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Pilot Bus Rapid Transit (BRT) Project in Dakar

ENVIRONMENTAL AND SOCIAL IMPACTS ASSESSMENTS



***Executive Summary of safeguard documents
(ESIA, RAP, ESMF, RPF)
January 2017***

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The present executive summary compiles all the mitigation mechanisms and measures adopted through the documents (ESIA, ESMF, RPF and RAP).

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FULL EXECUTIVE SUMMARY OF THE ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

Project Background

In accordance with its Transport Sector Policy Paper, the Government of Senegal has been modernising urban transport for over a decade, through the Transport and Urban Mobility Support Project (*Projet d'appui au transport et à la mobilité urbaine*, PATMUR). One of the essential components of this project is the support to the development and management of intercity road infrastructure.

In this framework, a project for the preparation of a pilot experiment of a Bus Rapid Transit (BRT) system using dedicated lanes is designed to provide solutions to the problems faced in the metropolitan area, in particular regarding commuter transportation and mobility.

This project is implemented by the project authority, i.e. the Dakar Urban Transport Executive Board (*Conseil exécutif des transports Urbains de Dakar*, CETUD).

Objective of the Environmental Impact Assessment

Implementation of the project for the preparation of a pilot experiment of a BRT system may have an adverse impact on the biophysical and socioeconomic environment. The objective of this study is to identify, assess and propose measures for the mitigation of environmental and social impacts likely to result from the project. **The aim is not only to determine the level of impacts resulting from works and to propose appropriate mitigation measures, but also to monitor the institutional arrangements during the implementation of the project.**

Policy, Legal and Institutional Framework for Environmental and Social Safeguards

The objectives of the project are perfectly consistent with the Senegalese Government's policies stated in various policy and strategy papers for economic and social development: The Plan for an Emerging Senegal (*Plan Sénégal Émergent*, PSE); the Economic and Social Development Strategy (SNDES), 2013-2017), the Act III for Decentralization, Investment Plans for Municipalities (PIC) for local communities in the project area, the Transport Sector Policy Paper, etc.

The BRT project must be consistent with the country's various environmental policies: the National Action Plan for the Environment (PNAE), the National Plan for Adaptation to Climate Change (PNACC), the Forestry Action Plan, etc.

The legislative and regulatory framework includes several provisions on the environmental and social aspects: management of the living environment, pollution and environmental nuisance, natural resources (fauna, flora, water). The ESIA process, the institutional framework for the environment and natural resources management, sanitation, land tenure. The road development project must be consistent with the above-mentioned provisions.

From an institutional standpoint, there are several categories of stakeholders: Ageroute, DREEC, IREF, local communities, carriers, carrier organizations, populations, etc. with diversified skills on environmental and social safeguards that will need to be strengthened in the framework of the project.

Project Description

The project consists in the development of a pilot line through the establishment of a corridor reserved for the BRT system. The design will include:

- The establishment of **23 BRT stops** or **stations** along the pathway out of which three terminals: Petersen Station, Guédiawaye, and Grand Medine.

- **The Guédiawaye** passengers terminal is located **opposite** the Guédiawaye mosque. This terminal includes a bus terminal, a parking lot for taxis, and a land reserve to be used in the future as park and ride.
- The **Grand Médine** terminal is located nearby the airport road and the Emergence Bridge, exactly at the junction of the road from Nord-Foire called "Tally Boubess" and the Niayes road, where a big park and ride lot will be developed, with places for taxis and other amenities (room for security personnel, room for the management of the centre, street lamps, security cameras, and furniture).
- **The Petersen terminal**, which will house **Cabral terminus and feeder terminal**, is located in the Dakar-Plateau municipality, more precisely on Avenue Faidherbe, between the extension of Avenue du Sénégal and Rue Mangin. It is connected to all communication nodes to the suburbs and plays a significant role in the urban transport system of the Dakar metropolitan area. It is located close to the 6 major access roads converging southwards towards the Plateau.

This exchange center will be built on the current Petersen road terminal, which receives each day more than **50,000 people**¹ and covers a landscaped right-of-way of **2.2 ha**.

This exchange centre will be developed according to Guédiawaye's design.

In addition, parallel tracks dedicated to the traffic as well as shoulders intended for the traffic of residents and pedestrians will be put in place.

Presentation of the Developer

Implementation of this project is under the responsibility of CETUD. This public institution established by Act n° 97-07 of 10 March 1997 is entrusted with the implementation and monitoring of the public transport sector policy outlined by the Government for the Dakar region.

For the implementation, it is planned to operate the BRT in the framework of a public-private partnership (PPP).

Analysis of the Various Options

For this study, a comparative analysis of two options was conducted: (1) "without the project" (current situation); (2) "with the project" (project for the preparation of a pilot experience of a BRT system; with several corridors assessed. Option 1 ("without the project") could result in a drastic reduction of mobility and have an adverse socioeconomic impact because it implies that populations in the area concerned continue to experience considerable difficulties to move to urban centres, where administrative, health, educational, and commercial infrastructures are concentrated.

Thus, option 2 ("with the project"), which is selected in the framework of the ESIA, gives priority to the amenities and works planned for the segment connecting the main municipalities in the project area, with a significant positive impact. From a socioeconomic perspective, this option will allow a better, faster and more comfortable service in the area concerned. This will enable all actors to make the most of the potential of the project area, despite the high implementation costs it involves.

This option, however, will have a number of adverse environmental and social effects.

Three variants were examined: **VDN variant, Avenue Bourguiba variant and Rue 10 variant**.

Several criteria for comparison of the variants grouped in 6 families have been used: servicing, quality of service, multimodal and urban consistency, environmental and social friendliness,

¹ Priority Program for the Development of the Urban Transport Infrastructure, Dakar Metropolitan Area. Final Report - March 2011

conditions for insertion, and costs.

