SUMMARY ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT OF THE MABANDA-MUGINA (BURUNDI) AND RUBAVU – GISIZA (RWANDA) ROAD DEVELOPMENT PROJECT

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SUMMARY ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

Project Name: Mugina-Mabanda (Burundi) and Rubavu-Gisiza (Rwanda) Road Development and Asphalting Project
Project No.: P-Z1-DB0-073
Country: Multinational (Burundi and Rwanda)
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1. Introduction
This document is the summary of the Environmental and Social Impact Assessment (ESIA) of the Mugina-Mabanda (Burundi) and Rubavu-Gisiza (Rwanda) Multinational Road Development and Asphalting Project. The summary was prepared in accordance with the African Development Bank (AfDB) environmental and social impact assessment guidelines and procedures for Category 1 projects. The project was categorized on the basis of the cumulated environmental and social impacts of the two roads. However, in an effort to comply with the procedures of the two countries, a separate environmental and social impact assessment was carried out in each country. This summary is a synthesis of the two assessments.

The project description and justification are presented first, followed by the legal and institutional frameworks of Burundi and Rwanda. A brief description of the main environmental conditions of the project area is presented for each country through its physiological, biological and human components. The variants and alternatives are compared in terms of technical, economic, environmental and social feasibility, including the concerns of the populations. Then the most significant positive and negative impacts on the biophysical and human (socioeconomic) environment are outlined. This is followed by the presentation of enhancement and mitigation measures proposed to boost the benefits and/or prevent, minimize, mitigate or offset the negative impacts, and as well as the monitoring programme. The public consultations that were held and the project-related complementary initiatives are presented.

2. Project Description and Justification
The development of the Mugina (Burundi-Tanzania border)-Bujumbura-Rubavu (Rwanda-DRC border) multinational highway, of which the Rubavu-Gisiza (Rwanda) and Mabanda-Mugina (Burundi) road sections form an integral part, is essential for expanding markets beyond national borders and promoting an enabling environment for private sector and tourism development and, more generally, for foreign investment. Besides stimulating trade and strengthening regional integration, the project will also contribute to poverty reduction among the local populations of both countries through improved access to markets and basic socio-economic infrastructure. The project area covers Makamba Province in Burundi and West Province in Rwanda, with an estimated population of 430,000 inhabitants and 706,000 inhabitants respectively.

This multinational project will help strengthen regional integration and stimulate international trade among Tanzania, Burundi, Rwanda and the DRC. The specific objectives are to: (i) improve service and goods transportation conditions in the south-western region of Burundi and western Rwanda by providing a perennial link, as well as safe and fluid traffic conditions; and (ii) improve the living conditions of the populations of the project area by facilitating access to basic socioeconomic services and infrastructure.

The project consists of the following components:
A. Road Works:
(i) Development and asphalting of 20 km of road between Mabanda and Mugina (in Burundi) and development and asphalting of 47.9 km of road between Rubavu (former Gisenyi) and Gisiza (in Rwanda);
(ii) Works control and supervision; and
(iii) Sensitization of the population on STIs/AIDS, environmental protection and road safety in the project area.

B. Related Works
• In Burundi: (i) development of feeder roads; (ii) development of a bypass and access road to Mabanda market and to the Chief Town of the Municipality; (iii) development of parking space for heavy-duty vehicles at Mabanda and stopping areas; (iv) rehabilitation of the health centre in Musenyi, a peace village inhabited mostly by returnee families from Tanzania; (v) development of the Musenyi rural market; (vi) supply of small agricultural implements and post-harvest processing equipment; and (vii) control and supervision of related development works.

• In Rwanda: (i) development of feeder roads (Rubavu District: 23.5 km and Rutsiro District: 72.5 km); (ii) fencing of schools (Kanyabihombo: 500 linear metres (lm), Gisunzu I & II: 720 lm, and Gisiza: 460 lm); (iii) rehabilitation of the Nyamyumba Sector Market, Rubavu District; (iv) development of four docks for fishermen and fish-drying areas and access roads to these areas; (v) supply of small equipment to Rubavu and Rutsiro Districts for the maintenance of feeder roads; and (vi) control and supervision of related development works.

C. Road Studies and Transport Facilitation Initiatives
• In Burundi: (i) construction of a single border control post (SBCP) with Tanzania; (ii) provision of equipment for the operation of the SBCP; and (iii) study on transport and trade facilitation along the corridor.

• In Rwanda (i) Road Studies; and (ii) detailed economic and technical studies on the Lake Kivu transport project, including the development of the Rubavu, Karongi and Rusizi ports.

3. Political, Legal and Administrative Framework

3.1 For Burundi
In Burundi, several Ministries are involved in environmental management, but the Ministry of Water, the Environment, Territorial Development and Urban Planning (MEEATU) is responsible for regulation and policy, according to Decree No. 100/186 of December 2002. Environmental management is governed by legal instruments, in particular:

• Decree No. 1/010 of 30 June 2000 relating to the Environmental Code of Burundi. Article 1 of this Decree defines basic rules for environmental management and protection against all forms of degradation, so as to safeguard and promote the rational use of natural resources, combat various forms of pollution and nuisances, and thereby improve the living conditions of human beings, while respecting the balance of ecosystems. Article 34 stipulates that: “…the construction of public structures or infrastructure such as roads, dams, dikes, bridges and airports shall be subject to the impact assessment procedure. Such structures shall be designed and built in such manner as not to irreversibly damage the environment, or cause or aggravate erosion problems”.

• **The Land Code**: Decree No. 1/008 of 1 September 1986 instituting the Land Code aims to establish the rules or rights that are recognized or may be recognized in respect of all lands within the national territory, and all that is appurtenant thereto and incorporated therein, whether naturally or artificially;

• **Decree No. 1/6 of 3 March 1980 relating to the establishment of National Parks and Nature Reserves** sets out legal provisions applicable to protected areas, particularly as regards the prohibition of their sale and lease, special plant and wildlife conservation measures, the prohibition of population settlements close to national parks and nature reserves, and visits into protected areas;

• **Other laws and decrees**: (i) Decree No. 1/16 of 17 May 1982 to institute the Public Health Code; (ii) Law No. 1/6 of 25 May 1983 relating to the protection of the national cultural heritage; (iii) Decree No. 100/24 of 31 December 1992 to regulate the disposal of wastewater from domestic, artisanal, industrial or agricultural sources in order to preserve the quality of the environment and ensure public hygiene and sanitation; (iv) Legislative Decree No. 1/033 of 30 June 1993 relating to plant protection.

### 3.2 For Rwanda

One of the pillars of Rwanda Vision 2020 is environmental protection and management. As in Burundi, at the institutional level, several Ministries are involved in environmental management. The Ministry of Natural Resources (MINIRENA) is responsible for coordinating and managing the environment. The Rwanda Environment Agency (REMA), under the supervisory authority of MINIRENA, is responsible for implementing the country's environmental policy.

