

Evaluation Concept Note (Inception Report)
Evaluation of and Data Gathering for Mafia Island Airport
Upgrading Project



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List of Abbreviations and Acronyms

| | |
|----------------|--|
| CBO | Community Based Organization |
| COSTECH | Commission for Science and Technology |
| CSPro | Census and Survey Processing System |
| DED | District Executive Director |
| FGD | Focus Group Discussion |
| HBS | Household Budget Surveys |
| IDI | In-Depth Interview |
| IGA | Income Generating Activity |
| LGA | Local Government Authority |
| M&E | Monitoring and Evaluation |
| MCA-T | Millennium Challenge Account Tanzania |
| MCC | Millennium Challenge Corporation |
| MDA | Ministry, Department and Agencies |
| MIMP | Mafia Island Marine Park |
| MKUKUTA | <i>Mkakati wa Kukuza Uchumi na Kupunguza Umaskini Tanzania</i> (It is the Swahili acronym for the National Strategy for Growth and Reduction of Poverty) |
| MKUZA | <i>Mkakati wa Kukuza Uchumi na Kupunguza Umaskini Zanzibar</i> (It is the Swahili acronym for the Zanzibar Strategy for Growth and Reduction of Poverty) |
| NIMR | National Institute of Medical Research |
| NGO | Non Governmental Organization |
| MLFD | Ministry of Livestock and Fisheries Development |
| MNRT | Ministry of Natural Resources and Tourism |
| NSGRP | National Strategy for Growth and Reduction of Poverty |
| NBS | National Bureau of Statistics |
| PAPI | Pen-and-Paper Interviewing |
| RAS | Regional Administrative Secretary |
| SACCOS | Savings and Credit Cooperative Society |
| SPSS | Statistical Package for Social Scientists |
| TAA | Tanzania Airports Authority |
| TCAA | Tanzania Civil Aviation Authority |
| TIC | Tanzania Investment Center |
| ToR | Terms of Reference |
| TTB | Tanzania Tourist Board |

1. INTRODUCTION

Inadequate transportation network is one of key constraints to economic growth and private investment in Tanzania. The problem is more serious in the Mafia Island due to poor condition of its airport and lack of feasible alternative transport options.

According to Rodrigue (<http://people.hofstra.edu>), when transport systems are efficient, they save time and costs and provide economic and social opportunities and benefits that result in positive multiplier effects such as better accessibility to markets, additional investments and employment. There are indirect impacts related to the economic multiplier effects where the price of commodities, goods or services drop and/or their variety increases. When transport systems are deficient in terms of capacity or reliability, they can have an economic cost such as reduced or missed opportunities. Transport also carries an important social and environmental load, which cannot be neglected.

Economic development of a country or part of a country is, in a broad sense, mainly driven by its level of investment, trade and consumption. According to Boopen (2006), the two most cited explanations relating transport improvement to economic growth in the literature has been that of reduced transportation costs and increased accessibility. These have often been referred to as the primary transportation benefits. These factors not only impact directly on productivity and growth but also work through other important avenues. They filter down to enhanced productivity and economic growth through the following channels namely, reorganization and rationalization of production, better productivity and higher level of private (inwards and foreign/external direct) investment, wider markets, increased specialization and economies of scale, and also effects on labour market supply, labour costs and labour productivity.

To address an inadequate transportation network in the country, the Government of Tanzania (GoT) is implementing transport sector projects using funds obtained from the Millennium Challenge Corporation (MCC). This report describes evaluation design for the Mafia Island Airport Upgrade Project based on consultations with MCC, MCA-T, TAA and other stakeholders. The assignment includes evaluation design as well as baseline data gathering, analysis and dissemination. The consultant understands that the cornerstone of the assignment is selection of relevant variables/indicators for the evaluation as well as, data collection, analysis and interpretation of results.

2. BACKGROUND

The Government of the United States of America acting through the Millennium Challenge Corporation (MCC) and the Government of Tanzania (GoT) acting through the Ministry of Finance have entered into a Millennium Challenge Compact for Millennium Challenge Account Tanzania (MCA-T) assistance to help facilitate poverty reduction through economic growth in Tanzania. The consultative process for the Program was informed by, and anchored in, the consultative process conducted in connection with the Government's National Strategy for Growth and Reduction of Poverty (NSGRP) which was finalized in 2005 (commonly referred to by the Swahili acronyms "MKUKUTA" and "MKUZA," for the mainland and Zanzibar, respectively).

The Compact is to be implemented over a period of five (5) years. Guided by MKUKUTA/MKUZA priorities, the Compact establishment process identified an inadequate transportation network, an insufficient and unreliable supply of energy, and a shortage of potable water as three key constraints to economic growth and private investment in Tanzania. The Millennium Challenge Compact Program is designed specifically to address each of these constraints. The Compact aims at reducing poverty through the implementation of a program consisting of three projects, namely *transport, energy and water* projects. Each project contains a number of activities and sub-activities.

The three infrastructure development projects are core components of the Compact. However, the Compact has a Monitoring and Evaluation (M&E) unit, which plays an important role in the management of the program by ensuring that the resources going into the Compact are being utilized

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effectively and efficiently; activities are implemented in a timely manner; services generated are being accessed, utilized and beneficiaries are satisfied with the services; and the expected results are being achieved in a sustainable manner. The M&E plan for Tanzania Compact is guided by both the national poverty monitoring system and the economic analysis that identified beneficiaries and provided economic rationale for the MCA-T programme.

Upgrading of Mafia Island Airport is one of the sub-projects (components) under MCA-T's Transport Sector Project. The sub-project is geared to addressing the existing problem of access to the island as a result of poor condition of its airport and lack of feasible alternative transport options. Specifically, the sub-project will:

- a) Refurbish the runway, apron and taxiway; establish boundary security; refurbish the fire station, terminal building and its water supply; and install communication equipment;
- b) Conduct additional environmental assessments, together with any resulting Resettlement Action Plans (RAPs) consistent with the World Bank Operational Policy and Environmental Management Plans (EMPs) each as needed and as satisfactory to MCC;
- c) Build the capacity at the Tanzania Airports Authority (TAA) – This includes improvements in strategic maintenance planning and management of routine and periodic maintenance contracts; and
- d) Co-ordinate and supervise the construction works.

Mafia district is an archipelago of islands made up of the main Mafia Island and other smaller islands of Jibondo, Bwejuu, Chole and Juani, which are permanently inhabited. Nyororo, Shungi mbili and Mbarakuli are other associated small islands that host migrant fishers who only go there seasonally following fish species seasonal abundance. For centuries, the island was a trading stop for Shirazi merchants travelling up towards Persia and under the rule of the Omani sultanate in Zanzibar. In 1890, Britain declared a protectorate over the territory of Sultan Sayid Ali, but part of this territory, namely Mafia, was traded to the German colonialists who moved the headquarters from Chole Mjini to Kilindoni on the main island (Chole Shamba) as it was more accessible. This meant that Mafia was administered as part of the mainland of Tanzania, unlike Zanzibar. Kilindoni remains the administrative and commercial capital of Mafia until today.

The main livelihood activities in Mafia are agriculture, livestock-keeping, fishing, industry and trade. Agricultural crops, such as cashew nut, coconut, paddy, fruits, vegetables, and sweet potatoes, are cultivated; together with fish, some are transported and sold in the Dar es Salaam market through Kisiju and Nyamisati in the Rufiji delta. Livestock keeping is on a very small scale mainly for food, but also cash income when needed.

Farming and fishing are seen as complementary activities, carried out by both men and women, though usually with different areas of responsibility. Women would collect octopus and bivalves, whilst men would go out in boats. Cash crops in Mafia include coconuts and cashew nuts. Mafia is the chief source of fish to Dar es Salaam, about 900 tones of various fish resources are fished annually. There is also commercial aquaculture on the island namely prawn hatchery, prawn farming and sea weed farming. Pearl oyster farming is also being pioneered. The only other main industry on Mafia is tourism.

Mafia Island is one of the most exciting diving and fishing areas in the world and is home to about four hundred species of fish and five species of turtle. Sports fishermen flock there for the superb catches, many of them great fighters, which include barracuda, marlin, sailfish and tuna. Divers see a veritable kaleidoscope of reef dwellers among the fifty types of coral. These include butterfly fish, clown fish, lion fish and rainbow fish while, in deeper waters, they come across groupers, rays and sharks. The rare dugong breeds in the Mafia channel while the green and hawksbill turtle nest on the smaller islands.

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Mafia Island is a popular destination for visitors to relax after their safari and the island’s relaxed and secluded beaches offer privacy and comfort for discerning travelers.

3. PROJECT LOGIC

Resurfacing of the airport’s runway and improving other airport facilities will allow for easier, more efficient, and safer access to the island, resulting in increased tourist and business travel to and from the mainland and additional job to the island. This is intended to translate into more dollars spent in the local economy for tourism-related businesses.

The evaluation will measure the following outcome, objective and impact indicators as outlined in the Project Logic prepared by MCA-T:

(a) Outcome: Increase in travel through Mafia Airport:

- i) Total annual passengers arrivals – # (Dry season)
- ii) Total annual Passengers arrivals – # (Wet season)

(b) Objectives: Increase in investment and economic activities:

- i) Annual aggregate visitor spending - dry season (\$)
- ii) Annual aggregate visitor spending - wet season (\$)
- iii) Percentage of household¹ with Income Generating Activity (IGA)² - %
- iv) Number of stand-alone businesses³ (#)

(c) Compact Goal: Poverty reduction and economic growth

- Average annual household income per capita (\$)

The evaluation will update some of the indicators already in the M&E Plan (Indicator Tracking Tables) and estimate values for indicators currently labeled as “to be determined (TBD)” in the ITT.

