AFRICAN DEVELOPMENT FUND

ETHIOPIA

JIMMA-MIZAN ROAD UPGRADING PROJECT

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT SUMMARY (ESIAS)

INFRASTRUCTURE DEPARTMENT (OINF)
ETHIOPIA

JIMMA-MIZAN ROAD UPGRADING PROJECT
(Project Number: P- ET- DB0 – 011)

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT
SUMMARY

1. Introduction

The Jimma-Mizan road upgrading project is one of the main road projects included in the Ethiopian Government’s 10 Years Road Sector Development Programme – (1997- 2007).

This development programme is designed to improve and expand the country's road network in order to stimulate the economy for long term development. It is recognised that agriculture is the backbone of the economy and particular importance is placed on the development of this sector by the removal of the transport constraints facing the sector. This explains the decision to upgrade the deteriorating Jimma-Mizan road to provide market access to agricultural products and facilitate agricultural export particularly coffee produced in the project zone of influence.

Road upgrading is likely to cause negative and positive impacts on the environment. The ESIA study for the Jimma-Mizan road project seeks to explain the biophysical features of the existing Jimma-Mizan road, to describe proposed realignment road sections and to assess potential positive and negative impacts of the whole Jimma-Mizan road upgrading project. It also proposed appropriate solutions to avoid or minimise any adverse impact that may result from the project during and after the upgrading process. The African Development Bank (AfDB) categorised this project as a Category 1 project, which is subjected to an ESIA. The Environmental Policy of Ethiopia (EPE) also includes ESIA policies in the cross-sectoral environmental policies and requires a project of this nature to prepare an ESIA study.

The road between Jimma and Mizan to be upgraded is approximately 224km. This is inclusive of the alignment modifications of original road design through the protected forest areas of Belete Gera and Shuba forests and the realignments to service Gimbo and Bonga towns that were bypassed by original design. The project road starts at Jimma, the head quarter of Jimma zone in Oromia region, and runs to Mizan Teferi with the proposal to pass through the towns of Ufa capital of Gimbo-Woreda, and Bonga the headquarter of Kafa zone. Finally, the road terminates at Mizan-Teferi headquarter of Bench Manji zone.

Studies related to the ESIA were carried out as an integral part of a technical and economic feasibility study in March 2002 by WSP International Consultants. These 2002 ESIA studies did not include the realignments to service the two towns (Kafa Zone capital of Bonga and Gimbo, Woreda capital of Ufa). A separate ESIA study was carried out in the realignment sections in 2006 by the Messrs. International Consultants and Technocrats (India) using the same guidelines for the former ESIA study.
In the methodological note for the ESIA studies, information on the existing environmental conditions of the road were reviewed (mainly from the previous ESIA study of the project road and various published sources), discussions held with government and non-governmental organizations and a detailed site assessment was carried out to provide the basic background for impact identification and assessment. A scoping exercise was also carried out at the pre-construction stage to identify and highlight the key issues and impacts likely to occur during the construction, and operations and maintenance phases of the project, as well as to identify those impacts which could, but are unlikely to occur. Practical and cost-effective benefit enhancement and mitigation measures were identified and outlined, taking into account alternative approaches that are appropriate to the situation. A management and monitoring plan was developed to provide a sound basis for ensuring that the specified benefit enhancement and mitigation measures are fully adopted.

2. Project Description and Justification

The Jimma-Mizam road project forms part of the South West Corridor route from Addis Ababa connecting the capital city to the south western part of Ethiopia. The project starts from Jimma, some 350km south-west of Addis Ababa at an elevation of 1700m above sea level (a.s.l.). It runs mostly within the Ethiopian plateau with altitudes varying between 1700 m and 2000 m a.s.l. before it reaches Mizan. The terrain is generally flat to rolling but contains short sections of steeper gradient hills.

The project comprises upgrading of 223.61 km of an existing engineered gravel road of varying width averaging 7.0m wide over the total length of the road. The original design was done in 1996/7 which formed the basis of the engineering update in 2002 by WSP of UK. This was revised update of 2006 to include the proposed two realignments (Gimbo and Bonga realignments) located in the Kafa zone of Southern Nation Nationality and People Regional State (SNNPRS). The design proposed a 200mm sub-base of gravel material extracted from borrow pits, followed by a 200mm base course of crushed stone. Surfacing will be 7.0m wide and is proposed as a double bituminous surface treatment. The Ethiopian Road Authority (ERA) current standard of a 7m carriageway, 2x2.5m parking/additional lanes, 2x2m footpaths, 2x1.5m top-width drains plus a 2x0.5m clearance to fence or property lines will be adopted. In urban and built-up areas, the Right of Way will be 20.0 metres while in rural areas the ROW of 30.0 metres will be adopted.