The 2003 Environmental Policy stipulates the need to conduct environmental impact assessments for development projects. The legal framework of this assessment focuses on the 2005 organic law defining the overall legal framework regulating environmental protection and management in Rwanda. In addition to the general provisions, the law relating to the natural and human environment defines the obligations of the State and local councils, the involvement of the population, the control, monitoring and inspection, as well as punitive provisions. This law is underpinned by a series of decrees and other laws: (i) Decree of 18 December 1930 relating to the felling of trees and the sale of wood; (ii) Law No. 47/1988 of 5 December 1988 defining the organization of forestry; (iii) Decree of 6 May 1952 defining the conditions for using underground water, lakes and rivers; and (iii) Law No. 11/82 of 30 March 1982 relating to land protection, conservation and use.

As regards the Ministry of Natural Resources (MINIRENA), the following should be noted: (i) Ministerial Decree No. 003/2008 of 15 August 2008 on the requirements and procedures for environmental impact assessment; (ii) Ministerial Decree No. 004/2008 of 15 August 2008 establishing the list of works, activities and projects subject to environmental impact assessment; (iii) Ministerial Decree No. 005/2008 of 15 August 2008 defining the terms and conditions for inspecting activities or companies that pollute the environment; and (iv) Ministerial Decree No. 007/2008 of 15 August 2008 listing protected animal and plant species.

In addition to the above-mentioned instruments, the following could be mentioned: (i) the Labour Law (2001) which covers health and safety at work and provides for staff training; (ii) Presidential Decree No. 54/01 of 12/10/2006 to determine the composition, responsibilities and functioning of the Land Commission; (iii) Law No. 18/2007 of 19 April 2007 relating to expropriation in the public interest.
The Rwanda Environmental Management Authority (REMA) is mandated by the regulations to organize and approve environmental impact assessment studies and the ESIA-recommended environmental monitoring programme.

3.3 International Conventions
Both countries are signatories to most international and regional conventions on environmental protection, prominent among which are: (i) the Convention concerning the Protection of World Cultural and Natural Heritage (1979); (ii) the Ramsar Convention on Wetlands of International Importance (1992); (iii) the Framework Convention on Climate Change (1994); (iv) International and regional conventions, including the Nile Basin Initiative (NBI) which covers the project area.

3.4 The African Development Bank (AfDB)

4. Description of the Project Environment

4.1 Biophysical Environment

4.1.1 In Burundi
Climate: The road passage area has low annual rainfall, compared to the rest of Burundi. The rainfall map shows that the project area is entirely between isohyets 1,000 mm and 1,500 mm. In the Imbo plains, the mean temperatures are above 23°C. At the summit of the mountain ridge, temperatures average 14°C.

Geology: Burundi is a large Precambrian geosyncline with an accumulation of thick layers of sediments. It has two main chains: (i) the Lubendian-Ruzizian chain; and (ii) the Kibaran-Burundian-Karagwe-Ankolean chain. The land is highly metamorphosed, consisting of four assemblies which, from the most recent to the most ancient, comprise: the Malagarasian, the Burundian, the Ruszizian and the base complex. From this perspective, the road under study crosses the lower Burundian which comprises the Mirwa area to the east of Rumonge and the Mabanda region.

Soils: Buragane soils are known to be fertile, but prolonged cultivation has decreased their fertility. The dominant soils are orthotype ferralsols which are generally of low agricultural value. The area also has outcrops, mineral soils and lithosols with which the ridges are capped. These ridges are generally used for pasture and forestry development. The Mabanda region has heavy clay and sandy clay soils.

Hydrography and Water Resources: In the southern part of the country, the tributaries of the Malagarazi, which itself flows into Lake Tanganyika, are Rivers Rukoziri, Mutsindozi, Musasa and Rumpungwe. These rivers tumble down the slopes of Mirwa, carving out their beds in very deep valleys. Their flows are modest in low-flow periods, but extremely high during floods. These rivers differ from torrents in size and in that they flow continuously, but their regime is classified as torrential because of the frequency and severity of their floods.
Plants and Wildlife: In Makamba Province, the Kumoso depression is covered by sparsely wooded forest in the Zambezian region. Following the occupation of this area, the forest was destroyed to make way for crops, which gave rise to wooded savannah comprising *Hyparrhenia* and *Pteridium aquilinum*. In Makamba, it is not uncommon to come across a colony of primates such as *Papio Anubis* (baboons) and *Cercopithecus aethiops*. All over the area, people report the existence of *Lepus crawshayi* which are very abundant in the low grasslands, containing *Eragrostis* and *Canis adustis* tree varieties frequently found in reforested areas. The areas bordering the road are planted with *Eucalyptus* and *Pinus* plantations, interspersed with crops, especially banana trees and scattered settlements, and sometimes even small centres. The immediate borders of the road are lined with big trees, some aged more than 40 years. Mabanda region is home to many species of mammals, including the bush pig, the common duiker and the bushbuck. It has also wild bird species and reptiles. As regards arthropods, the protected landscape area contains many termite mounds and termites.

4.1.2 In Rwanda

Climate: The Gisenyi-Gisiza road passage area, like the rest of the country, enjoys the temperate equatorial climate due to its altitude. Mean temperatures stand at 20°C towards the borders of Lake Kivu (Gisenyi) and 15°C in altitude towards Gisiza. In the Kivu area, the annual average rainfall reaches 1,800 mm. Towards Gisiza, it drops to 1,500 mm, but the rains are torrential in nature on account of the altitude.

Geology: The geological formations along the road may be classified under the lithological group, which differs in terms of the mineralogical composition and facies. The geological formations from the oldest to the most recent are as follows: (i) Precambrian rocks represented by various formations: the Butare complex made up of metasediments, gneiss and granite; the Gikoro Pindura, Cyohoha and Rugezi groups; (ii) The tertiary cover represented by volcanic rocks of mainly alkaline and basalt composition over large areas covering the Precambrian rocks; and (iii) Intrusive rocks in the form of undifferentiated pegmatitic or isolated granite.

Soils: The West Province has rich shallow soils from volcanic rocks and lava decomposition. The North-West Province has deep soils, but these are poor, very often acidic, sandy-clay and highly eroded. Torrential rains and the relief exacerbate soil erosion.

Hydrography: The hydrography of the project area is marked by the presence of the Congo Basin and Lake Kivu. The Congo Basin represents 15% of the total area of Rwanda, while Lake Kivu is one of the largest in Africa with an area of 2,650 km², located between Rwanda and Congo. In Rubavu District, River Sebeya is one of the major rivers emptying into Lake Kivu, and, in view of the altitude, allows for the generation of hydroelectric power. River Mpfunda, a tributary of the Sebeya, stagnates in the low-lying areas over a distance of about 15 km.

