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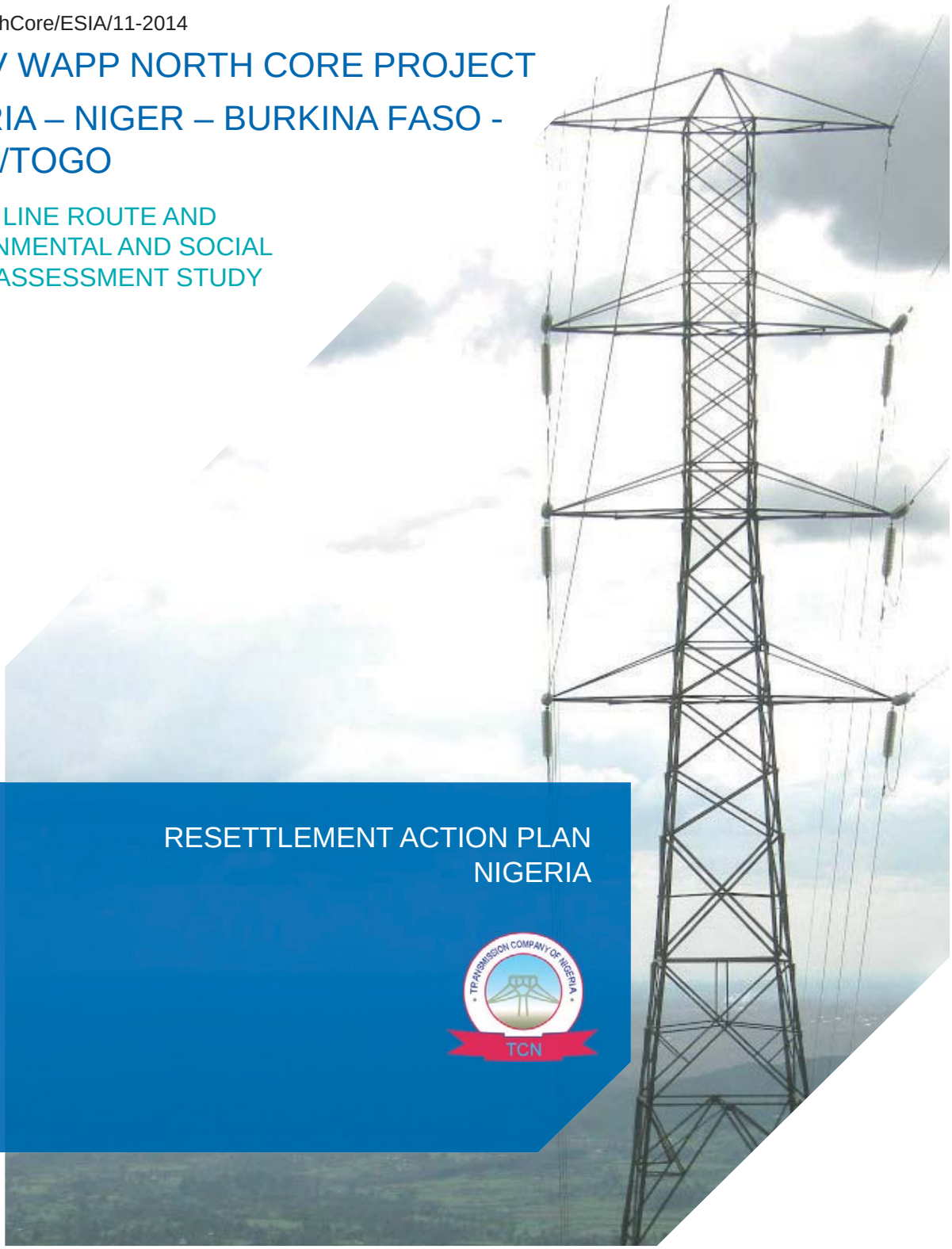
West African Power Pool

WAPP/NorthCore/ESIA/11-2014

330 KV WAPP NORTH CORE PROJECT

NIGERIA – NIGER – BURKINA FASO - BENIN/TOGO

UPDATE LINE ROUTE AND ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT STUDY



RESETTLEMENT ACTION PLAN NIGERIA

TRANSMISSION COMPANY OF NIGERIA
TCN

WSP

330KV WAPP NORTH CORE PROJECT - NIGERIA - NIGER - BURKINA FASO - BENIN/TOGO

WEST AFRICAN POWER POOL (WAPP)

UPDATE LINE ROUTE AND ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT STUDY

RESETTLEMENT ACTION PLAN - NIGERIA

Revised Final Report

Date: May 2018

PROJECT TEAM

WSP CANADA INC.

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NON-TECHNICAL SUMMARY

PROJECT CONTEXT

The West African Power Pool (WAPP) is a specialized institution of the Economic Community of West African States (ECOWAS) which ensures regional power system integration and the realization of a regional electricity market. The WAPP is made up of public and private generation, transmission and distribution companies involved in the operation of the electricity in West Africa. Some projects are currently in the planning phase or in execution**.**

The WAPP covers 14 of the 15 countries of the regional economic community. These countries show a very unevenly distributed population within this economic area. The growth rate of urban population (3.81% / year) is much higher than the overall rate for the population of the region. The main energy resources of West Africa (hydro-electricity, oil, natural gas, coal and renewable energy sources) are also unevenly distributed in the territory of the Region. In this context, the objective of the WAPP is to establish a regional electricity market in West Africa through the development of key infrastructures that would permit the accessibility to economic energy resources to all state members of the ECOWAS. Already, a number of priority interconnection projects are underway and one of them is the 330 kV WAPP North Core Project, consisting of a transmission line from Birnin Kebbi (Nigeria) to Ouagadougou (Burkina Faso) through Zabori (Niger), Niamey (Niger) and Malanville (Benin).

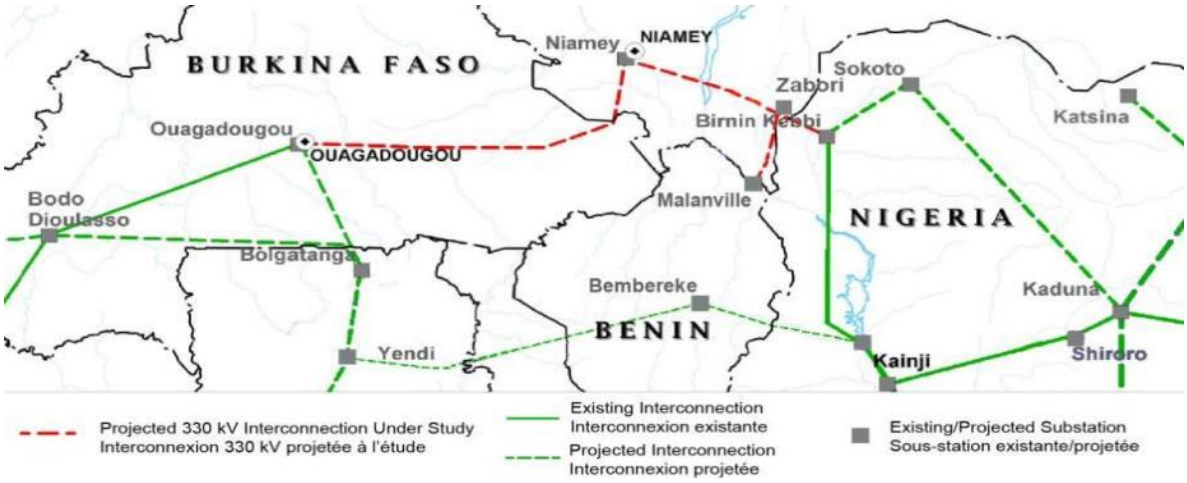
This type of project must undergo an environmental and social impact assessment and because of its cross-border nature, it is covered by four different legislative schemes. An Environmental Impact Assessment (EIA) for the North Core project is required in conformity to the EIA Act No. 86 of 1992 which states that no industrial plan, development or activity falling under the mandatory list can be executed without prior consideration of the environmental consequences of such a proposed action, in the form of an environmental impact assessment.

WSP Canada, in collaboration with Engineering and Environmental Management Services Limited Nigeria (EEMS), was mandated in December 2014, to undertake the line route update study, the Environmental and Social Impact Assessment (ESIA) and the Resettlement Action Plan (RAP) for the portion of the project located in Nigeria.

PROJECT DESCRIPTION

The project consists in the construction of a 330 kV transmission line on steel pylons with a total length of 880 km linking Nigeria to Burkina Faso through Niger, with a derivation toward Benin, as shown on the figure below.

Projected Interconnection between Burkina Faso, Niger, Nigeria and Benin



Reference: WAPP, 2011

The existing Birnin Kebbi substation in Nigeria will be modified to accept a new bay for the 330 kV line. The 330 kV line runs from the Birnin Kebbi substation to the border with Niger, with the following characteristics**:**

- → Extends over a length of 62 km with a right-of-way of 50 m.
- → Exits the Birnin Kebbi station from the north following the corridor of the existing Kanji-Birnin Kebbi 330 kV line, by-passes the city and links with the existing 132 kV line.
- → Crosses the floodplain of the Sokoto River on a distance of 8 km following the existing 132 kV line.
- → Mainly follows the existing 132 kV transmission line to the border with Niger over a distance of 48 km.

Self-supporting lattice towers are used in western Africa and are foreseen for this interconnection. It can be estimated that there will be about 140 to 150 tower structures in Nigeria considering dead-end and angle structures.

IMPACT OF THE PROJECT ON THE HUMAN ENVIRONMENT

IMPACT SOURCES

The project will require the construction of a 330 kV line with a 50 meters ROW over a total length of about 62 km to connect Nigeria from the existing substation in Birnin Kebbi to the Niger border. Most of the impact occurred in the ROW (resettlement, limited access, etc.) and in a corridor of 200 meters wide (dust noise, etc. during construction) along the ROW. The economic impact will be felt in the Birnin Kebbi region and LGA.

For the project affected households and communities, negative impacts occurring during the construction phase include:

- → Dust, noise and exhaust gas emissions;
- → Soil erosion and properties of affected land;
- → Loss of arable land and crop damaged as a result of clearing the ROW of trees for mitigation measures and for temporary access, work areas and work camps;
- → Degradation of water and soil quality resulting from an accidental spill of hydrocarbons and other material as well as disturbance and displacement of wildlife, which could be accentuated by poor waste management practices. The spill could occur from machinery and vehicles, in workplaces and in work camps;
- → Disturbance and displacement of wildlife due to noise generated vehicular movement or from construction and maintenance activities;
- → Conflicts or grievance related to resettlement of affected households;
- → Potential perturbation of communities or households associated to the arrival of workers and conflict over the distribution of jobs and other economic activities related to line construction.

The main long-term source of impacts, at the tower and substation location, and clearance of the ROW are:

- → Loss crop areas and tree plantation in the permanent ROW;
- → Prohibition of constructing any structure (houses, shed, etc.) in the ROW;
- → The arrival of workers and the distribution of jobs and other economic activities related to maintenance of ROW.

Most of the impacts listed above are permanent since farmers cannot use the land in the wayleave for agricultural and livestock or tree plantation. Loss of cultivated individual parcel amount to a total of 121.9 ha. One community land is also lost.

Beside these impacts on agricultural activities and human settlement, an important impact source will be the relocation of houses and other structures in the wayleave. In most cases, these will be relocated to an adjacent land plot or elsewhere, as it is desired by the affected households. However, this relocation

will result in loss of time, income and disruption of the daily life organization of affected households. It would need to be mitigated.

PAP affected physically or economically represent 498 households. The characteristics of the head of households are the following.

Head of Household Characteristics

Sociodemographic Characteristics		Local Governmental Area				Control group (%)
		AREWA (%)	BIRNIN KEBBI (%)	KALGO (%)	TOTAL (%)	
Gender	Male	98.9	98.5	99.1	98.8	96.4
	Female	1.1	1.5	0.9	1.2	3.6
Marital Status	Single	5.4	5.6	6.8	5.8	8.3
	Married – monogamous	52.2	47.7	34.2	46.2	36.9
	Married – polygamous	41.9	46.7	58.1	47.6	53.6
	Widowed	0.5	0	0.9	0.4	1.2
Main occupation	Farmer	89.8	62.1	92.3	79.5	57.1
	Pastoralist	0	1.5	0	0.6	0
	Self-employed	2.2	20.0	4.3	9.6	9.5
	Private employee	1.1	2.6	0.9	1.6	1.2
	Public employee	6.5	10.3	1.7	6.8	20.2
	Do not know	0.0	0.5	0.9	0.4	1.2
	Other	0.5	3.1	0	1.4	10.7
Religion	Muslim	100	99.5	100	99.8	95.2
	Christian	0	0.5	0	0.2	4.8
Formal education	No formal education	43.0	52.3	75.2	54.2	34.5
	Primary	19.4	15.9	15.4	17.1	4.8
	Secondary	18.3	12.8	8.5	13.9	20.2
	College	11.3	8.2	0.9	7.6	21.4
	University	2.7	9.7	0	4.8	10.7
	Do not know	5.4	1.0	0	2.4	8.3
Informal education	No informal education	12.9	1.5	10.3	7.8	6.0
	Koranic school	86.6	94.4	89.7	90.4	81.0
	Other	0.5	4.1	0	1.8	13.1
Ethnic group	Hausa	100.0	68.7	92.3	85.9	86.9
	Fulani	0	12.8	3.4	5.8	6.0
	Zabarmawa	0	13.8	3.4	6.2	2.4
	Other	0	4.6	0.9	2.0	4.8
Number of households		**186**	**195**	**117**	**498**	**84**

Source: Household Questionnaire

The households members characteristics are the following.

Age and Gender Distribution of Affected Households and Control Group Households

Age	Sex	Local Governmental Area				Control group (%)
		AREWA (%)	BIRNIN KEBBI (%)	KALGO (%)	TOTAL (%)	
0 - 4	Male	5.5	9.0	9.8	8.3	6.4
	Female	6.2	7.0	6.8	6.7	5.4
	Total	**11.7**	**16.0**	**16.7**	**15.0**	**11.7**
5 - 15	Male	23.1	21.8	23.5	22.7	20.7
	Female	15.3	19.7	16.9	17.6	16.9
	Total	**38.4**	**41.5**	**40.4**	**40.3**	**37.6**
16 - 35	Male	19.8	14.6	18.0	17.0	19.3
	Female	22.5	19.8	21.0	20.9	22.5
	Total	**42.3**	**34.4**	**38.9**	**37.9**	**41.7**
36 - 54	Male	1.6	1.7	0.9	1.4	2.4
	Female	5.6	5.1	2.4	4.4	5.2
	Total	**7.2**	**6.8**	**3.2**	**5.8**	**7.6**
55 and up	Male	0	0.5	0.4	0.4	0.4
	Female	0.5	0.8	0.3	0.6	1.0
	Total	**0.5**	**1.3**	**0.7**	**0.9**	**1.4**
Total	Male	49.9	47.6	52.6	49.8	49.1
	Female	50.1	52.4	47.4	50.2	50.9
	Total	**100**	**100**	**100**	**100**	**100**
Number of members of households		**823**	**1 296**	**935**	**3 054**	**503**

Note: The data distribution by age groups exclude the head of households.
Source: Household Questionnaire

GOALS AND OBJECTIVES OF THE RAP

The RAP presents the stakeholder's eligibility to compensation aspect and resettlement program details to be presented to the local community. Given the approval of the RAP by the competent authorities and the Transmission Company of Nigeria (TCN), a comprehensive framework of measures will be presented to the PAPs during local community consultations. The information provided during the consultations will reduce any concern that may be raised by the PAPs, favoring their approval and their collaboration through the census and socio-economic survey and the implementation of the proposed resettlement compensations.

The RAP's goals and objectives are listed below:

- → To minimize involuntary resettlement through the optimization of the line route in collaboration with the environmental, technical specialists and relevant stakeholders;
- → To address social issues related to land acquisition and to address livelihood restoration due to construction activities and other project related infrastructure construction;
- → To optimize compensation measures and support to all stakeholders through the identification and consultation of stakeholder and PAPs concerns;
- → To prepare cost estimates for resettlement/compensation through measuring the affected assets and socio-economic status of the PAPs, identifying vulnerable PAPs and households, and assessing compensation and mitigation measures;
- → To assess opportunities for affected communities and PAPs to have them benefit from the project's positive impacts;
- → To provide baseline information to be able to, through post-project comparison, assess whether the PAP's socio-economic situation, as a result of the project, has positively changed or has maintained a status quo;

- → To comply with applicable laws in Nigeria in order to obtain the environmental authority's approval;
- → To integrate the best practices during project implementation in order to comply with guidelines of funding agencies, namely the World Bank, (WB) the African Development Bank (AFDB), and the European Union (EU) and therefore facilitate international funding.

COMPENSATIONS

Different types of compensation, both for private and community structures are provided.

HOUSES AND SECONDARY STRUCTURES

The survey shows that a total of 25 houses are affected by this project. Ten (10) of these houses have been constructed with sandcrete blockwall and are permanent, while the remaining houses are semi-permanent and made out of mud. All these houses include 11 secondary structures (granary, toilet, etc.) the survey identified.

The affected houses are distributed along the line corridor. All affected houses will be rebuilt a few meters from their current location and within the same parcel of land. If, due to modification of PAP situation since the survey the residual portion of the piece of land does not suffice to allow the reconstruction, it will have to be moved on another land parcel that belongs to the same household or on a new land to be purchased. In each case, compensation for packing and displacement will be allocated to the 25 households.

Based on the average price of 1 500 000 Naira per plot in Birnin Kebbi and 150 000 Naira in Kalgo, the cost for parcels to reconstruct these structures is expected to be 22 050 000 Naira.

To these cost must be added all the administrative cost and taxes (registration fees, land taxes, etc.) The total amount including administrative costs and taxes such as registration fees and land taxes equates to 4 410 000 Naira.

A flat rate of 7 000 Naira per principal structure is being proposed, to account for disturbance and moving expenses as it is usual in the case in TCN project.

COMMERCIAL STRUCTURES

All commercial structures affected by the project are located in Birnin Kebbi. These include one (1) block making industry, one (1) mechanical shop, one (1) sachet water distributor, two (2) shops and one (1) petrol-station.

The total compensated amount for these commercial structures is estimated to 95 782 000 Naira. This amount includes the structure replacements, new site acquisitions, loss of business incomes, relocation benefits, and administration fees and taxes. Land is available for the relocations of these structures.

AGRICULTURAL PRODUCTION AND PARCELS

The total crop area affected by the project is 121.9 acres.

The compensation allocated for the purpose of harvest loss during the construction phase will vary depending on whether or not people have time to harvest. Compensation for crop losses will be calculated during the project implementation phase, based on harvests. Estimated harvest losses related to projects with similar timeframes were assessed as 13 380 637 Naira.

A piece of land must also be bought to replace the affected parcels.

It is estimated that 403 of the 531 affected parcels have more than 20% of their land parcel that is used by the ROW. In these cases, the total parcels need to be replaced. As for the 128 remaining parcels of land that are affected by less than 20%, cash compensation will be offered.

Given that the total surface area requiring compensation is 392 ha, the compensation amounts to 203 457 610 Naira. To this amount, 40 691 522 of taxes and legal fees must be added.

A total area of 44.9 ha of fallow land will also be compensated; the amount of compensation equates to a total of 27 979 868 Naira.

TCN policy is to compensate for land and prohibit any structure, crop or trees in the ROW. However, in practice, as seen on the ground where an existing high voltage line passes in the project area, TCN tolerates crop in the ROW under the condition that the PAP does not ask for compensation for any crop damage related to maintenance activity[1]. The economic impact on PAP production in the affected parcel is thus minimal. Since the PAP can buy a land to replace the impacted space with the compensation they will be able to increase their production overall.

COMMUNITY STRUCTURES AND SITE

One (1) Islamic school and two (2) mosques are affected in Birnin Kebbi (see table 5-6). The price of reconstruction for these structures, including the price of land and legal fees, is estimated to be 18 500 000 Naira.

In regards to the natural area affected, a heavily cultivated marsh area cooperatively owned, the replacement is estimated at 20 000 000 Naira.

The total cost for community structures and site is estimated at 38 500 000 Naira.

ACCESS ROADS AND WORKERS CAMPS

The allowance required for temporary workers to access roads is budgeted to account for the damages or temporary impacts on land for which the owners must be compensated. The budget for these damages is estimated at 37 032 690 Naira (5% of the RAP).

TREES

Some of the households in the project area (along with the transmission route) have fruit trees. 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. Evaluation of the numbers of trees for each family has been done on the basis of the investigation results. The total cost is estimated at 1 065 950 Naira.

INCOME AND LIVELIHOOD RESTORATION STRATEGIES

Various ways to provide support after displacement, development assistance and to improve the livelihoods and living standards of the displaced are under the RAP or will be developed during its implementation as required by the WB and AFDB guidelines.

The following table presents the group and the component concerned by the impact, the impact description or the strategies objective and the different income and livelihood restoration strategies proposed by the RAP.

[1] Note that mitigation measures about community health and safety during the construction and the operation phases are detailed in section 7.5.3.4 and 7.7.3.4 of the ESIA as well as in Tables 9-1 and 9-2. These include: “the towers must be designed according to best practices and standards. This will ensure the safe and reliable operation of the transmission line while ensuring the safety of neighboring communities thereof.”

Group and component concerned by the impact, impact description or strategies objectives, income and livelihood restoration strategies

GROUP CONCERNED	COMPONENT CONCERNED	IMPACT DESCRIPTION OR STRATEGIES OBJECTIVES	INCOME AND LIVELIHOOD RESTORATION STRATEGIES
Communities within the transmission line's row	Community structures	Reconstruction of three (3) structures (1 Islamic school and 2 mosques) Replacement of one (1) community area resource (wetland)	To inform the PAPs of the project at least 1 year before the start of the construction. To allocate 38 500 000 Naira for the reconstruction of the affected structures. To compensate the wetland part that will be inaccessible (N 20 000 000).
	Work opportunities	Positive impact	To maximise local hiring as well as the purchase of relevant local materials and services.
	Community facilities and services	To improve existing community facilities and services	Community Compensation Fund (61 748 900 Naira)
Households affected	Land base	Loss of land and crop space	Compensation to have the possibility to buy a new land (should the ROW take more than 20% of their parcel) and monetary compensation for to PAPs who lose less than 20% of their parcel (total of 244 149 132 Naira) Support from the Project Implementation Unit (PIU) to find replacement land. Compensation to improve the productive condition of the original plot. Technical assistance for at least a two-year period to help the impacted households improve their situation.
	Trees	Destruction of 443 natural and planted trees on 88 parcels	Compensation according to the prescribed rates up to a total of 1 065 950 Naira. Help by the PIU specialist to the affected households to plant trees to restore their source of income and livelihoods.
	Principal and secondary structures	Reconstruction of principal (25) and secondary (11) structures located in the wayleave Risk of compensation mismanagement and impoverishment of the households Inconvenience and time constraints related to the resettlement	Measures taken by the TCN and the PIU to make sure the PAPs find a suitable land for reconstruction and enough time for reconstruction and proper compensation is allocated. Reconstruction to be done on parcels adjacent to the piece of land being displaced, at best. Progressive instalment applied through two steps of the operation: first the land and construction material purchase and second, upon verification of the built structure. Reconstruction performed by households under the supervision of a qualified professional hired by PIU prioritized to ensure the quality of the structure and to help maximize their revenue from resettlement. Granting moving allocation of 7 000 Naira to each household resettled to pay for moving their goods and belongings. Granting income support allocation of 200 Naira/day for each member of the household for 30 days to mitigate the inconvenience and time constraints related to the resettlement.

GROUP CONCERNED	COMPONENT CONCERNED	IMPACT DESCRIPTION OR STRATEGIES OBJECTIVES	INCOME AND LIVELIHOOD RESTORATION STRATEGIES
	Vulnerable groups	To improve livelihoods of vulnerable households before the project construction	Beside in-kind and allocation of income as other group the vulnerable people will receive additional income support (1/day/member) and other organizational support see section (8.2.3) Consultation of vulnerable households at the onset of the operation to evaluate their concerns and needs. Participation of the affected households to the proposed training programs. Priority to household members within vulnerable households for the allocation of project related employment and other benefits. Compensation in kind (house reconstruction, equivalent in locally bought food for crop damage) rather than cash compensation. When cash compensations is the only acceptable option, possible mitigation measures should also be examined and implemented when feasible.
	Employment and other benefits	Positive impact in terms of job opportunities and contract	Priority given to all able bodied members of resettled households during the labour recruitment process. Access to all the wood that is cut on affected households and communities parcel. Materials salvaged from the affected structures left to the affected households and communities.

STAKEHOLDER ENGAGEMENT

General objectives of the public information and consultation process that has been designed and implemented in order to facilitate the informed participation of the project affected persons (PAPs), communities and other stakeholders affected by this project, were to:

- → Inform stakeholders on the proposed infrastructures and activities and seek their informed opinion about the socio-environmental risks and opportunities potentially associated with the project as well as take the measures and actions in order to manage the anticipated impacts;
- → Generate a social and institutional dialogue in order to assess and strengthen the project's social acceptability;
- → Help to consolidate, through the ESIA process, the efforts made by the WAPP and TCN in order to establish lasting relationships with affected communities and other stakeholders.

Target stakeholder groups for the stakeholder engagement process include:

- → Concerned ministries and national agencies;
- → State-level (Birnin Kebbi) and LGA-level (Birnin Kebbi, Arewa and Kola) authorities and technical services;
- → Customary authorities;
- → Communities affected by the line route;
- → Industrial and commercial actors affected by the line, if any;
- → NGOs and other civil society organisations in the fields of nature conservation, community development and human rights.

Four stakeholder information and consultation rounds were conducted through the development of the ESIA study and RAP of this project. Those were planned according to key stages, or decision moments, throughout the study where the informed participation of stakeholders was likely to make the most significant contribution to the on-going analysis. These included the environmental and social scoping stage (1st round), the preliminary route assessment stage (2nd round), the documentation of the affected communities and displaced households (3rd round) and the disclosure of the ESIA, ESMP and RAP preliminary results (4th round).

Although the first and second consultation rounds have helped to better define the scope and framework of the RAP study and to adjust the line route so as to minimize resettlement needs, thorough engagement with local communities and PAPs and consultation on the actual compensation and resettlement process really occurred at the third and fourth consultation rounds.

CONCERNS, EXPECTATIONS AND RECOMMENDATIONS EXPRESSED BY STAKEHOLDERS

The main concerns, expectations and recommendations made by stakeholders that are related to the population resettlement and compensation process, are summarized below:

- → Public enlightenment: Provide adequate enlightenment to the public, involve professionals such as the media houses located in Kebbi State. Specifically, affected communities have requested to be notified of the start date of the project sooner than later, to avoid loss of farm produce.
- → Encroachment on the corridor: The Surveyor General observed that there is encroachment by structures and farmlands on the corridor for the existing 132 kV line. To minimize this, the beacons delimitating the ROW should be lit at a height of at least 0.5 m above ground.)
- → Fair compensation: Local authorities and communities have emphasized their expectations over adequate and timely compensation of the PAPs.
- → Replacement of community structures: Communities and women representatives have asked for the adequate replacement of community structures such as hospitals, dispensaries or other government buildings affected by the project.

→ Compensation for fallow land: It was noted that, based on the requirements of the Land Use Act, there is no compensation for land and only assets on the land will be compensated. Nevertheless, it was observed that fallow land is either preserved for future generations of the owner to use or to be purchased with future plans for development[2]. There should be some form of compensation for fallow land, based on human face.

In the community's socioeconomic survey, the chiefs of affected villages were asked if they had any concerns on possible impacts about the project on their community. Most of the chiefs expressed the view that the project will bring positive economic impacts in their community such as jobs, electrification and infrastructure development. The negative impacts are essentially related to the loss of land and trees, because of the ROW implementation. Adequate compensation is asked and causes some concern.

Most of the PAPs had no specific comments or concerns related to the project. For those head of households that did comment on the project, the main concern or demand was related to compensation and concerns were related to the loss they could incur. The PAPs asked for a fair compensation so they would not be impoverished by the project. Also worthy of mentioning are the many positive comments. These specific PAPs agree to the project and see some benefits for them or the community.

Concerns collected during the information and consultation activities have been taken into account in the development of the project, the amounts offered in compensation, as well as in the organization of the implementation of the resettlement program.

IMPLEMENTATION AND MONITORING

To facilitate or ensure the implementation of the RAP, several measures or institutional arrangements are planned. In addition, monitoring mechanisms are provided to highlight the achievements and/or the deficiencies among the recommendations as contained in the RAP and implementation on the ground.

INSTITUTIONAL ARRANGEMENTS

Responsibilities in the implementation and monitoring of the ESMP and RAP are shared between multiple stakeholders, competent ministries, departmental authorities and TCN. The funding agencies will receive follow-up report from TCN.

In this context, and to encourage the coordination of decisions as well as application of the various measures in an appropriate way, TCN should consider the possibility of setting up a Project Management Unit (PMU) and Project Implementation Unit (PIU) to be responsible for the project ESMP and RAP.

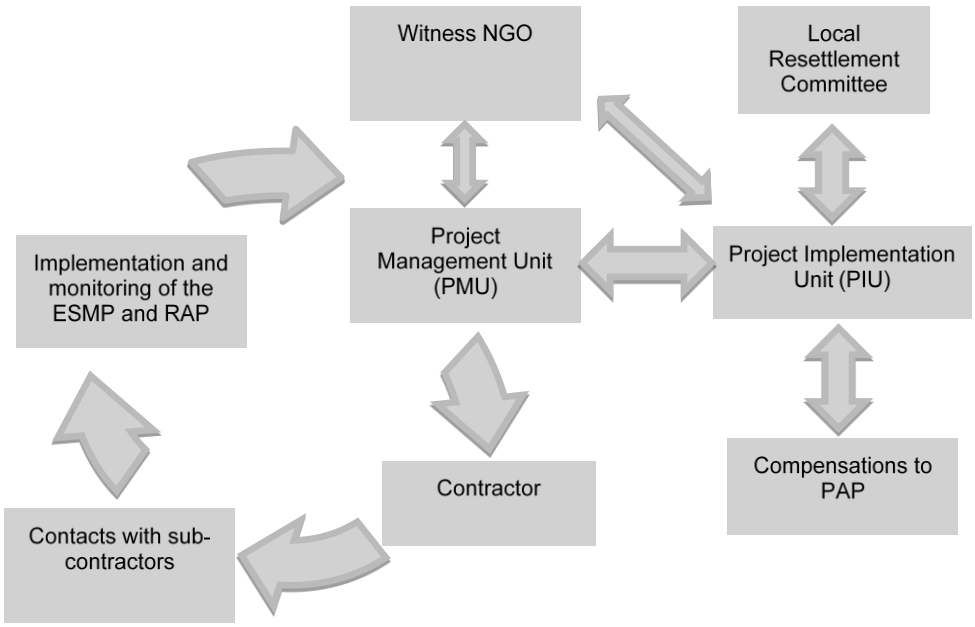
The implementation of the PMU will be coordinated through a Technical Committee and an Environmental Committee. The Environment Committee will oversee the implementation of the ESMP by the prime contractor and its subcontractors in charge of construction.

Furthermore as discussed a LRC should be put in place and a witness NGO should be invited to participate to the process.

The figure below illustrates the functioning of such institutional arrangement.

[2] Note that this is a commentary of a PAP and the logic of the comment is not the consultant responsibility. However, as mentioned in the report all parcels including fallow land are compensated.

Institutional Arrangements for ESMP and RAP Implementation



STAKEHOLDER ENGAGEMENT PROGRAM

To ensure the interests of the affected persons are fully entrenched in the RAP process and income restoration, an engagement program shall be developed at the onset of the RAP implementation process. This program goals are transparent information and meaningful participation of PAPs, representatives of affected and interested groups and of the various administrative and government departments all through the project.

This participation will be done through the creation of the Environmental committee of the PMU, the LRC and a vigorous program of information and consultation of affected communities and PAPs. These information and consultation will concern compensations rules and procedures, livelihoods program, PAPs rights, grievances mechanisms, etc.

INSTITUTIONAL CAPACITY REINFORCEMENT

Training and information transmission are important issues in order to raise awareness on current environmental and compensation legislations and regulations governing the project.

A training program must be implemented as part of the PIU and PMU set-up process to properly train key personnel involved with the supervision of compensation evaluation, procedures and implementation of others mitigation and compensation measures. Training on grievance procedures and negotiations should also be provided to the personnel in charge of supervising compensation and resettlement issues.

The costs associated with this training program are included in the ESMP budget.

GRIEVANCE MECHANISMS

Regarding the disputes/disagreements that could potentially occur between the project developer and the PAPs, a structure dedicated to the management of complaints will be established and will include two stages according to the Nigeria Land Use Act (LUA) of 1978, reviewed under Cap 202, 1990, namely: customary mediation and judiciary hearings.

At the first level, a series of customary avenues exists to deal with dispute resolutions. Those avenues should provide a first culturally and amicable grievance procedure that will facilitate formal and/or informal grievance resolution for grievances.

A Customary Grievance Redress Committee shall be set up by the PIU in each LGA to address complaints from RAP implementation. This committee will be assisted by the PIU who will act as TCN representative and its members will include:

- → Representative of State Ministry of Land and Housing (Chairperson);
- → Representative of Land Administration- (Secretary);
- → Representative of the local Government Area (s) (Member);
- → Respected local Elders (Members);
- → Representative of Village Head of affected village (s);
- → Representative of the Emirate Councils from all affected Emirates;
- → Representative of Witness NGO.

At the second level, the judicial process in accordance with applicable laws will be followed and the law courts will pass binding judgment on the matter.

MONITORING

The purpose of resettlement monitoring is to ensure that measures developed for compensating the losses were effective in restoring PAPs living standards and income levels.

During monitoring phase, the existing grievance mechanism will be regularly reviewed for improving and correspondingly, additional and more user friendly forms, which enable the field staff to forward complaints and demands of local people to the PIU and or Environmental Manager of the PMU.

Throughout the Project lifecycle, monitoring and evaluation activities will be reviewed; restructured or removed in case that the previously produced tools and forms are inefficient.

Monitoring and Evaluation (M&E) procedures establish the effectiveness of all land and asset acquisition and resettlement activities, in addition to the measures designed to mitigate adverse social impacts. The procedures include internal track keeping efforts as well as independent external monitoring.

The purpose of resettlement monitoring for the proposed Transmission Line Project will be to verify that:

- → Actions and commitments described in the RAP are implemented;
- → Eligible project affected people receive their full compensation prior to the start of the rehabilitation activities on the corridor;
- → RAP actions and compensation measures have helped the people who sought cash compensation in restoring their lost incomes and in sustaining/improving pre-project living standards;
- → Complaints and grievances lodged by project affected people are followed up and, where necessary, appropriate corrective actions are taken;
- → If necessary, changes in RAP procedure are made to improve delivery of entitlements to project affected people.

The WB and AFDB operational policy states that the project sponsor (TCN) is responsible for adequate M&E of the activities set forth in the resettlement instrument.

Monitoring will provide both a warning system for the PIU and the project sponsor (TCN) and a channel for the affected persons to make known their needs and their reactions to resettlement execution.

PIU monitoring and evaluation activities and programs shall be adequately funded and staffed. PIU monitoring will be verified by the witness NGO to ensure complete and objective information.

BUDGET

The RAP implementation budget includes all costs involved in the execution of all RAP activities. Among others, the cost of the PIU (283 148 585 Nigerian Naira) is associated to the grievance redress mechanisms, the RAP implementation committee and the consultations in the course of RAP implementation.

The total budget is estimated at **1 385 637 783** Nigerian Naira or 4 398 850 USD including a provision of 10% for inflation. This amount to 17% of the total construction cost of the project which is 26 M USD.

RAP and CCF Implementation and monitoring Cost

ELEMENT	COST LOCAL CURRENCY (NIGERIAN NAIRA)	COST (USD)
Crops compensation		
Agricultural land compensation	244 149 132	775 077
Fallow land compensation	27 979 868	88 825
Trees compensation	1 065 950	3 384
Principal structures compensation *(structure replacement, new site acquisition, relocation benefits, administration fees and taxes)*	314 753 000	999 216
Secondary structures compensation *(granary, kitchen, borehole)*	2 880 000	9 143
Commercial structures compensation *(structure replacement, new site acquisition, loss of business incomes, relocation benefits, administration fees and taxes)*	95 782 000	304 070
Community structures compensation *(mosque, school, Islamic school)*	18 500 000	58 730
Community assets compensation *(natural area)*	20 000 000	63 492
Income support allocation for the resettlement *(1 USD/day for each member of the household for 30 days, for household with a principal structure in the wayleave)*	1 697 099	5 388
Income support allocation for vulnerable groups *(1 USD/day for each member of the household for 30 days, for household with a principal structure in the wayleave, with the head of household or any of its members judged vulnerable)*	466 105	1 480
Compensation sub-total	**740 653 791**	2 351 282
Project implementation unit (PIU)	283 148 585	898 884
Witness NGO supervision	30 476 070	96 749
Community compensation fund *(1 % of the project)*	52 055 916	165 257
Community compensation fund administration *(10 % of FCC)*	5 205 592	16 526
Contingencies *(15 % of RAP sub-total)*	111 098 069	352 692
Compensation for access road and workers camps *(5 % of RAP sub-total)*	37 032 690	117 564
Total RAP and FCC	**1 259 670 712**	3 998 955
Provision for inflation (10%)	**125 967 071**	399 895
Total RAP and FCC (Conversion rate : 315 NGN = 1 USD)	**1 385 637 783**	4 398 850

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UNITS AND ACRONYMS

Units

m	Meters
km	Kilometers (1000 m)
kV	Kilovolts (1000 volts)
MV	Megavolts (106 volts)
MW	Megawatts (106 watts)
GWh	Gigawatts-hour (109 watts × 3600 seconds)

Acronyms

AfDB	African Development Bank
CAS	Country Assistance Strategy
ECOWAS	Economic Community of West African States
EBDR	European Bank for Reconstruction and Development
ECOWAS	Economic Community of West African States
EEMS Limited	Engineering and Environmental Management Services Limited
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
EMF	Electromagnetic Field
ESAP	Environmental and Social Assessment Procedures
ESMP	Environmental and Social Management Plan
FGN	Federal Government of Nigeria
FMPW&H	Federal Ministry of Power, Works and Housing
FS	Feasibility Study
GIS	Geographic Information System
ICNIR	International Commission on Non-Ionizing Radiation
IEEE	Electrical and Electronic Engineers
KBA	Key Biodiversity Areas
KESEPA	Kebbi State Environmental Protection Agency
LRC	Local Resettlement Committee
LGA	Local Government Authority
MMA	Mathematical Method of multi-criteria Analysis
N/A	Not Available
NGO	Non-Governmental Organization
NGN	Nigerian Naira
OP	Operational Procedures
OPGW	Optical Ground Wire
PAPs	Project Affected Persons
PCR	Physical Cultural Resources
PHCN	Power Holding Company of Nigeria
PIPES	Investment Programming and Safeguarding the Environment
RAA	Registry of Affected Assets
RAP	Resettlement Action Plan
ROW	Right of Way
SCADA	Supervisory Control and Data Acquisition
TCN	Transmission Company of Nigeria
ToR	Terms of Reference
WAPP	West African Power Pool

1 INTRODUCTION

1.1 PROJECT CONTEXT

The governments of Burkina Faso, Niger, Benin and Nigeria, with the support of the West African Power Pool (WAPP) and international donors, are planning to construct an 880 km high-voltage electrical transmission line. Known as the 330 kV WAPP North Core Project, the project will involve the construction of a transmission line spanning from Birnin Kebbi (Nigeria) to Ouagadougou (Burkina Faso), and passing through Niamey (Niger) as well as Malainville (Benin) via Zabori (Niger).The sections of the transmission line will be connected as follows:

- A 205 km span from Birnin Kebbi (Nigeria) to Niamey (Niger);
- A 480 km span from Niamey (Niger) to Ouagadougou (Burkina Faso);
- A 118 km span from Zabori (Niger) to Malanville (Benin).

The project is part of an ongoing regional energy integration process. Its objective is to: (i) promote and enhance electricity trade; (ii) improve the reliability and safety of the supply system of the four national systems; and (iii) contribute to economic development and regional integration. In addition to the construction of the power lines, the project scope also includes the following activities:

- The expansion of the existing 330 kV substation in Birnin Kebbi (Nigeria);
- The construction of a new 330/132 kV substation in Niamey (Niger);
- The construction of a new 330 kV or 330/132 kV substation in Zabori (Niger);
- The construction of 330/132 kV or 330/225kV substation in Ouagadougou (Burkina Faso);
- The construction of a new 330/161 kV substation in Malanville (Benin);
- The installation of a Supervisory Control and Data Acquisition (SCADA) and Fibre Optic systems.

Studies were done to determine the best route option for the transmission line based on technical, environmental and social considerations, including the reduction of the number of Project Affected Persons (PAPs) and affected assets.

WSP Canada, in collaboration with Engineering and Environmental Management Services Limited Nigeria (EEMS), was mandated in December 2014, to undertake the line route update study, the Environmental and Social Impact Assessment (ESIA) and the Resettlement Action Plan (RAP) for the portion of the project located in Nigeria.

As mentioned before, WAPP is the Economic Community of West African States (ECOWAS) institution responsible for integrating regional power systems and creating a regional electricity market through different public organisations and private businesses involved in electricity production, transmission, and distribution in West Africa.

WAPP's structure allows the organization to carry out the tasks that are assigned. It includes a General Secretariat, which serves as the administrative and technical organ of the day-to-day management of WAPP activities. The General Secretariat is comprised of three head offices: the Department of Planning, Investment Programming & Environmental Safeguard (PIPES) which consist of a team of professionals dedicated to the environmental responsibility and social acceptance aspects of WAPP's mission.

1.2 GOALS AND OBJECTIVES OF THE RESETTLEMENT ACTION PLAN

The Resettlement Action Plan (RAP) presents the stakeholder's eligibility to compensation aspect and resettlement program details to be presented to the local community. Given the approval of the RAP by the competent authorities and the Transmission Company of Nigeria (TCN), a comprehensive framework of measures were presented to the PAPs during local community consultations. The information provided during the consultations reduced any concern that may be raised by the PAPs, favoring their approval

and their collaboration through the census and socio-economic survey. Further consultation and information activities will be performed during implementation of the resettlement compensations.

The RAP's goals and objectives are listed below and are further discussed in subsequent sections, as required:

- → To minimize involuntary resettlement through the optimization of the line route in collaboration with the environmental, technical specialists and relevant stakeholders (see section 2);
- → To address social issues related to land acquisition and to address livelihood restoration due to construction activities and other project related infrastructure construction;
- → To optimize compensation measures and support to all stakeholders through the identification and consultation of stakeholder and PAPs concerns (see section 4);
- → To prepare cost estimates for resettlement/compensation through measuring the affected assets and socio-economic status of the PAPs, identifying vulnerable PAPs and households, and assessing compensation and mitigation measures (see section 5-6-7-8);
- → To assess opportunities for affected communities and PAPs to have them benefit from the project's positive impacts (see section 8);
- → To provide baseline information to be able to, through post-project comparison, assess whether the PAP's socio-economic situation, as a result of the project, has positively changed or has maintained a status quo;
- → To comply with applicable laws in Nigeria in order to obtain the environmental authority's approval;
- → To integrate the best practices during project implementation in order to comply with guidelines of funding agencies, namely the World Bank (WB), the African Development Bank (AFDB), and the European Union (EU) and therefore facilitate international funding.

1.3 METHODOLOGY

The preparation of the RAP commenced with a literature review (Fichtner's Feasibility Study Report, legal documents, scientific literature, etc.) where the key elements for the development of the report were assessed. Subsequently, the RAP was conducted through:

- → Consultations with a number of key stakeholders at the national, regional and local levels (see section 4);
- → The presentation of a provisional RAP report, including a preliminary assessment of the legal and institutional context, a project valuation and compensation framework, proposed options for income and livelihood restoration strategies, institutional arrangements for RAP implementation, grievances and monitoring mechanisms.

The presentation of the above mentioned provisional RAP report to the different utilities and the WAPP for comments;

- → The preparation of a multi-criteria line route study conducted to reduce the potential impacts of the project including resettlement upfront (see the line route update study);
- → The completion of a census of households, private and community assets and properties affected by the wayleave;
- → The completion of socioeconomic surveys of communities and households whose land will be crossed by the wayleave.

The census and socioeconomic studies were conducted based on two (2) separate surveys and one (1) consent form. The first survey was meant to assess the affected households' assets and socioeconomic circumstances and the second survey assessed the community's characteristics and assets that would be affected by the project implementation. The two (2) surveys are presented together in Appendix 1 and the consent form is presented in Appendix 2. To gather information on socioeconomic characteristics of the surroundings, a control group of households living outside the affected corridor and representing no less than 10% of the total number of affected households was also interviewed. The census was

undertaken from October 14 to 24, 2015. Note that the inventory was also undertaken for the purpose of completing the Registry of Affected Assets (RAA). This control group will be compared to the affected group of households in subsequent studies.

The information gathering through undertaking the steps discussed in the methodology above is presented in the sections below.

2 DESCRIPTION OF PROJECT

2.1 PROMOTER PRESENTATION

The project is under the auspices of the WAPP. This institution is supported by each of the companies responsible for electricity production and / or distribution of electrical energy, whether the TCN in Nigeria, the NIGELEC in Niger, the SONABEL in Burkina Faso or the CEB in Benin.

2.1.1 WAPP

The WAPP is the institution of the ECOWAS in charge of the integration of the regional energy system and the creation of a regional electricity market through various public and private companies involved in the production, transmission and distribution of electricity in West Africa.

The WAPP has a structure enabling it to fulfill the responsibilities entrusted to it, including a General Secretariat, which is the administrative body responsible for the daily management of the WAPP activities. The General Secretariat has three branches, the Planning Department, Investment Programming and Safeguarding the Environment (PIPES) that is composed of a team of professionals responsible for performing daily tasks necessary for the fulfillment of environmental and social aspects of the mission of the WAPP.

2.1.2 TCN (TRANSMISSION COMPANY OF NIGERIA)

The Transmission Company of Nigeria (TCN) is responsible for activities related to the transportation of electric power across Nigeria. According to Fichtner (2016) the total production capacity in Nigeria is 12 318.9 MW while the available capacity is 9,990.3 MW and consists of the following primary sources:

Table 2-1 Types and Electricity Production Capacity in Nigeria

TYPE OF POWER STATION	TOTAL CAPACITY (MW)	% OF COUNTRY'S TOTAL CAPACITY	AVAILABLE CAPACITY (MW)	% OF COUNTRY'S AVAILABLE CAPACITY
Hydroelectric	1,900	15	1,340	13
Thermal	10,418.9	85	8,650.3	87

In terms of the network, it consists mainly of:

- → 6,000 km of 330 kV power lines and 38 substations (330 kV);
- → 8,000 km of 132 kV power lines and 133 substations (132 kV).

In addition, Nigeria has interconnected transmission lines with the neighboring countries:

- → A 260 km 132 kV power line between Birnin Kebbi and Niamey (Niger);
- → A 103 km 132 kV power line between Katsina and Gazaoua (Niger);
- → A 70 km 330 kV power line between Lagos and Sakete (Benin).

Nigeria has a National control center located in the city of Osogbo, in addition to three regional control centers.

2.1.3 NIGELEC

The Nigerian Electricity Society (NIGELEC) was established in September 1968 as a public corporation to take over from the African Electricity Company (AEC). The company is overseen by the Ministry of Energy. It is responsible for the generation, transmission and distribution of electricity, under a renewable 50-year concession signed with the State of Niger on March 3, 1993 and follows the first concession

ratified on May 22, 1956. According to the concession, the state transferred the monopoly to the NIGELEC while allowing the use of public facilities directly related to the generation, transmission and distribution of electric energy. The NIGELEC has the responsibility to maintain and improve facilities to ensure the best quality service at the best price.

The NIGELEC is governed by a legal and regulatory framework by the electrical energy sub-sector. In 2003, a new Electrical Code was adopted (No. 2003-004), enabling production by independent companies, ending the monopoly of the NIGELEC.

The energy requirements of the NIGELEC are met through domestic production, imports, and independent producers. Total production and importation in 2015 reached a 1026.63 GWh of which 212.51 GWh was produced by NIGELEC, 52.70 GWh by SONICHAR and 781.99 GWh was imported from Power Holding Company of Nigeria (PHCN) (BOAD, 2016). National production is provided via:

- → The facilities of the NIGELEC, composed of 53 thermal centrals including more than a hundred power units generating between 50 and 16,000 kVA (BOAD, 2016), offers an approximate total capacity of 113.2 MW and available capacity of 73.2 MW (Fichtner, 2016);
- → The energy production of the Nigerian Society of Anou Araren Coal (SONICHAR), a state company that produces just over 36 MW thanks to a coal power plant. The transmission of electricity for the mining companies COMINAK and SOMAIR is provided through a 132 kV line. The transmission line and associated substations are leased to the SONICHAR but nevertheless belong to the NIGELEC. Part of this production is sold to the NIGELEC needed for the towns of Agadez, Arlit and Tchirozerine.

Imports from Nigeria are ensured by the PHCN and represented approximately 87% of electricity transiting on the NIGELEC distribution network in 2011. The PHCN has been selling electricity to the NIGELEC since 1976 when the first interconnection line of 132 kV became operational between Birnin Kebbi (Nigeria) and Niamey, via Dosso. In 1994, a second interconnection line of 330 kV was built between Katsina in Nigeria and Gazaoua, Maradi and Zinder in Niger.

The network in Niger is established in six zones:

- → The River Zone, via the 264 km 132 kV interconnection line linking Birnin Kebbi (Nigeria) to Niamey (Niger) with a capacity of 120 MV and a diesel plant of 57.6 MW;
- → The Central East Zone, which includes the provinces of Zinder, Maradi and Tahoua, via a 302 km 132 kV line linking Katsina (Nigeria) to Gazaoua (Niger) with a capacity of 40 MW and a diesel plant of 13.8 MW;
- → The North Zone, which includes the communities of Agadez, Arlit and Tchirozerine, in addition to the mining companies, via a 155 km 132 kV line supplied by the coal plant SONICHAR with a power of 37.6 MW;
- → The East Zone, which includes the province of Diffa, connected to the network of Nigeria by 33 kV interconnection linking Damask, with a power of 5 MW;
- → The Gaya – Malanville Zone, supplied by the interconnection of Kamba in Niger, with a power of 7 MW;
- → The Thermal Zone, comprising isolated load centers, provided by thermal power plants of 6 MW capacity.

This network is linked through the following type of substations:

- → 6 substations at 132 kV;
- → 15 substations at 66 kV;
- → 4 substations at 33 kV;
- → 19 substations at 20 kV.

The Government of Niger is currently undertaking an extensive program of energy production by developing their national resources. Several projects have been initiated, including the construction of Kandadji dam with a power of 130 MW and coal power plants Salkadamna with 200 MW and Anou Araren

with 50 MW, the 100 MW Gourou-Banda diesel power plant for which financing has been obtained for the first 80 MW and is currently under construction. 330 kV transmission line construction projects are also planned, including the North Core Project of the WAPP.

2.1.4 SONABEL

The national electricity company of Burkina Faso, The *Société Nationale d'Électricité du Burkina Faso* (SONABEL) is a company managed by the State under Decree (No. 97-599 / PRES / PM / MEM / CEC) approved on 31 December 1997. Several changes have occurred since the creation of the Company which was then a private company (AOF Energy) founded in 1954, and was responsible for the production and distribution of electricity in Ouagadougou. The SONABEL is currently responsible for the production, importation, transmission and distribution of electricity to the localities in the sectors it serves.

National production is essentially from thermal power plants and from a small amount of hydropower through 24 thermal power plants and 4 hydropower plants. According to Fichtner (2016), the total firm capacity of these facilities is 271.5 MW while the total available capacity is 147.5 MW distributed as follow:

Table 2-2 Types and Electricity Production Capacity in Burkina Faso

TYPE OF POWER STATION	TOTAL CAPACITY (MW)	% OF COUNTRY'S TOTAL CAPACITY	AVAILABLE CAPACITY (MW)	% OF COUNTRY'S AVAILABLE CAPACITY
Hydroelectric	36	13	16	11
Thermal	235.5	87	131.5	89

The SONABEL also meets some of the needs by the importation of electricity from the Ivory Coast, Ghana and Togo. Imports accounted for 48% of production in late 2011.

The main transmission lines are lines of 132 kV connecting the hydroelectric facilities of Bagre and Kompienga to Ouagadougou and a 225 kV line connecting Ferkessedougou (Ivory Coast) to Bobo Dioulasso and Ouagadougou. The total length of transmission lines is about 1370 km, including the interconnection transmission line of 225 kV linking Bobo Dioulasso and Ouagadougou completed in 2008 at a length of 350 km. The interconnection line project of 225 kV between Bolgatanga (Ghana) and Ouagadougou is under construction and is expected to be completed in 2015.

With regards to the electrical substations, the following installations are present:

- → 4 substations at 225 kV;
- → 4 substations at 132 kV;
- → 7 substations at 90 kV;
- → 25 substations at 33 kV.

In 2011, 172 localities were served. The electrification rate of the country was 20% in 2003, with the objective to be reached of 60% in 2015.

2.1.5 CEB

The Electric Community of Benin (CEB) is a public organization established by an international agreement ratified on July 27, 1968. Under this agreement, the CEB has the monopoly on the production and transportation of energy and also possesses a monopoly for the development of structures connected to Benin and Togo.

The revision of the Beninese – Togolese Electrical Code assigned the CEB exclusive rights to transport, import and sales to the unique buyers of these two countries. This revision also opens the market to independent power producers.

The CEB is the only energy supplier to distribution companies located in Benin, via the Beninese Electric Power Corporation (SBEE), and in Togo, via the Electric Power Company of Togo (CEET).

The CEB's activities began in 1973, following the construction of a transmission line of 161 kV interconnected between the two countries and Ghana. In 2007, a network of 330 kV was built to interconnect the CEB network to the network of Nigeria. In 2010, the importation of electricity totaled 88.6% of consumption in Benin and Togo. These imports came from Ghana (30.2%) via The Volta River Authority, The Ivory Coast (4.0%) via the *la Compagnie Ivoirienne d'Électricité de Côte d'Ivoire*and Nigeria (51.5%) via the Transmission Company of Nigeria.

According to Fichtner (2016), this network is linked through the following substations:

- → 1 substation at 330 kV;
- → 17 substations at 161 kV;
- → 6 substations at 63 kV;
- → 2 substations at 34.5 kV;
- → 2 substations at 33 kV;
- → 4 substations at 20 kV.

The CEB currently operates the hydroelectric plant of Nangbeto located 210 km northeast of Lome. Its installed capacity is about 65 MW for an average annual production of about 172 GWh. This resource is however characterized by a high sensitivity to climatic events. The CEB also occasionally operates two thermal power plants of 20 MW, one in the city of Lome in Togo and the other in Cotonou, Benin. They function as equally well with natural gas as with A1 jet fuel and each have a generation capacity of 150 GWh per year. *Contour Global*, an independent producer located in Togo, currently operates a thermal power plant of 100 MW.

According to Fichtner (2016), the total firm capacity of the CEB power generation plants is 285.6 MW, while its total available capacity is 90 MW, and consists of the following primary sources:

Table 2-3 Types and Electricity Production Capacity in Benin

TYPE OF POWER STATION	TOTAL CAPACITY (MW)	% OF COUNTRY'S TOTAL CAPACITY	AVAILABLE CAPACITY (MW)	% OF COUNTRY'S AVAILABLE CAPACITY
Hydroelectric	65.6	23	20	22
Thermal	220	77	70	78

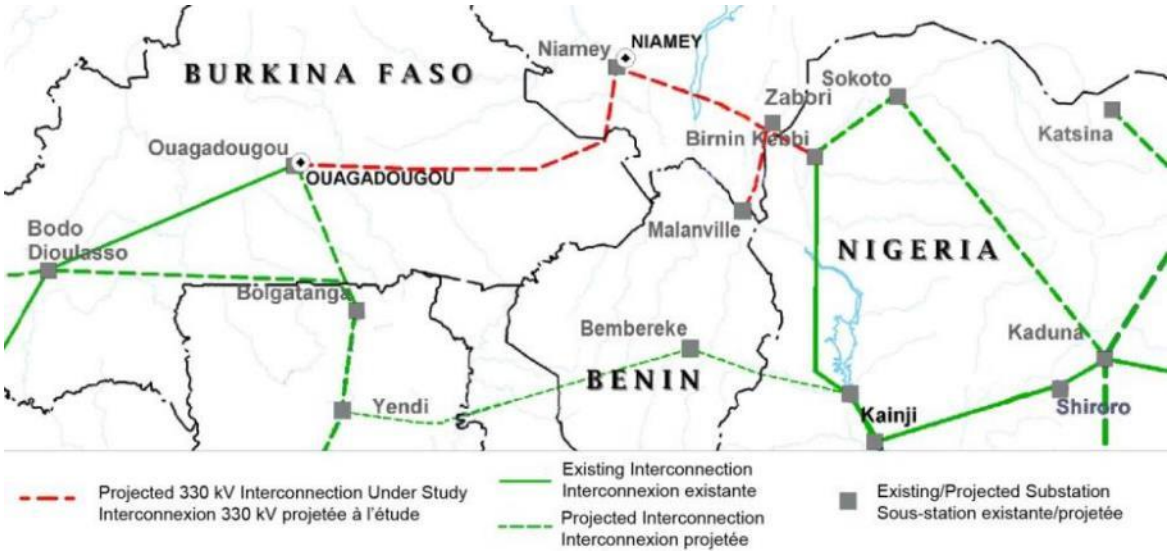
The interconnected network of the CEB mainly covers the coastal area, where the population density is high, and where the majority of economic and industrial activities are concentrated. Faced with a growing demand resulting from the development and expansion of new cities in both countries, the CEB has undertaken a series of studies aimed at:

- → The potential of hydroelectricity development in the two countries;
- → The possible diversification of energy sources, via transmission lines interconnected with Nigeria, which is part of the WAPP. The extension of the electricity transport systems in the two countries via the interconnection of the northern regions to the southern coastal network.

