



AFRICAN DEVELOPMENT  
BANK GROUP

**PROJECT: TRANSPORT SECTOR SUPPORT PROGRAM**

**COUNTRY: UNITED REPUBLIC OF TANZANIA**

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**ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT SUMMARY –  
ZANZIBAR ROADS – Bububu – Mahonda – Mkokotoni Road and Rural Roads**

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**ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA)**  
**SUMMARY – ZANZIBAR ROADS (Bububu-Mahonda-Mkokotoni Road)**

**Project Title: Tanzania Transport Sector Support Program - Bububu-Mahonda-Mkokotoni and Rural Roads**

**Project Number: P-TZ-D00-002**

**Country: Tanzania**

**Department: OITC**

**Division: OITC.2**

**Project Category: Category 1**

## **1. INTRODUCTION**

The Government of the United Republic of Tanzania and The Revolutionary Government of Zanzibar (RGoZ) through the Ministry of Infrastructure and Communications (MoIC) intends to upgrade part of the Zanzibar Town Roads, namely Bububu – Mahonda- Mkokotoni Road and three (3) of seven (7) rural roads with a total length of 20.78 km in Unguja Island. The rural roads include Matemwe - Muyuni Road (7.58 km), Fuoni-Kombeni Road (8.59 km) and Pale-Kiongele Road (4.61 km) totaling 20.78 km.

The Bububu-Mahonda-Mkokotoni road is asphalt paved. The road requires immediate upgrading, widening and construction of two-lane bridges to cater for the increased number of vehicles over the years. The existing condition of the rural roads is gravel/earthen roads. The rural roads are feeder roads which are currently in a poor state, whereby some sections of the roads become impassable during rainy season. It is expected that upgrading of these roads will enhance the economic situation of the government of Zanzibar through improved access to tourism, and transportation of goods and commodities as well as socio-economic livelihood to the general communities in the project areas.

In March 2011, the Government of United Republic of Tanzania represented by Ministry of Infrastructure and Communications (MoIC) of the Revolutionary Government of Zanzibar appointed Intercontinental Consultants and Technocrats Pvt. Ltd. (ICT), India, In association with Apex Engineering Company Ltd., Tanzania, to provide “Consultancy Services for Feasibility Study, Preliminary Design, Detailed Engineering Design, Environmental and Social Impact Assessment, Resettlement Action Plan and preparation of Tender Documents for upgrading of Zanzibar Town Entry Roads and Rural Roads. The Consultancy Contract Agreement was signed on 15th March 2011.

In September 2014, the Government of the United Republic of Tanzania (URT) requested the African Development Bank (AfDB) to finance the upgrading of the Bububu-Mahonda-Mkokotoni Road and three rural roads in Ugunja Island.

According to AfDB environmental screening guidelines, projects involving upgrading and rehabilitation of major roads, are classified Category 1, and these require detailed environmental and social impact assessment. Similarly, according to the environmental legislation in Zanzibar, specifically the Environmental Management for Sustainable Development Act of 1996 and Environmental Impact Assessment (EIA) Regulations of 2002, all development projects are subjected to EIA process entailing registration, screening, scoping and impact assessment. The proposed road upgrading project falls under mandatory list of projects requiring full environment and social impact assessment as per the above cited regulations.

The ESIA studies for each road section were therefore carried out in fulfilment of these requirements. The ESIA studies were submitted to the Department of Environment, Government of Zanzibar in 2014 for review and disclosure to the general public in accordance with the Zanzibar Environmental Management for Sustainable Development Act 1996. This ESIA Summary has been prepared from the project documents in accordance with AfDB's Environmental and Social Assessment Procedures (ESAP). In addition, over 200 persons will be involuntarily displaced by the project. A full Resettlement Action Plan (RAP) has been prepared and is included as Annex 1.

## **2. POLICY LEGAL AND ADMINISTRATIVE FRAMEWORK**

Environmental awareness in Zanzibar has significantly increased in recent years. The Government has been developing and reviewing national policies to address environmental management in various sectors including road sub-sector. Among others, the objective of these policies is to regulate the development undertaken within respective sectors so that they are not undertaken at the expense of the environment. The Zanzibar Environmental Policy, launched in 1993 and reviewed in 2013, paves the way for the protection, conservation, restoration and management of Zanzibar's environmental resources, such that their capacity to sustain development and maintain the rich environmental endowment for the present and future generations is unimpaired.

In Zanzibar, the main legislation that regulates environmental systems is the Environmental Management for Sustainable Development Act of 1996. The Act makes ample reference to long-term conservation, management and sustainable use of natural resources by providing regulatory measures that can be enforced by the institution responsible for Environment.

Part five of the Act describes requirements for EIA activities in Zanzibar. Section 38(1) of the Act stipulates that *"no person shall undertake any activity which is likely to have a significant impact on the environment without an EIA certificate issued under this Act"*. Moreover, section 38 (2) emphasizing that *"no licensing institution shall issue a license, permit, certificate, or other forms of approval for an activity which is likely to have a significant impact on the environment unless an EIA certificate has been issued for the activity"*. Part five of the Act further elaborates on the stages of ESIA, for instance screening, scoping, environmental impacts statement, and the review process.

Of key significance is the Environmental Performance Bond regulations 2002, which states that Environmental Performance Bond (EPB) shall be 10% of the capital investment of the project and be deposited in the Ministry responsible for Environment Account after the project approval process.

Other sectoral policies and legislation relevant to the proposed project were reviewed and their relevance and applicability analysed. The Land Tenure Act 1992 is significant to the proposed project since the law declare all natural land within the islands of Zanzibar, occupied or unoccupied land to be "Public land". The Act empower the President, to revoke the "Right of Occupancy" of any landholder for the "public/national interest" should the need arise. When this is done, the law states that compensation shall be to the fair market value of the land and any improvements thereon.

The African Development Bank's Integrated Safeguards System has been reviewed. The roads exceed the Bank threshold of 50Km and there are likely to be significant disturbance and impacts on the traders, businesses and settlements along the road corridor hence Operational Safeguards (OS) 1 on Environmental Assessment and OS2 on Involuntary Resettlement are triggered. The project roads will largely follow the existing alignments. As such, the environment along the corridor shall not be modified hence OS 3 on Biodiversity is not triggered. OS 4 on Pollution Prevention and Hazardous Substances is triggered since construction will involve use of fuels and possibly some hazardous materials. OS 5 on Labour, Working Conditions, Occupational Health and Safety is triggered since the construction will involve a significant number of construction workers. On Climate Change, the project has been classified as Category 2 according to the Bank's Climate Safeguards System. This implies that the proposed project could be at risk from climate change and further review is therefore required to consider broad climate trends and identify practical risk management and adaptation measures that should be integrated into the project design and implementation plans.

### **3. PROJECT DESCRIPTION AND JUSTIFICATION**

**Project Location:** The Project Roads are located in Unguja Island which is part of Zanzibar archipelago (i.e. the Unguja and Pemba islands). Zanzibar comprises, principally, of two large islands, Unguja and Pemba, both located on the Tanzania eastern coast of Indian Ocean. The islands are located between latitude 04°51' and 06°28', South, and longitude 39°11' and 39°53' East.

Bububu-Mahonda-Mkokotoni road improvement will involve a combination of overlaying the existing road, partial reconstruction and/or total reconstruction of roads sections as necessary. The replacement of existing drainage structures and the construction of new, additional drainage structures are also an important feature of the proposed works. Pertinent features of the road design include: (a) The width of the bitumen carriageway will be 6m carriageway. (b) The width of the paved footpath cum Cycle track on each side is 3.0m. (c) The width of the Median varies from 1m to 1.5m. (d) The Corridor of impacts varies from 18m to 21m (Majority are 21m). (e) A road Right of Way of 30m was adopted by the design. (f) Cross-drainage structures, intersections and ancillary road works.

The rural roads improvements will involve upgrading the existing gravel/earth roads to bitumen standard surfaced with full pavement. The replacement of existing drainage structures and the construction of new, additional drainage structures is also a feature of the proposed upgrading. Pertinent features of the road design include: (i) The width of the bitumen carriageway is 6m; (ii) The width of the sealed shoulders will be 1.5m and gravel shoulders 0.5m on each side; (iii) A road reserve corridor of 24m on the project Roads shall be adopted except 30m on Fuoni – Kombeni Project Road; (iv) Cross-drainage structures, intersections and ancillary road works.

The Bububu - Mahonda – Mkokotoni road (30.994km) is one of the Zanzibar Town Entry Roads recommended for rehabilitation under the Zanzibar Transport Master Plan. The road is located on Unguja Island and is one of the 3 north-south arterials serving the island. It is an extension of the Town Entry Roads but it is mainly rural. The Zanzibar Rural Roads comprising the Matemwe - Muyuni Road (7.58km), Fuoni – Kombeni Road (8.589km), and Pale – Kiongele Road (4.611km) are located north of Unguja Island and serve mostly as connectors to the main arterials and main villages.

#### 4. DESCRIPTION OF THE PROJECT ENVIRONMENT

*Climate:* Temperatures in Zanzibar are generally high during short dry season of January and February, with maximum mean of 32°C, and low during cool season lasting from May to September. The mean annual maximum and minimum temperatures are 29.3°C and 21.1°C respectively. The rainfall pattern is bimodal in nature, with long rainy season from mid-March to end of May and short rains during October to December. The annual rainfall in Unguja Islands is about 1600 mm and there is more rainfall in the Western sides of the Island than the East.

*Topography:* The main topographic feature of Zanzibar is a series of flat low “corridors” bounded by a number of parallel ridges running in North-South direction. Prominent amongst them are the three topographic zones identified as follows: (i) The undulating and elevated central and western area, incised on the western coast; (ii) The channel or corridor zones in the central area which form valleys with gentle slopes; (iii) The flat coastal periphery or ‘coral rag’ country.

The topography varies between 0 – 100 m above mean sea level. The island is separated from the Tanzanian mainland by a channel, which at its narrowest point is 36.5 kilometres. The island is about 85 kilometres long and 39 kilometres wide, with an area of 1,464 km<sup>2</sup>. Unguja is mainly low lying, with its highest point being 100 metres above the sea level.

*Geology and Soils:* The Zanzibar archipelago consisting of Unguja Island, Pemba Island and other surrounding islets are part of ancient Miocene Rufiji/Ruvu delta. The core of these islands have rocks of Miocene age to recent calcareous sediment with limestone of marine origin covered subsequently by sand, silts and clays brought by rivers from East African mainland. The Masingini ridge is the only part of the island where the bedrock is composed of sandstones and could therefore be considered to be the source of siliciclastic sediments found on the beaches of the western coast of the island and in few patches off Zanzibar town. The main part of the island is however consisting of coralline limestone formations of Pleistocene age.