4. EVALUATION QUESTIONS

The evaluation design and subsequent data gathering activities will address the following key research questions:

- a) Has the Mafia Island Airport Upgrade Project contributed to easier, more efficient, and safer access to Mafia Island?
- b) Has the Mafia Island Airport Upgrade project contributed to an increase in (i) tourism and/or (ii) business travel?
- c) Has the Mafia Island Airport Upgrade project contributed to an increase in visitor spending on the island?
- d) Has the Mafia Island Airport Upgrade project contributed to an increase in economic and investment activities on the island? (Hotel, wildlife refuge, food industry, etc.)

These are the thematic areas or critical issues for the evaluation. Linkage with the Project Logic will be as follows:

- Outcome indicators in the Project Logic will be addressed in evaluation question (b) above.
- Objective indicators in the Project Logic will be addressed in evaluation questions (c) and (d) above.
- The Compact Goal indicator will be part of the evaluation indicators of the project.
- The Consultant will also measure the Compact Goal using ownership of assets and food poverty as proxy of poverty indicators at micro level because they are used by the National Bureau of Statistics (NBS) in Household Budget Survey and Tanzania Poverty Monitoring Framework.

¹ A Household is defined as a one person or a group of people who normally live together and eat together as a family in a residential unit or part of a residence/house, whether owned or rented.

² A “Household with IGA)” is a residential unit or part of a residence/house as defined above which owns a business unit within or outside the household.

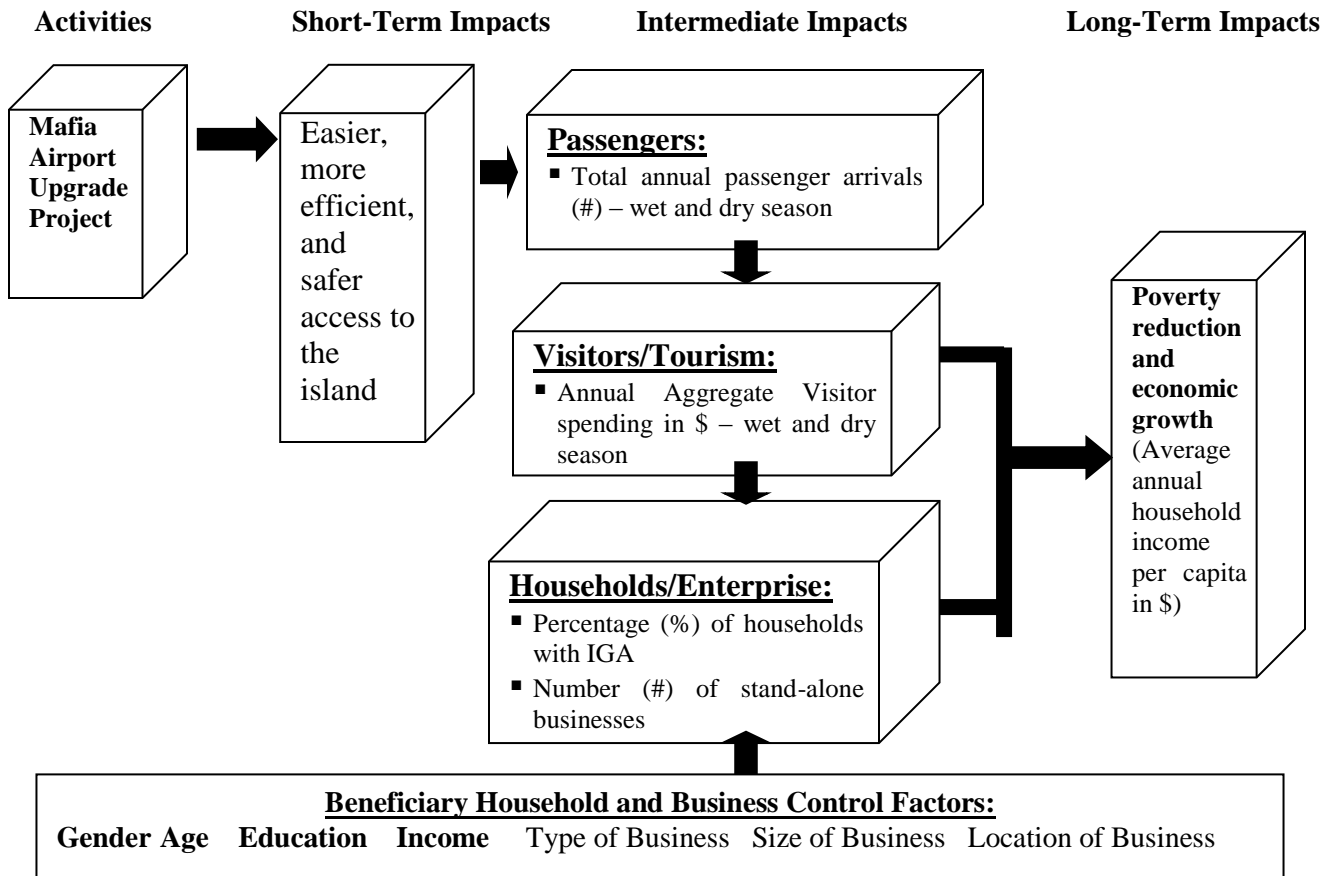
³ A Stand-alone business is an Income Generating Activity (IGA) established outside the household of the owner.

5. CONCEPTUAL FRAMEWORK

Figure 1 shows conceptual model of the project and identifies key evaluation issues. It presents the project's structure, connections, and expected outcomes and impacts. The conceptual model has been developed based on the Project Logic and the key evaluation questions. It is described as follows:

- The box on the far left of the figure shows the project activity – Mafia Island Airport Upgrade.
- The box on the far right shows the ultimate goal of the Compact- Poverty reduction and economic growth.
- The second box from left shows that the project activity is designed to achieve this Compact goal by enabling easier, more efficient, and safer access to the island. This will be realized in the short-run because the improved airport is expected to attract more flights per day than the current two flights making it easier to get flight booking to the Island; the tarmac runway will attract bigger and more cost efficient aircrafts such as ATR 42 (44 to 50 passengers) and ATR 72 (62 to 74 passengers) used by Precisionair between Dar es Salaam and other airports, than the current small planes flying to Mafia – mostly Cessna 208 and 206 that carry 14 and 5 passengers respectively, which will likely push down tariffs, enabling those who could not afford current tariffs (US\$ 150 one-way) to fly easily for 30 minutes instead of travelling aboard traditional sailing dhows via the Kisiju and Nyamisati villages of Rufiji delta for about two days from the mainland, or aboard on a small motorized boat for eight hours (also via the Kisiju and Nyamisati villages of Rufiji). Therefore, the project is intended to increase efficiency of traveling to Mafia due to decrease of flight operating costs and tariffs as well as travel time. The tarmac runway is intended to be safer to land than the current runway, hence potentially decreasing accidents.
- The third column of boxes shows that easier, more efficient, and safer access to the island is expected to have intermediate impact on the number of travelers/passengers to the Island and beneficiaries of investment and economic activities in the Island. Willingness and affordability to fly to the Island will increase the number of travelers/passengers. The evaluation will adapt to the Mafia context, especially business seasonality that is largely influenced by wet and dry seasons. With regard to investment and economic activities in the Island, the expected increase in the number of travelers/passengers is expected to increase the number of visitors and hence their aggregate spending. This may increase demand for goods and services, which will be catalyst for households to establish an Income Generating Activity (IGA). Some IGAs may be established outside the household of the owner/operator as stand-alone businesses. Increase of visitors aggregate spending and the IGAs (whether within the household or stand-alone) could lead to increase of the average annual household income per capita hence poverty reduction and economic growth in the Island shown in the box on the far right.
- The box at the bottom of the model shows factors that may affect impact of the project. They affect the way beneficiaries gain benefits of the project. For example, since women are often minority, men are potentially more likely to gain benefits than women or female headed households. The evaluation will pay particular attention to differences by gender as that is a strategic priority for MCC and MCA-T.

Figure 1: **Conceptual Framework for Mafia Island Airport Upgrade Project**



Process and output indicators in the Project Logic will be monitored by M&E unit of MCA-T. As mentioned in Section 4, the Consultant will also measure the Compact Goal using ownership of assets and food poverty as proxy of poverty indicators at micro level because they are used by the National Bureau of Statistics (NBS) in Household Budget Survey and Tanzania Poverty Monitoring Framework.

The rigor of a credible evaluation methodology is the ability to measure **relevance** (compact formulation process), **efficiency** (process and output indicators, and timeliness), effectiveness (outcome and objectives indicators), and **sustainability** (reaching intended beneficiaries, challenges, plans to sustain benefits, perception of the project). It should also identify and document applicable lessons.

Therefore, besides the short-run, intermediate and long-run impacts, the evaluation will also answer the following:

- **Cost - benefit analyses:** Is the project warranted based on re-estimation of cost - benefit analyses?
- **Unintended consequences:** Are there unintended impacts of the program (positive or negative)?
- **Lessons learned:** What are the implications of the evaluation findings for scaling up, replication or long-term policymaking?
- **Sustainability:** Are the stakeholders ready and committed to keep the airport under good repair and perpetuate impact created by the project? Did the project benefits reach intended/unintended beneficiaries? How was the activity perceived by potential/actual beneficiaries? What challenges were encountered? How were the challenges addressed?

