

Language : ENGLISH  
Original : French



AFRICAN DEVELOPMENT  
BANK GROUP

**PROJECT : AFLAO-SANVEE CONDJI ROAD REHABILITATION**

**COUNTRY : TOGO**

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**ESIA SUMMARY**

*Date : July 2009*

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## **1. Introduction**

This document is a summary of the Environmental and Social Impact Assessment (ESIA) of the Aflao-Sanvee Condji Road Rehabilitation Project in Togo, prepared in accordance with the environmental and social assessment guidelines and procedures of the African Development Bank for Category 1 projects. The project description and justification are presented, followed by the legal and institutional framework in the Togolese Republic.

A brief description of the main environmental conditions of the project area is presented, through its physical, biological and human (social, cultural and economic) components, the alternatives are compared in terms of technical, economic, environmental and social feasibility, including the concerns of the public.

The most significant positive and negative impacts of the alternative selected on the biophysical and human (socio-economic) environments are presented. The environmental and social impacts are summarized and the inevitable impacts identified. Descriptions cover expected impacts during the preparation, road construction and operation phases. This is followed by the presentation of the enhancement and mitigative measures proposed to increase the benefits and/or prevent, minimize, attenuate or offset the negative impacts, as well as the monitoring program. The public consultations held during the ESIA and the complementary initiatives related to the Project such as the required compensation plan are discussed.

The conclusion touches on the acceptability of the project for which an environmental compliance certificate is issued. The key references are given and the contact for further information is specified.

## **2. Project Description and Justification**

The road section to be rehabilitated extends over an overall length of approximately 10.3 km. It is located between Km 9.03 and Km 19.5 on the Togolese coast. This section crosses the harbour zone and Baguida Canton which falls under the Golfe Prefecture. Baguida Canton comprises the districts of Aflao Komè, Noudokopè, Sossoukopè and Avépozo. All of these districts are in the direct project impact area. Habitation in the project area is relatively dense because of the proximity of the Lomé Port Authority (PAL), industrial units located in the harbour area, the inter-State highway and hotels. Trade, truck farming, artisanal fishing and continental fishing are widely practised in the project area.

The implementation of the Aflao-Sanvee Condji Road Rehabilitation Project is consistent with the government's objective under Pillar II of Togo's 2009-2011 PRSP ("Development of growth-supporting infrastructure"), which seeks to: (i) build and rehabilitate bridges destroyed during recent floods; (ii) build, rehabilitate, reinforce and maintain the streets, rural and agricultural tracks as well as trunk roads and inter-state highways; and (iii) widen or split up sections on the capital city's major access roads.

The Aflao-Savée Condji road, 2/3 of which is in the urban zone, forms part of the Abidjan-Lagos corridor - the top priority of ECOWAS' Regional Transport Facilitation Programme. The project falls within the framework of Togo's CSP-I, Pillar 2 whose purpose is the rehabilitation of basic infrastructure.

The project is designed in a bid to enhance the road capacity and provide quality transportation system that is more efficient and safer (with cycle tracks since two-wheeled vehicles represent more than half of the vehicles), thus improving the mobility of the population.

### **3. Policy, Legal and Administrative Framework**

#### **3.1 Policy Framework**

The Togolese government has had an environmental and natural resources management policy framework since 2008. It comprises: (i) the National Environmental Policy (NEP); and (ii) the National Environmental Action Plan (NEAP). Togo ratified the United Nations Convention to Combat Desertification on 4 October 1995 and has pledged to comply with its provisions.

#### **3.2 Legislative and Regulatory Framework**

The ESIA conducted for this project is also consistent with Togolese regulations and the Bank's Environmental and Social Assessment Procedures (ESAP), established with a view to adopting an integrated environmental and social approach. These include, first, the environment encompassing, i) the Bank Group's Environmental Policy (PSDU February 2004); ii) the Environmental and Social Assessment Procedures for Public Sector Operations of the African Development Bank; and iii) Guidelines on the Integrated Assessment of Environmental and Social impacts. The second relates to involuntary displacements and deals with the Policy on Involuntary Displacement.

The applicable Togolese National Legislative Framework consists of: (i) Law No. 2008-005 of 30 May 2008: Outline Law on the Environment; (ii) Law No. 2008-009 of 19 June 2008 on the Forestry Code; (iii) the Mining Code instituted by Law No. 96-004/PR of 26 February 1996; (iv) the Hydrocarbons Code instituted by Law No. 99-003 of 24 February 1999; (v) Law No.2007-011 of 13 March 2007 on Decentralization and relating to decentralization and local liberties; (vi) the Land Tenure Law comprising Law No. 60 –26 of 05/08/1960 on the protection of landed property of Togolese citizens, as supplemented by Law No. 61–2 of 11/01/1961, and reinforced by Ordinance No.12 of 06/02/1974 which fixes the land tenure and State land regimes in Togo, is now considered the reference instrument on land issues.

The main national legal framework regarding ESIA is Decree No. 2006-058/PR of 5/07/2006 which specifies that any authorization or approval for the implementation of projects by a public authority is conditional upon prior possession of an environmental compliance certificate issued by the Minister for Environment.