*Hydrology and Water Resources:* The surface runoff in Zanzibar Island is found to pass through three types surface water bodies: the coastal rivers, the inland rivers and springs. The coastal rivers comprise of Bububu, Zingwe zingwe, Kitope, Mchanga, Mwanakombo and Kipange. Additionally to the coastal rivers there are a number of rivers that flow but fail to reach the sea as they disappear in the coral rag limestone into sink holes locally known as *pokezi*. Rivers which fall into this category are the Kinyasini, Pangenji and Mwera. The flow of these rivers has some resource value contribution to the groundwater recharge. However, since most of them disappear into sink holes (*pokezi*) near to the coastal aquifer, they are also regarded to pass some of the storm water to the sea.

The Zanzibar Island has a number of springs, the major ones being the Bububu and Mtoni springs. The springs exist either as discrete flows or diffuse seepage. There are a number of high flowing springs that discharge around the coast; Kiwani Bay in the Kaskazini West and Kombeni Bay in the south are examples of these types of springs.

*Land Use and Agriculture:* Land use in Zanzibar comprises basically of small holder mixed farming system. There are two agro-ecological zones, the plantation area and coral rag area. The plantation area occupies the fertile upland and valley bottom areas. In total there are some

130,000 ha of such land. Around 90% of this area is currently under agricultural production of which a small percentage is irrigated. The marginal coral rag area is characterized by relatively poor soils. Some 20% of this land is cultivated and most of its inhabitants survive on fishing, lime burning and charcoal making. Most of the project roads span into coral rag areas except Pale-Kiengele and Fuoni - Kombeni roads, which are located in western fertile soils corridor characterized by intense agricultural activities.

*Flora/ Vegetation:* The project roads are generally dominated by large trees (exotic species) and a few indigenous trees. These trees include *Mangifera Indica* (Mango trees), *Cocos Nusifera* (Coconut tree), *Syzygium cumini* (Water Bessie tree), *Terminalia catappa* (almond tree) and *Casuarinas* species, Fig trees (Mikuyu) and neem trees (Miarobaini). Some of the project roads have agriculture activities taking place and crops like cassava, banana, were observed etc. To a small extent the project road is covered by shrubs and bushes.

*Fauna:* There are no wildlife in the project influence zone. Communities have domestic animals such as chicken, goats, cats.

*Air Quality, Noise and Climate Change:* The ambient air quality for all the project roads is generally good as the only source of air pollution is traffic which is relatively very low. The noise levels were very low since the traffic is low. It is expected that, noise levels will go up during construction and marginally during operation due to increased traffic. Climate change issues are being addressed at the national level. Evidence of climate change impacts have been witnessed such as unexpected floods, beach erosion and other impacts to water resources.

*Water Quality:* The Zanzibar sources of water include; groundwater in the form of boreholes, shallow wells, springs, and cave wells, surface water in the form of perennial and seasonal rivers, lake and ponds, rainwater and sea water. The water quality are being affected by urbanization, deforestation and over extraction. The critical water quality issues facing water resources management in Zanzibar include high salinity basically due to salt water intrusion (which is caused by over extraction from local boreholes or shallow wells), high chloride and faecal contamination for the case of shallow wells located within human settlements areas. In the rural areas, some pit latrines are located very close to shallow wells and hence become sources of faecal pollution.

*Population:* Bububu- Mahonda- Mkokotoni road traverses three districts namely Magharibi, Kaskazini A and Kaskazini B. The population in three districts is 78, 1133 in accordance with 2013 national census. The five districts within which the rural roads traverse have a total population of 672,688 (2013, National Census).

## **5. PROJECT ALTERNATIVES**

*Pavement Alternative:* For the projected traffic loading on the Bububu – Mahonda – Mkokotoni Road, it is recommended that the section with TLC 20 traffic be constructed with a 50mm Asphaltic Concrete surfacing over 150mm crushed rock base on top of 150mm C2 + 150mm C1 sub-base, whilst the section with lower traffic loading (TLC10) will be constructed with a DBST surfacing over 150mm crushed rock base on top of 200mm C1. For the Zanzibar rural roads, it is expected that embankments will be built to provide subgrades with 15% CBR, and with traffic loading ranging from TLC 1 to TLC 3, the recommended pavement structure is

DBST surfacing on top of 150mm crushed rock or cement stabilised base course on 150 mm to 200mm sub-base.

No project Alternative: The no project alternative entails retaining the current status quo without upgrading the existing project roads to bitumen standard. Adopting this option would mean avoiding most of the negative impacts associated with the project and missing all the positive benefits such increased access to agricultural markets, increased transport and mobility in the project areas, increased agricultural productivity due farmers timely getting farm implements, economic growth in the project areas etc. Therefore adopting a no project alternative would mean failure to implement the transport policy in Zanzibar.

## **6. POTENTIAL IMPACTS**

### **Positive Impacts**

Employment Opportunities: Upgrading of the project roads in the Island is among the strategies for poverty alleviation in Zanzibar. The improved roads will open more opportunities for self-employment income generating activities. A family with sufficient and regular income is more likely to afford paying for the costs of education and health services for its members apart from getting sufficient food.

Most of the casual labourers and some skilled workforce will be absorbed from within the relevant Shehias. The Project is expected to employ more than 200 casual labourers from the shehias. In addition, the local people will have opportunity for small businesses due to the market created by the construction workforce.

### **Negative Impacts**

Land Take: Project Affected Persons in both the upgrading of Bububu-Mahonda-Mkokotoni road and the rural roads will suffer loss of value of affected land and fixed assets such as structures, crops, trees etc; partial physical loss of assets or resources used in production (eg parts of farmland) and loss of access to these assets or resources or loss of income sources or means of livelihood. Structures include built structures for residential (some with rooms for retail business outlets) units. Agriculture assets: farm properties such as trees and plantation. Social displacement includes loss and breakdowns of social, cultural and spiritual networks/ties and structures especially where displacement involves relocation of PAPs to other areas.

Disruption / Relocation of Utilities: Some of the infrastructure such as pipe network and power lines are either under, near or cross the project roads and need to be relocated during construction. However, this relocation can cause the following impacts to the community; (i) Disruption of service to the community. (ii) Cost implications to the authorities managing the infrastructure.

Water and Soil Pollution: The Unguja roads development will require the creation of drainage channels in order to drain concentrated run-off from the road. Water or soil pollution by accidental spillage of fuel or other materials and chemicals associated with road construction is an undesirable possibility. Obviously, it is not possible to predict the location or type of spillage, but it is considered that any spillage to soil will be local in nature and remediation

should not be difficult. Land and ground water pollution can occur anywhere along the project roads.

*Impacts of Material Sourcing:* Construction of the roads will have direct impacts related to excavation; quarrying and deposition of spoil material. Significant volumes of earthworks fill; road gravel and rocks will be extracted during project execution. Unguja being an island, the rate of extraction of her building resources (rocks and gravel) affects the construction industry in the long-term. Eight (8) existing borrow-pits were identified and samples were taken for laboratory tests to check quality of the available materials. Three of the sites are in prohibited areas around the airport and the military barracks. Five locations for both borrow sites and hardstone quarry were identified in Kandwi, Matemwe, Kibele, Jadidi. Three sand source locations were identified in Donge, Bumbwini and Pangatupu.

*Loss of Vegetation and Natural Habitats:* Land clearance to obtain the required additional area to accommodate the roads carriageway and associated road shoulders will involve uprooting vegetation which falls within the area as well as displacing topsoil. Detours to provide access to traffic during construction phase will further cause loss of habitat.

## **7. MITIGATION MEASURES AND COMPLIMENTARY INITIATIVES**

### **Mitigation Measures**

*Mitigation for Land Take:* A full Resettlement Action Plan (RAP) consistent with RGoZ guidelines and the AfDB Resettlement Safeguard Policies has been prepared. A summary of the RAP is included as an Annex to this ESIA Summary. The compensation recommended for payment to the project affected persons shall be in accordance with the provisions of Zanzibar Laws and Regulations on Compensation. Crops and farmlands to be affected by the project shall be valued and compensated prior to commencement of civil works.

*Utility Relocation Plan:* The Contractor shall prepare a Utility Relocation Plan and ensure that the authorities managing these infrastructures Zanzibar Water Authority (ZAWA) and Zanzibar Electricity Services Company (ZESCO) are involved from the early stages of this project so as to have an integrated planning. Early notice shall be given to the community before any service interruption. The funds for the relocation of this infrastructure shall be part and parcel of the project.

*Mitigation for water and soil pollution:* Spillage to watercourse is harmful to all living beings. In case of accidental spillage, the contractor shall exercise every effort in order to minimize the associated risks. For instance refueling of plant or transfer of materials should not be carried out near water bodies, and any local spillage to soil should immediately be remedied. Good housekeeping shall be practiced within material storage compounds or vehicle maintenance yards where the possibility of spillage is great. This can easily be done by provision of Spill tanks and Secondary containment at vehicle maintenance yards.

*Mitigation for Material Sources:* Where construction materials such as gravel and stones are to be obtained from village lands, the material shall be purchased and this will be officially negotiated with villagers and/or village government in order to avoid conflicts. The contractor may be compelled to pay a small fee to the villager and/or village government. Potential long term environmental impacts of borrow pits and quarry sites relate to the way they are left once



the resource has been extracted. In this case, all borrow pits and quarries shall be rehabilitated and proper landscaping done after completion of the road construction. Pits shall not be left with steep or vertical sides. The topsoil shall be stock piled for later use in reinstating the pits. Shallow slopes will encourage rapid re-vegetation thus preventing erosion as well as providing safety to animals.

Mitigation for loss of vegetation and Natural Habitat: The contractor shall seek permit from the Department of Forestry before felling of Trees; The road projects shall avoid as much as possible felling of big trees that take many years to grow or other flora of outstanding importance. The contractor shall from time to time bring to site a forester from Department of forestry to check for existence of such flora. Close supervision of earthworks shall be observed in order to confine land clearance within the proposed new road carriageway boundaries. Farmers will be notified early enough to enable them harvest the affected crops on time and be compensated to enable them create new farms. Topsoil shall be stockpiled and used for reinstating flora along the road. It is assumed that displaced fauna will return once the work is over, or seek another habitat locally. The contractor shall be instructed to give the uprooted trees/thickets in the road reserve area to the villagers through village governments or any other arrangement may seem convenient provided he does not contravene the Forest Acts 2002. The budget for re planting of the trees along the project road shall be part and parcel of the project cost. Department of Forestry shall handle the replanting of trees.

