



International Resources Group  
IRG is ISO 14001 Certified

---

Strategic Environmental  
Assessment of Mafia Island  
**FINAL REPORT**

**VOLUME I:  
EXECUTIVE SUMMARY**



Kilindoni, Mafia District © H. Sosovele (2008)



Mafia Airstrip, B. Thiam (2008)

Prepared for  
Millennium Challenge Account-  
Tanzania  
Dar es Salaam

By:  
International Resources Group  
(IRG), Washington, D.C.

In collaboration with:  
The Institute of Resource  
Assessment (IRA), University of  
Dar es Salaam, Tanzania

International Union for  
Conservation of Nature (IUCN),  
Tanzania Country Office, Dar es  
Salaam

**November 25, 2008**



## INTRODUCTION

President George W. Bush and President Jakaya Kikwete signed a \$698.1 million Millennium Challenge Compact (MCC) agreement in February 2008. The main purpose of the Compact is to reduce poverty by stimulating economic growth, increasing household incomes, and raising the quality of life through targeted infrastructure investments. The Compact is supporting three main infrastructure projects in *transport, water, and energy*. The upgrading of the airport on Mafia Island is one of the projects within the transport sector the Compact will support in Tanzania.

The objectives of the Millennium Challenge Corporation (MCC) Compact funds in Mafia are to refurbish the runway, apron, and taxiway; establish and secure airport boundaries; refurbish the fire station, terminal building, and its water supply; and install communication facilities. By undertaking these changes, the safety and security of the airport will be enhanced and the airport will be able to handle aircraft such as an ATR 72. The terminal building will be refurbished to handle 100 arriving and departing passengers per hour, and electricity will be provided to allow planes to land and take off at night. However, the target of 100 passengers is still being discussed. One option that the MCC and Government of Tanzania are discussing is a terminal building that can handle 40 arriving and departing passengers per hour. This change would need to match with the capacity of the aircraft, which, in turn, will also influence the size of the airport. On a long-term basis and considering future expansions, controls can be put on arriving and departing passengers whilst the overall designs remain the same to allow for future expansions.

The main means of transport to Mafia is by sea. The seemingly cut-off condition between Mafia and the rest of the districts in Tanzania due to poor transport has resulted in the district's slow development process. Indeed, some government employees who have been posted to Mafia have turned down the offer or not reported due to poor transportation. This has resulted in denying Mafia the critical technical staff that otherwise could have stimulated change. The proposed development of the airport will stimulate significant economic changes in Mafia, which may result in major environmental, social, and cultural negative and positive impacts. This realization has prompted the undertaking of a Strategic Environmental Assessment (SEA) for Mafia Island to determine strategic policy issues and options that will require the attention of decision-makers. This summary is based on the full SEA report that details policy and planning issues that need to be considered by the central and local government in order to ensure development activities in Mafia are sustainable.

## BACKGROUND - MAFIA DISTRICT

Mafia is one of the six districts that form the Coast Region of Tanzania. 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 Nyamisati in the Rufiji delta. The majority of the people in Mafia are poor subsistence farmers, primarily influenced by Coastal Swahili culture with strong religious and family ties.

Mafia Island is rich in marine biodiversity, with about 350 species of fish as well as prawns and octopus. Fishing is an important economic activity engaging the majority of local people in Mafia. The decline of fisheries in near-shore areas throughout the Tanzanian mainland has led to an influx of fishermen from other areas into Mafia waters. The influx of fishermen from outside Mafia has caused occasional friction within villages in Mafia. Most of the important fish species, beside the octopus, have been over-exploited almost to the point of exhaustion.

The Mafia Island Marine Park (MIMP) started operation in July 1995 in order to provide for the conservation of marine biodiversity and to promote sustainable utilization of marine resources. The Marine Park is a multiple marine and land-use facility where human settlement is allowed within the park boundaries. Over 50 percent of the population of Mafia lives within the MIMP boundaries.

The natural vegetation of Mafia Island includes coastal forests and thickets, which are part of the once-extensive lowland forest of East Africa. Mangrove forests, the Mlola forest reserve, and the MIMP are the main protected areas in Mafia. The forest resources are also facing pressure from local communities searching for fuelwood and building materials.