In order to assess and to rank them, a multicriteria analysis has been performed while identifying and assessing the various criteria retained.

The multicriteria analysis leads to recommending the elimination of the VDN variant, because it is less efficient in terms of servicing than the other two, with conditions for insertion (bilateral as well as central), feasibility, and cost appearing very unfavorable. Between the other two variants, that of Rue 10 (Boulevard Dial Diop) appears better than the Avenue Bourguiba variant because of its consistency and the legibility of its route, a lesser environmental sensitivity and social impact and more favorable conditions of **inclusion**.

This approach helped to highlight the interest of the route through Rue 10, a variant that turns out to be positive under each of the criteria, and made it possible to take into consideration a particularly visible and fluid line between Guédiawaye and Plateau, the environmental and social impact of which proves to be lower and its conditions for **inclusion** more favorable.

Major Environmental and Social Challenges in the Project Area

The analysis of the biophysical and socioeconomic context of project area allowed to identify environmental and social challenges, to which particular attention should be given not only during the preparation and the implementation of works, but also during maintenance of the **track**. The identification and analysis of the various related issues (landscaping, socioeconomic and environmental issues) helped to assess the impact on the setting.

In the city and the various parts of the segment

The issues raised by the BRT project in the different parts of the layout can be summarized as follows:

- Risk of displacement of a part of the population of Grand Médine, requiring the consideration of people affected by the project (PAP) and the adoption of a sound approach and a displacement and involuntary resettlement policy;
- Relative proximity with houses (Fadia, Grand Yoff), social infrastructures and facilities, and recreation facilities along the Guédiawaye coast road;
- Proximity with sensitive institutions (Dalal Jamm Hospital) and institutions open to the public: mosque, schools (Parcelles Assainies Lycée, College Hyacinthe Thiandoum, J. F. Kennedy Lycée);
- Proximity with socioeconomic activities: Finamark food-processing plant on Fadia, petrol stations, small shops, wholesale trade, market, diners, parking lots, networks of telephony dealers, utilities (SDE, ONAS, SENELEC, SONES);
- Proximity with trees, linear plantations along Boulevard du Général de Gaulle, Boulevard Dial Diop, Allées Papa Guèye Fall;
- Proximity with the BRT depot, with a stripe of filaos located around Guédiawaye (Gadaye district);
- Need to preserve the quality of air, control background pollution, reduce the risks to persons and property. The density of car traffic can exacerbate the concentration of pollutants, including particulate matter (PM 10, PM 2.5), nitrogen oxides, sulphur dioxide, etc. Exposure to pollutants (through respiratory organs and the skin) can cause immediate disorders as well as chronic pathologies or serious diseases and an extreme degradation of ecosystems. The quality of the outdoor air is a major public health concern. Its degradation can have important economic consequences.

One of the major issues of the BRT project will be to contribute to the improvement of the quality

of air.

Presentation of the project's area of study

From a geographical and administrative perspective, the route concerns 2 administrative divisions (Guédiawaye and Dakar), 14 municipalities, and 2 city councils located in the Dakar metropolitan area.

There are **958,229 inhabitants** in these municipalities, i.e. **32.42%** of the population of the Dakar region.

The travel time for the entire planned route is 47minutes, instead of 95 minutes currently.

The BRT route includes **10 sequences** (Corniche de Guédiawaye, Fadia, Parcelles Assainies, Grand Yoff, Ancienne piste, Sacré-Cœur, Boulevard Dial Diop, Obélisque, Boulevard Général de Gaulle, Allées Papa Guèye Fall and Plateau). The latter sequence (Plateau) is located at Pétersen station, place Cabral in Dakar.

The project's zone of influence concerns:

- The Dakar metropolitan area (expanded area of the study);
- A 500-m strip as a right-of-way in the 14 municipalities crossed by the segment;
- Limited area of the study (direct right-of-way of the BRT for the segment);

Policy, administrative and legal framework dealing with the environment (including the category of the project and the policies implemented)

Safeguard Measures Triggered by the World Bank

By virtue of its nature, its geographical coverage and its potential impact, the project is of the "A" category and must meet the following requirements as to World Bank operational safeguard policies:

- PO 4.01 Environmental Assessment;
- PO 4.11 Cultural and Physical Resources;
- PO 4.12 Involuntary Resettlement of Populations;

The bus fleet and the Technical and Information System (STI) systems included in the project will be financed and operated by a private operator recruited through a Public Private Partnership (PPP) procedure. The project will also have to meet the requirements of the policy OP 4.03 "Performance Standards for the Private Sector". The private entity selected must have the capacity to identify, assess and manage the environmental and social risks associated with the activity for which it is responsible. To this end, the operator must establish an environmental and social management system, acceptable to the World Bank and in compliance with the Performance Standards, before the start of operations.

Environmental and Social Impact

Positive Effects

Three types of positive effects

➤ Direct positive effects:

In terms of design, the BRT is a sustainable means of transport:

- Upgrading of roads, development of **diversion** roads (Fadia, Grand Yoff), development of pedestrian walkways, landscaping, accommodation of crossroads;
- Improvement of conditions of traffic for a better legibility, while remaining flexible

- Better adaptation of traffic at place de l'Obélisque, which will enable to reinforce the structure of the road at this level.

In terms of gains:

The gains are presented below:

- Time saved: from 95 minutes currently to 47 minutes with the project, and commercial speed ranging between 22 and 26.4 km/h:

The time saved with the BRT project is presented in the following table

Table: Time saved (billion CFAF)

Value of time 2015	2020	2030
CFAF450	12.2	29
CFAF600	16.4	38.7

Source: Analyse économique du BRT Godard novembre 2016

- Reduction of nuisance (air pollution) along the corridor through the modal shift brought by the BRT system that will result in a reduction in the emission of pollutants in the Dakar metropolitan area and a fuel consumption and emissions of pollutants by passenger/km much lower than with other modes of transport.