On 22 January 2011, the Government of Benin received funding from the West African Development Bank (WADB) to finance the preparation and construction of a 161 kV line linking Malanville, Kandi and Bembereke in Benin.

2.2 TYPE OF PROJECT

The project consists in the construction of a 330 kV transmission line on steel pylons with a total length of 880 km linking Nigeria to Burkina Faso through Niger, with a derivation toward Benin, as shown on the figure below.



Reference: WAPP, 2011

Figure 2-1 Projected Interconnection between Burkina Faso, Niger, Nigeria and Benin

Five new substations will be constructed: two in Niger (not that the Gorou Banda substation is in its final stages of construction), two in Burkina Faso, and one in Benin. The existing Birnin Kebbi substation in Nigeria will be modified to accept a new bay for the 330 kV line.

This interconnection between Nigeria, Niger, Burkina Faso and Benin will enable efficient transfer of electrical energy within the sub region and will help satisfy energy demand from appropriate production points.

2.3 LOCATION AND CHARACTERISTICS OF THE LINE ROUTE

The Final provisional Line Route (WSP 2015) takes into account the comments made during the meeting to review and adopt the Provisional Preliminary Line Route. This Line Route is presented below, from Nigeria to Burkina Faso through Niger and Benin. The following guidelines were followed to design an optimal line routes:

- → follow as much as possible existing roads to ease maintenance;
- → avoid the proximity of rivers and, as much as possible, paddy fields, to decrease pylon foundation costs;
- → select normal river crossing spans to avoid using high towers;
- → minimize the number of angle points;
- → avoid restricted areas, like villages, airfields and nature reserves;
- → consider technical and economic criteria for final optimization.

2.3.1 NIGERIA

The 330 kV line runs from the Bernin Kebbi substation to the border with Niger, with the following characteristics (see Map 1.2) below:

- → Extends over a length of 62 km with a right-of-way of 50 m;
- → Exits the Bernin Kebbi Station from the North following the corridor of the existing Kanji-Birnin Kebbi 330 kV line, by-passes the city and links with the existing 132 kV line.

- → Crosses the floodplain of the Sokoto River on a distance of 8 km following the existing 132 kV line;
- → Mainly follows the existing 132 kV transmission line to the border with Niger toward over a distance of 48 km.

2.3.2 NIGER

There are three 330 kV line sections in Niger that is between the Niger/Nigeria border and the future Gorou Banda substation in Niamey, between the Gorou Banda substation and the Niger/Burkina Faso border and between the projected Zabori substation and the Niger/Benin border.

The first section, from the border with Nigeria to the projected Gorou Banda substation in Niamey presents the following characteristics:

- → Extends over a length of 208 km with a right-of-way of 50 m;
- → From the border with Nigeria to the future site of the projected Zabori substation, crosses the Dallol Maouri Ramsar site for 24 km;
- → East of Dosso, crosses the Dallol Bosso Ramsar site for 37 km parallel to the National 1 road and the existing 132 kV line;
- → Crosses the floodplain of the Niger River near Tahirou Koira;
- → Reaches the projected Gorou Banda substation site located to the south of Niamey.

The second section, from Gorou Banda to Niger/Burkina Faso border, is characterized by the following:

- → Extends over a length of 104 km with a right-of-way of 50 m;
- → Exits the Gorou Banda substation towards the south-west;
- → Meets with the Niger NR6 and follows it to the Burkina Faso border;

  Crosses the bird and biodiversity area of Makalondi for approximately 50 km.

The third section, future site of the Zabori substation to Niger/Benin border, shows the following characteristics:

- → Extends for a length of 108 km with a right-of-way of 50 m;
- → Exits the future Zabori substation towards the south-west;
- → Touches a small section of the north-west limit of the Dallol Maouri Ramsar site;
- → Curves slightly towards the south to meet with Niger NR7 at the level of Gonga Innza, and follows this road on its western side for approximately 10 km;
- → Leaves the NR7 and pursue south through an area of classified forests;
- → Passes less than 2 km west of the Gourou Bassounga National Park and reaches the Niger River flood plain and the border with Benin.

2.3.3 BENIN

The line runs from the border with Niger to the Malanville substation, with the following characteristics:

- → Extends over a distance of 12 km with a right-of-way of 50 m;
- → Enters in Benin at the frontier with Niger at the west of Malanville and crosses the Niger river and its floodplain;
- → Bypasses the suburban area of Malanville on the west side;
- → Bypasses the hilly area southwest of Malanville;
- → Crosses the NR2 to reach the Malanville substation by the north-west.

2.3.4 BURKINA FASO

The original project, in Burkina Faso, consisted in one 330 kV line running from the border with Niger to the Ouaga-Est substation in Burkina Faso, with the following characteristics:

- → Extends over a distance of 381 km with a right-of-way of 50 m;
- → Follows the South-West side of the NR4 at a distance of approximately 5 km and crosses the NR19 at the level of Kantchari;
- → Curves towards the West and continues following the NR4 on its southern side;
- → Crosses the NR4 at the level of Nalougou and continues to follow this road on its other side thus avoiding the agropastoral and pastoral area of Tapoa-Boopo;
- → Reaching the periphery of Fada N'Gouma, the line leaves the NR4's side to by-pass the city on its northern side and then cross the National road on the western side of the city;
- → It pursues on the south side of the NR4 towards the west up to the level of the city of Koupéla which it bypasses on its southern side crossing, in the doing, the RN16;
- → The line curves slightly towards the North-West following the southern side of the NR4 and passing north of Silmiougou pastoral area, a military base and the Boromé gold mine;
- → Approximately 13 km after passing the town of Rapadama, the line follows the RN4 with which crosses the Volta Valleys zone for approximately 22 km and crosses twice the NR4 that is once at the level of Kougri and then again as it exits the Volta Valley zone;
- → When crossing the NR4 at the level of Kougri the line is near the southern limit of the Wayen National Park;
- → After leaving the Volta Valley zone, the line, still following the RN4, gradually curves towards the South-West, slightly touching the limits of the Gonsé National Park and finally reaching the Ouaga-Est substation from the north.

However, the WAPP introduced two other line sections to be constructed at the periphery of Ouagadougou, that is:

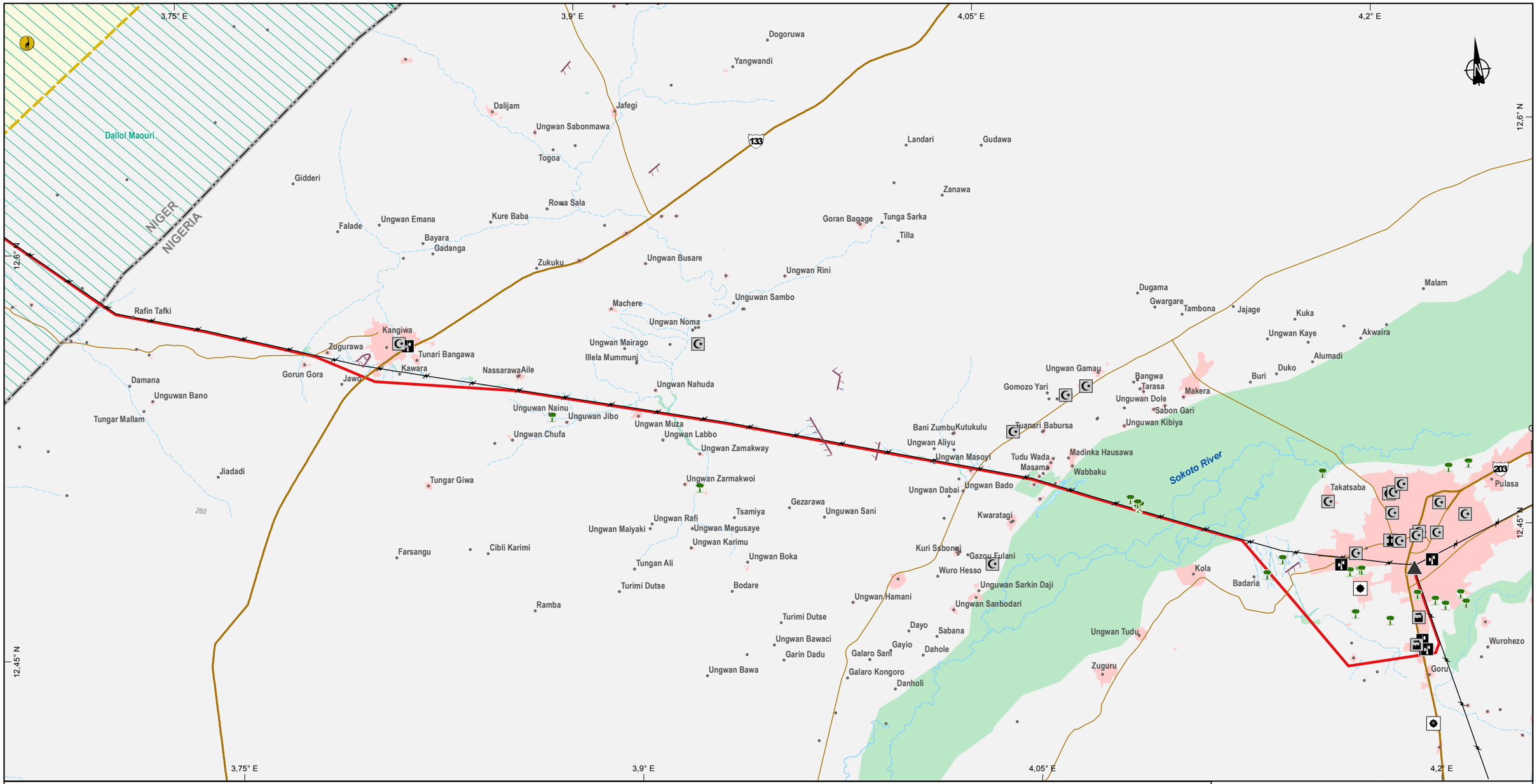
- → A 225 kV line originating from the Ouaga-Est substation, connecting to the future Ouaga-Sud-Est substation and pursuing up to an anchor pylon to the south-west of the future substation;
- → A 90 kV line originating from the Ouaga-Est substation and reaching the Kossodo (KOS) substation to the North-West.

The new 225 kV line originating from the Ouaga-Est substation shows the following characteristics:

- → Extends towards the South for a length of 24 km and a right-of-way of 75 m, bypassing on its eastern side the urban area of Ouagadougou;
- → It reaches the future location of the Ouaga-Sud-Est substation some 2 km to the North-East of the NR6 after bypassing the western limits of the Ouassoudi community;
- → Leaving the Ouaga-Sud-Est substation the line crosses the NR6 and extends towards the South-West and reaches the PA5 pylon approximately 800 m after crossing a water course.

The new 90 kV transmission line originating from the Ouaga-Est substation presents the following characteristics:

- → Extends for approximately 17 km with a right-of-way of 50 m;
- → The line stretches towards the North-West for 12 km crossing the NR4, the Ouaga 3 dam outlet and the NR3;
- → Almost 4 km after crossing the NR3, the line changes direction towards the South-West to finally reach the Kossodo substation.



Biological Environment

- Niger Giraffe Distribution Area
- Internationally Designated Area
- Ramsar Site

Human Environment

- City
- Built Environment
- Plantation
- Mosque
- Church

Physical Environment

- Intermittent Watercourse
- Permanent Watercourse
- Floodplain
- Erosion

Infrastructure

- National Road
- Secondary Road
- Telecommunication Tower
- Military Base
- Factory

Substations and Transmission Lines

- Existing Line
- Existing Substation

Project Component

- Draft Final Line

Boundary

- International Border

West African Power Pool

330kV WAPP North Core Project
Nigeria-Niger-Burkina Faso-Togo/Benin
Update of Line Route Study and
Environmental and Social Impact Assessment (ESIA)
Resettlement Action Plan
Draft Report

Draft Final Line Route in Nigeria

0 1,65 3,3 4,95 km

UTM, Zone 31N, WGS 84

Sources :
see Appendix A
Mapping: WSP, 2015
File: 141_24307_PAR_NG_c2_2_Nigeria_160121.mxd

Map 2-1

January 2016

WSP

2.4 LOCATION AND CHARACTERISTICS OF THE SUBSTATIONS

2.4.1 NIGERIA

The existing Bernin Kebbi substation is located in the heart of the city (12.437° N, 4.197° E). When completed with the new 330 kV bay for the present interconnection, the substation will occupy a surface of 110,000 m². According to Fichtner (2016), two development variants are considered for the extension of the substation, which would include the following components:

- → Extension of air insulated double busbar;
- → Extension of the substation with **1 or 2** line feeder;
- → Extension of auxiliary power supply (AC/DC Panels);
- → Connection of two existing transformers to the double busbar;
- → Construction of the incoming gantry for the existing Kainji line;
- → Removal of T-OFF of existing Kainji line.

No information is currently available with regards to oil spill confinement measures or fire protection. It will important to specifically require, in the tender documents, the preparation and implementation of a system that will alert, detect and fight eventual fires as well as an intervention process in case of an oil spill (or any other contaminant).

2.4.2 NIGER

The new Gourou Banda substation (13.426° N 2.116° E) is located 10 km south of Niamey and 2 km from highway 27. The substation is located 300 m from the Gourou Banda diesel power plant, on a hill at an elevation above sea level of 20 m. The substation occupies an area of 90,000 m². According to Fichtner 2016, this new substation is in fact an expansion of an existing 132 kV substation with two transformer feeders 161/330 kV in hybrid technology. Although initial recommendations was for an air insulated system (AIS) with double busbar for the extension, it seems that potential space limitation could prohibit this type of system and favor a gas insulated system (GIS). Two development variants have been considered which would include the following components:

- → 2 or 4 line feeders;
- → 2 or 4 shunt reactor feeders;
- → Bus coupler;
- → Two 330/132, 80 MVA Power transformer feeder;
- → An auxiliary power supply (battery, UPS, auxiliary transformers and diesel generator).

The new Zabori switchyard (12.769°N 3.473°E) is located 3 km southeast of Baba Dey and 3.3 km northwest of Zabori. It occupies an area of 90,000 m² and according to Fichtner (2016), it will be an air insulated double busbar arrangement with or without power transformer. Two development variants have been considered which would include the following components:

- → **3 or 5** line feeders;
- → One 330/132/33 kV, 20 MVA Power transformer feeder;
- → **1 or 2** shunt reactor feeder;
- → A bus coupler;
- → An auxiliary power supply (battery, UPS, auxiliary transformers and diesel generator).

No information is currently available with regards to oil spill confinement measures or fire protection. It will important to specifically require, in the tender documents, the preparation and implementation of a system that will alert, detect and fight eventual fires as well as an intervention process in case of an oil spill (or any other contaminant).

2.4.3 BÉNIN

The new Malanville substation (11.782° N 3.374° E) is located 3 km south of Badjekali and is accessible by a tertiary road linking the National Route E2. The substation occupies an area of approximately 70,000 m². According to Fichtner (2016), this substation will be built in two stages. First a 161 kV substation using air insulated double busbar will be built and later, the 330 kV section will be added. The required area to build both stages has already been reserved. The final station will include the following components:

- → 1 line feeder;
- → Bus coupler;
- → 1 shunt reactor feeder;
- → Two 330/161 kV, 50 MVA Power transformer feeders;
- → An auxiliary power supply (battery, UPS, auxiliary transformers and diesel generator).

No information is currently available with regards to oil spill confinement measures or fire protection. It will important to specifically require, in the tender documents, the preparation and implementation of a system that will alert, detect and fight eventual fires as well as an intervention process in case of an oil spill (or any other contaminant).

2.4.4 BURKINA FASO

Two new substations will be constructed at the periphery of Ouagadougou that is Ouaga-Est and Ouaga-Sud-Est.

The new 330/225/90 kV Ouaga-Est substation near Ouagadougou (12.401° N 1.381° E) is located 1 km from an existing secondary road and accessible by NR4. The substation will occupy an area of 100,000 m². This substation is at a distance of 16.5 km from the city center of Ouagadougou. According to Fichtner (2016), two development variants are considered for these substations and will include the following component:

- → New air insulated double busbar substation with transfer Busbar,
- → 1 or 2 330 kV Line feeder,
- → 1 or 2 Shunt reactor feeder,
- → Three 330/225 kV Power transformer feeders,
- → 330 kV Bus coupler,
- → 225 kV Bus coupler,
- → Two 225 kV Line feeders,
- → Two 225/90 kV Power transformer feeders,
- → 90 kV Bus coupler,
- → Two 90 kV Line feeders,
- → Auxiliary power supply (transformer, Battery, UPS, auxiliary transformers, diesel generator).

The new 225/132/33 kV Ouaga-Sud-Est substation (12.287° N, 1.400° E) is located 2 km to the North-East of the NR6 and the Kouba community. The substation will occupy approximately 20 000 m² and it is located at a distance of 14.8 km from Ouagadougou's city center. According to Fichtner (2016), the station will include the following components:

- → New air insulated double busbar substation;
- → Three 225 kV line feeders;
- → Two 225/132 kV Power transformer feeders;

- → 225 kV bus coupler;
- → Two 132 kV line feeders;
- → One 132/33 kV Power transformer feeder;
- → 132 kV bus coupler;
- → Four 33 kV outgoing feeders;
- → Auxiliary power supply (transformer, Battery, UPS, auxiliary transformers, diesel generator).

No information is currently available with regards to oil spill confinement measures or fire protection. It will important to specifically require, in the tender documents, the preparation and implementation of a system that will alert, detect and fight eventual fires as well as an intervention process in case of an oil spill (or any other contaminant).

2.5 PROJECT COMPONENTS

2.5.1 VOLTAGE LEVEL

A 330 kV voltage level was selected for this interconnection, which is part of a wide network foreseen by the WAPP in ECOWAS member states.

As for the two lines exiting the Ouaga-Est substation toward the South-West and North-west, they will respectively have a voltage of 225 kV and 90 kV.

2.5.2 NUMBER OF CIRCUITS

Fichtner (2016) defined the configuration of the 330 kV line as well as its number of circuits. The number of circuits considered is defined as follow:

- → SCL: Single Circuit Overhead Line;
- → DCL: Double Circuit Overhead Line;
- → DSL: Double Circuit Overhead Line which is erected with one circuit only.

Four distinct sections were considered for this analysis:

- → Birnin Kebbi – Zabori: 90 km;
- → Zabori – Gorou Banda (Niamey): 180 km;
- → Zabori – Malanville: 120 km;
- → Gorou Banda – Ouagadougou: 490 km.

Three variants were studied by the FS Consultant for the configuration and number of circuit:

<u>Variant 1</u>

- → Birnin Kebbi – Zabori: SCL;
- → Zabori – Gorou Banda: SCL;
- → Zabori – Malanville: SCL;
- → Gorou Banda – Ouagadougou: SCL.

<u>Variant 2</u>

- → Birnin Kebbi – Zabori: DCL;
- → Zabori – Gorou Banda: DCL;
- → Zabori – Malanville: DSL;
- → Gorou Banda – Ouagadougou: DCL;

Variant 3

- → Birnin Kebbi – Zabori: DSL;
- → Zabori – Gorou Banda: DSL;
- → Zabori – Malanville: DSL;
- → Gorou Banda – Ouagadougou: DSL.

Fichtner (2016) proposes to retain both variant 2 and 3 for network analysis and economic calculations. Variant 1, although it is the lowest investment cost option (see section 1.7), is not recommended as it does not allow the network to meet the n-1 criterion that is the ability to withstand the loss of any single component.

As for the 225 kV line to be implemented between the Ouaga-Est substation and the PA5 pylon, it is recommended Fichtner (2016) that the first 9 km to the Ouaga-Sud-Est substation be DCL while the last 15 km to the PA5 pylon could be SCL.

Finally, with regards to the 90 kV line that will link the Ouaga-Est and Kossodo substations, it is recommended that the line be SCL (monoterne).

2.5.3 PHASE CONDUCTORS AND SHIELD WIRES

According to the Fichtner (2016), the diameter, area and number of sub-conductors per phase should ensure:

- → Provision of satisfactory radio interference (RI), audible noise (AN) and corona loss performances;
- → Transfer of a maximum design power at 330 kV nominal voltage;
- → Transfer of a maximum design power at 330 kV nominal voltage, in cases of emergency on one circuit where there is a double circuit system;
- → Provision of satisfactory safety to the line (considering the loads from wind pressure).

The existing 330 kV lines are equipped with two Aluminum Conductor Steel Reinforced (ACSR) Bison per phase, one classical ground wire (shield wire) and one Optical Ground Wire (OPGW). This type of conductor is suitable for power transfer at 330 kV nominal voltages and thus, no further investigations were made for the conductor size. The recommendation for the OPGW cables is the 48 fibers type G.652d.

Investigations focused on conductor materials in respect of the latest technological developments to determine the possibilities of:

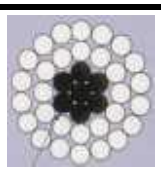
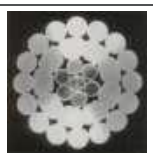
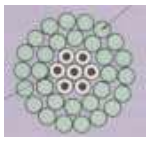
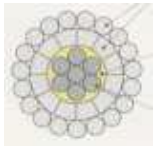
- → Of selecting an alternative conductor, or;
- → Of solutions to upgrade the line in the future, if necessary.

In order to ensure that the same types of towers and insulator strings could be maintained for an alternative conductor, the following restrictions were observed:

- → The alternative conductor shall have a diameter less than or equal to and breaking loads higher than or equal to the ACSR Bison;
- → The ground clearance and clearances to the other lines and structures shall be the same.

The following table summarizes the main characteristics of the existing conductor and of the alternative conductors considered.

Table 2-4 Key Features of the Existing Conductor and Alternative Conductors Considered

CONDUCTOR TYPE	STRANDING	VIEW	CHARACTERISTICS	
			Temperature	Power transfer at max. current
			ºC	% of ACSR
ACSR	Al + Steel		80ºC	100%
ACSR/ACS	Al + ACS		80ºC	107%
SLAC/ACS	Al + SBAl + ACS		80ºC	113%
TCASR/AS	TAl + ACS		150ºC	150%
60% ZTACIR/ACS	ZTAl + IR(ACS)		230ºC	200%
58% ZTACIR/ACS				
XTACIR/ACS	XTAl + IR(AS)			
60% ZTACEIR/ACS	SB ZTAl/IR(AS)		230ºC	200%
58% ZTACEIR/ACS				
XTACEIR/ACS	SB XTAl / IR(AS)			
GTACSR	TAl + TZ + EST		150ºC	150%
GZTACSR	ZTAl + TZ + EST		210ºC	180%

The conclusion of Fichtner's (2016) investigation completed was that for both single circuit and double circuit lines the conductor should be two-bundle ACSR Bison with one steel conductor as classical ground wire (shield wire) and one OPGW. They also recommends that all inner layers of conductors and the ground wire steel core be greased for protection against corrosion.

As an alternative, Fichtner (2016) propose a conductor with aluminum clad steel wires of ACSR/ACS Bison type that have the same size and strength as the ACSR based on the following technical performance:

- → An electrical resistance approximately 7% lower than that of the ACSR (consequently power losses should be less);
- → Favorable corrosion behavior, as all wire-to-wire contacts are aluminum-to-aluminum;
- → Reasonable extra costs, comparable to the savings resulting from low losses;
- → Favorable corona phenomenon performance (the grease on the ACSR conductor collects dust, so corona losses increase over time);
- → Low weight compared to ACSR, since no grease is needed, so sagging is less than for the ACSR.

The FS Consultant will also select the number of optical fibres in the OPGW.

For the 225 kV line linking the Ouaga-Est and Ouaga-Sud-Est substations, the conductor type will be an almelec, model ASTER 570. These conductors are an alloy of aluminum with some magnesium and silicon. This type of cable is composed of 61 strands of 3.45 mm in diameters for a total exterior diameter of 31.05 mm.

Finally, the 90 kV line linking the Ouaga-Est and Kossodo substations, the conductor type will also be an almelec, model ASTER 228. This type of cable is composed of 37 strands of 2,9 mm for a total exterior diameter of 19,6 mm.

2.5.4 TOWER TYPES

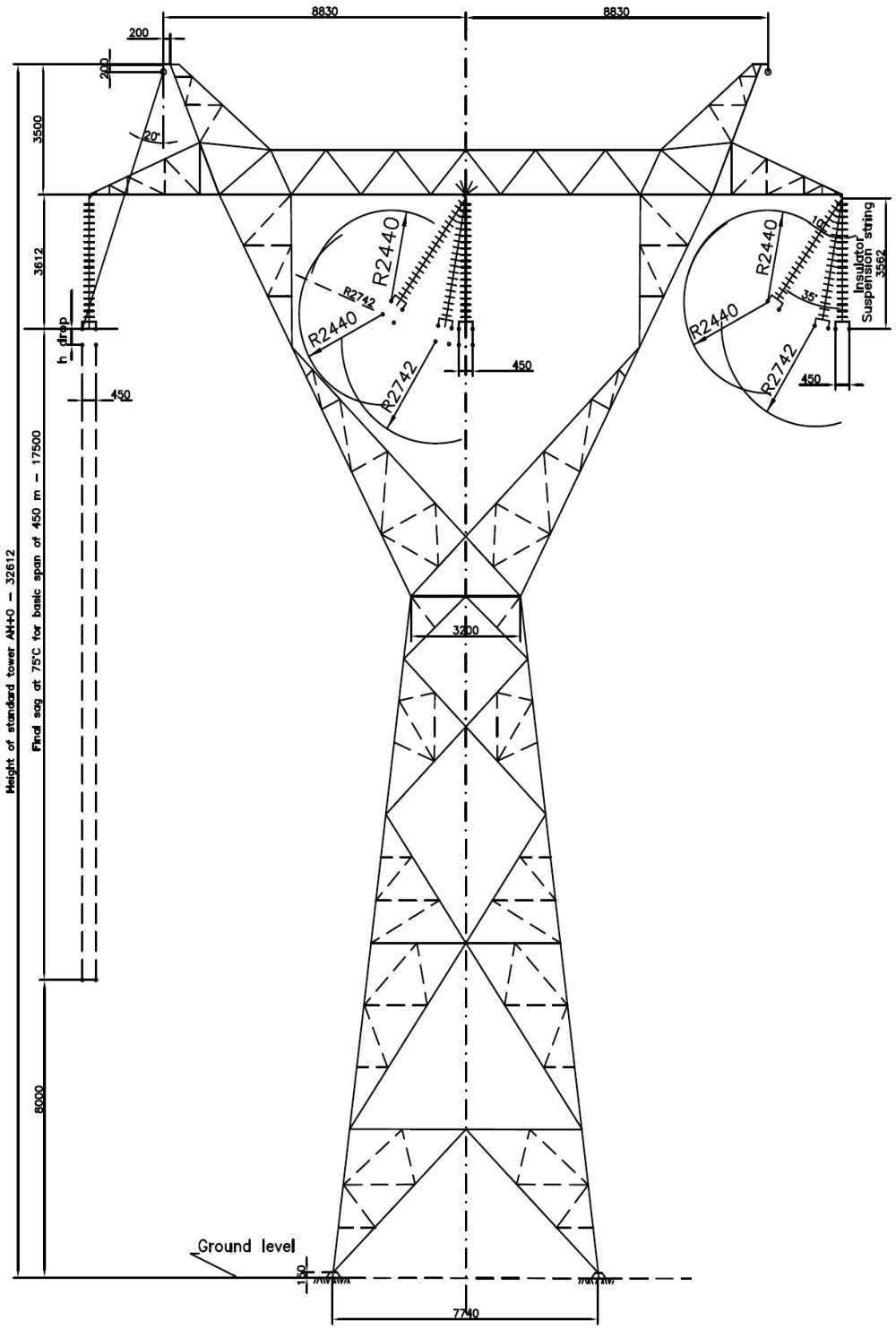
Typically, self-supporting lattice towers as illustrated in figure 1 and 2 are used in western Africa and are foreseen for this interconnection. In its 2016 Feasibility Study, Fichtner proposes the following specifications for the towers:

- → Tower types will be made under conventional basis but it should be made clear to the tenderers that, if found economical, it would be acceptable to combine one or more designs into a single type.
- → Suspension towers should be designed for the maximum height and maximum characteristic spans and provide with adequate body extensions.
- → Tension towers will include 30^{o}, 60^{o}, 90^{o} and terminal angle towers.
- → Tower span considered is 450 m for both single-circuit and double-circuit tower configuration.
- → Average height of the single-circuit structure will be 33 m and 47 m for the double-circuit structure.

The information related to minimum clearance to ground is currently not available for the 330 kV line. However, it will be necessary to consider the presence of giraffes in Niger during the feasibility study to ensure sufficient clearance, if required.

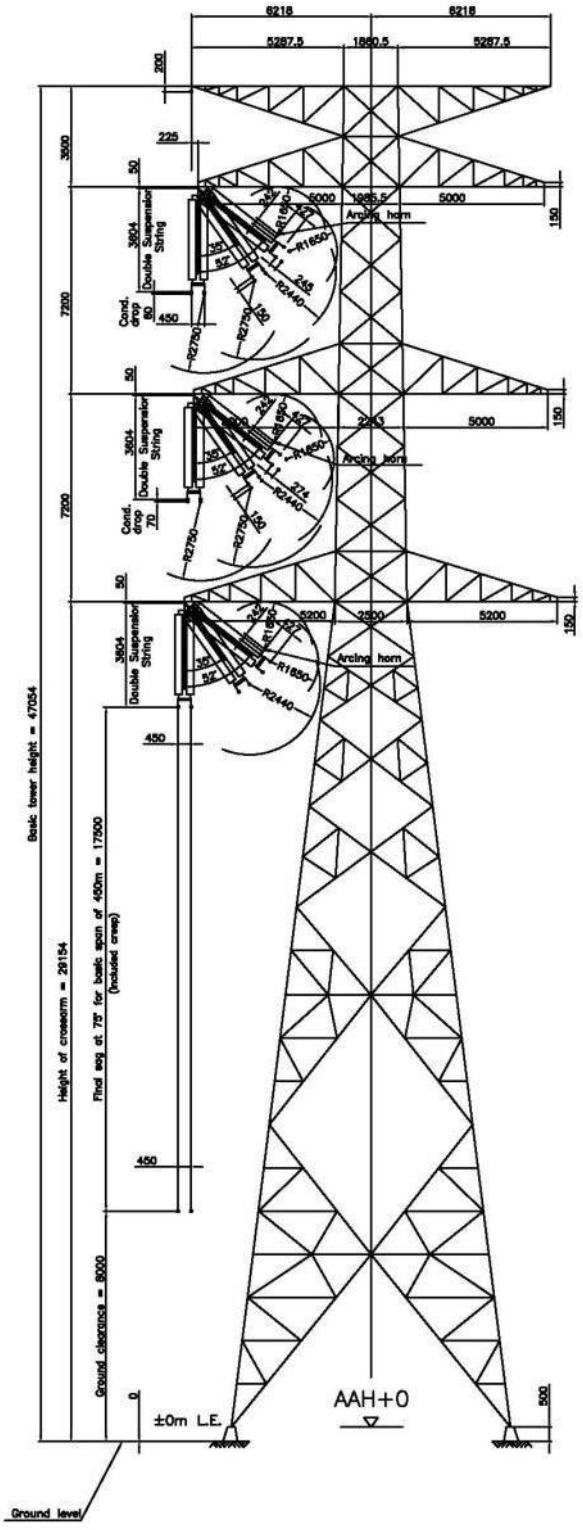
The specification for the selection of the 225 kV towers will be described in the call for tender file and thus, are not available at this time. Nonetheless, figures 3 and 4 respectively present the typical aspect of the DCL and SCL tower types to be used for this line. Typical span between two DCL towers will be 350 m and 300 m between two SCL towers.

The 90 kV line, also located in Burkina Faso, should be composed of tetrapod metal lattice towers equipped with composite isolators. The height of the structures will be calculated to ensure a minimal ground clearance of 6.5 m at conductor's maximum temperature. Figure 4 shows the typical aspect of the SCL towers to be used for this line. Typical span between two towers will be 300 m.



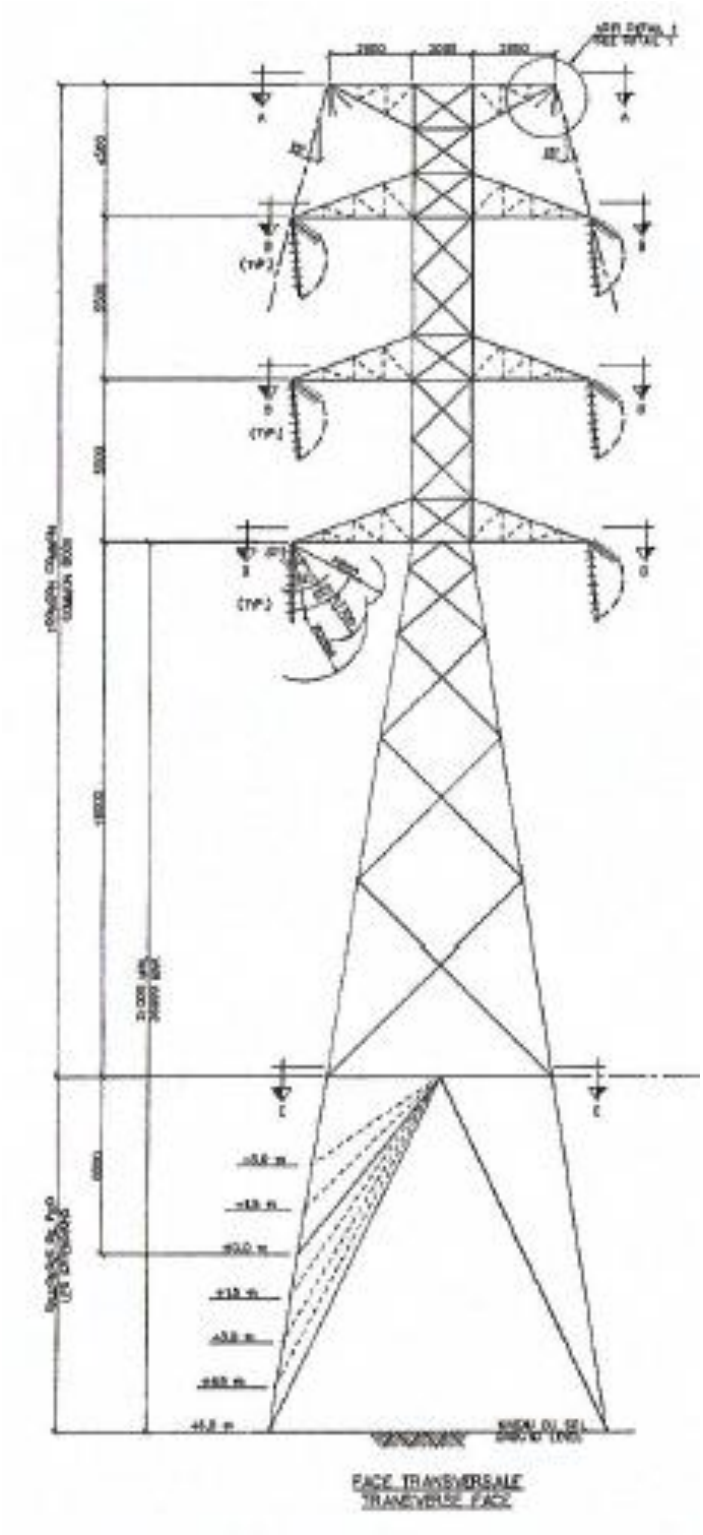
Reference : Fichtner, January 2016

Figure 2-2 330 kV Single Circuit Suspension Tower Type



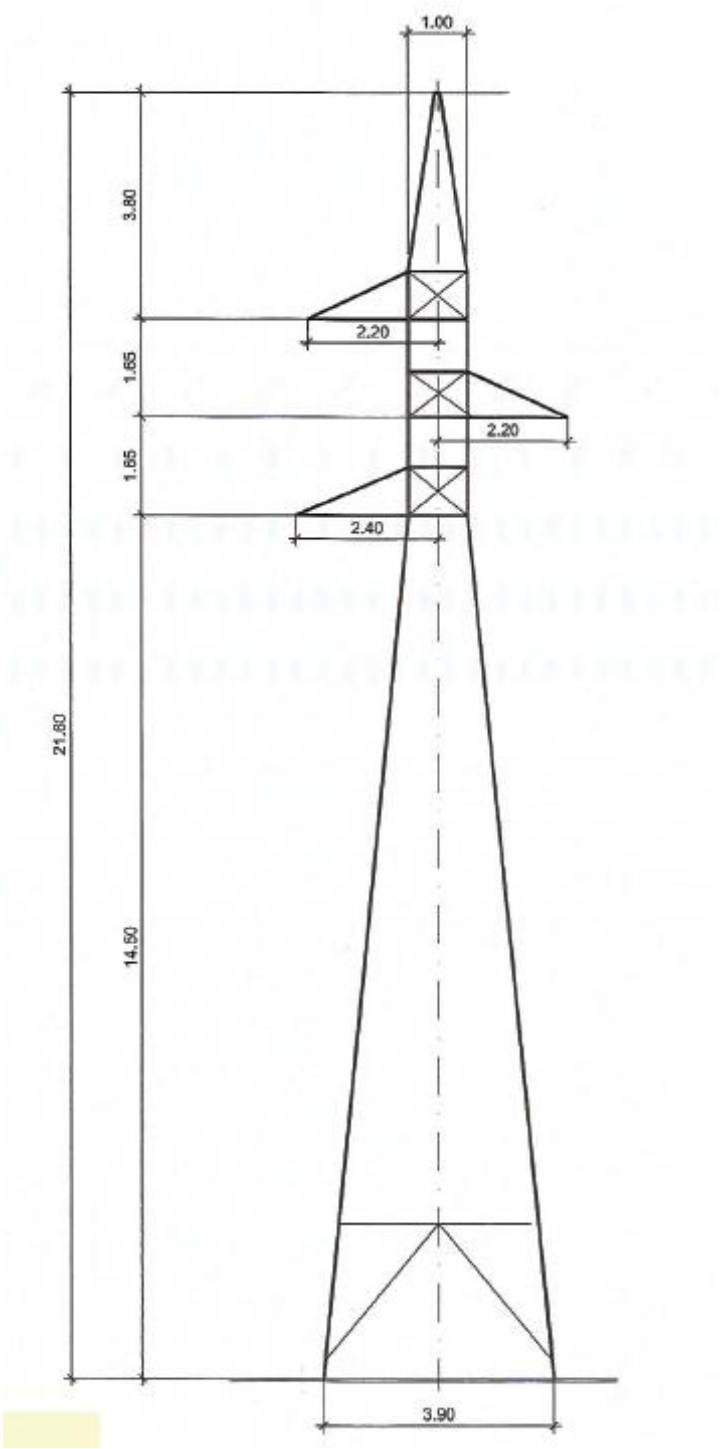
Reference : Fichtner, January 2016

Figure 2-3 330 kV Double Circuit Suspension Tower Type



Reference : SONABEL, 2016

Figure 2-4 Typical representation of a DCL tower for the 225 kV line



Reference : SONABEL, 2016

Figure 2-5 Typical representation of a SCL tower for the 225 and the 90 kV lines

2.5.5 FOUNDATIONS OF TOWERS

The 2016 Feasibility Study (Fichtner, 2016) specifies the following characteristics for the towers' foundations:

- → Rock foundations for sound rock with a bearing capacity of at least 1,000 kN/m^2;
- → Rock foundations for weathered rock with a bearing capacity of 600-1,000 kN/m^2;
- → Pad and chimney foundations for heavily weathered / fractured rocks with a bearing capacity of 300-600 kN/m^2;
- → Pad and chimney foundations for normal / good soil conditions with a bearing capacity of 150-300 kN/m^2;
- → Pile foundations for poor / very poor soil conditions.

The FS Contractor has indicated that the footprint for single-circuit tower with average height of 33 m is about 60 m^2. With a 15 m base extension, the footprint would increase to 163 m^2 and 200 m^2 with a supplementary leg extension of 15 m.

For a double-circuit tower with average height of 47 m, the footprint is about 52 m^2. With a 12 m base extension, the footprint would increase to 100 m^2 and 118 m^2 with a supplementary leg extension of 4 m.

The typical area occupied by the proposed DCL towers of the 225 kV line will be 8.5 X 8.5 m (mean value) and 10 X 10 (maximum value). The typical area occupied by the proposed SCL towers of the 225 kV and (0 kV lines will be 5 X 5 m (mean value) and 7 X 7 m (maximum value).

The 90 kV line tower foundation will be in concrete/armed concrete and composed of 4 distinct bases located at each corner of the towers.

2.5.6 NUMBER OF TOWERS

Nigéria

The Line Route Study (WSP 2015) indicates that there will be 17 angle structures. Considering that the FS Consultant Fichtner has indicated that the average ruling span will be around 450 m (single and double-circuit lines), it can be estimated that there will be about 140 to 150 structures in Nigeria considering dead-end and angle structures.

Niger

The Line Route Study (WSP 2015) indicates that there will be 84 angle structures. Considering that the FS Consultant has indicated that the average ruling span will be around 450 m (single and double-circuit lines), it can be estimated that there will be about 935 to 950 structures in Niger considering dead-end and angle structures.

Benin

The Line Route Study (WSP 2015) indicates that there will be 9 angle structures. Considering that the FS Consultant Fichtner has indicated that the average ruling span will be around 450 m (single and double-circuit lines), it can be estimated that there will be about 30 to 35 structures in Benin considering dead-end and angle structures.

Burkina Faso

The Line Route Study (WSP 2015) indicates that there will be 63 angle structures. Considering that the FS Consultant Fichtner has indicated that the average ruling span will be around 450 m (single and double-circuit lines), it can be estimated that there will be about 850 to 865 structures in Burkina Faso considering dead-end and angle structures.

For the 225 kV line linking the Ouaga-Est and Ouaga-Sud-Est substations in Burkina Faso and considering that the first 9 km will be composed of DCL towers while the last 15 km will be composed of SCL towers, the respective number of towers required has been estimated at 26 and 50, for a total of 76.

For the 90 kV line linking the Ouaga-Est and Kossodo substations in Burkina Faso, the estimated number of towers required for its length of 17 km was estimated at 57.

2.5.7 RIGHT-OF-WAY

A width of right-of-way (RoW) of 50 m has been preselected in the four countries for the line route study and final selection. It is expected that this 50 m RoW is enough to satisfy the following technical requirements to which the 330 kV transmission lines must comply:

- → Audible and radio noises
- → Electric and magnetic fields
- → Conductor swing clearance under high wind conditions
- → Security clearance for tower collapsing scenario

For the 225 kV line, the basic RoW between the Ouaga-Est substation and the PA5 pylon is 50 m. However, an additional width of 25 m has been reserved for the section between the Ouaga-Est and the future Ouaga-Sud-Est substations for a total RoW of 75 m.

The RoW for the 90 kV line between the Ouaga-Est and the Kossodo substations is 50 m. This RoW will be adapted to the existing roads in the Kossodo industrial area as the line approaches the Kossodo substation.

2.6 PROJECT SCHEDULE AND COST

2.6.1 PROJECT SCHEDULE

According to Fichtner (2016), implementation schedule for the construction of the transmission lines and substations would imply the following duration which are presented per project phases.

Table 2-5 Project Implementation Schedule

TRANSMISSION LINES			SUBSTATIONS			
Phase 1: Pre-Construction	Phase 2: Supply and Construction	Phase 3: Commissioning, Project Closure	Phase 1: Design and Approval	Phase 2: Procurement and Manufacturing	Phase 3: Construction	Phase 4: Commissioning, Project Closure
6 months	18 months	3 months	5 months	9 months	14 months (6 months in parallel of Phase 2)	5 months

Based on the above and allowing 10% for contingencies, the overall transmission line construction duration for each of the transmission line sections will be around 2.5 years. However, it would be possible to implement certain sections in parallel in the same period.

As for the substations, the total duration will be 27 months. Allowing a contingency of 10% for implementation, the total construction duration is 2.5 years. It is assumed that work may be undertaken in parallel at the various substation locations so the implementation period for all substation work will likewise be 2.5 years. With regards to the 90 kV line linking the Ouaga-Est and Kossodo substations, its construction will be realized in parallel with the other components of the project and thus, should not exceed the total duration of 2.5 years.

2.6.2 PROJECT COST

The total cost estimated by Fichtner (2016) included all work for the 330 kV and 225 kV line as well as for the associated new substations or expansions of existing substations. The estimate was calculated comparing the three line variant presented in section 3.2 of the ESIA report. The following table summarizes the total cost estimates.

Table 2-6 Estimates of Project Costs

COUNTRY	VARIANT 1		VARIANT 2		VARIANT 3	
	Lines*	**Substations***	**Lines***	**Substations***	**Lines***	**Substations***
Nigeria	13,190,289	4,383,425	20,460,659	5,673,175	16,240,807	4,383,425
Total*	**17,573,714**		**26,133,834**		**20,624,232**	
Niger	89,353,572	39,594,200	131,253,757	51,705,200	110,018,370	39,594,200
Total*	**128,947,772**		**182,958,957**		**149,612,570**	
Burkina Faso	85,254,177	58,924,450	129,931,775	63,903,950	104,000,101	58,924,450
Total*	**144,178,627**		**193,835,725**		**162,924,551**	
Benin	2,552,959	13,794,150	3,143,382	13,794,150	3,143,382	13,794,150
Total*	**16,347,109**		**16,937,532**		**16,937,532**	
Total Lines and Substations	**307,047,222**		**419,866,048**		**350,098,885**	

* USD

Fichtner (2016), specifies that Variant 2 is the most expensive but more profitable in the viewing time, by 2035 while Variant 1, is the cheapest option, but not stable for the future.

With regards to the 90 kV line linking the Ouaga-Est and Kossodo substations in Burkina Faso, its construction costs should amount to USD 83,323/km (€ 74 000/km) for a total of USD 1,416,491 (€ 1 258 000) for 17 km of line.

The total cost of the project is thus USD 421,282,539.

In Nigeria, the total cost of the project is USD 26,133,834.

3 POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

3.1 FRAMEWORK POLICY

3.1.1 LAND ACQUISITION AND COMPENSATION POLICIES

Acts and by-laws relevant to this project have been analyzed in order to make sure that the project complies with the WB and AFDB policy on resettlement and rehabilitation of PAP and indigenous population development plans as well as to identify any possible gaps that require bridging.

The following subsections summarize the legislative framework in which the projects shall be implemented with respect to social issues as well as international standards and policy on resettlement & rehabilitation and indigenous population.

Land required for the construction, operation and maintenance of the project shall be acquired and granted to the project by the Kebbi State Government.

The legal framework provides the basis for the three key elements of the Resettlement Action Plan (RAP) listed below.

- → Establishing rates for compensation;
- → Determining eligibility for compensation and resettlement assistance, including the development initiatives aimed at improving the social and economic well-being of the affected communities;
- → Establishing mechanisms to resolve grievance due to compensation and eligibility of stakeholders.
- → Land ownership in Nigeria is subject to a range of cultural practices, traditions; it is therefore classified as follows. Community land: land commonly referred to as ancestral land. It is owned by all the community.
- → Communal land: consists mostly of under-developed forests and is owned by clan. Those among the clan who clear it first can claim ownership.
- → Clan or family land: land owned by clans and families through ancestral privileges
- → Institutional land: land allocated to traditional institutions such as traditional authorities and chiefs.
- → Individual land: land acquired by an individual, which may be inherited by the immediate family depending on customary practices.

The legal framework for land acquisition and resettlement in Nigeria is the Land Use Act (LUA) of 1978, reviewed under Cap 202, 1990.

The relevant WB policy (OP) 4.12, which addresses land acquisition and resettlement, was adopted in 2001 and revised in 2013. The AFDB on resettlement was adopted in 1995 and revised in 2003. The European Bank for Reconstruction and Development (EBDR) first adopted its environmental policy in 1991; its currently effective policy is the ‘’Environmental and Social Policy’’. The last revision of this policy and its related Performance Requirements was done in 2014.

The Land Use Act does not discuss nor requires any compensation or rehabilitation fee measures or requirements while the international funding agency’s policies do enforce these.

3.1.2 NATIONAL LAND POLICY

The legal basis for land acquisition and resettlement in Nigeria is the Land Use Act of 1978, reviewed in 1990. According to the act, all land in Nigeria is vested in the Governor of each State and is to be held in trust for the use and common benefit of all people.

The administration of urban land is directly under the control and management of the Governor; whereas a non-urban land is under the control and management of the Local Government Area.

The Governor has the right to grant statutory rights of occupancy to land while the local government has the right to grant customary rights of occupancy.

The Land Use Act gives the government the right to revoke statutory and customary rights to land to override public interest. The Act gives the government the right to acquire land by revoking both statutory and customary rights of occupancy to override public interest.

The Land Use Act specifies that the State or Local Government should pay compensation to the current holder or occupier in the manner prescribed by the Land Use Act. The Act also provides that in lieu of compensation, the State or Local Government offer alternative land for affected people who are subject to losing farmlands. Alternative residential land is also offered to people who are subject to losing their houses.

The need for an integrated approach towards land use planning and the coordination of activities of all stakeholders in land use planning is emphasized. Specifically, the involvement of landowners, community groups, women, youth and the less privileged in making land use related decisions that affect them is emphasized. This is a critical step to the successful implementation of the policy.

The planned transmission line's ROW takes a sizeable amount of land, and therefore this policy is applicable in this project.

3.2 LEGAL FRAMEWORK

3.2.1 LAND USE ACT OF 1978 AND RESETTLEMENT PROCEDURES

The Land Use Act Cap 202, now Cap L5 Laws of the Federation of Nigeria 2004 is the key legislation and has direct relevance to this project. Relevant sections of these laws relate to this the project's land ownership and property rights, resettlement and compensation are summarized in this section.

The Land Use Act is the applicable law regarding ownership, transfer, acquisition and all such dealings on land. The provisions of the Act vest every parcel of land in every State of the Federation in the Executive Governor of the State. It holds such parcel of land in trust for the people and government of the State.

The Act categorizes the land in a State as urban, non-urban or local areas. The administration of the urban land is vested in the Governor, while the latter is vested in the Local Government Councils. The rate of the land is based on the category belonging to the State where individuals only enjoy a right of occupancy as stated in the Certificate of Occupancy.

The Act paints a picture that differs from the western concept of land ownership. The Governor administers the land for the common good and benefits of all Nigerians. The law makes it right for the Governor to grant statutory rights of occupancy for all purposes including grant easements related to statutory rights of occupancy and the right to demand rent. The statutory rights of occupancy are for a definite time (the time limit is 99 years) and may be granted subject to the terms of any contract made between the state Governor and the holder.

The Local Government Councils may grant customary rights of occupancy for agricultural (including grazing and ancillary activities), residential and other purposes. The limit of such grant is 500 hectares for agricultural purpose and 5,000 for grazing, except with the consent of the Governor. Under the Act, the local government is allowed to enter, use and occupy for public purposes any land within its jurisdiction that does not fall within an area compulsorily acquired by the Government of the Federation or of relevant State; or that is subject to any laws relating to minerals or mineral oils.

The State is required to establish an administrative system for the revocation of the rights of occupancy and must compensate the affected parties. Therefore, the Land Use Act provides for the establishment of a Land Use and Allocation Committee in each State. It determines disputes as to compensation payable for improvements on the land (Section 2 (2) (c)).

In addition, each Local Government is required to set up a Land Allocation Advisory Committee, to advise the Local Government on matters related to the management of land. The holder or occupier of such revoked land is to be entitled to the value of the unexhausted development as of the date of revocation. (Section 6) (5). When land subject to customary rights of occupancy and used for agricultural purposes is revoked under the Land Use Act, the Local Government can allocate alternative land for the same purpose (section 6) (6).

If the Local Government refuses or neglects, within a reasonable time, to pay compensation to a holder or occupier, the Governor may proceed to provide an assessment under section 29 and direct the Local Government to pay the amount of such compensation to the holder or occupier. (Section 6) (7).

Where a right of occupancy is revoked where land is required by the Local, State or Federal Government for public purpose or for the extraction of building materials, the holder and the occupier shall be entitled to compensation for the value at the date of revocation of their unexhausted improvements. Unexhausted improvement has been defined by the Act as:

> *"anything of any quality permanently attached to the land directly resulting from the expenditure of capital or labour by any occupier or any person acting on his behalf, and increasing the productive capacity the utility or the amenity thereof and includes buildings plantations of long-lived crops or trees, fencing walls, roads and irrigation or reclamation works, but does not include the result of ordinary cultivation other than growing produce."*

Developed land is also defined in the generic manner under section 50(1) as follows: land where there exists any physical improvement in the nature of road development services, water, electricity, drainage, building, structure or such improvements that may enhance the value of the land for industrial, agricultural or residential purposes.

It follows the fact that compensation is not payable on vacant land on which there exist no physical improvements resulting from the expenditure of capital or labour. The payable compensation is the estimated value of the unexhausted improvements at the date of revocation.

Payment of such compensation to the holder and the occupier, as suggested by the Act, may appear confusing as it raises the following question. Does it refer to a holder in physical occupation of the land or rather to two different parties entitled to compensation perhaps in equal shares? The correct view appears to follow from the general tenor of the Act.

First, the presumption is based on the fact that it is more likely to be the owner of such unexhausted improvements. Secondly, the provision of section 6(5) of the Act, which makes compensation payable to the holder and the occupier according to their respective interests, gives a pre-emptory directive as to who shall be entitled to what.

Again, the Act provides in section 30 where there could arise a dispute as to the amount of compensation calculated in accordance with the provisions of section 29, such dispute shall be referred to the appropriate Land Use and Allocation Committee. It is clear from section 47 (2) of the Act that no further appeal will be based upon the decision of such a committee. Alternatively, the provision is not only retrospective but also conflicts with the fundamental principle of natural justice which restrains a person to be the judge of its own case.

The Act must, in reference to this provision, have proceeded on the basis that the committee is a distinct body quite different from the Governor or the Local Government. It has however been noted that it will be difficult to persuade such a thing to the public since the members of the committee are all appointees of the Governor.

Where a right of occupancy is revoked for public purposes within the state of the Federation, or on the ground of requirement of the land for the extraction of building materials, the quantum of compensation shall be as follows:

- → In regards to land, an amount equal to the rent, if any, paid by the occupier during the year in which the right of occupancy was revoked.

- → In regards to the building, installation or improvements therein, for the amount of the replacement cost of the building, installation or improvements to be assessed on the basis of prescribed method of assessment (as determined by the appropriate officer less any depreciation, together with interest at the bank rate for delayed payment of compensation). With regards to reclamation works, the quantum of compensation is such that it may be substantiated by documentary evidence and proof to the satisfaction of the appropriate officer.
- → In regards to crops of land, the quantum of compensation is an amount equal to the value as prescribed and determined by the appropriate officer.

Where the right of occupancy is revoked due to part of a larger portion of land, compensation shall be computed in regards to the total land's surface area. An amount equal in rent, if applicable, is paid by the occupier during the year in which the right of occupancy was revoked. Note that to this amount an amount proportional to the area not affected by the revocation must be deducted and any interest payable shall be assessed and computed in the same fashion.

Where there is either a building, installation, improvement or crops on the portion revoked, the quantum of compensation shall follow the section outlined in the paragraph (ii) above and any interest payable shall be computed in the same fashion.

3.2.2 ELECTRIC POWER SECTOR REFORM NO. 6, 2005

This Act deals with acquisition of land and access rights. Section 77 of the Act empowers the Nigeria Electricity Regulatory Commission to make a declaration that land is required by a license for the purpose of generating or the distribution of electricity. Section 77 (9) states: "where the President issues a notice under sub-section 6, the Governor shall in accordance with the provisions of section 28(4) of the Land Use Act, revoke the existing right of occupancy respecting the land and grant a certificate of occupancy in favour of the concerned licensee in respect of the land identified by the commission in such notice. Who shall be entitled to claim compensation in accordance with the provisions of the Land Use Act".

3.3 INSTITUTIONAL FRAMEWORK

This section gives highlights on relevant institutions through which planning and implementation of the project will be affected. A number of institutions have been identified and will be involved in the overall implementation of this project. These include:

- → The Federal Government of Nigeria (FGN);
- → Federal Ministry of Power, Works and Housing (FMPW&H);
- → Transmission Company of Nigeria (TCN);
- → Federal Ministry of Environment;
- → Nigerian Electricity Regulatory Agency;
- → National Environmental Standards and Regulatory Enforcement Agency;
- → Kebbi State Government;
- → Kebbi State Ministry of Environment;
- → Kebbi State Ministry of Lands, Housing and Urban Development;
- → Kebbi State Ministry of Agriculture;
- → Kebbi State Environmental Protection Agency (KESEPA);
- → Kebbi State Rural Electrification Board;
- → Local Government Authority (LGA);
- → Birnin Kebbi Local Government Area;
- → Kalgo Local Government Area;
- → Arewa Local Government Area;
- → The Customary District Councils;

- → Emir of Gwandu;
- → Emir of Argungu;
- → Village Chiefs of Affected Communities.

The responsibilities and roles of each of these institutions are further discussed in the ESIA study report. We briefly present the main functions of those involved in resettlement in the following paragraphs.

3.3.1 THE FEDERAL GOVERNMENT OF NIGERIA

Responsibilities for commitments proposed in the RAP exist within the Federal Government of Nigeria and are delegated internally to the relevant Ministry, which in this case is the Federal Ministry of Power, Works and Housing.

3.3.2 FEDERAL MINISTRY OF POWER, WORKS AND HOUSING (FMPW&H)

All consultation efforts are coordinated by the Ministry of Power through the Transmission Company of Nigeria (TCN). The FMPW&H is responsible for the approval of compensation allowances to PAP. Payment is made by TCN.

3.3.3 TRANSMISSION COMPANY OF NIGERIA (TCN)

TCN is responsible for supervising the contractors engaged in the construction of facilities and to ensure strict adherence to project design specifications and land acquisition.

Health Safety and Environment (HSE) Unit of TCN, is responsible for Environmental and Social Safeguards. Overseen by a General Manager (GM), the unit facilitates liaison with communities as well as government agencies and local government department, to ease stakeholder consultations. This GM reports directly to the CEO of TCN, who in turn reports to the FMPW&H for the resettlement of affected people's progress.