### **Complimentary Initiatives**

Tree Planting: The project has incorporated a tree planting program for replacement of trees that will be felled. The trees along the project roads shall also act as carbon sinks. Approximately 3,000 tree seedlings shall be planted in selected sections along the project roads and the road catchment.

HIV/AIDS, STI and TB Awareness: The project has included a HIV/AIDs sensitization and awareness component. Working in collaboration with ZANGOC (Zanzibar NGO Cluster) Zanzibar Aids Commission's (ZAC) Community Response Officer will lead the Service Provider (Consultant) in facilitating the community mobilization and prepare community specific plans reflecting localized issues and responses which will be implemented under the project. (ZAC) has developed a Community Capacity Enhancement (CCE) approach which falls under the responses to "general population" category. The CCE approach is facilitated by ZAC in both financial and technical expertise in the preparation of the community AIDS management plans which are bottom-up.

Jetty for the Fishing Community at Mkokotoni: Fishing is a major activity in the project areas; and among the main users of the said roads are fish mongers who come to buy fish to take to the markets. The project shall include in its design the construction of a jetty at Mkokotoni. This will make the fishing operations more safe and efficient. It is expected that fishermen and vendors, including youth shall benefit from this intervention.

Support to Social Amenities: Students of Chaani School along the Bububu-Mahonda-Mkokotoni road learn under precarious conditions. To improve the learning conditions the project has built into its activities supply of students' desks and teachers' tables and chairs. Water supply (Borehole) and Sanitation facilities shall also be constructed for the school. A Hospital on the Fuoni – Kombeni road and Kinyasini Market will also be supported with either a borehole or construction of sanitation facilities.

## 8. RESIDUAL EFFECTS AND ENVIRONMENTAL HAZARD MANAGEMENT

Assessment has been made to the environmental and social impacts that will prevail even after applying mitigation or enhancement measures. These include GHG emissions and material sourcing sites.

*GHG Emissions:* Greenhouse gas emissions from vehicle exhaust systems will still be generated even after applying suggested mitigation measures. The emissions shall therefore continue to contribute to global climate change impacts. However, with adequate implementation of the tree planting mitigation measures, the impacts severity will be reduced.

*Inadequate Restoration of Material Sites:* Zanzibar is a small country with limited natural resources related to road construction. Extraction of stones and gravel shall never be recovered. Moreover, physical land degradation created by establishment of borrow pits shall remain a scar spots on the entire relief. Inadequate restoration practices can further lead to emergence or intensification of diseases like malaria and bilharzia.

*Hazard Management:* Hazards and/or emergencies occurrence is inherent in any construction projects, whereas its severity normally increases with the scale of the undertaking. An emergency is a sudden unforeseen event, which may arise from natural, environmental, physical or personal unforeseen occurrences.

Emergencies which are likely to occur during the construction of the road project may cover one of the following events: (i) Worker injury at construction sites or workshops (mechanical, steel, or precast yard, carpentry), quarry, crusher plant, batch plant etc. (ii) Injuries to workers or member of the public due to collisions or run over; (iii) Fires or explosions at camp sites; (iv) Mishap spills of hazardous material such as large amount of concrete, bitumen, oil, fuel, or paint on the ground or in a river system; (v) Outbreak of pandemic diseases such as cholera, diarrhoea, meningitis disease; (vi) Serious pollution to the water source (by hydrocarbons) which is relied on by the local people for living.

*Accident and Emergency Response Plan:* The Contractor shall develop an Accident and Emergency Response Plan (ERP). The ERP is a detailed program of action to control and/or to respond to hazards by minimizing the effects of emergency requiring prompt corrective measures beyond normal procedures, protecting human life, minimizing injury, optimize loss control, and reducing the exposure of physical assets and the environment from an accident. The contractor shall form an Emergency Response Team (ERT) which will report through the normal, internal management chain-of-command. Due to the diverse locations, and variety of field activities, which will be involved during construction, establishment of more than one ERT may be necessary. Under all circumstances, prompt and proper treatment of the employee injured employee or person, as well as response of hazardous spills, fires, or explosions, is of utmost importance.

*Safety Training:* During construction, field personnel will also be trained by the Contractor in a variety of measures to make the job site safe: (i) When and how to notify all others when actions or activities undertaken by them could affect health or safety of employees; to inform the Contractor of all injuries to workers; and who/how to report to Contractor any unsafe conditions that come to their attention. (ii) If in the course of the work an employee could be exposed to hazardous chemicals, or harmful physical agents, the location of material safety

data sheets will be specified and made available for review. (iii) PPEs are expected to be worn that may include protective eyewear, gloves, hard hat, and footwear appropriate for the job site. Steel-toed footwear will be required on a project-specific basis.

## 9. ENVIRONMENTAL AND SOCIAL MONITORING PROGRAM

The purpose of environmental and social monitoring is to quantitatively measure the environmental effects of the road project. The environmental monitoring program will operate through the preconstruction, construction, and operation phases. It will consist of a number of activities, each with a specific purpose, key indicators, and significance criteria.

The monitoring of mitigation measures during construction will be carried out by the Contractor's Environmental Manager and Engineer's Environmental and Social Specialists. They officers will conduct mitigation monitoring as part of the regular works inspections. The weekly inspections will be undertaken by the Contractor's Environmental Manager. When available and appropriate the inspection will also be attended by Engineer's Environmental and Social Specialists, the main Contractors site management staff and their specialist advisors. A weekly Environmental Compliance Report will be produced following each inspection and will incorporate any actions identified by the client. The inspection report will summarize the status of the site's compliance, and include photographic records if appropriate.

The responsibility for mitigation monitoring during the operation phase dwell on the Environmental Section in MoIC as the implementing agency. The MoIC will provide DoE-Z with reports on environmental compliance during implementation as part of their annual progress reports and annual environmental monitoring reports. Depending on the implementation status of environmentally sensitive areas of the project, DoE-Z will perform annual environmental reviews in which environmental concerns raised by the project will be reviewed alongside project implementation.

*External Monitoring:* Environmental audits shall be part of the continuous monitoring programme in order to help determine the long-term effects of adopted mitigation measures. The audits will unveil the actual performance of mitigation measures and will allow effective measures to be included in future projects based on the legislation in force. Environmental audits would be a responsibility of the Department of Environment.

Table 1 presents the monitoring parameters and the location of monitoring site which will be considered for various environmental components during the project implementation phases.

**Table 1: Monitoring Parameters and Monitoring Sites for various Environmental Conditions**

S/ No.	Environmental Items	Monitoring Parameter / Unit	Location of Monitoring / Monitoring Sites
1	Air quality	Measurement of dusts and vehicular emissions such as SPM, etc	Close to school, madrassat hospitals and villages
2	Surface water quality	Monitoring of PH, DO, BOD, COD, etc	River (if any)
3	Flora and Fauna	Monitoring of flora and fauna and other resources	In vicinity of construction camp
4	Traffic movement	Monitoring traffic control devices	Construction areas

S/ No.	Environmental Items	Monitoring Parameter / Unit	Location of Monitoring / Monitoring Sites
5	Waste management including construction wastes	Monitoring of collection, transportation and disposal of solid waste. Inspection of waste disposal sites and construction camps.	Construction yard/labour camp
6	Health and safety	Monitoring of health and safety of workers and HIV/AIDS cases in project areas	Construction sites/labour camps along the road
7	Reporting and documentation	Regular reporting	Along the road
8	Tree re-plantation	Two tree seedlings to be planted for each tree felled	Roadside slope

**Table2; Environmental and Social Monitoring Costs**

S/N	Project Road	Length (km)	Environmental Monitoring Costs (TZS)	Child Labour/ HIV/AIDS Monitoring Costs (TZS)	Total Environmental and Social Monitoring Costs (TZS)
1	Matemwe-Muyuni	7.58	19,649,600.00	8,000,000.00	27,649,600.00
2	Fuoni-Kombeni	8.59	21,694,400.00	8,000,000.00	29,694,400.00
3	Pale-Kiongele	4.61	11,681,600.00	6,000,000.00	17,681,600.00
<b>Total Monitoring Costs</b>			<b>53,025,600.00</b>	<b>22,000,000.00</b>	<b>75,025,600.00</b>

## 10. PUBLIC CONSULTATION AND DISCLOSURE

Public and Stakeholders consultation for participation in the project design was conducted in three phases:

- Phase 1: Stakeholder consultations at ministerial levels and field visits during EIA reconnaissance survey were held between 17th to 23rd October 2013 and six government departments were consulted.
- Phase 2: Stakeholder participation during the SIA scoping exercises (22 consultations were held). Detailed interviews and public consultative meetings were carried out by the SIA team between 16th to 31st December 2013 in 16 Shehias which are along the immediate road impact areas in which 352 people attended the meetings with average of 24 people per meeting.
- Phase 3: Public and local communities at shehia levels consultation during the preliminary EIA study were done between 3rd to 19th January 2014 in which all the shehias along the project road roads were consulted with a view to realise key environmental issues of concerns at grassroot levels within the corridor of impacts of proposed project.

In all cases the meetings and consultations whether with authorities, institutions or the general public and the local communities were participatory in nature. In all consultations a very positive attitude was displayed and observed on upgrading the road to bitumen standard.

Among reasons provided for supporting this project include: improvement of travel and transportation of goods and people, improved access to markets for the farm products and industrial goods. Among positive impacts of the project as perceived by most stakeholders include: improving access to social services such as health services, access to schools (both primary and secondary schools), creation of employment opportunities, transporting agricultural crops to market and improve communication, transport and travel between communities. All those consulted believe that ultimately the upgrading will improve the livelihoods of people within and beyond the road impact area. However regardless of the positive attitude predisposition toward the road project concerns were raised regarding issues relating to compensation such as adequacy, transparency, fairness, openness and efficiency of the whole exercise.

The general recommendations advanced by the stakeholders include: (i) Compensation and valuation process and procedures be fair, timely and transparent. (ii) For roads leading to the ocean the design should extend to the ocean not as proposed now where the end point is a kilometre or two from the ocean. (iii) Mechanisms to address grievances be developed. (iv) Fair and equitable employment modality be worked out. (v) Bumps be constructed, road signs be made available at all required locations. (vi) Public utilities, especially water supply infrastructure be relocated before construction begins. (vii) Appropriate compensation rates for crops and trees be provided. (viii) Local people should be given priority during employment i.e a letter from Shehia should be used as evidence of being a local residence.