Vehicle-km gains transferred are estimated this way for the computation of the avoided pollution costs:

Table: Vehicle-km gains (million) 2020

	2020	2030
DDD Buses	3.2	4.3
AFTUU Minibuses	39.3	52
Taxis (taximeter and illegal taxis)	25.8	34.2
Passenger cars	10.3	13.7
<i>BRT Vehicles (Veh-km equivalent)</i>	<i>- 14 x 1.3 = - 18.2</i>	<i>- 18.5 x 1.3 = - 24</i>
Total gains veh-km (million)	60.3	80.2

Source: Analyse économique du BRT Godard novembre 2016

- Reduced car traffic along the BRT route;
- More comfort in transport (modern and cleaner vehicles), improved security with a more precise computation of round-trip time (using the GIRABASE software), appropriate signposting and lighting system;
- Operation of material and equipment in stations and terminals with solar energy, for energy efficiency and control of greenhouse gases;
- Improvement of the corridor through landscaping
- All of segments equipped with a lighting system adapted to the areas crossed and traffic regulation at crossroads with a modern traffic lights system.
- Optimized operation: improved commercial speed and regularity at bus stops.

➤ Indirect Positive Impacts :

The main positive impacts identified are the following:

- Creation of jobs and generation of income during the works and during the maintenance phase;
- Improved access and better conditions of living for local populations, through the development, among others, of related activities (carriers, small businesses and services, crafts, etc).

- Opportunities for the diversification of production activities and services and increase in income;
- Better access to basic social services (health, education, learning, training, etc.);
- Promotion of local crafts and tourism.

Negative Impacts

The negative impacts of the project are mainly related to:

- The relocation of a segment of the population of Grand Médine because of the layout of the terminal on an area covering 10,700 m². A PAR is developed to this end;
- Additional pollution (even minimal) because of the arrival of the new fleet of the BRT project. This will be offset by modal shift and a decrease in car traffic (see below);

Table: Fuel consumption and GHG Emissions by Vehicle Type

	Fuel consumption Liters/100 km in 2015	CO2 emissions g/km
Bus DDD	48	900
Minibus Aftu (Tata, King long)	24	450
Light Duty Vehicles: Taxis (counters and clandos) Passenger Cars	8.5	180
<i>BRT vehicles</i>	<i>60</i>	<i>1,170</i>

Source: Analyse économique du BRT Godard novembre 2016

- The likely impact on the land affecting mainly: a part of buildings in Grand Médine, Fadia, some equipment and public infrastructure of PRECOL (sports, recreational, transport) and economic activities (markets, shops, etc.), 4 petrol stations (a part of their development is located in the BRT right-of-way), indirect impact on the factory Agri-Food FINAMARK (risks of loss of closing businesses and relocation, encroachment of the wall of Lycée Kennedy, the Inspection d'Académie and the the Obelisk Monument fence); the assessment of these impacts is taken into account in the framework of the PAR;
- The destruction of trees on certain parts of the segment because of the enlargement of the right-of-way and in some areas, including sandpits and quarries;
- The risks of HIV/AIDS spread in the municipalities crossed;
- The risks of accidents during the works and in the operation phase;
- The potential losses of income and assets, structures and facilities and other assets on the route);
- The nuisances caused by waste generated on the site;
- The relative pressure on part of filaos stripe in the northern part of Guédiawaye; etc.

The negative impacts of the project are for the most part temporary (works phase) and easily manageable through o mitigation measures proposed by the ESMP.

Environmental and Social Management Plan (ESMP)

The ESMP provides for:

- Good practice measures, rehabilitation, etc.;
- Environmental and social measures (compensatory reforestation and development of tree lines; and information and awareness-raising on the project, on security, on HIV/AIDS; for air quality, setting-up of a station measuring air pollution on the corridor, etc.);
- Capacity-building of some staff members of the project and the Centre de Gestion de la Qualité de l'Air (CGQA) [Center for the Management of Air Quality] who will be responsible for the management of the station;
- The daily dissemination of indicators of pollution on the route of the BRT

- The compliance with standards (minimum Euro 4) in the acquisition of the fleet of vehicles;
- The good periodical maintenance of buses of the BRT system;
- Measures for capacity-building, surveillance and environmental monitoring; etc.
- Measures to insert in the calls for tender and implementation records as contractual measures and whose financial evaluation will be taken into account by bidders when setting their unit and lump sum prices.

Institutional Arrangements and Implementation of the ESMP

The monitoring of the implementation of these various measures will be ensured as follows:

- Within CETUD, the Project Management Unit will be in charge of the monitoring and assessment of all environmental and social measures. An environmental and social focal point will be designated to this effect;
- The supervision of ESMP activities will be ensured by the Division Regionale de l'Environnement et des Etablissement Classées;
- The internal area-based monitoring of the implementation of the environmental and social measures will be ensured by the control offices that will be selecting to this effect, and also by the municipalities and DREEC. At the level of municipalities, the environmental management mechanism will be under the responsibility of the President of the Commission on the Environment and the representative of the local communities concerned, in particular as regards the area-based monitoring. The "external" monitoring will be performed by DREEC and CRSE;
- The epartment of Water and Forests will ensure the supervision of tree felling activities/restoration/reforestation and linear plantations;
- DEEC/DREEC will supervise activities related to pollution and ensure the coordination of monitoring missions;
- Local communities will oversee the information and awareness-raising of populations, the management of waste from the site, the loss of assets, the employment of the local workforce, etc.