The Togolese legal framework regarding expropriation for public purposes is governed by the decree of 1 September 1945 which highlights a procedure comprising the following stages: (i) declaration of public interest (ii) public inquiry on advantages and disadvantages; (iii) notice of expropriation showing the properties to be expropriated; (iv) publication of the notice; (v) amicable transfer or referral to the judge; (vi) disclosure of the rights of persons absent or opposed; (vii) expropriation judgment and fixing compensations; and (viii) payment of compensations to recipients; and (ix) possession of the property.

The participatory approach is institutionalized by Decree No. 018/MERF of 09/10/2006 and provides for on-the-spot consultation of documents relating to the project along with an information session on the project by the promoter, followed by discussions. Under this public consultation, the public inquiries and/or public hearings form part of the ESIA process.

### 3.3 Institutional and Administrative Framework

The key intervening institutions are the Ministry of Public Works and Transport (MTPT) and the Ministry of the Environment and Forest Resources (MERF). Through the General Directorate of Public Works (DGTP) in its capacity as Project Owner and its structure dedicated to Planning and Monitoring (DGPES), the MTPT is endowed with an Environment Unit (CE) which is responsible for preparing and implementing the Environmental and Social Management Plan. The duty of the Unit is to: (i) coordinate and monitor the environmental guidelines; (ii) centralize information on environmental and social issues related to road projects; and (iii) put construction companies in contact with the various departments capable of providing technical solutions to mitigate the environmental impacts.

MERF deals with all activities related to the Environment and Nature Conservation. Promotion and implementation are entrusted to the National Environment Management Agency (ANGE). As such, ANGE is charged with managing the conduct of environmental impact assessments, evaluating the ensuing reports and issuing environmental compliance certificate. Pending the adoption of the decree on ANGE organization and operation, the Directorate of Environment (DE) currently exercises jurisdiction over this issue.

## 4. Description of the Project Environment

### 4.1 Physical Environment

- (i) **Climate:** The project area has wet tropical climate. It is characterized by relatively low average temperatures (20 to 25°) all year round, but also by two dry seasons and two rainy seasons. The major rainy season runs from March to July and the minor rainy season from September to October. The relative humidity remains high throughout the year. Average annual rainfalls are 800 mm in Lomé and the rest of the coast. It should be noted that the high population pressure in Lower Togo (269 inh./km<sup>2</sup>) has led to massive destruction of the original vegetation cover, thus changing the environment into savannah with reduced rainfall.
- (ii) **Relief, Hydrology and Geology:** The offshore bar in the project area extends over about fifty kilometres and is between 1 and 3 km wide from West to East. This offshore bar separates the sea from Lake Togo (60 km<sup>2</sup> and shallow) which belongs to the interrupted lagoon system which extends from Keta in Ghana to Nigeria. It is connected by a narrow strip to Aného Lagoon and to Lake Zowla. During heavy floods, evacuation occurs seawards through a canal at Aného. The sedimentary coastal basins are composed of sandy clay alluvia with fine facies and coarser facies, slightly carbonated similar to that of present beach sands. The coastal aquifer is considered somewhat

contaminated by artificial fertilizers used by local market gardeners, and by household cesspools and septic tanks. The highly porous offshore bar accounts for this vulnerability of the area's ground water.

- (iii) **Coastal Sensitivity:** The low-lying and sandy Togolese coast is characterized by varied morphology around the port. Since 1983, it has suffered severe erosion following the construction of the deepwater seaport whose 1700m pier blocks the transit of sediments which, flowing from West to East, cause the changes in coastal morphology. The coastline is currently characterized by an erosion coast spanning over 30-km and an accretion coast of 10 km to the west from the harbour jetty. Current coastal dynamics is especially marked by a coastline receding by an average of about 5 m/year. The coastal sensitivity status is as follows: (i) from the port roundabout to Km 4, the rate of erosion is currently estimated at more than 10 metres per year, houses are 200 m from the coastline, and the project is 450m away; and (ii) beyond, the erosion segment is 5 to 10 m/year. The beach rock does not have much impact on the waves since it is in topographic continuity with the foreshore. Areas suitable for habitation are being lost to the waves.

## 4.2 Biological Environment

The only natural vegetation of the lagoon system and the offshore bar is some thickets; there are no longer any trees worthy of biological interest. The lagoon system was formerly rich in terrestrial fauna and had an ecosystem suitable for development of various kinds of forest mammals. Most of these species have since been wiped out through uncontrolled poaching and especially by the accelerated urbanization of Lomé City.