The project road is crucial to the connection between rural communities and urban centres and for export of agricultural products. The existing road has deteriorated remarkably as a result of lack of investment and has to be upgraded to higher service levels in order to reduce transport cost in support of socio-economic development. This project, which will provide upgraded and all-weather road communications between Jimma and Mizan Teferi, as well as to the settlements along the road, is expected to make a significant contribution to removing some of the constraints on agricultural development in the project area. It is of particular importance to the economy in that it forms the main trunk road for exporting coffee from the Kefa area.
3. **Policy, Legal and Administrative Framework**

The ESIA studies conform to the Environmental Policy of Ethiopia (EPE) issued in April 1997. The overall policy goal is to improve and enhance the health and quality of life for Ethiopians, to promote sustainable social and economic development through sound management and use of natural/human and cultural resources and their environment as a whole and to meet immediate and long term needs. The policy established the authority of the Environmental Protection Authority (EPA) and was assigned the responsibility for appraisal of projects with regard to their environmental implications.

In line with this power and duties, EPA has issued an Environmental Impact Assessment Proclamation (no: 299/2002) on the 3rd of December 2002 and an EIA guideline document which provides details of the Environmental Impact Assessment (EIA) process and its requirements. The Proclamation stated that projects shall be subject to EIA and no proponent shall commence implementation of a project without authorization from the Authority or from the Relevant Regional Agency, as appropriate.

The Terms of Reference (ToR) for the ESIA Studies for the Jimma-Mizan road upgrading project required an assessment of the positive and negative impacts of the proposed project on the biophysical and human environment and recommended appropriate mitigation measures that would minimize undesirable effects as a result of the implementation of the project alternative chosen. It also required an analysis to ensure that all other environmental policies and laws of Ethiopia are respected including international conventions and treaties of environment to which the country is a signatory (Convention on Biological Diversity, Framework Convention on Climate Change, the Vienna Convention on the Protection of the Environment, the United Nations Convention to Combat Desertification, the Basel Convention, the Stockholm Convention among others).

The ESIA studies were also carried out within the context of the AfDB Involuntary Resettlement Policy. The policy has been developed to cover involuntary displacement and resettlement of people caused by a Bank financed project and it applies when a project results in the relocation or loss of shelter of the persons residing in the project area, or when their assets are lost or their livelihoods are being affected. The policy among others states that compensation at the full replacement cost for loss of land and other assets should be paid prior to project implementation, with the view of improving their former living standards, income earning capacity and production levels of the affected population.

4. **Description of the Project Environment**

The project area is predominantly underlain by volcanic rocks. These rocks are naturally light in colour and are highly susceptible to physical and chemical weathering. The soils of the area are predominantly Dystric nitosols. These are reddish brown to dark reddish brown soils, with clay to clay loam texture and of relatively low fertility status. Orthic acrisols are also found, mainly on the steep valley slopes and have broadly similar properties and are predominantly well drained.
The section of road between Jimma and Dimbira (km0.00-km135.00) lies in the Omo-Gibe River basin and the remainder of the route lies within the headwaters of the Baro-Akobo watershed. The road crosses numerous small rivers and streams which are tributaries of two major drainage systems of the area (Gojeb and Weshi Rivers). Average annual rainfall generally increases along the road from Jimma to Mizan. It is 1496mm at Jimma, 1647mm at Bonga and 2071mm at Mizan. There is great variation in the rainfall, with approximately 60-65% of the total rainfall occurring during the wet season in the five months from May to September. December, January and February are driest months with rainfall less than 100mm at all locations. Although rainfall is high and often intense, and slopes in excess of 20% are common in the vicinity of the road, there is remarkably little evidence of significant erosion of existing earthworks or of agricultural land.

The natural vegetation cover of the project area comprising broad leaf high forest has been considerably modified by man, largely in connection with the development of agriculture. The most contiguous areas of disturbed forest traversed by the existing road are in the Beleta Gera forest area (km 34 – 43) and in the Shuba area (km 118 – 132) which are among the 58 Priority Forest Areas designated to protect biodiversity and conserve forest resources. The 1994 Forest Conservation, Development and Utilization Proclamation prohibit the utilization and harvesting of these forest resources and prohibit development of any type in the protected forest areas. There has been a road alignment modification for the project road away from the protected forest areas in line with the proclamation.