The following table presents the cost of the ESMP

Costs Estimate of the ESMP

Activities	Costs (CFAF)
1. Mitigation Measures	
Acquisition of a station measuring air pollution	180,000,000
Restore/compensatory reforestation, alignment	Integrated in investment costs
Development of platforms/points for waste collection	Integrated in investment costs
Operation of the communication platform between the company and the communities	15,000,000
Reconditioning of temporary sites of the company (loans, deposits, deviations, bases):	45,000,000
Signalling and safety equipment (capacity-building on the new aspects to integrate in the traffic laws: lights)	12 000 000
2. Training and Capacity Building	
Capacity-building of some staff members of the project and CGQA who will be responsible for the management of the station	4,080,000
Raising the awareness workers on SDTs/AIDS in collaboration with the Programme National de Lutte contre le Sida (PNLS) [National Program for the Fight Against AIDS (PNLS)]	5,000,000
Capacity building of local stakeholders	22,000,000
3. Monitoring and Evaluation	
Restoration/compensatory reforestation, alignment	Integrated in investment costs
Recruitment of and support to an environmental expert during all the phase of works or of a unit for the management of environmental and social aspects	61,920,000
Strengthen the capacity of DEEC for the support to and follow-up of compliance with the recommendations in order to take into account social and environmental aspects during the phase of works.	5,000,000
TOTAL	350,000,000

The overall cost of environmental measures recommended in the framework of the BRT project amounts to **CFAF350 million**

Consultations during project preparation

The consultations and meetings conducted in the context of the ESIA study, dates, locations and number of participants are as follows:

Table: Summary of consultations and meetings held in the framework of the BRT project

Consultations /Meetings	Date	Venue	Number of participants
Public Consultation Dakar Regional	12/11/2015	Dakar	32

Development Committee (RDC)			
Public consultation Departmental Development Committee (DDC) Guédiawaye	03/12/2015	Guédiawaye	20
Wrap-up meeting on the detailed draft study	12/01/2016	Hôtel GOOD RADE	29
Consultation with the representatives of Grand Médine, the municipality of Patte d'Oie and the FDV	10/03/2016	Villa Rose, municipality of Patte d'Oie	70
Information/consultation on the BRT project with the populations of Grand Médine. Preparation, census of PAPs, evaluation	18/06/2016	Grand Médine	75
Public consultation	13/01/2016	Municipality Patte d'Oie	30
Briefing with residents of the municipality of Patte d'Oie	12/05/2016	Municipality of Patte d'Oie	28
Briefing in Grand Médine	18/06/2016	Grand Médine	100
Meeting in preparation for the launch of surveys for the ESIA of the BRT project planned for the same day at 9 a.m.	18/07/2016	Grand Médine	50
Public hearing (Dakar Department) for the validation of the ESIA	20 /10/ 2016	Town hall of the city of Dakar	300
Public hearing (Guédiawaye Department) for the validation of the ESIA report on the BRT project	21/10/2016	Foyer des jeunes of Hamo 4, Guédiawaye	33
Meeting of the Interministerial Technical Committee for the validation of the ESIA of the BRT project	04/11/2016	Direction de l'Environnement et des Etablissements Classés (DEEC)	30
Total			797

The results of the public consultations carried out with the actors concerned are detailed in Annex 7

Synthesis of Perceptions, Concerns and Recommendations

Perception of the project

On the acceptability of the project, the majority of the stakeholders informed and consulted consider that the BRT project is useful, beneficial and supplements the policy of setting up large road infrastructures for the decrease in congestion as more traffic is taken off the roads in periurban areas of the Dakar agglomeration. The project is seen as one of the best public actions to increase urban mobility, reduce corridor travel time, increase the value of municipalities through land and housing, and modernize City of Dakar. On the other hand, it was in the assumption of responsibility for the interests of both parties that divergence and differences of opinion were noted.

Consequently, the analysis of the discourse and the positions of the actors will be more focused on the one hand on the main concerns and on the other hand on the recommendations of the stakeholders

Syntheses of concerns and fears

Although the project is truly satisfying, it is nevertheless a subject of major concerns and fears related to the various biophysical and socio-economic impacts that the project could generate in its implementation.

In general, people expressed the following concerns and fears:

- risks of destruction of houses, small business places, various workshops located at the edge of the right-of-way of the BRT corridor;

- risks of destruction of alignment and ornamental plantations on the right-of-way of the corridor and in part of the strip of filaos;
- risks of temporary or permanent loss of activities and / or sources of income, especially for young people and women in the communes crossed;
- risks of air pollution and nuisance by noise at the time of construction;
- risks of accidents to persons and animals in the operational phase of the BRT;
- fears of loss of earnings by other existing modes of transport;
- fears of lack of communication on the project;
- fears of not compensating the building and the land in accordance with market prices;
- fears of lower tax revenues for municipalities crossed.

Summaries of suggestions and recommendations

Following the consultations, the main suggestions and recommendations are as follows:

- Ensure the preservation of socio-economic activities during construction and the safety of riparian populations;
- Indemnify or compensate all cases of loss of property and / or sources of income due to project activities;
- For bus routes currently serving the BRT corridor, they will be subject to restructuring in part on the feeder lines that are created for this purpose. According to the latest estimates from IFC, about 60% of the demand on the BRT line originate from these feeder lines. The other parts of these existing bus lines on the BRT corridor will be redeployed in the suburbs where the supply of transport is still very insufficient. All these measures will help to safeguard the revenues of the bus operators and drivers. These proposed measures have facilitated the signing of a memorandum of understanding on December 5, 2016 between CETUD and the bus operators for the future restructuring of the public transport network around the line of the BRT (see MOU CETUD - AFTU in annex 9). For the taxis, they have specific kind of customers and greater flexibility compared to the buses. Moreover, they do not have fixed routes. The eventual loss of customers on the BRT corridor will be offset by the demand in progression on other routes.
- Recruit, as a matter of priority, young people from the area of the route during the project implementation and in the permanent posts during the exploitation phase;
- Take into account the question of the safety of the local populations in the communes serviced;
- Carry out awareness-raising campaigns for the project's ownership and avoid conflicts;
- Involve technical services and local and administrative authorities in the implementation of project activities;
- Take charge of all the networks to be departed in close cooperation with the concessionaires and the technical services concerned;
- Carry out rehabilitation actions through reforestation enabling the sequestration of carbon;
- Take into account in the developments of the various low points existing in the zone of Guédiawaye in order to compensate for the floods and to keep the platform of the BRT out of water;
- Put in place drainage and drainage works to secure the infrastructure of the BRT

The BRT corridor development project is a project that has gained the support of all actors despite the existence of a number of concerns that should be taken into account. A constructive dialogue between the various actors and strict adherence to the environmental measures advocated will encourage better ownership of the project by all sections of the population and a better participation in the management of the project.

SUMMARY OF THE RESETTLEMENT ACTION PLAN

Matrix of Baseline Data

N°	Subject	Baseline Data
1	Project Location	Dakar Region
2	Municipalities Concerned	City of Dakar and City of Guédiawaye
3	Municipalities Concerned	Municipalities Crossed: Plateau, Médina, Gueule Tapée Fass Colobane, Fann Point E Amitié, Grand Dakar, Sicap Liberté, Dieuppeul Derklé, Mermoz Sacré cœur, Grand Yoff, Patte d'Oie Parcelles Assainies, Cambérène, Golf Sud et Sam Notaire
4	Types of Works	Development of the BRT
5	Budget for Works (excluding taxes)	CFAF 202 billion, i.e. around USD400 million
6	Budget for the PAR	CFAF 5,016,379,104
7	Deadline for Eligibility	<ul style="list-style-type: none"> • September 22, 2016 for companies in the municipalities of the city of Dakar (Plateau, Médina, Gueule Tapée Fass Colobane, Fann Point E, Amitié, Grand Dakar, Sicap Liberté, Dieuppeul Derklé, Mermoz Sacré cœur, Grand Yoff, Patte d'Oie, Parcelles Assainies, Cambérène (see correspondence in Annex) • September 27, 2016 for companies in the municipalities of the city of Guédiawaye (see correspondence in Annex)
8	Total number of households affected and to be awarded compensation	1,138 households' (including 162 households to be relocated, 9 owners partly affected, 244 affected by encroachment, 126 tenants, 581 business operators, 15 owners of community goods), see Table 1
9	Total number of households to be relocated	162 households (all in the neighbourhood of Grand Médine, their houses will be demolished)
10	Number of households affected by a loss of housing	288 households (those concerned are either owners or tenants in Grand Médine: 162 + 146)
11	Number of households affected by the disruption of socioeconomic activities	864 (244 leaseholders will lose rental income from businesses, 581 business operators and 39 owners will lose rental income in Grand Médine)
12	Number of households affected by a permanent loss of business activities	581 business spots operators
13	Total number of people affected by the project	7,013 = 1,253 + (960 x 6²) ; (1,253 in Grand Médine, 960 = 9 owners partly affected + 244 owners affected by encroachment + 126 building tenants + 581 business operators)
14	Number of trees to be felled in the confessions affected in Grand Médine	21 , including 7 young fruit trees not yet productive and 14 forest species trees
15	Number of trees to be felled on sidewalks along the right-of-way (to be incurred by PGES)	979
16	Number of owners with a land title	3 land titles, including: 1 State land title on which the so-called Aly Sow sub-neighbourhood 5 of Grand-Médine is built and 2 other private land titles will be affected by the project

² Average size of households in Dakar (source: ANSD, RGPHAE 2013)

Matrix for the compensation of people affected by the BRT project

PAP category identified	Type of loss	Compensation measures				Observations
		In-kind	Cash	Legal formalities	Other types of compensation	
Loss of land						
Natural or legal persons landowners	Loss of land for housing, business or other	Each area of land lost will be compensated for with land of the same or a more important surface area	Or compensation based on the price of the square metre of the land lost as a percentage of the surface area affected In addition Compensation equivalent to the amount requested for fulfilling acquisition formalities for a new title (land title or lease agreement, as appropriate)	In case compensation is in-kind, the project will incur costs for securing land for the PAPs	None	None
Loss of structures (housing, business or other)						
Head of concession or other owner identified (natural or legal persons identified)	Loss of concession structures, business premises or other buildings	Replacement of old structures with no ones	OR, otherwise, the value of building new structures, based on current market prices, account not being taken of the depreciation (replacement costs) lump sum of 100,000	None	Lump sum of CFAF150,000 (reference CDRE ³) per household per displaced household over moving and resettlement costs	None
Loss of income						
Natural or legal persons letting one or several buildings and seeking compensation	Loss of income resulting from the rental of a concession or part of it	None	Lump sum compensation equivalent to 6 months of rental (reference CDREI).	None	None	None