Mafia Island is also rich in wildlife resources, both large and small. For example, two species of toad and gecko that occur nowhere else in the world, as well as large fruit bats (flying foxes), are found in Mafia. Other resources in Mafia include land, people, and cultural and archaeological sites. Mafia is becoming an important tourism destination, servicing largely a global tourism market that links Mafia with Zanzibar, Rufiji, Kilwa, and the Selous hunting areas in southern Tanzania with the northern tourism circuit of Ngorongoro, Serengeti, and Kilimanjaro Mountain. The flow of passengers, aircraft movement, and cargo freight to or from Mafia has increased since 1999, and it is expected to rise even further by 2030, to about 1.4 million kilograms (kg) of cargo and about 180,000 passengers. Mafia is also becoming important in the energy industry with gas drilling and exploration at Ndagoni.

The various investments now taking place in Mafia may have positive and negative implications for the overall local economy, the local communities, and the fragile island ecosystem. However, the environmental degradation is also likely to continue even without implementing the airport upgrade programme because of the many pressures that the local population and forces from outside Mafia exert on the resources on the island. Currently, illegal fishing practices, deforestation, and overfishing of specific species are occurring. These pressures are taking place amid an inadequate planning and management framework that should guide sustainable utilization of natural resources in Mafia.

## **OBJECTIVES OF THIS STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA)**

The Ministry of Infrastructure Development, in collaboration with Millennium Challenge Corporation and the Millennium Challenge Account- Tanzania (MCC/MCA-T), initiated this SEA. A Strategic Environmental Assessment is a tool to enable integration of environmental and sustainable development issues into the early stages of development policy and planning, to help design and assess preferred strategic options (i.e., alternatives), and to validate final outcome of the choices. It is a participatory planning process.

The main goal of this SEA process is to provide a long-term planning framework for Mafia Island that will help MCC and the Government of Tanzania address strategic issues that will be triggered by the programme to upgrade the airport and to ensure that the various activities will be compatible with Mafia's environmental conditions. The SEA also suggests a carrying capacity framework that could be adopted for various activities. For example, Mafia is becoming crucial in tourism development; however, without taking into account the carrying capacity of tourism development, tourism growth may lead to the degradation of the resources on which the sector greatly depends.

Extensive participatory approaches were followed in preparing this SEA, involving key stakeholders, focus group discussions, and meetings with government and religious leaders and elders, informed groups, nongovernmental organizations (NGOs), and private sector

stakeholders. Primary and secondary information was collected, analyzed, and integrated in the report.

## IDENTIFIED IMPACTS

The various economic activities that may be developed and implemented in Mafia, including the proposed airport upgrading programme, will have implications on the environment, social context, culture, and economy of Mafia and Tanzania in general. Some of the positive impacts and changes include:

- Expanded economic opportunities to the people of Mafia
- Improved mobility of the local people
- Increased markets for local products from fishing, livestock, and farming
- Increased opportunities for income-generating activities
- Increased and improved social services, communication, banking, and information
- Increased opportunity to develop small and medium enterprises (SMEs) and handicraft industries
- Increased revenue generation for local and central government
- Increased opportunities for inclusion and participation of local communities in decision-making, thus raising good governance and building confidence among Mafia's people
- Possible changes in the livelihoods of the local people resulting from improved social services, increased economic opportunities, increased sources of incomes, and capacity development opportunities.

The proposed development could also lead to significant negative impacts that may include the following:

- Forest degradation (i.e., charcoal production, harvesting of building materials from Kilwa and Rufiji, and mangrove clearance)
- Increased loss of biodiversity, both flora and fauna
- Increased generation of solid and liquid waste and pollution of the marine resources and underground water sources
- Coral reef damage (i.e., due to increased visitor traffic) leading to disturbing turtle, dugong, and whale Shark habitat sites
- Depletion of fisheries (i.e., overfishing)
- Destruction of beaches and coastal resources
- Possible increase in migration, leading to disruption of social cohesion, social relationships, and social institutions, and to expanded urbanization.
- Increased pressure on education and health facilities and risk of increasing HIV/AIDS infections
- Increased road transport accidents
- Damage to cultural/heritage sites (physical damage)

- Increased resource-use conflicts between locals and tourists, locals and conservation organizations (e.g., MIMP and District Council), locals and lodge owners, and among locals themselves
- Increased level of noise and traffic accidents
- Increased costs of living (due to increased demand for goods and services)
- Increased pressure on water, land, and energy resources
- Loss of land and access to beaches (i.e., increased sale of land and convention of beach areas for tourism development).