## 4.3 Human Environment

The project comprises a direct project impact area consisting of the right-of-way of the road to be rehabilitated proper, and an indirect project impact area consisting of the surrounding zones: the harbour area and Baguida Canton comprising the districts of Aflao Komè, Noudokopè, Sossoukopè and Avépozo. The socio-economic characteristics of this unit are as follows:

- (i) **Land Distribution and Population:** Apart from the harbour area whose population is represented mainly by businesses and employees of various companies and/or industries located in the area, the surrounding districts of the project area basically consist of renowned families (descendants of the founding fathers). However, there are also other families that have settled there due to urbanization. With the exception of the harbour area whose plots are classified as State property, the land in Baguida Canton is the property of ancestral families. The total population of the districts belonging to the project impact area (PIA) is estimated at 23 000. This population mostly comprises the following ethnic groups: Ewê (70.5%), Kabyè (13.6%), Fadagouma (5.1%), foreigners from ECOWAS (5%) and from outside ECOWAS (0.9%). At the territorial level, the project area belongs to the Maritime Administrative Region, sub-divided into six (6) prefectures and including Lomé City. This area hosts 44% of the country's total population, i.e. 2 342 000 inhabitants, with a high density of 384 inh./km<sup>2</sup>, against the national average of 94. Thus, the project will have an indirect effect on an estimated population of 2 342 000 inhabitants, 52% of whom women.

- (ii) **Socio-economic Activities:** the project area is mainly urban, with economic activities in its environs as well as administrative, health, socio-educational and religious structures. The harbour area covers over 80% of trade and is thus among the country's leading economic development poles. The port handles more than 4 million tons of goods yearly, 56% of which imports, 17% exports, and the rest to import/export transit traffic. It generates substantial revenue in the form of indirect activities related to the port industry. Furthermore, the used vehicle market draws thousands of buyers from countries in the sub-region. On average, 2 400 used vehicles are unloaded at Lomé Port. More than 70% are bound for countries in the sub-region.

In the districts around the project area, trade in various goods, services and fishing constitute the principal socio-economic activities. There are other ancillary activities, notably market gardening and the arts and crafts industry.

In the project area, a large number of women are engaged in informal trade and petty roadside businesses requiring no qualifications. Hence, many women are involved in the same activities, virtually saturating roadsides and generating very little income. Since these women lack substantial capital and face difficulties accessing credit, their low purchasing power prevents them from setting up on their own. There is no program supporting girls (for instance economic interest groups – IEGs) to set up business.

- (iii) **Habitat and Infrastructure:** The Lomé port area covers approximately 900 hectares. It has 8 berths (4 dedicated to goods, 2 in the container Terminal, 1 to hydrocarbons, and 1 to ores). This area also has major storage facilities comprising warehouses and back-up spaces, a used vehicle park and a parking area (Sahel Terminal) for vehicles bound for Sahel countries.

The districts surrounding the project area have mostly modern average-class permanent buildings. They are parcelled out and generally have a good level of urban and public amenities: (i) socio-economic: service stations, restaurants, businesses, financial services, abattoir; (ii) health: dispensary, health centre, private infirmaries, pharmacies; (iii) educational: schools, training centre; (iv) sports: stadia and various playgrounds; (v) tourist: hotels, restaurants; and (vi) religious (churches, temples, mosques).

The districts are connected to the electricity, drinking water supply and telephone networks. However, street lighting and drinking water distribution are a problem.

## 5. Project Alternatives

Originally, there were two project alternatives: A 2x3 carriageway with a vertical alignment and the second one, a 2x2 carriageway, each alignment having 2 roadway structures (a base course of bituminous sand-gravel mix or crusher-run aggregate) for the project sections. These alternatives are respectively referred to as "Alternative 1: Bituminous sand-gravel mix roadway" and "Alternative 2: Crusher-run aggregate roadway".

The option of a 2x3 carriageway with a vertical alignment and shoulders offers maximum capacity (5400 private vehicle units per hour – pvu/h), but very strongly impacts

surrounding buildings as it entails major demolition. Moreover, this option requires completely redoing the two overpasses (access to the port and access to the running gear of the cement factory) which presently have two two-way carriageways, replacing them with two bridges, each having 3 lanes and a shoulder. This will entail phasing the project, which would take long and generate much discomfort.

The option of a 2 x 2 carriageway with vertical alignment and shoulders was finally adopted. It offers a lower capacity (3600 pvu/h), and allows the desired traffic flow throughout the duration of the project. This option is simpler and more cost-effective compared to building 2 bridges (only splitting is required) with no traffic interruption on the existing bridges. In general, a 2x2 carriageway with a vertical alignment helps the project blend with the urban environment within the limits of urban alignments, thus avoiding the major demolitions of the first option. Compared to the first option, this one is more suitable and makes for less hazardous traffic. The completion time is shorter, so too the period of discomfort.

Lastly, it should be noted that this option is refined by dividing each shoulder into a cycle track and a kerb, 2m wide respectively. The provision of a cycle track enhances the road safety dimension of the design by separating the different types of road traffic.

## **6. Potential Impacts and Mitigative/Enhancement Measures**

### **6.1 Negative Impacts**

**6.1.1 Construction Phase:** The preparation phase is important for the installation of work camps and moving of machines. The first impacts on the physical and human environment occur during this phase, followed by those of the construction phase.