³ Commission Départementale d'Évaluation des Impenses

PAP category identified	Type of loss	Compensation measures				Observations
		In-kind	Cash	Legal formalities	Other types of compensation	
Operators of business premises identified (owners, tenants or operators)	Loss of income resulting from the operation of business premises	None	Lump sum compensation equivalent to 6 months of lost income	None	None	None
Loss of private or public equipment and infrastructures						
PAP as tenants or persons taken	Loss of housing	None	Compensation equivalent to 6 months of rental (reference CDREI), which will enable to find another housing	None	None	None
Owner of the equipment	Loss of private or public equipment and infrastructures	Replacement of old community property on the site chosen for the PAP	None	OR, otherwise, the value of building new structures, based on current market prices, account not being taken of the depreciation (replacement costs)	None	None
Loss of trees and natural resources						
Owner of the tree identified	Loss of private trees in concessions and a plots	None	Compensation equivalent to the value of a standing tree (replacement cost), depending on how young or old it is PLUS Compensation equivalent to the lost annual production until the tree can produce again (see Méthodologie d'évaluation des arbres Chap. 9.3.6)	None	None	Before the PAP move, owners of trees can collect the fruits and the wood of their own trees and take the whole away themselves
Resource users	Loss of community natural resources	None in the framework of the PAR, since it is incorporated in the PGES	None	None	None	The PGES provides for her reforestation plan This includes the replacement of forest resources

PAP category identified	Type of loss	Compensation measures				Observations
		In-kind	Cash	Legal formalities	Other types of compensation	
Vulnerable persons						
Vulnerable PAP identified as such during implementation	Vulnerable PAP needs for special assistance	None	None	None	For all vulnerable PAP, assistance will be provided according to their specific needs, in relation with resettlement ⁴ .	Assistance will be offered to vulnerable PAPs
Owners of mobile structures who lose small business places (fruit/fritter/peanut, vendors, etc) are in the category of persons needing special assistance	Need to provide special assistance to PAPs who have mobile structures (income drawn from business spots)	None	None	None	The PAR provides for assistance to all owners of mobile structures	

⁴ Measures to be taken will be specified at the beginning of implementation, taking into account gender-specific needs of PAPs

Grievance Redress Mechanisms

During the preparation of the RAP, the names of the heads of households of project affected persons (PAPs), were publically displayed at the Préfectures of Dakar and Guédiawaye, and respective municipalities. PAPs who felt that they were impacted but were not listed, could file their complaints with the Commissions Départementales de Recensement et d’Evaluation des Impenses (CDREI). If the PAP was not satisfied, the CDREI submitted the case to the CETUD ad hoc committee for resettlement census related claims, supported by the consultant who was preparing the RAP.

During the implementation of the RAP, Grievance Redress Mechanisms will include four steps, two of which are at the local level. PAPs who would wish to file complaints will first do so, with the CETUD entity in charge of the implementation of the RAP. The next step is the local mediation committee (Comité local de médiation, CLM), should the PAP not be satisfied with the first decision. The CLM will include representatives of PAPs, representatives of local municipalities, representatives CSO and NGO, and a representative of CETUD. The role of the CLM is to settle cases amicably. Should the PAP still not be satisfied with the resolution of the CLM, she/he can submit her/his complaint to the Médiateur de la République (Ombudsman). The fourth resort will be for the PAP file her/his complaint, with the formal legal system.

Consultations and Citizens Engagement

Consultations of the project affected persons will be a continuous process. During the preparation of the RAP, PAPs were consulted throughout the process, from inception to completion. The same will be done during the implementation.

During the various consultations, the project has been widely explained with the compensation principles and the different options for compensation. The subjects, concerns and issues raised during consultations were captured in the minutes of the meetings provided in the annex of this RAP.

The consultations confirmed that PAPs were willing to leave their current locations and properties both in the right of way and outside the right of way, for the common good, provided they get fair compensation for lost properties and other assets. They felt reassured that they would receive compensation.

Regarding PAPs in the neighborhood of Grand Medine, who will be subject to physical resettlement, 67.61% of PAPs wish to receive a compensation in the form of both cash and land on a new site to be developed by the project, 12.68% to be relocated on a new site at the expense of the project, and 19.72% to receive compensation in cash only. The main request is to make available to the PAPs, a resettlement site adjacent to the area where they live, so as to accommodate the 71 affected households. In addition, they raised concerns about the criteria of vulnerability, the schedule of compensation and supportive measures planned by the project.

Schedule for the implementation of activities and structures responsible

The overall planning for the implementation of the RAP is presented in the table below:

Activities	Structures responsible	Year 1											
		M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
1. Mobilization of facilitating structures for the implementation of the PAR	CETUD	●	●										
2. Preparation and signing of memoranda of agreement with the administrative authorities responsible for the implementation of the PAR	CETUD/Governor/Prefects		●	●									
3. Presentation to the various conciliation commissions and payment of compensation	CETUD			●	●	●	●	●	●	●	●	●	●
3.1. Communication Campaign	Administrative Commission/CETUD #facilitating structures			●	●	●	●	●	●	●	●	●	●
3.2. Validation of census data and Preparation of the PAP records	Administrative Commission/CETUD #facilitating structures			●	●	●	●	●	●				
3.3 Presentation before the Commission and payment of compensation	CETUD					●	●	●	●				
4. Libération effective des emprises	Commission on the release of rights-of-way					●	●	●	●	●	●	●	●
5. Display, collection, processing and management of claims and complaints	Administrative Commission/CETUD #facilitating structures	●	●	●	●	●	●	●	●				
6. Implementation of resettlement measures	CETUD #facilitating structures		●	●	●	●	●	●	●	●	●	●	●
7. Monitoring and evaluation of the implementation of the PAR	CETUD			●	●	●	●	●	●	●	●	●	●

Costs and budget

The budget for the implementation of the RAP is **CFAF 5,016,379,104**.

The following tables provide information respectively on the overall budget for the implementation of the RAP and unit costs.