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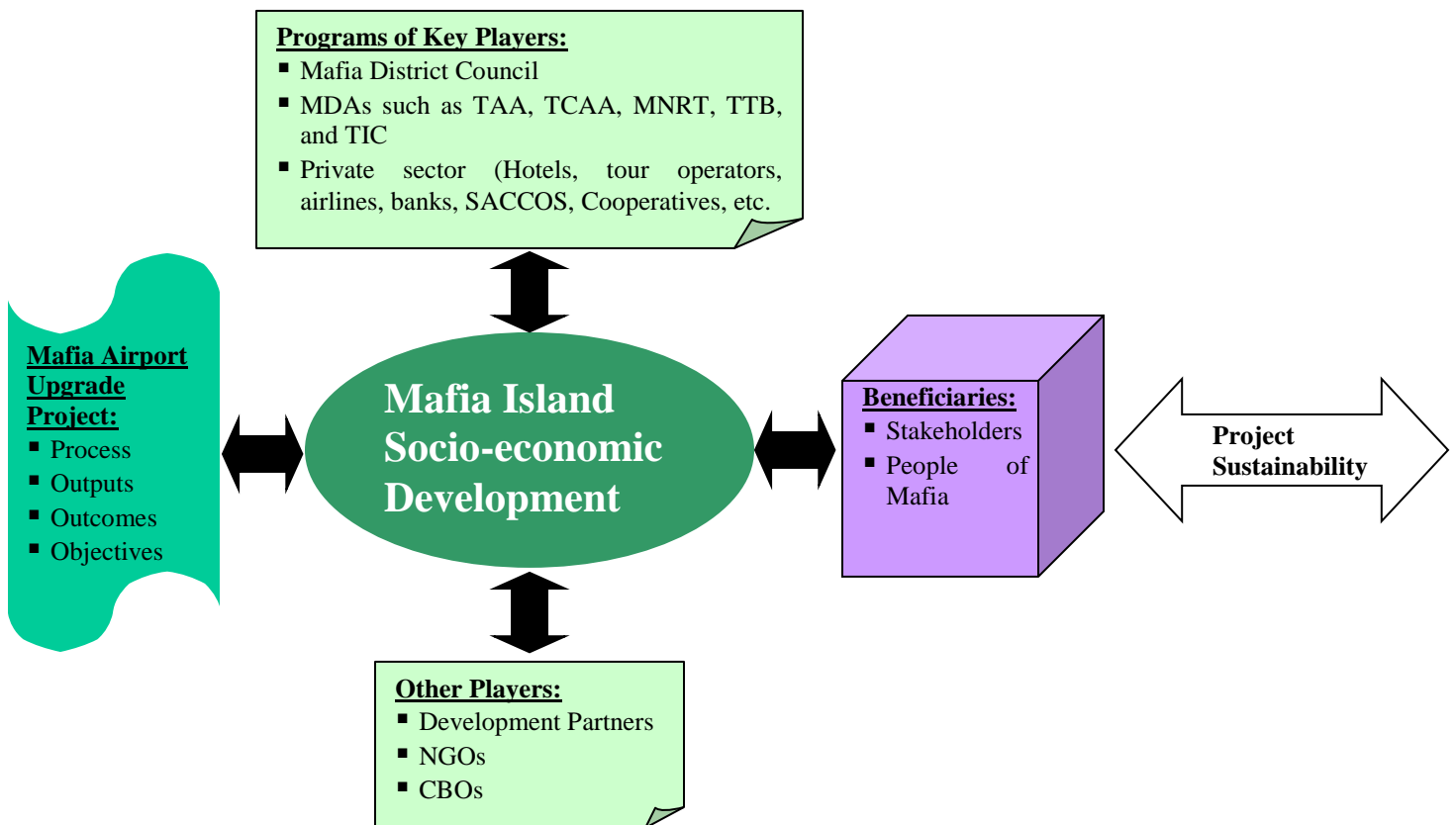
However, these additional issues will be addressed in the Interim and follow-up evaluations because they are not relevant for the baseline study.

6. EVALUATION METHOD

There are many factors and interventions that will be contributing to socio-economic development and poverty reduction in Mafia Island during implementation of the Airport Upgrade Project. The study of Pinnacle Research Company (<http://www.pinnacleresearch.co.nz/policy/linkages.html>) echoes this by arguing that transport investment on its own will not guarantee economic growth. This is because economic growth depends on so many factors and efforts.

In this regard, ideally, evaluation of the project impact and sustainability should consider parallel interventions as shown in *Figure 2*.

Figure 2: **Mafia Socio-economic Development Chain**



Mafia is believed to be a less developed part of Tanzania, and is lagging in terms of infrastructure such as electricity, roads, and education. The majority of the people in Mafia are (poor) subsistence farmers, primarily influenced by Coastal Swahili culture with strong religious and family ties. It is part of the “Swahili Coast” that comprises of Zanzibar, Mafia, Bagamoyo, Kilwa, Dar es Salaam and others. However, Mafia district is an archipelago of islands made up of the main Mafia Island and other seven (7) smaller islands. Its level of poverty is very high when compared with other parts of “Swahili Coast”. Therefore, there is hardly a part of Tanzania that has a perfect match with Mafia. The intervention being evaluated is also very unique because there is no area in the “Swahili Coast” that has or will get a similar intervention in the near future.

Furthermore, it is very difficult to get a group or groups in Mafia Island that would present a good counterfactual with similar observable and/or unobservable characteristics. Easier, more efficient, and safer access to the island as a result of the project will occur at the same time and is likely to affect all stakeholders and beneficiaries in Mafia because the Island is very small. Therefore, comparison with

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any part on the “Swahili Coast” or different parts of Mafia is likely to result into obtaining biased impact estimates caused by the initial differences between the groups compared either through the difference in differences comparison group method or the random assignment method. Consequently, the consultant will use a **pre-post or before and after** comparison evaluation method as shown in *Table 1*.

Table 1: **Proposed Evaluation Methodology**

| Activity | Evaluation Methodology | Intervention/ Treatment Group | Counterfactual: Comparison/ Control Group | Key Outcomes and Impact |
|--------------------------------------|---|------------------------------------|---|---|
| Mafia Island Airport Upgrade Project | Pre-post approach comparing outcomes from before and after implementation | Months after activity is completed | Months before activity begins | <ul style="list-style-type: none"> ▪ Increased total annual passenger arrivals ▪ Increased Annual Aggregate Visitor spending ▪ Increased Households with IGA ▪ Increased Stand-alone businesses ▪ Poverty reduction and economic growth (Increased average annual household income per capita) |

It should be noted that, while the pre-post method may not produce impact estimates that are conclusively causal because of lack of a counterfactual, they may provide a good basis for future work, including policy implications.

The evaluation will use both quantitative and qualitative data as complements in an evaluation strategy. Therefore, the consultant will use a “mixed-method” design that combines techniques traditionally labeled “quantitative” with those traditionally labeled “qualitative”. The choice is based on type of data to be collected, timeframe and nature of data source/respondents relevant for each type of data.

7. ROUNDS OF DATA COLLECTION AND USE

The consultant will adopt the three-stage or three rounds project evaluation cycle comprising of the Baseline, Interim, and Follow-up/final/impact also known as summative evaluation. All the rounds will address the same evaluation questions and use similar if not same instruments and protocols. Each round will have two phases of data collection during wet and dry season, which will match with the tourism seasons.

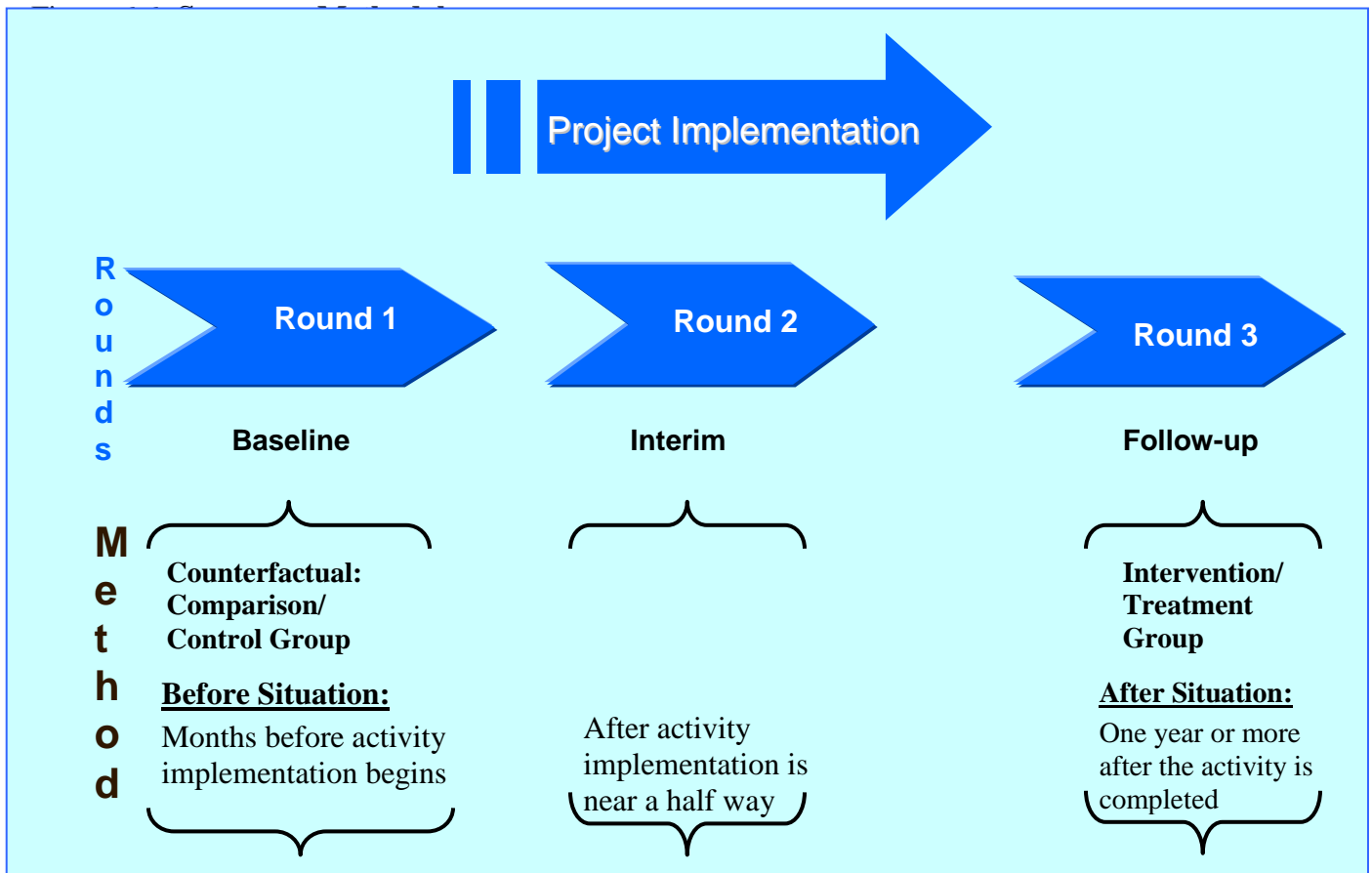
Baseline status (April to August 2012) - will be established immediately after approval of the baseline concept paper; when construction would have just started. *Figure 3* presents timeframe for each round of data collection.