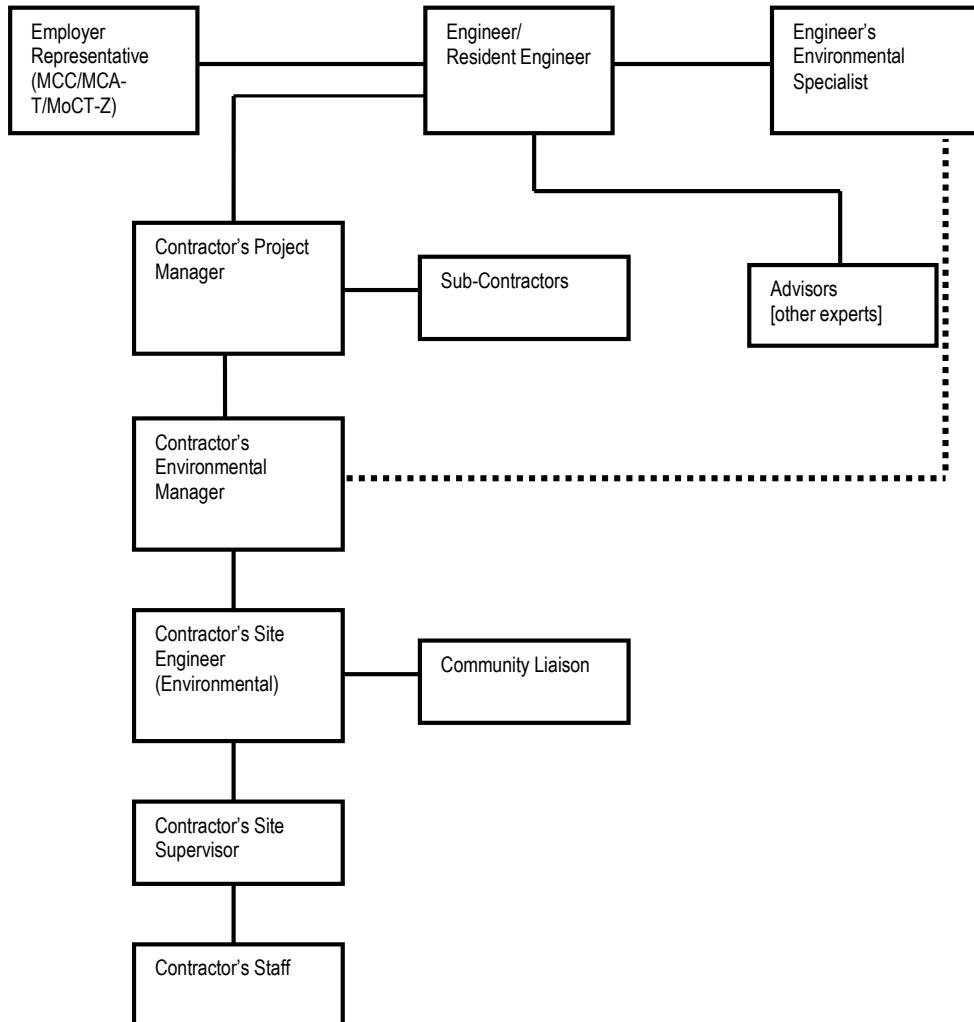
## **11. ESMP**

The Environmental and Social Management Plan (ESMP) presents the implementation schedule of the proposed mitigation measures to both environmental and social impacts as well as planning for long-term monitoring activities. The ESMP also includes the associated environmental costs needed to implement the recommended mitigation measures. The engineering designs have already included some of the mitigation measures recommended in this report. Additional recommendations are provided in the ESMP to enable the proposed roads to be more environmentally friendly. The implementation steps will involve the contractor, the Resident Engineer, Project Financier, MoCI, road users and the local communities at large.

*Implementation of ESMP:* The environmental and social mitigation and enhancement measures incorporated in the detailed engineering design will be attached to the Contract Documents. The Contractor shall take stock of the contents of the Environmental and Social Impact Assessment Report of the Project. The contractor will have an Environmental Expert with at least 10 years' experience in projects of similar nature. The expert will be familiar with the scientific measurement of environmental and social impacts and remedies and enhancement.

The Contractors will be supervised by a selected consulting firm (Engineer). One of the team members of the supervision team will be Environmental Specialist who is an expert in Environmental Management issues especially of construction project. (with at least 10 years' experience in projects of similar nature). One of his tasks will be to oversee contractor implementing the mitigation measures proposed by the ESMP during construction phase. His other duties will be to assist the contractor in the implementation of the Environmental Monitoring Plan during construction period.

**Construction Specific ESMP:** The project specific environmental construction guidelines (also known as contractor’s specific environmental management plan, CSEMP) will be developed by the contractor’s environmental expert. These guidelines should specify precautions and mitigation measures for construction activities, and to be included in the CSEMP. The ESMP developed in this ESIA will serve as a reference material to comprehend the scope of the CSEMP.



**Figure 1: ESMP Implementation Chart**

Table 3: provide the personnel to be involved in ESMP and implementation and their respective responsibilities.

**Table 3: Personnel and their Responsibilities for ESMP Implementation**

Personnel	Responsibilities
Resident Engineer	Has ultimate responsibility for compliance with the specification and resource consent conditions; and
	Reports to Consultant’s senior management , Project Financier and MoIC on environmental compliance
	Develops, implements and reviews environmental management systems and plans;

Personnel	Responsibilities
Engineer's Environmental Specialist	Provides leadership to ensure all staff comply with environmental management systems;
	Co-ordinates environmental management interfaces with external agencies and stakeholders;
	Notifies the concerned authorities of any non-compliance;
	Responsible for reporting major defects and non-compliances and arranging appropriate corrective actions; and
	Primary contact for environmental complaints and enquiries.
Employer's Representative	Undertakes compliance inspections as necessary;
	Attends initial early meeting to contribute to development of ESMP; and
	Attends environmental review meetings.
Contractors Project Manager	Ensures staff are adequately inducted and trained in site environmental procedures including emergency procedures. The same applies to sub-contractors.
	The overall overseer on the contractors side for the implementation of ESMP.
Contractors Environmental Manager	Develops, implements and reviews environmental management systems and plans
	Provides leadership to ensure all contractor's staff comply with environmental management systems;
	Works with Site Engineer to develop appropriate Site Specific Environmental Plans which comply with Standard Specifications 1700;
	Notifies the Engineers' Environmental Specialist of any non compliance;
	Responsible for reporting major defects and non-compliances and arranging for appropriate corrective actions;
	Initiates and coordinates monitoring and auditing;
	Monitors the effectiveness of Environmental Management Plan; and
	Trains contractor's staff in environmental objectives and procedures.
Contractor's site engineer (Environmental)	Designs site specific Environmental Plans in collaboration with Contractor's Environmental Manager, Site Engineer and other subcontractors;
	Conducts and coordinates monitoring and auditing and maintains relevant records;
	Conducts daily / weekly site inspections of Measuring devices ;
	Monitors the effectiveness of Environmental Management System;
	Monitors and carries out routine maintenance of measuring facilities and the various management measures required to ensure their on-going effectiveness;
	Ensures staff onsite are aware to laid down of environmental requirements at all times;
	Conducts daily / weekly site inspections of Measuring devices and co-ordinates maintenance where necessary; and

Personnel	Responsibilities
	Monitors effectiveness of Environmental Management System.
Engineer's advisors	Provide input to Engineer's Environmental Specialist regarding aspects of the ESM;
	Participate in monitoring and audits of the contractor's compliance with the ESMP; and
	Provide on-going advice to address environmental issues raised during construction.
Contractor's site supervisor	Ensures Environmental works are implemented and maintained;
	Leads the emergency response crew with advice from the Environmental Manager ; and
	Reviews the need to use a water cart to control dust.
Contractor's staff	Responsible for reporting incidents, defects and other problem areas to senior site staff as they arise onsite. Special forms will be used for all incident reporting;
	Carry out routine maintenance and emergency work when directed;
	Care for all environmental works;
	Ensure the site is kept tidy and litter is placed in bins; and
	Act in an environmentally responsible manner at all times to reflect the contractor's commitment to environmentally responsible environmental practices.

**Table 4: Summary of Environmental and Social Mitigation Costs**

S/N	Project Road	Length (Km)	Env. Enhancement/ Mitigation Costs (TZS)	Child labour/ HIV/AIDS Awareness Mitigation Costs (TZS)	Total Environmental & Social Mitigation Costs (TZS)
1	Matemwe-Muyuni	9.4	6,377,065	7,550,000	13,927,065
4	Fuoni-Kombeni	8.59	6,825,153	7,550,000	14,375,153
7	Pale-Kiongele	4.61	5,279,030	5,650,000	10,929,030
<b>Total Enhancement/Mitigation Costs</b>			<b>18,481,248</b>	<b>20,750,000</b>	<b>39,231,248</b>

## 12. INSTITUTIONAL CAPACITY AND STRENGTHENING PLAN

The staff capacity for carrying out environmental supervision in MoIC in Zanzibar is limited and hence they rely on the Department of Environment (DoE). The DoE has Environmental Impact Assessment (EIA) Section in its establishment. The EIA Section has 8 technical officers with the following qualifications (1-Certificate, 2-Diplomas, 1-Advanced Diploma, 2-B.Sc. Degree and 2-M.Sc. Degree). However, the DoE can still deploy staff from her other sections for supervising implementation of ESMPs. There are 5 staff in the Natural Resources Section and 6 in the Pollution and Control section who can be deployed to undertake supervision role during implementation of the ESMPs. With the present capacity, DoE has limited involvement in implementation of ESMPs for other projects are currently being executed in Zanzibar. MoIC committed to recruiting an Environmental and Social Expert to oversee the implementation of the road projects.



Capacity building is required within the MoIC and DoE to be able to carry out oversight roles in the implementation of ESMPs. The capacity building is required in terms of provision of equipment and staff training as well. Discussions with DoE revealed preference in the following areas of training:

- Short course (3-4 weeks) on the Use of GIS in EIA – 10 staff
- Short course (3-4 weeks) on Environmental Health and Safety – 15 staff
- Short course (3-4 weeks) on Environmental Protection and Management – 15 staff
- Long course (4-5 years) on Environmental Engineering – 1 staff
- Short course (1-2 weeks) on EIA and Climate Change – 3 staff

Among the required capacity building in terms of instrumentation and associated gadgets included: (i) Air sampling and measurement equipment for the air pollution surveillance; (ii) Noise and vibration measurement equipment; (iii) GPS sets; (iv) Water quality field kits.