- (i) Disruption of activities: During the project preparation and implementation phases, some of the activities undertaken in the immediate vicinity of the project will be disturbed. There are buildings used mainly for commercial purposes; 304 managers of commercial activities, of which 101 women (33%), will be affected. Their activities will either cease or decrease, representing a loss of direct employment and income.
- (ii) Loss of business for women: The identified businesses are subdivided into four: (1) Petty trading: the most common are small-scale sale of victuals, rice, fruits and bread (lowest monthly income); (2) so-called medium-scale businesses; the most recurrent are sale of food, second-hand clothes and hairdressing – a sector where women are heavily represented (51 out of a total of 116, or 38% of the total); (3) for handicraft, the following has been identified: a concentration in the tailoring and hairdressing trades, general provisions, sale of cosmetics and management of phone shops. Women number 31 out of a total of 86, i.e. 36% of the total; (4) in major businesses, women are also found in the restaurant and bar sector, sale of gravel, cement and cooled or frozen foodstuff or even pharmaceuticals. Women number 32 out of a total of 55. They are also represented in the readymade clothes sector and are gradually making inroads into sectors hitherto reserved for men (e.g. transportation, bakery and pastry making). (5) There are 9 women out of 30 persons engaged in market gardening.

- (iii) Disruption of traffic and access: The works will disrupt vehicle and pedestrian traffic, with increased accident hazards due to: (i) movement of project machines and vehicles, and on diversions which will be congested or flooded during the rainy seasons; and (ii) roadside parking of vehicles, notably in the harbour area.
- (iv) Displacement of networks: The work will require the displacement of the certain electrical supply and telephone networks and water pipes, the destruction of two fences of a combined length of 350 m and the uprooting of almost 50 trees on the sides of the existing road. The crossing of a pipeline over a water table requires a box culvert protection by dividing the existing one to enable access to the hydrocarbons pipelines.
- (v) Noise: There will be fairly significant impacts during the works. Noise pollution from earthmoving, transport, stripping and asphaltting equipment will constitute a temporary and localized nuisance for local residents and especially for government offices, business, homes, hotels and restaurants.
- (vi) Deterioration of the living environment and health: the collection of household refuse around company accesses, in hotels, restaurants or bars and homes will be disrupted. The accumulation of wastes such as cut, fill, rubble and waste resulting from the works will constitute a further nuisance for the population. The works will generate relatively significant quantities of fine dust on and around the construction site. This dust could generate respiratory disease risks for local residents.
- (vii) Soil erosion: the exploitation of existing borrow zones may increase soil erosion. The non- restoration of borrow sites is likely to foster stagnation of unclean water and proliferation of disease vectors such as mosquitoes.
- (viii) Pollution: the installation of mixing plants also entails risks of air pollution through dust and emissions from combustion. The construction camps may generate pollution through wastewater or poor waste management.

### 6.1.2 *Operational Phase*

- a) Biological Environment: As project works concern only the existing road which is already integrated in its natural environment, the project will not affect natural habitats, fauna and flora. The project has no negative impacts on the natural reserves, biosphere reserves or sensitive or protected areas. No additional degradation of the quality of abiotic environments (air, water, soil) during the operation of the rehabilitated and redeveloped road is envisaged. The project does not affect any archaeological, cultural or religious site.
- b) Human environment: the negative impacts of the project during the operational phase remain insignificant. There will however be adverse effects for the local residents limited to pollution due to gradually increasing traffic and accident hazards for pedestrians (longer road crossing).

- (i) Noise pollution: in the operational phase, the reference speed of the road will be 60 km/h for a design speed of 50km/h. Its traffic will increase constantly. The sound nuisances will be exacerbated by the combined effect of more vehicles using this road and the greater proximity of immediate neighbours.
- (ii) Population and social life: the period of adaptation to the operation of the new road will affect certain pedestrian traffic uses. The local residents will be more exposed to traffic accident hazards due to the width of the road and the flow and increase of traffic, hence the need for a sensitization campaign.
- (iii) Economic activities and habitat: during the operational phase of the rehabilitated road, accessibility will be limited for certain businesses, especially those which formerly used the project easement as a parking area for their customers or suppliers, as well as for motorcycles and city taxis. Parking areas will be provided to attenuate this constraint.

## 6.2 Mitigative/Enhancement Measures

### 6.2.1 Compensation for Vacating the Right-of-way

- (i) Acquisition of parcels and displacement: a total amount of **CFAF 298.6 million** has been reserved as compensation for expropriation and for loss of income.
- (ii) Construction of the market in Baguida Canton: this measure will help accommodate nearly 250 persons among the poorest affected by the project, giving priority to women who have lost their businesses. At least 100 stalls and shops will be reserved for them therein.
- (iii) Displacement of electrical/telephone networks and water pipelines will be necessary. This is included in the project and is the subject of a separate section in the **EIA**.

### 6.2.2 Mitigative Measures during the Construction Phase

The key mitigative measures, centred on the organization of work and equipment of the construction camps as recommended in the contractor's specifications to mitigate the overall nuisance generated by the project works, are as follows:

- (i) **Worksite layout**: the sites will be set up in places with open enclaves whose access will have been facilitated, not used for agricultural, archaeological or religious purposes. The construction companies will ensure that their camps are set up away from wells and streams to avoid any risk of pollution of water resources; no deposit of material which may release polluting substances will be authorized within the safety perimeter. Accesses will be guarded to limit interaction between the construction sites and the outside environment. The work hours will be modulated to limit disturbance of local residents. The speed of heavy equipment will be limited on the worksites and construction sites located on the public highway.