There are no national parks and wild life reserves along the project road. The wildlife population and native habitat have been significantly impacted by subsistence agricultural practices and this has resulted in low wildlife diversity in the region along the project road. For the avifauna, there are many birds in the project area. However, according to the Ethiopian Wildlife and Natural History Society (EWNHS, 1996), none of the 67 nationally designated important birds are found near the project road.

The project road traverses parts of two regions, the Oromiya Region and the Southern Nations, Nationalities and Peoples Region (SNNPR), with their capitals situated in Nazareth and Awassa respectively. A total of seven Weredas are located along the project road, three in Oromiya and four in the SNNPR. There are about ten population centres between Jimma and Mizan Teferi, some of which are small villages. The population and economy of the region traversed by the project road is almost totally dependent upon agriculture.

The agricultural sector employs about 85% of the labour force and contributes about 72% to the regional domestic product. About 90% of the annual total agricultural crop production consists of cereals. In the project area coffee is the most profitable crop with respect to value added per labour day and per hectare. Livestock are an integral part of the farming system in the project area and are economically complementary to crop production. Livestock productivity is generally low, with low reproductive rates, high mortality and low off take (hides, milk, etc.).

Apart from agriculture and general commerce in the major towns along the route, the contribution of manufacturing industries to the generation of income and employment in the project area is exceptionally low (at embryonic level).
The major health problems along the road are reported to be infectious diseases and malnutrition. Most illnesses are communicable and are related, either directly or indirectly, to lack of adequate and safe drinking water supplies and sanitation, low living standards and poor nutrition.

Enquiries to residents along the project road have indicated that there are no known sites of historical or archaeological significance in the vicinity of the road.

5. Project Alternatives

The ToR for the project studies required consideration of the alternative options for the road upgrading works. The environmental and social implications of each have been considered in selecting the project option:

**Base case: Repair to Existing road:** Leave the existing engineered road with poor horizontal and vertical alignment that is a safety hazard as it is and implement only minor repairs. In terms of minimizing adverse environmental and social impact this option has advantages because nature and scale of the works will be such that no significant adverse impact will be created. However, from the viewpoint of overall environmental/social performance, the poor horizontal and vertical alignment creates a safety hazard and potential beneficial impact will be forgone by this minimal option.

**Road upgraded to higher engineered gravel standard.** On the existing alignment the road horizontal and vertical curves and road widths are improved to Ethiopia ERA DS5 gravel standards to improve sight distances and reduce steep climbs. The road pavement is constructed using gravel base and sub-base, and the surfacing is left at gravel level. This option reduces the extent of realignments and expropriation of land so the number of properties affected will be minimized. However this would be offset by several disadvantages including less comfortable and less safe travel conditions, regravelling cost every five years; also, as gravel surfacing continually erodes, the siltation of roadside drainage systems and sedimentation of watercourses will be considerably higher compared to the case of a sealed road.

**Road upgraded to bituminous surfacing with modified horizontal alignment through forest areas and servicing Gimbo and Bonga towns.** Following the existing road, the road horizontal and vertical curves and road widths are improved to Ethiopia national standards to improve sight distances and reduce steep climbs. This alignment option is modified in isolated cases to reduce demolition of property, destruction of trees, avoid large cut/fill lengths, and provide service through Gimbo town and access link to Bonga town, and the pavement option is bituminous material. This is the preferred option as the potential benefits are considered to outweigh the disadvantages and in terms of overall environmental and social performance this is the preferred option.
The realignments of the existing Jimma-Mizan Road to serve Gimbo and Bonga. The realignment to service Bongo town will also have an added advantage of avoiding land take in an environmentally sensitive forest area. The land use along this route is mainly characterized by farmland. The major crop is maize and there are fruit trees like banana that are also grown along the road in settlement areas.

The Bonga realignment as proposed crosses various land use types ranging from resettlement to sparse forest land. There are six minor rivers crossings and one major river crossing along this realignment. Because of the environmental and social concern forseen in this realignment section, the project consultants suggested three realignment alternatives, of which the best was chosen after evaluating the cost implications and environmental concerns. The chosen alternative involves upgrading an existing link gravel road (3.156 km) to paved standard, starting from the Bonga Junction on the existing road to the center of Bonga Town. This option ensures lower relocation and resettlement costs than the looping as proposed in the second and the third alternatives.