Interim evaluation (April to August 2013) - will be an early check to determine what impact progress of the process and outputs have started to create on the Compact Goal (Poverty reduction and economic growth). At this stage, data will be collected and compared with the “before” baseline status to establish interim impact (if any). Findings will also be used to test features of the project to get bases for modifying/fine-tuning the project design with a view of improving effectiveness over time.

Follow-up/final/impact evaluation (April to August 2015) - will be conducted at least one year after completion of the Mafia Island Airport Upgrade Project. This will measure how the project has worked in the Mafia context and what lessons will be learned to inform next policy formulation. Recommendations of the evaluation will feed into policy making.

Figure 3 presents matching of the chosen *pre-post evaluation method* with the rounds of data collection and use.

Figure 3: **Integration of Project Implementation, Evaluation Rounds and Pre-post Method**



8. ANSWERING KEY EVALUATION QUESTIONS

The key research questions will be addressed as follows:

Research question 1— Has the Mafia Island Airport Upgrade Project contributed to easier, more efficient, and safer access to Mafia Island?

To address this question the consultant will use aircraft movement (flights) data from TAA. TAA will provide data on the number of flights per day to and from Mafia during the baseline, interim and follow-up stage. Flights are expected to increase during the third round. Increase of flights during follow-up stage will make getting a flight to the Island easier than before. The Consultant will also use data on the type and capacity of aircrafts also from TAA to examine the contribution of introduction of larger aircrafts such as ATR 42 and ATR 72 on making easier to book a flight to Mafia and decrease of tariffs (if any). Aircraft capacity utilization will also be calculated using the aircraft data and passenger data (also from TAA) with a view to show changes of how easy it will be to get a booking to Mafia. The consultant will use tariffs and flying time data from TAA and websites or booking offices of airlines flying to the Island to measure cost and time efficiency between the baseline, interim and follow-up stages of the evaluation. The consultant will use incidents and accidents⁴ data from Tanzania Civil Aviation Authority (TCAA) to assess safety trends at the Mafia airport. Reports of TCAA on assessment of safety deficiencies⁵ at the Mafia airport vis-à-vis International Civil Aviation

⁴ **Accident** is an intentional mishap event that leads to injury, death or property damage while **incident** is a disturbance event that did not cause injury, death or property damage.

⁵ **A deficiency** is a situation where a facility, service or procedure does not comply with a regional air navigation plan approved by the Council, or with related ICAO Standards and Recommended Practices, and which situation has a negative impact on the safety, regularity and/or efficiency of international civil aviation.

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Organization (ICAO) standards may also be used in the assessment of changes of safety between the baseline, interim and follow-up stages of the evaluation.

Research question 2— Has the Mafia Island Airport Upgrade project contributed to an increase in (i) tourism and/or (ii) business travel?

To address this question the consultant will use data from TAA on total annual passengers arrivals disaggregated by month and season. This will be compared with month-by-month Mafia rain data from TAA or Tanzania Meteorological Agency (TMA). However, although this secondary data perfectly answers the indicator in the evaluation logic, it cannot answer this question on purpose of travel such as (i) tourism and/or (ii) business travel. TAA has no data on *source markets, average length of stay, package⁶ or non-package⁷, purpose* of travelling to Mafia - Tourist (Leisure and holiday) - local/foreign by interest and package and non-package; Business- local/foreign and type of business e.g. Government, with a project in Mafia, etc.; Visitor - visiting friends and relatives; Returning Mafia Resident by occupation.

Consequently, this will be complimented by other sources such as a quick *passenger exit survey*.

According to Holberg (2008), there is no reliable statistics on tourists that visit Mafia. Only the Marine Park collects data because all visitors are registered at the park gates where they to pay fees per day (double or more counting?). But some tourists stay outside the Park and are therefore not registered by MIMP. The consultant will also use data from Mafia District Council, which is expected to collect data on tourists from the hotels as basis for tax revenue collection. However, reliability of such data will be assessed through triangulation with data obtained from MIMP and other sources. Consultation with the Ministry of Natural Resources and Tourism and Tanzania Tourist Board (TTB) during scoping of this assignment revealed that they do not collect any data on Mafia tourism. They avoid double counting because they believe tourists visit Mafia after safari on the mainland. They are interested on data of tourists visiting Mafia first before other attractions or Mafia alone. Tanzania Tourism Sector Survey including the 2009 International Visitors' Exit Survey carried out by the National Bureau of Statistics (NBS) in collaboration with the Bank of Tanzania (BoT) also does not include tourism in Mafia. The monthly Hotel Statistics Survey by NBS (latest April, 2011) does not provide data for Mafia. Household Budget Survey data and the National Informal Sector Survey (Tanzania Mainland), The Planning Commission and the Ministry of Labour and Youth Development (UNDP/ILO) in 1991 do not include data for Mafia. Data from Tanzania Investment Center (TIC) only cover projects registered by the center. Therefore, increase in tourism will be measured using MIMP and Mafia District Council tourists data, which will be complimented by passenger exit survey to capture purpose and a *hotel survey* to capture hotel revenue. Both passenger exit and hotel surveys will be small data collection efforts because the evaluation will be limited due lack of a counterfactual.

Research question 3— Has the Mafia Island Airport Upgrade project contributed to an increase in visitor spending on the island?

To address this question the consultant will collect primary data on annual aggregate visitor spending through a sample survey of hotels. Data will be collected from hotel management and a sample of hotel guests. This is hotel/tourism related data, which is not available for Mafia context as explained above. Because it is expected that many hotels would be reluctant to provide data on their revenues, the questionnaire will only include questions about, room tariffs and average room occupancy/service rates. Those figures will be multiplied to come up with an estimate of average monthly revenues. The consultant understands that visitors spend on other items other than accommodation. Some of these expenditures such as hire of transport and sport facilities as well as shopping *are made outside the*

⁶ A **package tour** or package holiday consists of transport and accommodation and other services advertised and sold together. Packages reveal a link between tourism and other sectors that provide services to tourists such as transport, attractions, guide, restaurants and entertainment.

⁷ **Non-package tour** is when accommodation is advertised and sold separately without including any other service.

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hotel and therefore cannot be captured in the hotel survey. Data on expenditure on these goods and services will be collected through *passenger exit survey* and *hotel guest interview* to get data on average length of stay and average expenditure on bar, restaurants, hire of transport and sport facilities, shopping and other goods and services. Passenger exit survey to be filled airborne form Mafia will also capture data on non-hotel patron visitors such as those visiting friends and relatives. The filled questionnaires will be collected on arrival in Dar es Salaam. Hotel guest interview will also capture people who chose boat travel, hence complementing data collected from the air passengers.

Research question 4— Has the Mafia Island Airport Upgrade project contributed to an increase in economic and investment activities on the island? (hotel, wildlife refuge, food industry, etc.)

To address this question the consultant will use data from Mafia District Council’s Planning Department. Data on population and households, households with Income Generating Activity (IGA) and number of stand-alone businesses will be collected from the Trade Department. Since there are informal IGAs that are not captured in the license data of the district and the data set does not indicate licensed IGAs that are stand-alone, other surveys carried out by the Mafia District Council’s Planning Department and NGOs providing livelihood interventions in the district will also be consulted. These are also unlikely to provide explicit households with Income Generating Activity (IGA) and number of stand-alone businesses. Consequently a small effort collection of data on these variables from village and sub-village government leaders using a checklist will be carried out. Focus Group Discussions (FGDs) of community key informants – gender disaggregated – will also be conducted to capture their perceptions on benefits, needs, problems, opinions, beliefs, and attitudes towards the project.

Other evaluation issues: — This evaluation has to answer the above four (4) key questions. However, as shown in the Conceptual Framework in Section 5, a rigor and credible evaluation will include:

(a) **Compact Goal:** Has the Mafia Island Airport Upgrade project contributed to attainment of the Compact goal?