Plants and Wildlife: In Rustiro district, Mukura and Gishwati forests are an important ecological heritage with a multitude of species, prominent among which are: the Dombeya Gortzeneri (umukore), Entandrophragma excersum (Umuyove), Prodocarpus (Umufu), Catrapa gradiflora (Umushwati), Sumphania globulifera (Umushishi), Alanginus (Umuava), Lancelata (Umuhanga), Polycias fulva (Umwungo), and the Eucalyptus. The proposed road does not affect these forests. On the other hand, the project area is very poor in wildlife. As a result of forest degradation, wildlife has gradually disappeared, giving way to certain reptiles, amphibians and birds. In low-lying areas, existing wildlife species consist of monkeys (including baboons), elephants and jackals.
4.1.3 Human Environment

In Burundi: Administratively, the project area (PA) is included in Makamba Province, and more specifically in Mabanda Municipality. Its population was estimated at 430,899 inhabitants in 2008, or nearly 5.3% of the total population of Burundi. About 30% of the population of the PA is affected by monetary poverty, which exceeds the national average of 25%. The PA has an average population density of 220 inhabitants/km², lower than the national average of 310 inhab./km². Approximately 58.7% of the PA population is under 15 years. The economy of the PA is mainly based on agriculture, which employs 94% of the population. The main food crops are banana, cassava, rice, potatoes and beans, as well as fruits (pineapples, mangoes, oranges, tangerine, etc.). The major cash crops are coffee, cotton and oil palm. Tourism is an untapped potential, which could be promoted by the project.

In Rwanda: The West Province, which is the project area (PA), covers the entire western part of Rwanda. It is bounded to the West by the DRC, to the South by Burundi, to the North by the North Province, and to the East by the South Province. It covers an area of 4,560 km² (20% of the Rwandan territory) and is home to a population of two million inhabitants, or 24% of Rwanda’s total population. Of the seven districts that make up this Province, only two (Rubavu and Rutsiro) are directly affected by the proposed road. The population of the area directly impacted by the project was estimated in 2010 at 706,000 inhabitants. In Rubavu District, 17% of the population is under 20, while the proportion is nearly 56% in Rutshuru. Women make up about 53% of the total population in both Districts. About 62% of the population of the project area lives below the poverty line, with agriculture, livestock and fisheries being the main sources of income. The economy of the area is primarily based on subsistence agriculture and the cultivation of cash crops, mainly tea and coffee. Farms are generally not more than 1 hectare, and their management is generally traditional. From the survey conducted during the update of the economic feasibility study (2010), the development of the road link appears to be a key priority for the population of the project area. Indeed, it is ranked as the most important development project by 90% of respondents. It is also clear from this survey that improvement of the overall income of the village, enhancement of access to basic services, and development of trade are also among the major expectations from the road development project.

5. Alternative solutions

In Burundi, the baseline technical study analyzed the various possible scenarios, from the economic, environmental and social standpoints in order to determine the best possible variants. Regarding the Mabanda-Mugina road, the project follows the existing route in its entirety and may only rarely affect certain crops and shops. Where the road crosses villages and urban centres such as Magara, Minago, Rumonge, Mukungu, Nyanza-Lac, Mabanda, the adopted variant will lead to the temporary displacement of about 20 traders located on the right-of-way. This solution will minimize as much as possible the potential nuisance, the related risks of accidents, and insecurity.

In Rwanda, the road follows the existing route with a few modifications at the level of intersections to improve the geometry and visibility. There is no alternative to this road section, which is located in the mountainous region offering the existing route as the only option. In case the road project is abandoned, this area will remain inaccessible, and transport costs will remain high - a situation that will adversely impact socioeconomic development.

Analysis of the “without project” variant - that is, the scenario where nothing is done - underscores the fact that the road sector will continue to be the weak link in the development policy of the Government of Burundi. Therefore, the outcome of this scenario would be failure to achieve economic growth objectives
in both areas (Imbo-Mirwa-Buragane), which will exacerbate poverty. The "without project" variant is not consistent with the economic and social development policies of Burundi and Rwanda.

6. Potential Impact and Mitigation Measures

6.1 Negative Impacts

Worksite Preparation Phase: During worksite installation, the project’s main impacts will include: (i) Disruption of commercial and social activities, as well as destruction of some shops, bananas plantations and residences (see the summary of the Resettlement Plan attached in annex); (ii) Felling of about 600 trees (mainly eucalyptus) along the existing road in both Burundi and Rwanda.

Construction Phase: (i) Disruption of business activities in the immediate vicinity of the project and access to homes located above the slope (in Rwanda). Population mobility will also be disrupted during the construction period; (ii) Risk of accidents associated with movement of construction machinery and worksite vehicles; (iii) Risk of air and noise pollution due to noise from the machinery, explosions, vibrations, exhaust gas emissions and dust particles in the area; (iv) Risk of soil erosion in borrow pits and existing rivers; (v) Risk of water and soil pollution as a result of poor management of worksite waste and hydrocarbons; and (vi) Risk of spread of STI and HIV/AIDS.

Operational Phase: noise and air pollution, as well as the risk of accidents, will be exacerbated by the increased number of the vehicles using this road, coupled with the greater proximity of local residents.

6.2 Positive Impacts

The main expected positive impacts of the project are: (i) Improved conditions of transporting goods and people; (ii) Opening up of the hinterland and improved access to basic socioeconomic infrastructure; (iii) Creation of direct and indirect employment during the road construction, operation and maintenance phases; (iv) Enhanced potential for tourism, including eco-tourism; (v) Improved living conditions for the vulnerable populations along the road and related feeder roads; (vi) Reduced risk of landslides and erosion thanks to the reinforcement and monitoring of embankments; (vii) Added value of land as a result of improved accessibility; and Improved security around schools along the road (mainly in Rwanda).

6.3 Mitigation/Enhancement and Monitoring Measures Anticipated at this Stage

Worksite Preparation Phase
Before works start-up, compensation will be paid to those affected by the project in Burundi and in Rwanda. In that regard, the Government of Burundi is expected to pay the sum of FBU 41,267,000. In Rwanda, compensation and assistance to families of affected persons are estimated at FRW 1,959,080,000 and will be paid by the Government of Rwanda.

Construction Phase
- Observance of labour norms on construction sites. These relate to staff management, conditions for establishing and ensuring hygiene in workers’ camps, organization and management of hydrocarbon depots (controlling risks of spillage, explosion or fire), the origin of materials (quarries) and their transportation conditions, as well as the organization of depots required for the
works or generated by renewals, extra watering of the road and the deviation, traffic regulations, solid and liquid waste management, site rehabilitation;

- Construction enterprises will ensure that their workers’ camps are established away from wells and rivers to avoid any risk of pollution of water sources. Working hours will be adjusted to limit disturbance of local residents. The speed of machinery will be limited on worksites and construction sites located on the highway;

- A traffic plan will be prepared for the movement of construction machinery in order to ensure greater mobility and accessibility for the local population. This plan will evolve in line with the various phases of the works, and will be supplemented with information and traffic signs. Worksites will be clearly demarcated;

- Construction of speed bumps in large villages or built-up areas crossed by the road;

- Construction of stopping areas for public transport, especially in villages; safety measures around schools, health centres, markets and other public places along the road;

- Storage units for hydrocarbons products will be either tanks or aboveground barrels placed in the appropriate confinement areas to avoid any spillage or tank rupture and ensure minimum risk of fire. Equipment for cleaning spills will be provided. Such equipment will be maintained in good working condition.