Costs and budget		
Heading	Activities	Sub-total FCFA
Compensation	Compensation of PAPs Habitat Owners of concessions	2,711,289,031
	Compensation of PAPs Habitat tenants of buildings in the concessions	20,366,550
	Compensation of PAPs places of business for the losses of structures	267,379,000
	Compensation for community losses	153,141,000
Resettlement Measures	Support for 835 persons in possession of a removable structures (movable)	92,300,000
	5% of the amount of compensation for the Support to Vulnerable PAPs	162,223,779
	15% of the amount of compensation for the implementation of the supportive measures for vulnerable PAPs	486,671,337
Allowance for the services of the provider (Social NGO or consultant) during the implementation of the PAR	10% of the amount of compensation for the implementation of the supportive measures for vulnerable PAPs	324,447,558
Follow-up - external evaluation of the Resettlement	Allowance for follow-up evaluation of the RAP (2% of the budget for compensation) by an external monitoring consultant for the implementation of the RAP	64,889,512
Consultant services	Hiring of experts to support CETUD in implementing the	82 000 000

	RAP	
Capacity building	Various training and capacity building activities in safeguards and citizen engagement for CETUD and the different stakeholders	165 000 000
PAR Contingencies	15% of the amount of compensation	486,671,337
GRAND TOTAL PAR BUDGET		5,016,379,104

Unit costs relating to compensation are listed below

Heading	Activities	Number of PAPs	Total cost CFAF	Unit cost CFAF
Compensation	Compensation of PAPs Habitat Owners of concessions	80	2,711,289,031	33,891,113
	Compensation of PAPs Habitat tenants of buildings in the concessions	126	20,366,550	161,639
	Compensation of PAPs places of business for the losses of structures	244	267,379,000	1,095,816
	Compensation for community losses	16	153,141,000	9,571,313
	Support for 835 persons in possession of a removable structures (movable)	835	92,300,000	110,539

FRAMEWORK OF MITIGATION MEASURES FROM THE ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

Phase	Negative impacts	Mitigations measures
Works	<ul style="list-style-type: none"> • Deforestation alignment planting • Activities and sources of income losses • Risk of flooding of the waterfront homes • Pollution of the environment (water and soil) by solid waste (debris, demolition, oils, etc.) • Noise pollution • Degradation of the environment by the demolition and construction products • Erosion and pollution of soils • Air pollution • Disruption of socio-economic activities during the works • Risk of accident during work (staff and population) • Risk of degradation of eventual cultural remains (if any is discovered) • Disruption of the distribution of water, electricity and phone 	<ul style="list-style-type: none"> • Make an efficient choice of the right-of-way and implantation • Avoid ecological sensitive areas (Niayes, etc.) for the establishment of the construction base • Ensure the proper drainage of the BRT corridor • Ensure the collection and disposal of wastes • Ensure compliance with hygiene and safety measures; • Provide appropriate deviation to keep the flow of goods and people • Put speed bumps and speed limit signs • Coordinate with the utilities companies (water, electricity and telephone) to limit the gene by a fast rehabilitation • Plant new trees • Wear workers with personal protective equipment (PPE) • Undertake a campaign of communication and awareness before the works • Respect national procedures in case of discovery of cultural remains • Involve the municipalities in the follow-up • If possible, hire PAP in the project • Make a provision for production of foam at the fuel storage depots
Operations (BRT infrastructure)	<ul style="list-style-type: none"> • Risk of accidents during crossing by residents 	<ul style="list-style-type: none"> • Inform and educate users and populations • Install traffic signs • Involve the police and the gendarmerie in the implementation of the project, for the definition of the security plan;
	<ul style="list-style-type: none"> • Risk of separation of the communities on the both sides of the corridors 	<ul style="list-style-type: none"> • Put in place crossing infrastructure
Stations and terminals	<ul style="list-style-type: none"> • Insecurity (risk of aggression, etc.) 	<ul style="list-style-type: none"> • Implement a public lighting system • Install shelters with sufficient benches
	<ul style="list-style-type: none"> • Risks of occupation by anarchic facilities 	<ul style="list-style-type: none"> • Regulate and monitor the occupation of stations • Create spaces for the sale of food/drink at the level of the Terminal • Install public toilets and water points in the Terminal and set up a maintenance and management system
	<ul style="list-style-type: none"> • Pollution of the environment by waste dumped by users 	<ul style="list-style-type: none"> • Install garbage bins and proceed to their regular collection in relation to municipal services
Feeder roads	<ul style="list-style-type: none"> • Risk of flooding • Risk of accidents 	<ul style="list-style-type: none"> • Set up a drainage network • Provide vertical and horizontal signs

GENERAL PRINCIPLES AND PROCEDURES OF RESETTLEMENT FROM THE RESETTLEMENT POLICY FRAMEWORK

The general principles that will guide all resettlement operations will take into account the following four steps: informing local communities and all stakeholders; determination of the sub-project (s) to be financed; if necessary, define a RAP; Approval of RAP. The expropriation procedure includes: a request for expropriation; an expropriation plan and a decree fixing the content; a property survey and a declaration of public utility.

The table below shows the different responsibilities for the implementation of expropriation and compensation.