- (ii) Traffic Plan and Diversions: a heavy equipment traffic plan will be prepared to allow greatest mobility and accessibility of local residents. It will have to be fluid according to the planned phasing of works. This plan will be reinforced by the installation of information and traffic signs. The operating areas will be clearly marked out.
- (iii) Installation of lubricant and fuel deposits: the storage units of bituminous materials will be either surface tanks or barrels placed in suitable confined areas to avoid any discharge or leakage of the tank and minimize fire hazards. Equipment for cleaning of any discharge will be envisaged. Such equipment will be kept in good working condition.
- (iv) Containment of flammable and hazardous substances: the storage sections for flammable products (bitumen, lubricants and various petrochemical by-products) must have appropriate emergency equipment in good working condition. The oxygen, propane and acetylene intended for welding operations will be stored in a place intended for this purpose, enclosed and protected from any possibility of an accident with a vehicle. Waste oils will be collected in tanks or barrels for recycling and conveyed away from the site under conditions imposed by the Directorate of Environment (DE).
- (v) Soil contaminated by fuels and lubricants: a special area will be reserved for any treatment of soil contaminated by petroleum products. It will be excavated and placed in tight confinement vats and decontaminated using solvents. The treated soils will be evacuated to authorized dumps.
- (vi) Felling of trees and quickset hedges: the felling of 50 trees of no special ecological value along the existing road requires prior authorization from the DE. The wood cut will obligatorily be put up for sale. Compensatory planting and sowing will be carried out within the project easement (after completion) as part of measures aimed at embellishing urban space. This action will help avoid erosion on temporarily bared surfaces. There are plans to replant **500** (five hundred) trees along the project layout.
- (vii) Earthmoving: borrow sites (quarries) or those intended for surplus deposits will be selected so as not to generate landscape impacts or present risks. The sites will be restored upon completion of works.
- (viii) Dust emission: to reduce dust emission from heavy equipment traffic and the transportation of materials, the project officials will water tracks adjacent to the inhabited zones. The provisional fill or cut deposits might also require humidification.
- (ix) Liquid discharges, water pollution risks and solid discharges: depending on the design of the sub-projects, effluents from the installations will be collected and evacuated according to their composition: in tight septic tanks or mobile collection systems. Water from washing and maintenance of equipment should undergo a water-oil separation treatment, the water will be evacuated to the septic tanks and bitumen and oil residues will be collected, recycled or

destroyed. Any disposal of oily and petroleum products (by the equipment) will be well thought-out to prevent them flowing on the ground and into rivers. Solid waste from the construction sites will be conveyed to authorized dumps and for possible selection and recycling notably for wood, metals and organic matter (turned into compost).

- (x) Construction of the two dry support bridges and pipeline protection structure: traffic will need to be maintained while all the civil engineering works continue at the three overpass construction sites. Furthermore, water draining from the concrete manufacture zone will be collected in sedimentation basins with no outlets, the suspended matter accumulated in the basins will be collected and the dry residues placed in a controlled or authorized dump.
- (xi) Erosion hazards and assessment of soil stability: soil stability trends will be monitored by contractors mainly for the placement of approach ramps to the bridges; it will consist in identifying the zones of their work sites that are vulnerable to erosion during and after construction. Drainage facilities will be positioned and physical methods of slope stabilization will be applied (piers, gabion or dwarf walls, etc).

### 6.3 Positive Impacts

The road improvements will enable better structured and more fluid motor vehicle traffic and cheaper travel, thus improving the road safety status, given the separation of motorbikes from heavy vehicles and light vehicles. The expected benefits are mainly:

- (i) Shorter travel time: due to the state of congestion of the present road between Lomé port and the Beninese border (53km), the distance cannot be covered in less than 3 hours, or approximately 17 km/h on average. The construction of the 2x2 carriageway with cycle tracks will enable mean travel speeds of around 40km/h for light vehicles and 30km/h for heavy trucks.
- (ii) Lower accident rates : due to a better structured traffic, separating motorcycle traffic from that of heavy vehicles and faster light vehicles.
- (iii) Facilitation of access to health and education establishments and government departments: access to administrative, economic, educational, health and tourist centres will be facilitated and improved, in terms of travel time and comfort. Intra- and inter-regional trade, notably between Lomé and Cotonou, will also improve.
- (iv) Job creation: in the construction, operation and subsequently maintenance phases, the number of jobs and required qualifications will be fixed by contractors and their sub-contractors according to their needs. Considering that construction for this type of project requires on average between 30 and 40 jobs per kilometre, the job openings should hover around 350, or about 1000 throughout the construction period. Nearly 60 sustainable jobs are envisaged in the operational phase. The local residents constitute potential labour, notably as guards, alternate traffic controllers, and when necessary, manual earthmoving or weeding. There will be recruitment of several

intermediate and senior personnel, among whom may be mentioned supervisors (engineers), team leaders (senior technicians) and topographers (senior technicians).