To address this question poverty reduction and economic growth will be measured using average annual household income per capita data from Mafia District Council’s Planning Department. A quick quantitative questionnaire will be administered to participants of Focus Group Discussions (FGDs) to capture data on household income, household size as well as ownership of assets and food poverty as proxy of poverty indicators at micro level. Participants who will be available will be source of data for both the baseline and follow-up. A multiple cross sectional approach will be used.

(b) **Other:** Interim and follow-up evaluations will also answer the following:

i) **Relevance:** Did the formulation process and design of Mafia Island Airport Upgrade Project relevant conform to existing policies and the country’s development agenda?

This will be examined through review of various documents at MCA-T including the Compact Agreement.

ii) **Cost - benefit analyses:** Is the project warranted based on re-estimation of cost - benefit analyses?

Findings generated from this evaluation, together with estimates of the costs of the interventions from MCAT, will be used to calculate the realized ERR of the program. The realized rates can then be compared against the projected ERRs to test whether the original projections differ from the realized outcomes, and to investigate which components of the original calculations contribute to any observed differences.

iii) **Unintended results:** Are there unintended impacts of the project (positive or negative)?

There will be open ended question in the hotel survey and the Focus Group Discussions (FGDs).

iv) **Lessons learned:** What are the implications of the evaluation findings for replication and long-term policymaking?

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The consultant will document lessons from challenges faced at all stages/rounds of the evaluation that have implications in future project designs, impact evaluations and long-term policy decisions.

- v) **Sustainability:** Are the stakeholders ready and committed to keep the airport under good repair and perpetuate impact created by the project?

To address this question, the consultant will ask this question of all the key stakeholders during collection of secondary data from TAA, MIMP, and Mafia District Council.

9. STAKEHOLDERS INVOLVEMENT

The Consultant will ensure adequate and timely participation of stakeholders. The aim is to create ownership and make sure results are incorporated in future policy choices and used to inform the allocation of resources across programs/sectors.

The evaluation design ensures participation of the implementing agent - Tanzania Airport Authority (TAA) and external stakeholders namely Ministry of Natural Resources and Tourism (MNRT), Ministry of Industry and Trade (MIT), Tanzania Civil Aviation Authority (TCAA), National Bureau of Statistics (NBS), Small Industries Development Organization (SIDO), Tanzania Investment Center (TIC) and Coast Region Local Government Authorities (LGA).

Results of the baseline study will be disseminated to all stakeholders. The aim is to ensure evaluation results will be applied to policy development and resources allocation. Recommendations will identify entry points for use of evaluation results.

10. DATA NEEDS AND SOURCES

The consultant has established data needs for evaluation of the project. Identification of relevant variables is critical to usefulness of evaluation results. Variables are identified in Section 8, which shows variables that will address each of the evaluation questions. **Table 2** presents the required five (5) data sets, nature of data to be collected, collection method, their analytic purpose, and the timing of data collection rounds. Most of data will be collected through extraction of existing administrative data. These will be complemented by small effort primary data collection for data not available in the secondary sources as explained in Section 8. In order to match with the tourism seasons, each round will have two phases of data collection during wet and dry season.

Table 2: **Data Needs and Collection Rounds**

| Dataset | Nature | Data Collection Method | Analytic Purpose | Timing/Data Collection Rounds |
|----------------|---------------------------|--|--|---------------------------------|
| Administrative | Quantitative | Secondary data extraction | To capture aircraft movement (flights), type of aircrafts flying to Mafia, tariffs, flying time, aircraft capacity utilization, incidents and accidents, and safety deficiencies at the Mafia airport. | Baseline, Interim and Follow-up |
| | | | To capture tourist data recorded by MIMP and Mafia District Council | Baseline, Interim and Follow-up |
| | | | To capture households with Income Generating Activity (IGA), number of stand-alone businesses, household income per capita | Baseline, Interim and Follow-up |
| | | | To capture variables used in the calculations of the Economic Rate of Return (ERR) for the | Follow-up |
| | Qualitative | Literature review (Secondary data) | To capture relevance of the project in terms of conformity of its formulation processes and design to the country's policies and development agenda. | Interim and Follow-up |
| | In-Depth Interviews (IDI) | To capture unintended consequences, lessons learned and sustainability plans | Follow-up | |

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| | | (primary data) | | |
|--------------------------------------|-----------------------------------|--|---|---------------------------------|
| Passenger exit survey | Quantitative | Questionnaire (primary data) | To capture source markets, average length of stay, and purpose of travelling to Mafia, planned expenditure on accommodation, bar, restaurants, hire of transport and sport facilities, shopping and other goods and services, including those made outside the hotel. | Baseline, Interim and Follow-up |
| Hotel Survey (Management and Guests) | Quantitative | Questionnaire (primary data) | <ul style="list-style-type: none"> ▪ To capture source markets, average length of stay, hotel booking rates and room tariffs ▪ Mode of transport to Mafia used and reasons ▪ An unintended impacts of the project (positive or negative) | Baseline and Follow-up |
| Households and Businesses | Both qualitative and quantitative | In-Depth Interviews (IDI) (primary data) | Population and households data; Households with IGA within and or as Stand-alone business; Number of stand-alone businesses; Household income per capita | Baseline and Follow-up |
| Community | Quantitative | Questionnaire (primary data) | To capture household income, household size as well as ownership of assets and food poverty | Baseline and Follow-up |
| | Qualitative | FGD (primary data) | To capture their perceptions on benefits, needs, problems, opinions, beliefs, and attitudes towards the project | Baseline and Follow-up |

Both questionnaire and FGD are needed for collection of community data set because the quantitative data on income, assets and food poverty can best be collected using a questionnaire while perceptions, opinions, beliefs and attitudes towards the project need FGD.

10.1 Existing Data

The evaluation will capitalize on existing data. As indicated in Section 8 and *Table 2*, some secondary data evidence already exists to gauge the effectiveness of this type of project. The administrative data set and literature on the project are available. Mafia population and households data is also readily available at NBS and district and village offices. They could also have household income per capita data.

10.2 Primary Data Collection Needs

Data available in most national surveys is not disaggregated to the extent of enabling extraction of data for Mafia Island. The fraction of sample covered in Mafia could be too small to show outcome relevant for this project. This could be attributed to the access problem during surveys, which is addressed by the intervention. Since evaluations are context specific, most of the general regional and national indicators found in the secondary data are not suitable for evaluation of the project. Consequently, the available relevant secondary data will be complimented by small efforts collection of primary data during Baseline and Follow-up as shown in *Table 2*. These include small effort primary data collection for variables for the following data sets:

- Passengers data;
- Hotels data;
- Hotel Guest data;
- Households and Businesses data; and
- Key informants data.

10.3 Data Sources

The data sources to be used in the evaluations are shown in *Table 3*.

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Table 3: **Data Sources for the Evaluation**

| Dataset | Data Variables | Source |
|---------------------------|---|---|
| Administrative | Aircraft movement (flights), type of aircrafts flying to Mafia, tariffs, flying time, aircraft capacity utilization | TAA |
| | Incidents and accidents, and safety deficiencies at the Mafia airport | TCAA |
| | <ul style="list-style-type: none"> ▪ Number of hotels and capacity, occupancy statistics by source countries, package and non package ▪ Tourism statistics for Mafia ▪ Tourism Revenue and rates used | MIMP and Mafia District Council |
| | Other variables used in the calculations of the Economic Rate of Return (ERR) - <ul style="list-style-type: none"> ▪ Terminal Revenue Benefits - Fuel suppliers, Flight kitchens, Retailing, Food service, Parking, and Storage – volume and tariffs ▪ Annual Air Freight (Tons and rates) - domestic and international, and then commercial and non-commercial, and then scheduled and non-scheduled; and also for dry and wet seasons ▪ Fisheries production (raw and processed) | TAA, Ministry of Livestock and Fisheries Development (MLFD) and Fish Processors in Mafia |
| | Relevance of the project in terms of conformity of its formulation processes and design to the country’s policies and development agenda. | TAA, TCAA, MIMP, Mafia District Council |
| | Unintended consequences, lessons learned and sustainability plans | |
| Passenger exit survey | <ul style="list-style-type: none"> ▪ Nationality (source markets), average length of stay, and purpose of travelling to Mafia ▪ Expenditure on accommodation, bar, restaurants, hire of transport and sport facilities, shopping and other goods and services, including those made outside the hotel. | Mafia Airport |
| Hotel Survey | Client source markets, average length of stay, hotel booking rates and room tariffs | Tourist hotels |
| Hotel Guest Survey | Same variables as the Passenger Exit Survey but with additional variables on mode of transport and reasons for choosing water/boat or air transport | Tourist Hotel Guests |
| Households and Businesses | Population and households data; Households with IGA within and or as Stand-alone business; Number of stand-alone businesses; Household income per capita | <ul style="list-style-type: none"> ▪ Mafia District Council ▪ Village Leaders |
| Community | Household income, household size as well as ownership of assets and food poverty | Community Key informants (male and female) |
| | Perceptions on benefits, needs, problems, opinions, beliefs, and attitudes towards the project | |

11. DATA COLLECTION PROTOCOLS AND INSTRUMENTS

The consultant has prepared data collection instruments and protocols based on data needs, sources and methods in Section 10. *Table 4* presents a list of data collection instruments.

Table 4: **Data Collection Instruments**

| Instrument | Respondent |
|-----------------------|---|
| Admin Data Form No. 1 | Institutions with secondary data needed |
| Admin Data Form No. 2 | LGAs (DED, Villages, Sub-villages) |
| Listing Schedule | Village and Sub-village Leaders |
| Questionnaire No. 1 | Passengers Exit Survey |
| Questionnaire No. 2 | Hotel Managers Interview |
| Questionnaire No. 3 | Community Key Informants of working age (18 - 60 years) |
| Questionnaire No. 4 | Tourist Hotel Guests |
| FGD Guide | Community Members |
| Literature Checklist | Institutions and websites |

Data collection instruments are given as *Annex I*.