### **13. CONCLUSION**

The Upgrading of the Bububu-Mahonda-Mkokotoni Road and the rural roads in Unguja Island consisting of the Matemwe - Muyuni, Fuoni - Kombeni and Pale - Kiongele roads in Zanzibar will generally have a great social economic benefit to the people especially the rural population. The Project Roads will increase transport mobility and communication with the urban areas in Unguja Island, where the farmers can find good markets for agricultural products and fish resources. The project is also associated with increase in economy and generally improvement of community life. The ESIA studies results show some limited negative environmental implications of the project, the road will have high socio-economic benefits to the people of Zanzibar. The major impact associated with these projects includes; Resettlement, Land expropriation and Compensation; Loss of Historical sites and Tourism attractions; Loss of Vegetation (Large trees) and Natural Habitats.

The associated negative impacts, to a large extent have been minimized through good engineering design and envisaged construction practices. Specific mitigation measures have been suggested to offset some of the inherent adverse impacts. In addition, a Resettlement Action Plan (RAP) has been prepared. All Project Affected Persons (PAPs) have been identified and procedures for compensation and relocation have been developed. The Social impacts have been identified and associated mitigation measures have been recommended. Implementing the mitigation measures would increase environmental soundness of the project roads. The total cost for implementing the Environmental and Social Management Plan and Monitoring Plan is estimated at Tsh12, 939,105,210.

It is, therefore, concluded that, implementation of the proposed Bububu- Mahonda – Mkokotoni Road and the rural roads in Unguja Island consisting of the Matemwe - Muyuni, Fuoni - Kombeni and Pale - Kiongele roads in Zanzibar will entail no detrimental impacts provided that the recommended mitigation measures are adequately and timely implemented. The identified adverse impacts shall be managed through the proposed mitigation measures and implementation regime laid down in this EIS. MOIC through the Department of Roads is committed in implementing all the recommendations given in the EIS and further carrying out the environmental auditing and monitoring schedules.

**Project Title:** Transport Sector Support Program (Upgrading of Bububu – Mahonda – Mkokotoni and Rural Roads, Zanzibar)

**Project Number:** P-TZ-D00-002

**Country:** Tanzania

**Department:** OITC

**Division:** OITC.2

**Project Category:** 1

## 1. Description of the project, project area and area of influence

This Resettlement Action Plan (RAP) Summary takes into consideration two RAPs prepared for submission as part of the Transport Sector Support Program in Tanzania. The two RAPs are for the Bububu – Mahonda - Mkokotoni road and for three short rural roads all within Zanzibar, Unguja Island. The Bububu – Mahonda – Mkokotoni (31.7 km) road is located within the districts of Kaskazini A, Kaskazini B and Magharibi. Zanzibar is comprises two major islands which are Unguja and Pemba. While the three other roads, also referred to as Package 1 are Matemwe – Muyuni Road (7.58 km), Pale - Kiongele Road (4.61 km) and Fuoni – Kombeni Road (8.59 km) adding up to a total of 20.78 km are located within the North "A" and West Districts. The Project Roads are either existing gravel roads or earthen roads/tracks with some sections which are impassable during the rainy season.

The road upgrading will involve a combination of overlaying the existing road, partial reconstruction and/or total reconstruction of road sections as necessary. The rehabilitation and/or replacement of existing drainage structures and the construction of new, additional drainage structures are important features of the proposed works. Pertinent features of the road Bububu – Mkokotoni road design include:

- The width of the bitumen carriageway will be 2 x 6.5m, and 6.m carriageway
- The width of the paved footpath cum cycle track on each side is 3.0m
- The width of the Median varies from 1m to 1.5m

The three rural roads currently have no Right of Way (RoW) along the existing earthen roads. In order to upgrade these roads to 6.0m wide bituminous road with 1.5m wide paved shoulders, it has been proposed to provide a RoW of 24 m for all the roads except that in case of Fuoni – Kombeni road, which is mostly passing through urban area, for it to have a RoW of 30m, in order to accommodate the future dual carriageway.

## 2. Potential impacts

The upgrading of the project road Bububu – Mkokotoni into dual carriageway and pedestrian and cyclist lanes will have major impact on properties that are located within the RoW. The survey noted that a number of buildings and other properties are located within the current 30 m RoW. A total of 464 residential only structures will be affected; 302 residential and business structure and 207 businesses only structure will be affected. In addition 759 business frames will be affected. A total of 27 Mosques and 3 health facilities will be affected. Effects will cut across various social groups including owners of structures, owners of business, renters or simply workers earning their daily living working in the retail businesses. Public utilities that will be affected by the project include domestic water supply, telecommunication facilities, and electricity (posts and transformers) utilities.

On the other hand, the 3 rural roads do not have RoWs hence acquisition of land in order to create the RoW will negatively impact on the communities living along the roads. The impacts shall include expropriation of businesses; land; residential structures; disruption of social

networks; family networks; disruption of religious services; and disruption of access to social services. In total there are 223 structures to be affected in this project that will be partly or fully demolished. The 223 structures include 110 residential houses, 19 residential and shops, 19 single business frames, 7 offices, 31 incomplete structures, 3 mosques, 1 madrasa classroom, and 20 other.

### **3. Organizational responsibility**

A number of organizations and institutions have been and will be involved with development and implementation process of the RAP at different levels. This section provides a list of all agencies and institutions involved in each step of the resettlement process (preparation, implementation, appeals and monitoring). These include:

- The Department of Roads: This will support sensitization of stakeholders on RAP, participation in monitoring of RAP;
- Local Government Authorities: These will sensitize communities on RAP, provide technical support in preparation of RAP, screen and appraise and monitor the implementation of RAP;
- Communities, Shehias affected groups: As the final owner of land, landed properties and assets to be acquired or affected will be the participants and responsible for the implementation of the RAPs. The local level committees will support practical day-to-day implementation of the resettlement activities, including the disbursement of compensation funds;
- the Ministry of Infrastructure and Communication shall have the overall responsibility for the oversight of implementation of the RAP and providing enabling environment for the same; in addition it shall set up Resettlement Committee comprising key Ministries and Project Affected Persons (PAPs) representatives, key agencies, and civil society;
- Independent NGOs /CBOs and other stakeholders may be engaged to witness the fairness and appropriateness of the whole process. The NGO will be involved in the monitoring of the resettlement process, establishing direct communication with the affected population, community leaders, the Ministry of Infrastructure and Communication to facilitate the completion of RAP;
- External Audits shall include the evaluation of the implementation of the resettlement action plans in routine annual audits. Without undue restrictions, the audits may include assessment of:
  - Resettlement conditions where relevant,
  - Consultation on compensation options, process and procedures,
  - Adequacy of compensation, and
  - Adequacy of specific measures targeting vulnerable people.

### **4. Community participation**

Comprehensive consultation meetings with communities were carried out with the aim of involving the stakeholders and seek their views on various aspects in particular the resettlement issues arising from the upgrading of Project Roads. The initial census surveys and consultations were conducted between November and December 2014 and later in January 2015. Consultations with PAPs focused to inform them of the project and its activities and discuss

possibilities for land acquisition and other physical assets at replacement or compensation costs. People have been made aware about acquisition of community properties like mosques at rebuilding or replacement cost. Options for relocation, shifting and loss of employment costs as per need and provision of livelihood support to vulnerable groups were some of the other issues discussed during consultations. Along with information dissemination these consultations aimed at taking peoples' opinions and suggestions on the project and its benefits and impacts.

The objectives of public participation and consultation were:

- To ensure transparency in all activities related to the resettlement and its potential impacts;
- To share fully the information about the proposed project, its components and activities;
- To obtain information about the needs and priorities of the various stakeholders, as well as information about their reactions;
- To improve project design and, thereby, minimize conflicts and delays in implementation in relation to resettlement;
- To involve public at large together with their responsible institutions and organizations in the project design and planning;
- Information dissemination to the people about the project and resettlement; and
- Understanding perceptions of local people towards the project

*Among the key stakeholders were:*

- a) Institutional stakeholders: Ministry of Infrastructure and Communications; Ministry Responsible for Lands; Ministry Responsible for Energy; and Ministry Responsible for Water.
- b) Local Government institutions: Kaskazini A. District Council; Kaskazini B. District Council; Magharibi District Council; North "A" District Council; West District Council; and all Shehias along the project road.
- c) Other Agencies: Zanzibar Water Authority (ZAWA); Zanzibar Electrical Corporation (ZECO); Zanzibar Tourists Corporation (ZTC); Tanzania Telecommunication Company (TTCL); Religious leaders; Zanzibar AIDS Commission (ZAC).
- d) Individual Interested Parties: Individual stakeholders referred to those owning, living or working within the immediate impact area that will experience the highest level of impacts of the resettlement. These include the affected households within the project area.

The following were some of the issues raised during the public consultations. Most of the issues raised were addressed by Consultants during the detailed design stage and also by the experts during the meetings with the PAP's. Among key issues raised included:

- Timely and adequate compensation
- Alternative alignment or re-alignment in some areas
- Timely communication from responsible authorities regarding project activities
- Project start-up date
- Modalities of compensation for community properties such as places of worship, schools etc.

- Grievance redress mechanisms
- Transparency in the valuation exercise
- Access to social services (e.g. water, schools)
- Status of partially affected structures and modality for compensation
- Timely relocation of public utilities (e.g. water supply and power lines)
- Loss of business
- Alternative site for Mkokotoni fish market

## **5. Integration with host communities**

During consultation with PAPs, the entire communities potentially to be relocated prefer to be relocated within the existing community in each place. This will, hence, minimize the disturbance to implement the resettlement by moving people away from their original place of stay or village who may require providing them with new services despite the fact that the displaced population is relatively small. The PAPs will, therefore, be relocated within their respective villages. From interviews conducted in the villages and localities, it was very clear that land availability was not considered to be a problem for some, and others were to seek assistance from the District councils. PAPs can, in principle, acquire new plots in the same or other neighboring location. In addition, relocating people in the same villages has the following advantages:-

- o The displaced population can continue to utilize the existing social facilities such as schools, hospitals, mosques, churches and other religious and traditionally significant sites;
- o It maintains social and cultural relations. This is likely to sustain people's economic system, ways of production and other means of income generation and trading. Their productive skills remain applicable since no significance geographical and social change has occurred;
- o Neighborhood is being maintained. For any traditional society, neighborhood is a very important element of social life. People value and respect social integration within their communities. Helping each other during funerals, wedding and other socio-cultural ceremonies. More significantly the neighborhood includes kingship groups. It is upon these social facets, a simple society is maintained. Their immediate concern of the community was to be assured that they will be compensated as some of the interviewees, said that there is plenty of un-used village land. The village government should agree with those to be relocated depending on the available area especially considering that Zanzibar urban is congested.