This unit also liaises with the PAPs on the resettlement plan. It is the responsibility of the unit to adequately implement the resettlement. The unit is also responsible for the identification of environmentally sensitive areas that are likely to be affected by the project.

The legal unit oversees all legal functions including resolution of grievances, depending on the extent and level of grievance. It also provides advice to the resettlement implementation manager, including verification of compensation and drafting of legal agreements with affected parties, local government authorities, etc.

TCN is responsible for processing payments to the affected people and ensures proper accountability throughout the project circle.

3.3.4 FEDERAL MINISTRY OF ENVIRONMENT

The Ministry is responsible for the overall environmental policy of the country. It has the responsibility for ESIA implementation and approval. It has developed certain guidelines and regulations to protect the environment and promote sustainable development. It will monitor the implementation of mitigation measures when the project will commence. It can also issue directives to the project on specific actions related to the environment in the project area. The Ministry normally involves the State and sometimes Local Governments in this responsibility depending on the specific activity.

3.3.5 KEBBI STATE MINISTRY OF ENVIRONMENT

The Ministry is responsible for the overall environmental policy of Kebbi State, enforcement of State environmental laws, establishing regulations, sanitation and waste management. Since environment is on the concurrent list in the Nigerian Constitution, the State Ministry of Environment has a role in the EIA process. The State undertakes joint site verification with the Federal Ministry of Environment, receives a copy of the report, appoints a member on the review panel as well as participates in impact mitigation monitoring. The State can also impose additional requirements based on the nature of the local environment.

3.3.6 KEBBI STATE MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

The ministry has the responsibility of formulating the policies and implementing these, pursuant to the provisions of the Land Use Act, 1978 as amended under the 1990 laws of the Federation of Federal Republic of Nigeria.

It also has the primary responsibility for land management in the state. Part of its agencies include the Land Use Advisory and Allocation Committee. Its functions and power include the assessment and payment of the amount compensated for the revocation of a right of occupancy.

TCN will acquire land for the purpose of this project, however, since the Ministry is statutorily mandated to implement compensation for acquired land, the advisory and allocation committee shall work with the Project Director to ensure that affected people are compensated as stated in this report. They will also ensure that TCN's compensation and assistance program are compliant to the provisions of the Land Use Act.

3.3.7 LOCAL GOVERNMENT AUTHORITY

Three Local Government Areas (LGAs) are involved in this project - Birnin Kebbi, Kalgo and Arewa. The roles and responsibilities of the local authorities (Lands or Physical Planning or Works department) of this project include the following:

- → Liaising with the project director to verify the adequacy of the resettlement location and provide approval for such sites;
- → Providing additional resettlement areas if the designated locations are not adequate;
- → Provide necessary infrastructures for the relocated areas;
- → Implement policies developed by FM Env to ensure project sustainability;
- → Liaise with FM Env and participate in consultations.

3.3.8 COORDINATION

Responsibilities in the implementation and monitoring of the ESMP and RAP are shared between multiple stakeholders, competent ministries, departmental authorities, LGA and TCN.

In this context, and to encourage the coordination of decisions as well as application of the various measures in an appropriate way, TCN should consider the possibility of setting up a Project Management Unit (PMU) and Project Implementation Unit (PIU) to be responsible for the project ESMP and RAP. Furthermore Local Resettlement Committees should be put in place and a witness NGO should be invited to participate to the process. This coordination structure is discussed in more details in section 9.4.

3.4 INTERNATIONAL FUNDING POLICIES, PROCEDURES AND GUIDELINES

The project falls within the scope of intervention of the AFDB and the WB. Environmental procedures; guidelines for these institutions are presented in the following sections.

3.4.1 AFRICAN DEVELOPMENT BANK (AFDB)

The environmental and social policies of the African Development Bank (AfDB) were developed over the years and amended to support the main objective of the AfDB (which is to provide assistance to African Regional Member Countries in their economic and social development). As for the resettlement issues, it is 2003's Involuntary Resettlement Policy by AfDB that apply. AfDB has put the Involuntary Resettlement Policy in place which covers involuntary displacement and resettlement of people caused by an AfDB financed project. This policy applies when a project results in the relocation or loss of shelter by the persons residing in the project area, assets are being lost or livelihoods are being affected.

The primary goal of the Involuntary Resettlement Policy is to ensure that when people must be displaced, they are treated equitably and they share the benefits of the project (hence their resettlement involvement).The objectives of the policy are to first ensure that the disruption of the livelihood of people in the project's area is minimized, second, ensure that the displaced individuals receive resettlement assistance to improve their living standards, third, to provide explicit guidance to AfDB staff and to borrowers, fourth, to 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 such as the livelihood and living standards of the displaced individual, compensation for loss of assets and using a participatory approach at all stages of the project design and implementation.

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

Economic benefits and costs should be calculated to determine the project's feasibility with regard to resettlement. The full cost of resettlement activities necessary to achieve the objectives of the project should be included in the total cost of the project. Similar to the other project activities, the costs of resettlement are treated as a charge against the economic benefits. However, the net benefits to resettlers (as compared to the "without-project" scenario) should be added to the benefits stream of the project.

Economic and social considerations should be taken into account to determine 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 are compensated for loss of land or other assets. However, a third category of displaced people who have no proven legal rights or basis for claim to the land they are occupying in the project area are also entitled to resettlement assistance. Land, housing, and infrastructure should be provided to the adversely affected population, including indigenous people, ethnic, 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 involves a significant number of people (200 or more persons) who would need to be displaced with a loss of assets, access to assets, or reduction livelihood.

For any project involving the resettlement of less than 200 persons, an abbreviated resettlement plan is to 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 Center and the AfDB's website for public review and comments.

3.4.2 WORLD BANK

The World Bank's environmental and social safeguard policies include both Operational Policies (OP) and Bank Procedures (BP). Safeguard policies are designed to protect environment and society against potential negative effects of projects, plans, programs and policies. The potentially triggered safeguard policies which will be considered in this RAP are the following:

- → OP 4.10 Indigenous People;
- → OP 4.11 Physical Cultural Resources;
- → OP 4.12 Involuntary Resettlement;
- → Access to Information Policy.

3.4.2.1 OP 4.10 INDIGENOUS PEOPLES

The objectives of this policy are to ensure that:

- → The development process fosters full respect for the dignity, human rights, and cultural uniqueness of indigenous peoples;
- → Adverse effects during the development process are avoided, or if this is not feasible, ensure that these are minimized, mitigated or compensated;
- → Indigenous peoples receive culturally appropriate and gender and inter-generationally inclusive social and economic benefits.

Desktop research and field investigations revealed that the study area does not contain populations that qualify as Indigenous Peoples according to the WB Operational Policy 4.10.

Therefore, OP4.10 is not triggered and no further specific investigations will be conducted regarding this issue.

3.4.2.2 OP 4.11 PHYSICAL CULTURAL RESOURCES (PCR)

This policy assists in preserving PCRs and helps reduce chances of their destruction or damage. The policy considers PCRs to be resources of archaeological, paleontological, historical, architectural, religious (including graveyards and burial sites) and aesthetic or other cultural significance.

According to this policy, an investigation and inventory of PCRs likely to be affected by the project have to be conducted. This investigation should document the significance of such PCRs, and assess the nature and extent of potential impacts on them. Since many cultural resources are generally not well documented or protected by law, consultation is an important means of identifying PCRs. Such consultations include meetings with project affected groups, concerned government authorities and relevant non-governmental organizations.

If PCRs are found during the inventory, a management plan must be prepared. This management plan must include measures to avoid or mitigate any adverse impacts on PCR, provisions for managing chance finds, any necessary measures for strengthening institutional capacity for the management of PCR and a monitoring system to track the progress of these activities.

Finally, whether or not a PCR is found at the inventory phase, provisions for managing chance finds must be implemented to ensure that PCR that may be discovered is properly handled.

3.4.2.3 OP 4.12 INVOLUNTARY RESETTLEMENT

The main objectives of the WB Resettlement Policy (OP 4.12) 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 individuals 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 WB OP 4.12, Appendix 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.

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 and offered choices among technically and economically feasible resettlement alternatives, and (iii) provided prompt and effective compensation of full resettlement 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, indigenous populations, ethnic 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. They also should be 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 only when 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, and, if 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. This development assistance comes 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.

3.4.2.4 ACCESS TO INFORMATION POLICY

According to its Access to Information Policy (which became effective on July, 1 2010), all information about projects under preparation and implementation, analytic and advisory activities, and Board proceedings will be made publicly available by the World Bank. The policy also outlines a clear process for making information publicly available and provides a right to appeal if information-seekers believe they were improperly or unreasonably denied access to information or if there is a public interest case to override an exception that restricts access to certain information.

3.5 EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT (EBRD)

The first environmental policy of the EBRD was initially adopted in 1991. It was developed over the years to become an Environmental and Social Policy. The last revision of this policy and its related Performance Requirements (PR) was completed in 2014. As for the resettlement issues it is the Performance requirement 5 Involuntary of the EBRD that applies.

3.5.1 LAND ACQUISITION, INVOLUNTARY RESETTLEMENT AND ECONOMIC DISPLACEMENT 2014

Involuntary resettlement refers both to physical displacement (relocation or loss of shelter) and economical displacement (loss of assets or resources, and/or loss of access to assets or resources that leads to loss of income sources or means of livelihood), as a result of project-related land acquisition1 and/or restriction of land use.

Resettlement is considered involuntary when affected individuals or communities do not have the right to refuse land acquisition or restrict land, resulting in displacement. This occurs in cases of: (i) lawful expropriation or restrictions on land use based on eminent domain; and (ii) negotiated settlements in

which the buyer can resort to expropriation or impose legal restrictions on land use if negotiations with the seller fail.

The objectives of this PR are to:

- → Avoid or, when unavoidable, minimise, involuntary resettlement by exploring alternative project designs;
- → Mitigate adverse social and economic impacts from land acquisition or restrictions on affected persons' use of and access to assets and land by: (i) providing compensation for loss of assets at replacement cost; and (ii) ensuring that resettlement activities are implemented with appropriate disclosure of information, consultation and the informed participation of those affected;
- → Restore or, where possible, improve the livelihoods and standards of living of displaced person at least to pre-displacement levels;
- → Improve living conditions among physically displaced persons through the provision of adequate housing, including security of tenure at resettlement sites.

The PR 5 (18) stipulates that eligibility for compensation and assistance concerns displaced persons: (i) who have formal legal rights to the land (including customary and traditional rights recognised under national laws); (ii) who do not have formal legal rights to land at the time of the census, but who have a claim to land that is recognised or recognisable under national laws; or (iii) who have no recognizable legal right or claim to the land they occupy.

The PR 5 (10) «encouraged to acquire land rights through negotiated settlements even if they have the legal means to gain access to the land without the consent of the seller. Negotiated settlements help avoid expropriation and eliminate the need to use governmental authority to remove people forcibly. Negotiated settlements can usually be achieved by providing fair and appropriate compensation and other incentives or benefits to affected persons or communities, and by mitigating the risks of asymmetry of information and bargaining power».

The PR 5 (12) states that from the earliest stages and through all resettlement activities, the client will involve affected men and women, including host communities. This will facilitate their early and informed participation in decision-making processes related to resettlement.

Affected individuals shall be given the opportunity to participate in the eligibility requirements, negotiation of the compensation packages, resettlement assistance, suitability of proposed resettlement sites and proposed timing. Additional requirements apply to consultations which involve Indigenous Peoples as well as individuals belonging to vulnerable groups. Consultation will continue during the implementation, monitoring and evaluation of compensation payments and resettlement in order to achieve outcomes that are consistent with the objectives of this PR.

In that the event that the project involves the physical displacement of people, the RP will require that a RAP be prepared which would cover, at a minimum, the applicable requirements set out in this PR, regardless of the number of people affected. The plan will be designed to mitigate the negative impacts of displacement, identify potential benefits and establish the entitlements of all categories of affected persons (including host communities), with particular attention paid to the needs of the vulnerable. The plan will document all procedures to acquire land rights, as well as compensation measures and relocation activities. It will establish procedures to monitor and evaluate the implementation of resettlement activities and take corrective action as necessary. The promoter should offer to physically displaced households a choice of options for adequate housing with security of tenure so that they can resettle legally without having to face the risk of forced eviction.

The PR 5 (36) specifies also that the affected households are only economic displaced a Livelihood Restoration Plan (LRP) should be develop and implement. The LRP will establish the entitlements of affected persons and communities and will ensure that these are provided in a transparent, consistent and equitable manner.

The PR 5 (17) states that displaced persons and communities compensation should be offered full replacement cost for loss assets, and other assistance. This is intended to restore, and potentially improve displaced persons' standards of living and/or livelihoods to pre-displacement levels. The

measures can be based on land, resources, wages and/or business activities. Standards for compensation will be transparent and consistent within the project. Compensation will be provided before displacement or imposition of access restrictions. Where livelihoods of displaced persons are land-based, or where land is collectively owned, the client will offer, where feasible, land-based compensation, taking into account seasonal and agricultural timing requirements. The client will provide opportunities to displaced persons and communities to derive appropriate development benefits from the project.

Compensation in kind will be offered in lieu of cash compensation where feasible. Cash compensation is acceptable in the following cases: (i) livelihoods are not land-based; (ii) livelihoods are land-based but the land taken for the project is a small fraction of the affected asset and the residual land is economically viable; or (iii) active markets for land, housing and labour exist, displaced people use such markets, and there is sufficient supply of land and housing. Cash compensation levels should be sufficient to replace the lost land and other assets at full replacement cost in local markets.

The PR 5 specifies also that an effective grievance mechanism be established as early as possible in the process. The grievance mechanism should be adequate to receive and address in a timely fashion specific concerns about compensation and relocation that are raised by displaced persons and/or members of host communities. It will include a recourse mechanism designed to resolve disputes in an impartial manner.

The PR 5 also stipulate that a monitoring of the resettlement and livelihood restoration process must be carried out and should involve the participation of key stakeholders such as affected communities. Depending on the scale of a project's resettlement, it may be appropriate for the client to commission an external completion report of the RAP/LRP to determine that the provisions have been met. The completion report should be undertaken subsequent to inputs in the process, including any developmental initiatives, have been completed. The report may identify further actions to be completed by the client. In the majority of cases, the completion of corrective actions identified by the completion report should bring the client's obligations for resettlement, compensation, livelihood restoration and development benefits to a close.

3.6 GAP ANALYSIS

Table below presents the national and international requirements as well as compares and proposes the most favorable conditions for the PAPs.

Table 3-1 Gap Analysis

TYPE OF PROPERTY	NATIONAL LEGISLATION	POLICY OF THE POWER COMPANIES	OP 4.12 OF WB[1]	ADB POLICY[2]	EBRD POLICY[3]	PROPOSAL TO BRIDGE THE GAP
Compensation						
Land	Under the Land Use Act (1978) Cap L5, LFN 2004 - where land for which the right of occupancy (R of O) has been issued, the area shall be compensated. Compensation is also required for land without R of O if there is customary ownership.	In Nigeria, the Land Use Act (1978) Cap L5, LFN 2004 bestowed land in the hands of government for use of overriding public interest. As a result, no compensation is paid for land. However, the eligibility for refund of ground rent, survey fees and processing fees that were paid for the year of revocation are granted.	Compensations in kind are recommended. Assistance should be provided for the restoration of productivity and achieving production levels (at least equivalent to the land replaced). The cash compensation is possible if the affected area accounts for less than 20% of the household's land.	Compensations in kind are recommended. Assistance that is at least equivalent to the land replaced should be provided for the restoration of productivity and achieving production levels.	Compensations for loss of assets at full replacement cost to restore and potentially improve the standard of living and/or livelihoods of the displaced populations are recommended. Compensation measures can be based on the land, resources, incomes and / or business activities.	Compensations in kind for loss of assets at full replacement cost to restore and potentially improve the standard of living and/or livelihoods of the displaced populations is proposed. Alternate land would be provided by TCN when possible or sourced by the PAPs and paid for by TCN. Assistance that is at least equivalent to the land replaced would be provided for the restoration of productivity and achieving production levels. Cash compensation would be possible if the affected land accounts for less than 20% of the household's land. The affected community would source the land while TCN would pay for it Should the above options fail to be implemented, compensation in kind should be agreed between TCN and community stakeholders.
Buildings (Houses, Annexes, Graves and Shrines) Community Structures	Under the Land Use Act (1978) Cap L5, LFN 2004, cash compensation for building and improvements based on depreciated replacement cost is applicable.	Compensation for buildings and other properties is based on the depreciated replacement cost.	Compensations in kind are recommended and should be based on the full current replacement cost of buildings /assets /structures, as well as all transaction costs (taxes, permits, etc.).	Compensations in kind are recommended. Compensation should be based on the value without depreciation	Recommendations include alternative accommodation of equivalent or greater value or a cash compensation at full replacement value, but compensation in kind must be offered in lieu of cash compensation where feasible. The displaced community should be given different options for adequate housing with security of tenure to be able to resettle legally without having to face the risk of forced eviction.	Compensation in kind based on the present full replacement market value without depreciation plus transaction costs TCN will provide to the physically displaced people options for adequate housing with security of tenure. The PAP may receive cash compensation for reconstruction through carefully planned installments at each step of the reconstruction process. Community structures should also be replaced at full market value without depreciation. If shrines and graves are encountered, TCN will pay for necessary ceremonial and resettlement costs.
Crops	Under the Land Use Act (1978) Cap L5, LFN 2004 - the holder and the occupier shall be entitled to compensation for the value at the date of revocation of their unexhausted improvements including crops and trees.	Compensation is paid using the Federal/ States/ Geopolitical region rates.	For perennial crops, compensation shall take into account the stage of maturity of crops, the production levels, and production delivery time. For annual crops, the land offered as compensation should allow the restoration of production.	For perennial crops, compensation shall take into account the production delivery time. For annual crops, the land offered as compensation should allow the restoration of production.	Crops should be substituted at the cost of replacing such production. Loss of income during period of maturation should be included.	Crop substitution at the cost of replacing such production is recommended. For perennial crops, compensation should take into account the production delivery time. For annual crops, the land offered as compensation should allow the restoration of production.
Economic Impact	Shops and other commercial structures are compensated as structures. However, the Land Use Act (1978) Cap L5, LFN 2004 is silent on income losses due to closure or relocation of business upon acquisition.	TCN abides to Nigerian Legislation.	The resettlement program should allow the owner to gain full trade income flow.	The resettlement program should allow the owner to gain full trade income flow.	Compensation should be offered for the recovery cost of commercial activities elsewhere, the loss of net income during the transition period and transfer fees as well as relocation of the plant, machinery or other equipment, as applicable. Provide replacement property (e.g.: agricultural or commercial sites) of equal or greater value, cash compensation at full replacement cost to individuals with legal rights or the right to claim the land given that they are recognized or recognizable under national laws.	Resettlement program that allows the owner to gain full trade income flow is recommended. Compensation offered for the recovery cost of commercial activities elsewhere, the loss of net income during the transition period and transfer fees as well as relocation of the plant, machinery or other equipment when applicable is recommended. Providing replacement property of equal or greater value or cash compensation at full replacement cost to individuals with legal rights or the right to claim the land given that they are recognized or recognizable under national laws is recommended.

[1] World Bank, Bank Policy, Operational Policy Waivers, 2013

[2] African Development Bank Group's, Integrated Safeguards System, Safeguards and sustainability series, Vol 1-Issue 1 (Dec 2013)

[3] European Bank for Reconstruction and Development, Environmental and Social Policy, 2014

Table 3-1 Gap Analysis (cont.)

TYPE OF PROPERTY	NATIONAL LEGISLATION	POLICY OF THE POWER COMPANIES	OP 4.12 OF THE WB[1]	ADB POLICY[2]	EBRD POLICY[3]	PROPOSAL TO BRIDGE THE GAP
Assistance to Resettled PAPs	The Land Use Act (1978) Cap L5, LFN 2004 does not propose other payment than compensation for building, crops, etc.	TCN abides by Nigerian Legislation.	PAPs should, in addition to the relocation allowance, receive assistance in their resettlement and monitoring thereafter.	PAPs should, in addition to the relocation allowance, receive assistance in their resettlement and monitoring thereafter.	Based on consultation with the displaced populations, PAPs should receive a relocation assistance to restore and, if possible, improve their standard of living on another suitable site.	PAPs should, in addition to the relocation allowance, receive assistance in their resettlement and be provided monitoring thereafter to improve their standard of living on another suitable site (ex: support to open bank account, help for administrative transaction (land titling), transport assistance, reconstruction advices to ensure the quality of construction, etc.).
Eligibility						
Legal or Customary Owners of Land and Titled Land; and Holders of Other Rights in Land	Not eligible	Eligible	Eligible	Eligible	Eligible	Eligible
Illegal Occupants	Not Eligible	Compensation for improvements on land.	Relocation assistance and compensation for lost of assets (other than land).	Relocation assistance and compensation for loss of assets (other than land).	All sources of income must be restored (crops, occupation, etc.).	Relocation assistance (transport, security of occupation of the new land) and compensation for loss of assets (other than land), and support for the resumption of activities, if any.
Tenants	If the R of O is revoked, both the holder (owner) and the tenant are entitled to compensation of their unexhausted improvement over that land. In addition, compensation of an amount equal to the rent paid by the occupier (tenant) during the year of revocation of the R of O.	Compensation for the improvement such as crops, trees and structures.	They must be compensated regardless of the type of legal recognition of their land tenure (formal or informal).	They must be compensated regardless of the type of legal recognition of their land tenure (formal or informal).	They must be compensated regardless of the type of legal recognition of their land tenure (formal or informal).	Compensation regardless of the type of legal recognition of the land tenure, support for the resumption of activities and relocation to new housing (reimbursement of rent prepaid, social allowance and allocation for inconvenience).

[1] World Bank, Bank Policy, Operational Policy Waivers, 2013

[2] African Development Bank Group's, Integrated Safeguards System, Safeguards and sustainability series, Vol 1-Issue 1 (Dec 2013)

[3] European Bank for Reconstruction and Development, Environmental and Social Policy, 2014

4 STAKEHOLDER ENGAGEMENT

This chapter outlines the public information and consultation process that has been designed and implemented in order to facilitate the informed participation of the project affected persons (PAPs), communities and other stakeholders affected by this project. As such, consultation objectives, activities and outcomes are reported.

4.1 APPROACH

4.1.1 GENERAL OBJECTIVES

General stakeholder engagement objectives of this study were to:

- → Inform stakeholders on the proposed infrastructures and activities and seek their informed opinion about the socio-environmental risks and opportunities potentially associated with the project as well as take the measures and actions in order to manage the anticipated impacts;
- → Generate a social and institutional dialogue in order to assess and strengthen the project's social acceptability;
- → Help to consolidate, through the ESIA process, the efforts made by the WAPP and TCN in order to establish lasting relationships with affected communities and other stakeholders.

4.1.2 TARGET STAKEHOLDER GROUPS

Target stakeholder groups for the stakeholder engagement process include:

- → Concerned ministries and national agencies;
- → State-level (Birnin Kebbi) and LGA-level (Birnin Kebbi, Arewa and Kola) authorities and technical services;
- → Customary authorities;
- → Communities affected by the line route;
- → Industrial and commercial actors affected by the line, if any;
- → NGOs and other civil society organisations in the fields of nature conservation, community development and human rights.

A comprehensive list of the stakeholder organizations and communities that have been identified for this project, in Nigeria, is presented in Appendix 3.

4.1.3 STAKEHOLDER INFORMATION AND CONSULTATION ROUNDS

Four stakeholder information and consultation rounds were conducted through the development of the ESIA study and RAP of this project. Those were planned according to key stages, or decision moments, throughout the study where the informed participation of stakeholders was likely to make the most significant contribution to the on-going analysis. These included the environmental and social scoping stage (1st round), the preliminary route assessment stage (2nd round), the documentation of the affected communities and displaced households (3rd round) and the disclosure of the ESIA, ESMP and RAP preliminary results (4th round).

Table 4.1 below outlines the studies' stakeholder engagement process and presents, for each consultation round, the specific engagement objectives, target groups and implementation periods.

Table 4-1 Objectives, Target Groups and Implementation Periods

ROUND	OBJECTIVES	TARGET GROUPS	IMPLEMENTATION PERIOD
ROUND 1: Environmental and Social Scoping	• Present the project and the ESIA process to key authorities; • Identify key issues, concerns and expectations related to the project and study area; • Complete the stakeholders' list and validate the general approach for consultations.	• National Electricity Company (TCN) • Concerned ministries • Regional Administration	December 2014 to January 2015
ROUND 2: Line Route Study	• Involve key stakeholders in the analysis of the « hot spots » identified along with the provisional line route.	• National Electricity Company (TCN) • Concerned ministries • Local authorities	June 2015
ROUND 3: Engagement with Affected Communities and PAPs	• Inform affected communities and involve them in environmental and social optimization of the line route; • Identify the concerns and expectations of affected communities, displaced households and women; • Inform affected households of their rights and options for resettlement.	• State-level and LGA-level authorities and technical services. • Affected Communities / Community leaders. • Women representatives. • Customary chiefs.	September 2015 to October 2015
ROUND 4: Disclosure of Preliminary Results (ESIA, ESMP and RAP)	• Present, validate and enhance preliminary ESIA and RAP results. • Ensure compliance of the proposed measures with the requirements of regulatory authorities; • Evaluate the social acceptability of the project and its proposed measures.	• Transmission Company of Nigeria (TCN) • Concerned ministries at national and state levels. • Local authorities and community leaders from affected LGAs. • NGOs.	February 2016

4.2 ACTIVITIES PERFORMED AND RESULTS ACHIEVED

The first consultation round took the format of individual semi-structured interviews with local authorities and key informants within the study area. It has proved to be useful to better define the scope and framework of the RAP study. The second consultation round involved field reconnaissance with local authorities and technical services and has served to adjust the line route so as to minimize resettlement needs. However, thorough engagement with local communities and PAPs and consultation on the actual compensation and resettlement process really occurred at the third and fourth consultation rounds and, for this reason, only the activities and results achieved during these consultation rounds are presented below. Note that the results from the 1st and 2nd consultation rounds are presented in the ESIA report. Detailed meeting minutes and registers of participants' signatures for the 3rd and 4th rounds can respectively be found in Appendix 4 and 5.

4.2.1 3RD CONSULTATION ROUND

4.2.1.1 ACTIVITIES PERFORMED

The round 3 consultation activities were conducted in September and October 2015. The activities carried out in Nigeria as part of the third stakeholder engagement round were the following:

→ One informative and consultative meeting in Birnin Kebbi with State-level authorities and technical services (workshop);

→ Informative meetings and consultation with LGAs, LGAs technical services and representatives from communities and urban neighbourhoods affected by the line route. Two meetings were held, one in Birnin Kebbi and the other in Kangiwa with representatives from both Arewa and Kalgo LGAs;

- → Focus group discussions with representatives from women's groups in Birnin Kebbi, Kalgo and Arewa LGAs;
- → Field walks with representatives from the communities affected by the line route to locate it and identify potentially affected sensitive elements;
- → Informative meetings and consultation with traditional leaders of regional influence such as the Emirs of Gwnadu and Argungu;
- → Group meeting hosted by TCN in Abuja with concerned ministries and national agencies, including follow up with the agencies to collect relevant information.

During the meetings, large printed maps were used to illustrate the route under study within each LGA. Printed images illustrating examples of the type of proposed infrastructure (pylons and lines) were also exhibited. A project background information document, in a poster form was produced and distributed by the consultant to local authorities and representatives prior to meetings for public advertising (shown in Appendix 6).

Representatives from all the communities likely to be affected by the line route were invited to attend LGA meetings. Throughout these meetings, community leaders received information about the project, asked questions and expressed their concerns and expectations. The meetings also served to complete and validate with local stakeholders the list of potentially affected communities, as well as to identify the communities that could be reached by a future rural electrification program associated with the project.

Finally, traditional leaders were visited in their respective royal courts in order to be presented the project and to give them the opportunity to provide relevant advice and recommendations, particularly as it pertained to the resettlement process.

4.2.1.2 STAKEHOLDERS MET

Tables 4-2 to 4-6 below list the stakeholder meetings held as part of the third information and consultation round. This round was geared towards the different target groups, namely the ministries and other national stakeholders, the State-level authorities and government services, the LGA and community representatives, the women's groups and the traditional leaders.

The same material (maps, images, etc.) was presented to media representatives and was broadcasted on radio and television stations in Kebbi State as well as in newspapers, to provide public awareness.

Table 4-2 Third Consultation Round's Meeting Log – National and State Level Stakeholders

DATE	PLACE	ORGANIZATIONS MET
17/09/2015	Birnin Kebbi	Kebbi State Water Board Kebbi State Ministry of Women Affairs *(in charge of Social Services)* Sokoto-Rima River Basin Development Authority, Kebbi State Area Office Kebbi State Rural Electrification Board (REB) Kebbi State Ministry of Lands and Housing *(Surveyor General's Office, Physical Planning and Valuation and Acquisition Departments)* Kebbi State Mininstry Environment Kebbi State Ministry of Agriculture *(departments of livestock, Forestry and Fisheries)*
09/10/2015	Abuja	Federal Ministry of Environment (*Department of Environmental Assessment and Department of Forestry)* Federal Mininistry of Agriculture *(Department of Animal Production and Husbandry Services and department of Agriculture)* National Parks Services Nigerian Civil Aviation Authority National Commission for Museums and Monuments Savannah Conservation Foundation Federal Ministry of Works *(Department in Charge of Federal Roads)*

Table 4-3 Third Consultation Round's Meeting Log – LGA Participants

DATE	PLACE	ORGANIZATIONS MET	PARTICIPANTS
17/09/2015	Birnin Kebbi	Birnin Kebbi Local Government Area (LGA) Village Heads of affected settlements in Birnin Kebbi LGA	10 participants, including director of works from Birnin Kebbi LGA, and representatives from 5 different communities.
18/09/2015	Kangiwa	Arewa LGA Kalgo LGA Village Heads of affected settlements in Arewa LGA Village Heads of affected settlements in Kalgo LGA	41 participants, including 7 technical services from Arewa and Kalgo LGAs, and representatives from 11 different communities in Arewa and Kalgo LGA.
19/09/2015	Field Trip to line route	Village Heads of affected settlements Women groups Farmers Association Miyetti Allah Cattle Raisers Association LGA representatives	15 participants

Table 4-4 Third Consultation Round's Meeting Log – Women Representative

DATE	PLACE	ORGANIZATIONS MET	PARTICIPANTS
19/09/2015	*Kaingiwa*	Women group in Arewa LGA Women group in Kalgo LGA Farmers Association in Arewa LGA Miyetti Allah Cattle Raisers Association in Kalgo LGA	41 participants including 8 women and community groups
19/09/2015	Birnin Kebbi	Kebbi Women group Farmers Association in Arewa LGA Miyetti Allah Cattle Raisers Association in Kalgo LGA	13 participants including 7 women and community groups

Table 4-5 Third Consultation Round's Meeting Log – Tradition Chiefs

DATE	PLACE	ORGANIZATIONS MET	PARTICIPANTS
13/10/2015	Birnin Kebbi	Gwandu Emirate Council	10 participants
14/10/2015	Argungu	Argungu Emirate Council	8 participants

Table 4-6 Third Consultation Round's Meeting Log – Media and Councils

DATE	PLACE	ORGANIZATIONS MET	PARTICIPANTS
15/10/2015	Birnin Kebbi	Media Houses	13 participants including representatives from 4 different TV/Radio and Newspaper stations
14/10/2015	Argungu	Argungu Emirate Council	8 participants

4.2.1.3 CONCERNS, EXPECTATIONS AND RECOMMENDATIONS EXPRESSED BY STAKEHOLDERS

The main concerns, expectations and recommendations made by stakeholders that are related to the population resettlement and compensation process, are summarized below.

→ Public enlightenment: Provide adequate enlightenment to the public, involve professionals such as the media houses located in Kebbi State. Specifically, affected communities have requested to be notified of the start date of the project sooner than later, to avoid loss of farm produce.

- → Encroachment on the corridor: The Surveyor General observed that there is encroachment by structures and farmlands on the corridor for the existing 132 kV line. To minimize this, the beacons delimitating the ROW should be lit at a height of at least 0.5 m above ground.)
- → Fair compensation: Local authorities and communities have emphasized their expectations over adequate and timely compensation of the PAPs.
- → Replacement of community structures: Communities and women representatives have asked for the adequate replacement of community structures such as hospitals, dispensaries or other government buildings affected by the project.
- → Compensation for fallow land: It was noted that, based on the requirements of the Land Use Act, there is no compensation for land and only assets on the land will be compensated. Nevertheless, it was observed that fallow land is either preserved for future generations of the owner to use or to be purchased with future plans for development. There should be some form of compensation for fallow land, based on human face.

4.2.1.4 CONCERNS AND EXPECTATIONS RAISED BY VILLAGE REPRESENTATIVES

In the community's socioeconomic survey, we asked the chiefs of affected villages if they had any concerns on possible impacts about the project on their community.

As summarized in Table 4.7 below, most of the chiefs expressed the view that the project will bring positive economic impacts in their community such as jobs, electrification and infrastructure development.

The negative impacts mentioned below are essentially related to the loss of land and trees, because of the ROW implementation. Adequate compensation is asked and causes some concern.

Table 4-7 Potential Changes Related to the Project Perceived by Communities

POTENTIAL CHANGE	LOCAL GOVERNMENTAL AREA			TOTAL
	AREWA	BIRNIN KEBBI	KALGO	
Positive economic impacts	4	6	4	14
Negative economic impacts	1	3	1	5
Other negative impacts and demands	0	2	2	4
No change	1	0	0	1
Number of villages	6	6	4	16

Notes: Some village's chief gave more than one answer, therefore the total impacts and demands exceed the number of villages in the survey.
Positive economic impacts include improved living conditions, the possibility of jobs, village electrification, development of new infrastructure and economic development of the villages.
Negative economic impacts include, expropriation and loss of trees, agricultural land and crops.
Other negative effects and applications include safety, obtaining adequate compensation and local hiring.

4.2.1.5 CONCERNS AND EXPECTATIONS RAISED BY THE HEADS OF AFFECTED HOUSEHOLDS

As it can be seen in the table below, most of the PAPs had no specific comments or concerns related to the project.

For those head of households that did comment on the project, the main concern or demand was related to compensation and concerns were related to the loss they could incur. The PAPs asked for a fair compensation so they would not be impoverished by the project. The RAP and compensations package were explained to the PAP in the course of the census by enumerator and coordinator and furthermore in the 3 and 4 th round of consultations. As for electromagnetic field the message provided was that international agencies (World Health) consider high-voltage line electromagnetic field as a very-low risk for health.

Also worthy of mentioning are the many positive comments. These specific PAPs agree to the project and see some benefits for them or the community.

Table 4-8 Concerns and Comments on the Project, Nigeria

CONCERN AND COMMENT	LOCAL GOVERNMENTAL AREA			TOTAL
	AREWA	BIRNIN KEBBI	KALGO	
Agreed with the project	1	27	1	29
Positive contribution of the project to the household, community	3	13	1	17
Loss caused by the project (income, land, tree structure)	2	16	6	24
Impact on health (electromagnetic field, electrocution)	0	1	1	2
Other negative aspects and demands	5	29	10	44
No concern nor comment	175	118	100	393
Number of households	186	195	117	498

Notes: Some households gave more than one answer, therefore the total of concerns and comments exceed the number of households in the survey.
The group identified as ''other negative aspect or demand the PAP'' expressed concerns over the amount of compensation that would be offered for land.

4.2.2 4TH CONSULTATION ROUND

This last round of stakeholder information and consultation has served to expose the main findings and recommendations contained in the preliminary RAP reports. It pre-validated these elements and served to obtain feedback and suggestions from stakeholder. Various topics about resettlement packages (compensation, CCF, replacement of affected community structures) were discussed (see table 4.13 for PAP reactions). The activities carried out, the organizations reached and the results obtained are summarized below.

4.2.2.1 ACTIVITIES PERFORMED

The activities carried out as part of the fourth stakeholder engagement round are:

- → One national meeting in Abuja with concerned ministries and national agencies;
- → One State-level meeting in Birnin Kebbi with State authorities and technical services;
- → Group meetings in Birnin Kebbi and Arewa with LGA-level authorities and technical services and representatives from affected communities.

4.2.2.2 STAKEHOLDERS REACHED

Tables 4-9 to 4-12 below list the stakeholders met during the fourth consultation round.

Table 4-9 Participating organizations and representatives at the national workshop on the preliminary results, held on March 17, 2016, in Abuja

ORGANIZATION	REPRESENTATIVES
Federal Ministry of Environment (Environmental Assessment Department)	1. Mr. Kevin A. Ihebinike (Deputy Director, Environmental Assessment) 2. Waziri Ali Mala (Geologist{) 3. Mr. Anenyeonu NCS (Asst. Director -SD)
Federal Ministry of Environment (Forestry Department)	1. Dr. Onyekuru John (Deputy Director, Conservation) 2. Mr. T.A. Agadafini (Asst. Chief Forestry)
Federal Ministry of Lands and Survey	Representative did not sign attendance register
National Commission for Museums and Monuments	1. Mr. Alafiatayo Oladipo (Asst Director -Monuments) 2. Mr. Aribido Adeniyi (Archaeologist) 3. Ms. Aisha M. Aliyu (Principal Heritage Officer)
Federal Ministry of Agriculture (Dept of Animal Production & Husbandry Services)	Representative did not sign the attendance registry
Savannah Conservation Foundation (NGO)	Mr. Smith Rufus (Community Env Dev Officer)
Federal Ministry of Power, Works and Housing	Engr. Cyril Onyeneke (Deputy Director -Electrical)
Transmission Company of Nigeria (TCN)	1. Engr. Sadiq Salihu ((Principal Manager -SCADA) 2. Mr. Joseph Akande (Asst. Gen Mngr -CR&E) 3. Ms. Ruskin, I.B.A. (Manager -ERSU) 4. Mr. Yusuf Babatunde (Senior Manager-Chem) 5. Mr. Ero S.O. (Principal Manager -ERSU) 6. Engr. Leronard Ogwu (Principal Manager -Line Proj) 7. Mr. Nasiru Gaya (Principal Manager -Property) 8. Mr. Mohammed Jibril (Principal Manager -Wayleave) 9. Surv. J,F. Coker (Principal Manager -Survey) 10. Mr. Yusuf Mungadi (Senior Manager -Occupational Health and Safety) 11. Engr. Musa Argungu (Senior Manager -Line Proj) 12. Mr. Felix Dooshiya (Desk Officer 13. Randawa Silas (Asst Gen Manager -Wayleave) 14. Oluwatobi Babatunde (Manager) 15. Mr. Ibe Ifeanyi Samuel (Officer II-HSE) 16. Mr. M.S. Mohammed (Asst. Gen Mngr -S/S) 17. Ms. Enamue Sera (Officer II -HSE)

Table 4-10 Participants to the State-level workshop held on March 14, 2016, in Birnin Kebbi

ORGANIZATION	REPRESENTATIVES
Kebbi State Ministry of Environment	Mr. Maijega Mohammed Ameen (Director of Environment)
Kebbi State Ministry of Lands and Housing	Mr. Adamu Babangida (Land Acquisition and Valuation Officer)
Kebbi State Ministry of Women Affairs (Department of Social Services)	Mr. Zubairu Bala (Senior Officer)
Kebbi State Ministry of Agric	1. Mr. Bala Mohammed (Director -Agric Services) 2. Mr. Kiskuwa Zaga (Director -Irrigation Engineering)
Federal Controller of Works in Kebbi State (Department in Charge of Federal Roads)	1. Engr. Mohammed Goni (Federal Controller of Works -Kebbi State) 2. Mr. Abubakar M. Kalgo (Field Officer -Highway)
1st Battalion Nigerian Army	Lt. C.C. Iwuala (Adjutant -Dukku Barracks B/Kebbi)
Transmission Company of Nigeria (TCN)	1. Mr. Joseph Akande (Asst. Gen Mngr -CR&E) 2. Ms. Ruskin, I.B.A. (Manager -ERSU) 3. Mr. Yusuf Babatunde (Senior Manager-Chem)

Table 4-11 Participants to LGA workshop, held on February March 14, 2016, in Birnin Kebbi

ORGANIZATION	REPRESENTATIVES
Birnin Kebbi LGA	1. Mohammed Usman Ambursa -Director of Works/Services 2. Hussain Bunza -Director Social Dev. 3. Shehu Ahmadu -Director of Public Health
Kalgo LGA	1. Musa Hassan Kalgo -Sole Administrator 2. Garba Abdullahi Bauna -Director of Works/Services 3. Ms. Saude Mohammed Kamba - Director Social Development 4. Abubakar Dan Iya Bunza -Director of Health
Arewa LGA	1. Umaru Tanko Jega -Director Social Development 2. Yahaya Ahmed -Director of Works/Services 3. Ms. Saude Mohammed
Farmers Association Arewa LGA	Alh. Ahmadu Sarkin Noma -Sarkin Noma
Miyetti Allah Cattle Association (Kalgo LGA)	Muhammad R/Kalgo -ArdoKalgo Fulani
Miyetti Allah Cattle Association (Arewa LGA)	Muhammad Dan Garso -Miyetti Allah
Transmission Company of Nigeria (TCN)	1. Mr. Joseph Akande (Asst. Gen Mngr -CR&E) 2. Ms. Ruskin, I.B.A. (Manager -ERSU) 3. Mr. Yusuf Babatunde (Senior Manager-Chem)
Director of Security Services	Ishaya Bazo -State Security Service

Table 4-12 Participants to Village Chief workshop, held on March 11th, 2016, in Birnin Kebbi

VILLAGE	LGA	REPRESENTATIVES
Eri	Arewa	Sule Maigari -Village Head
Tudunwada K/Giwa	Arewa	Muhammadu Shabi -Village Head
Unguear Labbo	Arewa	Alhaji Sallou -Village Head
Unguwan Musa	Arewa	Usman Sani -Village Head
Zukuku	Arewa	Ismaila Talabu -Village Head
Kola	B/Kebbi	Usman Zarumai -Head of village
Nasarawa 2	B/Kebbi	Malam Shehu Hanafi -Village Head
Sabon Gari Gorun	B/Kebbi	Hassam Mohammed -Village Head
Unguwan Dambo	B/Kebbi	Muhammad Hakimi -Village Head
Unguwan Mai Rago	B/Kebbi	*No representative*
Ungwan Gaga	B/Kebbi	Garba Liman -Village Head
Kutukullu	Kalgo	Muhammet -Village Head
Nayalwa	Kalgo	Muhammadu Kabiru -District Head
Sandare Babba	Kalgo	Maigari Sani -Village Head
Unguwan Dodo	Kalgo	Garba Hakimi -Village Head
Unguwan Masoyi	Kalgo	Garba Hakimi -Village Head Bello Hakimi

4.2.2.3 STAKEHOLDERS' COMMENTS AND RECOMMENDATIONS REGARDING COMPENSATION AND RESETTLEMENT ASSISTANCE MEASURES

Table 4-13 below provides a summary of the main comments and recommendations made by stakeholders on different elements of the draft RAP. Adjustments made to the draft RAP in response to these inputs from stakeholders are also provided, where applicable.

Table 4-13 Main comments and recommendations made by stakeholders on different elements of the draft RAP

TOPIC	COMMENTS AND RECOMMENDATIONS	STAKEHOLDERS THAT COMMENTED / PROVIDED RECOMMENDATIONS	ADJUSTMENTS TO FINAL RAP
Community Land	Ensure compensation is paid directly to the PAPs farming in the Wetland area surveyed as community land.	TCN (Environment Unit)	TCN will instruct the PIU accordingly.
Compensation for undeveloped land	It is recommended to pay compensation for land that has no asset, where the owner has certificate of ownership or customary ownership to avoid lengthy grievance or even litigation.	TCN (Wayleave Unit)	All lands, including fallow lands, will be compensated.
Replacement of community structures	Communities and women representatives have asked for the adequate replacement of community structures such as hospitals, dispensaries or other government buildings affected by the project.	Community leaders / Women representatives	All community structures affected will be replaced
Electrification of villages	The people of the area will be satisfied and provide more support to the project if electrification of villages within 10km is approved.	Arewa LGA (Sarkin Noma, Farmers Association)	A rural electrification component is included in the project. The feasibility of connecting each communities within a 10 km radius of the transmission line is assessed in the technical report.
Community Compensation Fund (CCF)	Consider the Dukku Barracks as a community for the inclusion in the CCF projects and be invited to all engagements with communities the line crossings. The line passes through the Barracks land for several kilometers.	1st Battalion Dukku Barracks, Birnin Kebbi	The Dukku Barracks can be considered as a community in the CCF projects.
When to vacate land	Provide adequate notice to vacate acquired land and ensure no crop is lost.	Village Head of Tudun-Wada Kangiwa (Muhammadu Shabi)	Construction will be done after crops season as much as possible. As mentioned in the section 9.3 all PAP will receive notice of acquisition by Land Ministry at least 6 weeks prior to the acquisition itself.
Wetland crossing	Claim of existence of dry season farmlands in Unguwan Dodo that were not included in the October 2015 survey.	Village Chief of Unguwan Dodo	This information was checked in the field and no farmland was observed (see 4th round of consultation report in Appendix 5)

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

This section presents data related to 498 households affected by the project's wayleave and 84 households in the control group, located outside the wayleave (Table 5-1). All collected data and registry of affected assets (RAA) can be found in Appendix 7. Data gathered on the 16 villages affected by the wayleave is also analyzed.

It is important to mention that the assets enumeration and valuation presented here will be reviewed and finalized thru an official review process before compensation and resettlement begin (see section 9.3 for details)

Table 5-1 Number of Completed Questionnaires by Affected Households, Control Group Households and Community Survey

	LOCAL GOVERNMENTAL AREA			TOTAL	CONTROL GROUP
	AREWA	BIRNIN KEBBI	KALGO		
Number of households affected by the wayleave	186	195	117	498	84
Number of villages crossed by the wayleave	6	6	4	16	-

5.1 CHARACTERISTICS OF COMMUNITIES

5.1.1 DEMOGRAPHICS

The project wayleave crosses a total of 16 villages and sub-counties, with a population of 592 200 inhabitants (Appendix 9).

Table 5-2 Population Distribution in Villages Affected by the Wayleave

POPULATION CHARACTERISTICS		LOCAL GOVERNMENTAL AREA			TOTAL
		AREWA	BIRNIN KEBBI	KALGO	
Number of villages crossed by the wayleave		6	6	4	16
Number of villages crossed by the wayleave with a special group (Fulani pastoralist)		1	4	4	9
Total population in villages crossed by the wayleave		9 500	563 500	19 200	592 200
Villages' sociodemographic characteristics					
Ethnic Group	Hausa	88.2%	64.6%	71.9%	65.2%
	Fulani	5.5%	32.1%	5.1%	30.8%
	Zabarmawa	3.2%	3.1%	9.0%	3.3%
	Other	3.2%	0.2%	14.1%	0.7%
Occupation	Farmer	94.1%	86.9%	82.7%	86.9%
	Pastoralist	11.1%	8.3%	14.3%	8.5%
	Self-employed	12.4%	2.2%	11.5%	2.6%
	Private employee	2.2%	0.1%	0%	0.1%
	Public employee	5.1%	2.6%	4.2%	2.7%
Religion	Muslim	99.2%	100%	100%	100%
	Christian	0.8%	0%	0%	0%

Notes: The villages' sociodemographic characteristics are calculated from the total number of village population in a row.
The village members may have more than one occupation. The total does not equal 100%.
Source: Local Community Questionnaire.

The main ethnic groups present in the villages are the Hausa 65.2% and the Fulani 30.8%. The LGA of Birnin Kebbi group has a larger proportion of Fulani (32.1%) than the two other LGAs (around 5%). Kalgo LGA is more ethnically diversified since 14.3% of its population is classified in the ''other ethnic groups'' category.

The special groups indicated are essentially Fulani pastoralists that crosses the region with their cattles.

The main occupation is farming; 86.9% of the population being in that category. It should be noted that Pastoralist and Self-Employed are more frequent occupation in Kalgo (14.3% and 11%) and Arewa (11.1% and 12.4%) than in Birnin Kebbi LGA (8.3% and 2.2%).

Also, the population is almost entirely Muslim, with only a very small proportion (0.8%) of the Arewa LGA population being Christian.

5.1.2 INFRASTRUCTURES AND COMMUNITY SERVICES

Table 5-3 Community Infrastructures in Villages Crossed by the Wayleave

INFRASTRUCTURE			LOCAL GOVERNMENTAL AREA			TOTAL
			AREWA	BIRNIN KEBBI	KALGO	
Number of villages crossed by the wayleave			6	6	4	16
Percentage of communities with at least one infrastructure (%) and number of infrastructures (No)						
Schools	Primary	%	66.7%	50.0%	75.0%	62,5%
		No	6	3	6	15
	Secondary	%	16.7%	16.7%	0%	12,5%
		No	3	1	0	4
	Tertiary	%	0%	0%	0%	0%
		No	0	0	0	0
Heath facility	PHC	%	0%	16.7%	50.0%	18,8%
		No	0	1	2	3
	Hospital	%	16.7%	0%	50.0%	18,8%
		No	2	0	2	4
Market/Trading center		%	66,7%	100%	100%	87.5%
		No	7	10	9	26
Slaughterhouse		%	66,7%	16.7%	75.0%	50.0%
		No	5	1	3	9
Administrative buildings		%	16,7%	50.0%	0%	25.0%
		No	1	4	0	5
Religious sites	Church	%	16.7%	0%	0%	6,3%
		No	1	0	0	1
	Mosque	%	100%	100%	100%	100%
		No	19	73	16	108
	Other religious site	%	0%	16.7%	0%	6,3%
		No	0	1	0	1
Heritage or cultural site		%	66.7%	50.0%	100%	68.8%
		No	5	7	4	16
Machinery/Production centre		%	83.3%	33.3%	50.0%	56.3%
		No	14	61	17	92
Water supply facilities		%	83.3%	83.3%	100%	87.5%
		No	14	27	44	85
Lodging facilities		%	16.7%	0%	0%	6.3%
		No	4	0	0	4
Police centre		%	0%	33.3%	25.0%	18.8%
		No	0	2	1	3
Number of infrastructures			**81**	**191**	**104**	**376**

Source: Local Community Questionnaire % means the proportion of village that have the type of infrastructure. For example 66.7% of the villages crossed by the project in Arewa LGA have at least one primary school.

Surveys of community infrastructure indicate that there are no tertiary institutions in the affected settlements and the primary schools are the most common 6 Nos. each in both Arewa and Kalgo LGs and 3 Nos. in Birnin Kebbi LG. Arewa also has 3 Nos. secondary schools in Arewa LG and 1 No. in Birnin Kebbi LG.

There are another 10 Nos. Markets/Trading centers serving the PAPs' neighbourhood in Birnin Kebbi LG, 9 Nos. in Kalgo LG, and 7 Nos. in Arewa LG. The most occurring community facility are Machinery/Production centres with 61 Nos. in Birnin Kebbi (being the most urban of the LGs.), 17 in Kalgo LG, and 14 in Arewa LG. These indicate a vibrant state of economic activities among communities.

Furthermore, on the social aspect, there is a vast number of religious/worship places distributed as follows: 73 Nos. mosques in Birnin Kebbi LG, 17 Nos. in Arewa LG, and 16 Nos. in Kalgo LG. Also worthy of mentioning is the fact that there is 1 No. church in Arewa LG.

It is envisaged that the project will not significantly alter the lifestyle of the community as the vast majority of these community facilities will not be directly impacted (see table 5-6 for the affected structures).

Table 5-4 Workforce in the Villages Crossed by the Wayleave

WORKFORCE	LOCAL GOVERNMENTAL AREA			TOTAL
	AREWA	BIRNIN KEBBI	KALGO	
Experienced pylon assembler	16.7%	33.3%	25.0%	25.0%
Carpenter	66.7%	100%	75.0%	81.3%
Welder	33.3%	83.3%	0%	43.8%
Electrician	16.7%	83.3%	50.0%	50.0%
Truck driver	66.7%	66.7%	25.0%	56.3%
Taxi (car, tricycle, motorcycle)	83.3%	100%	100%	93.8%
Heavy machinery operator (shovel operator, caterpillar, etc.)	16.7%	50.0%	25.0%	31.3%
Mechanic	66.7%	83.3%	100%	81.3%
Mason	66.7%	83.3%	100%	81.3%
Painter	33.3%	66.7%	25.0%	43.8%
Chainsaw operator	33.3%	0%	0%	12.5%
Commercial Farm workers	83.3%	83.3%	75.0%	81.3%
Other workforce	16.7%	33.3%	50.0%	31.3%
Number of villages	**6**	**6**	**4**	**16**

Source: Local Community Questionnaire: % means the proportion of village that have the type of workforce. For example, 66.7% of the village crossed by the project in Arewa LGA have at least one mechanic among its workforce.

The above table (Table 5-4) shows the distribution of artisanal skills across the villages impacted by the project. The composition shows a mix of carpenters, auto-mechanics, masons, and several others. Chainsaw operators as less common. It is envisaged that they would continue with their work lives post settlement and would particularly find temporary jobs as the project is implemented. For instance, masons could be involved in the laying of concrete foundations for the pylons.

Table 5-5 Services of Villages Crossing the Wayleave

SERVICES	LOCAL GOVERNMENTAL AREA			TOTAL
	Arewa	Birnin Kebbi	Kalgo	
Trucks/Lorry	0%	0%	25.0%	6.3%
Mechanical (dealers, repairs, etc.)	16.7%	16.7%	75.0%	31.3%
Petroleum products (sales, storage, etc.)	66.7%	50.0%	100%	68.8%
Heavy machinery (crane, bulldozer, excavator, etc.)	0%	0%	0%	0%
Materials (wood, stone, sand, cement, etc.)	66.7%	83.3%	75.0%	75.0%
Food eating place	16.7%	66.7%	75.0%	50.0%
Sleeping place (hotel, lodge)	16.7%	0%	0%	6.3%
Logging companies	0%	50.0%	0%	18.8%
Bank/Mobile money	0%	0%	25.0%	6.3%
Post office	0%	0%	0%	0%
Security company	16.7%	0%	0%	6.3%
Other service	16.7%	16.7%	25.0%	18.8%
Number of villages	**6**	**6**	**4**	**16**

Source: The Local Community Questionnaire % means the proportion of villages that have a certain type of service. For example, 66.7 percent of the village crossed by the project in Arewa LGA have at least one store/petro-station where petroleum products can be found.

The table above presents the composition of services available within the impacted villages. These will be positively impacted and it will be helpful if local building material needs are sourced from these communities. Materials such as sand, stones, cement and wood, petrol for machinery, and services (food, lodging) for the construction work can be bought in the villages when the project is being executed.

5.1.3 STRUCTURES, NATURAL, CEREMONIAL OR HERITAGE SITES ENTIRELY OR PARTIALLY LOCATED IN THE WAYLEAVE

Table 5-6 Building Construction and Community Site in the Wayleave

GROUP	TYPE	LOCAL GOVERNMENTAL AREA			TOTAL
		AREWA	BIRNIN KEBBI	KALGO	
Building	Islamic school	0	1	0	1
	Mosque	0	2	0	2
Site	Natural area	0	1	0	1
	Drillhole	0	0	1	1

Note: One community did not give information.

The table 5-6 shows that there are one (1) Islamic school and two (2) mosques in Birnin Kebbi that need to be moved because they are within the proposed wayleave.

One (1) natural area (a marsh that is heavily cultivated) is also impacted in Birnin Kebbi with one (1) drillhole in Kalgo.

5.2 CHARACTERISTICS OF AFFECTED HOUSEHOLDS AND THE CONTROL GROUP

5.2.1 CHARACTERISTICS OF HEADS OF HOUSEHOLDS

Heads of households in the properties affected by the project wayleave are predominantly men (98.8%). Women represent only 1.2% of heads of households.

Hausa (85.9%) is the most represented ethnic among all leaders, followed by Zabarmawa (6.2%). The Fulani (12.8%) and Zabarmawa (13.8%) ethnic groups are more frequent among the affected households in Birnin Kebbi LGA.

A majority (79.5%) head of households declare farming as their main occupation the other most frequent occupation being Public Employee (6.8%) and Self-Employed (9.6%). The households in Birnin Kebbi are more frequently Self-employed (20%) or Public Employee (10.3%).

Almost all (99.8%) households are Muslim with only a small proportion (0.2%) being Christian. They are concentrated in the Birnin Kebbi LGA.

As for marital status, the two numerically main categories are Polygamous (47.6%) and Monogamous (46.2%). The Kalgo LGA head of household declare more frequently (58.2%) being in the Polygamous type of marital arrangements than in the other LGA.

The majority (54.2%) of the head of households declare no formal education, the others have attended primary (17.1%) or secondary (13.9%) schools. The Kalgo LGA head of household are less educated since 75.2% declared no formal schooling.

The control group is composed of 96.4% male head of households, the majority (53.6%) being married in a Polygamous arrangement and the other being Monogamous (36.9%). The main occupations of the head of households are Farmers (57.1%), Public Employees (20.2%) and other (10.7%). The vast majority of the control group's head of households declare being Hausa (86.9%) or Fulani (6%). They are largely educated as only 34.3% declare no formal education but 20.2% secondary education and 21.4% college education. The vast majority are Muslim (95.2%).