Institutional stakeholders	Responsibilities
Executive Council of urban transport of Dakar (CETUD)	<ul style="list-style-type: none"> • Dissemination of the RPF • Approval and dissemination of RAPs • Initiation of the procedure of declaration of public utility and act of transferability • Dissemination of the RPF • Approval and dissemination of RAPs • Financing of studies, of sensitization and monitoring • Close collaboration with the other implementing partners (technical services) • Public consultation throughout the process of preparation and implementation of the project • Assistance to organizations, local communities, NGOs • Recruitment of a social expert and an expert in relocation to coordinate the implementation of RAPs • Recruitment of consultants/NGOS to undertake socio-economic studies, the PAR and monitoring/evaluation aspects • Supervision of the compensation of people affected • Monitoring of expropriation and compensation process • Submission of Activity reports to WB
Ministry of economy and finance (Budget and areas)	<ul style="list-style-type: none"> • Financing of the budget of the compensation • Declaration of public use and transferability act
Local Administrative authorities (regional governors and district authorities)	<ul style="list-style-type: none"> • put in place of the assessment and compensation commissions
Commission of evaluation and compensation of the disbursements	<ul style="list-style-type: none"> • Assessment of the disbursements and the affected people • Compensation of the beneficiaries • Release of allowances funds
Local authorities (city, towns)	<ul style="list-style-type: none"> • Registration of complaints • Identification and release of the sites to be expropriated • Monitoring of the resettlement and compensation • Dissemination of the RAPs • Treatment according to the procedure of conflict resolution • Participation in the close monitoring
Consultants in social sciences, NGOs and civil society Associations	<ul style="list-style-type: none"> • Socioeconomic studies • Realization of RAPs • Strengthening of capacities and information and sensitization • Evaluation /Mid-term evaluation, and final evaluation
Justice (judge of the regional court/expropriations)	<ul style="list-style-type: none"> • Judgment and resolution by consensus of the conflicts (in the case of disagreement)

Compensation and resettlement must precede the start of all field work. Compensation will be in kind or in cash, the calculation methods for the affected assets (land, buildings, etc.) will be based on market prices.

Local mediation committees will be set up in each municipality concerned. Each Committee should have local representatives from all stakeholders in the resettlement process. Recourse to justice will be the last alternative to which communities and affected persons could apply.

The monitoring of the complaint management mechanism will be the responsibility of the CETUD Social Expert with the support of the facilitating NGO.

COMPLAINTS AND CONFLICT MANAGEMENT MECHANISM FROM THE RESETTLEMENT POLICY FRAMEWORK

Types of complaints and conflicts

In practice, the complaints and conflicts that appear during the implementation of a program of resettlement and compensation may be justified by the following:

- Errors in the identification and assessment of the property;
- Disagreement on boundaries of plots, either between the person and the Agency of expropriation, or between two neighbors
- Conflict over the ownership of a property (two people affected, or more, say they are the owner of certain property), this problem may appear in this case with old and not updated property titles
- Disagreement on the assessment of a parcel or other property;
- Estates, divorces and other family problems, resulting in conflicts between heirs or members of the same family, on the property, or the property shares, of a given good.
- Disagreement on resettlement measures, for example on the location of the resettlement site, on the proposed habitat type or on the characteristics of the parcel of resettlement.

Mechanism proposed

a. Overview

In resettlement and compensation program such as that proposed for the BRT project, complaints and disputes may result from misunderstandings of their procedures of resettlement and compensation, or from neighborhood conflicts sometimes unrelated to the project, but which can often be solved by arbitration, by using rules of mediation from the tradition. Thus, many disputes can be resolved:

- By additional explanations (for example, explaining in detail how the project has calculated the compensation to the complainant and to show him that the same rules apply to all).
- By arbitration, by appealing to external respected persons in the community.

Conversely, resort to the courts that often requires long delays before a case is dealt with, may result in high costs for the complainant, and requires a complex mechanism, with experts and lawyers, who often escape completely to the complainant and eventually turn against him. Finally, the courts are not supposed to know about disputes on non-titled properties.

This is why the project will implement an extra-judicial mechanism of litigation involving the explanation and mediation by third parties. This procedure will start during the identification phase.

Each affected person, while of course retaining the possibility to resort to the Senegalese justice, may appeal to this mechanism, according to the procedures specified below. It consists of two main steps:

- The record of the complaint or litigation;
- The amicable treatment, using mediators independent of the project.

b. Registration of complaints

The project will establish a register of complaints. The existence of this register and access conditions (where it is available, when you can access to law enforcement officials to register complaints, etc...) will be widely disseminated to those affected as part of the consultation and information activities. The registry will be open as soon as the census activities in a given area.

On this basis, the complainants must formulate and lodge their complaints with either the commission assessment and observation, under the guise of its President, the *Préfet*, with extension to the project team, or at the level of the project directly. The complaint will be duly recorded in a notebook specially opened for this purpose. The recipients of the complaints in return address a reasoned answer to the complainant 10 days after receipt of the complaint. This means that all the addresses of the different bodies of management of the resettlement will be given to people in anticipation of this eventuality.

c. Complaints in the first instance

The first review will be done by the evaluation commission within a period of 7 days. If it determines that the complaint is well-founded, the affected person must receive the complement of his compensation, and adequate repairs;

d. Complaints in the second instance

If the complainant is not satisfied with the treatment in the first instance, the second review will be done by a **local mediation committee**, which involves local authorities.

Indeed, this informal body, which will take place if the commission does not evolve in its assessment, or if the situation is complex, and/or beyond the scope of the project (family disagreements around the Division of property, for example), will be implemented in each sector affected by the relocations. Each local mediation Committee shall include at least the following persons:

- A representative of the territorial Administration at the commune level,
- Three representatives of the populations, selected for example among the community organizations, elders, or traditional authorities as the case, representatives of the various categories socio-professional
- A representative of an NGO or religious organization presents on the ground in the area concerned and enjoying a high esteem on the part of the populations.

The local mediation Committee is convened by its Chairman and shall meet whenever necessary, in the presence of a representative of the project. It will have a maximum of three days to hear the plaintiffs and a maximum of 10 days to find a solution amicably.

e. Complaints in last instance or judicial remedies

If at the end of this process the complainant's dissatisfaction persists, he will be free to resort to judicial proceedings according to the provisions of the Act. But the PAP should be informed of procedures at this level are often costly, lengthy, and may disrupt their activities, although it has necessarily guarantee success.

In all cases, to minimize the situations of complaints, awareness campaign by NGOs as well as other consultations will be done intensely. This may require the development of materials to be shared to the populations.