Protocols on the process and rules that will guide the evaluation will include the following documents given in *Annex II*:

- Workload Listing Schedule

- Training Plan/manual for the additional staff

Most of the rules and instructions will be built into the data collection instruments. The assignment will largely be carried out by the consultant, hence less need for protocols.

12. SAMPLING AND WEIGHTING PLANS

12.1 Sampling Plan

One of pre-requisites for effective pre-post evaluation method is collection of data from the same sources/respondents during all rounds of data collection. However, due to semi nomadic nature of fisher community especially men and also attrition, a multiple cross sectional approach will be used instead of the ideal panel survey. Determination of the sample size could be guided by the National Master Sample (NMS) developed by the National Bureau of Statistics (NBS) and updated in 2003. The optimal sample size for producing national estimates in Tanzania varies from 5-10 clusters (villages/EA⁸s) per stratum (region) depending on the sensitivity of the study. However, since the primary data collection has to be small due to lack of a counterfactual and the fact that the target population is small, there will be full coverage as explained below.

(a) Administrative Data

Administrative data will be obtained from TAA, TCAA, MIMP, Mafia District Council, Ministry of Livestock and Fisheries Development (MLFD) and Fish Processors in Mafia. Since each of these stakeholders will provide very specific data/information, there will be full coverage (without sampling).

(b) Hotel Survey Data

There are about seventeen (17) tourist hotels in Mafia. Since they are few, all will be covered by the evaluation during the baseline and the follow-up. If any new hotels will be opened during the evaluation period, they will be added in the follow up.

(c) Hotel Guest Survey Data

Due to lack of a counterfactual, about 10% of guest of the hotel covered during the survey will be interviewed. Most hotels in Mafia are small size with less than fifty rooms. Assuming coverage of about twenty hotels, the sample size will be about 100 hotel guests.

(d) Passenger exit survey Data

The largest aircraft currently flying to Mafia is C208 with an average occupancy of 6.98 passengers. Data from TAA indicate that the average number of aircraft that landed at Mafia airport in 2011 was 116 per month. Therefore, the population of passenger arrivals per month is estimated at 348. While aircraft manifest could be used as sampling frame, most of the passengers are normally in rush such that orderly selection from the manifest (which normally come with the plane) will create delays and missing the respondents because most are not ready to wait and consider giving interview as a favour.

To solve the above problem, questionnaires will be given to all passengers when boarding in Mafia. Therefore, both men and women passengers will be given the questionnaire. Therefore, there will be full coverage of all passengers that will travel by air from Mafia during the two weeks data collection effort of each round (baseline, interim and follow-up) and phases (wet and dry season). However, the consultant is not expecting all passengers to accept the questionnaire.

⁸ EAs: these are the small Enumeration Areas demarcated prior to the population census activities covering a maximum of 900 persons in the rural settings and 400 in the urban areas. With good tracking of the EA boundaries, these areas are used by researchers for carrying social economic studies.

(e) Households and Businesses Data

This data will be collected from Mafia District Council and village leaders. Administratively, Mafia district is divided into 2 Divisions, 7 Wards, 20 Registered Villages (*Table 5*) and 132 sub- villages as shown in *Figure 4*. The Mafia Airport Upgrade Project is expected to affect households and businesses in **Kilindoni** where the Mafia District Headquarters and the airport are located. Households and businesses at **Utende and Chole** villages where most of the tourist hotels are located will also be affected by the project. Therefore, considering the small number of villages that are likely to be affected, leaders of all sub-villages of Kilindoni, Utende and Chole villages will be covered, about 18 sub-villages⁹.

Figure 4: **Mafia Administrative Structure**



Table 5: **Mafia Population**

| Ward | Area km ² | Population 2002 | Villages |
|--------------|----------------------|-----------------|-------------------------------------|
| Baleni | 132.1 | 9137 | Baleni, Kungwi, Ndagoni, Chunguruma |
| Jibondo | 21.9 | 3405 | Jibondo, Chole, Juani |
| Kanga | 52.7 | 3317 | Kanga, Bweni |
| Kilindoni | 36.8 | 11696 | Kilindoni, Dongo |
| Kirongwe | 77.0 | 5260 | Kirongwe, Jimbo, Banja, Jojo |
| Kiegeani | 40.3 | 3379 | Kiegeani, Marimbani |
| Mibulani | 52.3 | 4363 | Miburani, Mlongo, Chemchem |
| Mafia Island | 413 | 40801 | 20 villages |

(e) Community Data

The small data collection effort of community data will be conducted at the three villages of Kilindoni, Utende and Chole. Two FGDs will be conducted – one for male and another for female informants. The aim is to get gender disaggregated perceptions, opinions, beliefs, and attitudes towards the project. Therefore, a total of six FGDs will be conducted.

12.2 Weighting Plan

Some indicators will be generated through weighting. Proportions to total population of interest and reference time periods (day/week/month) will be used in weighting. For example:

- Average profit per month, times 12 months to get annual profit
- Average profit per week, times 52 weeks to get annual profit

Weighting will be calculated and incorporated into the data entry and processing software/system.

13. DATA COLLECTION PLAN

Data collection methodologies have been selected based on the nature of the variable to be collected (primary/secondary) and nature of the source of data.

⁹ Obtained by multiplying the 3 villages and the average of 6 sub-villages per village obtained from dividing the 132 sub-villages in the Island by the 20 registered villages.

13.1 Administrative Data

Administrative and secondary data will be extracted from records. Quantitative administrative data forms will be used in the extraction of data. The consultant will visit the data sources with a letter of introduction from MCA-T and ask them to fill the data extraction forms using their records. The literature checklist will be used during Follow-up to answer the question on project relevance and sustainability plans.

13.2 Primary Quantitative Data

Primary data will be collected using semi structured questionnaires, Listing Schedule and Focus Group Discussions (FGDs).

(a) Translation

The survey will use English and Swahili Languages. All communications and deliverables to the Client will be in English while some field data collection for ***household, business and community*** data will be conducted in the Swahili Language. Passenger exit and hotel guest surveys will be conducted in both English and Swahili Languages. Therefore, data collection instruments and protocols will be prepared in English and those mentioned above will immediately be translated from English into Kiswahili. The original English document will be compared with the back translation document to identify sections not correctly translated.

(a) Pre Testing

All data collection instruments and protocols will be tested before training for clarity and flow through mock interviews. They will be subject to more tests at a selected village near Dar es Salaam, where people of similar characteristics to the target respondents will be involved.

(b) Training and Mobilization

The Consultant will carry out mobilization, ensuring that all the resources and appointments required are in order.

Additional data collection staff (see Section 13.4) will be trained on the importance, roles and responsibilities, data collection tools and protocols to be used, as well as procedures and logistics pertaining to their roles in the assignment such as confidentiality and ethics.

(c) Pilot-test

Pilot testing will commence after MCA-T has approved this Inception Report/Concept Note. The piloting exercise will test all the approved data collection instruments and procedures in the protocols. Therefore, it will test all questions and operational procedures for all stages of the study.

Since most of data for the evaluation will be administrative and secondary data, piloting will be used to ascertain availability and formats of data available at district councils and villages.

The Consultant has selected Kilwa Masoko airport and village to be the pre-testing areas. They have similar characteristics with Mafia in terms of culture, economy, and passengers arriving at the airport are also predominantly tourists. The airlines serving Kilwa also serve Mafia.

Despite collection of primary being a small effort due to lack of a counterfactual, all technical procedures including pre-testing will be adhered to. The consultant estimates in **Table 6** that the sample size for pretest will be **22** respondents.

Table 6: **Pre-test Sample Size**

| Respondent Category | Sample Size |
|---|--------------------|
| Kilwa District Executive Director (DED) | 1 |
| Village Leaders | 2 |
| Tourist Hotels' Management in Kilwa | 2 |
| Passengers arriving at Kilwa Airport | 5 |
| Kilwa Masoko Community Key Informants (one FGD) | 14 |
| Total | 24 |

Additional staff will participate in the pre-test. Since passenger exit survey will cover, among others, tourists and other foreigners, excellent proficiency of English Language and ability to build quick rapport with that category of respondents will be necessary. Locals who are not comfortable with English will be interviewed in Kiswahili once they exit without filling the questionnaire.

(d) Field Data Gathering

Data will be collected using the traditional Pen-and-Paper Interviewing (PAPI) technology.

i) Passenger exit survey

The consultant will make arrangements with the airlines to distribute the short questionnaire in the departure lounge before boarding from Mafia. Passengers will be asked to fill them when airborne. Therefore, the paper survey should not take more than 15 minutes to completely fill it. The filled questionnaires will be collected on arrivals at Dar es Salaam airport. The consultant will ask permission to access arrival lounge from Dar es Salaam's Terminal I airport management.

ii) Hotel Survey

The consultant will visit the hotels to conduct interviews. Hotel managers will be allowed to use a mix of recall and records to answer evaluations questions in the data collection instruments. This is because some statistics such as hotel occupancy that cannot easily be recalled.

iii) Hotel Guest Survey

The questionnaire for hotel guest survey will be similar to the questionnaire for passenger except for the question on modes of transport used and reasons for choosing a particular mode. It will also be a small effort paper survey. The short questionnaires will be distributed to sampled guests.

iv) Village Households and Businesses Listing

The consultant will visit village leaders in Kilindoni, Utende and Chole as per the sample plan. Leaders will recall and consult their records. They may also consult Ten Cell Leaders whenever necessary. The latter normally know all their residents. Therefore, this may need walking thoroughly through the whole three areas to fill gaps left by memory recall and records. Since these are very small villages, this will still be a very small data collection effort.