Table 5-7 Head of Household Characteristics

Sociodemographic Characteristics		Local Governmental Area				Control group
		AREWA	BIRNIN KEBBI	KALGO	TOTAL	
Gender	Male	98.9%	98.5%	99.1%	98.8%	96.4%
	Female	1.1%	1.5%	0.9%	1.2%	3.6%
Marital Status	Single	5.4%	5.6%	6.8%	5.8%	8.3%
	Married – monogamous	52.2%	47.7%	34.2%	46.2%	36.9%
	Married – polygamous	41.9%	46.7%	58.1%	47.6%	53.6%
	Widowed	0.5%	0%	0.9%	0.4%	1.2%
Main occupation	Farmer	89.8%	62.1%	92.3%	79.5%	57.1%
	Pastoralist	0%	1.5%	0%	0.6%	0%
	Self-employed	2.2%	20.0%	4.3%	9.6%	9.5%
	Private employee	1.1%	2.6%	0.9%	1.6%	1.2%
	Public employee	6.5%	10.3%	1.7%	6.8%	20.2%
	Do not know	0.0%	0.5%	0.9%	0.4%	1.2%
	Other	0.5%	3.1%	0%	1.4%	10.7%
Religion	Muslim	100%	99.5%	100%	99.8%	95.2%
	Christian	0%	0.5%	0%	0.2%	4.8%
Formal education	No formal education	43.0%	52.3%	75.2%	54.2%	34.5%
	Primary	19.4%	15.9%	15.4%	17.1%	4.8%
	Secondary	18.3%	12.8%	8.5%	13.9%	20.2%
	College	11.3%	8.2%	0.9%	7.6%	21.4%
	University	2.7%	9.7%	0%	4.8%	10.7%
	Do not know	5.4%	1.0%	0%	2.4%	8.3%
Informal education	No informal education	12.9%	1.5%	10.3%	7.8%	6.0%
	Koranic school	86.6%	94.4%	89.7%	90.4%	81.0%
	Other	0.5%	4.1%	0%	1.8%	13.1%
Ethnic group	Hausa	100.0%	68.7%	92.3%	85.9%	86.9%
	Fulani	0%	12.8%	3.4%	5.8%	6.0%
	Zabarmawa	0%	13.8%	3.4%	6.2%	2.4%
	Other	0%	4.6%	0.9%	2.0%	4.8%
Number of households		**186**	**195**	**117**	**498**	**84**

Source: Household Questionnaire

5.2.2 CHARACTERISTICS OF HOUSEHOLD'S MEMBERS

Table 5-8 Age and Gender Distribution of Affected Households and Control Group Households

Age	Sex	Local Governmental Area				Control group
		AREWA	BIRNIN KEBBI	KALGO	TOTAL	
0 - 4 years old	Male	5.5%	9.0%	9.8%	8.3%	6.4%
	Female	6.2%	7.0%	6.8%	6.7%	5.4%
	Total	**11.7%**	**16.0%**	**16.7%**	**15.0%**	**11.7%**
5 - 15 years old	Male	23.1%	21.8%	23.5%	22.7%	20.7%
	Female	15.3%	19.7%	16.9%	17.6%	16.9%
	Total	**38.4%**	**41.5%**	**40.4%**	**40.3%**	**37.6%**
16 - 35 years old	Male	19.8%	14.6%	18.0%	17.0%	19.3%
	Female	22.5%	19.8%	21.0%	20.9%	22.5%
	Total	**42.3%**	**34.4%**	**38.9%**	**37.9%**	**41.7%**
36 - 54 years old	Male	1.6%	1.7%	0.9%	1.4%	2.4%
	Female	5.6%	5.1%	2.4%	4.4%	5.2%
	Total	**7.2%**	**6.8%**	**3.2%**	**5.8%**	**7.6%**
55 years old and up	Male	0%	0.5%	0.4%	0.4%	0.4%
	Female	0.5%	0.8%	0.3%	0.6%	1.0%
	Total	**0.5%**	**1.3%**	**0.7%**	**0.9%**	**1.4%**
Total	Male	49.9%	47.6%	52.6%	49.8%	49.1%
	Female	50.1%	52.4%	47.4%	50.2%	50.9%
	Total	**100%**	**100%**	**100%**	**100%**	**100%**
Number of members of households		**823**	**1 296**	**935**	**3 054**	**503**

Note: The data distribution by age groups exclude the head of households.
Source: Household Questionnaire

As for the affected households' composition, the survey shows that a large proportion (40.3%) of them are 15 years old or younger. The proportion of older people (55 years old or older) is very small 0.9%. Male (49.8%) and female (50.2%) are almost equally represented.

5.2.3 INCOME AND PROPERTY OF HOUSEHOLDS

Table 5-9 Number and Characteristics of Land Parcels used by Affected Households and Control Group Households

PARCEL		LOCAL GOVERNMENTAL AREA				CONTROL GROUP
		AREWA	BIRNIN KEBBI	KALGO	TOTAL	
Average land parcel per household		1.1	2.1	1.5	1.6	1.5
Average land parcel area (acre)		2,3	2,9	5,3	3,3	2,8
Land parcels' characteristics						
Uses	Crop growing	95.5%	88.5%	97.2%	92.3%	53.6%
	House/store	0.5%	6.6%	0.6%	3.7%	24.0%
	Others	4.0%	4.9%	2.2%	4.1%	22.4%
Ownership/ land use right	Customary law	84.5%	28.0%	11.7%	38.6%	24.0%
	Bought	4.5%	33.7%	16.7%	22.4%	44.0%
	Leasehold/certificate of ownership	9.0%	8.3%	43.3%	16.5%	20.0%
	Others	2.0%	30.0%	28.3%	22.5%	12.0%
Number of land parcels		**200**	**410**	**180**	**790**	**125**

The land holding characteristics vary markedly among the PAPs across the three LGs ranging from 1.1 to 2.1 parcels on average, and from 5.7 to 13.1 acres for crop or farm lands in the affected villages.

Additionally, as it usually is the case with agrarian societies, between 88.5% and 97.2% of their total land holding is devoted to farming, while between 0.5% and 6.6% is used for housing and other ancillary uses.

About a third of the PAPs in Birnin Kebbi LG bought their property; slightly over 16% of the households in Kalgo and 4.5% in Arewa LGs acquired their lands through purchase. This indicates a thriving market in the Birnin Kebbi LG and implies that lands can be easily sourced for PAPs who would have to be displaced. In the other two LGs, Arewa exhibits characteristics of a rather homogenous group that is yet to experience changes in its social composition. It is worth nothing that the proportion of PAPs having leasehold or a certificate of ownership is much higher in Kalgo (43.3%) than in the other two LG's.

The land in Nigeria is characterized as urban, non-urban or local areas. The administration of the urban land is vested in the Governor, while the latter is vested in the Local Government Councils. The rate of the land is based on the category belonging to the State where individuals only enjoy a right of occupancy as stated in the Certificate of Occupancy. The Governor administers the land for the common good and benefits of all Nigerians. The law makes it right for the Governor to grant statutory rights of occupancy for all purposes including grant easements related to statutory rights of occupancy and the right to demand rent. The statutory rights of occupancy are for a definite time (the time limit is 99 years) and may be granted subject to the terms of any contract made between the state Governor and the holder.

The Local Government Councils may grant customary rights of occupancy for agricultural (including grazing and ancillary activities), residential and other purposes. The limit of such grant is 500 hectares for agricultural purpose and 5,000 for grazing, except with the consent of the Governor. (for details on land tenure in Nigeria see section 3.2.1 above)

Table 5-10 Agriculture's Production and Sales per Affected Household and Control Group Household

CROPS		LOCAL GOVERNMENTAL AREA				CONTROL GROUP
		AREWA	BIRNIN KEBBI	KALGO	TOTAL	
Millet	Producers	87.1%	79.5%	90.6%	84.9%	59.5%
	Sellers	64.8%	25.2%	18.9%	38.8%	46.0%
	Average quantity produced (bags)	32.0	41.9	33.9	36.1	44.0
Beans	Producers	73.7%	79.0%	81.2%	77.5%	67.9%
	Sellers	71.5%	27.9%	42.1%	46.9%	61.4%
	Average quantity produced (bags)	14.5	13.0	32.3	18.3	54.1
Sorghum	Producers	38.7%	40.5%	89.7%	51.4%	38.1%
	Sellers	50.0%	17.7%	20.0%	27.7%	50.0%
	Average quantity produced (bags)	18.4	15.0	31.6	22.8	57.6
Rice	Producers	9.1%	45.1%	51.3%	33.1%	25.0%
	Sellers	58.8%	44.3%	43.3%	45.5%	47.6%
	Average quantity produced (bags)	35.1	42.4	45.9	42.9	60.0
Cassava	Producers	3.2%	12.3%	51.3%	18.1%	14.3%
	Sellers	66.7%	41.7%	43.3%	44.4%	75.0%
	Average quantity produced (bags)	18.8	13.5	16.7	16.0	16.0
Ground nuts	Producers	17.7%	5.6%	33.3%	16.7%	11.9%
	Sellers	97.0%	63.6%	64.1%	77.1%	90.0%
	Average quantity produced (bags)	21.8	28.4	24.9	24.2	21.3
Maize	Producers	4.3%	13.3%	29.1%	13.7%	21.4%
	Sellers	75.0%	50.0%	26.5%	41.2%	55.6%
	Average quantity produced (bags)	23.6	62.6	16.4	34.9	21.8
Mangos	Producers	0%	5.1%	17.1%	6.0%	6.0%
	Sellers	0%	80.0%	70.0%	73.3%	80.0%
	Average quantity produced (baskets)	0	77.1	36.2	49.8	52.0
Others	Producers	2.2%	16.4%	15.4%	10.8%	4.8%
	Sellers	50.0%	65.6%	50.0%	59.3%	50.0%
Number of households		**186**	**195**	**117**	**498**	**84**

Notes: Percentage of producers is calculated from the total number of households.
Percentage of sellers is calculated from the total number of producers.
A bag is equivalent to 100 kg and a basket X kg.

Table 5-10 shows the main crops farmed by the PAPs. These crops are used mainly for food while a large proportion of some is cropped and disposed for income.

The table shows the proportion of PAPs who engage in the production of a specific crop. For instance, millet, beans and orghum are where most of the PAPs' crops grow. For most of these crops, a large proportion of households, from 35 to 70%, sell at least a part of their production on the market for cash income. While crops like millet, sorghum, and maize are grown mainly as staples, rice, beans, and cassava; groundnuts are grown for income. This explains the relatively high proportion of households who sell part of their produce for these last crops.

Furthermore, the table below shows the average output per household for each crop, as surveyed. Rice, maize and millet are the crops that generate the most important output.

Table 5-11 Livestock Production and Sales per Affected Household and Control Group's Household

LIVESTOCK		LOCAL GOVERNMENTAL AREA				CONTROL GROUP
		AREWA	BIRNIN KEBBI	KALGO	TOTAL	
Goat	Stockbreeder	65.6%	65.1%	88.9%	70.9%	60.7%
	Sellers	18.9%	40.9%	26.0%	28.9%	58.8%
	Average quantity possessed	11.4	9.2	11.1	10.5	8.8
Cow	Stockbreeder	71.0%	63.1%	77.8%	69.5%	60.7%
	Sellers	18.9%	50.4%	22.0%	30.9%	49.0%
	Average quantity possessed	8.4	14.7	6.0	10.0	6.8
Sheep	Stockbreeder	72.6%	49.7%	82.1%	65.9%	59.5%
	Sellers	9.6%	23.7%	12.5%	14.6%	46.0%
	Average quantity possessed	9.5	4.8	7.7	7.6	7.5
Chicken (poultry)	Stockbreeder	54.3%	50.3%	83.8%	59.6%	51.2%
	Sellers	21.8%	35.7%	27.6%	28.3%	48.8%
	Average quantity possessed	27.4	39.5	33.8	33.5	39.1
Ram	Stockbreeder	62.9%	53.3%	68.4%	60.4%	44.0%
	Sellers	12.0%	37.5%	22.5%	23.6%	56.8%
	Average quantity possessed	6.0	4.4	4.3	5.0	4.3
Donkey	Stockbreeder	18.3%	20.0%	58.1%	28.3%	17.9%
	Sellers	8.8%	10.3%	2.9%	6.4%	13.3%
	Average quantity possessed	2.4	1.5	1.4	1.7	1.9
Camel	Stockbreeder	2.7%	6.7%	12.0%	6.4%	6.0%
	Sellers	0%	15.4%	7.1%	9.4%	40.0%
	Average quantity possessed	5.4	1.5	1.3	2.0	3.0
Others	Stockbreeder	1.1%	6.2%	5.1%	4.0%	13.1%
	Sellers	100.0%	25.0%	33.3%	35.0%	36.4%
	Average quantity possessed	10.0	29.8	23.0	25.8	35.1
Number of households		**186**	**195**	**117**	**498**	**84**

Notes: The percentage of stockbreeders is calculated from the total number of households.
The percentage of sellers is calculated from the total number of stockbreeders.

Table 5-11 shows the types of animals reared by affected PAPs alongside the proportion of households who sell among the breeders.

The bulk of these animals are raised for meat while others, like donkeys and camels, are transportation animals. These households are mostly small breeders holding between 5 and 15 of these farm animals (with the exception of chicken, where the average number (33.5) is higher).

The percentage of households who sold at least one animal in the last year vary greatly from one type of animal to the other. For instance, if only 6.4% sold a donkey in the last year, 30.9% reported having sold at least one cow in the past year.

Table 5-12 Sources of Income of Affected Household and Control Group's Households

ACTIVITY		LOCAL GOVERNMENTAL AREA				CONTROL GROUP
		AREWA	BIRNIN KEBBI	KALGO	TOTAL	
Fishing	Household having practiced	0.5%	14.9%	19.7%	10.6%	2.4%
	Household having declared a source of income	100.0%	58.6%	60.9%	60.4%	50.0%
Hunting	Household having practiced	7.5%	10.8%	9.4%	9.2%	8.3%
	Household having declared a source of income	7.1%	38.1%	18.2%	23.9%	14.3%
Charcoal	Household having produce	0.5%	2.1%	3.4%	1.8%	1.2%
	Household having declared a source of income	0%	50.0%	50.0%	44.4%	100%
Wood	Household having collected	32.3%	49.2%	40.2%	40.8%	42.9%
	Household having declared a source of income	30.0%	46.9%	23.4%	36.5%	63.9%
Others	**Household having declared a source of income from:**					
	Business	21.5%	37.9%	40.2%	32.3%	53.6%
	Pension	2.7%	4.1%	2.6%	3.2%	1.2%
	Money transfer (family)	8.6%	13.3%	24.8%	14.3%	22.6%
	Renting (land, house, etc.)	2.2%	11.8%	8.5%	7.4%	11.9%
	Salary (official)	9.7%	28.7%	6.8%	16.5%	29.8%
	Odd or casual contract work	2.7%	11.8%	22.2%	10.8%	16.7%
	Other sources	2.7%	11.8%	14.5%	9.0%	21.4%
Number of households		**186**	**195**	**117**	**498**	**84**

Notes: The percentage of households is calculated from the total number of households.
The percentage of household having declared a source of income is calculated from the total number of household who practice the activity.

Table 5-12 shows the main occupations of PAPs and the proportion of these households that declare other occupations than crop or husbandry as sources of income.

In a rural setting, it will be observed that most households engage in more than one job to boost income, varying work activity with the seasons, and level of acquired skills and relative size of household farmland holding. As the table shows, the importance of these sources varies greatly from an LGA to the other. For instance, while just about 0.5% of PAPs households engage in fishing in Arewa LG, the ones undertaking fishing declare doing so for income. In the other LG, the proportion that sells part of their fish is around 60% while a larger proportion of the households, around 15%, declare fishing as an activity.

All those engaging in charcoal wood making (0.5% of PAPs) in Arewa do so for their own use. As such, it is not declared as a source of income. In the other LG, the proportion that sells part of the charcoal they produce is around 50%.

Table 5-13 Property of Affected Households and Control Group Households

HOUSEHOLD FACILITIES	LOCAL GOVERNMENTAL AREA				CONTROL GROUP
	AREWA	BIRNIN KEBBI	KALGO	TOTAL	
Power generator	29.6%	34.9%	28.2%	31.3%	31.0%
Gas stove / kerosene	12.4%	32.8%	21.4%	22.5%	27.4%
Refrigerator	25.3%	43.6%	3.4%	27.3%	36.9%
Television	34.4%	59.5%	24.8%	42.0%	44.0%
Radio / cassette / music system	71.0%	70.3%	82.9%	73.5%	70.2%
Car / truck	12.9%	27.7%	1.7%	16.1%	25.0%
Motor cycle	59.7%	56.4%	59.8%	58.4%	56.0%
Bicycle	39.2%	26.2%	64.1%	40.0%	33.3%
Plow	25.3%	35.9%	64.1%	38.6%	31.0%
Cart	36.0%	7.7%	22.2%	21.7%	15.5%
House in town	27.4%	48.2%	25.6%	35.1%	45.2%
Land in town	6.5%	35.4%	14.5%	19.7%	47.6%
Number of households	**186**	**195**	**117**	**498**	**84**

Households have their house items and property depicted in Table 5-13; these are based on the surveys conducted. The most common mean of transportation that is owned by the PAPs is the motorcycle (almost two-thirds of the PAPs), while about 40% on the average across the LGs own a bicycle. About a fourth own a television across the three LGs, with 60% of Birnin Kebbi households owning one and against 25% in Kalgo LG (the relatively less urbanized of the three LGs). Buttressing this fact, slightly over 82% of Kalgo LG PAPs own a radio cassette player, while the 70% average for Birnin Kebbi and Arewa LGs as means of information reception or entertainment.

Table 5-14 Main Residence Characteristics of Affected Households and Control Group

	MATERIAL	LOCAL GOVERNMENTAL AREA				CONTROL GROUP
		AREWA	BIRNIN KEBBI	KALGO	TOTAL	
Roof	Corrugated Iron Sheets (CIS)	75.3%	87.7%	78.6%	80.9%	70.2%
	Thatch	3.8%	4.1%	16.2%	6.8%	6.0%
	Asbestos	0%	0%	0.9%	0.2%	2.4%
	Concrete / cement	0.5%	1.0%	0.9%	0.8%	7.1%
	Wood and mud	19.4%	0.5%	3.4%	8.2%	3.6%
	Bamboo / reed	0%	1.0%	0%	0.4%	0%
	Plastic canvas	0%	1.0%	0%	0.4%	0%
	Bricks	0.5%	0%	0%	0.2%	0%
	Other	0.5%	4.6%	0%	2.0%	10.7%
Walls	Mud bricks	62.9%	30.8%	43.6%	45.8%	32.1%
	Mud	31.7%	17.4%	41.0%	28.3%	28.6%
	Burnt bricks	0.5%	19.5%	0.9%	8.0%	6.0%
	Block	0.5%	14.4%	2.6%	6.4%	7.1%
	Concrete	3.2%	5.1%	7.7%	5.0%	10.7%
	Plain mud	0%	4.6%	3.4%	2.6%	1.2%
	Grass	0%	3.1%	0%	1.2%	0%
	Wood	0%	0.5%	0%	0.2%	1.2%
	Compacted	0%	0.5%	0%	0.2%	1.2%
	Other	1.1%	4.1%	0.9%	2.2%	11.9%

Table 5-14 Main Residence Characteristics of Affected Households and Control Group (cont.)

MATERIAL		LOCAL GOVERNMENTAL AREA				CONTROL GROUP
		AREWA	BIRNIN KEBBI	KALGO	TOTAL	
Floor	Earth / sand / straw	59.7%	58.5%	41.9%	55.0%	41.7%
	Smoothed mud	32.3%	16.9%	31.6%	26.1%	26.2%
	Smoothed cement	7.0%	15.4%	26.5%	14.9%	15.5%
	Ceramic tiles	0.5%	8.7%	0%	3.6%	3.6%
	Other	0.5%	0.5%	0%	0.4%	13.1%
Number of households		**186**	**195**	**117**	**498**	**84**

Table 5-14 presents the major construction details for structures owned by PAPs in the three LGs of Arewa, Birnin Kebbi, and Kalgo.

The predominant roof clad is corrugated iron sheets and is used in over 80% of households. The walls of most of these houses are made of mud bricks or compacted mud (45.8% and 30.9% respectively), with concrete and similar elements account for the wall of just over 11% of the houses.

As for the floor, most (55%) of the houses have packed earth while around 40% of the houses have furnished floor on smoothed earth (26.1%) or cement(14.9%).

The houses in Birnin Kebbi are more urbanized with a larger proportion having corrugated iron sheets as a roof as well as the following features: concrete block, concrete walls, etc.

Table 5-15 Energy and Water Source of Affected Households and Control Group

SOURCE		LOCAL GOVERNMENTAL AREA				CONTROL GROUP
		AREWA	BIRNIN KEBBI	KALGO	TOTAL	
Energy for cooking	Firewood (biomass)	96.2%	81.5%	99.1%	91.2%	77.4%
	Main electricity	1.6%	8.2%	0.9%	4.0%	7.1%
	Paraffin / kerosene	1.6%	6.7%	0%	3.2%	0%
	Gas (biogas)	0.5%	2.1%	0%	1.0%	2.4%
	Charcoal	0%	0.5%	0%	0.2%	3.6%
	Other	0%	1.0%	0%	0.4%	9.5%
Energy for lightning	Main electricity	7.0%	84.1%	7.7%	37.3%	38.1%
	Wick lamp	33.3%	3.1%	41.9%	23.5%	9.5%
	Candles	49.5%	4.1%	0.9%	20.3%	25.0%
	Hurricane lamp	3.8%	3.1%	35.9%	11.0%	11.9%
	Generator	0.5%	0.5%	8.5%	2.4%	2.4%
	Firewood (biomass)	2.2%	1.0%	0%	1.2%	3.6%
	Other	3.8%	4.1%	5.1%	4.2%	9.5%
Drinking water: dry season	Borehole / well	90.3%	81.5%	98.3%	88.8%	77.4%
	Piped water	0%	13.3%	0.9%	5.4%	8.3%
	Water vendor	7.0%	1.5%	0%	3.2%	1.2%
	Bottled water	2.2%	1.0%	0%	1.2%	3.6%
	Surface water	0%	1.0%	0.9%	0.6%	0%
	Other	0.5%	1.5%	0%	0.8%	9.5%
Drinking water: wet season	Borehole / well	87.1%	77.9%	97.4%	85.9%	78.6%
	Piped water	0.5%	13.3%	0.9%	5.6%	9.5%
	Water vendor	7.0%	2.1%	0%	3.4%	2.4%
	Rainwater catchment	2.2%	2.6%	0%	1.8%	0%
	Bottled water	2.2%	1.5%	0%	1.4%	0%
	Surface water	0.5%	1.0%	0.9%	0.8%	0%
	Other	0.5%	1.5%	0.9%	1.0%	9.5%
Number of households		**186**	**195**	**117**	**498**	**84**

Our surveys (Table 5-15) indicate that the predominant energy source for cooking by households is wood (91%) while only a small proportion 8.2% of Birnin Kebbi use electricity for cooking.

A proportion of 38% use lamps and 37% have access to main electricity for lighting. Birnin Kebbi displays a much larger proportion of the households' (84.1%) uses for main electricity than the other LGA. The major source of drinking water is by borehole/well and averages 86% of all the households.

5.2.4 VULNERABLE PAPS AND HOUSEHOLDS

Table 5-16 Household Vulnerability of Affected Households and Control Group Households, Nigeria

VULNERABILITY	LOCAL GOVERNMENTAL AREA				CONTROL GROUP
	AREWA	BIRNIN KEBBI	KALGO	TOTAL	
Head of Household Characteristics (number)					
Female	2	3	1	6	3
Widowed	1	0	0	1	0
Child	1	1	0	2	0
Handicapped or chronically sick	6	22	17	45	5
Number of household with at least handicapped or chronically sick member	6	26	19	51	12
Number of household that use only one land parcel who it is inside the row	177	89	90	356	-
Number of households	**186**	**195**	**117**	**498**	**84**

Notes: The head of household registered in the "Widowed" category is also registered in the "Female" category.
The "Child" category includes a head of household aged 18 years old or under.
Others than the head of household.

As the table 5-16 shows, the numerically most important source of vulnerability is sickness or handicap of the head of household or one of the household's member.

One important risk is the fact that most of the affected households own only one parcel. The parcel affected by the ROW must be replaced in part or completely when the proportion of the parcel affected is too large (20% or more).

Table 5-17 Household Income Index of Affected Households and Control Group Households, Nigeria

HOUSEHOLD INCOME INDEX	LOCAL GOVERNMENTAL AREA				CONTROL GROUP
	AREWA	BIRNIN KEBBI	KALGO	TOTAL	
0	2.2%	0%	0%	0.8%	1.2%
1 - 5	57.5%	50.3%	35.0%	49.4%	48.8%
6 - 10	27.4%	32.3%	38.5%	31.9%	20.2%
11 - 15	11.8%	10.8%	17.1%	12.7%	21.4%
16 - 20	1.1%	3.1%	7.7%	3.4%	6.0%
21 - 25	0%	3.6%	1.7%	1.8%	2.4%
Number of households	**186**	**195**	**117**	**498**	**84**

Note: The index of economic development was created using information gathered on crops, livestock and business income in the 12 months preceding the survey. The number of bags (or other amounts) of agricultural products produced and sold, the number of animals owned and sold and the wages earned were each separated into 6 categories, for which a value of 0 to 5 was allocated. The five sources of economic development were then summed to obtain an index ranging from 0 to 25 where 0 means a precarious economic situation and 25 means a favorable economic situation resulting from the production of more than 200 bags of agricultural products, the sale of more than 100 bags of agricultural products, the possession of more than 100 animals, the sale of more than 48 animals and the revenues of over one million NGN.

5.2.5 STRUCTURES AND PARCELS AFFECTED BY THE WAYLEAVE

Table 5-18 Number and Characteristics of Land Parcels inside a ROW used by Affected Households and Control Group Households

PARCEL	LOCAL GOVERNMENTAL AREA				CONTROL GROUP
	AREWA	BIRNIN KEBBI	KALGO	TOTAL	
Number of land parcels in the wayleave	196	204	131	531	-
Number of land parcels without any affected trees or structures	184	167	83	434	-
Number of land parcels with at least one tree affected	10	28	28	66	-
Number of land parcels with at least one structure affected	1	9	17	27	-
Number of land parcels with at least one tree and one structure affected	0	0	3	3	-

Notes: One Arewa household did not provide information about his land parcel in the wayleave.
These parcels have no structure.
These parcels have no tree.

As can be seen in the table 5-18 above the vast majority of affected parcels are used for crops. Only a minority have trees (66) or structures (27 with houses and dependency) that need to be remove.

5.2.6 STRUCTURES IN THE WAYLEAVE

Table 5-19 Principal, Secondary and Commercial Structures in the Wayleave

STRUCTURES		LOCAL GOVERNMENTAL AREA			TOTAL
		AREWA	BIRNIN KEBBI	KALGO	
Principal structures					
Sandcrete blockwall house	Number	0	7	3	10
Mud house	Number	0	1	14	15
Total principal structures	**Number**	**0**	**8**	**17**	**25**
Secondary Structures					
Granary	Number	0	0	8	8
Kitchen	Number	0	0	2	2
Borehole	Number	0	1	0	1
Total secondary structures	**Number**	**0**	**1**	**10**	**11**
Commercial structures					
Block Making industry	Number	0	1	0	1
Mechanics Shop	Number	0	1	0	1
Sachet Water Distributor	Number	0	1	0	1
Shop	Number	0	2	0	2
Petrol station	Number	0	1	0	1
Total commercial structures	**Number**	**0**	**6**	**0**	**6**
Total compensation	**Number**	**0**	**15**	**27**	**42**

From the surveys made, the structures can be categorized into either a primary or a secondary type, as Table 5-19 above indicates. The primary structures are mud or concrete wall houses with CIS roofing. While the secondary structures are comprised of detached kitchens and granary area, a mix of compacted

mud/mud brick structures with an assortment of roof cladding ranging from thatch to plastic apply. Placemarks for structures and PAP can be found in Appendix 8.

5.2.7 CROPS AND TREES IN THE WAYLEAVE

Table 5-20 Crops' Type in the Wayleave (in ha)

CROP TYPE	LOCAL GOVERNMENTAL AREA			TOTAL
	AREWA	BIRNIN KEBBI	KALGO	
Maize	0.1	0.7	1.6	**2.4**
Rice	0.1	2.4	1.9	**4.5**
Cassava	0.4	0.03	1.0	**1.5**
Sorghum	4.8	1.5	5.1	**11.4**
Millet	42.5	9.7	6.5	**58.7**
Yam	0.1	0	0.3	**0.4**
Groundnut	10.4	0	0.9	**11.3**
Beans	18.5	8.8	3.9	**31.2**
Acha	0.4	0	0	**0.4**
Harawa	0	0.1	0	**0.1**
Total (ha)	**77.4**	**23.3**	**21.2**	**121.9**

Table 5-20 above shows the total acreage (121.9 ha) of cropped land in the ROW, as measured during field inspection, according to the type of annual crops.

These represent the amount that the PAPs will lose upon resettlement. The most cropped type is millet and covers a total of 58.7 ha; it is mostly cropped in Arewa LG (42.5 ha). The least cropped type is yam and Acha; each cover 0.4 ha and Harawa 0.1 ha.

Table 5-21 Trees within the Wayleave

TREE TYPE	LOCAL GOVERNMENTAL AREA			TOTAL
	AREWA	BIRNIN KEBBI	KALGO	
Shea tree	16	15	3	34
Acacia tree	20	10	1	31
Banana tree	11	0	1	12
Cashew tree	15	1	8	24
Palm oil tree	16	13	2	31
Cocoa tree	34	0	1	35
Kola (nuts) tree	8	14	67	89
Orange tree	11	0	1	12
Mango tree	2	1	6	9
Neem tree	1	96	46	143
Other trees	0	11	12	23
Total # of trees	**134**	**161**	**148**	**443**

The table above shows the total number (443) of economic tree crops that need to be removed from the ROW. These also are shown according to tree crop type and quantity that would be lost by PAPs permanently. Neem trees (143) are the most prevalent followed by Kola nut trees (89).

6 IMPACT OF THE PROJECT ON THE HUMAN ENVIRONMENT

This section presents a summary description of the project's impacts on the human population. Potential environmental impacts are described in the impact study of the project. Social impacts of resettlement will be detailed in the present chapter. These impacts were assessed using data collected from field investigations, relevant documents and consultations with various stakeholders and PAPs.

6.1 IMPACT OF THE LINE

6.1.1 GENERAL

The project will require the construction of a 330 kV line with a 50 meters ROW over a total length of about 62 km to connect Nigeria from the existing substation in Birnin Kebbi to the Niger border. Moreover access roads, temporary or permanent and workers camp (if necessary) will affect some area and PAP. The exact localization of these components is not known and will be determined by the contractor hired to build the line. The RAP budget include a 5% provision for these costs.

The construction, operations and maintenance or repair activities of the ROW and transmission line will involve periodic access to the structures.

Most of the impact occurred in the ROW (resettlement, limited access, etc.) and in a corridor of 200 meters wide (dust noise, etc. during construction) along the ROW. The economic impact will be felt in the Birnin Kebbi region and LGA.

For the project affected households and communities, negative impacts occurring during the construction phase include:

- → Dust, noise and exhaust gas emissions;
- → Soil erosion and properties of affected land;
- → Loss of arable land and crop damaged as a result of clearing the ROW of trees for mitigation measures and for temporary access, work areas and work camps;
- → Degradation of water and soil quality resulting from an accidental spill of hydrocarbons and other material as well as disturbance and displacement of wildlife, which could be accentuated by poor waste management practices. The spill could occur from machinery and vehicles, in workplaces and in work camps;
- → Disturbance and displacement of wildlife due to noise generated vehicular movement or from construction and maintenance activities;
- → Conflicts or grievance related to resettlement of affected households;
- → Potential perturbation of communities or households associated to the arrival of workers and conflict over the distribution of jobs and other economic activities related to line construction.

The main long-term impacts, at the tower and substation location, and clearance of the ROW are:

- → Loss crop areas[3] and tree plantation in the permanent ROW;
- → Prohibition of constructing any structure (houses, shed, etc.) in the ROW;

[3] TCN policy is to compensate for land and prohibit any structure, crop or trees in the ROW. However, in practice as seen on the ground where an existing high voltage line passes in the project area, TCN tolerate crop in the ROW under the condition that the PAP do not ask for compensation for any crop damage related to maintenance activity. The economic impact on PAP production in the affected parcel is thus minimal. Since the PAP can buy a land to replace the impacted space with the compensation he will thus be able to increase his production overall.

→ Potential perturbation of communities or households associated with the arrival of workers and conflict over the distribution of jobs and other economic activities related to maintenance of ROW.

The impacts listed above are permanent since farmers cannot use the land in the wayleave for agricultural and livestock or tree plantation. Loss of cultivated individual parcel amount to a total of 121.9 ha. One community land is also lost[4].

To minimize resettlement the localization of some towers can be move a few meters to save the structures that are at the limit of the ROW. These possibilities will be discussed by TCN, the PIU and the contractor.

6.1.2 HOUSES

Beside these impacts on agricultural activities and human settlements, an important impact will be the relocation of houses and other structures in the wayleave.

In all cases, these will be relocated to the same plot a few yards away from their actual location. This solution is possible for all PAP since, as seen in the table 5-9 above, on average, the households use 1.6 land parcel, measuring 3.3 acre per parcel. Space is available. Thus, the physical resettlement impact is minimal.

In the theoretical case where the PAP situation has changed[5] since the survey, and the resettlement on the same plot is not possible, the physical resettlement will be done on an adjacent plot belonging to the same PAP. If this option isn't possible, due to the unavailability of another parcel belonging to the PAP a particular assistance will be offered by the PIU to find a suitable equivalent land nearby. As was observed in the study, land is available and the PAP will be able to purchase a parcel for relocation with the compensation offered.

In all cases, even if the physical relocation is done on the same parcel, it will result in loss of time, income and disruption of the organization for the daily life of affected households. It would need to be mitigated. By following the proper displacement procedures, and undertaking appropriate and cost-effective compensation measures (reconstruction of houses and related facilities before the destruction of affected structures, relocation assistance, etc.), the impact of the project on the affected households will be minimized. Proper time and care to assist communities and households are both crucial elements to minimize the impact of these relocations.

There are 25 houses belonging to 25 different households, (5% of the total impacted households) that are currently located in the wayleave. These houses are classified as permanent concrete block (10 houses), and mud house (15 houses). These houses must be demolished and displaced. ..

As indicated previously (see chapter 4), the consultations carried out as part of this preliminary assessment showed that many affected households are concerned about not receiving adequate and timely compensation for resettlement and loss of crops, trees or land. An adequate and timely compensation should therefore be given, and new houses of displaced households should be built before the beginning of construction or any other activities capable of disrupting the PAPs. Where properly managed, the envisaged impacts will be minimal.

It is important that a team of professionals managing displacement and compensation measures establishes at least one year before the start of construction. This team should include estate surveyors and evaluators, specialists in community development as well as agricultural and social workers who will have the task of assisting affected households and reduce their fears (see chapter 8 for more details).

The definitive number of houses likely to be displaced will be established during the final property and asset evaluation (see section 9.3). This procedure must be established at least one year before the start of the infrastructure's construction. All reconstruction (house, commercial and community buildings [see below) must be completed before line construction begins to reduce the impact on PAP.

[4] This statement is partially true. The official policy of TCN is to not allow any activity in the ROW. However, TCN tolerates crop growing, as observed in the ROW of an existing HV line in the area.

[5] The PAP may have sold part of is plot, the family has increased and the number of structures and space needed is more important than anticipated or other unforeseen reasons.

6.1.3 SECONDARY STRUCTURES

Within the ROW, there are 11 secondary structures that will be affected by the project. A total of 6 households have a secondary structure in the wayleave. All of them must be demolished and new ones reconstructed. Again, appropriate time, compensation and support must be given to the households to minimize the impact of the displacement or reconstruction of these structures.

6.1.4 COMMERCIAL STRUCTURES

Within the ROW, there are 6 commercial structures that will be affected by the project: one (1) block making industry, one (1) mechanics shop, one (1) sachet water distributor, two (2) shops and one (1) petro-station. As discussed above, appropriate time, compensation and support must be given to the households to minimize the impact of the displacement or reconstruction of these structures. Again space is available nearby to resettle those structures.

6.1.5 COMMUNITY STRUCTURES AND SITE

Some community structures are also affected: one (1) Islamic school, two (2) mosques and one (1) natural area (see table 5-6). Again, the key to minimize the impact is to start early in the process (at least one year before construction) in order to leave time to the community to properly plan the resettlement. All these structures must be replaced in kind and respect Nigerian specifications. As for the natural area affected, it is a heavily cultivated marsh area cooperatively owned.

6.2 OTHER PROJECTS IN THE AREA

The only other current project in the area is the road construction from Birnin Kebbi to Kola village. This road will be crossing the wayleave a few times. However, since the project will most probably be completed before the interconnection line is built, no impact is foreseen.

6.3 CUMULATIVE IMPACT

Other infrastructures in the area that could interact with the impacts from the WAPP 330K North Core project include the following:

- → The existing 54km 132KV electricity transmission line from Birnin Kebbi to Niger boarder with a 30m right of way. The new 330KV line will run parallel to it for a total of approximately 43km in two sections.
- → The existing 330KV electricity transmission line from Kainji to Birnin Kebbi. The new 330KV line will run parallel to it for approximately 6km, and exit the Birnin Kebbi Sub-station.
- → The road project under construction from Birnin Kebbi to Kola Village will cross the line and run parallel to it a few times.

Information was obtained during consultation with PAPs and institutional stakeholders as well as field surveys. The cumulative impacts that are likely to result from the interaction of these projects include the following:

- → Increased frequency of access into the areas where the line runs parallel to the existing transmission lines for inspection and maintenance works and could cause perturbation of the communities.
- → Impacts on structures and farmlands since structures that encroached the existing wayleave will be demolished, along with new wayleave to be acquired for this project.
- → Possible pollution of surface water in the Sokoto River from construction and maintenance activities as two lines will now cross the river. This could affect aquatic life.
- → Loss of dry season farming for another 35m width in addition to the existing 30m occupied by the existing line.
- → Safety issues as expressed by community concerns. Some people still farm without authorization under the existing line and herdsmen sometimes climb the pylons to observe their herds grazing.

6.4 IMPACT ON WOMEN

Project impacts on women will primarily be felt during the construction phase. They are related to the fact that women are primarily responsible for field work and crops' production.

Affected households include 1 534 women and girls. It is represented by a younger group since almost half of them (45.2%) are aged between 0 and 35 years old. Only 1.2% of affected households are headed by a woman.

The project will increase the vulnerability of women, since consultations in the project area have shown that, in general, women do not own land although the land law is such that the land belongs to the family.

This makes women's situation unfavorable since men control resources such as land and other important assets.

Due to limited ownership and access to resources, women play a very minor role in the decision-making process. This situation increases the risk for women, as many examples show that men may tend to use compensation for purposes other than those for which they are dedicated (reconstruction, acquisition of land, amounts allocated to the compensation) to leave their families. This is why it is important to make compensations in kind (i.e. land for land and house for house) rather than a cash compensation or to put in some control and information mechanisms to reduce those risks (see chapter 8 for details).

6.5 IMPACTS ON VULNERABLE GROUPS

As mentioned previously, women that are head of households in only 1.2% (6 households) of the impacted households. In addition, two head of households are younger than 18 years old.

There are also 45 head of households who are handicapped or chronically ill. Moreover, 51 households do have to take care of one or more of its member that are handicapped or chronically sick.

Specific mitigation measures, such as prioritizing local people and businesses for job opportunities and procurement, participation of able members of these households to work on their land (cutting, trees, reconstruction, etc.), leaving them the use of cut trees, salvage material from displaced houses or other structures (houses, shelter, etc.), could help these economically vulnerable households increase their revenues.

As for those households (356 cases) that have only one land parcel and whose land is inside the ROW, the impoverishment risk is high. In the majority of these cases, a large portion (+20%) of the parcel is inside the ROW, so a new parcel must be found. Each of these PAPs will be helped and TCN will pay for a new parcel for the PAP to comply with WB and AFDB standards.

Administrative burden of compensation procedures should be reduced to minimal especially for the vulnerable households giving them timely information, enhanced access that reduces their strain in the compensation process and ultimately minimize incidental costs to them.

6.6 IMPACTS ON MINORITY GROUPS

No minority groups are threatened by the project in the area. Migratory groups of herdsmen are present in the area but they can still graze the land when construction is completed. As it is mentioned in the EIES accompanying this RAP report, herdsmen route will be protected during construction and no obstacle will impede their movement.

6.7 RISK

The risks foreseen for this project are related to the following issues:

1. Difficulty to find new parcels for the affected households. It is anticipated that in most cases the PAP will be able (through family and neighborhood ties) to find a suitable replacement parcel that TCN will buy for him. However, in the case where no parcel is available, an alternative means of livelihood for the PAP must be found. This can imply for example training and other help to develop commercial activities in agricultural transformation or a complete reorientation in a new domain (carpentry, etc.) for the head of households.

2. Compensation and resettlement are also a major issue. Bad management of compensation and reconstruction can create a lot of frustration among PAPs and delay the project. Transparency in compensation schedule and scales, supervision of the process by a witness NGO, rapid creation of the Local Resettlement Committee and the grievances mechanisms, early implementation of the RAP are all measures that are proposed here to reduce this risk.
3. Some encroachment in the wayleave by opportunists who would like to receive compensation can occur. The village head and PAPs have already been sensitized to the cut-off-date no new structures are allowed in the ROW. These measures will be repeated in the last stage of the consultation. The rapid implementation of the project will also help to minimize this risk.

In some projects, workers site have attracted people hoping to find a job or small commercial activities to make-shift construction and small camp. The arrival of this population and activities can created some clash with established population and environmental problems (water pollution from refuse and excreta, etc.). These risks are very low since line construction sites keep moving and the sub-stations site is already in town where workers will have access to all the needed services nearby. Furthermore, the construction of workers camp in Birnin Kebbi is not expected since the workforce can be found in the area quite easily. Nonetheless, it is recommended that local authorities be sensitized to this risk. Rapid dismantlement of any opportunity of encroachment of the worksite will be organized by local police and all contractors follow a strict «official» recruitment process whereby all workers have to present their application through official offices away from the working site (See ESMP).

7 VALUATION AND COMPENSATION

The Government of Nigeria as well as the WB and AFDB have guidelines to follow for establishing the compensation costs of land, houses, public infrastructure, crops/trees and other structures such as graves, toilets, etc.

The difference between Nigerian legislation and the WB or AFDB procedures have been exposed and solutions to bridge the gap have been proposed in section 3.6.

As TCN is committed to WB and AFDB standards, the compensations presented here follow its criterion. The Federal Government of Nigeria is responsible for the resettlement budget through counterpart funding.

7.1 ELIGIBILITY AND ENTITLEMENT MATRIX

Assets that were surveyed in the project-affected area, including structures and fields, are eligible for compensation. People residing or holding affected assets in the project-affected area at the time of the survey (October 14 to 24, 2015) are eligible for compensation. This is the cut-off-date and the PAP were informed that only assets assessed during the survey were eligible for compensation. The land authorities of each LGA participated in the survey and was thus aware of the registered assets. The RPA was transmitted to the LGA with this report and thus all unregistered assets won't be considered in the compensation phase.

As shown on table 7-1 below, the types of affected households include: the economically, physically and the physically and economically affected. The physically affected lost a piece of land that need to be replaced either by cash compensation or by a new piece of land, while the economically affected own one or several parcels of land within the wayleave and require compensation for it. Lastly, the physically and economically affected group not only lost a piece of land, but also have to move their house and associated secondary structures.

Table 7-1 Household Distribution by Type of Impact of the Resettlement

TYPE OF IMPACT	ONLY PHYSICALLY AFFECTED	ONLY ECONOMICALLY AFFECTED	PHYSICALLY AND ECONOMICALLY AFFECTED	TOTAL
Number of households				
Arewa	0	184	1	185
Birnin Kebbi	0	186	9	195
Kalgo	0	98	19	117
Total	**0**	**468**	**29**	**498**

Notes: Physically affected: The house must be moved.
Economically affected: At least one parcel is in the wayleave.
One Arewa household did not provide information about his land parcel inside row.

Also worthy of noting is the fact that there were no indication showing the presence of graves or shrines present in the ROW. If a grave is discovered at the implementation stage, the necessary customary ceremonies and exhumation procedures will be funded by the project promoters. Body exhumation and relocation by a certified undertaker will be paid by the project developer.

The entitlement matrix presented in Table 7.3 below gives the type of help and compensation that these households are entitled to. These compensation measures have been revised by social and RAP experts and apply to houses, land, trees and crops. All compensation for land, structures or trees are based on market prices. These prices were gathered thru discussion with local authorities, local merchants and entrepreneurs.

7.2 COMPENSATIONS FOR HOUSES AND SECONDARY STRUCTURES

The survey shows that a total of 25 houses are affected by this project. Ten (10) of these houses have been constructed with sandcrete blockwall and are permanent, while the remaining houses are semi-permanent and made out of mud. All these houses include 11 secondary structures (granary, toilet, etc.) the survey identified.

Table 7-2 Principal and Secondary Structures

STRUCTURES		LOCAL GOVERNMENTAL AREA			TOTAL
		AREWA	BIRNIN KEBBI	KALGO	
Principal structures					
Sandcrete blockwall house	Amount (NGN)	0	214 718 000	48 500 000	263 218 000
	Number	0	7	3	10
Mud house	Amount (NGN)	0	3 400 000	21 500 000	24 900 000
	Number	0	1	14	15
Total principal structures	**Amount (NGN)**	**0**	**218 118 000**	**70 000 000**	**288 118 000**
	Number	**0**	**8**	**17**	**25**
Secondary structures					
Granary	Amount (NGN)	0	0	680 000	680 000
	Number	0	0	8	8
Kitchen	Amount (NGN)	0	0	700 000	700 000
	Number	0	0	2	2
Borehole	Amount (NGN)	0	1 500 000	0	1 500 000
	Number	0	1	0	1
Total secondary structures	**Amount (NGN)**	**0**	**1 500 000**	**1 380 000**	**2 880 000**
	Number	**0**	**1**	**10**	**11**
Total compensation	**Amount (NGN)**	**0**	**219 618 000**	**71 380 000**	**290 998 000**
	Number	**0**	**9**	**27**	**36**

Note: The compensation for these structures is only related to the replacement of buildings. Additional charges are also expected for replacement of land (depending on the principal structure), administrative costs and taxes as well as compensation for the relocation of structures and equipment. This amounts to a total of 26 635 000 NGN.

The affected houses are distributed along the line corridor. In all cases affected houses will be rebuilt a few meters from their current location and within the same parcel of land. Space is available since the parcel measure 3.3 acre on average. In each case, compensation for packing and displacement will be allocated to the 25 households.

If rare case where the residual portion of the piece of land does not suffice to allow the reconstruction because of change in the PAP situation since the survey it will have to be moved on another land parcel that belongs to the same household or on a new land to be purchased.

The survey indicates that all the affected households declared that they don't own land outside the ROW and therefore a piece of land is to be bought for the reconstruction of the property. The question was most probably misunderstood by the PAP who were afraid not to be compensated for their lost. As already mentioned (see section 6.1 and above) the survey indicated that on average these households own 1.6 parcel measuring 3.3 acres per parcel (see table 5-9). All PAP has thus space to reconstruct.

However, for compensation purposes, it is estimated that 0.28 Ha per house is necessary to move them. Based on the average price of 1 500 000 Naira per plot in Birnin Kebbi and 150 000 Naira in Kalgo, the cost for land to reconstruct these structures is expected to be 22 050 000 Naira. With this compensation, the PAP will be able to buy land if he chooses to or keep it as compensation for his lost land if he moves to a parcel that already belongs to him

To these cost must be added all the administrative cost and taxes (registration fees, land taxes, etc.) The total amount including administrative costs and taxes such as registration fees and land taxes equates to 4 410 000 Naira. The PIU will assist all PAP in the administrative process (registration, taxes payment,

etc.). According to the PAP survey no affected house is rented. However, if the case arise the PIU will insure that the household will be able to rented the new structure or rent another equivalent one in the area.

A flat rate of 7 000 Naira per principal structure is being proposed, to account for disturbance and moving expenses.

Photo 7-1 Shop to be resettled in Birnin Kebbi

Table 7-3 Entitlement Matrix

CATEGORY OF AFFECTED HOUSEHOLDS	RESIDENTIAL LAND	STRUCTURES	AGRICULTURAL LAND	CROPS AND TREES	LIVELIHOOD RESTORATION	VULNERABLE HOUSEHOLDS	RENTERS
Physically and Economically Affected Households	The reconstruction will take place on the portion of the parcel that is unaffected. Otherwise, the structure will be moved on another parcel belonging to the PAP. If this is unavailable an equivalent parcel of land will be bought and the structure is to be reconstructed at the new location.	A structure of equivalent or greater value associated as the original one plus associated cost (tax, registration) is compensated by the project developer. For those who rent a house the PIU will insure that the households is able to use the new structure or an equivalent one nearby.[1]	• A replacement land of equivalent of greater value found by the project developer or by the PAPs plus associated costs (tax, registration) is compensated by the project developer. • Improvement of land fertility will be assumed by the project developer. • For parcels of land that are affected by less than 20%, cash compensation is assumed given that the remaining portion of the parcel is viable, as determined by the PIU, the PAPs and the LRC.	Cash compensation equal to the cost of replacing any standing crops or trees that the farmer is unable to harvest during the notice period is compensated.	• Allocation for resettlement (packing, moving, etc.) is provided. • Transitional support allocation of 1$/day per household member for the period of one month following the physically displaced household is provided. • Accessibility to the training programs and help to improve crop and livestock is provided.	• A transitional allocation of 1$/day per household member for the period of one month is given to all vulnerable households. • All women that are part of the resettled households will be informed of the compensation benefits offered to them specifically. • Special help will be given such as opening a bank account, budget management, etc.	• Relocation to new housing (reimbursement of rent prepaid, social allowance and allocation for inconvenience) • Compensation for crops
Economically Affected Households	Not applicable	Not applicable	Equivalent to Physically and Economically Affected Households For those who would rent the parcel the PIU will insure that the households is able to rent the new parcel or an equivalent one nearby. [1]	Equivalent to Physically and Economically Affected Households	Accessibility to the training programs and help to improve crops and livestock is provided.	Equivalent to Physically and Economically Affected Households	Compensation for crops Help to find new parcel to rent

1-According to survey no house or parcel is rented

7.3 COMPENSATION FOR COMMERCIAL STRUCTURES

All commercial structures affected by the project are located in Birnin Kebbi. These include one (1) block making industry, one (1) mechanical shop, one (1) sachet water distributor, two (2) shops and one (1) petro-station.

The total compensated amount for these commercial structures is estimated to 95 782 000 Naira. This amount includes the structure replacements (80% of cost), new site acquisitions (15% of cost), loss of business incomes, relocation benefits, and administration fees and taxes (5% of cost). The PIU will assist all PAP in the administrative process (registration, taxes payment, etc.).

Table 7-4 Commercial Structures

STRUCTURES		LOCAL GOVERNMENTAL AREA			TOTAL
		AREWA	BIRNIN KEBBI	KALGO	
Commercial Structures					
Block Making Industry	Amount (NGN)	0	2 475 000	0	2 475 000
	Number	0	1	0	1
Mechanics Shop	Amount (NGN)	0	14 550 000	0	14 550 000
	Number	0	1	0	1
Sachet Water Distributor	Amount (NGN)	0	750 000	0	750 000
	Number	0	1	0	1
Shop	Amount (NGN)	0	18 250 000	0	18 250 000
	Number	0	2	0	2
Petro-Station	Amount (NGN)	0	59 757 000	0	59 757 000
	Number	0	1	0	1
Total Commercial Structures	**Amount (NGN)**	**0**	**95 782 000**	**0**	**95 782 000**
	Number	**0**	**6**	**0**	**6**

7.4 COMPENSATION FOR AGRICULTURAL PRODUCTION AND PARCELS

The total crop area affected by the project is 121.9 acres.

The compensation allocated for the purpose of harvest loss during the construction phase will vary depending on whether or not people have time to harvest. Compensation for crop losses will be calculated during the project implementation phase, based on harvests. Estimated harvest losses related to projects with similar timeframes were assessed as 13 380 637 Naira.

A piece of land must also be bought to replace the affected parcels.

It is estimated that 403 of the 531 affected parcels have more than 20% of their land parcel that is used by the ROW. In these cases, the total parcels need to be replaced. As for the 128 remaining parcels of land that are affected by less than 20%, cash compensation will be offered.

Given that the total surface area requiring compensation is 392 ha, the compensation amounts to 203 457 610 Naira. To this amount, 40 691 522 of taxes and legal fees must be added. The PIU will assist all PAP in the administrative process (registration, taxes payment, etc.).

According to the survey no PAP is renting the parcel where they cultivated. However, if the case present itself the PIU will insure that the household is able to rent the new parcel from the owner or another parcel on the same condition as previously. The compensation for crop will be divided among the owner and the user according to the renting agreement between the two parties.

A total area of 44.9 ha of fallow land will also be compensated; the amount of compensation equates to a total of 27 979 868 Naira.

It is important to mention that TCN tolerate crop in the ROW after acquisition, as was observed in the existing 120kV corridor in the project area. The farmers are aware and agree in that case that any damages to crop or land due to maintenance activities are not compensated. The economic impact on PAP production in the affected parcel is thus minimal. Since the PAP can buy a land to replace the impacted space with the compensation he will thus be able to increase his production overall.

Photo 7-2 Affected parcel

Table 7-5 Number of Parcels Affected by the Wayleave

PARCEL	LOCAL GOVERNMENTAL AREA				CONTROL GROUP
	AREWA	BIRNIN KEBBI	KALGO	TOTAL	
Number of land parcels affected	196	204	131	531	-

Table 7-6 Crop Compensation

CROPS		LOCAL GOVERNMENTAL AREA			TOTAL
		AREWA	BIRNIN KEBBI	KALGO	
Maize	Amount (NGN)	8 950	69 649	157 897	**236 496**
	Area (ha)	0.1	0.7	1.6	**2.4**
Rice	Amount (NGN)	19 140	365 186	284 931	**669 258**
	Area (ha)	0.1	2.4	1.9	**4.5**
Cassava	Amount (NGN)	67 185	4 046	151 600	**222 831**
	Area (ha)	0.4	0.03	1.0	**1.5**
Sorghum	Amount (NGN)	381 645	122 272	408 085	**912 002**
	Area (ha)	4.8	1.5	5.1	**11.4**
Millet	Amount (NGN)	4 246 667	973 783	652 063	**5 872 513**
	Area (ha)	42.5	9.7	6.5	**58.7**
Yam	Amount (NGN)	31 500	0	115 955	**147 455**
	Area (ha)	0.1	0	0.3	**0.4**
Groundnut	Amount (NGN)	521 395	0	46 065	**567 460**
	Area (ha)	10.4	0	0.9	**11.3**
Beans	Amount (NGN)	2 779 144	1 316 766	578 041	**4 673 952**
	Area (ha)	18.5	8.8	3.9	**31.2**
Acha	Amount (NGN)	73 950	0	0	**73 950**
	Area (ha)	0.4	0	0	**0.4**
Harawa	Amount (NGN)	0	4 720	0	**4 720**
	Area (ha)	0	0.1	0	**0.1**
Total compensation	Amount (NGN)	**8 129 577**	**2 856 422**	**2 394 637**	**13 380 637**
	Area (ha)	**77.4**	**23.3**	**21.2**	**121.9**

7.5 COMPENSATION FOR COMMUNITY STRUCTURES

One (1) Islamic school and two (2) mosques are affected in Birnin Kebbi (see table 5-6). The price of reconstruction for these structures, including the price of land and legal fees, is estimated to be 18 500 000 Naira. The PIU will assist the community group in the administrative process (registration, taxes payment, etc.).

In regards to the natural area affected, a heavily cultivated marsh area cooperatively owned, the replacement is estimated at 20 000 000 Naira.

The total cost for community structures and sites is estimated at 38 500 000 Naira (USD 193 283).

Table 7-7 Community Structures and Site Compensation

CROPS		LOCAL GOVERNMENTAL AREA			TOTAL
		AREWA	BIRNIN KEBBI	KALGO	
Islamic School	Amount (NGN)	0	9 500 000	0	9 500 000
	Number	0	1	0	1
Mosque	Amount (NGN)	0	9 000 000	0	9 000 000
	Number	0	2	0	2
Natural Area	Amount (NGN)	0	20 000 000	0	20 000 000
	Number	0	1	0	1
Total compensation	**Amount (NGN)**	**0**	**38 500 000**	**0**	**38 500 000**
	Number	**0**	**4**	**0**	**4**

Note: The drill hole is not compensated because it would stay in the wayleave.

7.6 ACCESS ROADS AND WORKERS CAMPS

The allowance required for temporary workers to access roads is budgeted to account for the damages or temporary impacts on land for which the owners must be compensated. The budget for these damages is estimated at 37 032 690 Naira (5% of the RAP).

7.7 COMPENSATION FOR TREES

Some of the households in the project area (along with the transmission route) have fruit trees. 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. Evaluation of the numbers of trees for each family has been done on the basis of the investigation results. The total cost is estimated at 1 065 950 Naira. Compensation are calculated according to the prescribed rates that take into account maturation. In addition, help will be provided by the PIU specialist to the affected households to plant trees to restore their source of income and livelihoods.

Table 7-8 Tree Compensation

TREES		LOCAL GOVERNMENTAL AREA			TOTAL
		AREWA	BIRNIN KEBBI	KALGO	
Shea tree	Amount (NGN)	32 000	30 000	6 000	68 000
	Number	16	15	3	34
Acacia tree	Amount (NGN)	8 000	4 000	400	12 400
	Number	20	10	1	31
Banana tree	Amount (NGN)	11 000	0	1 000	12 000
	Number	11	0	1	12
Cashew tree	Amount (NGN)	30 000	2 000	16 000	48 000
	Number	15	1	8	24
Palm oil tree	Amount (NGN)	48 000	39 000	6 000	93 000
	Number	16	13	2	31
Cocoa tree	Amount (NGN)	102 000	0	3 000	105 000
	Number	34	0	1	35
Kola (nuts) tree	Amount (NGN)	24 000	42 000	201 000	267 000
	Number	8	14	67	89
Orange tree	Amount (NGN)	44 000	0	4 000	48 000
	Number	11	0	1	12
Mango tree	Amount (NGN)	8 000	4 000	24 000	36 000
	Number	2	1	6	9
Neem tree	Amount (NGN)	1 000	96 000	46 000	143 000
	Number	1	96	46	143
Other trees	Amount (NGN)	90 000	64 950	78 600	233 550
	Number	45	33	39	117
Total compensation	Amount (NGN)	**398 000**	**281 950**	**386 000**	**1 065 950**
	Number	**179**	**183**	**175**	**537**

Photo 7-3 PAP with trees to compensate

8 INCOME AND LIVELIHOOD RESTORATION STRATEGIES

The project developer is encouraged to use the WB and AFDB guidelines and involve the affected communities, local leaders, NGOs and other stakeholders to gather opinions in order to assess livelihood restoration procedures.

