to farmers. In areas such as Babati, Hanang and Singida District most local people grow a variety of cash crops that need processing to add value to the products. With availability of electricity in the area, this will improve the economy of such people.

6.1.5 Impacts on Gender

The project will impact each gender differently in the project area. Women perform most of the domestic work as well as tilling the land whose harvest is decided over by men. The land lost due to the project and subsequent loss of crops (annual and perennial) will affect these women more than men because men are usually out of the homes to look for survival elsewhere as women struggle to provide for the households. In the project area traditional cultural norms are still important for consideration of education, gainful employment and other social benefits for women and girls.

In the survey of the affected households 13% are headed by a woman. These households in particular need to be helped to reduce the impact on their livelihood. It was also noted during consultations with local NGOs in Arusha that due to some traditions women do not own land and are rarely involved in the decision making process.

During construction and to a lesser degree during the maintenance and decommissioning operations, women will benefit from opportunities to provide goods and services to the workers: (fruits, meat, etc) and others goods, cooking and cleaning services. The contractor should have a gender hiring policy to maximise these positive impacts for woman.

6.1.6 Impacts on Vulnerable Groups

Among affected PAPs are vulnerable groups who cannot meet their basic needs and who require special treatment or consideration. They will need support during and after relocation so that they can maintain or improve their pre-project living conditions.

The survey identified 17 households who could be impacted more severely than others due to their vulnerable status. These households are taking care of a disabled persons (sick and handicapped) (32%), an elderly (28%), a widow (9%) or an orphan (9%)[5].

In most districts, it is possible to find women as head of households. From the socioeconomic survey, it is estimated that 13% impacted households in the villages crossed by the wayleave were headed by a woman, of which most are widows (57%). The small number of women head of households is due to the cultural arrangement of the common ethnic groups in the project area, where women rarely own land.

There are 312 affected households (61%) considered as economically vulnerable since their revenue is inferior to TShs 2 828 750/a[6]. In fact, a household is considered economically vulnerable when it spends less than TShs 1 550 per person, per day. The survey did not identify geographical concentration of vulnerable households along the line.

6.1.7 Impact on Minority Groups

The seven project impacted districts that include Singida Municipal, Singida District, Hanang, Babati, Monduli, Arusha and Longido are relatively homogenous with regard to ethnicity. There is no specific marginalized or stigmatized minority or indigenous people in the area or in Tanzania in general that need special attention because of their status.

[5] Among those 53 households mentioned as vulnerable by the surveyor 21% of them the specific cause of vulnerability was not recorded.

[6] Based on the following calculation: 5 members on average in affected households X TShs 1 550 X 365 days.

7 VALUATION AND COMPENSATION

7.1 Tanzania

The Government of Tanzania as well as the World Bank has guidelines to follow in establishing the compensation costs of land, houses, public infrastructure, crops/trees and other structures such as graves, toilets, plate racks, etc. The various assets and the guiding laws for compensation are highlighted in the table below. In this study, we are adopting the most stringent criteria.

Table 7.1 Compensation Rules

Land	Valuation based upon market value of unimproved land parcel plus a disturbance allowance based on commercial bank interest rates at that particular time.	PAPs will be given an option of having in kind compensation for land.
Permanent house	Valuation of each case based on the type of materials as well as house deprecation cost, transport for 12 tonnes at a distance of 20km and renting allowances for 36 months plus a disturbance allowance based on commercial bank interest rates at that particular time.	Structure can be completed at full replacement cost.
Traditional house	Valuation of each case based on the type of materials as well as house deprecation cost, transport for 12 tonnes at a distance of 20kms and renting allowances for 36 months plus a disturbance allowance based on commercial bank interest rates at that particular time.	Full replacement cost.
Other structures (graves, toilets, plate wrack, etc.)	Valuation based upon the official district approved compensation rates taking into account the type of materials, age and condition of the structure plus a disturbance allowance based on commercial bank interest rates at that particular time.	Replacement costs with additional facilitation for cultural rituals and relocation assistance.
Crops and trees	Valuation based upon the official district or Ministry of agriculture approved compensation and count of trees/crops on the affected land plot plus a 5% disturbance allowance.	For perennial crops a transition period for culture should be taken into account. This period may be more than one year for some crops. For trees a compensation rate should be convened for their permanent loss. For annual crops there is no specific provision. The goal is income restoration.

7.1.1 Compensations for Houses

Within the framework of the interconnection project some 84 modern structures, 94 mixed structures and 119 traditional structures will be affected by the project.

In the houses of the traditional type, the walls are built out of dried ground applied to a lattice of branches (cob) and the roof is out of thatch. The mixed houses are built out of dried bricks and have an iron sheet or thatched roof. The permanent houses are built out of concrete or baked bricks and have a sheet roof.

The affected houses are interspersed along the entire transmission line wayleave and are not concentrated together. The impact will generally consist in rebuilding them within a few meters outside the wayleave on the same piece of ground as much as possible. However, as mentioned previously, a large portion (74%) of the affected households that have a house or a secondary structure affected (n.253) say that they do not have suitable land to reconstruct their structures. Thus, a piece of land must be bought to reconstruct their property. It is estimated that, on average, 0,35 Ha per affected households is necessary. An amount of 197 000 USD must be set aside to buy parcels to reconstruct these structures. This amount is based on the following calculation 74% X 253 households X 0,35 Ha/household X 3 000 USD/ Ha= 197 000 USD).

In some cases the affected area is densely populated and thus alternative parcels will be difficult to find.

The very large majority of households head mentioned that they prefer cash over in-kind compensation for reconstruction in Tanzania. Cash compensation instead of in kind (land for land, house for house) has been shown to be detrimental to families since in many cases money was used for other purpose than reconstruction.

To reduce impacts and money misuse PIU must assist households to find alternative parcel and buy it, or alternatively, Tanesco must buy parcels and proceed to exchange them with the affected parcels.

Reconstruction must also by carefully organized and monitored to insure that proper work is done. Compensation should be distributed by instalments (for materials, then for work, and final payment after completion and inspection), to reduce problems and misuses.

As shown in Table 7.8 the total replacement cost of the houses is 2 583 419 USD to which a 5% increase (129 171 USD) for disturbance must be added, for a total price of 2 712 590 USD.

Table 7.2 Compensation for Houses to Relocate by Type

Tanzania	119	94	84
Average unit cost (Tsh)	3 300 000	13 400 000	28 000 000
Total cost estimates (Tsh)	392 700 000	1 259 600 000	2 352 000 000
Total cost estimates (USD)	253 355	812 645	1 517 419
		TOTAL	**2 583 419**
		5% Disturbance[1]	**129 171**

			GRAND TOTAL	**2 712 590**

1 This is an estimate of the bank interest rate.

There is also a small number (6) of other types of structures, mainly shops that have been constructed using mixed construction materials (traditional and modern) that need to be displaced. The price for reconstruction of all of these other structures is estimated to 15 120 Tsh or 9 755 USD including a 5% compensation and disturbance allowance, transport allowance and 36 months of profit allowance that is payable to business premises- this is normally calculated by the valuer depending on records kept by owner or research done by the valuer.

The replacement cost of the related infrastructures (cattle sheds, latrines, fences, etc.) is 334 239 USD (Table 7.9).

Table 7.3 Household Secondary Structures Located in the Wayleave

Fence / Gate	27	550 000	14 850 000	9 581
Toilets / Bathrooms	187	450 000	84 150 000	54 290
Kitchen	87	500 000	43 500 000	28 065
Animal shed	101	200 000	20 200 000	13 032
Well / Borehole	14	1 200 000	16 800 000	10 839
Storage	2	500 000	1 000 000	645
Family cemetery/graves	45	500 000	22 500 000	14 516
Other secondary structures	88	3 300 000	290 400 000	187 355
SUB TOTAL	**414**		**493 400 000**	**318 323**
5% Disturbance[1]			**24 670 000**	**15 916**
TOTAL			**518 070 000**	**334 239**

1 This is an estimate of the bank interest rate.

7.1.2 Compensation for Public Infrastructure

Certain public buildings are located in the wayleave and are affected by the construction project. As the detailed planning of the line, including the exact location of the pylons is not finalised, an optimization of the layout is still possible, and some of these structures could be spared. Those especially valuable would be churches or mosques whose symbolic value can be important and which several communities will hesitate to move. The list of affected structures presented hereafter thus corresponds to the least optimistic scenario.

It should be noted that all public buildings (schools, health centres, worship places, etc.) have to be rebuilt before undertaking their demolition. The replacement cost of the public buildings has been included in the calculation of the project. It should be noted that for most affected public structures, the authorities would prefer in-kind compensation in order for them to minimise complications related to the monitoring of the reconstruction exercise.

School	Permanent	7	629 300 000	406 000
Church	Permanent	6	530 100 000	342 000
Mosque	Permanent	1	88 350 000	57 000
Nursing home	Permanent	1	88 350 000	57 000
CCM office	Permanent	1	88 350 000	57 000
Market	Permanent	1	31 000 000	20 000
Maize milling machine		1	31 000 000	20 000
Other		2	31 000 000	20 000
Total		**22**	**1 517 450 000**	**979 000**

7.1.3 Compensation for Agricultural Production

There will be approximately 1 170 pylons in Tanzania that will have to be constructed for this project. Each pylon will occupy 26 m^2, therefore 30 ha (1 170 X 26 m^2) will be lost permanently for cultivation. The compensation cost for permanent cultivated surface losses, estimated at 38,585 USD/ha, are 1,157,550 USD (30 ha X 3 000 USD/ha).

The total area required by the project is estimated at 3 000 hectares (400 km X 75 m). TANESCO will compensate for loss of land, trees and crop, structures, etc. and thus acquire a right-of-wayfor safety reasons households and communities will not be allowed to use the way leave for agricultural operations (crops, grazing). No construction will be allowed in the wayleave. It is a common practise to find communities using wayleave area for agriculture and grazing.

Should TANESCO consider acquiring the land in the wayleave itself, the cost can be estimated at 9 000 000 USD (3 000ha X 3 000 USD/ha = 9 000 000). However, we do not recommend this operation because of its cost, the possible impact on the households, who could hesitate to cultivate it if they no longer own the land, and the legal implications.

The compensation costs for the harvest lost during the construction works will vary depending if affected people had time to make harvest or not. The compensations for crop losses will be calculated during project implementation on the basis of its commercial value in addition to the restoration cost of crops.

For the project needs, the harvest losses during all the year of construction are estimated at 1 116 549 USD.

The very large majority of household heads mentioned that they prefer cash over in-kind compensation for crop damage. As mentioned previously cash payment has been shown to be detrimental to families because of misuses. As much as possible, in kind payment should be organised (food for crop). Alternatively, compensation amount can be distributed by instalments (over many months) to reduce misuses.

Details are shown in Table 7.10.

Table 7.4 Compensation Cost for Loss of Annual Crops

Annual crops	Maize	349	278,4	286 000	79 622 400	51 369
	Sugarcane	12	4,6	2 600 000	11 960 000	7 716
	Beans	164	248,4	226 000	56 138 400	36 218
	Cassava	21	29	617 000	17 893 000	11 544
	Sweet potatoes	7	13,4	546 000	7 316 400	4 720
	Garden crops	43	5,6	1 236 000	6 921 600	4 466
	Millet	102	233,6	246 900	57 675 840	37 210
	Sorghum	86	271,2	624 000	169 228 800	109 180
	Simsim	212	158	808 000	127 664 000	82 364
	Sunflower	177	103,2	442 000	45 614 400	29 429
	Cotton	14	187	3 200 000	598 400 000	386 065
	Paddy	58	227,6	390 000	88 764 000	57 267
	Garden peas	101	72,8	1 690 000	123 032 000	79 375
	Pigeon peas	299	172,8	1 690 000	292 032 000	188 408
	Banana	109	21,8	2 145 000	46 761 000	30 168
Trees smaller than 4,5 m and perennial crops	Combretum sp	2	23,3	13 100	305 230	197
	Commipora sp	168	36,4	13 100	476 840	308
	Xymmania cafra	80	11,6	13100	151 960	98
	Brachystegia speciformis	98	9,2	13 100	120 520	78
	Brachystegia mycrophyllum	34	15,1	13 100	197 810	128
	Aloe secundiflora	32	22,1	13 100	289 510	187
	Caesalpinia decapetala	27	1,6	13 100	20 960	14
	Clerodendrum johnii	34	3,3	13 100	43 230	28
	Combretum hereroense	75	1,6	13 100	20 960	14
Total	**N/A**	**N/A**	**2 151,6**	**N/A**	**1 730 650 860**	**1 116 549**

7.1.4 Compensation for Trees

A lot of families have areas with trees, these include eucalyptus which is used for construction wood and firewood, and a part can also be sold. This situation was common in Singida, Arusha and parts of Dareda in Babati. Several families have also fruit trees that also vary from one locality to another. Other main indigenous types of trees are the baobab, acacia and brachystegia that have multiple uses to the communities. These include medicinal, construction, firewood and fruits.

These trees will have to be cut and cannot be replanted in the area of the line. This will be a permanent loss over the years. The loss generated by the complete deforestation of the area of the line will have a significant impact for households. The compensation for the loss is a complex procedure since the compensation given to each tree is depending on its size. Evaluation of the number of trees for each family has been done on the basis of the investigation results.

The total cost is estimated at 125 973 USD (Table 7.11).

7.1.5 Compensation for Loss of Turnover

Certain trade or businesses may be affected by the line construction. Taking into account the project linear aspect, the trade shifting will be possible in certain areas that could be closed or more difficult to access because of the construction. At all events, the businesses and trade income losses will be evaluated individually.

A cost equivalent to six months of turnover will be established as a basis for compensation.

7.1.6 Compensation for the Arusha substation land

The proposed area for the Arusha substation is in Lemugur village (400 m x 400 m). At present there are no houses/structures or perennial trees/crops in this area. Only seasonal crops such as maize, potatoes and nuts are grown in the area. Owners of these season crops will be allowed to harvest their crops before the commencement of the project so as to avoid unnecessary compensation costs. Basing on the value market of the land, it is hereby estimated that the land for the Arusha substation will be compensated for 50,000,000/= or USD 32258.