- (v) Facilitation of access and travel: the project will benefit the local residents as well as those from Lomé, notably the vulnerable groups (women, children and the elderly) by facilitating their daily trips to urban centres, health centres and socio-educational establishments. It will also benefit workers, various business operators and traders who use the project route daily. Accordingly, there are plans to build a market and its access road at Baguida, and repair the public primary school at Avapézo
- (vi) Better environmental integration: the improvement of the hydrology and stormwater drainage structures will help control soil erosion, thus protecting water resources, raising dwellings along the road flooding waters and sustaining the road itself. The environmental measures on slopes (plants) will seek to improve aesthetics and curb noise and light nuisances.
- (vii) Development of socio-economic activities : with project workers moving into Lomé City or Baguida Canton, demand for low-cost, middle-class and high-class housing will increase, raising rental income as a result. Such housing demand could encourage house owners to improve the state of their property. That should have a positive impact on the living environment. During construction, the project area population will be swollen by company personnel as well as people coming for business activities. The authority of district Heads will be enhanced during the construction phase through their involvement in the commitments made by various stakeholders (promoter, contractor and the population) and will be a guarantee of social cohesion. Furthermore, a temporary influx of workers to the project site will increase the consumption of several basic commodities such as fuel and foodstuff , therefore fetching larger income for managers of such business activities.

## **7. Climate Change and Environmental Hazard Management**

### **7.1 Temporary Risks for Local Residents**

The implementation of the project will generate temporary nuisance to local residents (discomfort, noise, vibration, air pollution) due to the movement of machines and transportation of materials. Such deterioration of the air quality should have no public health impact. The works will cause slow traffic, disruptions, stops and deviations only temporarily, but entail increased accident hazards.

### **7.2 Project Risks**

There will be risk of percolation of polluting substances into the ditches (or river) and/or ground water following accidental spillages of waste oils and fuels or streaming of stored materials. In certain sectors, there could be increased pressure on the water reserves intended for the needs of the population and market gardeners due to water extraction. However, work will affect six wells.

### **7.3 Climate Change**

The project will not contribute significantly to climate change. The road will enable better traffic flow and with the urban speed limits regulated at 60km/h, CO<sub>2</sub> emissions will be reduced. This stabilized speed limit will permit the operation of vehicles at optimum consumption levels for best energy efficiency, resulting in minimum emissions on the new road compared to the no-project situation where CO<sub>2</sub> emissions are concentrated at the points of congestion and exacerbated by frequent stop-and-start. Thus, greenhouse gas emissions will drop.

Furthermore, the planting of 500 trees along the project easement will help absorb CO<sub>2</sub> emissions.

## **8. Environmental and Social Monitoring Programme**

According to the Togolese institutional arrangements, responsibility for monitoring project outputs will be organized and overseen by the MTPT which will centralize the observations made by the other ministries and project stakeholders (MERF, DE, etc). The MTPT, through the DGTP environment unit, will carry out the regular monitoring of outputs until works acceptance.

The contracting authority will be responsible for taking into account the environmental and social component of the project and will be empowered accordingly. On its initiative, the work performance contract will set out penalties applicable to contractors for non-compliance with special technical specifications of an environmental and social nature. The works supervision and environmental monitoring program will form an integral part of the environmental and social reports prepared by the consulting firms charged with conducting the implementation studies on behalf of the contractor. The latter will refer to the environmental assessments to mitigate or offset the risks faced by the physical, natural and human environments. During annual Bank supervision missions, the quality of project environmental and social monitoring will be assessed.

The general worksite measures are contained in the contractor's specifications. Soil and water conservation and protection measures, and those relating to human perceptions (diversion, noise reduction, work schedules, watering...), are included in the project costs.

Measures concerning sensitization of the population on: (i) rules to be observed to keep them far from the work area of project machines and equipment during mechanized works, (ii) transport-related pollution issues, (iii) issues of road safety and compliance with the highway code, (iv) the call to good citizenship to avoid connecting waste water to the rain water drainage system, will require a budget evaluated at CFAF 15 million.

The other costs related to environmental measures included in the project stand at CFAF 147.432 million, detailed as follows:

Construction of hard shoulders and car parks using interlocking paving stones	34 510 000
Widening of the protective box culvert of pipeline crossings (oil refinery)	8 250 000
Pedestrian crossing markers	4 672 000
Planting of 500 <i>Khaya Senegalensis</i> trees	25 000 000
Provision for companies under contract to displace networks and laying of sleeves	75 000 000
Total in CFAF	147 432 000

## 9. Public Consultation and Public Disclosure

In accordance with Togolese laws and provisions in force for Category 1 projects, the ESIA was conducted on the principle of public consultation, based on field visits, exploration of background documents, discussions with the technical departments, economic operators, socio-professional groups, local residents, the administrative and traditional authorities and district heads.

During the meetings organized, the contents of the project and its economic, social, cultural and environmental implications were presented to the people consulted. In addition, information was collected on surrounding districts. The consulted people suggest the use of local labour for the execution of secondary tasks. They also recommend that the project provide solutions to the problems of road degradation, drainage and road safety.