## **6. Socio-economic studies**

The main objective of the census and socio-economic survey was to assess impact of the project on social and economic livelihoods of the affected households and PAPs. As per the statistics given in the Zanzibar Statistical Abstract (2007), total labor force participation has been observed at 83.4%, i.e. share of "economically active population, which shows "inactivity rate" of 16.6%. About 5.5% people were reported to be unemployed; and more than 11.8% of the economically active population found as "underemployed".

A sample survey of households whose buildings and other properties are affected were interviewed mainly on the three rural roads. The survey revealed that the majority of PAPs were small-scale fishermen and farmers with low levels of income. Majority have low educational attainment levels, and most families are characterized by age dependency ratio. Data showed that PAPs have more than one source of income and the main income source is

fishing, agriculture and self-employment in the business sector; rent; formal employment; remittances; livestock and seasonal labor. 32.6% of households were below poverty line and thus vulnerable to socio-economic shocks. A small proportion of PAPs are members of a social or economic groups thus lacking social capital and skills which would have been helpful in coping with the negative impact of project. 90.6% of households are male-headed and 9.4% of all households are female-headed. 50% of households have nuclear family structure and the other 50% are extended families. In terms of access to social service facilities such as health, primary and secondary schools, these are fairly accessible with limited variations between roads and between the services. The results also showed that women do have substantial decision making powers in matters relating to finances, education of child, health of child, purchase of assets, day to day activities and social functions. A significantly large proportion of women's time is however spent on domestic chores such as cooking, washing, cleaning, looking after children etc.

**Population and Demographic Characteristics:** More specifically, the socio-economic study was conducted in all Shehias along the 3 project rural roads. A sample size of 160 households was surveyed for the study. The survey sample comprised of 840 PAPs of which 47% were female and 53% male. The nature and type of households and families have implications on the intensity of social and economic impacts of the project. For example female-headed households have often been characterized as being poor. Extended families imply a much heavier burden on the PAPs although it can on the other hand provide a social support network. Majority of households in the study area are male -headed (90.6%) and 9.4% are female-headed.

Regarding the educational attainment levels, available data is limited for education level in the Island of Unguja. However, major indicators, showing literacy in general and among female population; enrolment in primary and secondary schools; and location of primary and secondary schools have been compiled and provided in the RAP main document to appreciate the education level and the availability of basic education facilities with their location and distance. The district of Kaskazini 'A' and Kaskazini 'B', somehow, show considerably low level of literacy and availability of educational facilities. On the three rural roads, 31.6% of all PAPs who are above 5 years of age are illiterate these are neither schooling nor have they been to any formal education Program; 25% of all PAPs above 18 years of age have attained only primary level of education and 16% have completed secondary level of education.

On production systems and livelihoods, the production systems among affected households are typical of semi-urban and urban communities. Production systems are therefore based on small-scale farming, small-scale fishing, limited livestock keeping, formal employment and self-employment including informal businesses. Fishing is the dominant economic activity in communities/shehias that are along the ocean and is practiced on small-scale. Likewise agricultural production systems are dominated by small-scale farmers depending on traditional farming for subsistence. There are several varieties of food crops produced along the project road. The major food crops produced are cassava, bananas, paddy, sweet potato, yams, tania Cow Peas Green beans, Grams, Ground Nuts maize, etc. By value of the food crops, bananas and cassava register the important position.

With regard to standards of living: Due to the level of economic activities as noted in the section above the standard of living and livelihoods in general for the majority of PAPs is low. For example this data shows that in 2013 about 33% of all households earned less than 1 USD per day. For most PAPs social services are fairly accessible with some variations between the services and between the project roads. Access to health service and secondary school is however a little bit problematic as 22% of all households are more than 2km away from a nearest health facility and 23% from the nearest secondary school. On the Bububu road, most

health facilities are within 5 km in reach of most of the households, the level of accessibility, in terms good roads, has been generally reported to be bad, which result in several en-route problems while seeking medical facilities. There are 21 Health Centers, 4 dispensaries and two hospitals along the project road. On the other hand, asset ownership is a significant indicator of the well-being of the affected households and PAPs. The main assets owned by affected households include: telephone (mainly mobile phones); (85.6% of households); radio (63.7% of households and cycles (60% of households).

Vulnerability is considered as an added hardship when it comes to resettlement and relocation. The determined measures for vulnerability used in this study included various forms of physical and mental disability, old age, below poverty line, poor female-headed households, including poor widowed households. Social survey indicated the most common form of disability is economic disability with 70% of all vulnerable households live below the poverty line of less than 1USD per day (however this was based on self-reported incomes which might not be very reliable and will be reassessed during final valuation). This was followed by poor female-headed households accounting for 11% of all vulnerable households. Special allowance for vulnerable groups is recommended and so is assistance from CBOs in the area.

<b>Frequency and % distribution of vulnerable households by Road</b>					
<b>Name of Road</b>	<b>Type of Vulnerability</b>				
	<b>Poor Female Headed Households (including widows)</b>	<b>Physical/ mental disability</b>	<b>70 or more years and dependent</b>	<b>Households Below Poverty Line</b>	<b>Total</b>
R1 (Matemwe-Muyuni)	3	2	4	47	56
R4 (Fuoni-Kombeni)	2	0	6	4	12
R7 (Pale-Kongele)	3	1	1	0	5
<b>Total</b>	<b>8</b>	<b>3</b>	<b>11</b>	<b>51</b>	<b>73</b>

## **7. Legal framework, including mechanisms for conflict resolution and appeal**

In Zanzibar, among others, the legislations and Acts governing the resettlement are the followings:

- (i) The Constitution of the United Republic of Tanzania of 1977: The Constitution of Tanzania is the main guiding legal framework for the planning and implementation of this project. The Policy, legal framework to address the social dimensions, impacts and implications of the project is based on the following articles: (a) Article 24 (1): Every person is entitled to own property, and has a right to the protection of his property held in accordance with law.
- (ii) Article 24 (2): It shall be unlawful for any person to be deprived of property for the purposes of nationalization or any other purposes without the authority of law which makes provision for fair and adequate compensation.
- (iii) In Zanzibar the President is the custodian of all Land and the Minister responsible for Lands is vested by the Land Tenure Act No. 12 of 1992 to control and administer land on behalf of the President while the Department of Land and Registration deals with various activities and the directives from the Minister. The Act also provides for a secure land tenure system, to encourage the optimal use of land resources, and facilitate a broad-based social economic development.

(iv) Other land related laws include: The Land Survey Act, 1989, the Land Transfer Act, 1994 and the Land Tribunal Act 1994, Land Adjudication Act 1989 and the Town and Country Planning Decree, Cap 096 of the Laws of Zanzibar (1956). CAP 096 is on assessment of compensation for land acquisition and based on this law a valuation manual was prepared in 2005 and this manual is currently in use.

(v) The Laws of Zanzibar Chapter 134: Roads (A Decree to Public Roads, 1927) provides for the formation and constitution of road boards; classification of public roads; appropriation of lands; compensation in certain cases; power of road authority to take stone and materials; compensation; power of road authority to remove trees; mechanism for arbitration; removal of encroachments.

(vi) The Land Transfer Act 1993: The Land Transfer Act 1993 allowed transfer of land following a laid down procedure.

(vii) The Commission for Lands and Environment Act of 1998: Deals with all matters related to land use and conservation of environment. This Act deals exclusively with land administration.

(viii) The Land Adjudication Act of 1989: Provides for mechanism to address land dispute ownership.

(ix) The Registered Land Act of 1989: It introduced acceptable standards of survey among others.

The African Development Bank Policy on Involuntary Resettlement (2003): The Involuntary Resettlement policy together with the Bank's Operational Safeguard 2 – Involuntary resettlement: land acquisition, population displacement and compensation are to:

- Avoid involuntary resettlement where feasible, or minimize resettlement impacts where involuntary resettlement is deemed unavoidable after all alternative project designs have been explored;
- Ensure that displaced people are meaningfully consulted and given opportunities to participate in the planning and implementation of resettlement programs;
- Ensure that displaced people receive significant resettlement assistance under the project so that their standards of living, income-earning capacity production levels and overall means of livelihood are improved beyond pre-project levels;
- Provide explicit guidance to borrowers on the conditions that need to be met regarding involuntary resettlement issues in Bank operations to mitigate the negative impacts of displacement and resettlement, actively facilitate social development and establish a sustainable economy and society; and
- Guard against poorly prepared and implemented resettlement plans by setting up a mechanism for monitoring the performance of involuntary resettlement programs in Bank operations and remedying problems as they arise.

## **8. Grievance Redress Procedures**

The RAP will be made available to all concerned people, the appeal structures at various levels, specifying the responsible parties and their response time. Before starting with the grievance sequence and where appropriate (i.e. in case of complaints of minor entity), aggrieved parties will take their complaints to the community or traditional meetings for dispute resolution. If need arises, the local NGOs will be contracted and involved to hear complaints and attempt to affect a resolution before they enter the legal and administrative appeals hierarchy.