Table 7.5 Tanzania - Compensation costs for trees

	Eucalyptus	217	33 000	7 161 000	4 620
	Guava	89	15 000	1 335 000	861
	Grevellia	312	13 500	4 212 000	2 717
	Avocado	34	60 000	2 040 000	1 316
	Acacia xanthophloea	118	13 100	1 545 800	997
	Acacia melifera	23	13 100	301 300	194
	Acacia polyacantha	21	13 100	275 100	177
	Commiphora africana	219	13 100	2 868 900	1 851
	Cassia breviata	61	13 100	799 100	516
	Combretum molle	82	13 100	1 074 200	693
	Euphorbia triucalii	524	2 000	1 048 000	676
Trees higher than 4,5 m	Mangifera indica	312	83 200	25 958 400	16 747
	Terminalia brownie	25	13 100	327 500	211
	Euphorbia candelabrum	12	2 000	24 000	15
	Vitex doniana	9	13 100	117 900	76
	Brachystegia speciformis	11	13 100	144 100	93
	Ficus sp	21	13 100	275 100	177
	Grewia similis	21	13 100	275 100	177
	Moringa orifera	32	28 000	896 000	578
	Sclerocarya birrea	61	28 000	1 708 000	1 102
	Syzygium cuminii	68	13 000	884 000	570
	Adensonia digitata	27	39 000	1 053 000	679
	Sisal	46 978	3 000	140 934 000	90 925
Total				**195 257 500**	**125 973**

8 INCOME AND LIVELIHOOD RESTORATION STRATEGIES

The World Bank guidelines WB OP 4.12 paragraph (6c) state that: displaced persons should be offered support after displacement, for a transition period, based on a reasonable estimate of the time likely to be needed to restore their livelihood and standards of living; and provided with development assistance, such as land preparation, credit facilities, training, in addition to the compensation they receive.

In addition, WB OP 4.12 paragraph (2c) requires that displaced persons should be assisted in their efforts to improve their livelihoods and standards of living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.

Using these guidelines, the developer should involve the affected communities, local leaders, NGOs and other stakeholders and gather opinions on how best income and livelihood restoration can be handled and achieved. The process of defining income and livelihood restoration strategies will be highly participatory for purposes of fostering ownership at an early stage. The displaced households are especially in need of assistance and among these those who will have to reconstruct their house far away from their actual location.

8.1 Communities along the Transmission Line

The communities will be impacted negatively mainly through the displacement of community structures (18) and through the effects on some of their community sites (forest, cemetery, etc.).

To minimize these impacts, sufficient time and funds must be allowed to reconstruct the affected structures before the clearing of the wayleave and the erection of the transmission line. In all cases, except if the community leaders choose otherwise, the new structure should be located near the previous one to reduce disruption of community, spatial organisation and services.

Many communities along the wayleave have a lot of experienced workers that can be hired for the construction of the new buildings. Local workers and entrepreneurs (if possible) should be given priority and, as suggested, local committees should be formed and liaise with the entrepreneur in charge of construction to maximise local hiring as well as the purchase of local materials and services.

The LRS that is proposed (see below) could be used to improve, as suggested by the community leaders, public buildings (schools), services (dispensaries), and infrastructures (water supply, roads). Equitable distribution of the fund is very important. Communities should receive their share according to the length of the wayleave within their community and the number of households affected. A calculation method for the distribution of the LRS is proposed below.

8.2 Income Restoration and Improvement

Different restoration packages will be required for each of the various categories of PAPs depending on the magnitude of the loss, their levels of vulnerability, their preferences associated to their family characteristics and other circumstances.

Most of the affected households have trees (natural and planted) and some crops that will be destroyed during the construction of the transmission line. In most cases cultivation of crop can be restored except for those trees that can grow higher than 5 meters. The impact is thus minimal and temporary provided that households have enough time to prepare, are duly compensated and receive as much as possible fringe benefits (work for the clearing of land restoration of compacted soil, ownership of wood cut on their plot, etc.).

For those households (253 cases) that have a house or secondary structures affected by the project, a large majority (74%) do not have land available to reconstruct them nearby. The potential impact for these households is more important. All necessary steps should be taken by TANESCO and the Project Implementation Unit (PIU) in charge of compensation and reconstruction follow-up, to buy suitable land for reconstruction, and ensure that enough time for reconstruction and proper compensation is attributed.

Tentative compensation and support activities are outlined to indicate what kind of activities and material support may be needed to satisfy the lenders' requirements.

A special focus on livelihood improvement must be made for vulnerable households prior to the construction of the project, including those with low incomes and women headed households. Support for vulnerable households could consist of additional administrative and logistic support to help them to receive and administer the financial compensation and other benefits.

Members of affected households should also benefit from the proposed training programs and able-bodied household members should be given priority in allocation of project related employment and other benefits.

8.2.1 Land Base

All those who will suffer a negative impact on their crops should be provided seedlings and seeds for the purposes of replacing their gardens and crops.

In addition, technical assistance (such as training on livestock and crop production) should be provided for at least a two-year period to help the impacted households improve their situation. To that end, a member of the PIU should be an experienced agronomist. The PIU specialist will also ensure a link with the existing agricultural extension system and consult the Agriculture and Livestock departments at the district levels for coordination and maximisations of the efforts.

This help could include the following:

- Practical training courses on improved agricultural techniques, including improved crop varieties, fertilization, small scale irrigation, animal traction and related equipment, post harvest grain conservation;
- Training and extension services could be delivered by an experienced organization providing a permanent presence in the area. Women should be targeted as a specific group of interest, with specific engagement methodologies.

8.2.2 Non-Farm Components

8.2.2.1 Employment and Other Benefits

Priority should be given to all able bodied members of the affected households and communities and, in particular, to resettlers' households when labour for the project is recruited.

The employment and contract opportunities are important: clearing of the wayleave; construction of access roads and construction camps, reconstruction of community buildings and houses; services and goods to the workers; administration of the compensation program, follow-up activities, etc.

Furthermore, all the affected household and communities should be given all the wood cut on their plot for their use or sale. The materials salvaged from the affected structures should also be left to the affected households and communities.

All goods and services (ex. sand, cement, food, etc.) should be bought (as much as possible) locally by the entrepreneur in charge of construction. Specific provisions to that effect must be included in the construction Terms of Reference.

As for all the community forests (14) affected, an appropriate program of tree plantation should be proposed to the affected communities. An experienced agro-forester should be hired by the PIU to assist the communities and consult with the district Forestry Services to adequately plan the compensation program.

8.2.2.2 Livelihood Restoration Strategy (LRS)

The Namanga-Singida project will have many impacts on land use and on many households. But, for the communities affected, the positive impacts are limited - some jobs and revenues during construction.

This is why it is recommended to dedicate some funds to general development objectives, with communities taking the lead in determining which priority project they wish to implement. Consultations with community leaders helped identify these priority projects.

This principle is admitted in Quebec, Canada, and in many countries for this type of linear project. It is proposed that the equivalent of 1% of the total cost of construction (line and substation), in each country, is added to the cost of the project to finance the LRS.

The LRS aims at providing impacted communities with developmental benefits beyond mitigation impacts, household and community compensations for loss of assets.

The following principles are proposed to inform the project approval process and organise the LRS

- Focus on quick-impact social infrastructure projects;
- In each country, allocate to each community a portion of the total budget which is proportional to the magnitude of impacts they are experiencing;
- Assist communities in identifying eligible projects and preparing project documents;
- Establish eligibility criteria for projects;
- Disburse funds against eligible activities based on procedures ensuring a control over the actual destination of the funds by the PIU;

To insure an equitable distribution of the LRS to each community, a formula to allocate community development funds to a given community should be based on:

- Partial proportionality to the magnitude of impacts (length of the electric line crossing the community);
- Partial proportionality to the permanent population living in the community;
- Minimum amount for villages with small population and small length of transmission lines.

Beyond the obvious benefits to communities in terms of social infrastructure, the LRS is also viewed as a means to enhance community self-reliance in prioritizing projects, and project implementation capacity building within the community.

The proposed formula (to be used in each country) is the following1[7]:

- L is the total length of the transmission system (km);
- N is the total number of affected communities in each country;
- P is the total population of all communities intersected (number of individuals, including both affected and non-affected people);
- li is the length of the transmission system in community i (in km);
- pi is the population of the community i (number of individuals);
- Avg(li) is the average length of transmission system intersection (L/N);
- Avg(pi) is the average community population (number of individuals) (P/N);
- B is the total budget allocated to the whole FFC for the interconnection system;
- bi is the budget allocated for a community.

[7] This formula was proposed in the report: Burnside and Associates Limited, 2006, BUJAGALI INTERCONNECTION PROJECT RESETTLEMENT AND COMMUNITY DEVELOPMENT ACTION PLAN.

$$bi = B \Big/ N \bullet \left[\frac{li}{Avg(li)} x0.3 + \frac{pi}{Avg(pi)} x0.3 + 0.4 \right]$$

This formula gives equal weight to population and length of impact (each weighted by a coefficient of 0,3). Through the coefficient 0,4, a minimum amount is made available to smaller communities with limited impacts (no community would get less than B/N x 0,4).

Areas where the electric line intersects with large estates should not be considered to be community-land and excluded from the calculation.

9 INSTITUTIONAL ARRANGEMENTS FOR RAP IMPLEMENTATION

Responsibility for the good implementation of this RAP lies with the TANESCO for whom the proposed power infrastructures will be built.

TANESCO will thus be responsible for setting-up the Project Implementation Unit (PIU). This structure will take care of the implementation of the RAP, including the monitoring activities and implementation of the CSRF.

The PIU coordinator will also have to ensure that identified vulnerable households benefit from the special measures intended for them, including income restoration and improvement measures, and do receive in an appropriate manner the compensations they are entitled to. The PIU team must be capable to adapt measures and information tools to local language (Maasaï, and other special dialect) and customs. Many local households head have little to no education and must thus be helped through adapted documentation and personal contacts.

As shown in the consultations carried out, the households, chiefs of villages and community administrators have concerns about not being compensated or insufficiently compensated. These fears result in particular from bad experiences (especially the previous 220kv line in Tanzania and the recent rehabilitation of the main road between Arusha and Singida). In order to reduce these fears, ensure transparency and an efficient process of compensation and re-localization, it is proposed that an organization independent of both electricity companies, a Project Implementation Unit (PIU), be created in each country. In addition, it is proposed that the Coordinator of each PIU be a neutral person, a private consultant or someone coming from an NGO. This independence will reassure the population about the neutrality of the PIU. The Coordinator of each PIU should be a person with sufficient knowledge in legal provisions related with the relevant compensations procedures.

Observers provided by government authorities, in particular those in charge of districts and lands, together with electricity companies would supervise the works of this PIU. These observers will receive a monthly report on the RAP implementation: compensation, relocation, grievances redress, income restoration, projects, etc.

NGOs should be encouraged to attend and witness consultation events and/or provide comments on disclosed materials to ensure that there is no evidence that stakeholder involvement and comments provided are a result of coercion by another party.

To enhance transparency it is also suggested that a witness NGO be retained in both countries by the PIU to provide independent advice and report on RAP implementation and management focusing on consultation activities, compensation and resettlement related activities. This mode of supervision was experienced in other projects and gave good results in terms of reduction of grievances in particular[8].

More specifically the body of observers that should receive information and supervise the work of the PIU are:

- The key partners in the implementation and management of RAP for the transmission line include, The Ministry of Water, Lands and Environment, the National Environment Management Authority, the Developer (TANESCO), Local governments at district level, representatives of Village committees, and an identified witness NGO.

At the time of the project approval, and at least a year before the beginning of construction, the PIU should be set-up in each country and the witness NGO should have been identified.

This PIU should be in place to monitor the construction activities and impacts on households, and also implement the projects funded through the LRS. It is estimated that the PIU will need to operate in full activity during 24 months (1 year before start of construction and all along construction operations) after which a limited team will monitor the long term impact on communities and households.

This long term RAP implementation success evaluation should be done a first time 1 year after construction completion and then a second auditing should be done 5 years after construction. The first one will be done after a first year of operation of the different social units affected (farm, cattle raising ranch, commercial unit, etc.) and can be used for impact and compliance monitoring[9].

Responsibilities of the PIU Coordinator, approved by the various parts, will include:

1. Provide information on activities and consultation of the PAPs;
2. Maintain a census of the goods and a detailed evaluation of the compensations;
3. Management of compensation payments;
4. Monitoring the resettlement work;
5. Implementation of community approved projects financed through the LRS;
6. Identification of the witness NGOs to be retained and facilitation of their involvement it in the consultation activities, compensation and resettlement related activities;
7. Production of follow-up reports (see below) for the RAP implementation to appropriate government authorities, the promoter of the power network in each country and the contractor in charge of the line construction.

The PIU Coordinator must rely on a team of professionals and support staff able to conduct all the following tasks. It is recommended that each PIU have:

1. **Support staff**: secretarial services, drivers, security and legal personnel, general accountants;
2. **Survey, Identification & Valuation Team**: surveyors, valuers, “option disclosure and agreement” officers;
3. **Resettlement (house and community structures)**: ad-hoc urban planner and architect (consultants), engineers / construction supervisors;
4. **Cash compensation**: compensation officers, accountant, security officer;
5. **Database management**: database officers;

6. **Livelihood restoration and community forest**: agronomist / agro-foresters;
7. **Assistance to vulnerable people and displaced households**: social workers;
8. **LRS community project**: community mobilisation specialists / sociologists; technicians or engineers on ad-hoc basis providing technical advices for projects.

It is also proposed that the PIU have 4 offices situated in easily accessible communities to facilitate transport, contact with population and local authorities.

The compensation amounts and resettlement envisaged will have to be approved and endorsed by the PAPs, the competent governmental authorities and by TANESCO.

It is important to organise payment of compensation in ways that are not detrimental to households. In particular for resettlement full value of actual replacement costs of crops, land and structure must be awarded. In kind payment, (land for land, constructed house for old one, food for crops, etc.) instead of cash payment is preferable in most cases. Experience in many projects shows that cash is much more likely to be used (and sometimes misused) to the sole benefit of males[10].

Communities and households fears regarding the non-payment of the allowances are important and widespread. These are related to past experiences which undermined their confidence.

By respect for the surveyed populations, and to reduce their fears, it is strongly recommended that the approval of the start of the construction of the electric line be conditional to the transmission of a satisfying progress report from the PIU.

This report must clearly establish, with the support of evidence, that compensations were paid, and that resettlement projects were successfully carried out prior to the initiation of the construction project.

Also, as a mitigation measure, the PIU should clearly identify and disclose well in advance the cut-off date (when will the survey come to an end and new compensation claims be refused) to the PAPs and their representatives, and provide them with the necessary contact information and procedures to fill in their compensation claims prior to the cut-off date. The cut-off date was 15th July 2013.

To inform affected communities authorities and PAP many means should be used to inform them on compensations rules and procedures, rights and grievances mechanisms etc.: leaflets, community meetings with graphical display to help illiterate people, radio messages in local language, recorded approval of the project by local authorities, etc.

Assistance in information, negotiation, payment, relocation, reconstruction and adaptation to the new environment is essential, especially for vulnerable households.

Lessons learnt from previous projects with relevance to the planned resettlement and compensation activities shows that in kind compensation options (house reconstruction, equivalent in kind food –bought locally- for crop damage,), tend to protect the weakest in the

community (females and children, vulnerable people), whereas cash compensation is often detrimental to them[11].

However, as shown in the survey most of the head of households prefer cash over in-kind compensation. This tendency is not easy to mitigate given the current place of females in rural communities. Possible mitigation measures are:

- Awareness program on the issue directed towards authorities, local administrators and communities;
- Assistance of the PIU by local NGOs and social services to inform and assist vulnerable people and groups;
- Seeking full consent of females in the households with explanation of proposed compensation options;
- Payment of large amounts of cash compensation (larger than USD 500) in carefully distributed instalments (it can be over several months) has been shown that it mitigated to a large extent the potential for cash misuse;
- Careful monitoring.