During the head count, persons affected were consulted. The talks enabled them to be involved beyond mere information gathering and to express, among other things, their fears and expectations with regard to displacement. Through public participation in the public inquiry on project advantages and disadvantages, complaints will be expressed and this will foster transparency and equity during the compensation process. It will also encourage those affected to take charge of their displacement.

Various means of communication will be used to properly inform persons affected by the project, including the provision of information boards, the use of posters and radio broadcasts in local languages.

## 10. Additional Initiatives

According to the Togolese Environment Code, the current Directorate of Environment (DE) will be directly involved in project environmental monitoring. Its action will fall more particularly within the framework of its institutional prerogatives, namely control of nuisance and the risk of pollution (management of any risk of pollution, liquid effluents, solid wastes including bitumen, etc.). The DE will manage the forestry aspects (tree felling and planting), erosion hazards and soil moisture conservation.

Section 6.3 deals with compensation for expropriation as well as compensation for loss of income for those affected by the spatial occupation of the right-of-way. The Government has therefore prepared a Compensation and Resettlement Plan (CRP) to facilitate compensation of people and property affected by the project, knowing that almost none are buildings used for residential purposes. The objectives of this plan are four-fold: (i) as much as possible minimize involuntary resettlement and acquisition of land by studying viable project design alternatives; (ii) participation of affected persons in all the important

stages marking the preparation and implementation of the compensation process, (iii) support efforts by affected persons to improve their livelihood and standard of living, or restore them to their pre-project levels, whichever is more advantageous, (iv) ensure that compensation operations are conceived and conducted as sustainable development programs providing sufficient investment resources so that those affected by the project should have the opportunity to enjoy its benefits.

This action plan includes compensation for losses. For loss of commercial buildings, those concerned have proposed financial compensation. For surrounding walls, compensation is in kind through reconstruction. Compensation for temporary loss of income will be in cash for all managers of businesses which are subdivided into four categories, namely: small businesses for a monthly income of up to CFAF 50 000, medium businesses for income ranging between CFAF 50 000 and 150 000, large businesses for income ranging between CFAF 150 000 and 300 000 and very large businesses for income of over CFAF 300 000. The compensations are calculated as income to cover a period of 4 months. Besides commercial activities, there is compensation for agricultural activities of market gardeners at the rate of CFAF 100 000. The total cost of compensation stands at CFAF 298 680 000. Provision has been made to cover the operation and equipping of the committee, in addition to conducting an external audit. The tentative budget allocated for the execution of the Compensation and Resettlement Plan is presented as Appendix 2:

**The baseline data of the CRP are:**

1	Number of affected persons who are rightful claimants	430 (150 women)
2	Number of households having lost a structure	304 (101 women)
3	Number of households having lost crops	30 (9 women)
4	Permanent loss of cultivable areas (in ha)	2 ha
5	Number of houses completely destroyed	0
6	Total number of fruit trees destroyed	0
7	Number of electric poles to be displaced	120
8	Number of telephone poles to be displaced	173
9	Number of wells to be displaced	8
10	Number of fences to be rebuilt	2 totalling 350 m
11	Number of supply systems to be displaced	NA

According to this plan, a monitoring committee (MC) and a CRP implementation committee (CPIR) will be set up. The MC is made up of representatives of MTPT (2), MERF (2), MEF (1), and Special Delegation of Aného *Commune* (1). The CPIR comes under the supervision of the DGTP (delegate contracting authority). It comprises representatives of the DGTP (2 representatives), DE (1), General Directorate of Taxation (1), and General Directorate of the Treasury and Public Accounting (1).

The CPIR will be supported by external service providers such as land and real estate experts, lawyers, bailiffs, traditional rulers and district heads, local authorities and the police force. The Togolese Government is entirely responsible for implementing the CRP. The funds intended for the expenditure come from the General State Budget. It will be evaluated by an external body at the end of the project in the form of an Audit.

This compensation plan has been designed to prevent anyone from losing livelihood due to this project. Monitoring reports will confirm that the compensations were duly paid.