6. Potential Impacts and Mitigation/Enhancement Measures

6.1 Environmental impacts

The EIA discusses major environmental issues and constraints on the physical and biological environment (including forest resources and protected areas).

Positive Impacts

The major positive impacts are related to job opportunities, access to health and education and economic growth, with potential gender benefits. The direct and indirect job opportunities that will be provided by the project can be considered as a positive aspect. The local people will be directly employed to work at the construction sites and others will be employed in sectors of the economy which have been developed by the road such as agriculture and commerce. Some individuals may gain skills that can be applied in other road construction projects.

This project will also give the population in the zone of influence access to health, education and other social facilities. Improved access will make possible increase mobility of government officials and employees, agricultural inputs and consumption goods and construction materials. Other access benefits will be more readily available to the population and extension/social services could more easily be provided by the administration for improved services in the region.

On the gender side, women should benefit from opportunities to work on the project as a result of project gender policy. Such income and opportunities for trading to salaried project workers and provide roadside services to subsequent road users will help women to start small businesses.

Economic growth will be enhanced as accessibility and motorization of traffic in this region will be improved and a better marketing of agricultural produce will be assured. Improvements in the general economy of the communities along the road are therefore likely.
Negative Impacts

On the negative impacts with respect to the biophysical environment, the main aspects analyzed are the impacts of the project on water resources, soil erosion, slope stability and aesthetic values of landscape, pollution of air/river courses and impact on flora and fauna.

The road upgrading will cause some adverse effects on local water resources. The likely sources of impacts will include the need to redirecting water courses at culverts and bridges; road cuts and other exposed sites that may trigger erosion and landslides (that may threaten the road itself); temporary road diversion that may affect people’s property and safety; operation of quarries and borrow pits; discharge of sewage and other fluid waste from construction camps, and spillage of pollutants (fuel, oil). In areas of flatter topography, the road embankment can obstruct the runoff and contribute to the formation of stagnant ponds and most of the waters which will be formed in un-rehabilitated quarries and borrow pits which can become breeding places for vectors of malaria and bilharzias.

Some soil erosion can be expected from areas where the soil is disturbed and exposed to runoff. Clearing of vegetation cover during clearing and grubbing of the road reserve and cut and fill operations for widening the road, construction of bridges, culverts and site drains, detours for collecting construction materials from quarries/borrow areas will expose soils during rainy seasons and may result in incremental soil erosion and sedimentation of river courses. Cutting and filling operations for widening of road width and for improving horizontal alignment in steep slopes and in mountainous areas may induce slope instability problems. The major variables affecting slope stability are topography, geology, vegetation, rainfall intensity and land use (human influence). All these aspects are manageable through proper environmental supervision during construction.

Increasing the width of the carriageway through horizontal and vertical realigning to improve the existing curves/grade and replacing the existing bridges and culverts may minimally affect the natural drainage systems and disturb vegetation and riverine aquatic species. The impact on wildlife will be negligible as there is in any case very limited wildlife within the impact zones. There are no protected wildlife conservation areas along the alignment.

6.2 Potential Socio-Economic Impacts

Along the road and within the right of way there are housing units, fences of different types, farmland, grazing land and forestland. During the construction period, some of these properties will be affected. This will cause an adverse impact on the socio-economic situation pertaining to the project area communities.

Loss of property is the main socio-economic impact of the Jimma-Mizan road upgrading project. The impact on housing units will occur in almost all the towns and villages along the road as individuals have constructed housing units for residence and business activities along the road.
On the basis of a 20metres right of way in urban/built-up areas and 30 meters right of way in rural settings, houses affected were inventoried during the field assessment. A total of 271 and 2,566 houses are situated within the 20.0 and 30.0 meters right of way respectively throughout the road.

Also, farmlands along the road own by different farmers will be affected by the project. About 218 hectares of farm and grazing land fall within the 30m right of way of the project road. At 20m right of way there will be no loss of farm and grazing land. The project intends to mitigate this by minimizing land takes in areas of 30metres ROW where there are farm and grazing land.

Loss of private and public fences will also be one of the potential socio-economic impacts of the project as there are households and institutions whose fences are very close to the road which will be removed in some instances. This will affect the individuals concerned as they would face some degree of insecurity without their fences and need some financial ability to reconstruct the fences.

It is anticipated that water supply lines will be affected in the different towns and villages during the construction period of the project because of their location within the existing right of way. Possible project impact on the water supply is expected at Jimma, Seka Shebe, Ufa, Bonga, Shishinda and Mizan.