In relation to the above, training and information transmission are important issues in order to raise the understanding of current environmental and compensation legislations and regulations governing the project.

For instance, experience gained from built power lines, notably with regards to compensation evaluation, distribution and acceptability, must be drawn upon to avoid repeating mistakes of the past.

A training program must be implemented as part of the PIU setting-up process to enhance awareness among key personnel involved with the supervision of compensation evaluation, procedures and implementation of others mitigation and compensation measures. Training in grievances procedures and negotiation should also be learned by the personnel in charge of supervising compensation and resettlement issues.

Table 9.1 outlines the training proposed for the PIU staff. The training is focussed on the practical aspects of compensation and relocation, calculation, monitoring and management.

Table 9.1 Training Programme

PIU Staff	• Lecture • System • Workshops • Group • Case studies • On-site	• Overview of the environmental and social issues of the project • Environment regulations and acts • Environmental and RAP management plans • Compensation and relocation acts, regulations and standards • Lessons learned from previous cases • Vulnerable groups participation techniques • Monitoring requirement and techniques	Environmental and social experts, legal advisors and evaluators NEMC
Grievances management, negotiation and mediation techniques	• Workshops • Lectures • Case studies	• PIU team of compensation supervisors and grievances committee members	Legal and negotiation experts

10 MONITORING, REVIEWS, AND EVALUATION

Monitoring and evaluation includes: the establishment of socio-economic background data of the affected persons prior to actual land acquisition or physical relocation and regular monitoring of their situation for an extended period of time after land acquisition and relocation.

In addition, qualitative and quantitative evaluations will be made to see whether the resettlers and affected people achieve at minimum their pre-project standard of living as a result of the livelihood restoration programme.

For monitoring, the two PIUs will take full responsibility for conducting regular internal monitoring of the land acquisition, resettlement and compensation process and report to the authorities (TANESCO, Lenders, Government officers and community leaders, etc.).

During the implementation of the RAP, monitoring will be undertaken at regular intervals, for example every 6 weeks. Post resettlement monitoring of the affected households should also be undertaken relatively frequently, e.g. every three months during the construction period. Monitoring reports should comply and outcome measures should include the following:

- Number of households and individuals affected by project activities;
- Number of households and individuals economically displaced (crop, shops and activities affected, etc.) as a result of project activities;
- Number of households and individuals resettled by the project;
- Number of resettlement houses built;
- Number of resettlement houses taken possession of by resettlers;
- Grievances (open, closed);
- Amounts of compensation paid for each category of lost assets (structures, land, crops, others) and other benefits obtained by households and individuals;
- Affected PAPs and resettled households economic and livelihood situation;
- Community structures affected;
- Community structures rebuilt and used by community;
- Community plantation program (affected community forests);
- CSRF approved projects and implementation status.

During the whole monitoring process, the PIU will focus on identified vulnerable households and individuals in order to monitor if they are benefitting or not from the income restoration and improvement special measures intended for them, and are receiving in an appropriate manner or not the compensations they are entitled to. Moreover these vulnerable households should be helped by the PIU in the administrative and logistics organization of compensation, relocation, and fringe

benefits program (jobs, use of cut trees on their plot, etc.) to insure that they receive the maximum of those advantages.

The list hereafter provides monitoring indicators for these vulnerable households and individuals.

- Number of vulnerable households and individuals affected by project activities;
- Number of vulnerable households and individuals physically displaced as a result of project activities;
- Number of vulnerable households and individuals economically displaced (crop, shops and activities affected, etc.) as a result of project activities;
- Number of vulnerable households and individuals resettled by the project;
- Number of resettlement houses taken possession of by vulnerable resettlers;
- Grievances (open, closed) by vulnerable households and individuals;
- Amounts of compensation paid for each category of lost assets (structures, land, crops, others) and other benefits obtained by vulnerable households and individuals;
- Affected vulnerable PAPs and resettled vulnerable households economic and livelihood situation (revenue, health and social status, well-being).

A long term RAP implementation audit should be done. At the operation stage 2 auditing should be done. A first audit should be conducted 1 year after construction completion. A second audit should also be done 5 years after construction. The first one will ensure that the household's situation is not left unattended, if the impact of the project is severe and the mitigation measures not effective. Corrective measures can thus be taken promptly. The second audit will measure the long term situation and trend.

A sample of affected households and communities can be selected to measure the impacts of the project[12]. These auditing studies should monitor impact (social changes in revenue, health, social status and well-being) and compliance (respect of standards or goals, for example: household's revenue at least equal to pre-project level)[13]. Household questionnaires and focus-groups (women, men, vulnerable head of households, community leaders) should be used to assess these impacts

As for the decommissioning phase three audits should be implemented. A first one for a pre-decommissioning baseline, a second one a year after the decommissioning is completed, and a third one 5 years after the decommissioning. The indicators used can be similar to those used at the operation phase.

11 GRIEVANCE MECHANISMS

11.1 Tanzania

11.1.1 General

TANESCO as a client has to be involved in all claims and disputes as the client is the one who will be receiving and handling them. However, being an interested party to the contracts the client should not be involved in the final ruling of disputes arising from compensation and resettlement arrangements.

There is needed to identify and describe at the onset the process, procedures and mechanisms for settling disputes. Affected individuals and households should be informed, by the PIU officers, about the existence of a defined process for expressing dissatisfaction and to seek redress. General information regarding the existence of such procedure should be made public during the early stages of the community consultations. A more detailed description of the established process should be presented to the PAPs at the time the resettlement plans are approved and individual compensation contracts are signed.

As recommended by other RAPs elsewhere, the selected procedure should be simple, administered as far as possible at the local level, to facilitate access, flexibility and openness to various proofs, taking into account that most of the PAPs have minimal awareness with regard to grievances procedures.

Grievances and disputes related to resettlement and/or compensation may arise for different reasons. Grievances may arise from mistakes related to the identification of the affected property and people within the wayleave, disagreements related to the ownership of property, disagreements on land and asset valuation, disagreements on other compensation allowances, and problems related to the time and manner of payment of compensations.

11.1.2 Steps for Submitting Grievances

Any dispute that may arise should be best redressed through project management, local civil administration, or other channels of mediation acceptable to all parties. Such channels of mediation may involve customary and traditional institutions of dispute resolution. The PIU officer in charge of grievances should make every effort to resolve grievances at the community level. Recourse to the legal system should be considered as a last resort.

The Land Act (Section 156) only provides for grievances related to land acquisition and compensation issues related to the creation of a wayleave to be brought to the High Court of Tanzania. This is usually too expensive and impractical for most of the residents and businesses within the project area. It is, therefore, recommended that claims and complaints regarding compensation and resettlement issues are brought first to the attention of the village/local leadership.

If the issue is not resolved, the grievances will be submitted to the Ward Executive Officer or eventually directly to the District Executive Director.

11.1.2.1 Stage One: Village Level

Procedures for grievances will be clearly explained during barazas. At the village levels, a series of customary avenues exists to deal with dispute resolutions. Those avenues should be employed, when and where it is relevant as a “court of first appeal”.

Such customary avenues should provide a first culturally and amicable grievance procedure that will facilitate formal and/or informal grievance resolution for grievances such as:

- Wrongly recorded personal or community details;
- Wrongly recorded assets including land details and/or affected acreage;
- Change of recipient due to recent death or disability;
- Recent change of asset ownership;
- Wrong computation of compensation;
- Name missed out of register, etc.

At the village level, grievance committees should be established with the following members:

- Traditional leader or head of the clan;
- Village administrators;
- the Secretary for women and children’s affairs;
- 2 representatives of the PAPs (1 female and 1 male);
- One officer of the Survey, Identification & Valuation Team of the PIU.

PAPs’ complaints should first be lodged verbally or in writing through this process. It is expected that the village committees will deal with the grievances they receive within three days of receipt of the complaint. If the complaint cannot be resolved at the village level, or if the plaintiff is not satisfied with the settlement proposed, the plaintiff should then be referred to the second stage.

11.1.2.2 Stage Two: Ward Executive Officer

Grievances that could not be resolved at the first stage will be submitted to the second stage: the District Resettlement Action Plan Committee (DRAPC)[14] in which PAPs, affected communities (local leaders) and the PIU officer in charge of grievances will be represented. This committee should be presided by the Ward Executive Officer.

Grievances that are beyond the scope of the DRAPC or could not be resolved through this instance should then be referred to the third stage.

11.1.2.3 Stage Three: District Executive Director

At this stage, PAPs that did not receive a satisfactory answer to their grievances in the first two stages, will be invited, as a last resort, to submit is case to the District Executive Director for conciliation. If, at this ultimate stage, the PAP is still not satisfied it will be directed, by the PIU officer, to High Court of Tanzania the ultimate instance of decision according to the Land Act (section 156).

11.1.3 Follow-Up Activities

Follow-up activities on grievance mechanisms should follow these steps:

- Proactively disclose information about the process, as well as success in grievance resolution, measured by numbers of satisfactorily resolved complaints, reduction of recurring complaints, decreases in new complaints.
- Ensure constant consultation with project affected people on ways to improve on grievance mechanism.
- Document the complaint and regularly report back to PAPs on any actions taken in resolving the grievance.
- Publicize either through public meetings, or written pamphlets or any media any complaint that has been successful resolved.
- Create an internal culture of accountability by preparing an operational manual or procedure in resolving conflicts.
- Once the complaint is resolved, in a timely manner, check the status of complaints, track progress, measure effectiveness, and timely report to concerned parties.
- If the grievances allege that the mechanism lacks transparency, adjust the policy and methods used to publicize it, by putting more emphasis on inviting the community to participate in decision making.
- Document lessons learned throughout the process of handling grievances as this can help in ensuring continual improvement of the Developers operation.

- Grievance records should provide the background information for regular monitoring.
- The process of redressing grievances will start by registration of each grievance with the respective chief or his representative who will register and then forward it to the DRAPC.
- Grievances will be discussed at the DRAPC monthly meetings and the resolution of the DRAPC communicated to the parties concerned through the chief's office. The DRAPC will submit a monthly report which will spell out achievements and challenges, grievances, funds received for the exercise in the month, moneys paid out as compensation in the month, other expenses, etc.

12 RAP IMPLEMENTATION BUDGET AND SCHEDULE

12.1 RAP and Livelihood Restoration Strategy (LRS) Budget

The RAP, LRS implementation and Monitoring budget is summarised in the table below. This includes all costs involved in the execution of all RAP and LRS activities. The total budget is: **39,980,379.09 USD** The only RAP activities that are planned for a longer period (about 3 years) are the monitoring and evaluation activities which are scheduled to be done once a year after completion of major RAP activities.

Table 12.21 Tanzania: RAP, Livelihood Restoration Strategy (LRS) and Monitoring Cost

Resettlement Action Plan (RAP)		
PIU Formation and activities (3 years) This include cost for public information campaign (Pamphlets, public announcement in newspaper, etc.) and compensation for local administrators	930 000 000	1 243 535
Detailed land and household evaluation	434 000 000	280 000
Permanent lost land compensation	39,970,439,000	25,787,380
Resettlement of principal structures (houses, shops, etc.)	4 509 864 500	2 909 590
Resettlement of secondary structures (kitchen, latrine, etc.)	518 070 450	334 239
Community buildings (church, schools, etc.)	1 517 450 000	979 000
Crops compensation	1 730 650 950	1 116 549
Trees compensation	195 258 150	125 973
Arusha substation's land compensation and house	2,942,700,000	1,892,411
Compensation sub-total	**42,913,139,000**	
Contingences 10 %	429,131,390	937,490
Total RAP	**47,204,452,900.**	
Livelihood Restoration Strategy (LRS)		
Access roads, provision of wells, follow up for providing woman employment (1% of project cost)	2 635 000 000	1 700 000
Rural Electrification Program (cost to provided after study)		205,787
Rural Electrification Study program	320,000,000	206,451
Administration of LRS (10%)	295,500,000	190,032
Total LRS	**3,250,500,000**	**2,095,819**
Total RAP and LRS	**50,454,952,900**	**32,551,582.52**
Inflation rate for next three years 7.3% (historical rate 2012-2014) source National Bureau of Statistics	11,049,634,685	7,128,796.57
Monitoring cost of RAP and LRS (USD 100,000 / year for 3 years	465,000,000	300,000
Total RAP and LRS after inflation	**61,969,587,585**	**39,980,379.09**

Conversion rate: 1 550 Tsh = 1 USD.

The actual cost of the RAP can vary and will be influenced by the timing of project implementation and by the retained valuation criteria.

An estimation of the additional cost involved with the land compensation in the wayleave average 60m x 400,000m with land rate of 0.75 of USD per square meter (and not only compensating for affected structures and crops) is estimated at USD 60x400,000x0.75.(18,000,000)

RAP and LRS monitoring will be an additional cost and it is estimated that USD 300,000 of which USD100, 000 will be used annually for 3 years

12.2 Schedule

The RAP implementation schedule covers a period of twenty four months in order to include all planned activities, including implementation of the LRS. It is important that all structures to be rebuilt and payments for compensation are completed before project construction is commenced. This is to ensure that all possible barriers and encumbrances to the project implementation will have been dealt with (Figure 12.1).

The only RAP activities that are planned for a longer period (about 3 years) are the monitoring and evaluation activities which are scheduled to be done once a year after completion of major RAP activities.

igure 12.1 RAP Implementation and Follow-Up Schedule

S/N	Activity	Responsible	Dec - 2013	Jan-2014	Feb-2014	Mar - 2014	Apr-2014	May - 2014	June - 2014	July - 2014	Aug - 2014	Sept - 2014	Octo - 2014	Nove - 2014	Dece - 2014	Jan - 2015	Febr - 2015
1	Demarcation of centre line and boundary limit (Singida- Arusha)	TANESCO															
2	Putting up Control points extension (Namanga – Arusha)	Survey and Mapping Division / TANESCO															
3	Demarcation of centre line and boundary limit (Namanga – Arusha)	TANESCO															
4	Stakeholder's Consultation Meetings on sensitization of what is required to make RAP implementation a success	TANESCO, District Councils (Land Officers, Valuation teams), District Commissioner's and Regional Commissioners representatives,															
5	Valuation of properties for compensation	Government Valuers/TANESCO															
6	Compensation payment	TANESCO in collaboration with Respective Councils															
7	Grievances Redress	TANESCO in collaboration with Respective Councils															
8	Monitoring of RAP and LRS																

NB:

1. Demarcation of Centre line and boundary limit between Singida and Arusha: Completed
2. Putting up of Control Points extension between Namanga and Arusha: Completed
3. Demarcation of centre line and boundary limit between Namanga and Arusha 63km covered by 16th July 2014
4. Compensation payment will be paid directly by TANESCO in collaboration with respective council: It will be paid in phases for each of the District Council in the respective region to avoid long wait by those evaluated first.
5. Monitoring of RAP and LRS – To continue for 3 years

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APPENDIX 4
ISSUES DISCUSSED DURING STAKEHOLDER MEETINGS

The concerns mentioned in this section are perceptions that have been received from participants during the meetings that were held. Some comments and observations reported by the population may have no scientific value or be partly or totally inaccurate, but they represent what they think and believe, and what was discussed.