- Monitoring of embankments at the operation phase; appropriate sizing of crossing structures (culverts and bridges) and road drainage structures, taking into account the intensity of rainfall, the peak-flow return periods, etc.; construction of protective structures against landslides and erosion in sensitive areas (retaining walls and gabion);

- Sensitization on STI/AIDS and environmental protection, including issues relating to water and soil conservation (WSC) and river bank protection techniques.

- Tree planting along the roads, in borrow areas and for the protection of embankments at the end of construction. In this regard, street trees will be planted at the entrance and exit of each built-up area, over a distance of 150m on both sides of the road.

7. **Environmental Risk Management**

Environmental risks will mainly relate to accidental spillage of hydrocarbons, bituminous products, explosives and other substances used for road construction. There will be risks of accidents mainly on the worksites and near watercourses. There will also be cases of fire for which safety and training measures have been provided by the competent services. These measures concern: sensitization and training of worksite employees and *ad hoc* teams on rapid response techniques in case of disaster, safety measures to be observed in hazardous or high-risk areas, sensitization of local communities on health risks prevention and road safety.

Other technical measures concern the development of safe maintenance areas for trucks and for the storage of pollutants to avoid accidental spillage that could contaminate natural resources. Measures will be taken on the sites to ensure good retention around the storage tanks for fuels, oils and bitumen and also to develop pits for disposal of oils, grease and other liquid pollutants from maintenance workshops,
vehicle and equipment washing facilities, and loading areas. Regarding the management of explosives, safety measures will be implemented, as defined by the provisions of the Environmental Codes of Burundi and Rwanda. Safety and prevention measures will be put in place and maintained for preventing specific risks related to traffic, road accidents, first aid, communication and evacuation.

The Resident Engineer will ensure compliance with speed restrictions by all construction vehicles in order to limit traffic-related risks. Other measures include the use of road diversions and retro-reflective devices to protect people and animals. The Environmental Protection Agency (EPA) or Directorate will be responsible for monitoring compliance with the measures. The Contractor will ensure proper maintenance of all vehicles and equipment to reduce noise and diesel particulate emissions. All equipment causing excessive noise or emitting smoke will be replaced or repaired. The Environmental Directorate in Burundi and the Rwanda Environmental Management Authority (REMA) will be responsible for monitoring air quality and noise.

8. Monitoring Programme and Institutional Responsibilities
Monitoring will, during the construction and operation phases, seek to verify effective implementation of the following: (i) the proposed mitigation measures; (ii) the provisions of the various laws and regulations; (iii) commitments made by OdR (Burundi) and RTDA (Rwanda), and contractors to effectively implement and monitor these measures; and (iv) the provisions of other laws and regulations related to public health, improvement of living conditions of project affected persons (PAPs), environmental protection, water quality management, and protection of sensitive areas.

The works environmental surveillance and monitoring programme will be an integral part of the social and environmental reports prepared by the consulting firms responsible for carrying out the implementation studies for the Contractors.

8.1 Monitoring Team and Institutional Arrangements
Implementation will be controlled essentially by a consulting firm with the support of a number of stakeholders, including the Police Department for the speed limit; the Water Supply Service for the use of local water sources; and the Mines and Geology Services as regards the opening, working and management of quarries. Representatives of local authorities and technical services in charge of the environment, health and security could also be involved in the supervision. The consulting firm responsible for supervision must keep a written record (compliance or non-compliance forms) of actions carried out to implement environmental measures, the progress of such actions, and their conformity with the norms.

In Burundi, the Roads Authority (OdR) will set up a Unit to coordinate monitoring of the ESMP implementation, including relations with the Directorate General for the Environment, local authorities and communities. This Unit should comprise: (i) an OdR representative (representing the Ministry of Public Works); (ii) a representative of the Ministry of Water, Environment, Territorial Development and Town Planning; (iii) an Environmentalist from the Control Mission (CM); and (iv) a representative of the project beneficiaries.

In Rwanda, the RTDA will set up a Project Implementation Unit, which will coordinate monitoring of the ESMP implementation, including relations with the REMA, local authorities and the population. This Unit should comprise: (i) an RTDA representative (representing the Ministry of Infrastructure), (ii) a REMA representative; (iii) an Environmentalist from the Control Mission (CM); and (iv) a representative of project affected persons.
The two Units will include an Environmentalist who will be responsible for the day-to-day monitoring of the implementation of both the ESMP and the Compensation and Resettlement Plan in the respective countries. These Units will also examine the impact the PAPs resettlement process, and identify the number of PAPs actually compensated. The Enterprises Control Bureau will notify the Units in writing of any environmental issues that may arise. Supervision will be based on: (i) regular verification through written reports on works implementation and through field visits; (ii) reports of administrative services of the relevant sectors.

At the end of the works, the Environmentalist from the Environmental Protection Committee (EPC) will, with the assistance of the Control Bureau, prepare a detailed ESMP implementation report. This report will be forwarded to the authorities in charge of the environment in each country. In the event of failure to compliance with or enforce the environmental measures, the environmentalist of the Unit will notify the company in writing, and apply the appropriate penalties.

Project monitoring will be incumbent on the project owner or its delegated authority, namely the Ministry in charge of the Environment, acting through the Directorate General for the Environment (DGE) for Burundi, and REMA for Rwanda, in accordance with accepted norms. The project owner will also be responsible for selecting the sampling sites, the institutions and conditions for analyzing samples and using their results, and the analyses frequency, as well as for defining standards and thresholds that would trigger the need to deploy corrective action.

8.2 Responsibilities
The following institutions will be responsible for implementing the environmental management programme: (i) the ESMP implementation team (works company); (ii) an Environmentalist from the Control Bureau; (iii) the RTDA Project Implementation and Monitoring Unit for Rwanda and the OdR for Burundi; and (iv) regional officials responsible for the environment.

8.3 Monitoring
The implementation of the ESMP-recommended measures will be monitored on the basis of the following criteria: (i) hygiene and sanitation in the camps; (ii) equipment maintenance level; (iii) use of worker protection gear; (iv) level of soil and water protection in sensitive areas; (v) signposting; (vi) watering of the road during the works and rehabilitation of borrow areas; and (vii) implementation of enhancement measures.