Furthermore, other important potential socio-economic impacts which need to be managed include: roadside infrastructure, traffic accidents, health and safety threats, possible impact of immigrant workers, together with impact on aesthetic values.
Mitigation/Benefit Enhancement Measures for Negative Impacts

The table below summarizes the negative environmental and social impacts and mitigation/benefit enhancement measures for the negative impacts, as well as the responsible body to implement the measures.

<table>
<thead>
<tr>
<th>Type of impact</th>
<th>Mitigation measure</th>
<th>Responsible body for implementing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadside erosion, landslide and gully formation</td>
<td>Line roadside runoff ways and construct energy dissipating structures at the drainage outlets and discharging points</td>
<td>Contractor</td>
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<tr>
<td></td>
<td>Design and construct culverts and pipes that have adequate openings to pass the design flood in order to minimize scouring and erosion of downstream easily</td>
<td>Consultant</td>
</tr>
<tr>
<td></td>
<td>Provision of cross drainage structure to let the flood join to the nearest stream</td>
<td>Consultant</td>
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<td></td>
<td>Re-grassing road side slopes; where necessary the road side ditches will be lined with concrete or stone pitching to prevent erosion. Frequent turnouts will be provided which discharge to natural drainage channels. Protection works at drainage outfalls will be installed where necessary to reduce erosion.</td>
<td>Contractor</td>
</tr>
<tr>
<td>Destruction of natural forest and road side cultivation</td>
<td>Avoid realignments and detour roads where there is significant amount of vegetation and road side cultivation</td>
<td>Consultant and contractor</td>
</tr>
<tr>
<td></td>
<td>Confining clearing of vegetation to what is absolutely necessary</td>
<td>Contractor</td>
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<tr>
<td></td>
<td>Allow farmers adequate time to harvest their crops before land take</td>
<td>Owners or farmers</td>
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<td></td>
<td>Establish a nursery at each Wereda to propagate and plant trees in areas adjacent to the roads and at areas affected due to operation of quarries and borrow pits.</td>
<td>Socio-economic supervisors in collaboration with each Woreda natural resource development desk and local community</td>
</tr>
<tr>
<td>Impact on settlement</td>
<td>Minimize the risk at the road particularly in a dense settlement area such as towns/built up areas</td>
<td>Consultant and contractor</td>
</tr>
<tr>
<td></td>
<td>Allow affected persons to salvage building materials and other assets</td>
<td>Owners and Clients (ERA)</td>
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<tr>
<td></td>
<td>Pay compensation and resettle the affected people</td>
<td>Client (ERA)</td>
</tr>
<tr>
<td>Impact on health</td>
<td>Do not induce water related diseases by creating temporary and permanent water holding areas which favor mosquitoes</td>
<td>Contractor</td>
</tr>
<tr>
<td></td>
<td>Restore borrow pits and quarry areas</td>
<td>Contractor</td>
</tr>
<tr>
<td>Impact on existing infrastructure</td>
<td>Minimize dust emission by watering the road during construction</td>
<td>Contractor.</td>
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<td></td>
<td>Put visible and appropriate warning signs on the road during construction</td>
<td>Contractor</td>
</tr>
<tr>
<td>Impact on cultural, religious and archeological resources</td>
<td>Relocate power lines, telephone lines and water points before commencing of the road construction</td>
<td>Owners and ERA</td>
</tr>
<tr>
<td>Impact on the aquatic ecosystem</td>
<td>Design roads to avoid impacts on burial places.</td>
<td>Consultant</td>
</tr>
<tr>
<td></td>
<td>Do not block natural flow of streams Contractor</td>
<td>Contractor</td>
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<tr>
<td></td>
<td>Do not select quarry sites on river beds and banks Contractor</td>
<td>Contractor</td>
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<td></td>
<td>Do not dump spoils into wetlands and streams</td>
<td>Contractor</td>
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<td></td>
<td>Avoid polluting rivers or streams during concreting work from cement slag</td>
<td>Contractor</td>
</tr>
<tr>
<td>Impact on wildlife</td>
<td>The workforce should not hunt wild animals for food or sport</td>
<td>Contractor, socio-environmental supervisors in collaboration with each Wareda Natural resource conservation desk</td>
</tr>
<tr>
<td>Road safety during construction and operation phase</td>
<td>Install road safety signs at all accident prone spots as installation/erection of safety signs in bill items</td>
<td>Contractor</td>
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<tr>
<td></td>
<td>Provide traffic awareness</td>
<td>Contractor in collaboration with traffic police of the area and local NGO</td>
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<td></td>
<td>Use clear, labeled properly and meaningful traffic signs and speed limits, especially at road crossing of people</td>
<td>Contractor in collaboration with traffic police of the area</td>
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<td></td>
<td>Assign traffic controllers to regulate the passage of construction vehicles</td>
<td>Contractor in collaboration with traffic police of the area</td>
</tr>
<tr>
<td></td>
<td>Construct half of the road while the other is used for traffic</td>
<td>Contractor in collaboration with traffic police of the area</td>
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<td></td>
<td>Flagmen, yellow flashing lights, chevron and speed reducing signs at such site where the road or bridge is reduced to half width for control and regulation of vehicles approaching from both ends of such sections</td>
<td>Contractor</td>
</tr>
<tr>
<td></td>
<td>Graveled detours to be watered as when necessary to prevent dust generation that affect visibility of drivers</td>
<td>Contractor</td>
</tr>
</tbody>
</table>
### Social impact from migrant workers
- Construction workers will be given health awareness
  - NGOs in collaboration with contractor
- Avoid accommodating labor force in or directly adjacent to villages
  - Contractor
- Recruit work force from the local community giving more chance to women
  - Contractor