Table 4 Main Issues Discussed during the National and Regional Stakeholders Meetings

Environmental Officer Longido District Council	• Longido district falls in the category of the savannah grassland accompanied by Fold Mountains formed as a result of volcanic eruptions. • There are undulated hills within the district; these are Longido Forest Reserve which is 2 015 ha, Kitumbeine Forest Reserve covering almost 6 441 ha, and Gilai Forest Reserve covering 2 334 ha. All of these mountains are forest reserves which are being reserved for protecting water catchments in the up hills. • It is dominated by mountainous forests, and some plains areas are savannah dominated with Acacia species. Rainfall availability is very low, maximum availability is 600 mm per year which is normally occurring in the western part of Longido and minimum is 200 mm per year. • Vegetation cover is Acacia in the whole of Longido district, and there almost ten different variety of Acacia species. • Almost 95% of the area in Longido is a Game Controlled Area whereby hunting activities is legally allowed. • The soil in the area is not suitable for agricultural activities hence the majority are pastoralists which is 95% dominated by the Maasai and Waarusha, the rest 5% comprises of business people and civil servants. • There is a wildlife corridor in some area of Kimbokoa which crosses to Sinya area from Amboseli National Reserve in Kenya. Another corridor is from Kitendeni Kilimanjaro National Park to Amboseli National Reserve. Also there is a wildlife corridor from Amboseli crosses to Longido and goes up to Lake Natron, it is mostly used by elephants. • Another notable wildlife corridor is from Ngasurai plains to Manyara National Park, this is a breeding site to wildebeests and giraffes. • Longido District is intending to establish WMA in most of the area because it has been observed that despite that fact that there are corridors, Longido is also a dispersal areas or animals to wander around for grazing and breeding purposes. • In the eastern part of Longido there is already established WMA known as Enduiment which comprises 8 villages while on the western part there is on-going process of establishing a WMA which will be known as Lake Natron WMA. • Longido is a new district having been established in 2007. • Currently, they are using electricity from Kenya through Namanga which is still not

	sufficient in terms of distribution and a few numbers of people have managed to install in their houses. • The majority are using generators. • There are small towns within Longido district such as Longido, Namanga, Kitombieni, Engarenaibor, Engikaret, Gelai Boma. All of these areas will be beneficiaries if the new power line is installed. **Other concerns on proposed project** • Any project must have negative and positive outputs, however for this kind of project the positives outweigh the negatives but it should try to minimize the levels of negative impacts to the environment and community. • It is envisaged that this kind of project will bring about development to the Longido district as many investors will come in, services will flourish, water pipes will be laid down, and individuals will venture into business hence development in the area.

Table 4 Tanzania: Main Issues Discussed during the National and Regional Stakeholders Meetings (cont'd)

Natural Resource and Environment Officer	• Generally, this district is characterized by semi-arid condition whereby most of the areas are dry dominated by Acacia trees and bushes. • Most of the areas have been proposed to establish WMA so that community will protect the wildlife and their habitats; few days ago there was an establishment of Lake Natron WMA. **Land Tenure and Issues** • Longido district has about 42 villages. It is dominated by pastoralists. • Land ownership is still under the Land Act of 1999 no 5. Villages have been given the mandate to manage and distribute land under the village government land committee. • Act no 5 of Land Act 1999 requires that each village must have a Land Use Plan for the sustainable development. • At the moment they have already arranged land use plan for 7 villages in collaboration with NGO's such as CORDS, TRIAS and AWF. • AWF are supporting the WMA initiatives such as Enduinmet and currently WMA in Lake Natron. They have also already arranged a budget for Land Use Plan for the all 42 villages in Longido District which AWF is supporting. • However, the majority of communities here are using customary laws in land ownerships especially the Maasai. • Normally, the Maasai build their houses (bomas) far from the road, however there are concentrated settlements along Longido and Namanga, there are few houses along Kimokowa. There is a new town which follow modern standard of builds (a well planned settlements). **Other concerns on proposed project** • The project will have a huge impact on the development. • Town will flourish, hence economic activities. • The power line project will facilitate the increase of land value in the areas. • There will definitely be a continuous supply of electricity. • Employment opportunities will be available especially to the youths. • However, it should be better if compensation will be done before the commencement of the project.

Table 4 Tanzania: Main Issues Discussed during the National and Regional Stakeholders Meetings (cont'd)

Wildlife Officer	• Almost 95% is covered by vegetation cover, the main activities around here is livestock and wildlife, few people are engaged in cultivation especially around Kimokuwa area. • Protected areas in Longido District are mountains, and all of the area in Longido is a Game Controlled Area, therefore liable for WMA. • From Engikaret there is a bridge which is a corridor for wild animals from East side i.e. Kilimanjaro National Park, Amboseli Reserve Park and Arusha national Park. • There is a breeding site for wildebeests and zebras in the eastern part of Longido district, and breeding site for hartebeests in Lake Natron. • They are collaborating with a NGO called Honey Guide Foundation, the aim is to protect the wild animals, they have been given by this NGO 2 car for Anti-Poaching patrol and conservation activities in the Longido District. **Other concerns** • The power line project will be a source of socio-economic development in the area. • The proposed common market for the EAC (East African Community) countries will be established in Namanga hence the project will facilitate a speedy economic development. • The issue of water will be solved if the power line crosses here because there are a lot of water reserves in Sinya-Longido. • There will be negative impacts for those who will be affected by the project however, the positive impacts are enormous.
Community Development Officer	• The ethnic majority here is Maasai and they still follow their traditional lifestyles although there are some elements of changes in their lives nowadays. • The majority of women are marginalized especially from land ownerships and inheritances. This reflects the patrilineal nature of the Maasai society. • Maasai communities have their own places for worshiping and offering sacrifices, in most cases these areas are confined to interior forests. • There are 42 villages and 20 wards in Longido District, hence there are almost 20 secondary schools in the district. • There are 2 churches in Longido village. • There is primary school, church, and dispensary in Engikaret. • In Namanga there is primary school known as Eworendeke Primary School. **Other concerns** • The project is vital for the development in the area and it will facilitate easy supply of power hence development. • Small industries will be built hence employment to the youths and able persons. • Revenue will increase at the border. • Many houses will be connected to power. • Life expenses will be reduced compared to the standard now. • However, to every project there must be a negative impact especially to those who will be directly affected such demolition of properties i.e. houses, churches etc.

	• If the compensations are done fairly there will be no conflicts at all. • Generally, it is a good project and we look forward to seeing its implementation.

Table 4 Tanzania: Main Issues Discussed during the National and Regional Stakeholders Meetings (cont'd)

AWF Arusha	• AWF is doing conservation activities around Africa and in particular here in Tanzania. • Conservation initiatives often take place in a dynamic environment with diverse habitats and species hence involvement of communities and stakeholders are a crucial approach for AWF activities. • They are largely engaging communities in conservation activities in a manner that benefit them and their children. • AWF do support establishment of WMA's in the country, for instance they established Enduiment WMA in the eastern part of Longido district and currently they are in final process of establish a WMA around Lake Natron in Arusha. • To facilitate these conservation activities, AWF do offer trainings to the communities, business plans and they help to link them with the potential supporters as far as conservation issues are concerned. • AWF are working in collaboration with the District Councils and community at large. **Other concerns** • Power lines do have minimal impacts to the wildlife corridors that can not threaten the establishment of a project. • Electricity is a good thing for any development hence, the project will have positive impacts to the communities and the beneficiaries. • Electricity will enable people to venture for other alternatives of income generating activities such as shops, kiosks, bars, mills and small light industries.
Longido Community Intergrated Programme (LOOCIP)	• This NGO deals with community development in the area such as water, education projects. • They also support students who come from a poor background in the district. They have a special programme for Early Childhood Education known as LECHE which uses Montessory Approach, and ICT. • They do have HIV Awareness programmes, guidance and counselling. • Gender issues are addressed through seminars and meetings. • They do advocacy and lobbying for gender equality e.g. women should inherit and acquire land. • They are collaborating with AWF in provision of HIV/AIDS education, Concern Universal in Kenya around Isinya area whereby they are working together in water projects. Also SNV of Netherlands. • They have project in place concerning family planning among the pastoralist societies in Longido district. • They will soon start to deal with conservation activities by collaborating with the American organization called Solar Oven Society (SOS). **Other concerns** • The project will have positive impacts to the Longido dwellers. • Small industries will flourish thus leading to economic development. • Investors will also come here and help the area to become the hub for economic activities in Arusha.

	• To them this project is very crucial for the development of the District Council and individuals in the area.

Table 4 Tanzania: Main Issues Discussed during the National and Regional Stakeholders Meetings (cont'd)

Maasai Women Development Organization- MWEDO	• It is an organization which deals with women issues among the Maasai communities in Longido district. • They have been active in raising awareness as far as land ownership is concerned. • They advocate women land ownership; they are collaborating with the District Council in every meetings, seminars and workshops. • They also championing for the women rights i.e. to have equal access of natural resources, cattle ownerships and land distributions.
Acting DED Monduli District	• Resettlement is a complicated issue due to scarcity of arable land and ownership of land in this area, therefore one needs to avoid resettlement as much as possible. • Energy is an important issue in the country, we at the district accept the project; however the project needs to ensure minimal impact to the environment and social aspects. • The district has a significant number of tourists due to availability of number of attractions in the district and adjacent areas. • If the proposed line follows the main road from Babati to Arusha it will minimize resettlement. • The proposed project should consider alternatives other than alternative A as it passes at Mto wa Mbu area which is very prime for tourism activities and agriculture- mainly irrigation.
DCDO- Monduli District	• Monduli is a Game Controlled Area that joined the Monduli forest reserve, Lake Manyara National Park, Ngorongoro Conservation Area and Tarangire National Park. The area supports a significant number of wildlife migrating projects among these protected areas, common animals spotted in the corridor includes giraffes, elephants, zebra, impala and wildebeest. • It is very important to involve the District at the preliminary phase of the project. • The project will facilitate industrial development in the region and boost the economy of the district and the region. • Currently within the proposed project areas in Monduli District there are some few farms and settlements that need to be relocated to give way to the project; however the project will have no impact to grazing activities, issues of compensation has to be looked at very careful. • Monduli District has several wildlife corridors that the project needs to take into account most people of Monduli District are livestock keepers and they do not settle close to main roads. • There is a problem of HIV and interruption of cultural practice due to continuous interaction between local communities and visitors brought in by tourism business in the district especially at Mto wa Mbu and Makuyuni areas that is accelerated with tourism activities. • Makuyuni has been cited as an Economic Processing Zone for the region as it is the main junction to Arusha, Babati, Tourist circuit, Mwanza and Musoma; therefore with enough power it will benefit more in terms of tourism business and other

	economic development activities to initiate as economic processing zone in the region.

Table 4 Tanzania: Main Issues Discussed during the National and Regional Stakeholders Meetings (cont'd)

DCDO- Monduli District (cont'd)	• With regards to how to deal with consulting pastoralists communities: one should note that nowadays they do move partially and leave part of their families behind. They also build permanent houses and invest on water harvesting infrastructure therefore with sufficient water even movement has been minimized. • Land tenure system has now changed and they are (pastoralists) cautious with land issues. They should therefore be consulted prior to implementation of the project so that they are aware of their fate and compensation issues. It is also important to raise awareness among various stakeholders. Every piece of land in the area is either owned by an individual family or a clan. • Women issues- There are families in the area where women are heads of household, however according to cultural behaviours women in most Tanzanian tribes do not own land, but in such cases women are protected by the family to ensure their rights are taken into account. • Mode of compensation- If local people are paid in money, there is a possibility of misusing the resources, for land it is important to find alternative land for the affected person and compensate for the affected land. • Family ties- Maasai have a tendency of living together in engan (group of bomas) because of among other reasons security. Therefore if the project affect part of the boma then it is important to relocate the whole engan. • It should be noted that land along the main road (Arusha-Babati and Makuyuni-Ngorongoro) in this district is very valuable due to tourism activities. • The road has been reconstructed without any compensation resulting in conflicts. • Maasai communities can also be involved in different activities of the project especially during construction phase. • HIV/AIDS is a problem in the area though data reveal a decrease in number of affected people from 5,7% in 2007 to 2,0% in 2010. Awareness on HIV is important. The government at district level undertakes awareness to local people on prevention and develops intervention to the affected. There are NGOs in the District that support the District. • On environment- The project must involve the District in monitoring of implementation of ESIA and RAP. • The project must have a plan to compensate trees lost in the clearing of the wayleave. • The project should consider involving local communities to minimize vandalism. • TANESCO should involve in cooperate responsibility such as building schools etc.

Table 4 Tanzania: Main Issues Discussed during the National and Regional Stakeholders Meetings (cont'd)

Babati Municipal Council	• This is an important project for the District and the National at large, the District is ready to provide any assistance needed. • Land is a critical issue in the area; however as far as compensation is concerned no huge/alarming situations will occur as there is no huge investment of infrastructure or other structures in the District. There is enough land within the municipality to relocate people who might be affected by the proposed project. • The main economic activity in the District is agriculture with minimal tourism activities in the area. • Electricity in the area is not a problem, there is minimal consumption, no industries, and may be with this project it might attract investments. Similarly no mining prospects in the area only artisanal mining. With the opening of another gate to Tarangire National Park (6 km); this might boost tourism in the District. • Gender Issues- Communities have minimal awareness on women rights we do have NGOs such as Engender health, Afnet that work on gender issues in the area. • On compensation- Urban dwellers would prefer money but in peri-urban areas they would prefer constructing another house therefore both methods are prominent. • Compensation should take into account matrimonial issues where property owner is married to more than one woman, there is need to control sharing of the compensation money obtained from such property as might lead into conflict and complain by disadvantageous part. Matrimonial cases are very prominent in the area. • The Municipal would like to know if there are any activities that the project will partner with the Municipal.
Babati District Council	• We have no problem with the project as it will reduce power problems in the country. • Compensation is always a problem in this area, because people are not willing to lose their land as the arable land in the area is very scarce. Also people are not satisfied with amount of money paid as compensation. This has lead into complain as we have experience with the road project. • There is land shortage in the District especially in rural areas. • It should also be noted that the line might go through protected areas such as BURUNGE WMA which under current wildlife policy it is recognized as one protected area. Although there are areas within the WMA that consumption of resources are allowed, which could provide room for construction activities of the proposed project to proceed, however the policy calls for consultation and EIA prior to implementation of the project and therefore needs to consult relevant institution prior to any activity. • The indigenous groups present in the area are Iraq, Maasai, Barbeig and Gorowa. Actually there are no issues regarding indigenous groups. • Women should be compensated fairly. • Among the projects to be funded by the Corporate Social Responsibility Fund new schools.