AFDB and (WB)'s encourage livelihood assistance, as stated in the OP, 4.12 paragraph (6c),:

> ''*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.''*

Additionally, WB OP 4.12, paragraph (2c), requires that displaced individuals be given assistance for their efforts to improve their living standards or to at least restore them to the highest standard between pre-displacement or standards prevailing prior to the beginning of the project implementation. The same objectives are important for AFDB.

In an effort to define income and develop livelihood restoration strategies, the developer should involve participation for purposes of fostering ownership at an early stage. Assistance will be especially critical to the individual that is to be relocated far away, due to reconstruction costs that may be otherwise avoided.

8.1 COMMUNITY ASSETS WITHIN THE TRANSMISSION LINE'S ROW

As discussed in chapter 5 of this report, among the 16 affected communities crossed by the infrastructure project, only three (3) structures (1 Islamic school and 2 mosques) and one (1) community area resource (wetland) are affected.

As discussed in chapter 7 of this report, it is recommended to inform the PAPs of the project at least 1 year before the start of the construction and to allocate 38 500 000 Naira for the reconstruction of the affected structures.

In all cases, except if the community leaders choose otherwise, the new structures should be located near the previous ones (ideally on land already belonging to the affected community to reduce disruption of community life, established spatial organization and services). Note that the community survey that was undertaken proved that all of these structures could be moved on an available plot of land already belonging to the community.

As mentioned in chapter 5, the wetland part that will be inaccessible will be part of a compensation equating to 20 000 000 Naira. This amount accounts for compensation measures that will help the community to develop, protect or otherwise improve the pool of natural resources in the area through plantation, restoration measures, etc. The village chiefs and local technical services will be consulted and involved for the choice and implementation of these measures.

Also worthy of mentioning is the fact that many communities along the wayleave have experienced workers that can be hired during the construction phase (see Tables 5-4 and 5-5 for additional details). Local experienced workers and entrepreneurs with necessary experience and capacity should be given priority work opportunities, if applicable. Also, as suggested through consultations, the general contractor should liaise with village chiefs to maximise local hiring as well as the purchase of relevant local materials and services.

The Community Compensation Fund (CCF) of 52 055 916 Naira is a local fund than can be utilized to improve existing community facilities and services by funding the construction or refurbishment of public buildings (schools), services (dispensaries) and infrastructures (water supply, roads). Equitable distribution of the fund is highly recommended. Communities should receive compensation based on both the length of the wayleave within their community and the number of households affected. A calculation method for the distribution of the CCF is proposed below. Again, community leaders will be consulted and involved in the choice and implementation of these actions.

8.2 INCOME RESTORATION AND IMPROVEMENT

Different restoration packages will be proposed to each of the various categories of PAPs and will depend on the type and magnitude of loss suffered, the vulnerability level of the PAPs' household, the indicated preferences associated to their family characteristics and other relevant circumstances. These measures were presented to PAP during consultations and to LGA and were agreed upon.

8.2.1 LAND BASE

As stated in chapter 7 of this report, the 498 affected households that will lose a piece of land will receive sufficient compensation to have the possibility to buy a new land, should the ROW take more than 20% of their parcel. Additionally, monetary compensation for loss of crop space will be allocated to PAPs who lose less than 20% of their parcel. The total amount is 244 149 132 Naira.

Most (93%) of the 531 parcels are owned by the households through traditional or legal ownership rights while the remaining households (37) of the households rent their parcel.

Most of the affected households (356 out of 498) will lose access to their only parcel of cropland. This situation poses a high risk of impoverishment for these households. However, discussions with authorities and community stakeholders show that land is available in the vicinity of the line corridor. It is thus expected that no household should be impoverished due to lack of land, as all households will have the opportunity to acquire alternate cropland.

However if a PAP cannot find an alternate parcel the PIU will look at the situation with local district authorities to help the PAP to find an alternate land or source of income (secure job, opening of a shop or commercial activity, etc.). If an alternate source of income is the best scenario the PIU will see that the PAP receive all the required support: training, transitional income, etc.

Further investigations paired with experience on similar projects indicate that in most cases it would be difficult and cumbersome for the TCN to find and propose replacement land for different reasons (risk of speculation, administrative burden, PAP lack of trust, etc.). It is thus preferable to propose to the PAPs that they find alternative parcels and liaise with the Project Implementation Unit (PIU). See chapter 9 for additional details. Cash compensation would thus be provided to the PAPs to provide them with an opportunity to purchase new land after all necessary verification are done (legal title of the seller, land size, etc.)

However, to limit impoverishment risk, adequate compensation level and implementation conditions are essential. The conditions discussed in chapters 7, 9 and 10 needs to be given to PAPs and are summarized below:

- → Sufficient time to find and evaluate their option and possible replacement land and organize the resettlement;
- → Support for all legal aspects of the transaction;
- → All "transaction costs" such as registration fees, transfer taxes, or customary tributes are to be compensated by the project developer;
- → Adequate control of PAPs' use of compensations by project authorities through different mechanisms like progressive verification of land purchase should be taken.

PAPs whose crops are to be negatively impacted by the project should be provided seedlings and seeds for their gardens and crops on their replacement land.

Furthermore, the replacement plot should be improved (fertilized, tilled, weeded, fenced, etc.) to reach the productive condition of the original plot. Affected households will be paid by the project to do this work as much as possible.

Additionally, technical assistance will be provided for at least a two-year period to help the impacted households improve their situation. As discussed in chapter 9, a member of the Project Implementation Unit (PIU) will be an experienced development specialist. The PIU specialist will also ensure coordination with governmental agricultural departments for the coordination and efficiency of the work. This specialist

will assess concerns, needs and the most relevant aspects of livelihood improvement with PAPs and local administration as well as it will propose improvement and support activities.

This help could include the following:

- → Practical training courses on improved agricultural techniques;
- → Improved crop varieties;
- → Fertilization;
- → Small scale irrigation;
- → Animal traction and related equipment;
- → Post-harvest grain conservation;
- → Agroforestry, other relevant techniques.

If possible training and services to ensure that the PAPs understand the scope of work 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. To this effect a feminine social worker will be included in the PIU and dedicated to women engagement. She will inform the women of the RAP's technicalities such as compensation payments, training opportunities, agricultural production programs and other allowances specific to women.

TREES

A total of 443 natural and planted trees are present on a small number of parcels (88). These will be destroyed during the construction of the transmission line since no trees taller 4 meters are being kept in the wayleave. Compensation to households will be allocated according to the prescribed rates up to a total of 1 065 950 Naira (see section 7 for details). The PIU specialist will help the affected households to plant trees to restore their source of income and livelihoods.

8.2.2 STRUCTURES

In a limited number of cases, houses and other structures that are located in the wayleave will have to be displaced. In that case and during the survey campaign, the PAPs indicated that the household did not have available land to relocate their houses and associated secondary structures (latrines, kitchens, etc.). As indicated above (section 7.2) the question was most probably misunderstood by the PAP who were afraid not to be compensated for their lost. The survey indicated on the contrary that PAP have space to reconstruct. On average these households own 1.6 parcel measuring 3.3 acres per parcel (see table 5-9). All PAP has thus space to reconstruct.

A budget of 317 633 000 Naira has been calculated for the reconstruction of principal and secondary structures (see section 7 for details). All relevant purchase charges, title registration fees are included in that estimate.

These structures are not associated to any commercial activity according to the survey therefore no disruption of services and related compensation are foreseen.

Those buildings should therefore be rebuilt on new land where the risk of spatial disruption of household activities is the lowest. All necessary steps will be taken by the TCN and the PIU in charge of compensation and reconstruction follow-up to make sure that the PAPs find a suitable land for reconstruction and enough time for reconstruction and proper compensation is allocated before the line construction start. Reconstruction is to be done on the parcel belonging to the PAP adjacent to the piece of land being displaced. As the survey has shown, the PAP have on average 3.3 acre of land (table 5-9). It is thus possible for them to reconstruct on their land in most if not all cases (see section 6.1.2 for details). If the PAP cannot do so because of his situation has changed since the survey or does not wish to do so for serious reason the PIU will help him to find a suitable space for reconstruction. As was observed in the area and confirmed by local authorities, land is available in the area and the PAP will be able to purchase a parcel for relocation with the compensation offered.

As already mentioned, all reconstruction must be done before construction starts so the PAP livelihood is unduly impacted.

In most cases it is expected that PAP will prefer to reconstruct by themselves. Again, to reduce the risk of compensation mismanagement and impoverishment of the households, the PIU staff will control the way compensation is spent by the PAPs. The PIU will take charge of reconstruction if the PAP prefer that an outside party reconstruct his house.

Progressive instalment will be applied through two steps of the operation: first the land and construction material purchase and second, upon verification of the built structure. Reconstruction performed by households under the supervision of a qualified professional hired by PIU should be prioritized to ensure the quality of the structure and to help maximize their revenue from resettlement.

Each of these household will receive:

- → a moving allocation of 7 000 Naira to pay for moving their goods and belongings;
- → an income support allocation of 200 Naira/day for each member of the household for 30 days to mitigate the inconvenience and time constraints related to the resettlement.

8.2.3 VULNERABLE GROUPS

A special focus must be given to the livelihood improvement of vulnerable groups prior to the construction of the project. As noted in section 5, vulnerable groups include low income families, women, child or handicap headed households.

Vulnerable households will be consulted at the onset of the operation to evaluate their concerns and needs. Special help that could be provided include, among others:

- → Support to open bank account;
- → Help for administrative transactions (land titling);
- → Relocation logistics and other support for the physically resettled households such as :
  - Transport assistance;
  - Reconstruction advice (on materials, type of structures, etc.) to ensure the quality of construction;
- → Psychological support (information, counseling, discussion);
- → Special transitional funds specific to vulnerable households.

Members of affected households should also benefit from the proposed training programs. Household members within vulnerable households are to be given priority for the allocation of project related employment and other benefits.

The PIU will assess the applicability of lessons learned from previous projects with relevance to the planned resettlement and compensation activities. The PIU will therefore propose compensation in kind (house reconstruction, equivalent in locally bought food for crop damage) because this type of compensation tends to protect the weakest in the community (females and children, vulnerable people) while cash compensation has been shown to be detrimental to them[7].

As noted in Table 5-16, 70 vulnerable households (where either the woman or a handicapped individual is head of household) will receive an income supported allocation of 200 Naira/day for each member of the household for 30 days. This is allocated due to the inconvenience and time constraint related to the resettlement of their principal structures. The total is 466 105 Naira.

Given the current place of females in rural communities, when cash compensations is the only acceptable option, the following possible mitigation measures should also be examined and implemented when feasible:

[2] Cernea M.M. 1988, Involuntary Resettlement in Development projects, Policy guidelines in World Bank-Financed project, WBTP

- → Awareness programs on issues directed towards authorities, local administrators and communities;
- → Assistance of the PIU to inform and assist vulnerable people and groups;
- → Seeking full consent of females in the households and explaining to them the proposed compensation options;
- → Payment of large amounts of cash compensation (larger than USD 500) through carefully distributed instalments (it can be over several months) to mitigate the potential for cash misuse;
- → Careful monitoring.

8.2.4 NON-FARM COMPONENTS

8.2.4.1 EMPLOYMENT AND OTHER BENEFITS

Priority should be given to all able bodied members of resettled households during the labour recruitment process. This applies to the following employment and contract opportunities : clearing of the wayleave path; porterage for movement of construction materials to transmission pylon development and other sites, construction of access roads and construction camps, reconstruction of community buildings and houses, provision of services and goods to the workers; administration of the compensation program, monitoring activities, etc.

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

All goods and services (sand, cement, food, etc.) should be bought locally when possible. This applies to all contractors and specific provisions to that effect must be included in the construction Terms of Reference.

8.2.4.2 COMMUNITY COMPENSATION FUND (CCF)

The project will have many impacts on land use and on many households and the positive impacts of the communities are limited to jobs during construction. It is therefore recommended to dedicate some funds to general development objectives, with communities taking the lead in determining which project they wish to prioritize and implement as well as how the project should be implemented. An engagement program will be put in place at the onset of the RAP implementation to inform and engage the leaders and communities of the importance of prioritizing their objectives.

It is proposed that the equivalent of 1% of the country's total cost of construction (line and substation) be added to the cost of the project to finance the CCF. The CCF amounts to 261 338 USD, which is 1% of 26 M. See chapter 2.6.3 for details regarding project costs.

The CCF 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 shape the project approval process and organise the CCF:

- → Focus on quick-impact social infrastructure or environmental improvement projects;
- → Allocate to each community a portion of the total budget which is proportional to the magnitude of the impacts they are experiencing;
- → Assist communities in identifying eligible projects and preparing project documents;
- → Establish eligibility criteria for projects;
- → Disburse funds to eligible activities based on procedures that ensure a control over the actual destination of the funds by the PIU;

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

- → The magnitude of impacts (length of the electric line crossing the community);

- → The proportion of 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 CCF is also viewed as a means to enhance community self-reliance in prioritizing projects and project implementation capacity that is built within the community.

The proposed formula (to be used in Nigeria) is the following:

- → I : the community
- → L : the total length of the transmission system (km);
- → N : the total number of affected communities in the country;
- → P : the total population of all communities intersected (number of individuals including both affected and non-affected people);
- → Li : the length of the transmission system in community (in km);
- → Pi : the population of the community (number of individuals);
- → Avg(li) : the average length of transmission system intersection (L/N);
- → Avg(pi) : 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.

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

This formula gives equal weight to population and length of impact (each weighed by a coefficient of 0.3). Through the coefficient of 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 electrical line intersects with large estates should not be considered to be community-land and excluded from the calculation.

9 INSTITUTIONAL ARRANGEMENTS FOR RAP IMPLEMENTATION

9.1 ACTORS INVOLVED AND ORGANISATIONAL STRUCTURE

This section highlights relevant institutions through which the planning and implementation of the RAP for the project will be conducted. A number of institutions were identified and consulted and will be involved in the overall implementation of this RAP.

These include:

- → The Federal Government of Nigeria (FGN);
- → Federal Ministry of Power, Works and Housing (FMPW&H);
- → Transmission Company of Nigeria (TCN);
- → Federal Ministry of Environment;
- → Kebbi State Government;
- → Kebbi State Ministry of Environment;
- → Kebbi State Ministry of Lands and Survey,
- → Kebbi State Rural Electrification Board;
- → Local Government Authority (LGA):
  - Birnin Kebbi Local Government Area;
  - Kalgo Local Government Area;
  - Arewa Local Government Area;
- → The District Council (Village Heads).

9.2 PROCEDURES AND RESPONSIBILITIES

The responsibilities and roles of each of the institutions are discussed in detail in the ESIA study report. We briefly present the main functions of those involved in resettlement in the following paragraphs.

9.2.1 THE FEDERAL GOVERNMENT OF NIGERIA

Responsibilities for commitments proposed in the RAP exist within Federal Government of Nigeria and are delegated internally to the relevant Ministry, which in this case is the Federal Ministry of Power, Works and Housing. The Federal Government of Nigeria will be responsible for the settlement of RAP compensation budget through counterpart funding.

9.2.2 FEDERAL MINISTRY OF POWER, WORKS AND HOUSING (FMPW&H)

All consultation efforts are co-ordinated by the Ministry of Power, through the Transmission Company of Nigeria (TCN). The FMPW&H is responsible for the approval of payment of compensation to PAPs. Payment is effected by TCN through the PIU that will be put in place.

9.2.3 TRANSMISSION COMPANY OF NIGERIA (TCN)

TCN is responsible for supervising the contractors engaged in construction of facilities and ensure strict adherence to project design specifications and land acquisition, Environmental and Social Safeguards, facilitates liaison with host communities as well as government agencies and local government department to facilitate stakeholder consultations.

TCN also ensure that the RAP is implemented adequately, oversee all legal functions including resolution of grievances, depending on the extent and level of grievance.

The payment of compensation to PAPs, livelihood restoration measures and resettlement supervision and PAP support are done through the PIU that will be put in place by TCN.

9.2.4 FEDERAL MINISTRY OF ENVIRONMENT

The Ministry is responsible for the overall environmental policy of the country. It has the responsibility for ESIA implementation and approval. It will monitor the implementation of mitigation measures, when the project commences. And they can issue directive to the project on specific actions related to the environment in the project area. The Ministry normally involves the State Ministry of Environment and Local Governments Areas in this responsibility depending on the specific activity. Other than this there is no specific role in RAP implementation.

9.2.5 KEBBI STATE GOVERNMENT

The Land Use Act 1978 as amended under the 1990 Laws of the Federation of Federal Republic of Nigeria vested all land compromised in the territory of each State (except land vested in the Federal government or its agencies) solely in the Governor of the State, who would hold such Land in trust for the people and would henceforth be responsible for allocation of land in all urban areas to individuals resident in the State and to organizations for residential, agriculture, commercial and other purposes while similar powers will with respect to non-urban areas are conferred on Local Governments.

The Land Use and Allocation Committee established by the Governor as required by the Act is responsible for advising the Governor on any matter connected with the resettlement of persons affected by the revocation of rights of occupancy on the ground of overriding public interest under this and determining disputes as to the amount of compensation payable under this Act for improvements on land. These responsibilities of the Governor are discharged through the State Ministry of Lands and Housing.

9.2.6 KEBBI STATE MINISTRY OF LANDS AND HOUSING

The Ministry has the responsibility for the formulation of policies and implementation pursuant to the provisions of the Land Use Act. It also has the primary responsibility for land management in the state. Part of its agencies includes the Land Use Advisory and Allocation Committee, with the functions mentioned in 9.3.5.

TCN will acquire all lands required for this project through the Kebbi State Ministry of Lands and Surveys, or provide PAP with funds so they can by their own plot for the purpose of this project, however, since the ministry is statutorily mandated to implement compensation for acquired land, the advisory and allocation committee shall work with the PIU to ensure that affected people are compensated as stated in this report. They will also ensure TCN's compensation and assistance programme are in conformity with the provisions of the Land Use Act.

9.2.7 KEBBI STATE MINISTRY OF ENVIRONMENT

The Ministry is responsible for the overall environmental policy of Kebbi State, enforcement of State environment laws, establishing regulations, sanitation and waste management. Since, environment is on the concurrent list in the Nigerian Constitution, the state ministry of environment has a role in the EIA process. The State undertakes joint site verification with the Federal Ministry of Environment, receives a copy of the report, appoints a member on the Review Panel as well as participates in impact mitigation monitoring. The State, can also impose additional requirements based on the nature of the local environment. The ministry can ensure proper protection of the environment in the case of resettlement of houses and reconstruction of community structures.

9.2.8 LOCAL GOVERNMENT AUTHORITY

Three Local Government Areas (LGAs) are involved in this project - Birnin Kebbi, Kalgo and Arewa. The roles and responsibilities of the local authorities (and Landsor works department) in this project shall include the following:

- → Liaising with the PIU Coordinator (see section 9.4 below) to verify adequacy of resettlement location and provide approval for such sites.
- → Supervise the payment of compensation and livelihood restoration measures.
- → Providing additional resettlement area if the designated locations are not adequate.
- → Provide necessary infrastructures in relocated areas.
- → Liaise with FMPW&H and participate in consultations.

The participation of LGA should be organised through the creation a local resettlement committee (LRC) (see below) where LGA representatives and district chiefs/ councils of affected communities will discuss resettlement matters and measures with the PIU.

9.2.9 LOCAL RESETTLEMENT COMMITTEE

There are in total 16 communities (villages and the Birnin Kebbi town) crossed by the project.

Local chiefs and elected representative of affected PAP need to be involved with LGA authorities in the RAP implementation to ensure proper management of compensation processes, reconstruction and CCF project management. As mentioned it is proposed that 3 LRCs, one per LGA, be created.

The composition of these LRC would be:

- → LGA Lands or works department representative;
- → Affected and village chiefs and council;
- → 3 representatives of affected PAP with at least one women;
- → 1 representative a neutral, respected party, like an respected Iman or church priest, that can act as chairman so meeting procedures are followed.

LCRs are considered as local partners for the implementation of the RAP and work with the PIU to ensure proper and equitable treatment to all PAP and communities.

They will:

- → Offer assistance to identify and select the resettlement sites;
- → Will be witnesses of the final agreement with the PAP in relation to compensation valuation, signing of agreements with households and selection of resettlement sites;
- → Involve in monitoring procedures, particularly the monitoring of management by the PAP of financial compensation and advancement of recovery measures;
- → Identification of vulnerable people and households and work with PIU to address specific concerns of these peoples.

This could be done through regular meetings of the LRCs organised by the PIU (see section 9.4).

9.3 STEPS FOR ROW PUBLIC UTILITY REGISTRY

The different steps that need to be followed to register the ROW as a public utility are the following.

1. FM Env will review the different reports. The proponent will incorporate the comments in the final version of the ESIA and RAP. The FM Env will then issue a Provisional ESIA-RAP approval. TCN can start the project

2. WSP will complete the detailed line and substations survey and profiling. Landmark (reference pillars) will be implanted in the ROW.
3. TCN[8] will then serve notice of intention to The Executive Governor of Kebbi State through the Commissioner for Lands and Housing. Attach to this notice, the authorities will find the project descriptions including what the land will be used for, technical description, maps and coordinates, etc.).
4. Upon approval by State government, the state government, through the Lands Ministry gazettes, issues notice for acquisition and revocation of all statutory grants falling within the right of way.

   a) Notice must show exact extent of land required and published appropriately

   b) Notice must give a minimum of 6 weeks prior to yielding of possession

   c) Notice must give or reserve rights of affected persons to enter (and their agents) for purposes of inspection/determination of their acquired interests.

   d) Notice must state an effective date for the acquisition.
5. TCN then publishes dates for inspection/enumeration of affected interests.
6. TCN undertakes physical inspection and confirms the assets registered in this survey and registers new assets if modification to the ROW has been done during the detailed survey and profiling.
7. TCN publishes list of claims/Undertakes verification /Resolves objections.
8. TCN proceeds to Resettlement/Payment of compensation /Receive /Compile indemnity data.
9. TCN takes over the ROW.
10. TCN registers the acquisition with relevant Deeds Registry.

9.4 INSTITUTIONAL ARRANGEMENT

Responsibilities in the implementation and monitoring of the ESMP and RAP are shared between multiple stakeholders, including the funding agencies, competent ministries, departmental authorities and TCN.

In this context, and to encourage the coordination of decisions as well as application of the various measures in an appropriate way, TCN should consider the possibility of setting up a Project Management Unit (PMU) and Project Implementation Unit (PIU) to be responsible for the project ESMP and RAP. Furthermore as discussed a LRC should be put in place and a witness NGO should be invited to participate to the process.

The figure below illustrates the functioning of such institutional arrangement.

[8] TCN will proceed through the structures that will be put in place to manage the project the PMU and PIU.

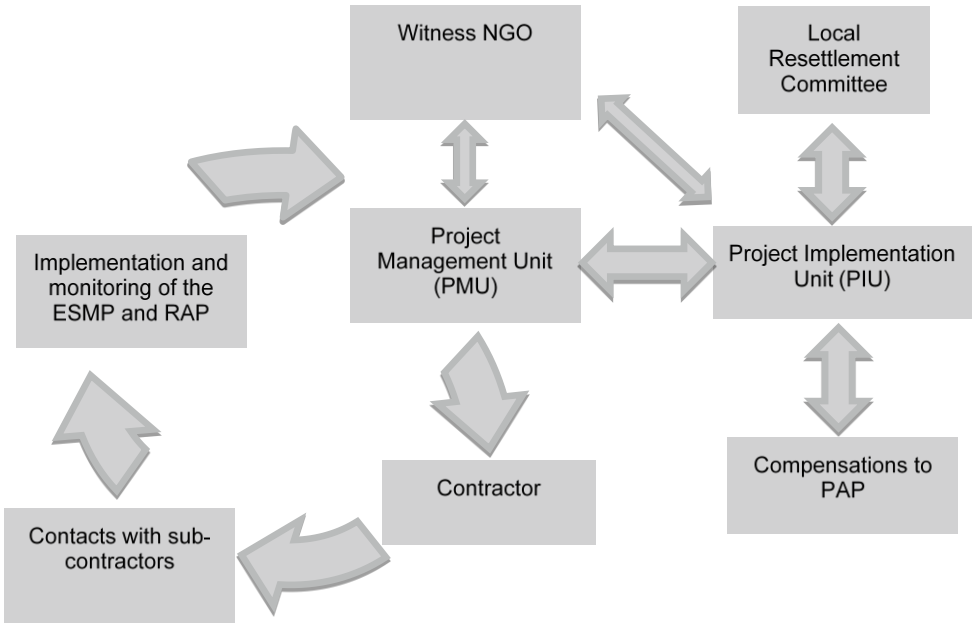


Figure 9-1 Institutional Arrangements for the RAP Implementation

9.4.1 PROJECT MANAGEMENT UNIT (PMU)

TCN will coordinate the implementation of the PMU, consisting of a Technical Committee and an Environmental Committee.

The Technical Committee shall be composed of technical experts able to ensure compliance with construction standards included in the plans and specifications, bidding documents and contracts. This Committee will be composed of engineers and experts supervised by a coordinator appointed from TCN. It is recommended that this committee meet on a monthly basis at least.

The Environment Committee will be composed of experts from the fields of environment, ecology, agronomy and sociology, etc., and will ensure proper implementation of the environmental and social management measures contained in the RAP and detailed in the ESMP[9]. These experts will be from the professional staff of TCN, and also from departmental and local authorities that need to supervise the RAP implementation (and the ESMP).

These are:

- → Lands or Works department of LGA;
- → Kebbi state and Federal state Ministry of Environment specialists;
- → Land Use Advisory and Allocation Committee of the Kebbi State Ministry of Lands and Housing;
- → Representative (4) of Local chiefs from affected communities.

Acting under the authority of the coordinator, the committee will meet on a bi-monthly basis in the first weeks of the project, and then on a monthly basis or more frequently as necessary.

The Environment Committee will oversee the implementation of the ESMP by the prime contractor and its subcontractors in charge of construction.

It is recommended that the committee hire and appoint an environmental manager and technical assistants who will be responsible to monitor on the field and on a day-to-day basis contractors' implementation of the measures contained in the RAP (detailed in the ESMP). These representatives will also be in charge of relations with local chiefs and the PAPs to receive and document complaints and

[9] The presentation of ESMP and RAP implementation structure was done jointly to clarify the overall implementation of environmental protection measures

grievances related to environmental measures, nuisances, workers-population relations, etc. These complaints and related correctives measures will be discussed on a daily basis between the contractor and the environmental manager and reported to the committee at its regular meeting.

In the case of an incident that could potentially cause serious damage to the environment or equipment, the Environment Committee through its environmental manager will be authorized to stop work or to give instructions to the head contractor to ensure that impacts are minimized or eliminated. All cases need to be reported and discuss at the committee meetings.

In addition, the committee as mandated by the TCN will work closely with the PIU for the RAP implementation: estimation and delivery of compensation packages; livelihood restoration and vulnerable groups assistance measures to affected household; reconstruction of community affected structures; implementation of the CCF funded measures.

9.4.2 WITNESS NGO

To enhance transparency and trust from PAPs it is suggested that a witness NGO, recognized and credible in the project area, be retained, through a public proposal and selection process, by the PMU to provide independent advice and report on RAP implementation and management focusing on consultation activities, compensation and resettlement related activities and grievances management. This NGO could be a recognized and credible Human Right advocacy group or a NGO active in rural development.

This 'outside' look will ensure that proper procedures and stated compensation processes are followed, that PAP grievances are well taken care of, and that PAP are treated with fairness. This mode of supervision was experienced in other projects and gave good results in terms of reduction of grievances in particular[10].

This NGO will revise PIU reports, meet with PAP, check implementation of the measures, reconstruction, etc. in the field and provide comments and recommendations. All PAPs will be informed of the NGO role and function and need to have access to its representatives, in a confidential manner if need be, to explain and discuss their difficulties of grievances.

9.4.3 PROJECT IMPLEMENTATION UNIT (PIU)

Responsibility for the good implementation of the RAP lies with TCN. It is thus it's responsibility to insure the creation of the PIU and the hiring of the witness NGO, with the help of the Environmental Committee of the PMU, at least one year before the start of construction activities to insure implementation of resettlement.

This structure will take care of the implementation of the RAP, including the monitoring activities and implementation of the CCF.

It is recommended that TCN hire, through a public proposal and selection process, a local consultant or NGO with good credentials to act as the PIU. An open bidding process must be put in place to recruit this organization.

This PIU should be in place to monitor the construction activities and impacts on households, and also implement the projects funded through the CCF. It is estimated that the PIU will need to operate in full activity during 36 to 48 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.

The PIU will be directed by a Coordinator who will supervise the work.

The responsibilities of the PIU Coordinator, approved by the various parties, will include:

→ Provision of information on activities and consultation with the PAPs;

[10] Burnside and Associates Limited, 2006, Bujagali Interconnection Project Resettlement and Community Development Action Plan

- → Maintain an inventory of the goods to be resettled and a detailed valuation of the compensations;
- → Ensure proper information and participation of PAPs and affected communities;
- → Management of compensation payments;
- → Monitoring the resettlement work;
- → Implementation of community-approved projects financed through the CCF;
- → Identification of the witness NGOs to be hired and facilitation of their involvement in the consultation activities, compensation and resettlement related activities;
- → Production of monitoring reports (see below) for the RAP implementation to appropriate government authorities, TCN 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 the PIU have:

- → **Support staff**: secretarial services, drivers, security and legal personnel, general accountants;
- → **Survey, Identification & Appraisal Team**: surveyors, appraisers, "option disclosure and agreement" officers in charge of relations with each PAP households (negotiation, compensation payment, PAP feed-back, etc.);
- → **Resettlement (house and community structures)**: ad-hoc urban planner and architect (consultants), engineers / construction supervisors;
- → **Cash compensation**: compensation officers, accountant, security officer;
- → **Database management**: database officers;
- → **Livelihood restoration and community forest**: agronomist / agro-foresters;
- → **Assistance to vulnerable people and displaced households**: social workers among which at least one woman;
- → **Communication specialist**: Community engagement specialist in charge of the information and participation program;
- → **CCF community project**: technicians or engineers on ad-hoc basis providing technical advices for community projects.

It is also proposed that the PIU have offices located in easily accessible communities to facilitate transport, contact with population and local authorities. The PIU coordinator will assess the situation and propose proper localization to that effect.

The envisaged compensation amounts and resettlement modalities for each PAP will have to be approved and endorsed by the PAPs, the competent governmental authorities and by TCN.

Communities' and households' fears regarding the non-payment of the Claims are important and widespread. In order to reduce those fears, it is strongly recommended that the approval of the start of the construction of the power line be conditional to the transmission of a satisfactory 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 phase. The confirmation of the witness NGO of this report is essential.

Also, as a mitigation measure, the PIU should clearly identify the cut-off date (when will the verification survey come to an end and new compensation claims be refused) and disclose it well in advance 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.

9.4.4 STAKEHOLDER ENGAGEMENT PROGRAM

To ensure the interests of the affected persons are fully entrenched in the RAP process and income restoration, an engagement program shall be developed at the onset of the RAP implementation process. These program goals are transparent information and meaningful participation of PAPs, representatives

of affected and interested groups and of the various administrative and government departments all through the project.

This participation will be done through the creation of the Environmental committee of the PMU, the LRC and a vigorous program of information and consultation of affected communities and PAPs. These information and consultation will concern compensations rules and procedures, livelihoods program, PAPs rights, grievances mechanisms, etc.

Many means should be used leaflets, community meetings with graphical display to help illiterate people, radio messages in local languages, recorded approval of the project by local authorities, etc.

9.5 INSTITUTIONAL CAPACITY REINFORCEMENT

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

A training program must be implemented as part of the PIU and PMU set-up process to properly train key personnel involved with the supervision of compensation evaluation, procedures and implementation of others mitigation and compensation measures. Training on grievance procedures and negotiations should also be provided to the personnel in charge of supervising compensation and resettlement issues.

Table 9-1 outlines the training proposed for the PIU and PMU Environmental Committee staff. The training is focused on the practical aspects of compensation and resettlement, compensation process, monitoring and management. The proposed content is a minimum that can be expanded according to PMU and PIU staff expertise and experience.

The costs associated with this training program are included in the ESMP budget.

Table 9-1 Training Program

TRAINING RECIPIENTS	TYPE OF TRAINING	ENVIRONMENTAL ISSUES TO BE COVERED	TRAINING CONDUCTING AGENCY
PIU and PMU Environmental Committee	• Lecture • Workshops • Teamwork • Case studies • On-site	• Overview of the environmental and social issues of the project • Environmental laws and regulations • Review of ESMP and RAP reports, implementation schedule and activities • Legal requirements on compensation and resettlement, WB OP 4.12 and other financiers (if necessary) RAP standards • Lessons learned from previous projects • Vulnerable groups participation techniques • Monitoring requirement and techniques	Environmental and social experts, legal advisors and Estate Surveyors and Valuers'
PIU team of compensation supervisors and grievance committee members and PMU Environmental Committee	• Workshops • Lectures • Case studies	• Grievances management, negotiation and mediation techniques	Legal and negotiation experts

Note: The presentation of ESMP and RAP implementation structure was done jointly to clarify the overall implementation of environmental protection measures

10 GRIEVANCE MECHANISMS

During implementation of the project activities, it is possible that disputes/disagreements between the project developer and the PAPs will occur especially in terms of compensation, boundaries, ownership of crops or land, etc.

There are great challenges associated with grievance redress especially in a project of this magnitude.

The practice of grievance arbitration over resettlement issues in Nigeria is conducted within the framework of the Land Use Act (LUA) of 1978, reviewed under Cap 202, 1990. Two stages have been identified in the grievance procedure: customary mediation and judiciary hearings.

A grievance procedure based on community grievance committees, one per LGA, will be established for resolution of the disputes and complaints.

10.1 CUSTOMARY MEDIATION

Procedures for grievances will be clearly explained during community meetings. 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.

A Customary Grievance Redress Committee (CGRC) shall be set up by the PIU in each LGA to address complaints from RAP implementation. This committee will be assisted by the PIU who will act as TCN representative and its members will include:

- → Representative of State Ministry of Land and Housing (Chairperson);
- → Representative of Land Administration- (Secretary);
- → Representative of the local Government Area (s) (Member);
- → Respected local Elders (Members);
- → Representative of Village Head of affected village (s);
- → Representative of the Emirate Councils from all affected Emirates;
- → Representative of Witness NGO.

PAPs’ complaints should first be lodged verbally or in writing through this process via the Village Head.

It is expected that the committee will deal with the grievances they receive via the Village Head within three days of receipt of the complaint. The proposed solution will be presented to the PAP in person if he attends the CGRC meeting, or by the PIU if the PAP is not present. If the complaint cannot be resolved at this level, or if the plaintiff is not satisfied with the settlement proposed, the plaintiff should then be referred to the official legal procedures.

10.2 COURTS OF LAW

The judicial process in accordance with applicable laws will be followed and the law courts will pass binding judgment on the matter.

11 MONITORING, REVIEW AND EVALUATION

The purpose of resettlement monitoring is to ensure that measures developed for compensating the losses were effective in restoring PAPs living standards and income levels. Monitoring will be implemented by the PIU.

During monitoring phase, the existing grievance mechanism will be regularly reviewed for improving and correspondingly, additional and more user friendly forms, which enable the field staff to forward complaints and demands of local people to the PIU and or Environmental Manager of the PMU (see section 9 above).

Throughout the Project lifecycle, monitoring and evaluation activities will be reviewed; restructured or removed in case that the previously produced tools and forms are inefficient.

Monitoring and Evaluation (M&E) procedures establish the effectiveness of all land and asset acquisition and resettlement activities, in addition to the measures designed to mitigate adverse social impacts. The procedures include internal track keeping efforts as well as independent external monitoring.

The purpose of resettlement monitoring for the proposed Transmission Line Project will be to verify that:

- → Actions and commitments described in the RAP are implemented;
- → Eligible project affected people receive their full compensation prior to the start of the rehabilitation activities on the corridor;
- → RAP actions and compensation measures have helped the people who sought cash compensation in restoring their lost incomes and in sustaining/improving pre-project living standards;
- → Complaints and grievances lodged by project affected people are followed up and, where necessary, appropriate corrective actions are taken;
- → If necessary, changes in RAP procedure are made to improve delivery of entitlements to project affected people.

The WB and AFDB operational policies states that the project sponsor (TCN) is responsible for adequate M&E of the activities set forth in the resettlement instrument.

Monitoring will provide both a warning system for the PIU and the project sponsor (TCN) and a channel for the affected persons to make known their needs and their reactions to resettlement execution.

PIU monitoring and evaluation activities and programs shall be adequately funded and staffed. PIU monitoring will be verified by the witness NGO to ensure complete and objective information.

11.1 MONITORING FRAMEWORK

The purpose of resettlement monitoring will be to ensure that compensation measures were effective in restoring PAPs living standards and income levels.

Also the effectiveness of the grievance mechanism provided will be followed up. As part of the monitoring and evaluation process, changes in RAP procedures will be put into effect if necessary.

The monitoring and evaluation framework consists of three elements:

- → PIU monitoring
- → External monitoring undertaken by the Witness NGO; and
- → Independent RAP Completion Audit.

Indicators have been established in order to measure RAP activities, results, objectives and goals. There are five categories of indicators for performance monitoring.

The first three (3) Internal Performance Monitoring are: *input, output and process indicators*.

They are mostly used for medium term measures to ensure that the RAP is relevant, effective and efficient.

The last two Impact monitoring are: *outcome and impact indicators.* They are mostly used for long term measures for assessing the results.

Table 11-1 RAP Monitoring Framework

COMPONENT ACTIVITY	TYPE OF INFORMATION/ DATA COLLECTED	SOURCE OF INFORMATION/DATA COLLECTIONS METHODS	RESPONSIBILITY FOR DATA COLLECTION, ANALYSES AND REPORTING	FREQUENCY/ AUDIENCE OF REPORTING
Internal Performance Monitoring	Measurement of input, process, output and outcome indicators against proposed timeline and budget, including compensation disbursement	Quarterly narrative status and compensation disbursement reports	PIU team, including public relations representatives	Semiannual or as required by TCN Environmental Committee, WB and AFDB or other financier
Impact Monitoring	Tracking effectiveness of inputs against baseline indicators Assessment of affected people's satisfaction with inputs, processes and outputs.	Annual quantitative and qualitative surveys. Regular public meetings and other consultation with project affected people; review of grievance mechanism outputs.	PIU team, including public affairs representatives Witness NGO	Annual

In order to effectively report on the effectiveness of RAP implementation, PIU will monitor the following key indicators, in keeping with WB and AFDB requirements on involuntary resettlement:

- → The timely disbursement of compensation;
- → Compensation disbursement to the correct parties;
- → Public consultation and grievance procedures in place and functioning;
- → The physical progress of resettlement and rehabilitation, where applicable.

PIU monitoring will provide the RAP management team with feedback on RAP implementation and help ensure that adverse impacts on affected people are mitigated in a timely manner. M&E will be the main mechanism to alert management of any delays and problems and will help TCN measure the extent to which the main objectives of the resettlement plan have been achieved.

RAP monitoring and evaluation activities will be adequately funded, implemented by qualified specialists and integrated into the overall PIU budget and activities.

PIU monitoring and evaluation activities will be supplemented and verified by monitoring efforts of the witness NGO.

The establishment of appropriate indicators in the RAP is essential since what is measured is what will be considered important. Indicators will be created for affected people as a whole, for key stakeholder groups, and for special categories of affected groups such as women.

The most important indicators for the RAP in the near term concern outputs, processes and outcomes since they define whether the planned level of effort is being made and whether early implementation experience is being used to modify/redesign RAP features. Over the medium to long term, outcome and

impact indicators are critical since they are the ultimate measure of the RAP's effectiveness in restoring people's livelihoods.

Monitoring indicators may have to be defined or re-defined during the course of project in response to changes to project-related conditions. Consequently, implementation and mitigation measures may have to be adopted to incorporate these changes into the M&E plan.

PAP will be involved in monitoring at different level of the process: thru the LRC that will be put in place, grievances mechanisms, participation in follow-up survey and focus-groups and the participation to communication activities (see section 9.4.4) were PAP will be able to provide feed-back to the PIU about RAP implementation difficulties.

11.1.1 INDICATORS

11.1.1.1 INPUT INDICATORS

These cover the human and financial resources that are utilized in the RAP activities.

11.1.1.2 OUTPUT INDICATORS

Include activities and services produced with the inputs, which can be a database of land acquisition, Compensation payments made for the loss of assets etc.

11.1.1.3 PROCESS INDICATORS

Process indicators represent the change in the quality and quantity of access and coverage of the activities and services. Examples of process indicators in the RAP include:

1. The creation of grievance mechanisms;
2. The establishment of stakeholder channels so that they can participate in RAP implementation;
3. Information and dissemination activities.

11.1.1.4 OUTCOME INDICATORS

The delivery of mitigation activities and measures to compensate physical and economic losses created by the project such as restoration and compensation of agricultural production and overall income levels, changes in PAPs and community attitudes towards the project, use of compensation payments for income generating activities; and CCF funded community project implementation.

11.1.1.5 IMPACT INDICATORS

Impact indicators define the change in medium and long-term measurable results in behavior and attitudes, living standards, and conditions. Impact indicators aim to assess whether restoration activities of the RAP are effective in maintaining and even improving social and economic conditions of PAPs.

In addition to quantitative indicators, impact monitoring will be supplemented by the use of qualitative indicators to assess client satisfaction and the satisfaction of the affected people with the choices that they have made in re-establishing themselves.

Tracking this data will allow PIU determining the following types of information:

→ The extent to which quality of life and livelihood has been restored;

→ The success of the resettlement;

→ Whether Project Affected Persons have experienced any hardship as a result of the project.

11.2 INTERNAL MONITORING

Internal monitoring measures the progress of activities defined in the RAP. The PIU will be responsible for this process with support from appointed experts as necessary.

It is the responsibility of the PIU to conduct regular internal monitoring of the resettlement efforts and performance of the operation through LRC and grievances committee which will be responsible for implementing resettlement activities and manage grievances. The monitoring shall be a systematic evaluation of the activities of the operation in relation to the specified criteria of the condition of approval.

11.2.1 OBJECTIVES OF INTERNAL M&E

The objective of internal monitoring and supervision shall be:

- → To verify that the valuation of assets lost or damaged, and the provision of relocation, resettlement and other rehabilitation entitlements, has been carried out in accordance with the resettlement policies.
- → To oversee that the RAP is implemented as designed and approved
- → To verify that funds for implementation of the RAP are provided by the TCN in a timely manner and in amounts sufficient for their purposes, and that such funds are used in accordance with the provisions of the RAP.
- → Ensure the identification and signature/thumb print of PAPs before and during receipt of compensation entitlements.
- → Record all grievances and their resolution and ensure that complaints are dealt with in a timely manner.

11.3 EXTERNAL MONITORING AND EVALUATION

External monitoring activities will verify the process defined in the RAP which is realized by PIU.

The witness NGO shall be established to periodically carry out external monitoring and evaluation of the implementation of the RAP. The general objectives for external monitoring are:

- → To provide an independent source of evaluation during the implementation process of resettlement and compensation. The external monitor will offer, if needed, external support and technical expertise to RAP compensation committees and implementing agencies;
- → To contribute advice to solve both anticipated and unanticipated problems that may arise as the programs defined in this RAP are carried out;
- → To provide an overall assessment of RAP programs from a broader, long term socio-economic perspective.

The following parameters will be monitored and evaluated through PIU reports and sites visits:

- → Public Consultation and Awareness efforts of Compensation distribution.
- → PAPs should be fully informed and consulted about on all resettlement activities, including land acquisition, leasing land and relocation activities;
- → The witness NGO representative should attend some public meeting to monitor consultation procedures, problems and issues arisen during the meetings and solutions proposed;
- → Levels of PAPs satisfaction with various aspects of resettlement and compensation will be monitored and recorded; and (b) operation of grievance redress mechanism, redress results, and effectiveness of grievance resolution will be monitored.
- → Standards of Living - throughout resettlement implementation process, the trends of living standards of PAPs will be observed and surveyed, and any potential problems in restoration of living standards will be recorded and reported.

The witness NGO should have qualified and experienced staff and their terms of reference acceptable to the financing WB or AFDB.

In addition to verifying the information furnished in the internal supervision and monitoring reports, the independent monitoring unit shall visit a sample of 10% of PAP in each relevant district, six (6) months after the RAP has been implemented to:

- → Determine whether the procedures for PAPs participation and delivery of compensation and other rehabilitation entitlements have been done in accordance with the Policy Framework and the respective RAP.
- → Assess if the RAP objective or enhancement or at least restoration of living standards and income levels of PAPs have been met.
- → Gather qualitative indications of the social and economic impact of project implementation on the PAPs.
- → Suggest modification in the implementation procedures of the RAP, as the case may be, to achieve the principles and objectives of this policy framework.

The terms of reference for this task and selection of qualified NGO and Consultant will be prepared by the PIU in collaboration with TC and the WB or AFDB at the beginning of project implementation stage.

Both internal and external monitoring will be ended with RAP Completion Audit.

11.4 RAP COMPLETION AUDIT

Two RA audit are proposed. A first RAP implementation audit that will insure that reconstruction have been adequately done and that all compensation have been paid.

A RAP completion audit will be undertaken when previous monitoring has indicated that there are no significant outstanding issues regarding livelihood restoration and resettlement. It is expected that this final audit will be performed 3 year after the resettlement at the latest.

The RAP completion audit will be undertaken by an Accredited Agent with support from PIU and TCN as required.

The RAP completion audit will provide final indication that the livelihood restoration is sustainable and no further interventions are required.

Therefore, the independent audit assessing compliance programs resettlement / compensation with the provisions described in the RAP, the Nigerian legal framework applicable and the requirements of WB, AFDB or other financier as required. The evaluation report will be made public thru the PMU Environmental Committee, LRC meeting and public announcement thru appropriate media.

11.5 REPORTING

RAP monitoring reports will be prepared in accordance with WB and AFDB guidelines. Progress will be reported for the following tasks:

- → Internal monitoring;
- → External monitoring;
- → Compensation;
- → Completion audit.

The PIU team will have primary responsibility for the implementation of all internal monitoring activities. Designated staff will collect relevant data in a standardized format. PIU will use a device such as a bar chart/Gantt chart or MS Project table to assess and present information on progress of time bound actions.

11.5.1 FREQUENCY/AUDIENCE OF REPORTING

Monthly performance monitoring reports for the PMU Environmental Committee will be prepared by the PIU, beginning with the commencement of any activities related to resettlement, including income restoration.

These reports will summarize information that is collected and compiled in the quarterly narrative status and compensation disbursement reports and highlight key issues that have arisen.

As a result of the monitoring of inputs, processes, outputs and outcomes of RAP activities, project management will be advised of necessary improvements in the implementation of the RAP.

11.5.2 TYPE OF INFORMATION/DATA COLLECTED

In order to measure the project process and impact performance and to assess the effectiveness of project impact mitigation measures, PIU will collect information on all the input, process outcome and impact indicators.

Impact monitoring data will be collected at appropriate intervals through qualitative and quantitative surveys, and include a review of grievance mechanism outputs. The PIU will consult directly with the affected populations through regular public and LRC meetings.

11.5.3 FREQUENCY OF REPORTING

Monitoring data will be reported to the PMU Environmental Committee team and relevant external agencies quarterly or more frequently as required. The monitoring will continue for about 2 years beyond the completion of displacement process.

12 RAP IMPLEMENTATION BUDGET AND SCHEDULE

12.1 RAP BUDGET

The RAP implementation budget is summarized in the table below. This includes all costs. RAP costs will be paid by Nigeria Finance Ministry. The total budget is estimated at **1 385 637 783** Naira, or 4 398 850 USD (with inflation[11]). This amounts to 17% of the total construction cost (26 M) of the project.

Table 12-1 RAP and CCF Implementation and monitoring Cost

ELEMENT	COST LOCAL CURRENCY (NIGERIAN NAIRA)	COST (USD)
Crops compensation	13 380 637	42 478
Agricultural land compensation	244 149 132	775 077
Fallow land compensation	27 979 868	88 825
Trees compensation	1 065 950	3384
Principal structures compensation *(structure replacement, new site acquisition, relocation benefits, administration fees and taxes)*	314 753 000	999 216
Secondary structures compensation *(granary, kitchen, borehole)*	2 880 000	9 143
Commercial structures compensation *(structure replacement, new site acquisition, loss of business incomes, relocation benefits, administration fees and taxes)*	95 782 000	304 070
Community structures compensation *(mosque, school, Islamic school)*	18 500 000	58 730
Community assets compensation *(natural area)*	20 000 000	63 492
Income support allocation for the resettlement *(1 USD/day for each member of the household for 30 days, for household with a principal structure in the wayleave)*	1 697 099	5 388
Income support allocation for vulnerable groups *(1 USD/day for each member of the household for 30 days, for household with a principal structure in the wayleave, with the head of household or any of its members judged vulnerable)*	466 105	1 480
Compensation sub-total	**740 653 791**	2 351 282
Project implementation unit (PIU)	283 148 585	898 884
Witness NGO supervision	30 476 070	96 749
Community compensation fund *(1 % of the project)*	52 055 916	165 257
Community compensation fund administration *(10 % of FCC)*	5 205 592	16 526
Contingencies *(15 % of RAP sub-total)*	111 098 069	352 692
Compensation for access road and workers camps *(5 % of RAP sub-total)*	37 032 690	117 564
Total RAP and FCC	**1 259 670 712**	3 998 955
Provision for inflation (10%)	**125 967 071**	399 895
Total RAP and FCC (Conversion rate : 315 NGN = 1 USD)	**1 385 637 783**	4 398 850

[11] The inflation is 10% on average between 2007 and 2017 https://tradingeconomics.com/nigeria/core-inflation-rate

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 CCF. It is important that all structures to be rebuilt and payments for compensation are completed before project construction start. This can be done progressively so construction can start on one end.

The timely flowing of compensation and reconstruction are essential for good implementation. The fund for structures compensation and PIU hiring (approximately 3 300 000 USD) must be available at the beginning of the process to insure that reconstruction is done rapidly to liberate the ROW. The rest of the RAP budget (approximately 1 000 000 USD) can be made available in regular monthly payments or in 2 bulk payments (every 6 months) as will be find practical by TCN-PIU and Ministry of Finance.

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.

Figure 12-1 ESMP and RAP Implementation Schedule – Line

	Activities	Months before Project Start												Year 1												Year 2												Year 3											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	11	12
Phase 0 : Preparatory activities for Pre-construction phase (6 months)																																															
0,1	Setting-up of PMU's Environmental Committee and PIU NGO witness recruiteme		x	x		x	x		x	x	x	x	x																																		
0,2	Implementation of training program							x		x		x																																				
0,3	Communities information and awareness		x	x			x		x	x			x						x						x						x						x						x					
0,4	Instruments, procedures and monitoring and compensation processes									x	x																																				
0,5	Right of way identification and establishment									x	x																																				
0,6	Plot/land investigation and structure identification										x	x																																			
0,7	Implementation of local resettlement committee (LRC)											x	x																																		
0,8	Compensation standards identification												x																																		
0,9	Compensation evaluation and signing of an agreement						x						x	x																																	
0,10	Preparation of Detailed Management Plans			x	x	x	x	x	x	x	x	x	x																																	
Phase 1 : Pre-construction (6 months)																																															
1,1	Reconstruction of houses and community structures													x	x																																	
1,2	Payment of compensations to PAP														x	x																															
1,3	Assessment and resolution of grievances														x	x																															
1,4	Population resettlement															x	x																														
1,5	Right of way freeing																	x	x																												
1,6	Implementation of Compensation and Revegetation Plan																	x	x																												
1,7	Implementation of Revegetation and Erosion Control Plan																	x	x																												
1,8	Implementation of Stakeholder Engagement Plan																	x	x																												
Phase 2 : Purchase and Construction (18 months)																																															
2,1	Mitigation and improvment measures implementation																		x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x										
2,2	Assessment and resolution of grievances																		x				x						x					x			x										
2,3	Implementation of Waste Management Plan																		x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x										
2,4	Implementation of Vegetation Management Plan																		x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x										
2,5	Implementation of Physical Cultural Resources Management Plan																		x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x										
2,6	Implementation of Emergency Management Plan																		x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x										
2,7	Implementation of Higiene, Heatlh and Safety Plan																		x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x										
2,8	Implementation of environmental monitoring program																			x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x										
2,9	Implementation of Stakeholder Engagement Plan																		x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x										
2,10	Restauration of income generator assets																				x	x							x	x							x	x									
2,11	Achievement of community support activities																						x	x							x	x						x	x							x	x	
Phase 3 : Operation and Decommissioning (3 months)																																															
3,1	Implementation of mitigation and improvment measures																																					x	x	x									
3,2	Environmental monitoring program implementation																																						x	x									
Operated by TCN																																																
TCN.1	Implementation of mitigation and improvment measures																																								x	x	x	x	x	x	x	x	x
TCN.2	Vegetation Management Plan																																								x	x	x	x	x	x	x	x	x
TCN.3	Revegetation and Erosion Control Plan																																								x	x	x	x	x	x	x	x	x
TCN.4	Waste Management Plan																																								x	x	x	x	x	x	x	x	x
TCN.5	Physical Cultural Resources Management Plan																																								x	x	x	x	x	x	x	x	x
TCN.6	Emergency Management Plan																																								x	x	x	x	x	x	x	x	x
TCN.7	Hygiene, Health and Safety Plan																																								x	x	x	x	x	x	x	x	x
TCN.8	Implementation of Stakeholder Engagement Plan																																								x	x	x	x	x	x	x	x	x
TCN.9	Implementation of environmental monitoring program																																								x	x	x	x	x	x	x	x	x
TCN.10	Environmental and social audits																			x								x																				
TCN.11	ESMP update																								x						x																

Figure 12-2 ESMP and RAP Implementation Schedule – Substation

	Activities	Year 1												Year 2												Year 3									
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	11	12
Phase 1 : Designing and approving (5 months)																																				
1,1	Implementation of Compensation and Revegetation Plan				x	x																														
1,2	Implementation of Revegetation and Erosion Control Plan				x	x																														
Phase 2 : Purchase and Processing (9 months)																																				
Phase 3 : Construction (14 months, of which 6 in parallel with phase 2)																																				
3,1	Implementation of mitigation and improvment measures									x	x	x	x	x	x	x	x	x	x	x	x	x	x													
3,2	Implementation of Waste Management Plan									x	x	x	x	x	x	x	x	x	x	x	x	x	x													
3,3	Implementation of Vegetation Management Plan									x	x	x	x	x	x	x	x	x	x	x	x	x	x													
3,4	Implementation of Physical Cultural Resources Management Plan									x	x	x	x	x	x	x	x	x	x	x	x	x	x													
3,5	Implementation of Emergency Management Plan									x	x	x	x	x	x	x	x	x	x	x	x	x	x													
3,6	Implementation of Higiene, Heatlh and Safety Plan									x	x	x	x	x	x	x	x	x	x	x	x	x	x													
3,7	Implementation of environmental monitoring program									x	x	x	x	x	x	x	x	x	x	x	x	x	x													
3,8	Achievement of community support activities											x	x					x	x						x	x								x	x	
Phase 4: Operation and Decommissioning (5 months)																																				
4,1	Implementation of mitigation and improvment measures																							x	x	x	x	x								
4,2	Implementation of environmental monitoring program																								x	x	x	x								
Operated by TCN																																				
TCN.1	Implementation of mitigation and improvment measures																												x	x	x	x	x	x	x	x
TCN.2	Vegetation Management Plan																												x	x	x	x	x	x	x	x
TCN.3	Revegetation and Erosion Control Plan																												x	x	x	x	x	x	x	x
TCN.4	Waste Management Plan																												x	x	x	x	x	x	x	x
TCN.5	Physical Cultural Resources Management Plan																												x	x	x	x	x	x	x	x
TCN.6	Emergency Management Plan																												x	x	x	x	x	x	x	x
TCN.7	Hygiene, Health and Safety Plan																												x	x	x	x	x	x	x	x
TCN.8	Implementation of environmental monitoring program																												x	x	x	x	x	x	x	x
TCN.9	Environmental and social audits							x								x									x											
TCN.10	ESMP update												x						x						x					x						

Appendix 1

QUESTIONNAIRES

LOCAL COMMUNITY SURVEY

INTERCONNECTION: WAPP NORTH CORE PROJECT

COUNTRY: NIGERIA

Note to the facilitator:

- *Complete section A (socioeconomic data) and section B (wayleave survey) with village leaders and some of their advisors;*
- *Women must take part in this survey to talk about their concerns, the presence of specific community sites (NTFP[1] harvesting, ceremonial or heritage site) in the wayleave;*
- *Register the name of participants to every sections using the "List of participants" – table provided in section C.*

INFORMATION ABOUT THE INTERVIEW

Date: Month ___ Day ___	
Questionnaire number (day/month/initials/interview of the day) **:** ___/___/___/___/___/___/___/___/___/___/	
Interviewer name:	
State: Kebbi **Local Government Area:** Arewa ☐ Birnin Kebbi ☐ Kalgo ☐ **City or village:** _____	**Is the village connected to the power grid?** Yes ☐ No ☐
Position of the main respondent: Head of village ☐ Other ☐	
Respondent family name:	**First name:**
Respondent cellular phone number:	

[1] *NTFP : Non-timber forest product – refers to products of biological origin other than timber, derived from forests.*

SECTION A: SOCIOECONOMIC DATA

I. POPULATION

Total population in the village: _____ inhabitants (source : National Institute of Stat. or census)	
Presence of special groups (permanent or transient) (*refugees, migrants, pastoralists crossing the area*) :	Yes ☐ No ☐ Specify group(s): _____ Number : _____

II. ETHNIC GROUP

Ethnic group	Percentage (%)
Main ethnic group: _____	
Second main ethnic group: _____	
Third main ethnic group: _____	
Other ethnic groups (specify): _____	

III. OCCUPATION

Occupation	Percentage (%)
Farmer	
Pastoralist	
Self-employed	
Private employee	
Public employee	
Other(s) (specify): _____	

Note: If there is no member in a specific category, please put 0.