### Slope instability
- Apply slope stabilizing mechanism as permanent installation on steep slope (i.e. grass/tree planting)
  - Contractor
- Install cut off drains above cut slopes
  - Contractor

#### 7. Environmental and Social Management and Monitoring Plan (ESMMP)

An environmental management and monitoring plan has been integrated within overall project management. It will be aimed at providing a high level of quality control resulting in a project which has been properly constructed as designed and functioning efficiently throughout its life. The Design Review Consultant will incorporate all the identified impacts and their necessary mitigation measures into the contractual documents for effective implementation.

Compliance monitoring will be carried out during the project work as this will assist control of the types of measures incorporated in project design and contract documents. The monitoring will play a major part in determining the overall environmental performance of the project. The total budget estimated for carrying out the ESMMP is **ETB 1.622 million**. The budget is spread over several budget lines/items: the implementation of environmental mitigation costs; the environmental management costs; monitoring and supervision of the measures and the set up of indicators; and capacity building and training.

Parts of the costs, particularly the implementation of environmental measures are included in the unit rates for the works and are the responsibility of the contactor. The other items of environmental and social mitigation costs will be specified in the tender documents under general provisions as lump sum or as an item in the Bill of Quantities and cost as part of overall project cost. The estimated budget for mitigating the impacts on the PAPs as compensation costs is **11,606,653 ETB** and will be met from the Ethiopian government budget.

#### 8. Public Consultation and Public Disclosure

Consultation with various stakeholders has been an integral part of this EIA process. People interviewed along the route, including elders and elected members of the community, have given a positive reaction to road improvement. The project road is important in terms of providing access to medical facilities, irregular trips taken for meeting people, and for transporting food, supplies and other items. Social acceptability of the project road is very high.
Consultations with Government Organizations

The construction of both realignments will bring socio-economic improvement in the region. As an outcome of the consultation with the zone and Woreda Administration/officials, the following consensus actions have been reached:

The officials have agreed to provide replacement land for the relocation of affected persons; they have agreed to keep the ROW and prevent people not to build any houses in the designated ROW width. No compensation will be paid to persons or households after the cut off date for the RAP implementation; they have also agreed to deliver all necessary support to the PAPs during the RAP implementation.

Consultation with Non-Governmental Organizations

Recognising the increased human interference into the natural environment, many NGOs are currently working on the protection and development of natural resources including forest resources. One of these NGOs is “Farm Africa” that is working on the participatory forest resources management in Bonga area. The principal objective is to develop ownership spirit among the locals thereby ensure the sustainability of forest management through participation. It can be expected that attempts at interference with the natural forestland in the area will result in a clash with the Farmer’s Participatory Forest Protection Cooperative Group.

9. Complementary Initiatives

The proposed project in its present scope will affect more than 50 families (i.e. more than 200 persons). Therefore a land acquisition and resettlement action plan (LARAP) has been prepared and is annexed as a Resettlement Action Plan (RAP).

JICA is financing a project on Participatory Forest Management in the road zone of influence to ensure sustainability of forest resources through an effective community participatory approach. This is as part of the mitigation measures to prevent deforestation along the road alignment as the local communities depend highly on forest resources (honey etc.) for subsistence.