Table 4 Tanzania: Main Issues Discussed during the National and Regional Stakeholders Meetings (cont'd)

Singida District Council	• We think this is an important project to the National economy. • Route B according to me is the most viable option as it shorter and with minimal impact. • Singida region has potentials of producing energy from wind; currently two wind projects are expected to generate 100 MW and feed the National grid (Wind East Africa Co. Ltd. And Powerpool East Africa). • The project should ensure minimal impact on relocating social services. • The road is under reconstruction and works should be completed by 2011. • It is an important project as it will bring development in the area and the country in general, we shall inform local communities. • It is important for the project to avoid built up residential areas to minimize resettlement impact. • The district has experience and capacity to handle matters related to relocation we have experience from similar projects as well as road projects. • Local communities will have no problem with the project considering that rural electrification is one of the components of the project.
Karatu District Council	• Alternative A will have a significant impact on migratory routes that we are currently in the process to protect them as Wildlife corridors. We are working with the Monduli District. • For alternative B the transmission line will have minimal impact to wildlife corridors. • Currently there is an existing line (Singida-Karatu) in the area but there no significant impact on birds migrating corridors. • Alternative A and C are too long and expensive. • For other projects we conduct meetings and create awareness to people on issues related to land acquisition and compensation; we do include compensation of land. • For alternative A land in Karatu is very expensive due to the tourism industry, expanding agriculture and most land is privately owned. • Most local people prefer compensation in terms of money as they are not sure of the quality of in-kind compensation. • The indigenous of this area include the Eyasi, Maasai, Barbeq and Hadzabe.
Arusha Municipal Council	• We are supporting the project. • It is a good idea that the project is considering another substation at Kisongo area as the current sub-station at Njiro is congested and it is a prime area with the land value being very high. • We also suggest the project to consider minimizing the wayleave to ensure it does not exceed 60 m wide especially in urban areas to minimize impact on resettlement. • It is also good that the current proposal intends to avoid the Arusha city, this will minimize impacts. • There is a need to take into account the new road project (ring road project).

Table 4 Tanzania: Main Issues Discussed during the National and Regional Stakeholders Meetings (cont'd)

Arusha District Council	• This is a good project for the country. • The project needs to consider avoiding highly populated areas especially in Arusha as well as prime areas within Arusha as compensation in Arusha is expensive due to land value. • It is a good idea to find an alternative land for the sub-station as the current on is located in a very prime area. • It is important to involve district officials during the land acquisition process.
Kondoa District Council	• The only protected areas are Mkungumero Game Reserve and Swaga Swaga Game reserve. • There is plenty of land at Kondoa District and the compensation for land is very minimal between Tsh. 300 000 to Tsh 600 000 per acre depending on the location. • Only at Kondoa Head Quarters and villages along the road to Kiteto are provided with electricity. The rest of villages about 97 villages have no power.
Kiteto District Council	• There is plenty of land at Kiteto District, therefore resettlement of people will not be a problem. • The compensation values is very minimal between Tsh 50 000 to Tsh 100 000 and Tshs. 300 000 per acre where the particular area has high potential. • There is no permanent crops in the area, therefore compensation will involve land and houses as seasonal crops will be harvested before the project commence. • In case of land acquisition, they suggest that the timing should be made when there are no crops at farms hence very low price of compensation. • There are no protected areas nearby to consider realignment of the suggested line route. • People live in scattered kind of settlement therefore no massive resettlement is anticipated. • Kiteto District comprises of 58 villages, places where electricity is available is only at District Head Quarters.
Simanjiro District Council	• The Districts have no problem with the project and accept it. • There is currently a rural electrification project that the Districts will benefit from. • There are mining activities (Mererani) but currently in that area there is electricity. • The main economic activity in the area is livestock keeping from near Mkungumero Game Reserve to Majimalolo. People living in this area are Maasai people and Waburungi. • People live at villages near Singida are Sandawe and their main economic activity is hunting. • The only protected areas are Mkungumero Game Reserve and Swaga Swaga Game reserve which is *commiphora- Acacia* dominated,other species include *Dalbergia melanoxylon, Acacia spirocarpa, and Acacia Senegal, salvadora persica* and *acacia mellifera.* • Electrical power supply is a problem in Kondoa, only at Kondoa Head Quarters and villages along the road to Kiteto are provided with electricity. The rest of villages about 97 villages have no power.

Table 4 Tanzania: Main Issues Discussed during the National and Regional Stakeholders Meetings (cont'd)

Simanjiro District Council (cont'd)	• Most of houses along the road are scattered except at villages between Swaga Swaga and Mkungumero, thus difficult to estimate the magnitude of resettlement in the area. • Resettlement is possible since the land is bare in many places and the compensation values for houses ranges between Tsh 300 000 to Tsh. 600 000 per house depending on the location and the size of the house. Compensation values for land is also minimal, although it depends on the market value of about 100 000 per acre, the location of the plot however will determine the actual value. **There are several NGOs in Kondoa District that are involved in welfare of the community in terms of health, environment and poverty alleviation:-** • CBHI – Community Based Health Initiative. • World Vision. • Africare – deals with orphans. • AFNET- Anti-genital female mutilation. • BRAC – Building Resources Across Communities which deals with provision of small loans to women.
TANESCO	• This is a very important project to the Company and the National at large. • We prefer the proposed route B as it is shorter compared to the other two and it is also accessible for maintenance purpose. • The terrain of route C is complicated even for the construction phase also due to the type of landscape (hills) the area might be prone to earthquakes which are not safe for transmission lines. • If the proposed line is constructed parallel to the existing 220kv from Singida to Arusha, this will minimize the width of land to be acquired and therefore minimize compensation and other environmental and social impacts. • We currently have another project of power transmission from Iringa to Singida of 400KV; this will form part of the proposed project. • We recommend a uniform width for our wayleaves for instance for the proposed Iringa-Shinyanga 400KV it is 90m we therefore recommend the same for this proposed project. • Once we acquire land and compensate for TANESCO project, that land belongs to TANESCO and therefore we do not encourage any human activities in the wayleave.
NEMC	• NEMC should be involved from the preliminary phase of the project. As a trans-boundary project we can work with Kenya during the review process.

Table 4 Tanzania: Main Issues Discussed during the National and Regional Stakeholders Meetings (cont'd)

TANAPA HQ	• It is important for the project to avoid impacts on protected areas and wildlife corridors. • For alternative C the proposed area near Simanjiro is ecologically very sensitive as wildebeests, elephants and zebra and other wild animals use the area during the dry season, while for alternative A and B the areas are only wildlife corridors while in C wild animals stay for a long period. • Between Lake Manyara NP and Tarangire NP there is a migratory corridor used by elephants. • There will be a significant lose of vegetation and habitat if one opts for alternative C and significant visual impact. • TANAPA discourages transmission lines in National parks mainly because of permanent loss of vegetation in the wayleave and visual impact. • Alternative A has a challenging terrain especially during construction, alternative B is most recommended as the area is already impacted by another transmission line (reduced visual impact) also alternative B has less farms and settlements. • Option A is also crossed by migratory birds.
Ministry of Natural Resources and Tourism	• Extensive and intensive field research conducted since 1970s in this area along option A recovered numerous cultural heritage sites ranging from Stone Age period to recent past. • Cultural heritage sites along the option B route are not as many as those found along option A. As a matter of fact, very few archaeological and paleontological researches have been undertaken in the area through which option C route passes. Therefore the area (option C) is almost *terra incognita.* • In order to minimize the impacts, option B is the best. Not only that but also it is shorter than Option A and C. Option A is very rich in terms of cultural heritage sites, therefore if picked, the impacts and the cost will be high. • The fact that Option C is not well known disqualifies it, because if picked, rigorous archaeological surveys and excavations shall have to be undertaken which is costly and might result into recovering abundant and potential cultural resources that need to be preserved *in situ*. • There are lots of cultural sites and resources along the route that goes through option A. • Along option B and C there are few sites and cultural resources. However, the area along option C is under researched. • In the view of that, option B should be chosen so as to minimize impacts and cost.
Ministry of Energy and Minerals	• The project is well accepted by the Ministry as the sector Ministry of energy. • Energy shortage is one of the problems that the country is currently facing; therefore such projects will minimize this problem. • This is project supports various policies of the country. • With regard to the alternatives proposed the Ministry would prefer the route that will be least expensive to implement but with minimal impacts. • We already have other major interconnector projects that will be linked to the

	proposed project.

Table 4 Tanzania: Main Issues Discussed during the National and Regional Stakeholders Meetings (cont'd)

Ministry of Lands and Human Settlement	• This is a good project; however prior to implementing affected people must be compensated according to the Tanzanian law. • Valuation exercise must be carried by a satisfied valuer and the valuation report must be approved by the chief government valuer. • We at the ministry have experience in undertaking valuation exercise of linear projects such as the proposed transmission line. • It is also important to involved District officials specifically District land officials during the exercise. • Similarly, it is also important to first create awareness to the PAPs on issues associated with land acquisition, this will minimize conflicts. • It is also important to avoid densely populated areas and urban areas when designing the transmission line.
Ministry of Defense	• The ministry has no problem with the project as it will bring development to the nation. • The project will benefit not all communities around Longido District but even to those areas where the line will pass. • However some few steps need to be followed in order to get permit for the project to cross over the military land i.e. writing a letter to the relevant authority. • The Developer (TANESCO) needs to write an official letter to the Chief of Defense Force (CDF) explaining the project, quantity of land to be acquired (wayleave), location of entry and exit point of the line within the army land.
TANROADs	• It is important to carry an ESIA for such projects to minimize conflicts with other stakeholders. • TANROADs is ready to share data for development projects that are close to the proposed site. • The developer needs to write a letter requesting for the data.
Ministry of Health and Social Welfare	• Communities that will be affected by the proposed project should be educated on the impacts and benefits of the project as well as raise their awareness on HIV/AIDS mainly during construction phase. • Health impact assessment should be undertaken prior to implementation of this project.
Tanzania Civil Aviation Authorities	• If the project transmission lines will be closer to an airport/airstrip there are specifications on design that needs to be accommodated and agreed between TCAA and the implementing agency. • Since the proposed project will not affect any airstrip, the TCAA has no objection to its implementation. • For the proposed line the only airport that is about 8 km from the project is the Arusha airport however this will be noted in the report. • At the BURUNGE WMA in Babati District there is a proposal for an airstrip which will also be about 8-9 km from the proposed line.

Table 4 Tanzania: Main Issues Discussed during the National and Regional Stakeholders Meetings (cont'd)

Ministry of Water and Irrigation	• As the Ministry of water, we support the project since it will contribute to the economy of the country. • The project should ensure minimal or no impact on water sources or water infrastructures. • If any water infrastructure is affected by the project, the infrastructure should be replaced first be demolishing to avoid affecting users. • Assessment and compensation of water infrastructures should involve the District water office and water committees in the area.

Table 5 Issues and Concerns discussed during the district and community meetings in Tanzania

SINGIDA DISTRICT

Singida District Council (District Executive Director-DED)	The District Executive Director is fully aware of the proposed project and supports the project. **Affected Properties** The Sagara farm belongs to the district council, and according to the consultations, it seems that the proposed project will pass through it. There are schools, water catchments, a reserved forest, and a water spring in addition to planted trees, including indigenous types which make this area important and need special attention during project implementation. Normally, the department of natural resources is inspecting areas of significant resources in the villages in order to make sure that all resources are recognized and demarcated; this is done with the help of village government leaders and other authorities. **General views** Economically and socially, the availability of electricity will be a good opportunity among the villagers for this will lead for business to flourish, opening of shops, groceries, small or light industries for making sunflower oil, mills, etc. Also the new proposed line will reduce the shortage of electricity as we are experiencing it now in the country. **Recommendations** During project implementation, it will be wise to use labour from the specific areas which the project will be implemented so that the communities will benefit directly. Also, transmission of information to the community will be a good idea as this will make them aware and knowledgeable of the project and associated impacts. Properties that belong to communities should be replaced immediately and in-kind.	The ESIA will ensure minimal impact to areas of environmental and social importance The project also intends to use local workforce Village meetings are conducted as part of the ESIA process to create awareness to the people with regards to the project and its positive and negative impacts.

Table 5 Issues and Concerns discussed during the district and community meetings in Tanzania (cont'd)

Singida District Council (Acting Planning Officer)	The District is aware of the Project and supports its development. **Views** The proposed project will speed up development in our areas; improvement of service will definitely increase. Poverty levels among the people will decrease because they will engage themselves in different activities that can be developed as a result of availability of electricity. Business will flourish, as well as other opportunities; stakeholders will be willing to work here. Singida will be able to develop as far as socio-economic, political is concerned. **Recommendations** Compensation should be paid according to the current life standards. The exercise should be participatory (bottom up kind of approach). Payments should be made on time.	
Singida municipal Director, Yona Lucas Mark	The District is aware of the project and is supporting the initiative. It is important for the project to avoid impact on infrastructures, such as schools and health facilities. For instance, there is a secondary and primary school at Mungumaji village. Also there is a dispensary and primary school at Mwenyemikumbi village. In other areas, such as Unyambwa, there are cemeteries and other infrastructures. At Kisasida village, there is an on-going wind power project. There are also eucalyptus trees in the area that are treated as cash crop. **Views** The project will be good for development, but the communities should be engaged in all phases, which will reduce conflicts when the project starts. Community properties are to be compensated in terms of in-kind compensation. **Environmental condition of the area** There is a forest reserve at Unyamikumbi, which is owned by the district council, water catchments at Kititimo and Mungumaji, there is an archaeological and cultural site at Unyambwa while a water catchment at Mwankoko. So project implementers should be aware of that and try to avoid impact on these areas. It should be noted that these structures will not be affected by the wayleave. Most of the villages here such as Mwankoko, Unyamikumbi, Unyambwa, Mungumaji are not connected to the grid except Misuna villa.	The ESIA will ensure minimal impact to areas of environmental and social importance. Mwenyemikumbi village will not be affected by the wayleave. Moreover, the primary school is the only structure in Unyambwa that will be affected by the wayleave. The ESIA considers, among other things, archaeological impacts and recommends alternative site for the project when appropriate.

Table 5 Issues and Concerns discussed during the district and community meetings in Tanzania (cont'd)

Singida Municipal (Town Planning Officer, Head of Land Department)	The Town Officer has been notified for the first time about the proposed project by the consultants, he is aware that there are some sensitive areas in terms of economic, social and ecological aspects in Kisasida, Kititimo and Njanuka. There are communication towers at Kisasida and water catchments at Kititimo. Areas which are close to sub-station are already considered in the municipal land use plan so land value in such areas is higher compared to unplanned areas. **Views** The proposed project will have positive impacts in terms of development for Singida region. More investors will come to invest once a reliable source of power is installed. **Recommendations** During construction phase, labour force should come from local communities.	The communication towers and the water catchments at Kitimo are located outside the wayleave.
Misuna village	Villagers are quite aware of the number of the power transmission projects passing through the village. Local community is complaining about the unfair compensation of the existing lines that were constructed prior to the new land Act of 1999. They recommended that compensation for the proposed project should be done fairly and timely.	
Kinyagigi	Villagers insist that there should be more stakeholders' sensitization programs that intend to raise more awareness about the project. This should include informing people about the benefits and impacts of the project as well as rights and obligations of citizens. Villagers should also be informed about evaluation and compensation procedures. The government should supply electricity to interested villagers who have ability to pay the connection charges.	Village meetings are conducted as part of the ESIA process to create awareness to the people with regards to the project and its positive and negative impacts.
Kinyamwenda	The villagers requested the government to provide the villagers with clean and safe water. They also requested the government to make sure that the village benefits from the project, by connecting the village to the power line. During the property valuation phase, the villagers who will be affected by the project have to be involved. This will increase the transparency of the exercise.	