## **11. Conclusion**

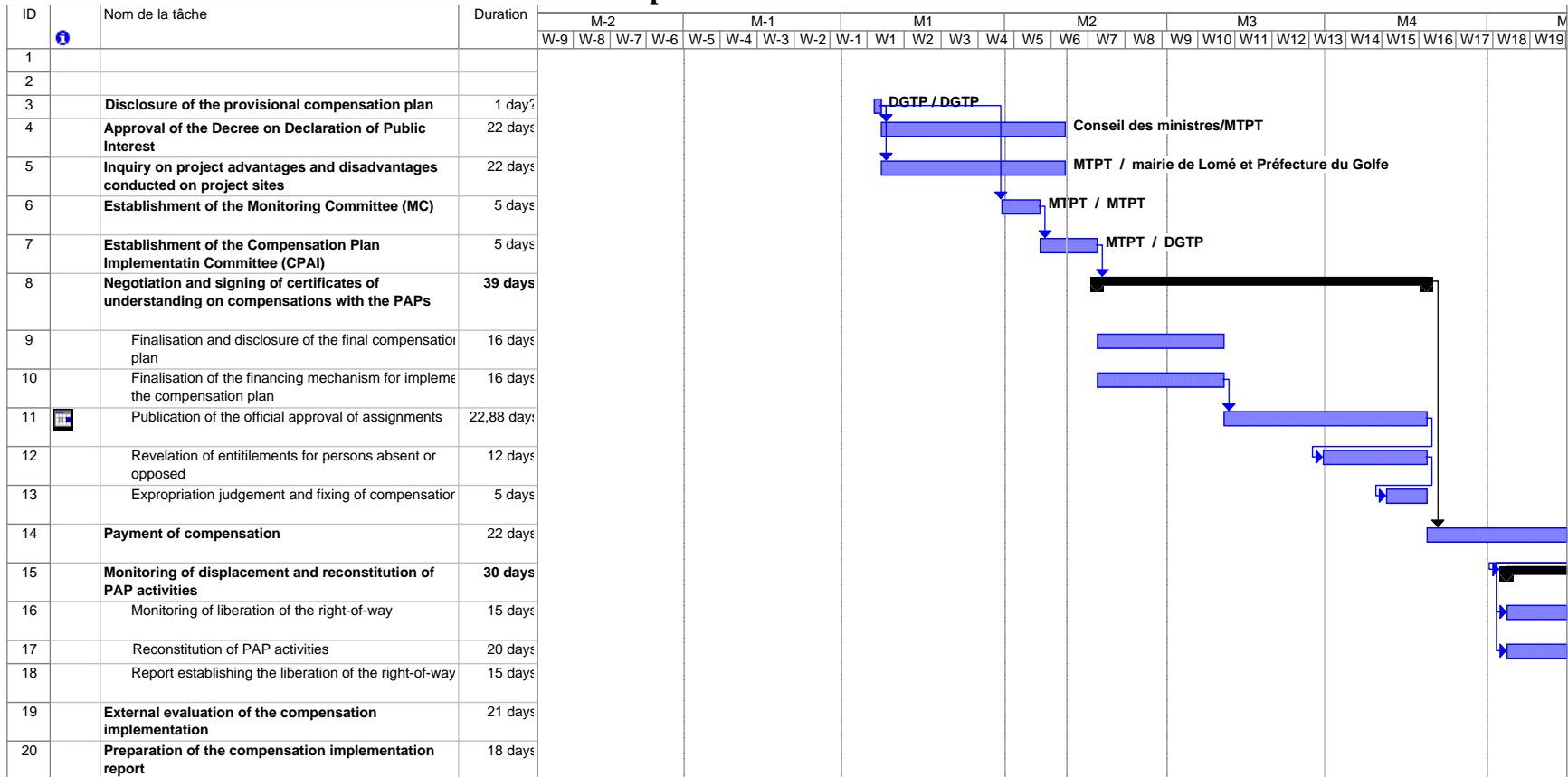
Taking into account the impacts and measures identified, this project is deemed acceptable on the environmental and social level. There is provision for compensation of the 430 persons concerned. The public consultations organized made it possible to draw up the detailed list of these persons with precise information (names, addresses, income, value of affected structure, etc...). The impacts fall within the State's ambit. The key issues arising from the analysis and the environmental assessment have been addressed and appropriate measures likely to offset or mitigate identified impacts are provided. The earthworks under this project will be very limited and their impact on vegetation cover is minor. The expected positive economic, social and security impacts are significant in terms of creation of direct and indirect jobs. The project has been granted the environmental compliance certificate by the Ministry of the Environment and Forest Resources. The payment of the compensations to affected people is a conditionality for the first disbursement of the Bank's grant to Togo.

## **References and Contacts**

The Environment-related documents forwarded by the Ministry of Public Works and Transport are:

- (i) Final version of the ESIA in May 2009;
- (ii) Compensation Action Plan, May 2009;
- (iii) Detailed Headcount, March 2009;
- (iv) Public Consultation Report, March 2009;
- (v) Environmental Compliance Certificate, May 2009.

### Compensation Process Timeline



**Details of the compensations taken into account in the Compensation and Resettlement Plan**

Description	Unit	Number	Unit cost in CFAF	Amount in CFAF
<b>Owners of commercial buildings</b>				
Compensation for loss of building		<b>304</b>	Based on surface area	<b>103 600 000</b>
<b>Business Managers</b>				
<b>Small businesses</b>				
Compensation for loss of income *	u	143	30 000	17 160 000
<b>Medium businesses</b>				
Compensation for loss of income *	u	116	65 000	30 160 000
<b>Large businesses</b>				
Compensation for loss of income *	u	86	190 000	65 360 000
<b>Very large businesses</b>				
Compensation for loss of income *	u	55	320 000	70 400 000
<b>Market- gardeners</b>				
Compensation for loss of income *	u	30	100 000	12 000 000
<b>Sub- total compensation for loss of income</b>		430		<b>195 080 000</b>
<b>Total of compensations (loss of buildings and income)</b>				<b>298 680 000</b>

\* Compensations for loss of income cover 4 months.