## MITIGATION MEASURES

This SEA has considered a number of mitigation measures whilst also taking into account the Carrying Capacity and Limits of Acceptable Change frameworks. The main assumption of the Carrying Capacity framework is that a fixed number of people can be supported by the resource limitations found in a particular area over time. This limit can be pushed outward through technology choices and adaptive planning. The core assumption of the Limits of Acceptable Change framework is that any development risks some degree of negative impact on the natural and social systems. The tolerable limits of change are a matter of deliberate policy decisions, with implicit recognition of risks and trade-offs.

The mitigation measures recommended in this SEA are based on the premise that decision-makers must be aware of the risks and trade-offs to the extent possible as a basis of informed decision-making. For example, the decision to expand tourism development in Mafia must take into account the environmental and financial risks and trade-offs. Such a decision must address the issue of the number and type of facilities and the number and type of tourists that could be allowed in Mafia. These decisions will have implications on revenue generation for Tanzania and the investors. Mafia District and central government decision-makers (e.g., Ministry of Natural Resources and Tourism, Ministry of Infrastructure Development, Ministry of Water and Irrigation, and others) must engage in adaptive management planning, based on long-term observations and careful monitoring of social and environmental indicators and adoption of precautionary approaches.

Some of the mitigation measures proposed in this SEA include the following:

- *The Ministry of Natural Resources and Tourism, in collaboration with Mafia District Council (MDC), must prepare a Mafia Tourism Master Plan that is informed by the Carrying Capacity and Limits of Acceptable Change frameworks.* The initial plan is to expand the terminal to be able to handle 100 passengers per hour, a capacity to handle 16 ATR 72 movements in a 12-hour day, or one airplane landing and taking off every 1.5 hours. By 2007, about 40 passengers were arriving in Mafia daily (or 13,240 per annum). Air traffic is projected to increase to 486 passengers per day (177,503 per year) and 56 aircraft movements per day (20,611 per year), including smaller aircraft, by 2030. Although this level of passengers can be accommodated by the upgraded airport, growing tourism arrivals will stimulate demand for tourism-related facilities (lodges and hotels) and services, increase visitor density and circulation on the island, increase economic activity, and promote social interactions (and tension) between local populations, visitors, and potentially migrant workers. Without adequate environmental management, facilities development may result in direct, permanent modification of the physical environment and may cause long-term environmental changes.

There are about 78 rooms in the existing eight lodges, hotels, and guesthouses in Mafia, and plans to construct five more lodges are underway. However, it is important to consider

scaling down the number of visitors in order to reduce pressure on facilities and resources. The environmental implications of having larger numbers of visitors are likely to be significant; ***therefore, a gradual reduction of numbers of visitors to almost half of the projected daily arrivals by 2030 would reduce the pressure significantly.*** The reduction in arrival numbers will have positive environmental benefits and could guarantee long-term revenue generation. The MCC and Government of Tanzania are re-assessing the scale of development to reduce the expected arriving and departing passengers to only 40 per hour. This reduction would entail fresh assessment of the intended aircraft size (i.e., from ATR 72 to something else). However, taking into account future development needs and changes, the expansion of the airport and the facilities could be maintained as planned, whilst controls are set on the numbers of lodges, passengers, and frequency of flights and time. Although such a decision may be viewed as a loss, it will have long-term investment and environmental benefits.

- Mafia District Council, in collaboration with the National Land Use Planning Commission, should develop a *Mafia District Land Use Plan* with clear zonation for various land uses. The existing land-capability assessment is limited to only six villages. A comprehensive plan covering all the villages in Mafia is needed.
- The Ministry of Natural Resources and Tourism and Mafia District Council should develop a strategy to assure local benefits from tourism. Integrating tourism activities in district plans is a key component of that assurance.
- Mafia District Council and the National Environment Management Council (NEMC) should ensure full and participatory Environmental Impact Assessments for all projects that will be implemented in Mafia in line with the Environmental Management Act (Cap. 191) of 2004.
- Mafia District Council should undertake targeted capacity development programmes to increase the capacity of the district staff to discharge their duties effectively as well as the capacity of the local people to be able to employ themselves or be employed. Skills development in handicraft and other activities will be needed.
- Projects and programmes to be implemented in Mafia should adopt technologies that reduce emissions into water bodies and the atmosphere and that comply with national and international environmental standards and laws.
- Ministry of Natural Resources and Tourism (MNRT), in collaboration with the Mafia District Council and Mafia Island Marine Park, should set limits for visitors to areas inside and outside the Marine Park and enforce such policy decisions. While legal measures are enforced, MIMP and the MNRT should develop and implement benefits-sharing schemes that would encourage local people to conserve and protect the Marine Park.
- Mafia District Council should conduct sensitization programmes to raise the awareness of local people about potential opportunities from various economic activities, including the airport upgrading programme; health implications (e.g., HIV/AIDS); and gender relationships and the role of women in development in Mafia.