Table 5 Issues and Concerns discussed during the district and community meetings in Tanzania (cont'd)

Kisasida village	Villagers accept the project however they were sceptical of the compensation that will be made. This is due to past experiences in the area such as the Power pool and 220kv transmission line from Singida to Arusha. Project will mostly affect farms and few houses. However, they recommended that the project try to avoid impacts on social services, especially the Kijanuka Primary school.	This ESIA will ensure minimal impact to community properties and those of individuals. Kijanuka Primary school is located outside the wayleave.
Msikii village	Villagers suggested that they should be fully involved in the valuation process and that compensation should be paid timely and fairly. They also argued that there should be transparency in the evaluation and compensation processes. They therefore recommended that those who will be affected have to be informed about the amount of money that will be paid as compensation.	
Itaja village	Generally, the villagers accepted the implementation of the new project but they were enthusiastic to know how much they are going to be paid and they also need compensation. Evaluation process will have to be done fairly and on participatory basis. They proposed that price of affected properties should be derived by involving local communities.	
Kiongozi village	Villagers had concerns mainly referring to the previous transmission lines, as most claimed that compensation was not fair. Most of the PAPs properties were not compensated. They also said that for the existing line, most of the PAPs properties had not been valued. Villagers wish that the compensation process be fair and participatory. Also they propose that they should be allowed to cultivate seasonal crops along the way leave.	During this RAP exercise, it was explained to them that the previous compensation was undertaken under an old land act but since 1999 most of what was not previously compensated will now be compensated.
Mungumaji	During project implementation, the government officials should abide to laws and rules governing the evaluation and compensation procedures. The project will increase the problem of shortage of land in the village. There are so many transmission lines in the area which also increase the problem of shortage of land in the village.	This ESIA is aware of the number of proposed transmission lines in the village.

Table 5 Issues and Concerns discussed during the district and community meetings in Tanzania (cont'd)

Sagara village	They need their village to be connected to the electric line. They also demanded that government should pay fair compensation to the project affected persons. During the implementation phase, the project should give first priority to local people preferably experienced one.	Sagara village is located outside the wayleave.
Mughamo village	Members of the community should be given first priority during the construction of the project by giving them short-term employment. They want fair compensation because they were very discouraged with former projects. The fees for guarding the future pylons have to be increased.	
BABATI DISTRICT		
Negamsi	The villagers positively accepted the government plan to implement the power transmission project. They anticipated that the government will connect the village to the power line. Those who will be affected by the power transmission project have to be compensated well and in a timely fashion. The government should maintain constant flow of information during project implementation. This will include, among other things, involvement of the local officials and villagers in all stages of project implementation. As part of the community compensation program the villagers requested that the project should assist the village to rehabilitate the primary school buildings.	Village meetings are conducted as part of the ESIA process to create awareness to the people with regards to the project and its positive and negative impacts.
Malangi	They believe that they will benefit a lot from the proposed project. They wish to be connected to the national grid. They want a fair compensation.	The project has a rural electrification component.
Matufa	People consider that the project should minimize the environmental and social impacts. Compensation for the PAPS should consider the living standard of the people.	
Sangaiwa	They want to be connected with the national grid. Developers must consider fair compensation. There is scarcity of land in the village as Sangaiwa is adjacent to two protected areas (Tarangire National Park and Burunge WMA) and land close to these areas are not suitable for agriculture. We should be allowed to practice agriculture in the wayleave.	Agriculture in the ROW will be recommended to TANESCO.

Table 5 Issues and Concerns discussed during the district and community meetings in Tanzania (cont'd)

Lake Burunge tented lodge (Hotel manager)	The place is busy with tourists from June to September while there are very few tourists in November and October. The lodge is closed in April, for a whole month. This would be the best time for construction. The manager said there are no complaints from tourists with regards to the visual impact from the existing transmission line, however, he has asked to ensure that the towers avoid the lodge's main entry and that this is factored into the design.	This shall be incorporated in the ESIA.
Vilima Vitatu	Villagers were very much concerned about the benefits that the proposed project will provide to them considering the fact that the project will transmit high voltage electric power which cannot be directly connected to their houses. They therefore proposed that the government should find ways of connecting their village to the power line so that they can benefit from the project. Villagers who attended the meeting argued that currently there is the problem of shortage of land for farming and grazing. They therefore argued that the proposed project will make the problem more severe as large portions of the land will be taken by the government. They proposed that the government should directly be involved in providing alternative areas for those who will be affected by the project. Some of the members suggested that, if possible, the government should look for the alternative route which will create little impact to the villagers such as protected areas. There are a number of concerns about property evaluation and compensation process. Community members at the meetings had the views that compensation to all affected persons should be made on time and fairly. Also, the amount of money that will be paid to the affected persons should be made based on the current living standard. Property evaluation process should not be done by valuers alone. On the contrary all affected persons and their community leaders should also participate in the process. The villagers expressed their concerns on the need to involve local people during project implementation by providing them part time or temporary employment opportunities.	Transmission lines are not encouraged to be constructed in protected areas.
Endasago	Villagers accept the project because it is a national development infrastructure. They also said the amount paid for guarding electrical towers should be increased. Permanent employment should be provided for the villagers. Villagers also insisted on fair compensation and on the need to be paid prior to project implementation.	Local communities will benefit from employment during construction phase.

Table 5 Issues and Concerns discussed during the district and community meetings in Tanzania (cont'd)

Dareda kati	Villagers and their leaders have a positive attitude towards the proposed project. Despite their positive attitude, villagers expressed concerns on the project. They include: transmission of information to the villagers through meetings. This will increase awareness among the public. They also argued that the valuers from the district should not be involved in the property valuation process as past experiences show that they did not abide to the rules and regulations.	Village meetings are conducted as part of the ESIA process to create awareness to the people with regards to the project and its positive and negative impacts.
Mawemairo	Villagers accepted the project but they insisted that during the construction period a contractor should provide temporary employment for the youth and villagers as a whole. They also requested that TANESCO increase the rate for guarding electrical towers from TSh 3 000 to 5 000. Compensation has to be paid according to the village land Act no.5 of 1999. However, compensation should be paid fairly and timely.	
Arri	The villagers supported the project and argued for their village to be connected to the national grid. Property evaluation and compensation should be done fairly. There should be community involvement during project implementation.	We urge the village government to ensure that they are involved in various activities regarding compensation and also to review the Land Act to enable a better understanding of the valuation exercise.
Sigino	Villagers wished that the government pay those who will be affected by the project on the basis of current living standards. They also requested that TANESCO increase the rate for guarding electrical towers in the village. In terms of community benefits, villagers recommended that the government should rehabilitate the existing primary schools and health centre.	Comments will be submitted to TANESCO. Current valuation prices ensure communities are not impacted negatively by the project.
Bagara village	They usually accept development projects but end up not being fairly compensated for the loss of their properties. For instance, for the existing transmission line, TANESCO did not pay them for affected land. They request a fair compensation.	

Table 5 Issues and Concerns discussed during the district and community meetings in Tanzania (cont'd)

Sarame village	They accept the project but request fair compensation. For the two lines that cross the village (Singida –Arusha and Babati-Karatu), some assets, such as land, was not compensated for. Villagers wanted to know if they can continue with their daily activities (construction or agricultural activities) in the proposed wayleave. The community also emphasised the need for them to benefit directly from the project, i.e. to be connected to the national grid. **Land availability and ownership** The community claims that they have no available land within the village for relocation even if they are compensated. Implying that land availability is a problem in the area, government will have to pay them a lot of money. Women indicated their concern with the compensation process, indicating that is if they are not closely involved, men (husband) tend to misuse the compensation money and they are the ones who are more affected, thus recommending that they should be fully involved.	Project promoters will ensure involvement of women in all phases of valuation exercise.
Minjingu	As the village is experiencing administrative problems, it has affected villagers' response to the meeting. The community wishes to be connected to the national grid. The project should ensure fair compensation.	The project has a rural electrification component.
Olasiti village	The village is part of a Wildlife management area (WMA). Villagers complained on the poor compensation provided by the construction of the existing line. They also need to know when exactly the project will be implemented. The project should avoid acquiring areas that are dedicated to agricultural activities or else allow people to continue practising agriculture activities in the wayleave to minimise land problems and food shortage in the area.	
Mwada	TANESCO should make sure that the amount of money paid to each village as part of the payment for the community security initiative is increased. The project should make sure that affected communities are involved from the beginning of the project. This will include the provision of proper information about the benefits and impacts of the projects. There should be transparency and participation of affected persons and village officials on one hand and TANESCO and government on the other hand.	This will be conveyed to TANESCO with regard to existing payments for security of transmission lines.

Table 5 Issues and Concerns discussed during the district and community meetings in Tanzania (cont'd)

HANANG DISTRICT		
Hanang District Council	The project will have a lot of benefits to the country and the district at large; for example distribution of rural electricity project will be more reliable. For instance, in Gehandu village which is at the border between Singida and Hanang, there is really a need of electricity to enable them to establish small milling industries. **Benefits from the project** Electricity is good for national development. The project will help women and youth because it will minimize distance for women looking for grain mills and looking for water. In the district, we have a lot of raw materials to process. Also it will reduce water problems in the community and district as a whole. **Land ownership** Land is a very sensitive issue in the area. It is unethical for Barbeigs to sell land although it has been observed in some few places, such as Basutu. We have a lot of land conflicts in the area due to land scarcity. Normally women do not own land in the area though this is slowly changing. Women are partially involved in community decisions making. Barbeigs, who are the dominant tribe in the area, own large pieces of land which is normally owned by men. Nowadays Barbeigs settle in one area, they don't migrate anymore and currently they practice both livestock keeping and agriculture. The difference of land price is not too big. **Recommendations and views** We will advise communities to accept the project. The authorities should create awareness to community prior to project implementation. Some of the communities have had bad experiences from other development projects, such as the existing transmission line.	
Gajal village	A school compound, including agricultural land which is a source of food for students, may be affected by the project. Villagers insisted on fair compensation.	It should be noted that the church is the only structure in Gajal that will be affected by the wayleave. Community projects will be compensated. Project ensures minimal impact on community infrastructures.

Table 5 Issues and Concerns discussed during the district and community meetings in Tanzania (cont'd)

Dumbeta	The meeting was attended by relatively few villagers as compared to other meetings. Villagers recommended that during the construction phase the community should be sensitized on the impacts and benefits of the project. As part of the community compensation program, the villagers requested that the government connect the village to the power line. The government should also assist in the supply of water to the village.	
Endagaw	The meeting was attended by relatively few people. One of the reasons provided by the village government was that most of the villagers are in their farms harvesting seasonal crops. Generally, the villagers have accepted the new project but they had some concerns. Villagers insisted that during project implementation, short-term employment should be given to the local people from the village. They also insisted that compensation should be paid on time and fairly.	
Minge'nyi village	The community needs TANESCO to give them power so as to benefit from the project. There is a small lake in the area that may be affected by the project; the community proposes that the line is relocated because they get a lot of benefits from the lake. They request the project to provide employment during construction to the surrounding community that will be affected by the project.	Employment will be provided to some local communities during construction phase. The lake will not be affected by the wayleave.

Getasang Village	Community accepts the project but they request fair compensation. They do not want to repeat what happened with the existing line, i.e. not a fair compensation. Most of the assets that will be affected by the project are individual assets such as farms. No house will be affected. However, one public asset is likely to be affected, that is a water catchment. They said the whole community members rely on that catchment and that the water project has been funded by the World Bank. Village officials mentioned that you can compensate for a house but not for a catchment since it is the only place where you can find clean water in the surrounding area of the village. Therefore, they proposed that the line be relocated should it impact the catchment.	Village meetings are conducted as part of the ESIA process to create awareness to the people with regards to the project and its positive and negative impacts and also to provide awareness with regard to compensation. The location of towers will consider the presence of structures, such as water catchments, in order to avoid impacting them.

Table 5 Issues and Concerns discussed during the district and community meetings in Tanzania (cont'd)

Meskron	The project was accepted but participants insisted on fair compensation. They proposed that the project process be participatory from the beginning to the end. Villagers insisted on the fact that they required a health centre as a compensation because the nearest health service is located in the next village almost 25 km away.	
Mogitu	We strongly recommend fair compensation to all PAPs. Compensation money should be enough to sustain common needs. Temporary employment should be given to youth during construction period.	
Nangwa	Compensation should be made prior to the construction phase. PAPS should be involved in all stages. The project should involve the community.	
Masakta village	Villagers accept the project but they requested their full participation to the process and a fair compensation. **Impacted assets** Two public assets could be affected by the project according to the proposed line. These are Masakta secondary school and Masakta Roman Catholic Church. However, the proposed line will affect more houses in the area. **Recommendations** Communities propose the line be shifted to the other side, so as to reduce the magnitude of loss.	The line corridor was determined in order to minimize environmental and social impacts. Moving the transmission line corridor may lead to more impacts to other communities. The line has been inserted on this side because it had the least impact. The church will be affected by the wayleave, but not the school. As for the houses located in the wayleave, there are six houses that will be affected.
Mara village	They are very comfortable with the project and they are happy with its participatory nature. They wished to be connected to the national grid.	

Masqaroda village	They wished that the project involves local community and their officials. They requested to be connected to the national grid. They also want the contractor to give the youth first priority during construction.	

Table 5 Issues and Concerns discussed during the district and community meetings in Tanzania (cont'd)

Ming'enyi	Project should support our key infrastructure, such as health services, provision of education and environmental protection. The project should conduct awareness campaign about dangers associated with project implementation. During the project implementation, the government should make sure that employment is given to local people within the village. People who will be affected by the project have to be compensated fairly.	
Endasak	The government and TANESCO should make sure the project will be beneficial to those who will be affected by the project. This should include, among other things, connecting PAPs to electric power, provide employment opportunities to the local people during project implementation and establishing community based projects in the village. The evaluation process should be participatory where all affected persons and their village officials should be involved right from the beginning of the evaluation process. Some of the villagers indicated that it is very important for the valuers to adhere to the laws and ethics when evaluating villagers' properties. This, they insisted, will eliminate unnecessary complaints and conflicts between the government and villagers. There is a need to minimize environmental and social impacts to the villages where the power line will be passing through. One villager had the view that because of the shortage of land in the village, villagers who will be affected by the project should be allowed to cultivate and graze animals within the proposed wayleave even after the construction of the power line.	ESIA and RAP are conducted to ensure minimal impact of the project to the environment and local people
Gehandu	It is very difficult for villagers to acquire land as it is already scarce while and population is increasing. They want fair compensation. Temporally employment for the youth during construction period must be provided.	The RAP will recommend the Project Proponent to collaborate with the District in finding alternative land for PAPs.