Land Acquisition Act details procedures for dispute resolution with respect to compensation. Local authorities could handle the disputes and grievances in the first place. In summary those seeking redress will have to notify local government and ward offices. If this fails, disputes shall be referred to district level. Resolution of disputes shall be speedy, just and fair and local NGOs that are conversant with these issues will be engaged by the project. The following describes the various stages and players:

## *Process of Addressing Grievances*

No.	Reporting Officer /Committee	Officer /Committee members	Time Frame to Redress	Grievance Redressed	Grievance not redressed
1	PAP shall submit grievance in writing to the Shehia Government and receives an acknowledgement from Shehia government as proof. If the PAP is unable to write, the RAP Implementing Agency (RIA) or the Shehia Government shall record the same on behalf of PAP.	<ol style="list-style-type: none"> <li>1. Shehia Government</li> <li>2. Representative of RAP Implementing Agency</li> </ol>	Upon receipt of grievance, the Shehia Government with the help of RAP implementing agency shall try to resolve the grievance amicably with the active participation of aggrieved party within 5 working days from the date of file of grievance.	If the grievance is resolved and the PAP is satisfied with Shehia Government's decision, a report of the same shall be prepared by RIA. A copy given to PAP and to Department of Roads for record, case closed.	If the grievance is not resolved, go to Step 2.
2	If PAP is not satisfied with Step 1 decision, the case shall be forwarded to Ward Council with a preliminary report prepared by RIA. The report should have the details of grievance, preliminary assessment of RIA & local government, hearing date and decision of local government.	<p>The members of this committee shall be:</p> <ol style="list-style-type: none"> <li>1. Members of Shehia</li> <li>2. Representative of RIA</li> <li>3. PAP Representative</li> <li>4. Representative of Department of Roads</li> </ol>	Upon receipt of grievance, the Shehia and Ward Council if desired may direct RIA to collect further information related to grievance and submit the same to committee for its use while hearing the grievance. The hearing shall be completed within 10 working days from the date of case referred.	If the grievance is resolved and the PAP is satisfied with Shehia and Ward Council decision, a report of the same shall be prepared by RIA. A copy given to PAP and to Department of Roads for record, case closed.	If the grievance is not resolved, go to Step 3.
3	If PAP is not satisfied with Step 2 decision, the case shall be forwarded to Social Services Committee (SSC) at the District level. This committee shall function as Grievance Redress Committee (GRC) at the district level. The grievance shall be forwarded with all the paper details of case till date to SSC.	<ol style="list-style-type: none"> <li>1. District Commissioner – Chairman</li> <li>2. Member, Land office</li> <li>3. Member , Valuer</li> <li>4. Member, RAP Implementing Agency</li> <li>5. Member, PAP representative/ local NGO</li> <li>6. Member, Representative of Department of Roads</li> </ol>	Upon receipt of grievance, the GRC if desired may direct RIA to collect further information related to grievance and submit the same to committee for its use while hearing the grievance. The hearing shall be completed within 20 working days from the date of case referred.	If the grievance is resolved and the PAP is satisfied with GRC decision, a report of the same shall be prepared by RIA. A copy of report shall be handover to PAP for record and a copy to be submitted to Department of Roads for record, case closed.	If the grievance is not resolved, go to Step 4.
	It is assumed that all the cases shall be solved at GRC level. It may be possible that there are cases which might still remain unresolved at GRC level. For such cases, the PAP shall have option to refer his /her case to Commissioner of Lands for final amicable solution or to refer the case to Judiciary.	<ol style="list-style-type: none"> <li>1. Regional Secretariat</li> <li>2. District Commissioner</li> <li>3. Member, Representative of Department of Roads</li> </ol>	If the case is referred to Commissioner of Lands, the details of case file shall be submitted to RS office and the case shall be heard within 45 days from the date of case referred. The PAP shall be intimated 10 days in advance about the date, time and venue of the hearing.	If the grievance is resolved and the PAP is satisfied with RS's decision, a report of the same shall be prepared by RIA. A given to PAP and to Department of Roads for record, case closed.	If the grievance is not resolved, the PAP may take the case to appropriate court.
	PAP takes the case to appropriate court.	-	-	-	-

## 9. Comparison of Zanzibar/Tanzania Laws to AfDB Policies

In developing the RAP document, Zanzibar laws, policies and regulations and international conventions which are relevant were consulted. These include the AfDB Policy and Operational Safeguards on Involuntary Resettlement (December 2013). The key legal document relating to resettlement in Tanzania is the Constitution of the United Republic of Tanzania Article 24 (1). This article stipulates that every person is entitled to own property, and has the right to the protection held in accordance with the law. The analysis of Tanzanian/Zanzibar and ADB policies on resettlement is as indicated in the table below:

### *Comparisons of AfDB and Tanzania Policies*

<b>PAP Category</b>	<b>AfDB</b>	<b>Zanzibar Law</b>
Land Owner	Recommends land-for-land compensation. Other compensation is at replacement cost.	Cash compensation is based upon market value of the real property, disturbance allowance, transport allowance, loss of profits or accommodation, cost of acquiring or getting the subject land, any other immediate costs or capital expenditure incurred to the development of the subject land and compensation should be paid promptly, and if not paid in time, interest at market rate will be charged.
Tenant	Entitles to some form of compensation whatever the legal recognition of their occupancy.	Entitled to compensation based on the amount of rights they hold upon the land.
Land user	Entitles to compensation for crops and labor, may be entitled to replacement land and as a minimum standard, incomes must be reported to pre-project levels.	Not entitled to compensation for land, entitled to compensation for crops. This category of PAP is also sometimes provided with other land of equal size and quality.
Owners of “non-permanent” buildings	Entitled to in-kind compensation or cash compensation at full replacement cost including labor and relocation expenses, prior to displacement.	Valuation and disturbance allowance. Cost of putting up an equivalent structure as the one existing at the time of valuation, based on price of the open market.
Owners of “permanent” buildings	Entitled to in-kind compensation or cash compensation at full replacement cost including labor and relocation expenses, prior to displacement.	Valuation and disturbance allowance. Cost of putting up an equivalent structure as the one existing at the time of valuation, based on the price on the open market.

## 10. Institutional framework

A number of organizations and institutions will be involved with RAP implementation processes at different levels and periods. However the overall coordination of RAP activities will be under the MoIC and other institutions and organizations that have the legal obligations to carry out functions related to resettlement and or compensation including various local authorities.

- MoIC will be responsible for implementing RAP
- MoIC will support and facilitate the sensitization of stakeholders on RAP, preparation and monitoring of RAP;

- Local Government Authorities will sensitize communities on RAP, provide technical support in preparation of RAP, monitor the implementation of RAP;
- Communities, Shehias and affected groups as the final owner of land, landed properties and assets to be acquired or affected will be the participants in the process;
- Independent NGOs and other stakeholders may be engaged to witness the fairness and appropriateness of the whole process. The NGOs will be involved in the monitoring of the resettlement process, establishing direct communication with the affected population, community leaders, MoIC to facilitate the completion of RAP; Resettlement, compensation, and dispute resolution committees will be formed with representatives from various stakeholders and will assist in implementing RAP as per the applicable laws, regulations, and policies.

Department of Roads shall set up Resettlement Committee comprising representatives of key Ministries and a local NGO involved in similar projects. The following committees shall be established at district levels with representation from the PAPS /Shehia:

- Resettlement Committee chaired by the District Commissioner with members from Department of Roads; Ministry responsible for Lands; Consultant; Representative of Shehias; Representative of a Local NGO; and Representative of PAPS.
- Compensation Committee chaired by the Department of Roads and members from Ministry responsible for lands; Consultant; Representative of Shehias; Representative of PAPS; and Independent Valuer.
- Dispute Resolution Committee chaired by the District Commissioner with members from Department of Roads; Ministry responsible for lands; Independent Valuer; Representative of a Local NGO and Representative of PAPS.

## **11. Eligibility**

Affected persons eligible for compensation and resettlement assistance under this project shall be those who are directly affected socially and economically through the road project caused by:

- a) The compulsory taking of land and other assets resulting in the following:
  - i) Relocation or loss of shelter;
  - ii) Loss of assets or access to assets; and
  - iii) Loss of income sources or means of livelihood whether or not the affected persons must move to another location.
- b) The forceful denial to access legally designated social economic services, with adverse impacts on livelihood of the displaced individuals

The PAPS were considered irrespective of their tenure status, with respect to land that they own, occupy or use provided they owned, occupied or used the affected land prior to the cut-off-date in each case. Cut-off date for eligibility to resettlement entitlements for the project was when the valuations of affected properties was completed which is September 2011 for the Bububu – Mahonda – Mkokotoni road, and for the rural roads, it is March 2015.

Assets that are eligible for compensation are buildings, land, and development made on the land such as crops, trees, graves, bore holes etc. The affected public social services such as power supply will be enumerated for costing, replacement and construction at suitable sites. For public utilities such as pipes, water main distribution pipes/customer pipes, control valves with chambers, tunnel bulk meter, electric reticulation poles, and telephone cables are being valued separately. The cost for relocating these utilities are always developed by the respective utility authority and included in the bills of quantities for the contractor. In line with the AfDB Safeguards categories of those legible include affected group(s) individual(s) /persons as:

- a) Those who have formal legal rights (including customary and traditional rights) recognized under the laws of Government of Tanzania;
- b) Those who do not have formal legal rights to land at the time of conducting census, but have a claim to such land or assets provided that such claims are recognized under the laws of Government of Tanzania; and
- c) Those who have no recognized legal rights or claims to land they are occupying.

## 12. Entitlement

The principle adopted from the Tanzania Laws establishes the eligibility and provisions for all types of losses (land, structures, businesses, loss of accommodation, disturbance, tree, crops, transport costs resulting from displacement and trees). All affected persons will be compensated at full replacement costs and other allowances. The principles adopted from the Zanzibar Laws and AfDB Policy and Operational Safeguards (December 2013) establishes the eligibility and provisions for all types of losses (land, structures, businesses, employment, wages, crops, trees). All affected persons will be compensated at full replacement costs and other allowances. The key issues in entitlement delivery include: PAPs participation; compensation payment. The institutions responsible for various activities for preparation and implementation of RAP include: MoIC; District Authorities; NGOs; Consultants; and external agency. The table below summarises the entitlements due to PAPs.

**Entitlement Matrix by Type of PAP and Type of Loss**

Type of PAPs	Type of Loss	Entitlement				
		Compensation for Loss of Structure	Compensation for Loss of Assets	Compensation for Loss of Income	Moving allowance	Other assistance
Property Owner	Loss of Land	-	Replace land / pay	Crops at market cost in scarce season	None	Land replacement and new site
	Loss of structure, residential, or business; standing crops & trees	Compensation at full replacement	Compensation at market price Permanent crops or trees at market price	For lost rental income lump some cash payment of 6 months' rent per tenant Loss of business income payment of half turnover for 6 months	Actual cost of transport for 12 tons of goods by road 20 Km	Disturbance, Accommodation, and Transport Allowances for loss of residential, loss of profit allowance for business

Type of PAPs	Type of Loss	Entitlement				
		Compensation for Loss of Structure	Compensation for Loss of Assets	Compensation for Loss of Income	Moving allowance	Other assistance
Residential Tenant	Loss of rental accommodation	-	Replacement cost of non-movables installation was agreed with owner		12 tons of goods by road for 20 Km	6 moths rent equivalent
Business Tenant	Loss of rental business premises	-	Replacement cost for facilities that cannot be moved	Loss of business income payment of half of turnover for 6 months	12 tons of goods by road for 20 Km	-
Squatters (living on site)	Loss of shelter	Compensation at full replacement value for structure	-	Payment in lieu of wages while re-building	-	Disturbance Allowance

### 13. Valuation of, and compensation for losses

The basis for compensation that has been adopted is replacement value. The different types of assets were rated accordingly.