8.4 Monitoring Indicators
The following will be the key monitoring indicators: (i) Number of erosion control structures and gutters around the workers' camp, quarries, borrow pits and storage sites; (ii) Turbidity and changes in the colour of stream water. Analyses will be conducted in a water laboratory water in Kigali (for Rwanda) and Bujumbura (for Burundi); (iii) Number of consultations for waterborne diseases in health centres in neighbouring regions per quarter (health service); (iv) Number of consultations for respiratory diseases, cough and bronchitis in health centres per quarter (health service); (v) Number of jobs created for local workers; (vi) Number of women or vulnerable persons employed on the construction works; (vii) Number of accidents related to traffic disruption during the works; (viii) Number of road signs put up; (ix) Number and location of sensitization signs put up; and (x) Number of consultation meetings held with political, administrative and local government authorities.
<table>
<thead>
<tr>
<th>Phase</th>
<th>Negative Impact</th>
<th>Proposed Measures</th>
<th>Implementation Period</th>
<th>Surveillance and Monitoring Indicators</th>
<th>Monitoring Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONSTRUCTION</td>
<td>Lack of environmental awareness among workers and companies</td>
<td>Recruitment of an Environmentalist/Safety during the works</td>
<td>Before the start-up of works</td>
<td>Presence on the worksite</td>
<td>MININFRA + CSEP + Control Bureau</td>
</tr>
<tr>
<td></td>
<td>Damage to sites of ecological or cultural interest</td>
<td>Surveys prior to the choice of areas for use by the companies (choice of sites for workers’ camp, equipment pool, crushing site, etc.)</td>
<td>Before the start-up of works</td>
<td>Survey form (form per site)</td>
<td>MININFRA + CSEP</td>
</tr>
<tr>
<td></td>
<td>Dust emission and handling of hazardous materials</td>
<td>Equipping workers with safety and protection gear (gloves, masks, reflective outfits and helmets)</td>
<td>At start-up and during the works</td>
<td>Level of equipment of workers in the worksite</td>
<td>CSEP + Control Bureau</td>
</tr>
<tr>
<td></td>
<td>Risk of HIV/AIDS contamination stemming from intermingling with outsiders</td>
<td>Sensitization of workers on STI/HIV AIDS (visit by a doctor each month+ condoms distribution)</td>
<td>At start-up and during the works</td>
<td>Number of visits by the doctor and condom-distribution operations</td>
<td>CSEP + Control Bureau</td>
</tr>
<tr>
<td></td>
<td>Risk of accidents at the worksite</td>
<td>Opening of a worksite dispensary at the workers’ camp</td>
<td>Before the start-up of works</td>
<td>Equipment of the infirmary at the local level</td>
<td>CSEP + Control Bureau</td>
</tr>
<tr>
<td></td>
<td>Water and soil pollution by solid waste and negative impact on the landscape</td>
<td>Equipment for the management of solid wastes from the workers’ camp (bins, tippers, etc.)</td>
<td>At start-up and during the works</td>
<td>Number of garbage cans, emptying rate, frequency of recovery</td>
<td>CSEP + Control Bureau</td>
</tr>
<tr>
<td></td>
<td>Soil pollution by waste oils and hydrocarbons during maintenance of equipment</td>
<td>Providing the equipment pool with a settling basin for wash water from the equipment Providing the equipment pool with a concrete platform equipped with a device for collecting leaking fluids from fuel tanks and drainage operations</td>
<td>Before the start-up of works</td>
<td>Presence of the basin and number of drainage and cleaning operations Presence of the platform and traces of oil or hydrocarbon pollution</td>
<td>CSEP + Control Bureau</td>
</tr>
<tr>
<td></td>
<td>Disruption of current traffic</td>
<td>Installation of a signalling device indicating the temporary deviation of day and night traffic and fluorescent strips demarcating work areas</td>
<td>At start-up and during the works</td>
<td>Number of deviations made, equipment at risky bends</td>
<td>CSEP + Control Bureau</td>
</tr>
<tr>
<td></td>
<td>Dust emission during transportation of materials</td>
<td>Supply trucks transporting loose materials with tarpaulins for use in covering the tippers.</td>
<td>During the works</td>
<td>Number of trucks with tarpaulins</td>
<td>CSEP + Control Bureau</td>
</tr>
<tr>
<td></td>
<td>Emission of dust during earth-moving operations</td>
<td>Systematic watering of roads used for transporting materials, work areas and crushing sites to reduce dust emissions</td>
<td>During the works</td>
<td>Length of road watered</td>
<td>CSEP + Control Bureau</td>
</tr>
<tr>
<td></td>
<td>Erosion, water stagnation, disruption of the landscape</td>
<td>Restoration of massive rock quarries, including possible reforestation of the affected sites. Rehabilitation of borrow sites (slope correction, transporting and spreading topsoil, re-vegetation)/</td>
<td>During and at the end of works</td>
<td>Number of sites rehabilitated</td>
<td>MININFRA + CSEP + Control Bureau</td>
</tr>
<tr>
<td></td>
<td>Erosion, water stagnation, disruption of the landscape</td>
<td>Rehabilitation of storage sites and depots</td>
<td>At the end of works</td>
<td>Number of sites rehabilitated</td>
<td>MININFRA + CSEP + Control Bureau</td>
</tr>
<tr>
<td>OPERATION</td>
<td>Increase in speed with the attendant risk of accident in communities</td>
<td>Fence in durable material for neighbouring schools</td>
<td>During and at the end of works</td>
<td>Linear meters (LM) of fence built</td>
<td>MININFRA + CSEP + Control Bureau</td>
</tr>
<tr>
<td></td>
<td>Disruption of access by raising the road platform</td>
<td>Installation of warning devices at the entrance to villages along the road under construction</td>
<td>During and at the end of works</td>
<td>Number of warning signs put up</td>
<td>MININFRA + CSEP + Control Bureau</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Construction of stairs and slabs at the level of bridges (*)</td>
<td>During and at the end of works</td>
<td>Number of restored access</td>
<td>MININFRA + CSEP + Control Bureau</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Covering of gutters in built-up areas or on access tracks with slabs</td>
<td>During and at the end of works</td>
<td>Number of restored access</td>
<td>MININFRA + CSEP + Control Bureau</td>
</tr>
</tbody>
</table>
8.5 Cost Estimates

The costs of implementing the ESMP measures, including expropriation, are indicated in the following table:

<table>
<thead>
<tr>
<th>Activities</th>
<th>Cost for Burundi (FBU)</th>
<th>Cost for Rwanda (FRW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total cost of environmental measures in the construction phase (excluding those included in the works contract)</td>
<td>42,000,000</td>
<td>197,800,000</td>
</tr>
<tr>
<td>Total cost of environmental measures during the operation phase (excluding those included in the works contract)</td>
<td>26,000,000</td>
<td>217,600,000</td>
</tr>
<tr>
<td>Cost of the Compensation and Settlement Plan for the population</td>
<td>41,267,000</td>
<td>1,959,080,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>109,267,000</strong></td>
<td><strong>2,374,480,000</strong></td>
</tr>
</tbody>
</table>

Source: Report on studies in the two countries

9. Public Consultations and Information Dissemination

The stakeholders were consulted to give them the opportunity to express their views and concerns. As part of the process, they were also provided with relevant and sufficient information on the project prior to its start-up.