Table 5 Issues and Concerns discussed during the district and community meetings in Tanzania (cont'd)

MONDULI DISTRICT		
Mbuyuni village	The communities in the area are mostly Maasaï. According to the proposed power line, a few *bomas* and farms will be impacted. Their main concern is on the valuation exercise of *bomas* as most valuers tend to undervalue *bomas* or do not valuate all *bomas* as they consider the entire *boma* as one household. They propose that the line should as much as possible avoid affecting *bomas* as some have already invested in rain harvest infrastructures which they are not sure will be adequately compensated for.	The RAP ensures that all affected properties are included in the valuation process.
Meserani Juu	The government has to make sure that affected persons are compensated fairly. It is a tourism area therefore land value is very high. Project might affect a large number of houses. Project implementation can be long and affected persons will keep waiting. Fair compensation must be considered.	Value of land will be considered during valuation exercise. According to survey results, there are only five houses that will be affected by the wayleave.
Arkatani	They believe that they will benefit a lot from the proposed project but insist on fair compensation.	
Mti mmoja village	They accept the project but they request fair compensation and they really need electricity in the village. Compensation should be paid on time to allow those who will be affected by the project to find alternative land for farming and housing. They are concerned with the price of land that will be used by valuers; i.e. it might be too low to enable them buy alternative land. Villagers should be allowed to choose either to be compensated in cash or in kind.	
Loosimingiri village	Villagers revealed that because the project will be implemented under government regulations they cannot oppose the project; however they should be assured of fair compensation. They also claimed unfair compensation for the existing line. They also need electricity.	The project has a rural electrification component.

Table 5 Issues and Concerns discussed during the district and community meetings in Tanzania (cont'd)

Nanja village	In 1995, during implementation of another transmission line by TANESCO, compensation was not fairly done. Therefore, they need fair and on time compensation and they need to benefit directly from the project by being connected to the national grid. They also claimed that the former project did not involve communities. Communities acknowledged the current RAP exercise has provided basic information on the evaluation exercise and suggested that this should be repeated prior to the valuation exercise.	
ARUSHA DISTRICT		
Arusha District Executive Director (DED)	**Concern/general views** The proposed project seems to be beneficial to the communities but involvement of the locals should be the priority. This will minimize conflicts with the project. Compensation should be presented to the PAPs prior to payment, since there is a land conflict in Arusha due to land scarcity. In the past we have witnessed a lot of problems related to compensation schemes in the district, so to avoid this, valuation should be fair and must involve all leaders at different levels, and payments should be organized. For community's properties we recommend in-kind compensation. **Recommendations** Documents regarding the project and map should be provided, thus to assist in planning. Councillor meetings should be organized and district officials should be involved in the proposed project. Local leaders are highly respected, so involving them is vital. Information should be shared and disseminated to all stakeholders to inform them. We are willing to assist as far as the proposed project is concerned since this could lead to development in our areas and at a national level.	Sharing information prior to compensation shall be recommended in the RAP.
Matevezi	Communities were not happy about the project due to land scarcity in the area; they said even if the project gives them a lot of money it will not be easy for them to acquire land. Also, villagers were eager to know the specific amount of money to be paid. However, they need to benefit from power and the government should pay all the cost including bills.	

Table 5 Issues and Concerns discussed during the district and community meetings in Tanzania (cont'd)

Engurtoto village	The project should also consider the role of local / traditional leaders by involving them in the implementation of the project. Villagers asked why we should export power while we have a power crisis in Tanzania. The community is concerned about the possibility of obtaining alternative land if they are affected by the project as there is land shortage in the area. Local communities' preference is to enter into contract with TANESCO, so that they are paid land rent other than TANESCO fully acquiring the land.	They were given details as to how the project will be implemented and that it will not affect the power crisis in the country but rather improve the situation.
Likamba	The village should be connected to the power line. This will help improve the living standards of local people. During the project implementation, the first employment opportunities should be given to the local people. This will not only improve their living standards but also create a sense of project ownership among them. Government officials who will be involved in the property evaluation should adhere to the rules and regulations that govern evaluation processes. There should be a fair compensation for people's properties. The project also needs to make sure that all PAPs are informed and involved.	
Losikito	Villagers wanted to know what would be the benefits from the proposed project taking into consideration that the power line will transmit a very high voltage that cannot be connected directly to their houses. TANESCO should install transformers in every village where the power line will be passing, to connect local people in the villages to electricity.	
LONGIDO DISTRICT		
Engorora village	PAPs should be compensated on time and compensation should be fair. The existing line was very problematic and the compensation process was not good.	

Table 5 Issues and Concerns discussed during the district and community meetings in Tanzania (cont'd)

Longido	There should be an agreement between the government and TANESCO on one hand and villagers on the other hand on how the proposed project should be implemented. This would not only ensure a high level of participation but also eliminate unnecessary conflicts. The project should provide short-term employment opportunities to the people living in the areas where the power line will pass. The proposed project should establish community based projects to support those who will be affected by the project. This could include the provision of clean water, education or health services. Compensation for those who will be affected on the proposed project should be made on time and while considering current living standards. Project implementation should minimize environmental, economic and social impacts and, whenever possible, community properties, such as schools, historical sites, health centres and forest reserves should not be affected.	
Lemon'go village	Villagers accept the project but they wish for fair compensation. Villagers recommend that the government assist them in acquiring alternative land as it is a big problem to them since land value differs from one area to another and therefore, land value may not be equivalent to where one is moving to. For instance, in Oldonyo sambu and Namanga, there is a big difference in land value. PAPs with unfinished structures should be compensated. They also advise the project be participatory and they do not need people from district council to be involved.	
Eurendeke village	The community accepts the project but they also insist on fair compensation. The village land is surveyed and land use planning has been done in the area. Furthermore, villagers said that land is very scarce in the area because the village is located near Namanga town. There is an existing international project in Namanga, which is the construction of an international market. Villagers propose that the line corridor crosses at the East side because in the West side there is Namanga hills between the border of Tanzania and Kenya *(one border stop project*). Also in the West side there are many buildings when compared to the East side.	This recommendation was taken into consideration and the transmission line corridor route was optimized to avoid Namanga hills.

Table 5 Issues and Concerns discussed during the district and community meetings in Tanzania (cont'd)

Lengijave village	Village officials requested that TANESCO find alternative lands to relocate villagers before the implementation of the project. At the beginning of the project implementation, the government and TANESCO should have effective information programs for the community. There was a concern about land shortage. Some of the villagers proposed a different mode of compensation. Instead of TANESCO compensating villagers in cash or in kind, TANESCO should rent the land based on agreed terms. Traditional leaders *(Legwanans)* should be well informed before any project activity begins. However, they said they should have enough time to prepare an alternative area for relocation and if possible the government should prepare an alternative land for PAPs.	TANESCO and the PIU will work closely with the District Land Office to ensure land is available for those who will be affected by the project and cannot find alternative land.
Namanga Village	Most of the villagers who attended the meeting were positive, welcomed the project and argued that the project will strengthen the EAC. Communities emphasized the need of knowing the time frame of the project as currently there is another proposed project within the area that will also involve the resettlement of people. Villagers proposed that TANESCO should opt for the alternative route so as to reduce the impact on residential areas. The government should make sure that impacts to the community properties and environment are reduced to the minimum. The government should make sure the route deviates from water sources, forest reserves, etc. Villagers noted that land at Namanga is very expensive as the area is growing into a small town and has business development potential. Thus, the compensation should also consider the value of land in the area.	This recommendation was taken into consideration and the transmission line corridor route was optimized to reduce the impacts on residential areas.

Table 5 Issues and Concerns discussed during the district and community meetings in Tanzania (cont'd)

Kimokuwa	Generally, the local community is happy with the proposed project but they want their village to be connected to the power line so as to improve their living standards. Villagers are more concerned by the problem of shortage of land in the village as most of them are farmers and pastoralists, and they are heavily dependent on the land. Related to compensation, most of the villagers who attended the meeting were very much concerned about involvement of those who will be affected by the project. They argued that the project has to be participatory in nature. This is essential in ensuring that the interest and opinions of everyone in taken into consideration. They also insisted on fair compensation. They want temporary employment during the construction period.

Table 6 Issues Discussed during NGO and CBO meetings in Tanzania

OSOTWA Mount Meru Community Based Conservation Organization John Ole Daniel	OSOTWA is an NGO dealing with environmental conservation and management of energy resources. The organization is based on Olmontonyi, Arusha. Views about the project: The project is good and acceptable because 80% of people residing in rural areas have no access to power. However, there is a power crisis in Tanzania and the electricity is an alternative energy source that can conserve the environment. Deforestation could be reduced and water sources could increase. The project has to be participatory in nature where communities have to be involved right from the beginning. The involvement of local communities in all stages will reduce conflicts between the government and local communities. Villages affected by the project should be connected to electricity. This will create a sense of ownership of the project among the people. Communities should also benefit from employment mainly during construction phase. Education should also be provided to communities. The education program should aim at increasing awareness of the communities about the impacts and benefits of the project as well as issues of compensation.	

Table 6 Issues Discussed during NGO and CBO meetings in Tanzania (cont'd)

OSOTWA Mount Meru Community Based Conservation Organization John Ole Daniel (cont'd)	For the smooth project implementation, there is a need to involve CBOs/NGOs. Education on environmental and health impacts should be provided particularly to pastoralist societies. Compensation should be participatory, fair and PAPs should be paid on time. Land compensation should be based on multiple factors such as land availability, actual market price, and fertility of the land. Land is very scarce in Longido and Monduli districts in particular. The current population growth rate is 3 to 4% therefore the population is rapidly increasing. In these two districts you cannot find a place to relocate people, you can already find landless people. Therefore, the project should consider finding alternative land to relocate PAPs. For instance, OSOTWA tried to shift 80 people from Longido to Handeni and helped them on the initial settlement and provision of social services. In that case, people in these two districts are very crude in projects that involve relocation (for example, in the Legijave village in Oldonyosambu, government proposed to establish the Institute of Mwalimu Nyerere Academy but villagers said no to the project and the project failed). As the project might involve cutting of trees, we advice TANESCO to re-plant trees in the areas along the wayleave.	
TUNAJALI – NGO, Singida office	TUNAJALI is a NGO which provides support to the people living with HIV/AIDS and orphans. Views about the project: The project is one of the important measures that the government needs to take to improve the status of power supply in the country.	

World vision, Singida office	World vision is a religious organization which coordinates activities related to agriculture and supports education for vulnerable children by paying their school fees, uniforms and sometimes building classrooms. It also provides health related education to the local community including pregnant women and children. The organization also deals with issues related to environmental conservation, including conservation of the water sources and beekeeping. Views about the project: The project will contribute to the organization's initiative to conserve the environment. There is need for promoters to ensure minimal impact to the environment especially during construction phase. There is need for the government to involve NGOs in sensitizing villagers on the importance of the project to the economic development of the country.	This ESIA is undertaken to ensure minimal impact to the community and the environment as well as to provide mitigation measures for various impacts that might occur.

Table 6 Issues Discussed during NGO and CBO meetings in Tanzania (cont'd)

OLKEJU LOOMORAK – NGO, Arusha District Mr. Lesker Lisse, Chairman	This NGO's is dealing with irrigation activities, environmental protection and conservation, and the provision of environmental education. The NGO is operating in various areas including Ngaramtoni, Emawe, and Olmotonyi. However, during consultations it was revealed that the proposed project will not pass through areas where the organization is operating. It is important to note that this area has a significant soil erosion problem and therefore during construction one has to consider very strong foundations for the pillars. Views about the project: Electricity is a national agenda. Currently, Tanzania is suffering from electricity shortage therefore the project will minimise this problem. The negative impacts of the project are minimal compared to the positive multiplier effect and can be mitigated.	The issue of soil erosion is very severe in the Arusha District. Therefore the design of tower foundations will consider this limitation.
KIPOC Barabaig (Korongoro Integrated People Oriented to Conservation)-CBO, Hanang Augustino Maragu	Korongoro Integrated People Oriented to Conservation (KIPOC) concerns the empowering of pastoralist community in Hanang District. Views about the project: The pastoralist community in Hanang District has a number of projects to assist local communities. These include: • Provide water source facilities for animals and humans; • Facilities for livestock treatment; • Health services and facilities including health centres, dispensaries and other medical supplies. The community also needs primary and secondary schools. There is also a need to have an education program for proper use of land to the community to minimise land conflicts considering the increase in development projects in the area.	

Table 6 Issues Discussed during NGO and CBO meetings in Tanzania (cont'd)

ARANYA KAAYA – AFNET- NGO (Ant Female Network) – *AFNET* Hanang	The Ant Female Network's (AFNET) main goal is to provide education to sensitize the community on outdated traditional practices, especially those affecting women, as well as to assist orphans and other vulnerable children. Views about the project: Employment opportunities should be given to the local communities. The organization has identified the following needs for the community: • The project should provide financial assistance to the orphans and other vulnerable children. The money will be used to build orphanage and education centres. • The proposed project should assist the community living in Lamay, Mogitu, Jorodomu and Dumbeta villages to get clean and safe water.	During construction employment priorities will be given to local communities. The project has a special fund to assist in community development projects and communities are involved in selecting their preferred project.
KAGANANA - CBO Jackson Mtesse	KAGANANA is a CBO that works for the provision of education on environmental conservation and protection to the community. Views about the project: Currently, the country lives a power crisis. The implementation of the project will contribute to the government effort to reduce the problem of power crisis in the country. The project should make sure that villages, more specifically all villages affected by the power line, are connected to the electric line. There are a number of areas where the proposed project can assist the organization. These include provision of financial assistance that will enable the organization to strengthen its capacity in mobilizing more people and disseminate the environmental education to more people.	The project has a rural electrification component.
WAMATA (Walio katika Mapambano na AIDS Tanzania), Hanang Willy Akyoo	WAMATA is a NGO whose main objective is to fight against the spread of HIV/AIDS to the community. They further hold that the project can help the organization in assisting people who are living with HIV/AIDS to establish small business to support their living. Views about the project: The project is feasible and will contribute to the economic development. Project implementation should involve all interested parties, including those who will be affected by the project, the local leaders, NGOs and activists. It is important to sensitize local communities on HIV/AIDS, especially during construction phase.	The ESIA has conducted village meetings in all villages affected by the project. Issues discussed include sensitization and awareness about HIV/AIDS, compensation and other associated positive and negative impacts of the project.