10. Conclusion

There has been extensive consultation with officials and representatives of potential beneficiary groups along the road. There is no local objection that has been recorded. Conservation interests have been alerted to the construction of the road.

The project is judged to be environmentally and socially acceptable. The ESIA has identified environmental issues and social impacts and adequate measures are planned for mitigation and compensation. As a condition of the loan, the resettlement and compensation arrangements will be implemented prior to construction of the road.
The environmental management and resettlement plans (*estimated at ETB approximately 13.3 millions*) will be monitored by ERA and the designated units. The environmental management plan will be supervised by the Project’s consultant. The RAP will be implemented by the Resettlement Implementation Committee. The reports submitted for the project during the construction phase will include details on the status of implementation of the compensation programme. These will be copied to the two relevant provincial offices. Supervision visits will be undertaken by the Bank to ensure compliance.

The investment will have many positive impacts on beneficiary livelihoods and in the potential economic expansion of a region that has been disadvantaged in recent years yet has significant potential for trade, particularly in agricultural commodities such as coffee for export and spices.

(RAP Summary is attached as Annex)
Annex

Resettlement Action Plan (RAP) Summary

Jimma-Mizan Road, Ethiopia

Introduction

The Jimma-Mizan Road Project is 224km long and is located in Oromia and the Southern Nations Nationalities and People's Regional State in the south-western part of Ethiopia. The upgrading of the road to asphalt standard is considered to have a crucial role in developing and integrating the regional economy. The road represents a potentially important inter-regional link, serving presently inaccessible districts and interconnecting the western and south-western corridors.

The first 74km of the road is located in the Jimma Zone of Oromia while the last 95km of the road project is located in Kaffa Zone and 40 km in Bench Maji Zones of the Southern Nations Nationalities and People's Regional State. The Feasibility Study and the ESIA of the project road were completed in 2002 and updated in 2006. Significant resettlement implications were identified and as the costs of the road construction are going to be financed by the African Development Bank (AfDB) as part of intervention in the RSDP, a Resettlement Action Plan (RAP) is required.

A Resettlement/Compensation Action Plan (RAP) for the PAPs (Project Affected Persons) along the road has been done, so that the potentially adverse social impacts of the road construction operations can be minimized. This Resettlement Action Plan (RAP) has been completed based on a survey of all the people who have been living along the road and their properties/ assets. A full listing for each locality of the PAPs and their assets has been established for compensation.

Legal Framework

There are a number of policy legal instruments that govern issues pertaining to compensation and resettlement. Among the most important is the Constitution of the Federal Democratic Republic of Ethiopia, which has provisions regarding land tenure, expropriation, compensation, public consultation, gender and environmental issues.

The Environmental Policy of Ethiopia (EPE) aims to promote sustainable social and economic development through the sound management and use of natural, human-made and cultural resources and the environment as a whole.
Other legal documents pertinent to this project are:

ADB’s Policy on Involuntary Resettlement, 2003;
The Ethiopian Civil Code;
The Federal Rural Land Administration Proclamation (proclamation No.89/1997)
The Ethiopian Roads Authority Re-establishment Proclamation No. 80/1997
The Environmental Protection Re-establishment Proclamation No. 295/2002
The Regional Proclamation No 28/1999 for the establishment of the Oromia Regional National
State Rural Roads Authority
Regulation for the Establishment of Oromia Environmental Protection Office, Regulation No.
The Regional Proclamation No 26/1999 -- Southern Nations, Nationalities and Peoples Regional
State for establishment of Rural Roads Authority.
ERA Resettlement Policy Framework, February 2002

Potential Social Impacts

The consultations and the socio-economic survey of the Project Affected Persons revealed that a
total of 1,073 PAPs would be fully and/or partially affected along the project road. Fully-affected
PAPs are those individuals whose whole properties were affected by the road project, while
partially affected persons are those where some part of their properties/resources affected. Of the
affected 1,073 PAPs, 133 (12.4 %) were taken as a sample representative to be interviewed out
of which 17 were from rural and 116 were from urban areas. Table 1 shows the distribution of
sampled PAP households for the 3 Zones along the road.