IV. RELIGION

Religion	Percentage (%)
Muslim	
Christian	
Animist	
Other(s) (specify): _____	

Note: If there is no member in a specific category, please put 0.

V. SOCIAL AND ECONOMIC INFRASTRUCTURES PRESENT IN THE COMMUNITY

Does the village have any of the following social and economic infrastructures/facilities?

Infrastructure/ Facility	Presence	Number	Number connected to power grid
1. School	Yes ☐ No ☐	Primary: #_____ Secondary: #_____ Tertiary: #_____	Primary: #_____ Secondary: #_____ Tertiary: #_____
2. Health facility	Yes ☐ No ☐	PHC: #_____ Hospital: #_____	PHC: #_____ Hospital: #_____
3. Market/ Trading center	Yes ☐ No ☐	Market: #_____ Trading center : #_____	Market: #_____ Trading center : #_____
4. Slaughterhouse	Yes ☐ No ☐	Number: #_____	Connected: #_____
5. Administrative buildings (hall, meeting room, etc.)	Yes ☐ No ☐	Number: #_____	Connected: #_____
6. Mosque, church, etc.	Yes ☐ No ☐	Mosque: #_____ Church: #_____ Other: #_____	Mosque: #_____ Church: #_____ Other: #_____
7. Heritage or cultural site (historic site or building, community burial sites, etc.)	Yes ☐ No ☐	Number: #_____	Connected: #_____
8. Machinery/ Production centre (sawmill, grain mill, workshop, pottery, honey, etc.)	Yes ☐ No ☐	Number: #_____	Connected: #_____
9. Water supply facilities (bore boles, protected spring)	Yes ☐ No ☐	Number: #_____	Connected: #_____
10. Lodging facilities (hotel)	Yes ☐ No ☐	Number: #_____	Connected: #_____
11. Police center	Yes ☐ No ☐	Number: #_____	Connected: #_____

VI. WORKFORCE

In the village, are there workers in the following fields?

Trades	Presence	Number of workers
Experienced pylon assembler	Yes ☐ No ☐	
Carpenter	Yes ☐ No ☐	
Welder	Yes ☐ No ☐	
Electrician	Yes ☐ No ☐	
Truck driver	Yes ☐ No ☐	
Taxi (car, tricycle, motorcycle)	Yes ☐ No ☐	
Heavy machinery operator (*shovel operator, caterpillar, etc.)*	Yes ☐ No ☐	
Mechanic	Yes ☐ No ☐	
Mason	Yes ☐ No ☐	
Painter	Yes ☐ No ☐	
Chainsaw operator	Yes ☐ No ☐	
Commercial Farm workers	Yes ☐ No ☐	
Other (specify): _____	Yes ☐ No ☐	

VII. SERVICES

Are these businesses present in the village?

Service	Presence	Number of businesses
Trucks/Lorry	Yes ☐ No ☐	
Mechanical *(dealers, repairs, etc.)*	Yes ☐ No ☐	
Gas/Petroleum products *(sales, storage, etc.)*	Yes ☐ No ☐	
Heavy machinery *(crane, bulldozer, excavator, etc.)*	Yes ☐ No ☐	
Materials *(wood, stone, sand, cement, etc.)*	Yes ☐ No ☐	
Food eating place	Yes ☐ No ☐	
Sleeping place *(hotel, lodge)*	Yes ☐ No ☐	
Logging companies	Yes ☐ No ☐	
Bank/Mobile money	Yes ☐ No ☐	
Post Office	Yes ☐ No ☐	
Security company	Yes ☐ No ☐	
Other (specify): _____	Yes ☐ No ☐	

VIII. OBSERVATIONS AND PERCEPTIONS

I. Are there <u>wild</u> animal or fish species that can be found around the village? Yes ☐ No ☐ *(If yes, complete the following table.)*

Wild animal and fish species names	Where (forest, wetlands, rivers, agricultural fields, etc.)

II. After the discussions held during the consultation, do you think the Project could generate other changes (not covered during the discussions) for your community, and how will this affect it? (perceived impacts and opportunities)

<u>Note to the interviewer</u> : to encourage and extend the discussion, ask about any specific concern or expectation associated to : - *Clearing of the wayleave* - *Construction works* - *Presence of foreign workers* - *Restriction of land use and agricultural activities under the line* - *The visual impact of the power line* - *The compensation and resettlement process*

Perceived potential changes (impact or opportunity)	**How will this affect the community? Who will be the most affected?**	**What do you think should be done to prevent (or optimize) this change?** (perceived solutions)
1.		
2.		
3.		

4.		
5.		
6.		
7.		
8.		

Note: Use additional sheets if required.

SECTION B: WAYLEAVE SURVEY

Note to the facilitator:
This section must be completed by the interviewer in the field with the help of the authorities of the communities (village leaders and representatives). The presence of women should be requested to provide relevant information concerning the presence of community, ceremonial or specific heritage sites in the wayleave.

I. PRINCIPAL BUILDINGS

Are there any municipal, school, church/mosque or heritage buildings, **entirely or partially located in the wayleave,** that must be relocated?

Yes ☐ No ☐ (If no, go to question II)

#	Function	Ownership Rights	Roof	Walls	Floor	Size	GPS coordinate	Photo #	Would it be acceptable to move the building if it cannot be avoided?	Does the community have land outside the wayleave on which the building could be rebuilt?	GPS coordinate of this land *(in the center if possible)*
1	1. House ☐ 2. Commerce/ shop ☐ 3. Other ☐ *If other, specify:* _____	1. Owner ☐ 2. Rented ☐ 3. Borrowed ☐ 4. Other ☐ *If other, specify:* _____	1. Corrugated Iron Sheets ☐ 2. Thatch ☐ 3. Asbestos ☐ 4. Concrete/cement ☐ 5. Wood and mud ☐ 6. Bamboo/reed ☐ 7. Plastic canvas ☐ 8. Bricks ☐ 9. Other ☐ *If other, specify:* _____	1. Plain mud ☐ 2. Mud ☐ 3. Mud bricks ☐ 4. Wood ☐ 5. Grass ☐ 6. Compacted ☐ 7. Burnt bricks ☐ 8. Concrete ☐ 9. Other ☐ *If other, specify:* _____	1. Earth/sand/ dirt/straw ☐ 2. Smoothed mud ☐ 3. Smooth cement ☐ 4. Wood/planks ☐ 5. Ceramic tiles ☐ 6. Other ☐ *If other, specify:* _____	Width___ m Length___ m *If house is round:* Diameter___ m	_____N _____E		Yes ☐ No ☐	Yes ☐ No ☐	_____N _____E
2	1. House ☐ 2. Commerce/ shop ☐ 3. Other ☐ *If other, specify:* _____	1. Owner ☐ 2. Rented ☐ 3. Borrowed ☐ 4. Other ☐ *If other, specify:* _____	1. Corrugated Iron Sheets ☐ 2. Thatch ☐ 3. Asbestos ☐ 4. Concrete/cement ☐ 5. Wood and mud ☐ 6. Bamboo/reed ☐ 7. Plastic canvas ☐ 8. Bricks ☐ 9. Other ☐ *If other, specify:* _____	1. Plain mud ☐ 2. Mud ☐ 3. Mud bricks ☐ 4. Wood ☐ 5. Grass ☐ 6. Compacted ☐ 7. Burnt bricks ☐ 8. Concrete ☐ 9. Other ☐ *If other, specify:* _____	1. Earth/sand/ dirt/straw ☐ 2. Smoothed mud ☐ 3. Smooth cement ☐ 4. Wood/planks ☐ 5. Ceramic tiles ☐ 6. Other ☐ *If other, specify:* _____	Width___ m Length___ m *If house is round:* Diameter___ m	_____N _____E		Yes ☐ No ☐	Yes ☐ No ☐	_____N _____E

#	Function	Ownership Rights	Roof	Walls	Floor	Size	GPS coordinate	Photo #	Would it be acceptable to move the building if it cannot be avoided?	Does the community have land outside the wayleave on which the building could be rebuilt?	GPS coordinate of this land *(in the center if possible)*
3	1. House ☐ 2. Commerce/ shop ☐ 3. Other ☐ *If other, specify:* _____	1. Owner ☐ 2. Rented ☐ 3. Borrowed ☐ 4. Other ☐ *If other, specify:* _____	1. Corrugated Iron Sheets ☐ 2. Thatch ☐ 3. Asbestos ☐ 4. Concrete/cement ☐ 5. Wood and mud ☐ 6. Bamboo/reed ☐ 7. Plastic canvas ☐ 8. Bricks ☐ 9. Other ☐ *If other, specify:* _____	1. Plain mud ☐ 2. Mud ☐ 3. Mud bricks ☐ 4. Wood ☐ 5. Grass ☐ 6. Compacted ☐ 7. Burnt bricks ☐ 8. Concrete ☐ 9. Other ☐ *If other, specify:* _____	1. Earth/sand/ dirt/straw ☐ 2. Smoothed mud ☐ 3. Smooth cement ☐ 4. Wood/planks ☐ 5. Ceramic tiles ☐ 6. Other ☐ *If other, specify:* _____	Width___ m Length___ m *If house is round:* Diameter___ m	_____N _____E		Yes ☐ No ☐	Yes ☐ No ☐	_____N _____E
4	1. House ☐ 2. Commerce/ shop ☐ 3. Other ☐ *If other, specify:* _____	1. Owner ☐ 2. Rented ☐ 3. Borrowed ☐ 4. Other ☐ *If other, specify:* _____	1. Corrugated Iron Sheets ☐ 2. Thatch ☐ 3. Asbestos ☐ 4. Concrete/cement ☐ 5. Wood and mud ☐ 6. Bamboo/reed ☐ 7. Plastic canvas ☐ 8. Bricks ☐ 9. Other ☐ *If other, specify:* _____	1. Plain mud ☐ 2. Mud ☐ 3. Mud bricks ☐ 4. Wood ☐ 5. Grass ☐ 6. Compacted ☐ 7. Burnt bricks ☐ 8. Concrete ☐ 9. Other ☐ *If other, specify:* _____	1. Earth/sand/ dirt/straw ☐ 2. Smoothed mud ☐ 3. Smooth cement ☐ 4. Wood/planks ☐ 5. Ceramic tiles ☐ 6. Other ☐ *If other, specify:* _____	Width___ m Length___ m *If house is round:* Diameter___ m	_____N _____E		Yes ☐ No ☐	Yes ☐ No ☐	_____N _____E

II. COMMUNITY ASSETS, CEREMONIAL OR PATRIMONIAL SITES

Are there any community assets (natural areas (where households collect products), pastures, community forests, plantations, etc.), religious, ceremonial or heritage sites, **entirely or partially located in the wayleave,** that must be relocated or compensated?

Yes ☐ No ☐ (If no, go to question III)

#	**Element:** *natural products collection area (forest, swamp, etc.), plantation, pasture, ceremonial site, cemetery, etc.*	**If natural area… what are the products collected in that area?** *(more than one possible)*	**GPS coordinate**	**Area in the wayleave (m^2)**	**If the affected area/element is properly compensate/ relocated, could this be acceptable to the community?**	**If moving the element, is there land outside the wayleave on which the element could be relocated?**	**If there is land outside the wayleave for a relocation, take 1 GPS waypoint of this land** *(in the center if possible)*
1	1. Natural area ☐ ___**code** 2. Wood Plantation ☐ 3. Pasture ☐ 4. Sacred site ☐ 5. Cemetery ☐ 6. Other ☐ *If other, specify:* _____	1. Fruits and other food products ☐ 2. Game, Fish ☐ 3. Medicinal plant ☐ 4. Wood *(for construction, fuel, etc.)* ☐ 5. Fodder ☐ 6. Other ☐ *If other, specify:* _____	_____N _____E	Length: ____m Width: ____ m	Yes ☐ No ☐	Yes ☐ No ☐	_____N _____E
2	1. Natural area ☐ ___**code** 2. Wood Plantation ☐ 3. Pasture ☐ 4. Sacred site ☐ 5. Cemetery ☐ 6. Other ☐ *If other, specify:* _____	1. Fruits and other food products ☐ 2. Game, Fish ☐ 3. Medicinal plant ☐ 4. Wood *(for construction, fuel, etc.)* ☐ 5. Fodder ☐ 6. Other ☐ *If other, specify:* _____	_____N _____E	Length: ____m Width: ____ m	Yes ☐ No ☐	Yes ☐ No ☐	_____N _____E

3	1. Natural area ☐ ___**code** 2. Wood Plantation ☐ 3. Pasture ☐ 4. Sacred site ☐ 5. Cemetery ☐ 6. Other ☐ *If other, specify:* _____	1. Fruits and other food products ☐ 2. Game, Fish ☐ 3. Medicinal plant ☐ 4. Wood *(for construction, fuel, etc.)* ☐ 5. Fodder ☐ 6. Other ☐ *If other, specify:* _____	_____N _____E	Length: ____m Width: ____ m	Yes ☐ No ☐	Yes ☐ No ☐	_____N _____E
4	1. Natural area ☐ ___**code** 2. Wood Plantation ☐ 3. Pasture ☐ 4. Sacred site ☐ 5. Cemetery ☐ 6. Other ☐ *If other, specify:* _____	1. Fruits and other food products ☐ 2. Game, Fish ☐ 3. Medicinal plant ☐ 4. Wood *(for construction, fuel, etc.)* ☐ 5. Fodder ☐ 6. Other ☐ *If other, specify:* _____	_____N _____E	Length: ____m Width: ____ m	Yes ☐ No ☐	Yes ☐ No ☐	_____N _____E

Natural gathering area (code): **(1)** Forest **(2)** Wetland **(3)** Scrubland **(4)** Grassland **(5)** Riverine area

SECTION C: GENERAL COMMENTS AND LIST OF PARTICIPANTS

Interviewer comments (note any particularities):

WAPP NORTH CORE PROJECT POWER

LIST OF PARTICIPANTS

PLACE OF THE MEETING:_____ DATE OF THE MEETING: _____

Name	Position/Occupation	Phone number	Signature

WAPP NORTH CORE PROJECT POWER

LIST OF PARTICIPANTS

PLACE OF THE MEETING:_____ DATE OF THE MEETING: _____

Name	Position/Occupation	Phone number	Signature

WAPP NORTH CORE PROJECT POWER

LIST OF PARTICIPANTS

PLACE OF THE MEETING:_____ DATE OF THE MEETING: _____

Name	Position/Occupation	Phone number	Signature

HOUSEHOLD SURVEY

INTERCONNECTION: WAPP NORTH CORE PROJECT

COUNTRY: NIGERIA

Hi, my name is _____. I am hired by Engineering and Environment Management Services Limited (EEMS) a Nigerian consultancy mandated by Transmission Company of Nigeria (TCN) to conduct an environmental impact assessment on a high-voltage electricity transmission line project between Birnin Kebbi (Nigeria) and Ouagadougou (Burkina Faso) via Záboří (Niger), Niamey (Niger) and Malanville (Benin).

This project is at a preliminary stage. We need to evaluate the potential impacts of the project on the population and affected households (fields, house, etc.). This is why we are performing this survey.

Later on, if the project is approved, the exact localization of the line will be determined and the official valuation of the affected household assets will be done.

Do you have any questions on this survey or on the project before I start?

Note: The respondent must sign the consent form before starting.

IDENTIFICATION OF THE HOUSEHOLD

Information about the Interview
Questionnaire number (day/month/initials/interview of the day) **:** ___/___/___/___/___/___/___/___/___/___/
State: Kebbi **Local Government Area:** Arewa ☐ Birnin Kebbi ☐ Kalgo ☐ **City or village:** _____
Interviewer name:

Information about the Head of Household (HofH) and the Informant	
HofH family name:	**First name:**
HofH cellular phone #:	**No phone** ☐
Email address:	**No email** ☐
Is the respondent the HofH? Yes ☐ No ☐ **If not, what is the respondent's name:** _____ **And what is his status:** Spouse of HofH ☐ Child of HofH ☐ Other ☐ Specify: _____	

SECTION A: HOUSEHOLD DATA

Household data is collected for the head of household and the members of the household currently residing in the principal residence of the household.

(Note: Definition of members of household: People sleeping and eating in the house for at least the last 6 months. Do not count visitors, boarding children BUT count children of the household away for school, visiting others, etc.)

I. HEAD OF HOUSEHOLD

Gender: Male ☐ Female ☐

Age: _____ years old

Marital status:

1. Single ☐
2. Married ☐
3. Widowed ☐
4. Divorced/Separated ☐
5. DNK ☐

If married:

1. Polygamous ☐
2. Monogamous ☐
3. DNK ☐

Ethnic group:

1. Hausa ☐
2. Fulani ☐
3. Dakarkari ☐
4. Kambari ☐
5. Zabarmawa ☐
6. Kanuri ☐
7. Yoruba ☐
8. Igbo ☐
9. Nupe ☐
10. Tiv ☐
11. DNK ☐
12. Other ☐

If other, specify: _____

Religion:

1. Muslim ☐
2. Christian ☐
3. Animist ☐
4. DNK ☐
5. Other ☐

If other, specify: _____

Highest formal education level attained:

No formal education ☐ Primary ☐ Secondary ☐ Tertiary ☐ University ☐ DNK ☐

Informal education received:

No informal education ☐ Koranic School ☐ Adult Education ☐ Vocation ☐
Others ☐ *If other, specify*: _____

Main Occupation:

Farmer ☐ Pastoralist ☐ Self-employed ☐ Private employee ☐ Public employee ☐
DNK ☐ Other ☐ *If other, specify*: _____

II. MEMBERS OF HOUSEHOLD

Members of household (excluding HofH) currently living in the residence(s) in the affected area.

(Note: People sleeping and eating in the house for at least the last 6 months, include children of the household away for school or visiting.)

Member	Age	Sex
#1		Male ☐ Female ☐
#2		Male ☐ Female ☐
#3		Male ☐ Female ☐
#4		Male ☐ Female ☐
#5		Male ☐ Female ☐
#6		Male ☐ Female ☐
#7		Male ☐ Female ☐
#8		Male ☐ Female ☐
#9		Male ☐ Female ☐
#10		Male ☐ Female ☐
#11		Male ☐ Female ☐
#12		Male ☐ Female ☐
#13		Male ☐ Female ☐
#14		Male ☐ Female ☐
#15		Male ☐ Female ☐

III. HOUSEHOLD INCOMES

Now, I would like to ask you some questions about the sources of livelihood.

A- Did the household practice these activities during the past 12 months?

1. Agriculture: Yes ☐ No ☐ *If yes, complete this table*.

Crops/Fruits	Over the past 12 months, have you produced…	If, yes… who?	Area in acre *(estimation)*	Quantity produce	Quantity sold
Maize	Yes ☐ No ☐	HofH ☐ Spouse(s) of HofH ☐ Both ☐		___ Bags	___ Bags
Rice	Yes ☐ No ☐	HofH ☐ Spouse(s) of HofH ☐ Both ☐		___ Bags	___ Bags
Cassava	Yes ☐ No ☐	HofH ☐ Spouse(s) of HofH ☐ Both ☐		___ Bags	___ Bags
Sorghum	Yes ☐ No ☐	HofH ☐ Spouse(s) of HofH ☐ Both ☐		___ Bags	___ Bags
Millet	Yes ☐ No ☐	HofH ☐ Spouse(s) of HofH ☐ Both ☐		___ Bags	___ Bags
Yam	Yes ☐ No ☐	HofH ☐ Spouse(s) of HofH ☐ Both ☐		___ Tubers	___ Tubers
Ground nuts	Yes ☐ No ☐	HofH ☐ Spouse(s) of HofH ☐ Both ☐		___ Bags	___ Bags
Beans	Yes ☐ No ☐	HofH ☐ Spouse(s) of HofH ☐ Both ☐		___ Bags	___ Bags
Date Palm	Yes ☐ No ☐	HofH ☐ Spouse(s) of HofH ☐ Both ☐		___ Mudu	___ Mudu
Mangos	Yes ☐ No ☐	HofH ☐ Spouse(s) of HofH ☐ Both ☐		___ Basket	___ Basket
Oranges	Yes ☐ No ☐	HofH ☐ Spouse(s) of HofH ☐ Both ☐		___ Basket	___ Basket

Bananas	Yes ☐ No ☐	HofH ☐ Spouse(s) of HofH ☐ Both ☐		___ Bunch	___ Bunch
Garden Eggs	Yes ☐ No ☐	HofH ☐ Spouse(s) of HofH ☐ Both ☐		___ Basket	___ Basket
Other	Yes ☐ No ☐ *If yes, specify*: ___________	HofH ☐ Spouse(s) of HofH ☐ Both ☐		___	___
Other	Yes ☐ No ☐ *If yes, specify*: ___________	HofH ☐ Spouse(s) of HofH ☐ Both ☐		___	___
Other	Yes ☐ No ☐ *If yes, specify*: ___________	HofH ☐ Spouse(s) of HofH ☐ Both ☐		___	___
Other	Yes ☐ No ☐ *If yes, specify*: ___________	HofH ☐ Spouse(s) of HofH ☐ Both ☐		___	___

2. **Livestock:** Yes ☐ No ☐ *If yes, complete this table.*

Animals	**Over the past 12 months, did you have…**	**If yes, how many?**	**Over the past 12 months, have you sold some of them?**	**If yes, how many?**	**Who sold them?**
Cow	Yes ☐ No ☐	________	Yes ☐ No ☐	________	HofH ☐ Spouse(s) of HofH ☐ Both ☐
Pig	Yes ☐ No ☐	________	Yes ☐ No ☐	________	HofH ☐ Spouse(s) of HofH ☐ Both ☐
Chicken (poultry)	Yes ☐ No ☐	________	Yes ☐ No ☐	________	HofH ☐ Spouse(s) of HofH ☐ Both ☐
Goat	Yes ☐ No ☐	________	Yes ☐ No ☐	________	HofH ☐ Spouse(s) of HofH ☐ Both ☐
Donkey	Yes ☐ No ☐	________	Yes ☐ No ☐	________	HofH ☐ Spouse(s) of HofH ☐ Both ☐
Sheep	Yes ☐ No ☐	________	Yes ☐ No ☐	________	HofH ☐ Spouse(s) of HofH ☐ Both ☐

Ram	Yes ☐ No ☐	_____	Yes ☐ No ☐	_____	HofH ☐ Spouse(s) of HofH ☐ Both ☐
Camel	Yes ☐ No ☐	_____	Yes ☐ No ☐	_____	HofH ☐ Spouse(s) of HofH ☐ Both ☐
Other	Yes ☐ No ☐ *If yes, specify*: _____	_____	Yes ☐ No ☐ *If yes, specify*: _____	_____	HofH ☐ Spouse(s) of HofH ☐ Both ☐

3. Fishing from river or fish pond: Yes ☐ No ☐ *If yes, complete this table*.

Frequency of fishing	**Use** *(multiple responses)*	**Over the past 12 months, the fishing income (for the household) amounted to…**
Daily ☐ Weekly ☐ Monthly ☐ Seasonal ☐	Household consumption ☐ Exchange ☐ Sale ☐	_____ NGN

4. Hunting: Yes ☐ No ☐ *If yes, complete this table*.

Frequency of hunting	**Use** *(multiple responses)*	**Over the past 12 months, the hunting income (for the household) amounted to…**
Daily ☐ Weekly ☐ Monthly ☐ Seasonal ☐	Household consumption ☐ Exchange ☐ Sale ☐	_____ NGN

5. Charcoal (production): Yes ☐ No ☐ *If yes, complete this table*.

Frequency of charcoal production	**Use** *(multiple responses)*	**Over the past 12 months, the charcoal production income (for the household) amounted to…**
Daily ☐ Weekly ☐ Monthly ☐ Seasonal ☐	Household consumption ☐ Exchange ☐ Sale ☐	_____ NGN

6. Wood (collect): Yes ☐ No ☐ *If yes, complete this table*.

Frequency of wood-collecting activities	**Use** *(multiple responses)*	**Over the past 12 months, the wood-collecting income (for the household) amounted to…**
Daily ☐ Weekly ☐ Monthly ☐ Seasonal ☐	Household consumption ☐ Exchange ☐ Sale ☐	_____ NGN

7. **Business: (owned shop/store):** Yes ☐ No ☐

   If yes, what is the income associated to this source of money for the past 12 months?
   _____ NGN

8. **Pension:** Yes ☐ No ☐

   If yes, what is the income associated to this source of money for the past 12 months?
   _____ NGN

9. **Money transfer (family):** Yes ☐ No ☐

   If yes, what is the income associated to this source of money for the past 12 months?
   _____ NGN

10. **Renting (land, house, etc.):** Yes ☐ No ☐

    If yes, what is the income associated to this source of money for the past 12 months?
    _____ NGN

11. **Salary (official):** Yes ☐ No ☐

    If yes, what is the income associated to this source of money for the past 12 months?
    _____ NGN

12. **Odd or casual jobs:** Yes ☐ No ☐

    If yes, what is the income associated to this source of money for the past 12 months?
    _____ NGN

13. **Other sources:** Yes ☐ No ☐

    If yes, specify: _____

    If yes, what is the income associated to this source of money for the past 12 months?
    _____ NGN

IV. HEALTH AND VULNERABILITY

A- Is the HofH handicapped or chronically sick? Yes ☐ No ☐

If yes, provide details on his/her sickness or handicap: _____

B- Are there any other members of the household handicapped or chronically sick? Yes ☐ No ☐

If yes, provide details on their sickness or handicap: _____

C- Were there any deaths in the household in the last year? Yes ☐ No ☐

If yes, provide details on cause(s) of deaths: _____

V. HOUSEHOLD FACILITIES

A- Does the household have any of the following facilities?

Power generator	Yes ☐	No ☐	Car/Truck	Yes ☐	No ☐
Gas stove/Kerosene	Yes ☐	No ☐	Motor Cycle	Yes ☐	No ☐
Refrigerator	Yes ☐	No ☐	Bicycle	Yes ☐	No ☐
Television	Yes ☐	No ☐	Plow	Yes ☐	No ☐
Radio/cassette/music system	Yes ☐	No ☐	Cart	Yes ☐	No ☐
			House in town	Yes ☐	No ☐
			Land in town	Yes ☐	No ☐

B- For the main dwelling of the household : What is the main building material used in the construction of the:

Roof	**Walls**	**Floor**
1. Corrugated Iron Sheets ☐	1. Plain mud ☐	1. Earth/sand/dirt/straw ☐
2. Thatch ☐	2. Mud ☐	2. Smoothed mud ☐
3. Asbestos ☐	3. Mud bricks ☐	3. Smooth cement ☐
4. Concrete/cement ☐	4. Wood ☐	4. Wood/planks ☐
5. Wood and mud ☐	5. Grass ☐	5. Ceramic tiles ☐
6. Bamboo/reed ☐	6. Compacted ☐	6. Other ☐
7. Plastic canvas ☐	7. Burnt bricks ☐	*If other, specify:*
8. Bricks ☐	8. Concrete ☐	_____
9. Other ☐	9. Other ☐	
If other, specify:	*If other, specify:*	
_____	_____	

VI. CONSUMPTION

A- Energy and Drinking Water

ENERGY			
What is the household's <u>main</u> source of energy for…?			
Cooking	1. Main electricity ☐ 2. Solar ☐ 3. Gas (biogas) ☐ 4. Bottled gas 5. Paraffin/kerosene ☐ 6. Charcoal ☐ 7. Firewood (biomass) ☐ 8. Crop residues 9. Livestock dung ☐ 10. Other ☐ *If other, specify* : _____	**Lighting**	1. Main electricity ☐ 2. Solar ☐ 3. Gas (biogas) ☐ 4. Hurricane lamp ☐ 5. Pressure lamp ☐ 6. Wick lamp ☐ 7. Candles ☐ 8. Firewood (biomass) ☐ 9. Other ☐ *If other, specify* : _____
DRINKING WATER			
What is the household's main source of drinking water during the…?			
Dry season	1. Piped water ☐ 2. Rainwater catchment ☐ 3. Protected spring ☐ 4. Unprotected spring ☐ 5. Water vendor ☐ 6. Tanker truck ☐ 7. Bottled water ☐ 8. Surface water *(lake/dam/river/stream)* ☐ 9. Borehole ☐ 10. Other ☐ *If other, specify* : _____	**Wet season**	1. Piped water ☐ 2. Rainwater catchment ☐ 3. Protected spring ☐ 4. Unprotected spring ☐ 5. Water vendor ☐ 6. Tanker truck ☐ 7. Bottled water ☐ 8. Surface water *(lake/dam/river/stream)* ☐ 9. Borehole ☐ 10. Other ☐ *If other, specify* : _____
What is the distance between the main source and house?			
Dry season	_____ km	**Wet season**	_____ km

B- Household Food Consumption

1. How many meals the household normally has per day? ____ **/Day** (between 1 and 3)
2. In the last week, how many days the household consumed meat? ____ (between 0 and 7)
3. In the last week, how many days the household consumed fish? ____ (between 0 and 7)
4. In the last year, how often could the head of household satisfy the food needs of the household?
   Never ☐ Seldom ☐ Sometimes ☐ Often ☐ Always ☐
5. Do you need to buy food to satisfy household needs?
   Yes ☐ No ☐

VII. LAND OWNERSHIP

Record all land parcels owned/used by the household in the last 12 months (including land owned, rented or leased, use of common/community land, etc.).

Note: All land parcels within and outside the wayleave are included.

A- How many pieces of land do you use: _____ pieces of land

Parcel #	Ownership/ Use rights	Ownership of the use rights	Use	Area (acre)
1	1. Leasehold/ Certificate of ownership ☐ 2. Customary law ☐ 3. Bought ☐ 4. Rented ☐ 5. Borrowed ☐ 6. Shared cropping ☐ 7. Other form of tenure ☐ 8. N/A ☐	1. HofH ☐ 2. Wife ☐ 3. Son/Daughter ☐ 4. Father of HofH ☐ 5. Mother of HofH ☐ 6. Other relative male ☐ 7. Other relative female ☐	1. Crop growing ☐ 2. House/store ☐ 3. Rented to others ☐ 4. Pasture ☐ 5. Planted trees ☐ 6. Savana – natural bush ☐ 7. Fallow ☐ 8. Uncultivated (excluding fallow) ☐ 9. Unusable ☐ 10. Other ☐ *If other, specify:* _____	___ **acre**
2	1. Leasehold/ Certificate of ownership ☐ 2. Customary law ☐ 3. Bought ☐ 4. Rented ☐ 5. Borrowed ☐ 6. Shared cropping ☐ 7. Other form of tenure ☐ 8. N/A ☐	1. HofH ☐ 2. Wife ☐ 3. Son/Daughter ☐ 4. Father of HofH ☐ 5. Mother of HofH ☐ 6. Other relative male ☐ 7. Other relative female ☐	1. Crop growing ☐ 2. House/store ☐ 3. Rented to others ☐ 4. Pasture ☐ 5. Planted trees ☐ 6. Savana – natural bush ☐ 7. Fallow ☐ 8. Uncultivated (excluding fallow) ☐ 9. Unusable ☐ 10. Other ☐ *If other, specify:* _____	___ **acre**

Parcel #	Ownership/ Use rights	Ownership of the use rights	Use	Area (acre)
3	1. Leasehold/ Certificate of ownership ☐ 2. Customary law ☐ 3. Bought ☐ 4. Rented ☐ 5. Borrowed ☐ 6. Shared cropping ☐ 7. Other form of tenure ☐ 8. N/A ☐	1. HofH ☐ 2. Wife ☐ 3. Son/Daughter ☐ 4. Father of HofH ☐ 5. Mother of HofH ☐ 6. Other relative male ☐ 7. Other relative female ☐	1. Crop growing ☐ 2. House/store ☐ 3. Rented to others ☐ 4. Pasture ☐ 5. Planted trees ☐ 6. Savana – natural bush ☐ 7. Fallow ☐ 8. Uncultivated (excluding fallow) ☐ 9. Unusable ☐ 10. Other ☐ *If other, specify:* _____	___ **acre**
4	1. Leasehold/ Certificate of ownership ☐ 2. Customary law ☐ 3. Bought ☐ 4. Rented ☐ 5. Borrowed ☐ 6. Shared cropping ☐ 7. Other form of tenure ☐ 8. N/A ☐	1. HofH ☐ 2. Wife ☐ 3. Son/Daughter ☐ 4. Father of HofH ☐ 5. Mother of HofH ☐ 6. Other relative male ☐ 7. Other relative female ☐	1. Crop growing ☐ 2. House/store ☐ 3. Rented to others ☐ 4. Pasture ☐ 5. Planted trees ☐ 6. Savana – natural bush ☐ 7. Fallow ☐ 8. Uncultivated (excluding fallow) ☐ 9. Unusable ☐ 10. Other ☐ *If other, specify:* _____	___ **acre**

SECTION B: IMPACTS RELATED TO THE WAYLEAVE

Section B must be completed by the interviewer in the field with the help of the community authority. The interview with the household is used to complete or confirm the information.

A. CONTROL GROUP (OUTSIDE ROW) Yes ☐ **(STOP INTERVIEW HERE AND ASK THE INTERVIEWEE TO SIGN AT THE END OF THE QUESTIONNAIRE)**

B. AFFECTED GROUP (INSIDE ROW) Yes ☐ **(PLEASE FILL SECTION B)**

I. CULTIVATED PARCELS IN THE WAYLEAVE

Are there any parcels (used by the household) partially or entirely located in the wayleave?

Yes ☐ No ☐ **(If no, go to question # II)**

If yes, how many? _____

For each parcel affected, provide numbers of trees and perennial crops (and estimate the area for crops **in m^2**) that are **entirely located** in the wayleave.

PARCEL # 1

Ownership rights	Ownership of the use rights	If rented /borrowed or shared	Area	GPS Waypoint # *(corners of the affected area)*	Annual crops / Area used in the ROW		Permanent crops in the ROW	
					Type	**(m^2)**	**Type**	**# of trees**
1. Leasehold/ certificate of ownership ☐ 2. Customary law ☐ 3. Bought ☐ 4. Rented ☐ 5. Borrowed ☐ 6. Shared cropping ☐ 7. Other ☐	1. HofH ☐ 2. Wife ☐ 3. Son ☐ 4. Daughter ☐ 5. Father of HofH ☐ 6. Mother of HofH ☐ 7. Other relative male ☐ 8. Other relative female ☐ 9. DNK ☐	Name of the owner: _____ Cell.: _____	**Total area (m)** Length : ____ m Width : ____ m **Area in ROW (m)** Length : ____ m Width : ____ m		Maize	_____**m^2**	Shea tree	**# of trees_**
					Rice	_____**m^2**	Acacia tree	**# of trees_**
					Cassava	_____**m^2**	Banana tree	**# of trees_**
					Sorghum	_____**m^2**	Cashew tree	**# of trees_**
					Millet	_____**m^2**	Palm oil tree	**# of trees_**
					Yam	_____**m^2**	Cocoa tree	**# of trees_**
					Ground nut	_____**m^2**	Kola (nuts) tree	**# of trees_**
					Beans	_____**m^2**	Orange tree	**# of trees_**
					Other, specify: _____	_____**m^2**	Other, specify: _____	**# of trees_**

Do you have another parcel not used to replace the affected one? Yes ☐ No ☐

If yes, where is located the new parcel? *(1 GPS waypoint – center)*

_____

If yes, do you have ownership rights on the new parcel? Yes ☐ No ☐

What is the situation of the parcel? Cultivated ☐ Fallow ☐ Uncultivated (excluding fallow) ☐ Unusable ☐

PARCEL # 2

Ownership rights	Ownership of the use rights	If rented /borrowed or shared	Area	GPS Waypoint # *(corners of the affected area)*	Annual crops / Area used in the ROW		Permanent crops in the ROW	
					Type	**(m^2)**	**Type**	**# of trees**
1. Leasehold/ certificate of ownership ☐ 2. Customary law ☐ 3. Bought ☐ 4. Rented ☐ 5. Borrowed ☐ 6. Shared cropping ☐ 7. Other ☐	1. HofH ☐ 2. Wife ☐ 3. Son ☐ 4. Daughter ☐ 5. Father of HofH 6. Mother of HofH 7. Other relative male ☐ 8. Other relative female ☐ 9. DNK ☐	Name of the owner: _____ Cell.:_____	**Total area (m)** Length : ___ m Width : ____ m **Area in ROW (m)** Length : ___ m Width : ___ m		Maize	_____**m^2**	Shea tree	**# of trees** _
					Rice	_____**m^2**	Acacia tree	**# of trees**
					Cassava	_____**m^2**	Banana tree	**# of trees** _
					Sorghum	_____**m^2**	Cashew tree	**# of trees** _
					Millet	_____**m^2**	Palm oil tree	**# of trees** _
					Yam	_____**m^2**	Cocoa tree	**# of trees** _
					Ground nut	_____**m^2**	Kola (nuts) tree	**# of trees**
					Beans	_____**m^2**	Orange tree	**# of trees**
					Other, specify: _____	_____**m^2**	Other, specify: ____	**# of trees**

Do you have another parcel not used to replace the affected one? Yes ☐ No ☐

If yes, where is located the new parcel? *(1 GPS waypoint – center)*

_____

If yes, do you have ownership rights on the new parcel? Yes ☐ No ☐

What is the situation of the parcel? Cultivated ☐ Fallow ☐ Uncultivated (excluding fallow) ☐ Unusable ☐

PARCEL # 3

Ownership rights	Ownership of the use rights	If rented /borrowed or shared	Area	GPS Waypoint # *(corners of the affected area)*	Annual crops / Area used in the ROW		Permanent crops in the ROW	
					Type	**(m^2)**	**Type**	**# of trees**
1. Leasehold/ certificate of ownership ☐ 2. Customary law ☐ 3. Bought ☐ 4. Rented ☐ 5. Borrowed ☐ 6. Shared cropping ☐ 7. Other ☐	1. HofH ☐ 2. Wife ☐ 3. Son ☐ 4. Daughter ☐ 5. Father of HofH ☐ 6. Mother of HofH ☐ 7. Other relative male ☐ 1. Other relative female ☐ 2. DNK ☐	Name of the owner: _____ Cell.: _____	**Total area (m)** Length : ____ m Width : ____ m **Area in ROW (m)** Length : ____ m Width : ____ m		Maize	_____**m^2**	Shea tree	**# of trees** _____
					Rice	_____**m^2**	Acacia tree	**# of trees** _____
					Cassava	_____**m^2**	Banana tree	**# of trees** _____
					Sorghum	_____**m^2**	Cashew tree	**# of trees** _____
					Millet	_____**m^2**	Palm oil tree	**# of trees** _____
					Yam	_____**m^2**	Cocoa tree	**# of trees** _____
					Ground nut	_____**m^2**	Kola (nuts) tree	**# of trees** _____
					Beans	_____**m^2**	Orange tree	**# of trees** _____
					Other, specify: _____	_____**m^2**	Other, specify: _____	**# of trees** _____

Do you have another parcel not used to replace the affected one? Yes ☐ No ☐

If yes, where is located the new parcel? *(1 GPS waypoint – center)*

_____

If yes, do you have ownership rights on the new parcel? Yes ☐ No ☐

What is the situation of the parcel? Cultivated ☐ Fallow ☐ Uncultivated (excluding fallow) ☐ Unusable ☐

PARCEL # 4

Ownership rights	Ownership of the use rights	If rented /borrowed or shared	Area	GPS Waypoint # *(corners of the affected area)*	Annual crops / Area used in the ROW		Permanent crops in the ROW	
					Type	**(m^2)**	**Type**	**# of trees**
1. Leasehold/ certificate of ownership ☐ 2. Customary law ☐ 3. Bought ☐ 4. Rented ☐ 5. Borrowed ☐ 6. Shared cropping ☐ 7. Other ☐	1. HofH ☐ 2. Wife ☐ 3. Son ☐ 4. Daughter ☐ 5. Father of HofH 6. Mother of HofH 7. Other relative male ☐ 8. Other relative female ☐ 9. DNK ☐	Name of the owner: _____ Cell.: _____	**Total area (m)** Length : ____ m Width : ____ m **Area in ROW (m)** Length : ____ m Width : ____ m		Maize	_____**m^2**	Shea tree	**# of trees** _____
					Rice	_____**m^2**	Acacia tree	**# of trees** _____
					Cassava	_____**m^2**	Banana tree	**# of trees** _____
					Sorghum	_____**m^2**	Cashew tree	**# of trees** _____
					Millet	_____**m^2**	Palm oil tree	**# of trees** _____
					Yam	_____**m^2**	Cocoa tree	**# of trees** _____
					Ground nut	_____**m^2**	Kola (nuts) tree	**# of trees** _____
					Beans	_____**m^2**	Orange tree	**# of trees** _____
					Other, specify: _____	_____**m^2**	Other, specify: _____	**# of trees** _____

Do you have another parcel not used to replace the affected one? Yes ☐ No ☐

If yes, where is located the new parcel? *(1 GPS waypoint – center)*

_____

If yes, do you have ownership rights on the new parcel? Yes ☐ No ☐

What is the situation of the parcel? Cultivated ☐ Fallow ☐ Uncultivated (excluding fallow) ☐ Unusable ☐

PARCEL # 5

Ownership rights	Ownership of the use rights	If rented /borrowed or shared	Area	GPS Waypoint # *(corners of the affected area)*	Annual crops / Area used in the ROW		Permanent crops in the ROW	
					Type	**(m^2)**	**Type**	**# of trees**
1. Leasehold/ certificate of ownership ☐ 2. Customary law ☐ 3. Bought ☐ 4. Rented ☐ 5. Borrowed _____ 6. Shared cropping ☐ 7. Other ☐	1. HofH ☐ 2. Wife ☐ 3. Son ☐ 4. Daughter ☐ 5. Father of HofH ☐ ☐ 6. Mother of HofH ☐ ☐ 7. Other relative male ☐ 8. Other relative female ☐ 9. DNK ☐	Name of the owner: _____ Cell.: _____	**Total area (m)** Length :___ m Width :___ m **Area in ROW (m)** Length :___ m Width :___ m		Maize	_____**m^2**	Shea tree	**# of trees_**
					Rice	_____**m^2**	Acacia tree	**# of trees_**
					Cassava	_____**m^2**	Banana tree	**# of trees_**
					Sorghum	_____**m^2**	Cashew tree	**# of trees_**
					Millet	_____**m^2**	Palm oil tree	**# of trees_**
					Yam	_____**m^2**	Cocoa tree	**# of trees_**
					Ground nut	_____**m^2**	Kola (nuts) tree	**# of trees_**
					Beans	_____**m^2**	Orange tree	**# of trees_**
					Other, specify: _____	_____**m^2**	Other, specify: _____	**# of trees_**

Do you have another parcel not used to replace the affected one? Yes ☐ No ☐

If yes, where is located the new parcel? *(1 GPS waypoint – center)*

_____

If yes, do you have ownership rights on the new parcel? Yes ☐ No ☐

What is the situation of the parcel? Cultivated ☐ Fallow ☐ Uncultivated (excluding fallow) ☐ Unusable ☐

PARCEL # 6

Ownership rights	Ownership of the use rights	If rented /borrowed or shared	Area	GPS Waypoint # *(corners of the affected area)*	Annual crops / Area used in the ROW		Permanent crops In the ROW	
					Type	**(m^2)**	**Type**	**# of trees**
1. Leasehold/ certificate of ownership ☐ 2. Customary law ☐ 3. Bought ☐ 4. Rented ☐ 5. Borrowed ☐ 6. Shared cropping ☐ 7. Other ☐	1. HofH ☐ 2. Wife ☐ 3. Son ☐ 4. Daughter ☐ 5. Father of HofH ☐ 6. Mother of HofH ☐ 7. Other relative male ☐ 8. Other relative female ☐ 9. DNK ☐	Name of the owner: _____ Cell.: _____	**Total area (m)** Length : ____ m Width : ____ m **Area in ROW (m)** Length : ____ m Width : ____ m		Maize	_____**m^2**	Shea tree	**# of trees_**
					Rice	_____**m^2**	Acacia tree	**# of trees_**
					Cassava	_____**m^2**	Banana tree	**# of trees_**
					Sorghum	_____**m^2**	Cashew tree	**# of trees_**
					Millet	_____**m^2**	Palm oil tree	**# of trees_**
					Yam	_____**m^2**	Cocoa tree	**# of trees_**
					Ground nut	_____**m^2**	Kola (nuts) tree	**# of trees_**
					Beans	_____**m^2**	Orange tree	**# of trees_**
					Other, specify: _____	_____**m^2**	Other, specify: _____	**# of trees_**

Do you have another parcel not used to replace the affected one? Yes ☐ No ☐

If yes, where is located the new parcel? *(1 GPS waypoint – center)*

_____

If yes, do you have ownership rights on the new parcel? Yes ☐ No ☐

What is the situation of the parcel? Cultivated ☐ Fallow ☐ Uncultivated (excluding fallow) ☐ Unusable ☐

II. STRUCTURES

Are there any principal structures (house or commercial property belonging to the household) **partly or entirely located in the wayleave**?

Yes ☐ No ☐ **(If no, go to question on secondary structures below)**

If yes, how many? _____

1-PRINCIPAL STRUCTURES

#	Function	Ownership rights	If the structure is rented or borrowed	Roof	Walls	Floor	Size	GPS coordinates	Photo #	Would it be acceptable to move the building if it cannot be avoided?	Do you have land outside the wayleave to rebuild your principal structure?	GPS coordinate of relocation land
1	1. House ☐ 2. Business/ shop ☐ 3. Other ☐ *If other, specify:* _____	1. Owner ☐ 2. Rented ☐ 3. Borrowed ☐ 4. Other ☐ *If other, specify:* _____	Name of owner _____ Cell. :_____	1. Corrugated Iron Sheets ☐ 2. Thatch ☐ 3. Asbestos ☐ 4. Concrete/cement ☐ 5. Wood and mud ☐ 6. Bamboo/reed ☐ 7. Plastic/canvas ☐ 8. Bricks ☐ 9. Other ☐ *If other, specify:* _____	1. Plain mud ☐ 2. Mud ☐ 3. Mud bricks ☐ 4. Wood ☐ 5. Grass ☐ 6. Compacted ☐ 7. Burnt bricks ☐ 8. Concrete ☐ 9. Other ☐ *If other, specify:* _____	1. Earth/sand/dirt/straw ☐ 2. Smoothed mud ☐ 3. Smooth cement ☐ 4. Wood/planks ☐ 5. Ceramic tiles ☐ 6. Other ☐ *If other, specify:* _____	Width ___m Length ___m *If house is round:* Diameter ___m	E_____ N_____		Yes ☐ No ☐	Yes ☐ No ☐	E_____ N_____
2	1. House ☐ 2. Business/ shop ☐ 3. Other ☐ *If other, specify:* _____	1. Owner ☐ 2. Rented ☐ 3. Borrowed ☐ 4. Other ☐ *If other, specify:* _____	Name of owner _____ Cell. :_____	1. Corrugated Iron Sheets ☐ 2. Thatch ☐ 3. Asbestos ☐ 4. Concrete/cement ☐ 5. Wood and mud ☐ 6. Bamboo/reed ☐ 7. Plastic/canvas ☐ 8. Bricks ☐ 9. Other ☐ *If other, specify:* _____	1. Plain mud ☐ 2. Mud ☐ 3. Mud bricks ☐ 4. Wood ☐ 5. Grass ☐ 6. Compacted ☐ 7. Burnt bricks ☐ 8. Concrete ☐ 9. Other ☐ *If other, specify:* _____	1. Earth/sand/dirt/straw ☐ 2. Smoothed mud ☐ 3. Smooth cement ☐ 4. Wood/planks ☐ 5. Ceramic tiles ☐ 6. Other ☐ *If other, specify:* _____	Width ___m Length ___m *If house is round:* Diameter ___m	E_____ N_____		Yes ☐ No ☐	Yes ☐ No ☐	E_____ N_____

3	1. House ☐ 2. Business/ shop ☐ 3. Other ☐ *If other, specify:* _____	1. Owner ☐ 2. Rented ☐ 3. Borrowed ☐ 4. Other ☐ *If other, specify:* _____	Name of owner _____ Cell. :_____	1. Corrugated Iron Sheets ☐ 2. Thatch ☐ 3. Asbestos ☐ 4. Concrete/cement ☐ 5. Wood and mud ☐ 6. Bamboo/reed ☐ 7. Plastic/canvas ☐ 8. Bricks ☐ 9. Other ☐ *If other, specify:* _____	1. Plain mud ☐ 2. Mud ☐ 3. Mud bricks ☐ 4. Wood ☐ 5. Grass ☐ 6. Compacted ☐ 7. Burnt bricks ☐ 8. Concrete ☐ 9. Other ☐ *If other, specify:* _____	1. Earth/sand/dirt/straw ☐ 2. Smoothed mud ☐ 3. Smooth cement ☐ 4. Wood/planks ☐ 5. Ceramic tiles ☐ 6. Other ☐ *If other, specify:* _____	Width ___m Length ___m *If house is round:* Diameter ___m	E_____ N_____		Yes ☐ No ☐	Yes ☐ No ☐	E_____ N_____
4	1. House ☐ 2. Business/ shop ☐ 3. Other ☐ *If other, specify:* _____	1. Owner ☐ 2. Rented ☐ 3. Borrowed ☐ 4. Other ☐ *If other, specify:* _____	Name of owner _____ Cell. :_____	1. Corrugated Iron Sheets ☐ 2. Thatch ☐ 3. Asbestos ☐ 4. Concrete/cement ☐ 5. Wood and mud ☐ 6. Bamboo/reed ☐ 7. Plastic/canvas ☐ 8. Bricks ☐ 9. Other ☐ *If other, specify:* _____	1. Plain mud ☐ 2. Mud ☐ 3. Mud bricks ☐ 4. Wood ☐ 5. Grass ☐ 6. Compacted ☐ 7. Burnt bricks ☐ 8. Concrete ☐ 9. Other ☐ *If other, specify:* _____	1. Earth/sand/dirt/straw ☐ 2. Smoothed mud ☐ 3. Smooth cement ☐ 4. Wood/planks ☐ 5. Ceramic tiles ☐ 6. Other ☐ *If other, specify:* _____	Width ___m Length ___m *If house is round:* Diameter ___m	E_____ N_____		Yes ☐ No ☐	Yes ☐ No ☐	E_____ N_____
5	1. House ☐ 2. Business/ shop ☐ 3. Other ☐ *If other, specify:* _____	1. Owner ☐ 2. Rented ☐ 3. Borrowed ☐ 4. Other ☐ *If other, specify:* _____	Name of owner _____ Cell. :_____	1. Corrugated Iron Sheets ☐ 2. Thatch ☐ 3. Asbestos ☐ 4. Concrete/cement ☐ 5. Wood and mud ☐ 6. Bamboo/reed ☐ 7. Plastic/canvas ☐ 8. Bricks ☐ 9. Other ☐ *If other, specify:* _____	1. Plain mud ☐ 2. Mud ☐ 3. Mud bricks ☐ 4. Wood ☐ 5. Grass ☐ 6. Compacted ☐ 7. Burnt bricks ☐ 8. Concrete ☐ 9. Other ☐ *If other, specify:* _____	1. Earth/sand/dirt/straw ☐ 2. Smoothed mud ☐ 3. Smooth cement ☐ 4. Wood/planks ☐ 5. Ceramic tiles ☐ 6. Other ☐ *If other, specify:* _____	Width ___m Length ___m *If house is round:* Diameter ___m	E_____ N_____		Yes ☐ No ☐	Yes ☐ No ☐	E_____ N_____

2-SECONDARY STRUCTURE

Are there any secondary structures (**for example, a shed for animals, a separate kitchen, a toilet, a well, a tomb, etc.**) **partly or entirely located in the wayleave**?

Yes ☐ No ☐ **(If no, go to question # III)**

If yes, how many? _____

#	Type of structure	Ownership rights	If the structure is rented or borrowed	Size	GPS coordinate	Photo #	Would it be acceptable to move the structure if it cannot be avoided?	Do you have land outside the wayleave to rebuild the structure?	GPS coordinate of relocation land
1	_____	1. Owner ☐ 2. Rented ☐ 3. Borrowed ☐ 4. Other ☐ *If other, specify:* _____	Name of owner _____ Cell. :_____	Width ___m Length ___m	E _____ N _____		Yes ☐ No ☐	Yes ☐ No ☐	E _____ N _____
2	_____	1. Owner ☐ 2. Rented ☐ 3. Borrowed ☐ 4. Other ☐ *If other, specify:* _____	Name of owner _____ Cell. :_____	Width ___m Length ___m	E _____ N _____		Yes ☐ No ☐	Yes ☐ No ☐	E _____ N _____
3	_____	1. Owner ☐ 2. Rented ☐ 3. Borrowed ☐ 4. Other ☐ *If other, specify:* _____	Name of owner _____ Cell. :_____	Width ___m Length ___m	E _____ N _____		Yes ☐ No ☐	Yes ☐ No ☐	E _____ N _____

III. CONCERNS ABOUT THE IMPACTS OF ESTABLISHING THE WAYLEAVE

Do you have concerns about the establishment of the wayleave?	Yes ☐ No ☐
If YES, what are they?	

Interviewer comments (write down anything particular about this interview):

Appendix 2

CONSENT FORM

Due to its voluminous content, this entire Appendix is available on CD-ROM at the end of this document.

Appendix 3

LIST OF STAKEHOLDERS

WAPP 330 kV North Core Project

Identified Project's Stakeholders

Stakeholder groups and organizations	Location
Ministries and agencies at national level	
Federal Ministry of Environment - Environmental Assessment (EIA)	Abuja
Federal Ministry of Environment - Forestry Department	Abuja
Federal Mintsry of Lands and Survey	Abuja
National Commission for Musuems and Monuments	Abuja
Federal Mininistry of Agriculture (Department of Animal Production and Husbandry Services and department of Agriculture)	Abuja
National Parks Services	Abuja
Nigerian Civil Aviation Authority	Abuja
National Commission for Museums and Monuments	Abuja
Federal Ministry of Works (Department in Charge of Federal Roads)	Abuja
Administrative authorities at regional / sub-regional levels	
Kebbi State Ministry of Environment	Birnin Kebbi
Kebbi State Environmental Protection Agency (KESEPA)	Birnin Kebbi
Kebbi State Ministry Lands and Survey	Birnin Kebbi
Birnin Kebbi Local Government Area	Birnin Kebbi
Kalgo Local Government Area	Kalgo
Arewa Local Government Area	Arewa
Kebbi State Ministry of Women Affairs	Birnin Kebbi
Sokoto-Rima River Basin Development Authority, Kebbi State Area Office	Birnin Kebbi
Kebbi State Rural Electrification Board (REB	Birnin Kebbi
Kebbi State Ministry of Agric (Livestock)	Birnin Kebbi
Parks / Conservation areas administrators	
Great Green Wall Project	Abuja
Affected communities (cities, towns and villages)	
Badariya (Birnin Kebbi)	Project area
Kola	Project area
Kutukulu	Project area
Ungwan Dodo	Project area
Unguwan Mairago	Project area
Rafin Atiku	Project area
Kangiwa	Project area
Sandare	Project area
Ungwan Muza	Project area
Eri	Project area
Goru	Project area
Mahuta	Project area
Zukuku	Project area
Environmental NGOs	
Savannah Conservation Foundation	Abuja

Appendix 4

REPORTS/ SIGNATURES/PICTURES OF THE MEETINGS WITH THE STAKEHOLDERS – 3RD ROUND (INCLUDING SIGNATURES OF THE COMMUNITY QUESTIONNAIRE)

Due to its voluminous content, this entire Appendix is available on CD-ROM at the end of this document.

Appendix 5

REPORTS/ SIGNATURES/PICTURES OF THE MEETINGS WITH THE STAKEHOLDERS – 4TH ROUND

MINUTES OF MEETING

ESIA/RAP FOR 330 KV WAPP NORTH CORE PROJECT
4th ROUND CONSULTATIONS

ORGANIZATION NAME: LGA Authorities/Services
Date and time of the meeting: 14/03/2016 09:00 Hours
Meeting location: State Secretariat Conference Room, Birnin Kebbi.
Participants: See attached register of signature
Agenda: 1. Introductions 2. Opening prayers 3. Welcome Address 4. Presentation of the Preliminary ESIA, ESMP and RAP reports 5. Feedback from stakeholders 6. Response to comments/Round Up 7. Closing prayers 8. Departure

PRESENTATION OF THE PROJECT AND ONGOING STUDIES

The key findings and recommendations contained in the preliminary ESIA, ESMP and RAP reports was presented to LGA authorities and CBOs at LGA level; in order to pre-validate and obtain feedback and suggestions from stakeholders to improve them. And also to assess the level of compliance of key measures put forward by the preliminary ESMP and RAP reports with authorities' requirements and expectations.

FEEDBACK FROM STAKEHOLDERS

Topic	**Comments and recommendations**	**the comment / recommendation by**
Electrification of villages	The communities pledged unflinching support for the project and reiteration for earlier request for the electrification of villages along the line route.	Arewa LGA (Sarkin Noma, Farmers Association)
Public Awareness	Translate public awareness in Hausa Language and print in Ajami characters as well. Awareness should also be aired on local radio and TV stations	Kalgo LGA (Social Development) Kalgo LGA (Ardo Fulani)
Women	The culture of the people of the area does not encourage women to partake in certain types of jobs. Hence, the need to consult widely when hiring women.	Kalgo LGA (Social Development)

Prepared by: Engr. Mamoud Abubakar

MINUTES OF MEETING

ESIA/RAP FOR 330 KV WAPP NORTH CORE PROJECT
4th ROUND CONSULTATIONS

ORGANIZATION NAME: National Authorities
Date and time of the meeting: 17/03/2016 10:00am
Meeting location: TCN Conference Room, Abuja.
Participants: See attached register of signature
Agenda: 1. Introductions 2. Opening prayers 3. Welcome Address 4. Presentation of the Preliminary ESIA, ESMP and RAP reports 5. Feedback from stakeholders 6. Response to comments/Round Up 7. Closing prayers 8. Departure

PRESENTATION OF THE PROJECT AND ONGOING STUDIES

The key findings and recommendations contained in the preliminary ESIA, ESMP and RAP reports was presented to participants; in order to pre-validate and obtain feedback and suggestions from stakeholders to improve them. And also to assess the level of compliance of key measures put forward by the preliminary ESMP and RAP reports with authorities' requirements and expectations.