13.3 Qualitative Data

Participants will be 8 to 14 key informants selected in collaboration with the village leaders and verified by village residents who are not village leaders. The Consultant will ensure representation of all adult age groups and that all gender (men and women) will be represented. The baseline FGDs will ensure full participation of 14 participants. This will provide some cushion in case some participants are not available during the next rounds of data collection, which will be multiple cross sectional.

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Preparations will include a protocol comprising rules and instructions to be followed in each FGD, to ensure consistency, and thus increase the reliability of the findings. A guide that lists the questions or issues to be explored during the FGD will also be prepared. The protocol and guide will be translated into Kiswahili, the language that will be used in the discussions. During the discussions probes will be used as and when needed. FGD will be conducted by two persons, a Moderator and Recorder. The recorder will use a Note Book, Tape Recorder and camera.

During the discussion I will explain the purpose of the discussion meeting, why the stakeholder has been chosen, the two phases that include filling a small questionnaire and the expected duration of the discussion. I will then seek informed consent of the participants. I will verify some of the information as and when deemed fit.

Analysis of the qualitative data is explained in Section 11.3.

13.4 Staffing Plan

Based on the data needs and sampling plan in Sections 10 and 12 respectively, and data collection methodology in Section 13, the Consultant will be able to collect data alone for three out of the five data sets. Passenger exit survey will need one (1) additional staff because the questionnaires will be given to passengers at the departure lounge in Mafia. There must be an additional staff who will collect them at the arrival lounge in Dar es Salaam.

Community Focus Group Discussions (FGDs) and administration of the quantitative questionnaire to the participants will need one additional staff. FGDs are conducted by two persons, a Moderator and Recorder. The Consultant will be the Moderator, while the additional staff will be the Recorder.

Therefore, the additional staff will participate in both passenger exit survey and village households and businesses listing.

The additional staff will be trained and participate in the evaluation from the piloting stage.

13.5 Research/ethical Clearance

The Consultant will ensure the research follows international and national ethical research standards. In Tanzania, all research work must get a permit either from the Commission for Science and Technology (COSTECH) or the National Institute of Medical Research (NIMR) if they are medical related. Therefore, the Consultant will apply for human subjects/ethical clearance from COSTECH. The evaluation will adhere to human rights such that no person will be interviewed before giving consent to be interviewed. The letter of clearance from COSTECH is normally copied to Regional Administrative Secretary (RAS). The Consultant must ask for a letter of introduction from RAS to the District Executive Director (DED), and then from DED to Wards, who in return introduce the Consultant to Villages.

14. DATA ENTRY AND CLEANING PLAN

Data entry and cleaning will be very limited because of small primary data collection effort. All data entry will be in English. The SPSS software will be used by the Consultant. No data entry clerks are envisaged to be used because of small data collection effort. The data dictionary will be used as a guide. There will be data consistency checks to identify any inconsistencies and then cleaning for outliers. There will be a data quality control/verification process inbuilt into the data management system that clearly identifies data entry range restrictions and consistency checks to values appropriate for Tanzania leading to a pop up dialog box if there is violation.

Due to challenges of qualitative data, the consultant will review and edit the scripts against the voice recorded during the discussions, and a data entry plan guide will be prepared to guide on aggregation of similar responses/answers, albeit in different sentences meaning the same thing.

15. ANALYSIS PLAN

Analysis of quantitative data will use descriptive statistics. The SPSS software will be used in the analysis. The analysis will produce cross-tab tables for key variables as per the tabulation plan and requests of the Client. Age and income intervals as well as other data disaggregation used in similar studies will be adopted. Statistical confidence limit (p values of the findings) will also be calculated, whenever considered appropriate. Sampling weights will also be calculated and variance analysis will be conducted. After production of an acceptable clean data set, a Data Analysis Documentation will be prepared as indicated in the ToR, covering descriptive statistics complimented by summary description, list of files, data dictionary, codebook, do files, and weighting plan.

Evaluation during the follow-up stage will also use comparison between the projected Economic Rates of Return (ERR) against the realized ERR that will be calculated in the final evaluation report based on data to be collected during follow-up data collection (cost-benefit assessment). This will test whether the original projections differ from the realized outcomes, and to investigate which components of the original calculations contribute to any observed differences.

Analysis of qualitative data collected through FGDs and IDIs will be through transcription (review), which involves reading through the scripts to look for patterns or themes among the participants, and then group them in any meaningful way, such as by type of participant.

Data will be disaggregated by the control factors in our Conceptual Framework, thus: gender, age, education, and income in households; and type, size, and location of Businesses.

16. DISSEMINATION PLAN

Results of the evaluation will be disseminated to the target audience through reports and workshops presentations. The data sets and their documentations will also be part of dissemination. The consultant will also consider how the data analysis for the report can also be used to generate MCC’s policy relevant paper. (Similar to the World Bank’s Policy Working Paper Series).

Report writing will involve presentation in the form of tables and figures, and interpretation of the descriptive statistics findings of the quantitative survey. Qualitative descriptors will compliment the quantitative findings in some sections using qualifiers such as “the prevalent feeling was that . . .,” or “several participants strongly felt that . . .,” or even “most participants agreed that . . .” There will be quotes (in boxes) from FGD respondents (without revealing their identity) in some sections of the report to add credibility to the information.

All outputs specified in the Contract will be submitted in electronic and hard copies. The submission schedule provided in the ToR will be adopted. Each deliverable will be submitted first as a draft for review and comment by the Client before preparation of final version that incorporates comments on the Draft. The Consultant understands and agrees to the provision in the ToR that there could be more than one round of comments. The aim will be to produce high quality deliverables. This applies to all deliverables. Besides a detailed narrative report, presentation of baseline indicators established by the survey will be in the same manner as the Indicator Tracking Tables in Annex 2 of the M&E plan. The table shows expected time by which each result will be achieved.

It is proposed that “cross-tab tables for key variables” be submitted to the Client before report writing. This will give opportunity to for the Client to request additional tables – if any. Intermediate reports (Monthly progress reports, Data Gathering Report, and Final Implementation Report) should include plans for addressing the challenges. This will inform the next level(s) of the assignment.

The deliverables of the assignment are summarized as follows:

| Deliverables | Contents/Outline |
|---------------------|----------------------------|
| Evaluation Concept | As outlined in this report |

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| Deliverables | Contents/Outline |
|---|---|
| Note | |
| Monthly Progress Reports | Progress made on activities carried out during the previous month, challenges faced, lessons learned, and plans for addressing the challenges. |
| Final Data Gathering Report | Sample coverage – geographic, subject/major unit of observation, quantitative and qualitative (number of questionnaires and other instruments completed), challenges faced, lessons learned, and plans for addressing the challenges. |
| Final Implementation Report | Activities (Design, recruitment, training, piloting and data collection), sample coverage, challenges faced and lessons learned during implementation phase as well as a summary of any deviations from Evaluation Concept Note. Plans for addressing the challenges. Annexes will include all final instruments and protocols. |
| Final data files | Clean data set |
| Data Analysis Documentations | Descriptive statistics complimented by summary description, list of files, data dictionary, codebook, do files, weighting plan |
| Cross-tab tables for key variables | As per the Tabulation Plan and MCA-T guidance (if any) |
| Final Baseline Report | Based on MCA-T template/outline |
| Dissemination Power Point presentations | Power Point Presentations |

17. EVALUATION TIMELINE AND WORK PLAN

The evaluation will be integrated into project planning and implementation (project cycle). On 28th November 2011 the Millennium Challenge Account-Tanzania (MCA-T) signed construction contract with M/s Kuanta Insaat Taahhut Electronic Tur. San. Vetic. A.S of Turkey. The contract for rehabilitation and upgrading of Mafia Island Airport for twelve months is worth US\$ 10.354 million.

Table 7 shows the timeline and work plan for the evaluation.

Table 7: **Timeline for Evaluation of the Mafia Island Airport Upgrade Project**

| Date | Event |
|------------------|--|
| May 2012 | Wet season baseline data collection |
| July 2012 | Dry season baseline data collection |
| August 2012 | Baseline Report |
| <i>July 2012</i> | <i>Rehabilitation and upgrading works starts</i> |
| April 2013 | Wet season Interim data collection |
| July 2013 | Dry season Interim data collection |
| | <i>Rehabilitation and upgrading completed</i> |
| August 2013 | Interim Report |
| April 2015 | Wet season Follow-up data collection |
| July 2015 | Dry season Follow-up data collection |
| August 2015 | Final Evaluation Report |

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The major challenge in the timeline is on how to match progress of project implementation with the seasonal data collection. For instance, while implementation is expected to be midway in January 2013, the first phase of Interim data collection during wet season will delay for three months until the wet season ensues in April 2013. However, this will not affect the evaluation because there will be negligible outcome impact during construction works. Since the evaluation will use the pre-post method, the first phase of Follow-up data collection during wet season will be conducted in April 2015 because the wet season in 2014 will ensue less than a year (ten months) after project completion. This will be a short period for an airport construction project to make any impact. The consultant believes that conducting the Follow-up data collection after one year and ten months since completion of the airport will be appropriate because airlines will need a long time to start exploiting the opportunity and tourist and traveler will also need a long time to respond to the more easier, efficient and safe access to the Island. Therefore, the final report of the evaluation will be submitted in August 2015.