<table>
<thead>
<tr>
<th>Zone/Woreda/Town</th>
<th>Rural HH</th>
<th>Urban HH</th>
<th>Total PAPs Interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jimma</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seka &amp; Shebe Towns</td>
<td>5</td>
<td>46</td>
<td>51</td>
</tr>
<tr>
<td>Kaffa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gimbo, Bonga, Ufa &amp; Chena</td>
<td>8</td>
<td>46</td>
<td>54</td>
</tr>
<tr>
<td>Bench Maji</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wacha &amp; Temenjayah Towns</td>
<td>4</td>
<td>24</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>116</td>
<td>133</td>
</tr>
</tbody>
</table>

Source: Survey Results, August 2005/January 2006.

The survey shows that most of the affected persons are living in Jimma and Kaffa Zones, the
extent to which the PAPs are affected is depicted in Table 2. It also indicates that 42.1% of the
sample will be partially and 57.9% fully affected by the road project. However, for all persons
whose structures are even partially affected, full compensation payment may need to be
considered.
Table 2: Form of Loss of the Interviewed PAPs

<table>
<thead>
<tr>
<th>Affected Assets</th>
<th>Jimma Zone Woredas</th>
<th>Kaffa Zone Woredas</th>
<th>B/Maji Zone Woredas</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Seka &amp; Shebe</td>
<td>Bonga, Gimbo &amp; Chena</td>
<td>Wacha &amp; T/Yahz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partially Affected H.H</td>
<td>21</td>
<td>23</td>
<td>12</td>
<td>56</td>
<td>42.14</td>
</tr>
<tr>
<td>Fully Affected H.H</td>
<td>30</td>
<td>31</td>
<td>16</td>
<td>77</td>
<td>57.9</td>
</tr>
<tr>
<td>Total</td>
<td>51</td>
<td>54</td>
<td>28</td>
<td>133</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Survey Results, August 2005/January 2006.

Compensation

For the total of 1,073 PAPs that will be affected a compensation package to cover houses, crops, trees and business of the PAPs has been estimated at a total of Birr 7,913,443. An amount of Birr 2,280,000 has been estimated for costs of relocating public utilities that would bring the overall costs for RAP implementation to Birr 11,606,653 including costs for disturbance/mobilization and contingency costs. The total RAP implementation cost is indicated in Table 3.

Towns and villages in both regions Oromia and SNNP (Jimma and Kaffa Zone Woredas are mostly found in the ROW for which more compensation cost is required while B/Maji Zone has less costs.

Implementation and Monitoring

Implementation of the RAP will broadly involve the following activities:
- Formation of the Resettlement Implementation Committees
- Awareness creation among PAPs
- Right-of-way survey
- Acquisition of land
- Identification of land for resettlement
- Payment of compensation
- Land preparation
- Construction of new houses and other infrastructures
- Monitoring the implementation

Performance monitoring will be undertaken through which the physical progress of the RAP can be measured. Indicators would include the number of meetings held with the PAPs, number of complaints lodged, details of the compensation payments made, the number of houses /structures constructed, the number of PAPs relocated and the degree of social cohesion with the host community.

Impact monitoring will be done through an external evaluation, which will assess the effectiveness of the RAP and its implementation with respect to meeting the needs of the PAPs. The evaluation will assess, inter alia, the appropriateness of the relocation sites, the implementation schedule, the grievance mechanism, and mechanisms for assisting vulnerable groups. The Resettlement Implementation Committee will take on the responsibility for the
coordination, management and monitoring of the practical day-to-day implementation of the resettlement activities, including the disbursement of compensation; ERA’s ROW Branch will be in charge of monitoring the entire resettlement process.

Cost for the RAP

The overall total cost for the RAP implementation has been estimated at a total of Birr 11,606,653. A disturbance/mobilization and contingency cost is included at 10% of the total compensation cost. A RAP cost summary is presented in Table 3.

Table 3: Summary of Costs for RAP

<table>
<thead>
<tr>
<th>Item</th>
<th>Total Cost (Birr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compensation for Structures and Crops/Trees</td>
<td>7,913,443.41</td>
</tr>
<tr>
<td>Public Utilities (Telephone and Electricity Poles and Water Supply Systems)</td>
<td>2,280,000.00</td>
</tr>
<tr>
<td>Internal and External Monitoring and Evaluation Costs</td>
<td>358,060</td>
</tr>
<tr>
<td></td>
<td><strong>Sub-Total</strong></td>
</tr>
<tr>
<td>Disturbance /Mobilization and Contingency Cost (10%)</td>
<td>1,055,150</td>
</tr>
<tr>
<td></td>
<td><strong>Grand Total</strong></td>
</tr>
</tbody>
</table>

For proper and smooth implementation of the road construction all compensation will be undertaken before the commencement of road construction works.