FEEDBACK FROM STAKEHOLDERS

Topic	Comments and recommendations	the comment / recommendation by
Accidental find	Ensure prompt reporting of accidental find of archaeological materials to National Commission for Museums and Monuments and further work suspended until Officers arrive site	National Commission for Museums and Monuments
Vegetation	It is recommended that trees removed should be replaced through revegetation programme.	Federal Department of Forestry
Report format	The ESIA report should be presented in line with the format in the EIA Sectoral Guideline	Federal Ministry of Environment (Environmental Assessment)
Crossing Cattle Routes	Try to minimise the number of towers placed in the international Transhumance Cattle Route	Federal Ministry of Agriculture (Animal Husbandry department)
Sokoto River Crossing	Contact National Inland Waterways Agency (NIWA) for their role	TCN (Wayleave Unit)
Burrow Pits	Ensure appropriate mitigation/rehabilitation of burrow pits	Savannah Conservation Foundation (NGO)
Community Land	Ensure compensation is paid directly to the PAPs farming in the Wetland area surveyed as community land	TCN (Environment Unit)
Compensation for undeveloped land	It is recommended to pay compensation for lands that has no asset, where the owner has certificate of ownership or customary ownership to avoid lengthy grievance or even litigation	TCN (Wayleave Unit)

Prepared by: Engr. Mamoud Abubakar

MINUTES OF MEETING

ESIA/RAP FOR 330 KV WAPP NORTH CORE PROJECT
4th ROUND CONSULTATIONS

EEMS Limited
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ORGANIZATION NAME: State Level Authorities/Services
Date and time of the meeting: 14/03/2016 13:00 Hours
Meeting location: State Secretariat Conference Room, Birnin Kebbi.
Participants: See attached register of signature
Agenda: 1. Introductions 2. Opening prayers 3. Welcome Address 4. Presentation of the Preliminary ESIA, ESMP and RAP reports 5. Feedback from stakeholders 6. Response to comments/Round Up 7. Closing prayers 8. Departure

PRESENTATION OF THE PROJECT AND ONGOING STUDIES

The key findings and recommendations contained in the preliminary ESIA, ESMP and RAP reports was presented to State level agencies; in order to pre-validate and obtain feedback and suggestions from stakeholders to improve them. And also to assess the level of compliance of key measures put forward by the preliminary ESMP and RAP reports with authorities' requirements and expectations.

FEEDBACK FROM STAKEHOLDERS

Topic	**Comments and recommendations**	**the comment / recommendation by**
Vegetation	It is recommended that trees removed should be replaced through revegetation programme. And the State Government pledged to donate seedlings for the revegetation programme	Kebbi State Ministry of Environment
	The report of the land survey to demarcate the wayleave should be submitted to State Government, and should be done with the participation of the Ministry of Lands/Survey. The beacon numbers is to be issued by Surveyor General of the State.	Kebbi State Ministry for Lands
Crossing Highways	All highways have ROW of 45.72m, and towers should not be placed within the highway ROW	Federal Controller of Works, Kebbi
Community Compensation Fund (CCF)	The Dukku Barracks needs to be considered as a community for the purpose inclusion in the CCF projects and be invited to all engagements with communities the line crosses. This is because line passes through the Barracks land for several kilometers	1st Battalion Dukku Barracks, Birnin Kebbi

Prepared by: Engr. Mamoud Abubakar

MINUTES OF MEETING

ESIA/RAP FOR 330 KV WAPP NORTH CORE PROJECT
4th ROUND CONSULTATIONS

ORGANIZATION NAME: Village Chiefs of Villages crossed by the line
Date and time of the meeting: 11/03/2016; 09:00 Hours
Meeting location: State Secretariat Conference Room, Birnin Kebbi.
Participants: See attached register of signature
Agenda: 1. Introductions 2. Opening prayers 3. Welcome Address 4. Presentation of the Preliminary ESIA, ESMP and RAP reports 5. Feedback from stakeholders 6. Response to comments/Round Up 7. Closing prayers 8. Departure

PRESENTATION OF THE PROJECT AND ONGOING STUDIES

The key findings and recommendations contained in the preliminary ESIA, ESMP and RAP reports was presented to Head of Villages crossed by the line; in order to pre-validate and obtain feedback and suggestions from stakeholders to improve them. And also to assess the level of compliance of key measures put forward by the preliminary ESMP and RAP reports with authorities' requirements and expectations.

The meeting was conducted in Hausa Language as usually is the case with this group of stakeholders.

FEEDBACK FROM STAKEHOLDERS

Topic	Comments and recommendations	the comment / recommendation by
Wetland crossing	Unguwan Dodo community on the other side of the Sokoto River plains, complaint that they ought to have been invited to the meeting in Kola village with the Fadama Farmers. They claimed that they also have dry season farmlands on their side of the River. It was explained by EEMS that their non inclusion is because there was never any sign of farming activity on that side of the river. Nevertheless, it was agreed that the area in reference will be inspected the following day.	Village Chief of Unguwan Dodo

Prepared by: Engr. Mamoud Abubakar

North Core 330 kV Power Interconnection Project Environmental and Social Impact Assessment (ESIA)

Consultation of Project Stakeholders, March 2016

Date: 14TH MARCH, Location BIRNIN KEBBI, Group LGAs & SERVICES

S/N	Organization	NAME, surname	Position/Designation	Phone No/E-Mail	Signature
1 ✓	B/KEBBI L-G	~~AHD~~ USMAN AMBURSA	D/WORKS & SERVICES	08107056893	
2. ✓	B/KEBBI L-G	HASSAN ALEZIRU BUNZA	D.S.D	07032990815	
3. ✓	AREWA L/GOVT.	MUHD DAN GARSO	MUNTARI ALLAH	08164662154	
4 ✓	Kalgo L/G	Muhammadu R/Kalgo	Ardon Kalgo Fulani	08056255400	
5 ✓	Kalgo L/Govt	Garba Abdullahi R/Bauna	Director of Works and Services	09039027028	
6 ✓	Kalgo L/Govt	Musa Hassan Kalgo	Sole administration	08094358197	S.A. Klg.
7 ✓	Arewa Kangiwa L/Govt	Alh. Amadu S/ Noma	Farmers Associ.	08138168612	
8. ✓	AREWA L/G	UMAR TANKO JEGA	DIRECTOR SOCIAL DEVELOPMENT	08135499805	
9 ✓	KALGO L/G	SAUBE MOH'D LAMBA	DIRECTOR SOCIAL DEVELOPMENT	08066284792	
10 ✓	KALGO LG	ABUBAKAR DAN UMA RUNTA	DIRECTOR HEALTH	08037034603	

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North Core 330 kV Power Interconnection Project Environmental and Social Impact Assessment (ESIA)

Consultation of Project Stakeholders, March 2016

Date: 14TH MARCH, Location BIRNIN KEBBI, Group ~~STATE~~ LGA AGENCIES

S/N	Organization	NAME, surname	Position/Designation	Phone No/E-Mail	Signature
11	MINISTRY OF ENVIRONMENT	MAISEGA MOHD AMEEN	DIRECTOR OF ENVIRONMENT	08035043858 aMeenMayega@gmail	[signature]
12	TCN	JOSEPH TUNDE AKANDE	AGM (CR$E)	08034335257 akandejoe44@gmail.com	[signature]
13	TCN	Yusuf Babatunde	S.M (Civil)	08023274822 [illegible]	[signature]
14	TCN	Ruskin, I.B.A. (Mrs)	Manager (ERSU)	08099862074 inemsunday@yahoo.com	[signature]
15	B/Kebbi LGA	Shehu Muhammad [illegible]	Director PHC B/KLGA	08032865420 [illegible]@yahoo.com	[signature]
16	DSS	Ishaya Bazo	Rep. of DSS	07039897706	[signature]
17	ARewa[illegible]	YAHAYA AHMED	BTNS	080-60045195	[signature]
18	EEMS	UHEGWU KELECHI.C	FIELD OPERATOR	07036760559 kuhegwu@gmail.com	[signature]
19	EEMS	Abubakar Ahamed	COO	08097077557 [illegible]eemslimited.com	[signature]

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North Core 330 kV Power Interconnection Project Environmental and Social Impact Assessment (ESIA)

Consultation of Project Stakeholders, March 2016 STATE LEVEL

Date: 14TH MARCH, Location BIRNIN KEBBI, Group NATIONAL AGENCIES

S/N	Organization	NAME, surname	Position/Designation	Phone No/E-Mail	Signature
1.	Fed. Min of Power Works & Housing	Ezigo Goni Mohd	Federal Controller of Works.	08037861102 taikagoni@yahoo.com	[signature]
2	Fed. Min of Power Works & Housing	Abubakar M. Kalgo	FM Works Field Officer H.Q. B/Kebbi	08060217169	[signature]
3	1 Battalion Nigerian Army	2LT CC IWUALA	ADJUTANT	08134728375 cciwuala@gmail.com	[signature]
4	MWASA B/K K/B	Zubairu Bala	S.W.O.	08065911714 zubairusbala@yahoo.com	[signature]
5	Min of Land B/Kebbi	Adamu Babangida	Land Acquisition Evaluation Officer	08135824060 adamubabangida77@gmail.com	[signature]
6.	Min. of Agric. Kebbi State	Bala Mohd Giwa	Director of Agric. Services Dept	08102700794	[signature] esq.
7	"	Kiskuru Kiskuru Uniza	Director Irrig. Eng. Services	08022070901 [illegible] @gmail.com	[signature]
8	MINISTRY OF ENVIRONMENT	MAISEGA MOHD AMEEN	DIRECTOR OF ENVIRONMENT	08035043858 ameenMaisega@g.mail	[signature]
9	TCN	JOSEPH TUNDE AKANDE	AGM (CR$E)	08034335257 akandejoe44@gmail.com	[signature]
10	TCN	Yusuf Babatunde	S.M (Chem)	08023274822 babs2000yb@yahoo	[signature]

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North Core 330 kV Power Interconnection Project Environmental and Social Impact Assessment (ESIA)

Consultation of Project Stakeholders, March 2016 STATE AGENCIES

Date: 14TH MARCH, Location ~~BIRNIN~~ KEBBI, Group ~~STATE LEV~~ STATE AGENCIES/SERVICES

S/N	Organization	NAME, surname	Position/Designation	Phone No/E-Mail	Signature
11	TCN	RUSKIN, I.B.A.(Mrs)	Manager (TRSU)	08099862074 irensunday@yahoo.com	
12	EEMS	Uhegwu, Kelechi C.	Field operator	07036760559 kuhegwu@gmail.com	
13	EEMS	Abubakar Mamoud	COO	08091027753 ambello@eemslimited.com	
14	Kalgo LG	Omar Shuwa	Rep farmers (NGO)	08073563125	
15	AREWA LGA	USMAN GORA	AREWA LGA/HEALTH	08037231401	
16	Ahmadu Ardo	Ardo-Arewa	Arewa LGA	08023143374	

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North Core 330 kV Power Interconnection Project Environmental and Social Impact Assessment (ESIA)

Consultation of Project Stakeholders, March 2016

Date: 11TH MARCH, Location: BIRNIN KEBBI, Group: VILLAGE CHIEFS.

S/N	Organization	NAME, surname	Position/Designation	Phone No/E-Mail	Signature
1	S/Soru village	hassan mhd	Village head S/Gari	07038310935	[signature]
2	Nayelwa District	muhammadu Kabiru	District Head Nayelwa	08188835491	[signature]
3	Kutakullu	muhammad	V/head Kutakullu	08097037736	[signature]
4	Ungwan Dodo	Garba hakimi	V/head Ungwar dodo	09097736475	Gah
5	Sandare	magani sani	V/head Sandare		[signature]
6	Ungwan Labbo	Alh. Sallau	v/head Ungwar Labbo	08036299064	Sallau
7	Ungwan Maza	Usman Sani	V/head ungwar maza	08169760256	USUMI
8	Ungwan Masoji	Garba hakimi	v/head ungwar masoji	08088477025	GaRba
9	Ungwan Gaga	Garba Liman	V/head ungwar gaga	08062895874	[signature]
10	Ungwan Dambo	mchd hakimi	V/head ungwar danbo		MHMH

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North Core 330 kV Power Interconnection Project Environmental and Social Impact Assessment (ESIA)

Consultation of Project Stakeholders, March 2016

Date: 11TH MARCH, Location BIRNIN KEBBI, Group VILLAGE CHIEFS

S/N	Organization	NAME, surname	Position/Designation	Phone No/E-Mail	Signature
11	Ulgam Masoyi	Bello hakimi	Ungu uar mairago	08138303248	BELLO
12	Zukuku	Ismaila talaaba	Zukuku	07064341076	[signature]
13	Kola village	Usman Sarkimmai	Zarumai of Kola	08142839030	[signature]
14	Nassarawa 2	Mal. Shehu Hunafi	BNassarawa 2	08033237971	[signature]
15	Eri village	Sule m/gari	Eri		NA
16	Tudun Kanguwa	Mohd Sahabi	Tudun wada II		[signature]
17	EMASS	UMEGWU			

North Core 330 kV Power Interconnection Project Environmental and Social Impact Assessment (ESIA)

Consultation of Project Stakeholders, March 2016

Date: 11TH MARCH, Location: BIRNIN KEBBI, Group: VILLAGE HEADS

S/N	Organization	NAME, surname	Position/Designation	Phone No/E-Mail	Signature
17	TCN	JOSEPH TUNDE AKANDE	AGM(CR&E)	08034335257 akandejoe4u@gmail.com	
18	TCN	Yusuf Babatunde	Senior Mgr (Elem)	08025274322 babs2wony@yahoo.com	
19	TCN	RUSKIN, I.B.A (Mrs)	Manager (ERSU)	08099862074 inensunday@yahoo.com	
20	EEMS	Abubakar Mamman	COO	08099027753 ambello@eemslimited.com	
21	EEMS	UHEGWU KELECHI CHIOMA	FIELD OPERATOR	07036760519 kuhegwu@gmail.com	

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4RTH CONSULTATION ROUND – NATIONAL LEVEL MEETING

17 MARCH, 2016, ABUJA, NIGERIA






Appendix 6

INFORMATION LEAFLET

Environmental and Social Impact Assessment (ESIA) for the 330 kV “North Core” Transmission Line Project

Public Information Document, September 2015

Project Overview

The Project involves the construction of a high voltage electrical transmission line over a distance of 880 km between Birnin Kebbi (Nigeria) and Ouagadougou (Burkina Faso), through Zabori and Niamey (Niger). It also connects with Benin in the region of Malanville, via Niger.

The project is part of a regional energy integration process, with the objective to: (i) promote and enhance electricity trade; (ii) improve power security and reliability of supply on the four national systems; and (iii) contribute to economic development and regional integration.

The transmission line will consist of the following sections:

- Birnin Kebbi (Nigeria) – Niamey;
- Niamey – Ouagadougou ;
- Zabori (Niger) – Malanville (Benin).

In Nigeria, the project includes the following activities:

- Construction of a high voltage (330 kV) transmission line over a distance of 62 km between Birnin Kebbi and Kaingiwa (border with Niger);
- Construction of a new 330 kV substation, or expansion of the existing one, in Birnin Kebbi;
- Installation of Supervisory Control and Data Acquisition (SCADA) and Fibre Optic systems

Studies underway will determine the best route option for the transmission line based on technical, environmental and social considerations.

Expected Project Benefits

- Increased reliability and security of energy supply;
- Increased capacity for energy exchanges between the countries;
- New opportunities for rural and urban electrification.

Impacts Sometimes Associated With Transmission Lines

- Wayleave clearance may bring about damage to vegetation and wildlife habitat;
- Transmission lines may open up virgin land and provide easy access to illegal loggers or poachers;
- Restrictions may apply on land use and agricultural activities under the line (within wayleave);
- Transmission lines may have effects on migratory birds and low flying aircrafts;
- Construction works may disturb seasonal crops and affect nearby population;
- Transmission lines may, for safety reasons, require people to resettle outside the wayleave.

Compensation for Lost Assets and Assistance to Affected Households

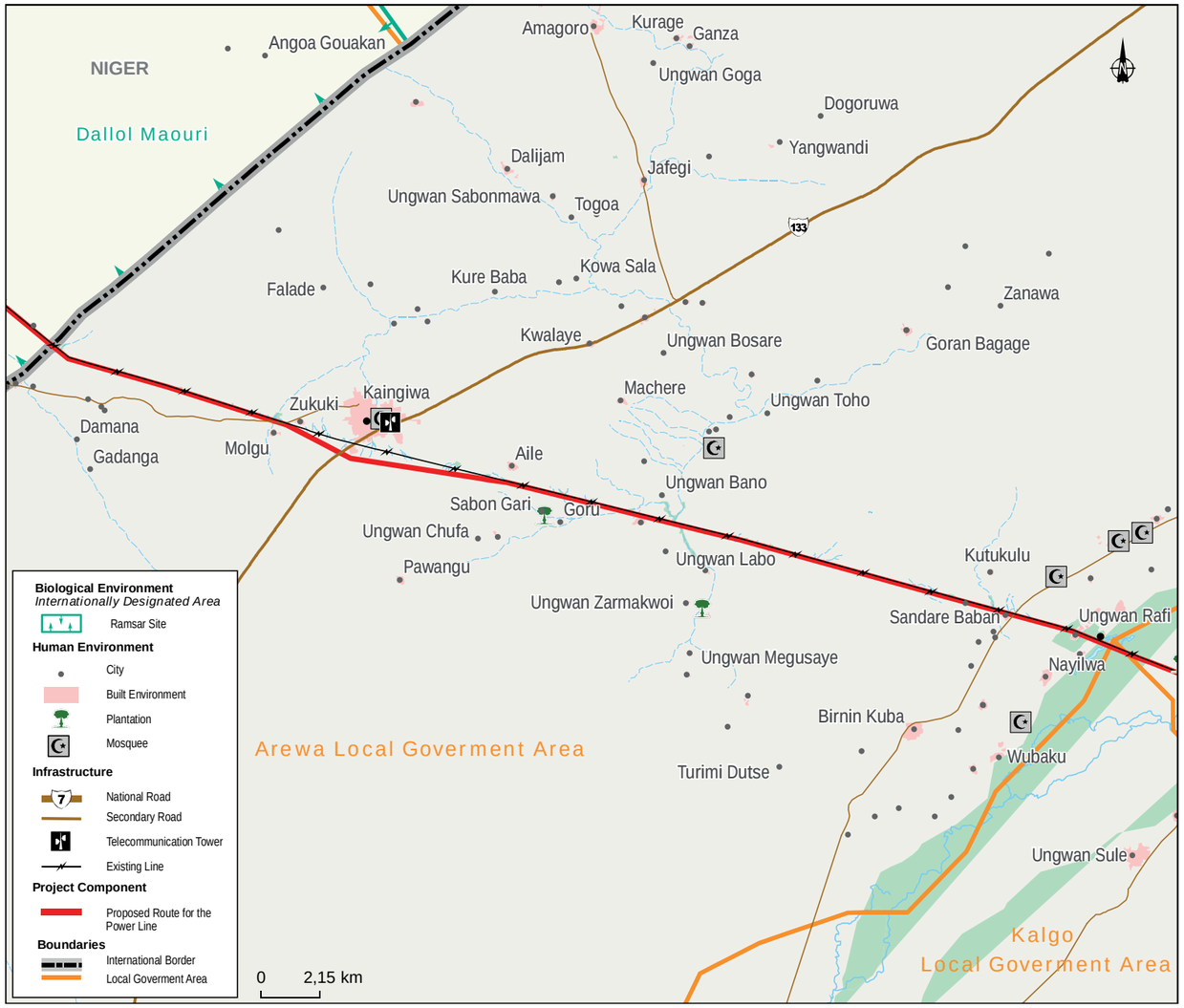
A Resettlement Action Plan (RAP) will define the compensation and assistance required to support the households and communities affected by the clearance of the power line’s right-of-way, according to national procedures and World Bank’s requirements. A socio-economic survey will be conducted with potentially affected households and communities in October 2015 so as to determine the project’s impact on their properties and activities.

The Environmental and Social Impact Assessment (ESIA)

The completion of an environmental and social impact assessment is a legal obligation to obtain permits for the realization of the 330 kV North Core transmission line project. Initiated in December 2014, this study is expected to be finalized in 2016.

The ESIA aims to identify:

- Potential impacts on the natural environments (water, air, soils, wildlife, vegetation);
- Potential impacts on populations and human activities (health, security, cultural and economic activities);
- Measures required to mitigate negative impacts and to enhance project benefits;
- Required environmental and social monitoring and follow-up activities.



Public Information and Consultation Sessions

Informative and consultative meetings will be held in the Local Government Areas affected by the route of the transmission line (Birninkebbi, Kalgo and Arewa). These meetings, which will occur in September or October 2015, will enable community representatives, local authorities and other participants to obtain further information about the project and express their concerns, expectations and suggestions.

Contact : **WSP**

M. Frédéric Faustin
ESIA Director
Frederic.Faustin@wspgroup.com

WSP Canada, in collaboration with EEMS, was mandated to conduct the ESIA and Resettlement Action Plan studies for the 330 kV WAPP North Core Project.

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Appendix 7

COMMUNITIES, HOUSEHOLD DATABASES AND REGISTRY OF AFFECTED ASSETS (RAA)

Due to its voluminous content, COMMUNITIES and HOUSEHOLD DATABASES is available on CD-ROM at the end of this document.

NIGERIA - REGISTRY OF AFFECTED ASSETS (RAA)
LOCAL GOVERNMENTAL AREA: AREWA

CROPS

City or village	Respondent Identification			Crops	
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)
Eri	Abdulmutallib, Garba	NA	NA	2 000	25 000
	Abubakar, Sani	NA	NA	2 125	25 698
	Ahmadu, Halidu	NA	NA	5 200	58 000
	Aliyu, Abdullahi	NA	NA	500	5 000
	Amadu, Baidu	NA	NA	1 100	11 500
	Anace, Labaran	NA	NA	7 118	71 175
	Ate, Umaru	NA	NA	3 100	31 500
	Bawa, Anache	NA	NA	7 100	70 000
	Dahiru, Sawani	NA	NA	250	3 000
	Garba, Suleiman	NA	NA	6 005	60 053
	Hamadu, Graba	NA	NA	1 303	13 030
	Hamidu, Hassan	NA	NA	477	4 770
	Hassan, Amadu	NA	NA	159	1 885
	Ibrahim, Mohammed	NA	NA	16 000	195 000
	Kiyasa, Amadu	NA	NA	42 464	424 640
	Liman, Amadu	NA	NA	18 500	190 000
	Mohammed, Haruna	NA	NA	500	4 600
	Mohammed, Mamuda	NA	NA	9 218	92 183
	Mohammed, Sani	NA	NA	4 270	21 351
	Mohammed, Suleiman	NA	NA	6 205	31 025
	Mohammed, Umaru	NA	NA	624	6 240
	Mohammed, Yakubu	NA	NA	3 500	35 000
	Muhammad, Garba	NA	NA	5 000	37 500
	Muhammed, Abdullahi	NA	NA	600	7 000
	Mumtari, Muhammed	NA	NA	239	2 585
	Sani, Abdullahi	NA	NA	1 114	11 138
	Sule, Aliyu Eri	NA	NA	2 000	20 000
	Umaru, Dandare	NA	NA	1 248	12 480
	Umaru, Mohammed	NA	NA	8 082	110 955
	Usman, Haruna	NA	NA	2 900	29 500
	Wazam, Aliyu	NA	NA	3 000	35 000
Giddare	Gagara, Yakubu	NA	NA	4 350	73 950
Gorin Gora	Bawa, Sani	NA	NA	3 874	38 744
	Gagara, Buhari	NA	NA	41 699	416 994
	Usman, Suleiman	NA	NA	5 900	29 500
	Wakili, Gado	NA	NA	5 296	26 481
Goro Chindo	Abdul-lahi, Aliyu	NA	708183424	130	1 200
	Abubakar, Shehu	NA	806548992	330	3 000
	Aliyu Tilli, Ibrahim	NA	706388288	1 800	24 300
	Bal, Yaron	NA	NA	190	1 740
	Bala, Aliyu	NA	706388096	1 500	13 600
	Gorun Chindo, Alhj Atiku	NA	703512768	440	3 900
	Lawal Muhammad, Muhammad	NA	808932608	220	1 980
	Muhammad Musa, Hassan	NA	816912512	122	1 200
	Murtala, Muhammad	NA	813938944	150	1 380
	Musa Muhammad, Isa	NA	814283328	176	1 953
	Sulaiman, Jinaidu	NA	706344448	91	1 034

City or village	Respondent Identification			Crops	
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)
Kurukullu	ALIYU, Usman	NA	NA	360	3 140
	Aluluwa, Aliyu	NA	809180288	3 000	27 200
	Bashir, Abubakar	NA	809178560	4 100	36 200
	Muhammad, Dahabi	NA	809488512	3 500	31 000
	Sahabi, Malami	NA	NA	330	2 970
	Sani, Abubakar Danzariya	NA	NA	3 395	37 345
	Sani, Ibrahim	NA	817708608	390	3 640
	Wakili, Garba	NA	NA	300	2 740
	Wakili, Garba	NA	NA	1 900	17 400
Rafin Tafki	Sani, Sununsi	NA	NA	5 000	68 500
Tudunwada	Abdullahi, Hassan	NA	NA	1 700	21 500
	Alhaji Aliyu, Banau	NA	NA	12 000	140 000
	Alhaji Lauwal, Farya	NA	NA	13 500	168 750
	Danbalko, Alhaji Usman	NA	NA	6 000	72 000
	Hassan, Aliyu	NA	NA	7 500	92 500
	Hassan, Umaru Banau	NA	NA	1 900	23 500
	Ibrahim, Danbuga kada	NA	NA	15 000	175 000
	Muhammad, Mamuda	NA	NA	11 500	115 500
	Musa, Abubakar Utu	NA	NA	15 500	195 000
	Musa, Kurma	NA	NA	20 000	250 000
	Sani, Rabiu	NA	NA	5 500	67 500
	Umaru, Banau	NA	NA	2 700	25 500
	Usman, malam hassan	NA	NA	16 000	195 000
	Zaharadeen Aliyu, Banau	NA	NA	13 000	165 000
Unguwan	Kanta, Mallan Isa	NA	NA	1 876	18 758
Unguwan Labbo	Abubakar, Dari	NA	NA	410	3 850
	Aminu, Abubakar	NA	NA	220	2 300
	Dan Iya, Unguwar Musa	NA	NA	160	1 700
	Hamza, Yusuf	NA	NA	320	3 100
	Muhammed, Dan-matseri	NA	NA	40	450
	Sani, Nasiru	NA	NA	9 355	116 937
	Umaru, Alhaji	NA	NA	130	1 550
	Umaru, Chiffa	NA	NA	60	650
	Yahaiya, Ya'u	NA	NA	80	950
	Zangina, Hamisu	NA	NA	5 001	50 009
Unguwan Musa	Abdulhamid, Ahmad	NA	NA	35 627	445 333
	Abubakar, Rabi'u	NA	NA	3 300	33 000
	Baidu, Ahmadu	NA	NA	700	8 750
	Ladan, Aliyu	NA	NA	4 353	54 418
	Liman, Aliyu	NA	NA	300	3 300
	Liman, Ya'u	NA	NA	5 258	65 727
	Maigari, Ibrahim	NA	NA	90	990
	Maigari, Sani	NA	NA	300	2 700
	Maigari, Usman	NA	NA	300	2 700
	Sani, Aliyu	NA	NA	35 783	447 292
	Zubairu, Isa	NA	NA	23 754	296 920
	Zubairu, Salihu	NA	NA	160	1 900

NIGERIA - REGISTRY OF AFFECTED ASSETS (RAA)
LOCAL GOVERNMENTAL AREA: AREWA

City or village	Respondent Identification			Crops	
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)
Zukuku	Abarshi, Aminu	NA	NA	13 378	66 890
	Abdulsalami, Nomau	NA	NA	4 000	40 000
	Abdul-salamu, Ma'awuya	NA	NA	3 100	28 200
	Abubakar, Adamu	NA	NA	1 927	19 272
	Abubakar, Aliyu	NA	NA	13 697	171 214
	Abubakar, Nabane	NA	NA	4 000	36 000
	Adamu, Lawali	NA	NA	1 200	12 000
	Adamu, Nasuru	NA	NA	1 200	12 000
	Ajiya, Mus	NA	NA	1 000	10 000
	Alhaji Bisala, Musa	NA	NA	36 000	360 000
	Alhaji Sale, Barebari	NA	NA	9 900	123 500
	Alhasan, Abdullahi	NA	NA	1 000	12 000
	Aliyu, Abdul-lahi Kangiwa	NA	903274	1 900	17 600
	Aliyu, Alhj Amadu	NA	80241536	2 800	24 400
	Aliyu, Musa Kangiwa	NA	80685856	1 500	13 600
	Alu, Danlami	NA	NA	1 950	17 550
	Amadu, Abubakar	NA	NA	970	11 700
	Amadu, Suraju	NA	NA	7 266	36 329
	Anace, Ibrahim	NA	NA	1 200	6 000
	Anaci, Umar	NA	NA	2 500	12 500
	Andi, Yahaya	NA	NA	4 890	48 898
	Bello, Balkisu	NA	NA	800	9 500
	Chairman, Kwalaye	NA	NA	600	4 800
	Chindo, Ahamad	NA	706749248	3 500	33 000
	Dodo, Umaru	NA	NA	4 200	38 200
	Husdaini, Jamilo	NA	814432	2 100	18 600
	Ibrahim, Dahiru	NA	813550	1 800	16 400
	Ibrahim, Kabiru	NA	NA	14 067	70 337
	Isa, Aliyu	NA	NA	3 400	30 600
	Isa, Halidu	NA	70342960	800	7 400
	Isa, Mohammed	NA	NA	7 401	74 006
	Isa, Usman	NA	NA	3 200	29 200
	Kwando, Alhj Umaru	NA	NA	2 000	20 000
	Magaji, Ibrahim	NA	NA	866	8 657
	Mai Dankundi, Alhj Uman	NA	NA	4 500	45 000
	Mai Jama'a, Abdul-lahi	NA	NA	7 000	84 000
	Mai Kura, Alhj Mannman	NA	NA	1 600	14 600
	Mai Kwanu, Alhj Dandare	NA	NA	2 900	26 000
	Mai Zargina, Sani	NA	903537152	1 400	12 800
	Maiki, Mohammadu	NA	NA	4 100	51 250
	Mamman, Bawa	NA	NA	8 000	95 000
	Mohammed, Abdullahi	NA	NA	10 614	132 672
	Moh'd, Nura D Kalgo	NA	NA	900	9 000
	Mohd, Zayyanu	NA	NA	1 700	15 400
	Muhammad, Aminu Mabeo	NA	NA	1 100	10 400
	Muhammad, Umàru Shekare	NA	816408320	1 400	12 400
	Muhammad, Usman	NA	NA	2 000	18 200
	Muhammad, Yusuf Kafinta	NA	NA	1 400	13 000

City or village	Respondent Identification			Crops	
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)
Zukuku	Musa Malta, Yakubu	NA	NA	3 000	26 800
	Musa, Sahabi	NA	NA	3 600	32 400
	Mustafa, Aliyu	NA	NA	1 000	12 500
	Namaiwa, Aminu	NA	NA	400	3 000
	S. power, Alhj Macedo	NA	806492032	3 300	31 000
	Sale, Sani Nipe	NA	803320	1 800	16 200
	Salihu, Basiru	NA	813191	1 400	12 800
	Sama'ila, Kabiru	NA	813070848	2 300	21 000
	Sani, Sanusi	NA	81308072	900	8 400
	Saraki, Saidu	NA	NA	14 366	71 832
	Shehu, Mohammed	NA	NA	2 974	29 740
	Shekarau, Ibrahim	NA	808145344	1 200	11 400
	Shekare, Ma'azu	NA	705453888	1 300	12 200
	Tanko, Alhj Kabiru	NA	NA	500	5 000
	Tukur, Agoro	NA	903210	1 800	16 200
	Usman, Sulaiman Kwallesa	NA	706486	1 100	10 200
	Zayyanu, Muhammed	NA	NA	140	1 500
			Total	**769 628**	**8 090 177**

Note:
NA: Data are not available.

NIGERIA - REGISTRY OF AFFECTED ASSETS (RAA)
LOCAL GOVERNMENTAL AREA: AREWA

TREES

City or village	Respondent Identification			Trees	
	Respondent name	Email address	Cellular phone number	Number of trees	Amount (NGN)
Kurukullu	ALIYU, Usman	NA	NA	9	18 000
Rafin Tafki	Sani, Sununsi	NA	NA	66	150 600
Tudunwada	Danbalko, Alhaji Usman	NA	NA	1	1 000
	Muhammad, Mamuda	NA	NA	2	800
Unguwan Labbo	Kanta, Mallan Isa	NA	NA	1	4 000
	Zangina, Hamisu	NA	NA	1	4 000
Zukuku	Abdul-salamu, Ma'awuya	NA	NA	9	27 000
	Adamu, Nasuru	NA	NA	36	90 000
Zukuku	Chindo, Ahamad	NA	706749248	9	18 000
	Mai Kura, Alhj Mannman	NA	NA	9	27 000
	Moh'd, Nura D Kalgo	NA	NA	9	18 000
	Nayaya, Nayaya	NA	NA	9	18 000
	Sale, Sani Nipe	NA	803320	9	3 600
	Usman, Hussaini Jantullu	NA	706911	9	18 000
			Total	**179**	**398 000**

Note:
NA: Data are not available.

STRUCTURES

City or village	Respondent Identification			Principal structures		Commercial structures		Other structures	
	Respondent name	Email address	Cellular phone number	Number of principal structures	Amount (NGN)	Number of commercial structures	Amount (NGN)	Number of other structures	Amount (NGN)
			Total	0	0	0	0	0	0

Note:
NA: Data are not available.

NIGERIA - REGISTRY OF AFFECTED ASSETS (RAA)
LOCAL GOVERNMENTAL AREA: BIRNIN KEBBI

CROPS

City or village	Respondent Identification			Crops	
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)
Badariya	Abdullahi Bele,	NA	NA	640	8 400
	Abudllahi, Alhaji Maazu	NA	NA	3 360	42 000
	Aliya Bala, Bala	NA	NA	46	620
	Aminu Umaru Musa, Umaru Musa	NA	NA	680	8 420
	Faruku Abubakar, Abubakat	NA	NA	440	6 250
	Hakimi, Aliyu	NA	NA	530	6 800
	Hakimin Bagudu, Bagudu	NA	NA	2 400	30 000
	Hakimin Bagudu, Bagudu	NA	NA	2 400	30 000
	Lawal Jodu, lawal	NA	NA	6 100	91 500
	Muhammadu Dan Hasan, Dan	NA	NA	3 400	36 000
	Muhammadu Dan Manu, Muhammadu	NA	NA	1 013	15 188
	Muhd Bashir, Faruq Maiwalda	NA	NA	4 000	53 333
	Sani Mai Welder, Sani	NA	NA	4 957	74 358
	Umaru Giwa, Giwa	NA	NA	1 200	13 000
	Umaru Kigo, Umaru	NA	NA	2 190	32 850
Behaind Barack	Ibrahim, Ummaru Dodo	NA	NA	2 000	23 333
	Muhammad Basiru, Abbakar Bagudu	NA	NA	6 000	70 000
Bye Pass	Aliyu, NAfiu	NA	NA	69	690
Dukku Barrack	Abdullahi, Fulamba	NA	NA	1 100	13 000
	Abubakar, Badamasi	NA	NA	1 150	13 050
	Audu, Chairman	NA	NA	1 000	8 000
	Garba, Dogo	NA	NA	400	6 000
	Muhammadu, Danladi	NA	NA	2 000	16 000
	Umaru, Tela Tarasa	NA	NA	900	11 500
	Yarima, Mouhammadu	NA	NA	1 030	12 400
Goro Chindo	Abubakar, Badiru	NA	NA	450	4 100
	Aliyu Abdullahi Mai keke, Abdullahi Mai Keke	NA	NA	430	5 450
	Aminu Malam Ibrahim, Aminu Ibrahim	aminuibrahim491 @yahoo.com	NA	410	5 400
	Bala Gamagira, Bala Gamagira	NA	NA	500	6 700
	Faruku Umaru, Umaru	NA	NA	74	1 042
	Goru, Alhaji Bala	NA	NA	835	8 795
	Lawal Adamu, Lawal	NA	NA	120	1 300
	Malami Balarabe, Balarabe	NA	NA	4 100	55 500
	Sanusi Ahmad, Ahmad	NA	NA	1 010	10 200
	Uzirau, Lawal	NA	903395776	350	3 260
Jodu	Umar, Alh Bala	NA	NA	4 200	48 000
Kardi	Baba, Hassan	NA	NA	1 500	15 000
Kola	Abubakar Bingel, Abubakar	NA	NA	550	8 250
	Abubakar Buda, Abubakar	NA	NA	1 000	11 000
	Abubakar Dan bako, Abubakar	NA	NA	600	9 000
	Abubakar Kurma, Muhammadu	NA	NA	3 354	36 894
	Abubakar, Malam Ahmadu	NA	NA	990	10 615
	Alhaji Auwalu, Auwalu	NA	NA	830	12 450
	Aliyu, Mohammed	NA	NA	100	1 010

City or village	Respondent Identification			Crops	
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)
Kola	Arzika, Mohammed	NA	NA	750	7 650
	Bello, Abubakar	NA	NA	1 500	22 500
	Bube, Abdullahi	abdullahibubekola @gmail.com	NA	3 400	37 400
	Bube, Monde	NA	NA	500	7 500
	Bube, Umaru	NA	NA	740	8 140
	Ibrahim, Shugaba	NA	NA	800	10 100
	Idrisu, Abubakar	NA	NA	570	6 270
	Kabiru, Bello Mahe	NA	NA	1 809	19 899
	Ladan Sambo, Umaru Yaroga	NA	NA	24 640	308 000
	Ladan, Umaru	NA	NA	900	11 400
	Magawata, Umar	NA	NA	7 556	75 560
	Mal Mai Arce, Muhammadu	NA	NA	1 985	29 775
	Mal Umaru Rabakaya Kola, Umaru	NA	NA	148	2 218
	Mal Usman Mai turare, Mal Usman	NA	NA	500	5 500
	Mohammadu, Munde	NA	NA	350	4 900
	Muhammad Kasim, Ummaru Layya	NA	NA	2 000	25 000
	Muhammadu Bandi Boka, Muhammadu	NA	NA	2 150	32 250
	Muhammadu Na Ta'ala, Muhammadu	NA	NA	1 032	15 480
	Sahabi Umaru, Sahabi	NA	NA	850	10 750
	Sana'a, Usman	NA	NA	58	709
	Shehu, Bube	NA	NA	45	640
	Umaru Uma Kola, Umaru	NA	NA	200	2 500
	Umaru, Ahmodu	NA	NA	33	385
	Umaru, Kasimu	NA	NA	10 000	150 000
	Usman Kakale, Usman	NA	NA	120	1 550
	Zaradeen, Aliyu Ladan	NA	NA	2 100	23 100
Kurukullu	Sahabi Muhammad, Sahabi	NA	NA	936	11 232
	Sule Mai daji, Sule	NA	NA	840	10 220
Kwamawa	Abbas Abubakar, Abbas	NA	NA	3 900	39 000
	Abubakar Magaji, Magaji	NA	NA	140	1 350
	Alhaji Abi Mai Gishiri, Abi	NA	NA	3 000	45 000
	Alhaji Danjuma, Dan Juma	NA	NA	1 620	20 250
	All Yau Maniru, Yau Maniru	NA	NA	340	3 600
	Falalu Gigane, Falalu	NA	NA	4 650	69 750
	Faruku Usman, Faruku	NA	NA	1 965	24 563
	Mustafa Musa, Mustafa	NA	NA	851	12 758
	Sahabi Musa, Musa	NA	NA	900	9 500
	Umar Abu Baker Wale, Abubakar Wale	NA	NA	3 800	44 000
	Umaru Mai Danda, Umaru Mai Danda	NA	NA	80	950
Kwanuna	Ibrahim, Abubakar	NA	NA	300	3 000
Nasarawa	Abubakar, Umar	NA	NA	430	5 700
	Altina Joga, Joga	NA	NA	4 000	45 000
	Bello, Abubakar bello	NA	NA	630	6 300
	Mainasara, Shehu	NA	NA	650	7 250
	Umaru, Alh Bala	NA	NA	550	6 750

NIGERIA - REGISTRY OF AFFECTED ASSETS (RAA)
LOCAL GOVERNMENTAL AREA: BIRNIN KEBBI

City or village	Respondent Identification			Crops	
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)
Nassarawa 2	Alhaji Abubakat, Daudu	NA	NA	1 300	14 500
	Bahashi, Dan boko	NA	NA	150	1 750
	Bello, Suleman	NA	NA	65	675
	Garba, Iggo	NA	NA	350	3 750
	Gide Joga, Joka	NA	NA	600	6 500
	Hakimi, Umaru	NA	NA	90	1 000
	Manu, Joka	NA	NA	3 500	37 500
	Shehu, Liman	NA	NA	400	4 250
Rafin Atiku	Balle, Bagudu	NA	NA	1 530	20 450
Sani Abacha	Abdullahi, Muhammad	NA	NA	220	3 300
	Aliyu, Ibrahim	NA	NA	945	11 813
	Aliyu, Kaba Muhammad	NA	NA	459	5 738
	Basaura, Muhammad Buhari	NA	NA	320	3 850
	Ibrahim, Bala daudu	NA	NA	900	12 000
	Iliyasu, Idiris	NA	NA	1 392	17 400
	Muhammad Bello, Abdulrasheed Bello	faridaabdoul14@gmail.com	NA	30	350
	Muhammad, Bello Tuni	belloadabo97@gemil.com	NA	210	2 400
	Nafiu, Aliyu kalgo	NA	NA	744	7 440
Unguwan Dambo	Abdullahi Mai Gwandu, Abdullahi	NA	NA	1 210	18 150
	Abubakar bagudu, Abubakar	NA	NA	2 950	44 250
	Abubakar Muhammad sani, Abubakar	NA	NA	1 116	12 276
	Abubakar, Ibrahim	NA	NA	400	4 000
	Adamu, Garba	NA	NA	400	4 000
	Alhaji Abdullahi, Mai Gwandu	NA	NA	2 500	27 500
	Aliyu Sarkin Yaki, Aliyu	NA	NA	1 260	14 490
	Aminu, Muhammed	NA	NA	2 000	22 500
	Basiru, Abubakar	NA	NA	430	4 450
	Ibrahim Musa, Ibrahim	NA	NA	2 260	33 900
	Lawal I Bawa, Bawa	NA	NA	1 000	11 000
	Muhammad Aate, Aate	NA	NA	600	6 100
	Muhammadu Kaina, Muhammadu	NA	NA	6 399	95 985
	Muhammadu Mashayabo, Muhammadu	NA	NA	2 600	29 000
	Muhammadu Muddaha, Muddaha	NA	NA	2 400	22 000
	Musa, Garba	NA	NA	70	800
	Mustapha, Garba	NA	NA	100	800
	Shehu Hakimi, Hakimi	NA	NA	3 500	32 000
	Shehu, Danladi	NA	NA	12 000	130 000
	Suleman, Hakimi	NA	NA	2 650	27 250
	Umar Ibrahim Yaro, Ibrahim Yaro	NA	NA	1 700	17 000
	Yahaiya Garba, Garba	NA	NA	4 500	47 500
	Zaki Dan Zuru, Dan Zuru	NA	NA	2 100	22 500
	Zaki, Abu	NA	NA	200	2 000
	Zakin Dan Zuru, Zaki	NA	NA	636	9 540
Unguwan Gaga	Muhammag Rashid, Abubar Kani	NA	NA	48	620
	My Hammy, Bande Mai Pump	NA	NA	12	140
			Total	**232 971**	**2 856 422**

Note: NA: Data are not available.

TREES

City or village	Respondent Identification			Trees	
	Respondent name	Email address	Cellular phone number	Number of trees	Amount (NGN)
Badariya	Abudllahi, Alhaji Maazu	NA	NA	3	6 000
	Muhammadu Dan Manu, Muhammadu	NA	NA	1	1 000
Jodu	Umar, Alh Bala	NA	NA	1	2 000
Kardi	Baba, Hassan	NA	NA	12	36 000
Kola	Abubakar Dan bako, Abubakar	NA	NA	1	1 000
	Abubakar Kurma, Muhammadu	NA	NA	3	2 800
	Abubakar, Malam Ahmadu	NA	NA	8	13 000
	Arzika, Mohammed	NA	NA	4	5 000
	Bube, Abdullahi	abdullahibubekola @gmail.com	NA	3	3 000
	Bube, Umaru	NA	NA	3	3 000
	Idrisu, Abubakar	NA	NA	3	3 000
	Kabiru, Bello Mahe	NA	NA	1	1 000
	Ladan Sambo, Umaru Yaroga	NA	NA	6	7 000
	Magawata, Umar	NA	NA	1	1 000
	Mal Mai Arce, Muhammadu	NA	NA	3	3 000
	Mal Umaru Rabakaya Kola, Umaru	NA	NA	19	36 550
	Muhammad Kasim, Ummaru Layya	NA	NA	1	2 000
	Umaru Uma Kola, Umaru	NA	NA	50	50 000
	Umarun Daudu, Sahabi	NA	NA	2	2 000
	Zaradeen, Aliyu Ladan	NA	NA	3	3 000
Kurukullu	Sahabi Muhammad, Sahabi	NA	NA	9	9 000
	Sule Mai daji, Sule	NA	NA	5	10 000
Kwamawa	Abbas Abubakar, Abbas	NA	NA	1	1 000
	Faruku Usman, Faruku	NA	NA	1	1 000
Nasarawa	Bello, Abubakar bello	NA	NA	5	10 000
	Magagi, Admau Kaoje	NA	NA	1	2 000
Nassarawa 2	Alhaji Abubakat, Daudu	NA	NA	18	30 600
Sani Abacha	Abdullahi, Muhammad	NA	NA	3	8 000
	Adeyanju, Elizikel	NA	NA	2	4 000
	Bello, Alima	NA	NA	1	2 000
	Iliyasu, Idiris	NA	NA	2	4 000
Unguwan Gaga	Ahmadu Sambo, Ahmadu	NA	NA	1	1 000
	Muhammag Rashid, Abubar Kani	NA	NA	6	18 000
			Total	**183**	**281 950**

Note:
NA: Data are not available.

NIGERIA - REGISTRY OF AFFECTED ASSETS (RAA)
LOCAL GOVERNMENTAL AREA: BIRNIN KEBBI

STRUCTURES

City or village	Respondent Identification			Principal structures		Commercial structures		Other structures	
	Respondent name	Email address	Cellular phone number	Number of principal structures	Amount (NGN)	Number of commercial structures	Amount (NGN)	Number of other structures	Amount (NGN)
Abacha Road	Ibrahim Umaru, Ibrahim	NA	NA	1	23 399 331	0	0	0	0
Bye Pass	Ibrahim Dan Fulani, Abubakar	NA	NA	1	47 067 620	0	0	0	0
Goro Chindo	Idowu Yakubu, Yakubu	NA	NA	1	3 400 000	0	0	0	0
Nasarawa	Bello, Abubakar bello	NA	NA	0	0	1	9 125 000	0	0
	Muhammad, Abubakar Chika	NA	NA	0	0	1	14 550 000	0	0
Sani Abacha	Abubakar, Aslam	aslamabubakar@gmail.com	NA	1	30 571 540	0	0	1	1 500 000
	Adamu, Auwal Alieor	NA	NA	0	0	1	2 475 000	0	0
	Muhammad, Abubakar Chika	NA	NA	0	0	1	9 125 000	0	0
Tower Area	Alh Abubakar Buba, Abubakar	NA	NA	1	35 502 433	0	0	0	0
	Ibrahim Shehu, Ibrahim	NA	NA	1	24 744 120	0	0	0	0
	Nafi'u Galadima, Nafi'u	NA	NA	1	36 488 612	0	0	0	0
	Yusuf Chimba, Yusuf	NA	NA	1	16 944 343	0	0	0	0
NA	NA	NA	NA	0	0	1	750 000	0	0
NA	NA	NA	NA	0	0	1	59 757 000	0	0
			Total	**8**	**218 118 000**	**6**	**95 782 000**	**1**	**1 500 000**

Note:
NA: Data are not available.

LOCAL GOVERNMENTAL AREA: **AREWA**

City or village	Respondent Identification			Crops		Trees		Principal structures		Commercial structures		Other structures		Total compensation (NGN)
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)	Number of trees	Amount (NGN)	Number of principal structures	Amount (NGN)	Number of commercial structures	Amount (NGN)	Number of other structures	Amount (NGN)	
Eri	Abdulmutallib, Garba	NA	NA	2 000	25 000	0	0	0	0	0	0	0	0	25 000
	Abubakar, Sani	NA	NA	2 125	25 698	0	0	0	0	0	0	0	0	25 698
	Ahmadu, Halidu	NA	NA	5 200	58 000	0	0	0	0	0	0	0	0	58 000
	Aliyu, Abdullahi	NA	NA	500	5 000	0	0	0	0	0	0	0	0	5 000
	Amadu, Baidu	NA	NA	1 100	11 500	0	0	0	0	0	0	0	0	11 500
	Anace, Labaran	NA	NA	7 118	71 175	0	0	0	0	0	0	0	0	71 175
	Ate, Umaru	NA	NA	3 100	31 500	0	0	0	0	0	0	0	0	31 500
	Bawa, Anache	NA	NA	7 100	70 000	0	0	0	0	0	0	0	0	70 000
	Dahiru, Sawani	NA	NA	250	3 000	0	0	0	0	0	0	0	0	3 000
	Garba, Suleiman	NA	NA	6 005	60 053	0	0	0	0	0	0	0	0	60 053
	Hamadu, Graba	NA	NA	1 303	13 030	0	0	0	0	0	0	0	0	13 030
	Hamidu, Hassan	NA	NA	477	4 770	0	0	0	0	0	0	0	0	4 770
	Hassan, Amadu	NA	NA	159	1 885	0	0	0	0	0	0	0	0	1 885
	Ibrahim, Mohammed	NA	NA	16 000	195 000	0	0	0	0	0	0	0	0	195 000
	Kiyasa, Amadu	NA	NA	42 464	424 640	0	0	0	0	0	0	0	0	424 640
	Liman, Amadu	NA	NA	18 500	190 000	0	0	0	0	0	0	0	0	190 000
	Mohammed, Haruna	NA	NA	500	4 600	0	0	0	0	0	0	0	0	4 600
	Mohammed, Mamuda	NA	NA	9 218	92 183	0	0	0	0	0	0	0	0	92 183
	Mohammed, Sani	NA	NA	4 270	21 351	0	0	0	0	0	0	0	0	21 351
	Mohammed, Suleiman	NA	NA	6 205	31 025	0	0	0	0	0	0	0	0	31 025
	Mohammed, Umaru	NA	NA	624	6 240	0	0	0	0	0	0	0	0	6 240
	Mohammed, Yakubu	NA	NA	3 500	35 000	0	0	0	0	0	0	0	0	35 000
	Muhammad, Garba	NA	NA	5 000	37 500	0	0	0	0	0	0	0	0	37 500
	Muhammed, Abdullahi	NA	NA	600	7 000	0	0	0	0	0	0	0	0	7 000
	Mumtari, Muhammed	NA	NA	239	2 585	0	0	0	0	0	0	0	0	2 585
	Sani, Abdullahi	NA	NA	1 114	11 138	0	0	0	0	0	0	0	0	11 138
	Sule, Aliyu Eri	NA	NA	2 000	20 000	0	0	0	0	0	0	0	0	20 000
	Umaru, Dandare	NA	NA	1 248	12 480	0	0	0	0	0	0	0	0	12 480
	Umaru, Mohammed	NA	NA	8 082	110 955	0	0	0	0	0	0	0	0	110 955
	Usman, Haruna	NA	NA	2 900	29 500	0	0	0	0	0	0	0	0	29 500
	Wazam, Aliyu	NA	NA	3 000	35 000	0	0	0	0	0	0	0	0	35 000
Giddare	Gagara, Yakubu	NA	NA	4 350	73 950	0	0	0	0	0	0	0	0	73 950
Gorin Gora	Bawa, Sani	NA	NA	3 874	38 744	0	0	0	0	0	0	0	0	38 744
	Gagara, Buhari	NA	NA	41 699	416 994	0	0	0	0	0	0	0	0	416 994
	Usman, Suleiman	NA	NA	5 900	29 500	0	0	0	0	0	0	0	0	29 500
	Wakili, Gado	NA	NA	5 296	26 481	0	0	0	0	0	0	0	0	26 481

City or village	Respondent Identification			Crops		Trees		Principal structures		Commercial structures		Other structures		Total compensation (NGN)
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)	Number of trees	Amount (NGN)	Number of principal structures	Amount (NGN)	Number of commercial structures	Amount (NGN)	Number of other structures	Amount (NGN)	
Goro Chindo	Abdul-lahi, Aliyu	NA	708183424	130	1 200	0	0	0	0	0	0	0	0	1 200
	Abubakar, Shehu	NA	806548992	330	3 000	0	0	0	0	0	0	0	0	3 000
	Aliyu Tilli, Ibrahim	NA	706388288	1 800	24 300	0	0	0	0	0	0	0	0	24 300
	Bal, Yaron	NA	NA	190	1 740	0	0	0	0	0	0	0	0	1 740
	Bala, Aliyu	NA	706388096	1 500	13 600	0	0	0	0	0	0	0	0	13 600
	Gorun Chindo, Alhj Atiku	NA	703512768	440	3 900	0	0	0	0	0	0	0	0	3 900
	Lawal Muhammad, Muhammad	NA	808932608	220	1 980	0	0	0	0	0	0	0	0	1 980
	Muhammad Musa, Hassan	NA	816912512	122	1 200	0	0	0	0	0	0	0	0	1 200
	Murtala, Muhammad	NA	813938944	150	1 380	0	0	0	0	0	0	0	0	1 380
	Musa Muhammad, Isa	NA	814283328	176	1 953	0	0	0	0	0	0	0	0	1 953
	Sulaiman, Jinaidu	NA	706344448	91	1 034	0	0	0	0	0	0	0	0	1 034
Kurukullu	ALIYU, Usman	NA	NA	360	3 140	9	18 000	0	0	0	0	0	0	21 140
	Aluluwa, Aliyu	NA	809180288	3 000	27 200	0	0	0	0	0	0	0	0	27 200
	Bashir, Abubakar	NA	809178560	4 100	36 200	0	0	0	0	0	0	0	0	36 200
	Muhammad, Dahabi	NA	809488512	3 500	31 000	0	0	0	0	0	0	0	0	31 000
	Sahabi, Malami	NA	NA	330	2 970	0	0	0	0	0	0	0	0	2 970
	Sani, Abubakar Danzariya	NA	NA	3 395	37 345	0	0	0	0	0	0	0	0	37 345
	Sani, Ibrahim	NA	817708608	390	3 640	0	0	0	0	0	0	0	0	3 640
	Wakili, Garba	NA	NA	300	2 740	0	0	0	0	0	0	0	0	2 740
	Wakili, Garba	NA	NA	1 900	17 400	0	0	0	0	0	0	0	0	17 400
Rafin Tafki	Sani, Sununsi	NA	NA	5 000	68 500	66	150 600	0	0	0	0	0	0	219 100
Tudunwada	Abdullahi, Hassan	NA	NA	1 700	21 500	0	0	0	0	0	0	0	0	21 500
	Alhaji Aliyu, Banau	NA	NA	12 000	140 000	0	0	0	0	0	0	0	0	140 000
	Alhaji Lauwal, Farya	NA	NA	13 500	168 750	0	0	0	0	0	0	0	0	168 750
	Danbalko, Alhaji Usman	NA	NA	6 000	72 000	1	1 000	0	0	0	0	0	0	73 000
	Hassan, Aliyu	NA	NA	7 500	92 500	0	0	0	0	0	0	0	0	92 500
	Hassan, Umaru Banau	NA	NA	1 900	23 500	0	0	0	0	0	0	0	0	23 500
	Ibrahim, Danbuga kada	NA	NA	15 000	175 000	0	0	0	0	0	0	0	0	175 000
	Muhammad, Mamuda	NA	NA	11 500	115 500	2	800	0	0	0	0	0	0	116 300
	Musa, Abubakar Utu	NA	NA	15 500	195 000	0	0	0	0	0	0	0	0	195 000
	Musa, Kurma	NA	NA	20 000	250 000	0	0	0	0	0	0	0	0	250 000
	Sani, Rabiu	NA	NA	5 500	67 500	0	0	0	0	0	0	0	0	67 500
	Umaru, Banau	NA	NA	2 700	25 500	0	0	0	0	0	0	0	0	25 500
	Usman, malam hassan	NA	NA	16 000	195 000	0	0	0	0	0	0	0	0	195 000
	Zaharadeen Aliyu, Banau	NA	NA	13 000	165 000	0	0	0	0	0	0	0	0	165 000