Table 6 Issues Discussed during NGO and CBO meetings in Tanzania (cont'd)

Jipe Moyo – NGO, Hanang Mr. Emmanuel Darema,	Jipe Moyo provides assistance for people who are living with HIV/AIDS by providing home based care and treatment, health related education, training on how to collect statistics on people who are living with HIV/AIDS. There are a number of challenges and problems that the organization faces in its day to day operations. These include lack of support from the government and lack of office facilities and buildings. Views about the project: The proposed project can assist the organization in a number of ways including: supply of clean and safe water to the community, assisting people who are living with HIV/AIDS to establish small business.	
Lishe Bora - CBO Claudia Marco	Lishe Bora is a CBO which provides assistance and health related education to the people living with HIV/AIDS. The organization therefore deals with: • Counselling services to people living with HIV/AIDS; • Support program against outdated/banned traditional practices, such as female genital mutilation. Views about the project: This project is of its own in the country. The organization strongly supports the implementation of the project. The organization faces numerous problems such as a lack of funds to support planned activities, and transportation for volunteers. The proposed project should construct water supply sources for the village.	

HAWOCODA (Hanang Women Counseling and Development Association), Hanang Mary D. Gitagno	Hanang Women Counselling and Development Association (HAWOCODA) has the following goals: • Provide counselling services to women and children who are suffering from domestic violence and other forms of abuse; • Educate and sensitize community so that they can understand, protect and advocate children and women human rights; • Provide primary health education to the community. Views about the project: The organization has positively welcomed the implementation of the project as it is a right decision at the right time. The organization anticipates that the project will increase the economic development in the country and eventually increase the number of employment opportunities. The organization needs support to establish a community health education centre.	

Table 6 Issues Discussed during NGO and CBO meetings in Tanzania (cont'd)

WAMATA (Walio katika Mapambano na AIDS Tanzania), Babati Keneth Shemboe	WAMATA provides services to orphans and widows, including providing them with food and clothes and education on how to prevent the spread of HIV/AIDS. Views about the project: The proposed project is a step towards sustainable development in the country. It will reduce to a large extent the problem of shortage of electricity in the country. The project will strengthen the government initiatives to supply electric power in rural areas. The organization is facing a problem of shortage of fund to implement some of its activities. The new project can assist local people to establish small businesses in their communities.	
TCCIA (Tanzania Chamber of Commerce, Industry & Agriculture), Babati town Julian Khambayta	Tanzania Chamber of Commerce, Industry and Agriculture- Babati chapter is an organization which works to support development of agriculture, industry and business to the community. The organization also works as an umbrella organization in coordinating activities of other organizations including: TCCIA, MVIWATA, FIDE and FARM AFRICA. It also provides entrepreneurial education to the retail traders. View about the project: The project can assist in building health centres and youth centres for HIV testing. It could also assist local community in getting clean and safe water. The project will support industrial and agricultural development. It is now an opportunity for the country to consider new investments in the Manyara region and in various sectors, such as tourism, processing and manufacturing industries.	The project has a rural electrification component.

AFNET (Ant Female Network), Babati Nancy Joseph	The Ant Female Network (AFNET) Babati provides education aimed at sensitizing the community about impacts of traditional practices on women, and provides support for orphans. Views about the project: The organization has the following needs that the proposed project could assist: • Financial support for the implementation of the organization activities. • Assist in the provision of education on the prevention of HIV/AIDS. • Provide food supply for the people who are living with HIV/AIDS.	During consultations at the village meeting, communities are reminded of some of the potential impacts associated with construction phase, including an increased spread of HIV and therefore they should take extra caution. It is good to see that in the area there are several organizations that are working on HIV and gender related issues.

Table 6 Issues Discussed during NGO and CBO meetings in Tanzania (cont'd)

Friends in Development (FIDE), Babatu Hadija Said	Friends in Development (FIDE) coordinate and support a number of rural projects including: agricultural projects and biogas projects. Views about the project: The project should assist the local community in getting a reliable supply of clean and safe water and health services.	
Support for International Change (SIC), Babati Daniel Craig	Support for International Change (SIC) provides community services to vulnerable groups such as orphans, women and sick people. Views about the project: The new project can assist the local community and more specifically people who are vulnerable such as those who are living with HIV/AIDS. The project can also provide financial assistance to local small groups within the community so that they can establish small businesses.	The ESIA has conducted village meetings in all affected villages. Issues discussed include sensitization and awareness regarding HIV/AIDS, compensation and other associated positive and negative impacts of the project.
Africare - CBO Noah Mwakyalabwe	Africare provides home based care to the local communities in the district. Views about the project: The organization faces numerous problems in the implementation of its day to day activities. These include: • Not being able to reach all the people who are in need of the services. • Lack of funds to establish income generating activities to support their living and to join Village Cooperative Banks.	

APPENDIX 5
EVALUATION METHODOLOGY AND RULES TANZANIA

Evaluation methodology

The calculation of compensation and other resettlement allowances for displaced property owners are based on current practices in Tanzania for valuation and compensation of properties as stipulated under the Land Act, 1999 and Land Regulations, 2001 only provide for compensation equivalent to the market value of the affected land and standing crops as determined by the valuation assessments while replacement cost is compensated for buildings/structures, less depression, this approach to valuation is not consistent with the resettlement measures required by the World Bank OP 4.12 which requires that compensation is paid based on the full replacement value (not considering depreciation) of an asset. In addition, OP 4.12 strongly prefers the replacement of 'land for land' where appropriate for all PAPs (including those without title/squatters).

Disturbance Allowance

Disturbance allowance is payable as a percentage of real property value in compliance to provision of the Land Act No: 4 of 1999. The percentage is the average commercial bank rates offered on fixed deposits. From data obtained from the majority of the financial institutions in Tanzania, the rate on fixed deposits is 5% per annum and this is the rate that has been used to determine disturbance allowance of project affected persons (PAPs) for this project. Thus, disturbance allowance is 5% of the summation of the total compensation.

Transport Allowance

Transport allowance is calculated as the cost of 12tons hauled over distance not exceeding 20 kilometres from displaced place. In accordance with Section 11 of the Regulations of Land Act No: 4 of 1999, transport allowance is computed on the basis of obtaining average transport rates within the area. Transport allowance is being paid to those who have habitable houses.

Loss of Accommodation Allowance

Tanzania regulations require an accommodation allowance to be paid to the affected persons to support them to afford at least monthly rent for an alternative accommodation during resettlement transition period. Accommodation allowance is equivalent to the rent of the acquired property per month over thirty-six months; this allowance is only paid to those who have habitable houses.

Loss of Profit Allowance

Loss of profit allowance is assessed by establishing Net profit per month evidenced by audited accounts multiplied by 36 months. This approach applies also to temporary businesses i.e., **Loss of profit = Net Profit / p.m. x 36 months.** The compensation amount is usually assessed on the basis of audited accounts; the assumption is that all business owners have books of accounts, which are subject to annual audits. Experience in Tanzania reveal that PAPs do not have such records and therefore loss of profit or interest rates to affected business is considered by investigating the average profits per month by interviewing the affected PAP.

Description of compensation of a specific affected property/asset referred to by 'The Land Act No. 4 of 1999'

Buildings

According to Tanzania laws, replacement cost is compensated for buildings/structures and the a depression of the building is deducted from the cost; this approach to valuation is not consistent with the resettlement measures required by the World Bank OP 4.12 which requires that compensation be paid based on the full replacement value (not considering depreciation) of an asset. Other compensations associated with buildings include:

- Accommodation allowance = Market Rent of the affected building per month multiplied by 36 months i.e. **Accommodation allowance = Rent /p.m. x 36 months**.
- Loss of profit allowance (if it is a commercial/business structure). This is assessed by establishing Net profit per month evidenced by audited accounts multiplied by 36 months i.e., **Loss of profit = Net Profit / p.m. x 36 months.**

Crops

The list of prices from Chief Valuers Office has been adopted. Therefore, valuation was done according to the price list given for crops as the Valuation Analysis shows. Owners of crops will be allowed to harvest their produce before construction of the project and restricted to utilise the project area, notice should be given to avoid further use. For trees compensation considers the rate of maturity that the affected tree has reached to determine the rate of compensation; for instance a full matured tree that is compensated 100% of the market value.

Land value

Subject to the Land Act No. 4 of 1999 and land regulations in Tanzania, land compensation is inexorable as it has value. Therefore, land value has been included as part of the total compensation.

The method used to compute land value is a comparative approach to identify those sales or offerings which may be comparable in terms of condition, location and type of land.

Calculation of total compensation is as follows

The total compensation = property replacement cost (calculated differently for houses, structures, crops and trees) + land values + accommodation allowance + transport allowance + disturbance allowance + loss of profit (allowances where applicable).

Appendix 6: Stakeholders' views and concerns on the proposed Arusha Substation

S/N	NAME	POSITION	VIEWS/CONCERNS
	Mwanga ESK	Ag. RAS-Arusha	• This is very good project, we would like to see its implementation as soon as possible • Activities related to power transmission will lead to population increase leading to spread of diseases such HIV/AIDS • There will be high demand of social services such as schools, health facilities and water • The project should contribute to the development of social services in the Region • The project should comply with the existing laws, policies and regulations that govern such projects
	Jackson L. Saitabau	AAS	• It is a very important project to the surrounding communities' income as well as the government revenues. • Employment opportunities should consider the communities close to the substation and transmission line • People should be informed on issues related to compensation • Compensation exercise should be participatory and prompt • The affected people must timely and fairly compensated
	Godwin G Uisso	Ag. Arusha district Eng	• It is a very good project and should be fully supported as it will stimulate development in the area • There is a need to have an assessment of human resource need in the district before the project starts • The transportation infrastructure is

			very poor. The project should improve or construct new roads • Especially during construction, it is expected to attract large numbers of migrants looking for employment opportunities. Measures should be put in place to prevent the spread of HIV/Aids
	Lemugur village	Public meeting	• The village is aware of the proposed project and has accepted it • The project should give priority of employment to local communities. • Compensation should consider fruit trees and profit obtained from these trees • We would like to know how much will be paid to the people who will lose their properties such as land, houses, plants/crops etc • The village has land scarcity; people losing land will have to find alternative land outside the village. However people support the proposed project for the benefit of the district, region and the nation at large • Land use plan is important in order to minimize conflicts between investors and surrounding communities • We would like the project to construct a new village office • The project should consider gender equalities
	Loibanguti Songoyo	PAP	• No benefits for people who will be relocated • We accept it because it is a government project
	Moikan Melau	PAP	• Generally this is a good project as it will reduce or completely do away power cut off

			• We also need to be assured that we will be connected to electricity • We also expect is project to help in constructing schools, health centers and other social services centers
	Nai Issaya	PAP	• I wish to be relocated within my village • There should gender equality in employment • Children should not be employed in anyway
	Nini Karainei	PAP	• Project compensation exercise should be fairly and on time • The project design should consider other human activities that can continue without affecting the project for example grazing or agriculture
	Lomnyaki Soingei	PAP	• Quite often projects are implemented before compensation is made. We don't want this to happen in our area. • The project should contribute to the village development projects. • The project should be implemented as soon as possible
	Lembres Mitawazi	PAP	• We are happy that the projects are coming into our area, however there is a tendency of delay of compensation after valuation • The power transmission line (way leave) is not clear. We would like to know where the way leave and road will pass so that we can plan and use our properties without fear.

ORODHA YA MAJINA YA KAMATI

1. LOIBANGUI SONGOTO
2. MOLIKAM MELAU
3. LEMBRIS MIIANGAS
4. SEURI MIIANGAS
5. LOMINGO OLODUMA
6. MIIMI KARANGA
7. LOMMYAK SOINGET
8. SAIBOKU LUKUNGORE -

AFISA MTENDAJI WA KIJIJI
KIJIJI CHA LENGUR
(W) ARUMERU

MAWASILIANO YA M/KITI WA KIJIJI:

0754 405065

0787 520074.

AGENDA

1. KUFUNGUA MKUTANO WA DHARURA
2. KUMEGEA AMBALO HAZIJENGWA KIPOOZEO
3. KUFUNGA MKUTANO.

AGENDA NA 1/2013 KUFUNGUA MKUTANO.

Mwenyekiti wa mkutano mkuu wa dharura ndg: Lembris Mairisa aliwaomba wananchi wote walio hudhuria mkutano huu wawe watulivu, mkutano ulifunguliwa kwa sala mnamo saa 5:30 asubuhi.

AGENDA NA 2/2013 KUMEGEA AMBALO HAZIJENGWA KIPOOZEO.

Kiongozi kutoka Tanesco Makao makuu Dar alisema wao wataijenga kipoozeo cha umeme ndani ya kijiji cha Kemugur. Umeme huo utatoka Dar unashushwa na kupoozwa na baadaya kuelekea Mairobi. Pamoja na kuwa eneo hilo wamewaka alama kuwa waiju watu wanao milki maeneo hayo yanye ukubwa wa mita 400 kwa 400 (mianne kwa mianne) Hata hivyo wananchi wanao zungumza mradi watapewa umeme, watajengewa visima vya maji, na barabara itatengenezwa kwa kiwango cha lami. Na wale wenye maeneo watalipwa fedha ya maeneo yao, nyumba, usumbufu na kodi ya miaka 3 mitatu ili waweze kutafuta maeneo mbadala.

Wananchi kwa pamoja walipokea mradi na kuwaomba uongozi wa tanesco makao makuu wajenge Ofisi ya kijiji na ombi hao limekubaliwa. Pia kodha ya maji yalizamaki nimeambatanisha nyuma ya mukitasari hau.

AGENDA NA 3/2013 KUFUNGA MKUTANO.

Mwenyekiti aliwashukuru wananchi kwa mawazo yao mazuri na uvumilivu mkubwa mkutano uliahirishwa hadi tar: 01/10/2013 watakapo kutana tena wananchi wenye maeneo.

MWENYEKITI WA KIJIJI
ARUMERU
KIJIJI CHA LEMUGUR

AFISA MTENDAJI WA KI
KIJIJI CHA LEMUGUR

MKUTANO WA MKUTANO WA KIJIJI CHA LEMUGUR KILICHOFANYIKA KWA TAR: 30/9/2013 NA WAKU WA TAMESCO.

MAHUDHURIO	CHEO	SAINI
1. LEMBRIS MANGISA	M/KITI WA KIKAO	
2. MARAM KOIAM	V/ED	
3. MOHAMMI MEVUSH	M/KITI (K) MGUKWAMI	
4. DAUDI MGARUMA	MJUMBE HALMASHAURI TA KIJIJI	
5. MUIMI KARAMME	V/TI MAALUM	
6. KUREGOI MEMGATA	MWANACHI.	
7. SOJI KIMAMIAM		
9. LOIBANGUTI SONGOTO		
10. SEURI MEMSORI		
11. FRANK MEMGATA		
12. SAMBURU SONGOTO		
13. MOKAM MEMSORI		
14. MEVOROO LOMGIDA		
15. SOMM FRANK		
16. THOMAS LOMGIDA		
17. MISETEKI SONGOTO		
18. MAMATAM SONGOTO		
19. LOMMIAK SOINGE		
20. SAIMALE MIGARU		
21 LEMBURIS LOIBANGUTI		