(a) *Building Structures*: The valuation rates that were applied for structures are summarized in table below:

#### Rates Adopted for Building Structures

Sl. No.	Type of Construction	Rate per Sqm. (T Shs.)
1	Shades, Bush poles thatch roof, earthen floor	30,000
2	Mud-Pole walls, thatch roof, earth flooring	70,000
3	Mud-Pole walls, thatch roof, Screed flooring	75,000
4	Mud-Pole walls, CIS roof, earth flooring	80,000
5	Brick Walls, CIS roof, screed	150,000
6	Block Walls, CIS roof, Sreed flooring, standard finishes	200,000
7	Flats,	500,000-600,000
8	Mosques	250,000

(b) *Trees and crops*: Valuation for trees and crops was done separately and their report is included in the category of affected building structures. The most common trees that were identified to be in the corridor of impact are coconut trees, mango trees, banana trees and shade trees.

(c) *Disturbance Allowance*: Disturbance allowance is payable to all the affected persons in addition to the assessed values of lost assets. It has been computed as a percentage of asset

value of the acquired over 12 months. The percentage rate used is the mean bank fixed deposit rate for banks operating in Zanzibar and Dar es Salaam which is 5%.

(d) *Transport Allowance*: The Zanzibar laws have no provision on payment of transport allowance that would assist the affected persons in moving from their current premises to resettlement areas. The AfDB guidelines are explicit on the need to assist affected persons to get started again in life. The project shall adopt the Mainland Regulation and provide transport allowance to those with residential buildings and in occupation. This shall be at the rate of a 12 ton haul over a distance not exceeding 20 km for T Shs 150,000.

(e) *Accommodation Allowance*: Affected persons who will have to vacate their present dwellings will receive an allowance based on Tanzania regulation as Zanzibar has no clear regulations guiding this. It is computed on the premise that the displaced person will need utmost 36 months of assisted accommodation while constructing his or her new house. Since most houses in the project areas are referenced to number of rooms and that it is usual for individuals in the area to transact in room lettings rather than the whole building, the allowance has been worked out on room monthly rents as per the table below:

### Estimated Room Rates for Computing Accommodation Allowances

	Type of Dwelling	Monthly Rent (T. Shs.)
1	Standard Room in a thatched /CIS, mud-pole plastered walls, earthen screed floor	10,000
2	Standard Room in a CIS Roofed, concrete Block plastered walls, screed floor	20,000
3	Standard Room in a CIS Roofed, concrete Block plastered and painted walls, screed/tiled floor	25,000
4	Retail space/room in all types of dwelling except quality finishes /fittings buildings	40,000-70,000
5	Retail space /room in quality buildings	80,000

(f) Loss of Profit: Loss of Profit by a PAP is also compensable. This is usually assessed on the basis of audited accounts. However, under the circumstances, this information is not easy to find. In order to ensure fairness and mitigate amount of loss suffered by an individual, the project has carried out mini-market research to determine mean profit margins for the type of retail business found in the area; and have estimated profit levels in cases of bakery, retail space, food vending business etc. and these have been included in the compensation schedules for the structure.

#### **14. Implementation schedules**

Implementation of RAP consists of several resettlement activities. Efficient implementation of RAP activities requires several measures to be taken prior to startup of implementation. These include setting up of relevant committees at district level, hiring of NGO or consultant etc. In principle project civil works may not start until all PAPs determined to be entitled to compensation are compensated. The time frame for the Bububu – Mkokotoni road is estimated to be 12 months (see implementation schedule, Chart 1, below). The RAP implementation of the rural roads will take 15 month (see implementation schedule, Chart 2).



**RAP Implementation Schedule, Chart 1**

Task	Months of Year 2015 – 2016													
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Feb	Mar
Preparation and conducting of household surveys of PAPS														
Identification of affected land and other assets														
Consultations with PAPS and communities														
Identification of categories of affected assets														
Identification of names, addresses, ownership/use status, gender, age of PAPs														
Disclosure of affected assets and claimants														
Establishment of cut-off-dates														
Holding of public hearings to verify entitlements and proposed valuation methods														
Updating Properties valuation														
Finalization of draft RAP report														

Task	Months of Year 2015 – 2016													
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Feb	Mar
Response to feedback to draft RAP and RAP finalization														
Submission of final RAP and budget														
Approval of budget for relocating utility														
RAP disclosure and circulation														
Hiring NGO/Consultant/RAP implementing agency														
Set Up district level committees														
Revision and approvals of compensation schedules														
Mobilization of Compensation Money- Ministry of Finance														
Relocating Utilities														
Opening Bank Accounts with Bank														
Certified List of names with Bank Accounts sent to Department of Roadsby Bank														
Compensation to PAPs-payment through banks (for those getting or equal to 400,000 Tsh)														

Task	Months of Year 2015 – 2016													
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Feb	Mar
PAPs informed by Department of Roads/or consultant that funds have been deposited into their accounts														
Department of Roads prepares open checks for PAPs getting less than TShs 400,000														
Department of Roads prepares record form for PAPs to sign upon receiving the check														
Preparing relocation-Local Government														
Finalization of arrangements for grievances mechanisms														
Land acquisition-Notice of COI clearance														
Commencement of Works														
Monitoring and Evaluation														

**RAP Implementation Schedule, Chart 2**

	Month of Year 2014			Month of Year 2015												Month of Year 2016	
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb
Preparation and conducting of household surveys of PAPS																	
Identification of affected land and other assets																	
Consultations with PAPS and communities																	
Identification of categories of affected assets																	
Identification of names, addresses, ownership/use status, gender, age of PAPS																	
Disclosure of affected assets and claimants																	
Preparation of valuation methods																	
Establishment of cut-off-dates																	
Finalization of draft RAP report																	
RAP disclosure and circulation																	
Response to feedback to draft RAP and RAP finalization																	
Submission of final RAP and budget																	
Hiring NGO/Consultant/RAP implementing agency																	
Set Up district level committees																	
Verification of PAPS																	
Revision and approvals of compensation schedules																	
Submission of Final RAP																	
Opening Bank Accounts																	
Certified List of names with Bank Accounts sent to MoIC																	

	Month of Year 2014			Month of Year 2015												Month of Year 2016	
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb
Compensation to PAPs-payment through banks (for those getting or equal to 400,000 Tsh)																	
PAPs informed by MoIC or Consultant that funds have been deposited into their accounts																	
District Administrative Assistant (DAS) prepares vouchers for payment for PAPs getting less than TShs 400,000 to Regional Sub-Treasuries (RST)																	
RST prepares open checks for PAPs getting less than TShs 400,000 and are sent back to DAS for delivery to PAPs																	
Consultant prepares record form for PAPs to sign upon receiving the check																	
Preparing relocation																	
Finalization of arrangements for grievances mechanisms																	
Land acquisition-Notice of COI clearance																	
Commencement of Works																	
Monitoring and Evaluation																	

## 15. Costs and budget

The indicative amounts for implementing the RAPs are presented in the table below. The Bububu – Mahonda – Mkokotoni road shall require TSh. 12,671,105,217/=. While the 3 rural roads of Matemwe – Muyuni Road; Pale – Kiongele; and Fuoni – Kombeni shall require TSh. 6,486,582,937/=. This comes to a total of TSh. 19,157,688,154/= to be met by the Government of Zanzibar in lieu of resettlement, compensation and related costs.

Itemized cost summary for the two project road segments is as follows:

<b>A. Bububu – Mahonda - Mkokotoni</b>		
<b>S/N.</b>	<b>Asset Type</b>	<b>Amount (TSh.)</b>
1.	Residential only (464)	
2.	Residential and business (302)	
3.	Business frames (759)	
5.	Mosques (27)	
6.	Health facilities (3)	
	<b>Sub-total</b>	<b>6,486,582,937</b>
<b>B. 3 Rural Roads</b>		
7.	Land	2,434,734,782
8.	Structures and buildings	2,794,735,020
9.	Crops and trees	286,767,000
10.	Allowances	661,461,234
11.	Monitoring	308,884,901.00
	<b>Sub-total</b>	<b>12,671,105,217</b>
	<b>Grand Total</b>	<b>19,157,688,154</b>

## 16. Monitoring and evaluation

Monitoring of the RAP implementation shall be done in three phases, internal, external and evaluation. Project implementation unit MIC and an NGO to be identified will be responsible for internal monitoring while the Consultants may provide technical assistance in implementing RAP. External monitoring shall be engaged by Department of Roads to carry out independent bi-annual review of RAP implementation and project evaluation. External monitoring and evaluation can be done by independent researcher, consulting agency, university department or an NGO. Other involved stakeholders mainly the district councils, the Ministry of Lands and the Shehias will also be involved with monitoring.

The following are the suggested reporting requirements:

- The Consultants shall prepare monthly and quarterly reports on RAP progress implementation to Department of Roads;
- The Consultants responsible for supervision and implementing RAP will prepare monthly progress report on resettlement progress activities;
- The Department of Roads shall also monitor RAP implementation and submit quarterly reports to Ministry of Works.

External monitoring agency shall submit bi-annual reports directly to Department of Roads and determine whether or not RAP goals have been achieved and livelihoods have been restored and suggest suitable recommendations for improvement. Areas of specific focus for each of the monitoring stages, internal and external, respectively have been provided in the RAP documents. The following table, however summaries the key indicators to be observed.

**Key Monitoring Indicators**

	<b>Issue /Impact</b>	<b>Monitoring Indicator</b>
1	Physical loss of utilities, building, land, plot, crops	<ul style="list-style-type: none"> <li>- Number of PAPs compensated</li> <li>- Number of Bank Accounts opened</li> <li>- Number of Buildings demolished</li> <li>- Number of PAPs able to establish pre-displacement activities, land, crops</li> <li>- Number of community properties relocated</li> <li>- Number of trees cleared</li> </ul>
2	Financial loss of business	<ul style="list-style-type: none"> <li>- Number of PAPs compensated</li> <li>- Number of PAPs resuming business at pre-displacement level or better</li> </ul>
3	Loss of social services	<ul style="list-style-type: none"> <li>- Number of community properties relocated</li> </ul>
4	Psychological loss	<ul style="list-style-type: none"> <li>- Number of PAPs paid relevant allowances</li> </ul>
5	Sociological loss	<ul style="list-style-type: none"> <li>- Number of vulnerable individuals supported</li> </ul>
6	Grievances	<ul style="list-style-type: none"> <li>- Number of grievances received</li> <li>- Number of grievance resolved</li> </ul>
7	Consultation	<ul style="list-style-type: none"> <li>- Number of consultations held</li> </ul>

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