The timeline is graphically presented in *Figure 5*. The Consultant will prepare a work plan for each round of the evaluation. The work plan for the baseline study is presented in Section

Figure 5: **Schedule of Evaluation Tasks for Mafia Island Airport Upgrade Project**

| | 2012 | | | | 2013 | | | | 2014 | | | | 2015 | | | |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec | Jan-Mar | Apr-Jun | Jul-Sep | Oct-Dec |
| Planning | | | | | | | | | | | | | | | | |
| Wet season baseline data collection | | | | | | | | | | | | | | | | |
| Dry season baseline data collection | | | | | | | | | | | | | | | | |
| Baseline Report | | | | | | | | | | | | | | | | |
| <i>Rehabilitation and upgrading works starts</i> | | S | | | | | | | | | | | | | | |
| Wet season Interim data collection | | | | | | | | | | | | | | | | |
| Dry season Interim data collection | | | | | | | | | | | | | | | | |
| <i>Rehabilitation and upgrading completed</i> | | | | | | E | | | | | | | | | | |
| Interim Report | | | | | | | | | | | | | | | | |
| Wet season Follow-up data collection | | | | | | | | | | | | | | | | |
| Dry season Follow-up data collection | | | | | | | | | | | | | | | | |
| Final Evaluation Report | | | | | | | | | | | | | | | | |

18. BASELINE DATA GATHERING

The first round of data collection during that baseline study will start immediately after approval of the evaluation design. The Work Plan for this round is given as *Figure 6*.

Figure 6: **Baseline Work Plan**

| Item/Month | March | | | | April | | | | May | | | | June | | | | July | | | | August | | |
|---|-------|---|---|---|-------|---|---|---|-----|---|----|----|------|----|----|----|------|----|----|----|--------|----|----|
| | Week | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| <i>Drafting Concept Note/Inception report</i> | | | | | | | | | | | | | | | | | | | | | | | |
| Research Ethical Consideration Clearance from COSTECH | | | | | | | | | | | | | | | | | | | | | | | |
| MCA-T comments on the Evaluation Concept Note | | | | | | | | | | | | | | | | | | | | | | | |
| Final Evaluation Concept Note | | | | | | | | | | | | | | | | | | | | | | | |
| Translation of survey Instruments and Protocols | | | | | | | | | | | | | | | | | | | | | | | |
| Recruitment and Training of One Additional Staff | | | | | | | | | | | | | | | | | | | | | | | |
| Pilot Testing of survey Instruments at Kilwa Masoko | | | | | | | | | | | | | | | | | | | | | | | |
| Monthly Progress Report No. 1 | | | | | | | | | | | | | | | | | | | | | | | |
| Collection of existing secondary data | | | | | | | | | | | | | | | | | | | | | | | |
| Collection of primary in Mafia - wet season | | | | | | | | | | | | | | | | | | | | | | | |
| Collection of primary in Mafia - dry season | | | | | | | | | | | | | | | | | | | | | | | |
| Data Entry | | | | | | | | | | | | | | | | | | | | | | | |
| Monthly Progress Report No. 2 | | | | | | | | | | | | | | | | | | | | | | | |
| Draft Data Gathering Report | | | | | | | | | | | | | | | | | | | | | | | |
| MCA-T comments on the Draft Data Gathering Report | | | | | | | | | | | | | | | | | | | | | | | |
| Final Data Gathering Report | | | | | | | | | | | | | | | | | | | | | | | |
| Data Analysis | | | | | | | | | | | | | | | | | | | | | | | |
| Data Analysis Documentations Report | | | | | | | | | | | | | | | | | | | | | | | |
| Monthly Progress Report No. 3 | | | | | | | | | | | | | | | | | | | | | | | |
| MCA-T comments on the Data Analysis Documentations Report | | | | | | | | | | | | | | | | | | | | | | | |
| Draft Baseline Report | | | | | | | | | | | | | | | | | | | | | | | |
| MCA-T comments on the Draft Baseline Report | | | | | | | | | | | | | | | | | | | | | | | |
| Final Baseline Report | | | | | | | | | | | | | | | | | | | | | | | |
| Dissemination | | | | | | | | | | | | | | | | | | | | | | | |

19. POTENTIAL CHALLENGES AND PROPOSED RESPONSES

Common errors – (1) *sampling error* because of using a sample instead of the whole population; (2) *sample bias* due to refusal or incomplete information; and (3) *response bias* when questions are misunderstood or respondents chose not to tell the truth. Remedy will be to use of adequate sample, good approach to reduce refusal, careful editing to ensure completeness, testing and piloting to identify unclear, leading, or threatening questions, qualified and experienced staff for both interviews and data cleaning.

Culture – can affect the whole evaluation processes, especially interactions with respondents/sources of data/information. As mitigation, data collection instruments will ensure conformity to the way people of Mafia behaves socially. Questions that are likely to cause panic or misunderstanding will be avoided. The approach to respondents will be in line with the local culture. In this regard, testing and piloting of data collection instruments with groups similar to the target sources of data will be done to ensure cultural compliance.

Language – the evaluation results can be affected by language barrier in properly communicating issues of the evaluation. While English is the language of the evaluation, some sources of information may not be English speakers. To address this limitation, some data collection instruments such as Focus Group Discussion (FGD) guide will be translated from English to Kiswahili. In order to ensure the same weight and meaning is maintained, bilingual translators will be used.

Attitudes – negative attitude of respondents/sources of data/information can affect the level of response and success of the data collection exercise.

Threats to validity - the evaluation results can be affected by similar projects. The consultant understands that the main harbour at Kilindoni is being constructed to enable vessels anchor afloat for offloading/ disembarking in all tidal fluctuations. If speed boats similar to those plying the Dar es Salaam – Zanzibar route will be introduced during implementation of the airport upgrade, it can affect the number of travelers/passengers flying to Mafia and it may significantly contribute to investments and economic activities in the Island. The evaluation will identify and include the effect of such similar projects, if they will be found to be relevant.

Delay of project implementation – Delay of construction can delay the interim and follow-up evaluations. Long delays can make baseline data obsolete. Nevertheless, delay of evaluation activities may also distort evidence gathered. For instance, if the baseline is delayed until project implementation starts to make some impact to the beneficiaries. The timeline of the evaluation has provided some cushion for some delays.

20. CONCLUSION

The success of the evaluation designed in this report will depend on cooperation between the Consultant and stakeholders. There will be challenges in both project implementation and evaluation activities. The timeline and work plan in this design has provided cushion for some small variations that may occur without affecting timing of the evaluation events. Success will depend on planned mitigation against potential challenges.

REFERENCES

1. Boopen, Seetannah, Transport Infrastructure and Economic Growth: Evidence from Africa Using Dynamic Panel Estimates, *The Empirical Economics Letters*, 5(1): (January 2006)
2. Eberts, Understanding the Impact of Transportation on Economic Development, available at <http://onlinepubs.trb.org/onlinepubs/millennium/00138.pdf>
3. Garcia (et al) Correlation between Transport Intensity and GDP in European Regions: a New Approach, 8 th Swiss Transport Research Conference, Monte Verità / Ascona, October 15-17, 2008, available at http://www.strc.ch/conferences/2008/2008_Garcia_Levy_Limao_Kupfer_TransportIntensity_GDP.pdf
4. International Resource Group, Strategic Environmental Assessment of Mafia Island, Final Report, November, 2008
5. Linn Marie Holberg (2008), Tourism in Mafia Island - A study of perceptions and impacts from different types of tourism in Mafia Island Marine Park, Tanzania, available at http://www.umb.no/statisk/noragric/publications/master/2008_linn_marie_holberg.pdf
6. Millennium Challenge Corporation (MCC), Economic Rate of Return (ERR) Report for Mafia
7. Selling Africa Limited (2010), Tanzania, the Land of Kilimanjaro, Zanzibar and the Serengeti
8. URT (2008), Millennium Challenge Compact between the United States of America acting through the Millennium Challenge Corporation and the Government of the United Republic of Tanzania acting through the Ministry of Finance, 17th day of February, 2008
9. URT (1991), The National Informal Sector Survey (Tanzania Mainland), The Planning Commission and the Ministry of Labour and Youth Development (UNDP/ILO – URT/91/028)
10. URT (2010), Monitoring and Evaluation Plan, Millennium Challenge Account – Tanzania (MCA-T), March, 2010
11. URT (2009), MCA-T Gender Policy, December, 2009
12. URT (2009), Rehabilitation and Upgrading of Mafia Island Airport, Engineering Design Report, July, 2009
13. URT (2007), Poverty and Human Development Report (PHDR)
14. URT (2007), Tanzania Household Budget Survey (HBS), May 2009
15. URT (2006), MKUKUTA Monitoring Master Plan and Indicator Information, November 2006
16. URT (2006), Millennium Challenge Compact Proposal, July 2006
17. URT (2005), National Strategy for Growth and Reduction of Poverty (NSGRP), June, 2005
18. URT (2002), Population Census Report
19. URT (2001), Poverty Monitoring Master Plan, December, 2001
20. Savor Tanzania Limited (2011), Savor Tanzania, The Unique Destination to Kilimanjaro, Serengeti and Zanzibar, Issue No. 010 December, 2011
21. http://en.wikipedia.org/wiki/Mafia_Island

Concept Note – Evaluation of and Data Gathering for Mafia Island Airport Upgrading Project

22. <http://mafia-island-tanzania.gold.ac.uk/tourism-hotels/>
23. <http://www.tanzaniatouristboard.com/places-to-go/islands-and-beaches/mafia/>
24. http://www.nap.edu/openbook.php?record_id=10404&page=22