**In Burundi:** The various stakeholders were consulted, including the central and local authorities, as well as the population. These consultations were conducted during the feasibility and detailed design studies and Bank’s missions. During the Bank’s visit to the Mugina-Mabanda road section, a public consultation meeting was held. It was attended by a total of two hundred thirty (230) people, nearly 50% of whom were women from various social segments and project stakeholders. The main proposals put forward by the population could be summarized as follows: (i) feeder roads linked to the road to facilitate access to basic socioeconomic infrastructure; (ii) health centre for Musenyi Peace Village, located along the road and predominantly composed of returnee families from Tanzania (more than 300 households); (iii) Musenyi market; (iv) small farm equipment (watering cans, shovels, etc.) for women's associations; (v) small processing equipment for post-harvest activities (cassava, pineapple, etc.); and (vi) rehabilitation of vocational school for children from returnee families. A number of proposals were selected as part of the complementary initiatives.

**In Rwanda:** The ESIA, ESMP and Resettlement Action Plan (RAP) studies were conducted using a participatory approach. Extensive consultations were held with various stakeholders (NGOs, local communities, associations, cooperatives, national and local administrative and political authorities). Participatory consultation sessions were held with the populations of Rubavu and Rutsiro Districts. These consultations took place in June and July 2010 during the final design studies (866 people were involved, of whom 45% were women). During Bank missions, working sessions were held with administrative authorities (the Governor of West Province, mayors and deputy mayors of Rubavu and Rutsiro), as well as the populations and representatives of associations/cooperatives, particularly in Pfunda and Nyamyumba localities. The key proposals of the various stakeholders could be summarized as follows: (i) construction of feeder roads to facilitate access to basic socioeconomic infrastructure and agricultural production areas (about 23.5 km in Rubavu District and 72.5 km in Rutsiro District; (ii) fencing of schools (500 linear metres (ml) for Kanyabihombo primary school; 720 ml for Gisunzu I & II schools, and 460 ml for the Gisiza school). As with Burundi, a number of these proposals were included in the additional initiatives.

During consultations with project affected persons (PAPs) in both countries, the project impact and appropriate mitigation measures were explained to them, and they individually expressed their

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For cost-related details, refer to each country’s ESMP
readiness to cooperate in order to ensure successful implementation of the project. Further consultations will be held prior to the payment of compensations. The project affected persons will be notified of the amount and place of collection of compensations owing to them. They will also be notified of the starting date for the civil works.

The public consultation process is expected to continue during the project appraisal and implementation, notably to: (i) validate the compensation plan; (ii) establish the worksites and start construction; and (iii) establish the baseline situation and ensure monitoring and evaluation of the project impacts. The consultations should allow for implementation of the measures recommended in the Environmental and Social Management Plan (ESMP).

10. **Additional Initiatives**

10.1 **Related Developments**

As part of the project implementation, and to meet the needs expressed by the populations during public consultations, additional measures to improve the quality of life have been incorporated into the project for the benefit of communities living along the road. These are:

**For Burundi:** (i) Development of feeder roads to facilitate access to the road and socioeconomic infrastructure by inhabitants of villages along the road; (ii) Development of bypass roads and roads facilitating access to Mabanda market and the chief town of the Municipality. That would help reduce the risk of accidents and enable women to carry out their income-generating activities under optimal safety conditions; (iii) Construction of a parking area for heavy duty vehicles at Mabanda. This will also enable transport operators to rest, and help strengthen the local economy; (iv) Rehabilitation of the health centre in Musenyi, a peace village inhabited mostly by returnee families from Tanzania. This will be beneficial particularly to children and women; (v) Development of Musenyi rural market for the benefit of women; (vi) Supply of small farm implements and post-harvest processing equipment to existing women’s associations in the project area.

**In Rwanda:** (i) Development of feeder roads (Rubavu District: 23.5 km and Rutsiro District: 72.5 km) to facilitate access to the road and socioeconomic infrastructure by inhabitants of villages along the road; (ii) Fencing of schools (Kanyabihombo: 500 linear meters (lm), Gisunzu I & II: 720 lm, and Gisiza: 460 lm) in order to improve safety; (iii) Rehabilitation of the Nyamyumba sector market in Rubavu District for the benefit of women; (iv) Construction of four docks and fish-drying areas for fishermen, as well as access roads to these areas; (v) Supply of minor equipment to Rubavu and Rutsiro Districts for feeder road maintenance.

11. **Climate Change**

11.1 **Major Challenges**

**In Burundi:** Analysis of the evolution of rainfall over time reveals a cyclical trend. With a periodicity of about 10 years, periods of excessive rainfall alternate with those of rainfall deficit, compared with the normal. Analysis of mean temperature changes shows a steady upward trend, compared with the normal, with an average increase of 0.4°C every ten years.

**In Rwanda:** Results of rainfall projection models in Rwanda point to an increase in average rainfall - a situation which heightens the risk of flooding and damage to infrastructure, agricultural land, etc. The project area is subject to this risk, especially as it is prone to recurrent extreme hydrological events. In 2007, for example, floods in Nyabihu and Rubavu Districts caused damage estimated at USD 22 million, or 0.6% of Rwanda’s GDP.
11.2 Adaptation Measures

In Burundi: The adaptation options adopted for the project are: (i) choice of road pavement suitable to the region’s climate; (ii) appropriate sizing of hydraulic structures in general and those of River Mushara, in particular, taking into account the intensity of rainfall and the return periods; and (iii) flood proofing of the road, especially in valleys and plateaux.

In Rwanda: Adaptation options included in the project are: (i) the choice of road pavement suitable to the climate and topography of the area (bends, steep slopes and torrential rains); (ii) the design of appropriate crossing structures (culverts and bridges) and road drainage structures, taking into account the amount of rainfall, return periods, etc.; (iii) construction of protective structures against landslides and erosion in sensitive areas (retaining walls and gabion); (iv) tree planting for embankment protection; and (v) monitoring of embankments during the operation phase.

11.3 Mitigation Measures

In Burundi: The mitigation measures for this project include: (i) the fluidity of traffic and speed control aimed at limiting CO₂ and CO emissions along this road; (ii) planting of trees and reforestation of some spaces in the project area; (iii) sensitization of the populations on environmental protection, including issues related to agro-forestry, afforestation and climate change.

In Rwanda: The mitigation measures within the project’s purview include: (i) extension of the existing platform, enhancement of the fluidity of traffic, speed control, reduction of steep slopes as much as possible, thereby helping to minimize CO₂ and CO emissions along this road; (ii) planting of trees along the road over a distance of 150 m on both sides of the road at the entrance and exit of each village crossed; (iii) sensitization of the populations on environmental protection, including topics related to water and soil conservation (WSC), soil fertility management, etc.