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City or village	Respondent Identification			Crops		Trees		Principal structures		Commercial structures		Other structures		Total compensation (NGN)
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)	Number of trees	Amount (NGN)	Number of principal structures	Amount (NGN)	Number of commercial structures	Amount (NGN)	Number of other structures	Amount (NGN)	
Unguwan Labbo	Kanta, Mallan Isa	NA	NA	1 876	18 758	1	4 000	0	0	0	0	0	0	22 758
	Abubakar, Dari	NA	NA	410	3 850	0	0	0	0	0	0	0	0	3 850
	Aminu, Abubakar	NA	NA	220	2 300	0	0	0	0	0	0	0	0	2 300
	Dan Iya, Unguwar Musa	NA	NA	160	1 700	0	0	0	0	0	0	0	0	1 700
	Hamza, Yusuf	NA	NA	320	3 100	0	0	0	0	0	0	0	0	3 100
	Muhammed, Dan-matseri	NA	NA	40	450	0	0	0	0	0	0	0	0	450
	Sani, Nasiru	NA	NA	9 355	116 937	0	0	0	0	0	0	0	0	116 937
	Umaru, Alhaji	NA	NA	130	1 550	0	0	0	0	0	0	0	0	1 550
	Umaru, Chiffa	NA	NA	60	650	0	0	0	0	0	0	0	0	650
	Yahaiya, Ya'u	NA	NA	80	950	0	0	0	0	0	0	0	0	950
	Zangina, Hamisu	NA	NA	5 001	50 009	1	4 000	0	0	0	0	0	0	54 009
Unguwan Musa	Abdulhamid, Ahmad	NA	NA	35 627	445 333	0	0	0	0	0	0	0	0	445 333
	Abubakar, Rabi'u	NA	NA	3 300	33 000	0	0	0	0	0	0	0	0	33 000
	Baidu, Ahmadu	NA	NA	700	8 750	0	0	0	0	0	0	0	0	8 750
	Ladan, Aliyu	NA	NA	4 353	54 418	0	0	0	0	0	0	0	0	54 418
	Liman, Aliyu	NA	NA	300	3 300	0	0	0	0	0	0	0	0	3 300
	Liman, Ya'u	NA	NA	5 258	65 727	0	0	0	0	0	0	0	0	65 727
	Maigari, Ibrahim	NA	NA	90	990	0	0	0	0	0	0	0	0	990
	Maigari, Sani	NA	NA	300	2 700	0	0	0	0	0	0	0	0	2 700
	Maigari, Usman	NA	NA	300	2 700	0	0	0	0	0	0	0	0	2 700
	Sani, Aliyu	NA	NA	35 783	447 292	0	0	0	0	0	0	0	0	447 292
	Zubairu, Isa	NA	NA	23 754	296 920	0	0	0	0	0	0	0	0	296 920
	Zubairu, Salihu	NA	NA	160	1 900	0	0	0	0	0	0	0	0	1 900
Zukuku	Abarshi, Aminu	NA	NA	13 378	66 890	0	0	0	0	0	0	0	0	66 890
	Abdulsalami, Nomau	NA	NA	4 000	40 000	0	0	0	0	0	0	0	0	40 000
	Abdul-salamu, Ma'awuya	NA	NA	3 100	28 200	9	27 000	0	0	0	0	0	0	55 200
	Abubakar, Adamu	NA	NA	1 927	19 272	0	0	0	0	0	0	0	0	19 272
	Abubakar, Aliyu	NA	NA	13 697	171 214	0	0	0	0	0	0	0	0	171 214
	Abubakar, Nabane	NA	NA	4 000	36 000	0	0	0	0	0	0	0	0	36 000
	Adamu, Lawali	NA	NA	1 200	12 000	0	0	0	0	0	0	0	0	12 000
	Adamu, Nasuru	NA	NA	1 200	12 000	36	90 000	0	0	0	0	0	0	102 000
	Ajiya, Mus	NA	NA	1 000	10 000	0	0	0	0	0	0	0	0	10 000
	Alhaji Bisala, Musa	NA	NA	36 000	360 000	0	0	0	0	0	0	0	0	360 000
	Alhaji Sale, Barebari	NA	NA	9 900	123 500	0	0	0	0	0	0	0	0	123 500
	Alhasan, Abdullahi	NA	NA	1 000	12 000	0	0	0	0	0	0	0	0	12 000
	Aliyu, Abdul-lahi Kangiwa	NA	903274	1 900	17 600	0	0	0	0	0	0	0	0	17 600
	Aliyu, Alhj Amadu	NA	80241536	2 800	24 400	0	0	0	0	0	0	0	0	24 400
	Aliyu, Musa Kangiwa	NA	80685856	1 500	13 600	0	0	0	0	0	0	0	0	13 600
	Alu, Danlami	NA	NA	1 950	17 550	0	0	0	0	0	0	0	0	17 550
	Amadu, Abubakar	NA	NA	970	11 700	0	0	0	0	0	0	0	0	11 700

City or village	Respondent Identification			Crops		Trees		Principal structures		Commercial structures		Other structures		Total compensation (NGN)
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)	Number of trees	Amount (NGN)	Number of principal structures	Amount (NGN)	Number of commercial structures	Amount (NGN)	Number of other structures	Amount (NGN)	
Zukuku	Amadu, Suraju	NA	NA	7 266	36 329	0	0	0	0	0	0	0	0	36 329
	Anace, Ibrahim	NA	NA	1 200	6 000	0	0	0	0	0	0	0	0	6 000
	Anaci, Umar	NA	NA	2 500	12 500	0	0	0	0	0	0	0	0	12 500
	Andi, Yahaya	NA	NA	4 890	48 898	0	0	0	0	0	0	0	0	48 898
	Bello, Balkisu	NA	NA	800	9 500	0	0	0	0	0	0	0	0	9 500
	Chairman, Kwalaye	NA	NA	600	4 800	0	0	0	0	0	0	0	0	4 800
	Chindo, Ahamad	NA	706749248	3 500	33 000	9	18 000	0	0	0	0	0	0	51 000
	Dodo, Umaru	NA	NA	4 200	38 200	0	0	0	0	0	0	0	0	38 200
	Husdaini, Jamilo	NA	814432	2 100	18 600	0	0	0	0	0	0	0	0	18 600
	Ibrahim, Dahiru	NA	813550	1 800	16 400	0	0	0	0	0	0	0	0	16 400
	Ibrahim, Kabiru	NA	NA	14 067	70 337	0	0	0	0	0	0	0	0	70 337
	Isa, Aliyu	NA	NA	3 400	30 600	0	0	0	0	0	0	0	0	30 600
	Isa, Halidu	NA	70342960	800	7 400	0	0	0	0	0	0	0	0	7 400
	Isa, Mohammed	NA	NA	7 401	74 006	0	0	0	0	0	0	0	0	74 006
	Isa, Usman	NA	NA	3 200	29 200	0	0	0	0	0	0	0	0	29 200
	Kwando, Alhj Umaru	NA	NA	2 000	20 000	0	0	0	0	0	0	0	0	20 000
	Magaji, Ibrahim	NA	NA	866	8 657	0	0	0	0	0	0	0	0	8 657
	Mai Dankundi, Alhj Uman	NA	NA	4 500	45 000	0	0	0	0	0	0	0	0	45 000
	Mai Jama'a, Abdul-lahi	NA	NA	7 000	84 000	0	0	0	0	0	0	0	0	84 000
	Mai Kura, Alhj Mannman	NA	NA	1 600	14 600	9	27 000	0	0	0	0	0	0	41 600
	Mai Kwanu, Alhj Dandare	NA	NA	2 900	26 000	0	0	0	0	0	0	0	0	26 000
	Mai Zargina, Sani	NA	903537152	1 400	12 800	0	0	0	0	0	0	0	0	12 800
	Maiki, Mohammadu	NA	NA	4 100	51 250	0	0	0	0	0	0	0	0	51 250
	Mamman, Bawa	NA	NA	8 000	95 000	0	0	0	0	0	0	0	0	95 000
	Mohammed, Abdullahi	NA	NA	10 614	132 672	0	0	0	0	0	0	0	0	132 672
	Moh'd, Nura D Kalgo	NA	NA	900	9 000	9	18 000	0	0	0	0	0	0	27 000
	Mohd, Zayyanu	NA	NA	1 700	15 400	0	0	0	0	0	0	0	0	15 400
	Muhammad, Aminu Mabeo	NA	NA	1 100	10 400	0	0	0	0	0	0	0	0	10 400
	Muhammad, Umàru Shekare	NA	816408320	1 400	12 400	0	0	0	0	0	0	0	0	12 400
	Muhammad, Usman	NA	NA	2 000	18 200	0	0	0	0	0	0	0	0	18 200
	Muhammad, Yusuf Kafinta	NA	NA	1 400	13 000	0	0	0	0	0	0	0	0	13 000
	Musa Malta, Yakubu	NA	NA	3 000	26 800	0	0	0	0	0	0	0	0	26 800
	Musa, Sahabi	NA	NA	3 600	32 400	0	0	0	0	0	0	0	0	32 400
	Mustafa, Aliyu	NA	NA	1 000	12 500	0	0	0	0	0	0	0	0	12 500
	Namaiwa, Aminu	NA	NA	400	3 000	0	0	0	0	0	0	0	0	3 000
	Nayaya, Nayaya	NA	NA	0	0	9	18 000	0	0	0	0	0	0	18 000
	S. power, Alhj Macedo	NA	806492032	3 300	31 000	0	0	0	0	0	0	0	0	31 000
	Sale, Sani Nipe	NA	803320	1 800	16 200	9	3 600	0	0	0	0	0	0	19 800
	Salihu, Basiru	NA	813191	1 400	12 800	0	0	0	0	0	0	0	0	12 800
	Sama'ila, Kabiru	NA	813070848	2 300	21 000	0	0	0	0	0	0	0	0	21 000

NIGERIA - REGISTRY OF AFFECTED ASSETS (RAA)

City or village	Respondent Identification			Crops		Trees		Principal structures		Commercial structures		Other structures		Total compensation (NGN)
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)	Number of trees	Amount (NGN)	Number of principal structures	Amount (NGN)	Number of commercial structures	Amount (NGN)	Number of other structures	Amount (NGN)	
Zukuku	Sani, Sanusi	NA	81308072	900	8 400	0	0	0	0	0	0	0	0	8 400
	Saraki, Saidu	NA	NA	14 366	71 832	0	0	0	0	0	0	0	0	71 832
	Shehu, Mohammed	NA	NA	2 974	29 740	0	0	0	0	0	0	0	0	29 740
	Shekarau, Ibrahim	NA	808145344	1 200	11 400	0	0	0	0	0	0	0	0	11 400
	Shekare, Ma'azu	NA	705453888	1 300	12 200	0	0	0	0	0	0	0	0	12 200
	Tanko, Alhj Kabiru	NA	NA	500	5 000	0	0	0	0	0	0	0	0	5 000
	Tukur, Agoro	NA	903210	1 800	16 200	0	0	0	0	0	0	0	0	16 200
	Usman, Hussaini Jantullu	NA	706911	0	0	9	18 000	0	0	0	0	0	0	18 000
	Usman, Sulaiman Kwallesa	NA	706486	1 100	10 200	0	0	0	0	0	0	0	0	10 200
	Zayyanu, Muhammed	NA	NA	140	1 500	0	0	0	0	0	0	0	0	1 500
			Total	**769 628**	**8 090 177**	**179**	**398 000**	**0**	**0**	**0**	**0**	**0**	**0**	**8 488 177**

Note:

NA: Data are not available.

LOCAL GOVERNMENTAL AREA: **BIRNIN KEBBI**

City or village	Respondent Identification			Crops		Trees		Principal structures		Commercial structures		Other structures		Total compensation (NGN)
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)	Number of trees	Amount (NGN)	Number of principal structures	Amount (NGN)	Number of commercial structures	Amount (NGN)	Number of other structures	Amount (NGN)	
Abacha Road	Ibrahim Umaru, Ibrahim	NA	NA	0	0	0	0	1	23 399 331	0	0	0	0	23 399 331
Badariya	Abdullahi Bele,	NA	NA	640	8 400	0	0	0	0	0	0	0	0	8 400
	Abudllahi, Alhaji Maazu	NA	NA	3 360	42 000	3	6 000	0	0	0	0	0	0	48 000
	Aliya Bala, Bala	NA	NA	46	620	0	0	0	0	0	0	0	0	620
	Aminu Umaru Musa, Umaru Musa	NA	NA	680	8 420	0	0	0	0	0	0	0	0	8 420
	Faruku Abubakar, Abubakat	NA	NA	440	6 250	0	0	0	0	0	0	0	0	6 250
	Hakimi, Aliyu	NA	NA	530	6 800	0	0	0	0	0	0	0	0	6 800
	Hakimin Bagudu, Bagudu	NA	NA	2 400	30 000	0	0	0	0	0	0	0	0	30 000
	Hakimin Bagudu, Bagudu	NA	NA	2 400	30 000	0	0	0	0	0	0	0	0	30 000
	Lawal Jodu, lawal	NA	NA	6 100	91 500	0	0	0	0	0	0	0	0	91 500
	Muhammadu Dan Hasan, Dan	NA	NA	3 400	36 000	0	0	0	0	0	0	0	0	36 000
	Muhammadu Dan Manu, Muhammadu	NA	NA	1 013	15 188	1	1 000	0	0	0	0	0	0	16 188
	Muhd Bashir, Faruq Maiwalda	NA	NA	4 000	53 333	0	0	0	0	0	0	0	0	53 333
	Sani Mai Welder, Sani	NA	NA	4 957	74 358	0	0	0	0	0	0	0	0	74 358
	Umaru Giwa, Giwa	NA	NA	1 200	13 000	0	0	0	0	0	0	0	0	13 000
	Umaru Kigo, Umaru	NA	NA	2 190	32 850	0	0	0	0	0	0	0	0	32 850
Behaind Barack	Ibrahim, Ummaru Dodo	NA	NA	2 000	23 333	0	0	0	0	0	0	0	0	23 333
	Muhammad Basiru, Abbakar Bagudu	NA	NA	6 000	70 000	0	0	0	0	0	0	0	0	70 000
Bye Pass	Aliyu, NAfiu	NA	NA	69	690	0	0	0	0	0	0	0	0	690
	Ibrahim Dan Fulani, Abubakar	NA	NA	0	0	0	0	1	47 067 620	0	0	0	0	47 067 620
Dukku Barrack	Abdullahi, Fulamba	NA	NA	1 100	13 000	0	0	0	0	0	0	0	0	13 000
	Abubakar, Badamasi	NA	NA	1 150	13 050	0	0	0	0	0	0	0	0	13 050
	Audu, Chairman	NA	NA	1 000	8 000	0	0	0	0	0	0	0	0	8 000
	Garba, Dogo	NA	NA	400	6 000	0	0	0	0	0	0	0	0	6 000
	Muhammadu, Danladi	NA	NA	2 000	16 000	0	0	0	0	0	0	0	0	16 000
	Umaru, Tela Tarasa	NA	NA	900	11 500	0	0	0	0	0	0	0	0	11 500
	Yarima, Mouhammadu	NA	NA	1 030	12 400	0	0	0	0	0	0	0	0	12 400

City or village	Respondent Identification			Crops		Trees		Principal structures		Commercial structures		Other structures		Total compensation (NGN)
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)	Number of trees	Amount (NGN)	Number of principal structures	Amount (NGN)	Number of commercial structures	Amount (NGN)	Number of other structures	Amount (NGN)	
Goro Chindo	Abubakar, Badiru	NA	NA	450	4 100	0	0	0	0	0	0	0	0	4 100
	Aliyu Abdullahi Mai keke, Abdullahi Mai Keke	NA	NA	430	5 450	0	0	0	0	0	0	0	0	5 450
	Aminu Malam Ibrahim, Aminu Ibrahim	aminuibrahim491@yahoo.com	NA	410	5 400	0	0	0	0	0	0	0	0	5 400
	Bala Gamagira, Bala Gamagira	NA	NA	500	6 700	0	0	0	0	0	0	0	0	6 700
	Faruku Umaru, Umaru	NA	NA	74	1 042	0	0	0	0	0	0	0	0	1 042
	Goru, Alhaji Bala	NA	NA	835	8 795	0	0	0	0	0	0	0	0	8 795
	Idowu Yakubu, Yakubu	NA	NA	0	0	0	0	1	3 400 000	0	0	0	0	3 400 000
	Lawal Adamu, Lawal	NA	NA	120	1 300	0	0	0	0	0	0	0	0	1 300
	Malami Balarabe, Balarabe	NA	NA	4 100	55 500	0	0	0	0	0	0	0	0	55 500
	Sanusi Ahmad, Ahmad	NA	NA	1 010	10 200	0	0	0	0	0	0	0	0	10 200
	Uzirau, Lawal	NA	903395776	350	3 260	0	0	0	0	0	0	0	0	3 260
Jodu	Umar, Alh Bala	NA	NA	4 200	48 000	1	2 000	0	0	0	0	0	0	50 000
Kardi	Baba, Hassan	NA	NA	1 500	15 000	12	36 000	0	0	0	0	0	0	51 000
Kola	Abubakar Bingel, Abubakar	NA	NA	550	8 250	0	0	0	0	0	0	0	0	8 250
	Abubakar Buda, Abubakar	NA	NA	1 000	11 000	0	0	0	0	0	0	0	0	11 000
	Abubakar Dan bako, Abubakar	NA	NA	600	9 000	1	1 000	0	0	0	0	0	0	10 000
	Abubakar Kurma, Muhammadu	NA	NA	3 354	36 894	3	2 800	0	0	0	0	0	0	39 694
	Abubakar, Malam Ahmadu	NA	NA	990	10 615	8	13 000	0	0	0	0	0	0	23 615
	Alhaji Auwalu, Auwalu	NA	NA	830	12 450	0	0	0	0	0	0	0	0	12 450
	Aliyu, Mohammed	NA	NA	100	1 010	0	0	0	0	0	0	0	0	1 010
	Arzika, Mohammed	NA	NA	750	7 650	4	5 000	0	0	0	0	0	0	12 650
	Bello, Abubakar	NA	NA	1 500	22 500	0	0	0	0	0	0	0	0	22 500
	Bube, Abdullahi	abdullahibubekola@gmail.com	NA	3 400	37 400	3	3 000	0	0	0	0	0	0	40 400
	Bube, Monde	NA	NA	500	7 500	0	0	0	0	0	0	0	0	7 500
	Bube, Umaru	NA	NA	740	8 140	3	3 000	0	0	0	0	0	0	11 140
	Ibrahim, Shugaba	NA	NA	800	10 100	0	0	0	0	0	0	0	0	10 100
	Idrisu, Abubakar	NA	NA	570	6 270	3	3 000	0	0	0	0	0	0	9 270
	Kabiru, Bello Mahe	NA	NA	1 809	19 899	1	1 000	0	0	0	0	0	0	20 899
	Ladan Sambo, Umaru Yaroga	NA	NA	24 640	308 000	6	7 000	0	0	0	0	0	0	315 000

City or village	Respondent Identification			Crops		Trees		Principal structures		Commercial structures		Other structures		Total compensation (NGN)
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)	Number of trees	Amount (NGN)	Number of principal structures	Amount (NGN)	Number of commercial structures	Amount (NGN)	Number of other structures	Amount (NGN)	
Kola	Ladan, Umaru	NA	NA	900	11 400	0	0	0	0	0	0	0	0	11 400
	Magawata, Umar	NA	NA	7 556	75 560	1	1 000	0	0	0	0	0	0	76 560
	Mal Mai Arce, Muhammadu	NA	NA	1 985	29 775	3	3 000	0	0	0	0	0	0	32 775
	Mal Umaru Rabakaya Kola, Umaru	NA	NA	148	2 218	19	36 550	0	0	0	0	0	0	38 768
	Mal Usman Mai turare, Mal Usman	NA	NA	500	5 500	0	0	0	0	0	0	0	0	5 500
	Mohammadu, Munde	NA	NA	350	4 900	0	0	0	0	0	0	0	0	4 900
	Muhammad Kasim, Ummaru Layya	NA	NA	2 000	25 000	1	2 000	0	0	0	0	0	0	27 000
	Muhammadu Bandi Boka, Muhammadu	NA	NA	2 150	32 250	0	0	0	0	0	0	0	0	32 250
	Muhammadu Na Ta'ala, Muhammadu	NA	NA	1 032	15 480	0	0	0	0	0	0	0	0	15 480
	Sahabi Umaru, Sahabi	NA	NA	850	10 750	0	0	0	0	0	0	0	0	10 750
	Sana'a, Usman	NA	NA	58	709	0	0	0	0	0	0	0	0	709
	Shehu, Bube	NA	NA	45	640	0	0	0	0	0	0	0	0	640
	Umaru Uma Kola, Umaru	NA	NA	200	2 500	50	50 000	0	0	0	0	0	0	52 500
	Umaru, Ahmodu	NA	NA	33	385	0	0	0	0	0	0	0	0	385
	Umaru, Kasimu	NA	NA	10 000	150 000	0	0	0	0	0	0	0	0	150 000
	Umarun Daudu, Sahabi	NA	NA	0	0	2	2 000	0	0	0	0	0	0	2 000
	Usman Kakale, Usman	NA	NA	120	1 550	0	0	0	0	0	0	0	0	1 550
	Zaradeen, Aliyu Ladan	NA	NA	2 100	23 100	3	3 000	0	0	0	0	0	0	26 100
Kurukullu	Sahabi Muhammad, Sahabi	NA	NA	936	11 232	9	9 000	0	0	0	0	0	0	20 232
	Sule Mai daji, Sule	NA	NA	840	10 220	5	10 000	0	0	0	0	0	0	20 220
Kwamawa	Abbas Abubakar, Abbas	NA	NA	3 900	39 000	1	1 000	0	0	0	0	0	0	40 000
	Abubakar Magaji, Magaji	NA	NA	140	1 350	0	0	0	0	0	0	0	0	1 350
	Alhaji Abi Mai Gishiri, Abi	NA	NA	3 000	45 000	0	0	0	0	0	0	0	0	45 000
	Alhaji Danjuma, Dan Juma	NA	NA	1 620	20 250	0	0	0	0	0	0	0	0	20 250
	All Yau Maniru, Yau Maniru	NA	NA	340	3 600	0	0	0	0	0	0	0	0	3 600
	Falalu Gigane, Falalu	NA	NA	4 650	69 750	0	0	0	0	0	0	0	0	69 750
	Faruku Usman, Faruku	NA	NA	1 965	24 563	1	1 000	0	0	0	0	0	0	25 563
	Mustafa Musa, Mustafa	NA	NA	851	12 758	0	0	0	0	0	0	0	0	12 758
	Sahabi Musa, Musa	NA	NA	900	9 500	0	0	0	0	0	0	0	0	9 500

City or village	Respondent Identification			Crops		Trees		Principal structures		Commercial structures		Other structures		Total compensation (NGN)
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)	Number of trees	Amount (NGN)	Number of principal structures	Amount (NGN)	Number of commercial structures	Amount (NGN)	Number of other structures	Amount (NGN)	
Kwamawa	Umar Abu Baker Wale, Abubakar Wale	NA	NA	3 800	44 000	0	0	0	0	0	0	0	0	44 000
	Umaru Mai Danda, Umaru Mai Danda	NA	NA	80	950	0	0	0	0	0	0	0	0	950
Kwanuna	Ibrahim, Abubakar	NA	NA	300	3 000	0	0	0	0	0	0	0	0	3 000
Nasarawa	Abubakar, Umar	NA	NA	430	5 700	0	0	0	0	0	0	0	0	5 700
	Altina Joga, Joga	NA	NA	4 000	45 000	0	0	0	0	0	0	0	0	45 000
	Bello, Abubakar bello	NA	NA	630	6 300	5	10 000	0	0	1	9 125 000	0	0	9 141 300
	Magagi, Admau Kaoje	NA	NA	0	0	1	2 000	0	0	0	0	0	0	2 000
	Mainasara, Shehu	NA	NA	650	7 250	0	0	0	0	0	0	0	0	7 250
	Muhammad, Abubakar Chika	NA	NA	0	0	0	0	0	0	1	14 550 000	0	0	14 550 000
	Umaru, Alh Bala	NA	NA	550	6 750	0	0	0	0	0	0	0	0	6 750
Nassarawa 2	Alhaji Abubakat, Daudu	NA	NA	1 300	14 500	18	30 600	0	0	0	0	0	0	45 100
	Bahashi, Dan boko	NA	NA	150	1 750	0	0	0	0	0	0	0	0	1 750
	Bello, Suleman	NA	NA	65	675	0	0	0	0	0	0	0	0	675
	Garba, Iggo	NA	NA	350	3 750	0	0	0	0	0	0	0	0	3 750
	Gide Joga, Joka	NA	NA	600	6 500	0	0	0	0	0	0	0	0	6 500
	Hakimi, Umaru	NA	NA	90	1 000	0	0	0	0	0	0	0	0	1 000
	Manu, Joka	NA	NA	3 500	37 500	0	0	0	0	0	0	0	0	37 500
	Shehu, Liman	NA	NA	400	4 250	0	0	0	0	0	0	0	0	4 250
Rafin Atiku	Balle, Bagudu	NA	NA	1 530	20 450	0	0	0	0	0	0	0	0	20 450
Sani Abacha	Abdullahi, Muhammad	NA	NA	220	3 300	3	8 000	0	0	0	0	0	0	11 300
	Abubakar, Aslam	aslamabubakar@gmail.com	NA	0	0	0	0	1	30 571 540	0	0	1	1 500 000	32 071 540
	Adamu, Auwal Alieor	NA	NA	0	0	0	0	0	0	1	2 475 000	0	0	2 475 000
	Adeyanju, Elizikel	NA	NA	0	0	2	4 000	0	0	0	0	0	0	4 000
	Aliyu, Ibrahim	NA	NA	945	11 813	0	0	0	0	0	0	0	0	11 813
	Aliyu, Kaba Muhammad	NA	NA	459	5 738	0	0	0	0	0	0	0	0	5 738
	Basaura, Muhammad Buhari	NA	NA	320	3 850	0	0	0	0	0	0	0	0	3 850
	Bello, Alima	NA	NA	0	0	1	2 000	0	0	0	0	0	0	2 000
	Ibrahim, Bala daudu	NA	NA	900	12 000	0	0	0	0	0	0	0	0	12 000
	Iliyasu, Idiris	NA	NA	1 392	17 400	2	4 000	0	0	0	0	0	0	21 400

City or village	Respondent Identification			Crops		Trees		Principal structures		Commercial structures		Other structures		Total compensation (NGN)
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)	Number of trees	Amount (NGN)	Number of principal structures	Amount (NGN)	Number of commercial structures	Amount (NGN)	Number of other structures	Amount (NGN)	
Sani Abacha	Muhammad Bello, Abdulrasheed Bello	faridaabdoul14@gmail.com	NA	30	350	0	0	0	0	0	0	0	0	350
	Muhammad, Abubakar Chika	NA	NA	0	0	0	0	0	0	1	9 125 000	0	0	9 125 000
	Muhammad, Bello Tuni	belloadabo97@gemil.com	NA	210	2 400	0	0	0	0	0	0	0	0	2 400
	Nafiu, Aliyu kalgo	NA	NA	744	7 440	0	0	0	0	0	0	0	0	7 440
Tower Area	Alh Abubakar Buba, Abubakar	NA	NA	0	0	0	0	1	35 502 433	0	0	0	0	35 502 433
	Ibrahim Shehu, Ibrahim	NA	NA	0	0	0	0	1	24 744 120	0	0	0	0	24 744 120
	Nafi'u Galadima, Nafi'u	NA	NA	0	0	0	0	1	36 488 612	0	0	0	0	36 488 612
	Yusuf Chimba, Yusuf	NA	NA	0	0	0	0	1	16 944 343	0	0	0	0	16 944 343
Unguwan Dambo	Abdullahi Mai Gwandu, Abdullahi	NA	NA	1 210	18 150	0	0	0	0	0	0	0	0	18 150
	Abubakar bagudu, Abubakar	NA	NA	2 950	44 250	0	0	0	0	0	0	0	0	44 250
	Abubakar Muhammad sani, Abubakar	NA	NA	1 116	12 276	0	0	0	0	0	0	0	0	12 276
	Abubakar, Ibrahim	NA	NA	400	4 000	0	0	0	0	0	0	0	0	4 000
	Adamu, Garba	NA	NA	400	4 000	0	0	0	0	0	0	0	0	4 000
	Alhaji Abdullahi, Mai Gwandu	NA	NA	2 500	27 500	0	0	0	0	0	0	0	0	27 500
	Aliyu Sarkin Yaki, Aliyu	NA	NA	1 260	14 490	0	0	0	0	0	0	0	0	14 490
	Aminu, Muhammed	NA	NA	2 000	22 500	0	0	0	0	0	0	0	0	22 500
	Basiru, Abubakar	NA	NA	430	4 450	0	0	0	0	0	0	0	0	4 450
	Ibrahim Musa, Ibrahim	NA	NA	2 260	33 900	0	0	0	0	0	0	0	0	33 900
	Lawal I Bawa, Bawa	NA	NA	1 000	11 000	0	0	0	0	0	0	0	0	11 000
	Muhammad Aate, Aate	NA	NA	600	6 100	0	0	0	0	0	0	0	0	6 100
	Muhammadu Kaina, Muhammadu	NA	NA	6 399	95 985	0	0	0	0	0	0	0	0	95 985
	Muhammadu Mashayabo, Muhammadu	NA	NA	2 600	29 000	0	0	0	0	0	0	0	0	29 000
	Muhammadu Muddaha, Muddaha	NA	NA	2 400	22 000	0	0	0	0	0	0	0	0	22 000
	Musa, Garba	NA	NA	70	800	0	0	0	0	0	0	0	0	800
	Mustapha, Garba	NA	NA	100	800	0	0	0	0	0	0	0	0	800
	Shehu Hakimi, Hakimi	NA	NA	3 500	32 000	0	0	0	0	0	0	0	0	32 000
	Shehu, Danladi	NA	NA	12 000	130 000	0	0	0	0	0	0	0	0	130 000
	Suleman, Hakimi	NA	NA	2 650	27 250	0	0	0	0	0	0	0	0	27 250
	Umar Ibrahim Yaro, Ibrahim Yaro	NA	NA	1 700	17 000	0	0	0	0	0	0	0	0	17 000

NIGERIA - REGISTRY OF AFFECTED ASSETS (RAA)

City or village	Respondent Identification			Crops		Trees		Principal structures		Commercial structures		Other structures		Total compensation (NGN)
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)	Number of trees	Amount (NGN)	Number of principal structures	Amount (NGN)	Number of commercial structures	Amount (NGN)	Number of other structures	Amount (NGN)	
Unguwan Dambo	Yahaiya Garba, Garba	NA	NA	4 500	47 500	0	0	0	0	0	0	0	0	47 500
	Zaki Dan Zuru, Dan Zuru	NA	NA	2 100	22 500	0	0	0	0	0	0	0	0	22 500
	Zaki, Abu	NA	NA	200	2 000	0	0	0	0	0	0	0	0	2 000
	Zakin Dan Zuru, Zaki	NA	NA	636	9 540	0	0	0	0	0	0	0	0	9 540
Unguwan Gaga	Ahmadu Sambo, Ahmadu	NA	NA	0	0	1	1 000	0	0	0	0	0	0	1 000
	Muhammag Rashid, Abubar Kani	NA	NA	48	620	6	18 000	0	0	0	0	0	0	18 620
	My Hammy, Bande Mai Pump	NA	NA	12	140	0	0	0	0	0	0	0	0	140
NA	NA	NA	NA	0	0	0	0	0	0	1	750 000	0	0	750 000
NA	NA	NA	NA	0	0	0	0	0	0	1	59 757 000	0	0	59 757 000
			Total	**232 971**	**2 856 422**	**183**	**281 950**	**8**	**218 118 000**	**0**	**95 782 000**	**1**	**1 500 000**	**318 538 372**

Note:

NA: Data are not available.

LOCAL GOVERNMENTAL AREA: **KALGO**

City or village	Respondent Identification			Crops		Trees		Principal structures		Commercial structures		Other structures		Total compensation (NGN)
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)	Number of trees	Amount (NGN)	Number of principal structures	Amount (NGN)	Number of commercial structures	Amount (NGN)	Number of other structures	Amount (NGN)	
Birnin Kebbi	Abubakar, Shehun hajare	NA	NA	130	1 310	1	2 000	0	0	0	0	0	0	3 310
Diggi	musa, garba	NA	NA	10 000	100 000	4	8 000	0	0	0	0	0	0	108 000
Kurukullu	Abdullahi, Nassarawa	NA	NA	1 692	20 586	0	0	0	0	0	0	0	0	20 586
	Abubakar, Ruwa	NA	NA	2 205	27 563	0	0	0	0	0	0	0	0	27 563
	Abubakar, Sahabi	NA	NA	0	0	0	0	1	691 365	0	0	0	0	691 365
	Aliyu, Dan Dare	NA	NA	396	5 280	0	0	0	0	0	0	0	0	5 280
	Aliyu, Mohammed	NA	NA	1 390	14 880	4	4 000	1	1 693 843	0	0	0	0	1 712 723
	Badan, Muhammadu	NA	NA	3 300	41 580	0	0	0	0	0	0	0	0	41 580
	Bagudu, Abubakar	NA	NA	1 404	12 636	0	0	0	0	0	0	0	0	12 636
	Bagudu, Ibrahim	NA	817166272	0	0	0	0	1	208 850	0	0	0	0	208 850
	Bala, tukur	NA	NA	0	0	0	0	1	1 026 965	0	0	0	0	1 026 965
	Bawa, Dangara	NA	NA	2 655	31 860	0	0	0	0	0	0	0	0	31 860
	Bawa, Umaru	NA	NA	0	0	0	0	1	864 206	0	0	0	0	864 206
	Bello, Hassan	NA	NA	3 700	40 700	10	9 800	1	26 972 194	0	0	0	0	27 022 694
	Bojo, Hakimi	NA	NA	2 450	29 400	0	0	0	0	0	0	0	0	29 400
	Dan Abu, Bakaniki	NA	NA	2 950	35 400	0	0	0	0	0	0	0	0	35 400
	Dan Maishiya, Umaru	NA	NA	2 150	27 090	0	0	0	0	0	0	0	0	27 090
	Dan Sabo, Sahabi	NA	NA	1 763	22 214	2	2 000	0	0	0	0	0	0	24 214
	Danburtu, Muhammad	NA	NA	1 500	18 000	0	0	0	0	0	0	0	0	18 000
	Dilli, Umar	NA	NA	2 250	28 350	0	0	0	0	0	0	0	0	28 350
	Garba, Harina Maaigoro	NA	NA	0	0	0	0	1	2 160 515	0	0	0	0	2 160 515
	Hakimi, Bala	NA	NA	2 000	22 000	0	0	0	0	0	0	0	0	22 000
	Hakimi, Bala	NA	NA	3 750	45 625	0	0	0	0	0	0	0	0	45 625
	Ibrahim, Umar	NA	807510208	4 200	39 400	0	0	0	0	0	0	0	0	39 400
	Jakimi, Shehu	NA	NA	800	10 080	1	1 000	0	0	0	0	0	0	11 080
	Liman, Abdullahi	NA	NA	12 500	145 000	8	10 000	0	0	0	0	0	0	155 000
	Magaji, Muhammadu	NA	NA	2 784	35 078	0	0	0	0	0	0	0	0	35 078
	Magajji, Sarkim Noma	NA	NA	2 784	35 078	8	18 400	0	0	0	0	0	0	53 478
	Maidaji, Sani di'ya	NA	NA	1 072	10 716	0	0	0	0	0	0	0	0	10 716

City or village	Respondent Identification			Crops		Trees		Principal structures		Commercial structures		Other structures		Total compensation (NGN)
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)	Number of trees	Amount (NGN)	Number of principal structures	Amount (NGN)	Number of commercial structures	Amount (NGN)	Number of other structures	Amount (NGN)	
Kurukullu	Mohammadu, Bagudu	NA	NA	1 540	16 940	0	0	0	0	0	0	0	0	16 940
	Mohammadu, Bande	NA	NA	2 650	23 850	0	0	0	0	0	0	0	0	23 850
	Mohammed, Umar	NA	NA	0	0	0	0	1	1 152 274	0	0	0	0	1 152 274
	Muhammad Sani, Bello	NA	NA	2 652	33 415	0	0	0	0	0	0	0	0	33 415
	Muhammad, Aliyu	NA	NA	1 476	17 712	0	0	0	0	0	0	0	0	17 712
	Muhammad, Sahabi	NA	NA	936	11 232	9	9 000	0	0	0	0	0	0	20 232
	Muhammad, Shehu	NA	NA	1 750	21 000	1	4 000	0	0	0	0	0	0	25 000
	Sani, Bello	NA	NA	5 916	70 992	2	4 000	0	0	0	0	0	0	74 992
	Sani, Hassan	NA	NA	4 970	111 825	0	0	0	0	0	0	0	0	111 825
	Sani, umaru	NA	NA	2 200	19 800	1	2 000	0	0	0	0	0	0	21 800
	Suleiman, Hassan	NA	NA	1 989	21 115	0	0	0	0	0	0	0	0	21 115
	Suleiman, Umaru	NA	NA	1 620	14 580	0	0	0	0	0	0	0	0	14 580
	Tankari, Usman	NA	NA	6 300	73 200	11	16 000	0	0	0	0	0	0	89 200
	Umar, Sahabi	NA	NA	0	0	0	0	1	362 966	0	0	0	0	362 966
	Umaru, Bizo	NA	NA	600	6 600	0	0	0	0	0	0	0	0	6 600
	Umaru, Danalu	NA	NA	5 655	57 273	0	0	0	0	0	0	0	0	57 273
	Umaru, Gayi Hakimi	NA	NA	2 800	32 200	1	1 000	0	0	0	0	0	0	33 200
	Umaru, Mohammadu	NA	NA	1 467	22 005	1	4 000	0	0	0	0	0	0	26 005
Nayelwa	Rogo, Bello	NA	NA	2 300	25 300	0	0	0	0	0	0	0	0	25 300
	Usman, Aliyu	NA	NA	1 900	20 900	0	0	0	0	0	0	0	0	20 900
ND	Bello, Malam Musa	NA	NA	504	5 040	66	198 000	0	0	0	0	0	0	203 040
Sandare	Abubakar, Cindo	NA	NA	3 303	36 333	0	0	0	0	0	0	0	0	36 333
	Adamu, Sahabi	NA	NA	0	0	0	0	1	1 616 065	0	0	4	870 000	2 486 065
	adamu, sahabi	NA	NA	375	4 125	0	0	1	3 995 881	0	0	0	0	4 000 006
	Alhaji Mamman, Mumaru	NA	NA	3 822	42 042	1	800	0	0	0	0	0	0	42 842
	Fati, Ilyasu Modi	NA	NA	3 312	56 304	1	8 000	0	0	0	0	0	0	64 304
	Garba, Amadu	NA	NA	830	9 130	0	0	1	1 663 596	0	0	0	0	1 672 726
	Garba, Bala	NA	NA	594	6 534	0	0	0	0	0	0	0	0	6 534
	Hakimi, Arzika	NA	NA	3 825	45 900	1	1 000	0	0	0	0	0	0	46 900

City or village	Respondent Identification			Crops		Trees		Principal structures		Commercial structures		Other structures		Total compensation (NGN)
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)	Number of trees	Amount (NGN)	Number of principal structures	Amount (NGN)	Number of commercial structures	Amount (NGN)	Number of other structures	Amount (NGN)	
Sandare	Hakimi, Bala	NA	NA	2 050	24 601	2	1 800	0	0	0	0	0	0	26 401
	Hakimi, Mai Dammu	NA	NA	396	4 356	0	0	0	0	0	0	0	0	4 356
	Hakimi, Umaru	NA	NA	0	0	0	0	1	3 145 709	0	0	3	255 000	3 400 709
	Husaini, Muhammadu Sani	NA	NA	2 520	27 720	1	1 400	0	0	0	0	0	0	29 120
	Liman Hamidu, Abdullahi	NA	NA	153	1 632	3	3 000	0	0	0	0	0	0	4 632
	Maigari, Alh Gado Sandare	NA	NA	449	4 494	0	0	0	0	0	0	0	0	4 494
	Muhammadu, Bello	NA	NA	516	5 676	0	0	0	0	0	0	0	0	5 676
	Muhammadu, Boka	NA	NA	306	3 550	0	0	0	0	0	0	0	0	3 550
	Muhammadu, Sani	NA	NA	0	0	0	0	1	1 129 229	0	0	0	0	1 129 229
	Muhammadu, Umar	NA	NA	0	0	0	0	1	1 411 536	0	0	0	0	1 411 536
	Nasiru, Abdullahi	NA	NA	1 218	13 398	0	0	0	0	0	0	0	0	13 398
	Samaila, Usmàn	NA	NA	2 800	30 800	2	4 000	0	0	0	0	0	0	34 800
	Umaru, Waddu	NA	NA	1 380	12 420	1	1 000	0	0	0	0	0	0	13 420
	Yabo, Usmanu	NA	NA	2 616	28 776	4	8 000	0	0	0	0	0	0	36 776
Sandare Babban	Alhaji Muhammad, Mallam Umar	NA	NA	2 680	29 480	0	0	0	0	0	0	0	0	29 480
	Aliyu, Nura	NA	NA	30	240	0	0	0	0	0	0	0	0	240
	Alpha, Aliyu	NA	NA	2 050	21 525	1	2 000	0	0	0	0	0	0	23 525
	Baidu, Sani	NA	NA	2 050	21 525	0	0	0	0	0	0	0	0	21 525
	Bello, Isa	NA	NA	3 000	33 000	0	0	0	0	0	0	0	0	33 000
	Dandare, Bala	NA	NA	2 025	21 263	0	0	0	0	0	0	0	0	21 263
	Garba, Ibrahim	NA	NA	2 300	24 380	2	4 000	0	0	0	0	0	0	28 380
	Hakimi, Aliyu	NA	NA	1 000	12 500	0	0	0	0	0	0	0	0	12 500
	Ibrahim, Abu	NA	NA	600	6 000	0	0	0	0	0	0	0	0	6 000
	Isah, Bala	NA	NA	3 036	32 182	0	0	0	0	0	0	0	0	32 182
	Mallam Umaru, Hakimi	NA	NA	680	6 800	0	0	0	0	0	0	0	0	6 800
	Misa, Bagudu	NA	NA	3 381	40 572	3	6 000	0	0	0	0	0	0	46 572
	Muhammadu, Ate	NA	NA	486	5 832	4	12 000	0	0	0	0	0	0	17 832
	Muhammadu, Auwali	NA	NA	300	3 000	0	0	0	0	0	0	0	0	3 000
	Muhammadu, Lakke	NA	NA	1 000	9 000	0	0	0	0	0	0	0	0	9 000

NIGERIA - REGISTRY OF AFFECTED ASSETS (RAA)

City or village	Respondent Identification			Crops		Trees		Principal structures		Commercial structures		Other structures		Total compensation (NGN)
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)	Number of trees	Amount (NGN)	Number of principal structures	Amount (NGN)	Number of commercial structures	Amount (NGN)	Number of other structures	Amount (NGN)	
Sandare Babban	Rabiu, Bagudu	NA	NA	1 000	9 000	0	0	0	0	0	0	0	0	9 000
	Sambo, Usman	NA	NA	200	1 800	0	0	0	0	0	0	0	0	1 800
	Sarki, Umaru	NA	NA	300	2 400	0	0	0	0	0	0	0	0	2 400
	Umar, Shehu	NA	NA	4 400	48 400	2	8 000	0	0	0	0	0	0	56 400
	Umar, Usman	NA	NA	500	5 000	0	0	0	0	0	0	0	0	5 000
	Umaru, Muhammadu Juli	NA	NA	5 846	64 306	1	1 000	0	0	0	0	0	0	65 306
	Usman, Abubakar	NA	NA	1 000	12 500	0	0	0	0	0	0	0	0	12 500
	Usman, Bambatta	NA	NA	1 128	12 408	5	10 000	0	0	0	0	0	0	22 408
	Wanzan, Ibrahim	NA	NA	400	4 000	0	0	0	0	0	0	0	0	4 000
	Yaro, Alhaji	NA	NA	500	4 000	0	0	0	0	0	0	0	0	4 000
Sanfare	bawa, sani	NA	NA	364	4 004	0	0	0	0	0	0	0	0	4 004
Unguwan Dodo	Bagudu, Abubakar	NA	NA	0	0	0	0	1	17 531 926	0	0	0	0	17 531 926
	Liman, Manu	NA	NA	0	0	0	0	1	4 372 881	0	0	0	0	4 372 881
Unguwan Masoyi	Abdullahi, Sahabi	NA	NA	1 000	8 000	0	0	0	0	0	0	0	0	8 000
	Gero, Umaru	NA	NA	5 850	64 350	1	2 000	0	0	0	0	0	0	66 350
	Gero, Ummaru	NA	NA	100	900	0	0	0	0	0	0	0	0	900
	Hakimi, Garba	NA	NA	14 250	106 875	1	800	0	0	0	0	0	0	107 675
	Maijama'a, Sani	NA	NA	3 800	41 800	0	0	0	0	0	0	0	0	41 800
	Muhammadu, Sani	NA	NA	400	3 600	9	18 000	0	0	0	0	0	0	21 600
	Sani, Adamu	NA	NA	1 200	10 800	0	0	0	0	0	0	0	0	10 800
NA	NA	NA	NA	0	0	0	0	0	0	0	0	1	85 000	85 000
NA	NA	NA	NA	0	0	0	0	0	0	0	0	1	85 000	85 000
NA	NA	NA	NA	0	0	0	0	0	0	0	0	1	85 000	85 000
			Total	**216 371**	**2 434 037**	**175**	**386 000**	**17**	**70 000 000**	**0**	**0**	**7**	**1 380 000**	**74 200 037**

Note:

NA: Data are not available.

COMMUNITY STRUCTURES AND SITES

Local government area	City or village	Respondent name (Respondent position)	Cellular phone number	Islamic school		Mosque		Natural Area		Total compensation (NGN)
				Number	Amount (NGN)	Number	Amount (NGN)	Number	Amount (NGN)	
Birnin Kebbi	Nassawa	Alh Aliyu, Biyo (NA)	7063534484	1	9 500 000	0	0	0	0	9 500 000
Birnin Kebbi	Nassawa	Alh Aliyu, Biyo (NA)	7063534484	0	0	1	4 500 000	0	0	4 500 000
Birnin Kebbi	Nassawa	Alh Aliyu, Biyo (NA)	7063534484	0	0	1	4 500 000	0	0	4 500 000
Birnin Kebbi	Kola	Zarumai, Usman (Head of household)	8182989712	0	0	0	0	1	20 000 000	20 000 000
			Total	**1**	**9 500 000**	**2**	**9 000 000**	**1**	**20 000 000**	**38 500 000**

Note:

NA: Data are not available

NIGERIA - REGISTRY OF AFFECTED ASSETS (RAA)

LOCAL GOVERNMENTAL AREA**: KALGO**

CROPS

City or village	Respondent Identification			Crops	
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)
Birnin Kebbi	Abubakar, Shehun hajare	NA	NA	130	1 310
Diggi	musa, garba	NA	NA	10 000	100 000
Kurukullu	Abdullahi, Nassarawa	NA	NA	1 692	20 586
	Abubakar, Ruwa	NA	NA	2 205	27 563
	Aliyu, Dan Dare	NA	NA	396	5 280
	Aliyu, Mohammed	NA	NA	1 390	14 880
	Badan, Muhammadu	NA	NA	3 300	41 580
	Bagudu, Abubakar	NA	NA	1 404	12 636
	Bawa, Dangara	NA	NA	2 655	31 860
	Bello, Hassan	NA	NA	3 700	40 700
	Bojo, Hakimi	NA	NA	2 450	29 400
	Dan Abu, Bakaniki	NA	NA	2 950	35 400
	Dan Maishiya, Umaru	NA	NA	2 150	27 090
	Dan Sabo, Sahabi	NA	NA	1 763	22 214
	Danburtu, Muhammad	NA	NA	1 500	18 000
	Dilli, Umar	NA	NA	2 250	28 350
	Hakimi, Bala	NA	NA	2 000	22 000
	Hakimi, Bala	NA	NA	3 750	45 625
	Ibrahim, Umar	NA	807510208	4 200	39 400
	Jakimi, Shehu	NA	NA	800	10 080
	Liman, Abdullahi	NA	NA	12 500	145 000
	Magaji, Muhammadu	NA	NA	2 784	35 078
	Magajji, Sarkim Noma	NA	NA	2 784	35 078
	Maidaji, Sani di'ya	NA	NA	1 072	10 716
	Mohammadu, Bagudu	NA	NA	1 540	16 940
	Mohammadu, Bande	NA	NA	2 650	23 850
	Muhammad Sani, Bello	NA	NA	2 652	33 415
	Muhammad, Aliyu	NA	NA	1 476	17 712
	Muhammad, Sahabi	NA	NA	936	11 232
	Muhammad, Shehu	NA	NA	1 750	21 000

City or village	Respondent Identification			Crops	
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)
Kurukullu	Sani, Bello	NA	NA	5 916	70 992
	Sani, Hassan	NA	NA	4 970	111 825
	Sani, umaru	NA	NA	2 200	19 800
	Suleiman, Hassan	NA	NA	1 989	21 115
	Suleiman, Umaru	NA	NA	1 620	14 580
	Tankari, Usman	NA	NA	6 300	73 200
	Umaru, Bizo	NA	NA	600	6 600
	Umaru, Danalu	NA	NA	5 655	57 273
	Umaru, Gayi Hakimi	NA	NA	2 800	32 200
	Umaru, Mohammadu	NA	NA	1 467	22 005
Nayelwa	Rogo, Bello	NA	NA	2 300	25 300
	Usman, Aliyu	NA	NA	1 900	20 900
ND	Bello, Malam Musa	NA	NA	504	5 040
Sandare	Abubakar, Cindo	NA	NA	3 303	36 333
	adamu, sahabi	NA	NA	375	4 125
	Alhaji Mamman, Mumaru	NA	NA	3 822	42 042
	Fati, Ilyasu Modi	NA	NA	3 312	56 304
	Garba, Amadu	NA	NA	830	9 130
Sandare	Garba, Bala	NA	NA	594	6 534
	Hakimi, Arzika	NA	NA	3 825	45 900
	Hakimi, Bala	NA	NA	2 050	24 601
	Hakimi, Mai Dammu	NA	NA	396	4 356
	Husaini, Muhammadu Sani	NA	NA	2 520	27 720
	Liman Hamidu, Abdullahi	NA	NA	153	1 632
	Maigari, Alh Gado Sandare	NA	NA	449	4 494
	Muhammadu, Bello	NA	NA	516	5 676
	Muhammadu, Boka	NA	NA	306	3 550
	Nasiru, Abdullahi	NA	NA	1 218	13 398
	Samaila, Usmàn	NA	NA	2 800	30 800
	Umaru, Waddu	NA	NA	1 380	12 420
	Yabo, Usmanu	NA	NA	2 616	28 776

NIGERIA - REGISTRY OF AFFECTED ASSETS (RAA)

LOCAL GOVERNMENTAL AREA**: KALGO**

City or village	Respondent Identification			Crops	
	Respondent name	Email address	Cellular phone number	Area of crops (m^2)	Amount (NGN)
Sandare Babban	Alhaji Muhammad, Mallam Umar	NA	NA	2 680	29 480
	Aliyu, Nura	NA	NA	30	240
	Alpha, Aliyu	NA	NA	2 050	21 525
	Baidu, Sani	NA	NA	2 050	21 525
	Bello, Isa	NA	NA	3 000	33 000
	Dandare, Bala	NA	NA	2 025	21 263
	Garba, Ibrahim	NA	NA	2 300	24 380
	Hakimi, Aliyu	NA	NA	1 000	12 500
	Ibrahim, Abu	NA	NA	600	6 000
	Isah, Bala	NA	NA	3 036	32 182
	Mallam Umaru, Hakimi	NA	NA	680	6 800
	Misa, Bagudu	NA	NA	3 381	40 572
	Muhammadu, Ate	NA	NA	486	5 832
	Muhammadu, Auwali	NA	NA	300	3 000
	Muhammadu, Lakke	NA	NA	1 000	9 000
	Rabiu, Bagudu	NA	NA	1 000	9 000
	Sambo, Usman	NA	NA	200	1 800
	Sarki, Umaru	NA	NA	300	2 400
	Umar, Shehu	NA	NA	4 400	48 400
	Umar, Usman	NA	NA	500	5 000
	Umaru, Muhammadu Juli	NA	NA	5 846	64 306
	Usman, Abubakar	NA	NA	1 000	12 500
	Usman, Bambatta	NA	NA	1 128	12 408
	Wanzan, Ibrahim	NA	NA	400	4 000
	Yaro, Alhaji	NA	NA	500	4 000
Sanfare	bawa, sani	NA	NA	364	4 004
Unguwan Masoyi	Abdullahi, Sahabi	NA	NA	1 000	8 000
	Gero, Umaru	NA	NA	5 850	64 350
	Gero, Ummaru	NA	NA	100	900
	Hakimi, Garba	NA	NA	14 250	106 875
	Maijama'a, Sani	NA	NA	3 800	41 800

City or village	Respondent Identification			Crops	
	Respondent name	**Email address**	**Cellular phone number**	**Area of crops (m^2)**	**Amount (NGN)**
Unguwan Masoyi	Muhammadu, Sani	NA	NA	400	3 600
	Sani, Adamu	NA	NA	1 200	10 800
			Total	**216 371**	**2 434 037**

Note:

NA: Data are not available.

NIGERIA - REGISTRY OF AFFECTED ASSETS (RAA)

LOCAL GOVERNMENTAL AREA**: KALGO**

TREE

City or village	Respondent Identification			Trees	
	Respondent name	Email address	Cellular phone number	Number of trees	Amount (NGN)
Birnin Kebbi	Abubakar, Shehun hajare	NA	NA	1	2 000
Diggi	musa, garba	NA	NA	4	8 000
Kurukullu	Aliyu, Mohammed	NA	NA	4	4 000
	Bello, Hassan	NA	NA	10	9 800
	Dan Sabo, Sahabi	NA	NA	2	2 000
	Jakimi, Shehu	NA	NA	1	1 000
	Liman, Abdullahi	NA	NA	8	10 000
	Magajji, Sarkim Noma	NA	NA	8	18 400
	Muhammad, Sahabi	NA	NA	9	9 000
	Muhammad, Shehu	NA	NA	1	4 000
	Sani, Bello	NA	NA	2	4 000
	Sani, umaru	NA	NA	1	2 000
	Tankari, Usman	NA	NA	11	16 000
	Umaru, Gayi Hakimi	NA	NA	1	1 000
	Umaru, Mohammadu	NA	NA	1	4 000
ND	Bello, Malam Musa	NA	NA	66	198 000
Sandare	Alhaji Mamman, Mumaru	NA	NA	1	800
	Fati, Ilyasu Modi	NA	NA	1	8 000
	Hakimi, Arzika	NA	NA	1	1 000
	Hakimi, Bala	NA	NA	2	1 800
	Husaini, Muhammadu Sani	NA	NA	1	1 400
	Liman Hamidu, Abdullahi	NA	NA	3	3 000
	Samaila, Usmàn	NA	NA	2	4 000
	Umaru, Waddu	NA	NA	1	1 000
	Yabo, Usmanu	NA	NA	4	8 000
Sandare Babban	Alpha, Aliyu	NA	NA	1	2 000
	Garba, Ibrahim	NA	NA	2	4 000
	Misa, Bagudu	NA	NA	3	6 000
	Muhammadu, Ate	NA	NA	4	12 000
	Umar, Shehu	NA	NA	2	8 000

City or village	Respondent Identification			Trees	
	Respondent name	**Email address**	**Cellular phone number**	**Number of trees**	**Amount (NGN)**
	Umaru, Muhammadu Juli	NA	NA	1	1 000
	Usman, Bambatta	NA	NA	5	10 000
Unguwan Masoyi	Gero, Umaru	NA	NA	1	2 000
	Hakimi, Garba	NA	NA	1	800
	Muhammadu, Sani	NA	NA	9	18 000
			Total	**175**	**386 000**

Note:

NA: Data are not available.

NIGERIA - REGISTRY OF AFFECTED ASSETS (RAA)

LOCAL GOVERNMENTAL AREA**: KALGO**

STRUCTURES

City or village	Respondent Identification			Principal structures		Commercial structures		Other structures	
	Respondent name	Email address	Cellular phone number	Number of principal structures	Amount (NGN)	Number of commercial structures	Amount (NGN)	Number of other structures	Amount (NGN)
Kurukullu	Abubakar, Sahabi	NA	NA	1	691 365	0	0	0	0
Kurukullu	Aliyu, Mohammed	NA	NA	1	1 693 843	0	0	0	0
Kurukullu	Bagudu, Ibrahim	NA	817166272	1	208 850	0	0	0	0
Kurukullu	Bala, tukur	NA	NA	1	1 026 965	0	0	0	0
Kurukullu	Bawa, Umaru	NA	NA	1	864 206	0	0	0	0
Kurukullu	Bello, Hassan	NA	NA	1	26 972 194	0	0	0	0
Kurukullu	Garba, Harina Maaigoro	NA	NA	1	2 160 515	0	0	0	0
Kurukullu	Mohammed, Umar	NA	NA	1	1 152 274	0	0	0	0
Kurukullu	Umar, Sahabi	NA	NA	1	362 966	0	0	0	0
Sandare	Adamu, Sahabi	NA	NA	1	1 616 065	0	0	4	870 000
Sandare	adamu, sahabi	NA	NA	1	3 995 881	0	0	0	0
Sandare	Garba, Amadu	NA	NA	1	1 663 596	0	0	0	0
Sandare	Hakimi, Umaru	NA	NA	1	3 145 709	0	0	3	255 000
Sandare	Muhammadu, Sani	NA	NA	1	1 129 229	0	0	0	0
Sandare	Muhammadu, Umar	NA	NA	1	1 411 536	0	0	0	0
Unguwan Dodo	Bagudu, Abubakar	NA	NA	1	17 531 926	0	0	0	0
Unguwan Dodo	Liman, Manu	NA	NA	1	4 372 881	0	0	0	0
NA	NA	NA	NA	0	0	0	0	1	85 000
NA	NA	NA	NA	0	0	0	0	1	85 000
NA	NA	NA	NA	0	0	0	0	1	85 000
			Total	**17**	**70 000 000**	**0**	**0**	**10**	**1 380 000**

Note:

NA: Data are not available.

Appendix 8

PLACEMARK FOR STRUCTURES AND PAP

Due to its voluminous content, this entire Appendix is available on CD-ROM at the end of this document.

Appendix 9

LGA AND VILLAGES CROSSED BY THE PROJECT

LGA and Villages Crossed by the Project - Nigeria

Local Government Area	City or village
Arewa	Eri
	Gorin Gora
	Tudun Wada Kangiwa
	Unguear Labbo
	Unguwan Musa
	Zukuku
Birnin Kebbi	Gorun Chindo
	Kola
	Nasarawa
	Unguwan Dambo
	Unguwan Mai Rago
	Ungwan Gaga
Kalgo	Kutukullu
	Nayalwa
	Sandare Babba
	Unguwan Dodo
3	**16**