12. Conclusion

The probable negative impacts of the works and operation phases of the project essentially range from moderate to significant. These impacts will be considerably mitigated by appropriate measures.

13. Contacts

For more information, please contact:
Mamadi SOUARE, Transports Division-2, Tél : + 216 7110 1987 Email: m.souare@afdb.org
Modeste KINANE, Environment and Climate Change Division, Tél : 216-7110-2933, Email : m.kinane@afdb.org
ANNEX: SUMMARY OF THE RESETTLEMENT ACTION PLAN

1. POLICY, LEGAL AND ADMINISTRATIVE SCOPE

The policy, legal and administrative framework in which this Resettlement Action Plan (RAP) was prepared is summarized as follow: (i) for Burundi, land code of 1986, which covers issues related to land tenure and property rights and ministerial decree n° 720/CAB/810/2003 dated 28/05/2003 related to the update of indemnification fares for land, crops and buildings; (ii) for Rwanda, law n°18/2007 dated 19/04/2007 on expropriations and the land code of 2005; (iii) for AfDB: handbook on stakeholders consultations and participation to AfDB operations; policy and guidelines on cooperation with civil society organizations; policy on gender, 2001; Involuntary Resettlement Policy, 2003; Policy on information disclosure, 2005.

The main institutions in charge of the preparation and implementation of the RAP are: (i) In Burundi, the Ministry of Finance; the Ministry of Transport, public works and Equipment through the Road Authority (OdR), The Directorate of Environment, the Makamba Province; and (ii) in Rwanda, the Rwanda Transport Development Authority (RTDA); the Ministry of Finance (MINFIN) the Ministry of Natural Resources (MINIRENA); Land Commission; and the Rubavu and Rutsiro districts. In both countries, key Non-Governmental Organizations operating in the project area will be involved.

2. PROJECT AFFECTED PERSON (PAP)

2.1 Definition and identification of PAP

Persons affected by the project (PAPs) are defined as those who might lose, directly as a result of the project, property, or access to their property or opportunities which can generate incomes. In this project, the PAP include: (i) in Burundi 51 people owning shops & kiosks, bananas plantations and residential building, (ii) in Rwanda 207 people out of which 136 owners of residential building, 67 of commercial buildings and kiosks and 2 office buildings. On average, an household in this Region has 5 to 10 members. Thus, the number of PAP to be considered for residential buildings is 1042. This gives a total of 1109 people.

2.2 Eligibility and Rights

PAPs eligible for compensation or additional assistance are those concerned by the above definition and who have been registered during identification process conducted from 23 to 24 February 2012 in Burundi and those whose name will appear on the ministerial decree related to the expropriation for this project. Payments and other assistance should be strictly based on these surveys. Anyone who encroaches on the project area after the deadline will not be eligible for compensation or relocation assistance, or any other assistance. The procedure for determining eligibility for compensation, assistance for the relocation and rights considers the following factors (Table 1).

3. PUBLIC CONSULTATION

3.1 In Burundi

The various stakeholders were consulted, including the central and local authorities, as well as the population. These consultations were conducted during the feasibility and detailed design studies and Bank’s missions. During the Bank’s visit to the Mugina-Mabanda road section, a public consultation meeting was held. It was attended by a total of two hundred thirty (230) people, nearly 50% of whom were women from various social segments and project stakeholders.

3.2 In Rwanda

Extensive consultations were held with various stakeholders (NGOs, local communities, associations, cooperatives, national and local administrative and political authorities). Participatory consultation
sessions were held with the populations of Rubavu and Rutsiro Districts. These consultations took place in June and July 2010 during the final design studies (866 people were involved, of whom 45% were women). During Bank missions, working sessions were held with administrative authorities (the Governor of West Province, mayors and deputy mayors of Rubavu and Rutsiro), as well as the populations and representatives of associations/ cooperatives, particularly in Pfunda and Nyamyumba localities.

Table 1: Matrix of rights

<table>
<thead>
<tr>
<th>Type of PAP</th>
<th>Type of loss</th>
<th>Right</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmers with traditional or formal rights</td>
<td>Loss of agricultural land and crop</td>
<td>Compensation for loss of land and crop losses and assistance from the village chief to find another parcel for agriculture</td>
</tr>
<tr>
<td>recognized in relation to land</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farmers with no formal or recognized traditional</td>
<td>Crop loss</td>
<td>Compensation for crop loss and assistance from the village chief to find another parcel for agriculture</td>
</tr>
<tr>
<td>rights to land</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owners of residential and commercial buildings</td>
<td>loss of business opportunities or loss of house</td>
<td>Value of the estimated good at full replacement cost without taking into account depreciation</td>
</tr>
</tbody>
</table>

3.3 Consultations with PAPs
The following concerned were raised by PAPs during the consultations: (i) when is the list of affected assets will be finalized; (ii) the source of financing of the compensations; (iii) the timing for payment of compensations; (iv) who will be liable for destruction of assets during the construction; (v) start date of the works. All the concerned and issues raised where adequately addressed during consultations with PAPs.

3.4 Future consultations
The consultation process will continue throughout the project cycle. They will be held at various levels and with all groups of PAPs. For all PAPs (owners farm lands, commercial and residential buildings), consultation will continue after the payment of compensation and/or assistance through the monitoring and evaluation. This will ensure that the livelihoods of all PAPs have been improved or have been restored to at least the same level they were before the project.

4. PROCEDURES FOR EVALUATION AND COMPENSATION

4.1 Method of evaluation
In assessing the affected land, the current value of cultivated land was considered without taking into account depreciation or loss of soil fertility. In addition, this evaluation considered the value of the crops on the land with the best market prices. Finally the assessment took into account the disruption, discomfort and other contingencies that may arise during the relocation on new land. For owners of commercial and residential buildings, shops, kiosks, etc, the evaluation took into account the full replacement cost for the building without taking into account depreciation, the cost of disruption of activity and other inconvenience. The summation of the values estimated above provides the proper amount of compensation to be paid for each group of PAPs.

4.2 Grievance redress procedure
In order to minimize as much as possible potential conflicts related to land expropriation for farmers or interruption of income generating activities for sellers and staff of the ferry, consultations were carried
out during the project design. However, a complaints committee has been established for the amicable resolution of the issues of compensation related to the project. This committee includes representatives from the Ministries in Charge of roads, Representatives of local authorities and representatives of PAPs, etc. In Burundi, this Committee has already been set up (Table 2). In Rwanda, members of this Committee will be set up during the approval of the ministerial decree related to expropriation for this project. Any PAP not satisfied with the amount of compensation or assistance received may seek redress through the complaints committee. If the PAP is still not satisfied, he can seek redress through the judicial process and eventually to the Supreme Court.

Table 2: Membership of the grievance redress committee

<table>
<thead>
<tr>
<th>Names</th>
<th>Function/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ntuyahaga</td>
<td>Chief of the Hill of Mabanda</td>
</tr>
<tr>
<td>Bigirimana Jean Claude</td>
<td>Chief of the Hill of Mugina</td>
</tr>
<tr>
<td>Kabura Cyriaque</td>
<td>Principal Advisor of the Governor of Makamba</td>
</tr>
<tr>
<td>Butoyi Bernard</td>
<td>Mayor of Mabanda</td>
</tr>
<tr>
<td>Havyarimana Jonathan</td>
<td>Technical Advisor in Charge of Development of the Mabanda District</td>
</tr>
<tr>
<td>Kagabjo Serge</td>
<td>(PAP)</td>
</tr>
<tr>
<td>Mme Niyokwizera Spres</td>
<td>Seller (PAP)</td>
</tr>
</tbody>
</table>

5. INSTITUTIONAL RESPONSABILITIES, MONITORING AND EVALUATION

5.1 Institutional responsibilities
OdR and RTDA are ultimately responsible for the implementation of all project components. They are directly responsible for the implementation of RAP. Even though they will play a leading role, OdR and RTDA will work with other institutions like the Ministry of Local Governments through their relevant districts in the project area, the Ministry in Charge of Environment through their relevant Directorate or Authorities, and the Ministry in Charge of Finance. OdR and RTDA will play a role in social surveys and assessments thereon and ensure the participation of stakeholders such as PAPs and NGOs. OdR and RTDA are responsible for monitoring the implementation process by ensuring that compensation and restoration mechanisms are carried out properly.

5.2 Monitoring and evaluation
Internal monitoring will aim to establish whether or not the implementation of the RAP is in accordance with approved plans. Its implementation will involve: (i) process of implementation review, in light of the schedule and on approved budget, (ii) evaluate the performance of disbursements for compensation to PAPs. The implementation of the RAP will be evaluated regularly by the OdR and RTDA (Table 3) to ensure that the actions for compensation and assistance to PAP were conducted in accordance with the RAP. This monitoring will be conducted in collaboration with REMA for Rwanda and the Ministry of Environment in Burundi to ensure that OdR and RTDA follow the principles of the RAP.

Monitoring and external evaluation will mainly to determine whether the overall objectives of RAP were achieved. As a result, they will focus on the period after the relocation. This activity will therefore focus on establish whether, after the execution of the relocation, the living standards of people affected will be improved if their livelihoods have been restored and maintained in a sustainable manner. It was then that will be measured efficiency, effectiveness, impact and sustainability of the RAP. The project sponsor, in collaboration with funding agencies and traditional leaders, will monitor externally. This monitoring should be carried out annually for at least two years.
It will be used a number of indicators to measure performance, impacts and outcomes of activities for compensation and resettlement. These indicators will aim to measure the physical and socio-economic status of people affected by the project to understand and guide their social well-being.

**Table 3: Roles in monitoring**

<table>
<thead>
<tr>
<th>Acteurs</th>
<th>Rôle</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTDA and OdR</td>
<td>Lead agency and coordinating institution for the evaluation of both internal and external monitoring of the implementation of the RAP in each country</td>
</tr>
<tr>
<td>Local authorities</td>
<td>• sensitization for adequate involvement of PAPs</td>
</tr>
<tr>
<td></td>
<td>• Periodic monitoring of the impacts of the RAP</td>
</tr>
<tr>
<td>Land Commission</td>
<td>Regular monitoring to ensure that the approved amount of compensation is paid</td>
</tr>
<tr>
<td>REMA and Ministry of Environment</td>
<td>Regular monitoring of the implementation of the RAP and its environmental impacts if any</td>
</tr>
<tr>
<td>External consultant and ADB</td>
<td>External monitoring, evaluation and audit of the implementation of the RAP.</td>
</tr>
</tbody>
</table>

6 **ESTIMATED COST**

By taking into account the relevant indicators such as loss of livelihood, the extent and effects of impact, economic and institutional factors, among others, the cost of compensation excluding contingencies is estimated to: (i) FBU 41, 267, 000 for Burundi and; (ii) RWF 1,959,080,000 for Rwanda. These amounts will be paid the respective Governments.

7 **SCHEDULE OF IMPLEMENTATION**

The schedule for implementation of key activities is described in Table 4 below.

**Table 4 : Implementation schedule**

<table>
<thead>
<tr>
<th>Time limit (month)</th>
<th>Activity to be carried out</th>
<th>Responsible structure or Person in Burundi</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 2 months</td>
<td>Mobilisation of resources for the indemnification process</td>
<td>Government</td>
</tr>
<tr>
<td></td>
<td>Creation of the implementation committee including grievance</td>
<td>OdR and Makamba Province</td>
</tr>
<tr>
<td></td>
<td>Redress committee</td>
<td>MINIRENA , RTDA, the departments of social affairs and tenure of both districts</td>
</tr>
<tr>
<td></td>
<td>Identification and confirmation of the affected properties and</td>
<td>OdR and Makamba Province</td>
</tr>
<tr>
<td></td>
<td>indemnifications</td>
<td>MINIRENA , RTDA , both districts</td>
</tr>
<tr>
<td></td>
<td>Informing the owners of the affected properties</td>
<td>OdR, Makamba Province and Mabanda district</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MINIRENA , the concerned Districts, local ONG</td>
</tr>
<tr>
<td>1 to 4 months</td>
<td>Payment of allowances,</td>
<td>Ministry of Finance, OdR, Makamba Province and Mabanda district</td>
</tr>
<tr>
<td></td>
<td>indemnifications</td>
<td>The Ministry in charge of Finances, MINIRENA , RTDA , the Districts of Rubavu and of Rutsiro</td>
</tr>
<tr>
<td>1 to 6 months</td>
<td>Assistance of the affected population</td>
<td>Makamba Province and Mabanda district</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Districts of Rubavu and Rutsiro</td>
</tr>
<tr>
<td>6 months</td>
<td>Monitoring and evaluation of the living standards of PAPs</td>
<td>OdR, Makamba Province and Mabanda district</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MINIRENA , RTDA , Districts</td>
</tr>
<tr>
<td></td>
<td>Claims process (if there are any)</td>
<td>PAP</td>
</tr>
<tr>
<td></td>
<td>Final report</td>
<td>MINIRENA, RTDA, Districts</td>
</tr>
</tbody>
</table>
8 PUBLICATION OF INFORMATION
This RAP will be published in Burundi by OdR and RTDA in Rwanda. These institutions will make this RAP available to the public and distribute copies to PAPs and to relevant local authorities in the project area. AfDB will publish this RAP on its website.

9 CONCLUSION
Given the implementation of mitigation measures, negative social impact of the project is expected to be minimized. The project will provide significant socio-economic opportunities for communities and people of the area and many other benefits at local, regional and national levels.