## **PROGRAMME/POLICY ALTERNATIVES**

Several alternatives have been considered in this SEA. However, the project-based Environmental Impact Assessment for the Mafia airport upgrade project and several EIAs that will be undertaken later must consider project-based alternatives. In this SEA, the alternatives considered focus on strategic policy-related issues. The alternatives considered include the following.

## **The No-Project alternative**

The no-project alternative implies the proposed development activities are not taking place; instead, the status quo remains as it is. This alternative has significant policy and political implications. For example, abandoning an airport upgrading programme will have greater policy implications because, for many years, transport between Mafia Island and mainland Tanzania has relied upon ships, boats, and dhows. Airplanes flew to Mafia only occasionally and mainly during dry season. Sea transport has not been reliable due to poor vessels and lack of a secure docking area or jetty.

Poor and unreliable transport conditions have negatively affected attitudes and perceptions about working in Mafia. Taking the no-project alternative will continue to subject Mafia people to the same hardships as before and perpetuate their underdevelopment. Taking this alternative does not necessarily imply avoiding environmental degradation. Some of the environmental problems may continue, possibly at a slower pace and smaller scale than is the case with the various development activities. More importantly, the no-project alternative conflicts with MKUKUTA policies, tourism policies, and the MCC/MCA-T and Government of Tanzania agreements. Thus, this option is not politically acceptable.

## **Alternative volume of visitors per day**

The proposed airport expansion will increase traffic flows and aircraft movement from 40 passengers a day (or 13,240 per annum) in 2007 to about 486 passengers per day (177,503 per year) and 56 aircraft movements per day (20,611 per year), including smaller aircraft, by 2030. At the initial expansion, with 100 passengers per hour, the airport will handle at least one landing every 1.5 hours. The increased flow of traffic and landings could be handled by the expected airport upgrading.

However, by increasing arrivals, airport expansion will trigger construction of new resorts, hotels, restaurants, and dive centres. It will also stimulate growth of other activities to provide services and support to expanded tourism (e.g., agriculture, livestock, services, etc.). Without adequate environmental management, facilities development may result in long-term environmental changes. Therefore, an alternative scenario based on a gradual reduction of the number of visitors to almost half of the projected daily arrivals by 2030 would reduce the pressure significantly. Although reducing the arrival numbers will negatively affect projected revenue, environmental benefits may have long-term implications and guarantee more long-term revenue generation. Policy decisions will have to be taken to consider this option in the light of the trade-offs. Indeed, MCC and Government of Tanzania are considering scaling down the number of passengers per hour to only 40.

## **Alternative type of tourist – Combining quality products and high-value tourism**

The airport upgrading may stimulate an increase in tourist arrivals; however, to reduce the impact of bigger numbers and to minimize demand for more lodges, policies that ensure *high-value, low-volume tourism* for Mafia can be developed and implemented to accommodate only a certain type of clientele. This policy option is compatible with the overall tourism development strategy in Tanzania that is discouraging mass tourism. To be able to do this, programmes to diversify and improve tourism products in Mafia must be implemented. Advance bookings to visit Mafia can be introduced as a control measure. The net effect of such a programme is increased revenue from fewer tourists and less environmental degradation. The main cost is in terms of improving and diversifying products and promotional activities that will target the high-end tourist.

## **Improve existing facilities and limit development of more lodges and hotels**

Currently, Mafia has eight tourist facilities that include four high-cost lodges at Utende and Chole and some middle- and budget-level tourism hotels in Kilindoni. These facilities vary in terms of quality of services and structures. Plans are underway to build five new facilities along the seashore, and some investors are targeting the small islands that serve as marine breeding sites. As a measure to address the effect of constructing more lodges, thus exacerbating pollution and land-use problems, direct policy options should be adopted to ensure that existing facilities are improved and classified to a level that meets international standards before new facilities are built. This initiative will have to be implemented in tandem with the proposal to encourage high-value tourism. The government may consider economic incentives as policy options that could motivate hotel owners to improve their facilities and services so that the environment and tourist resources are protected and utilized in sustainable ways. This alternative, however, does not address the impact of general construction that may be stimulated by several economic activities. The District must ensure it has a comprehensive Land Use Plan and Urban Master Plan to guide future development and construction works that may take place in Mafia.

## **Alternative source of energy**

Reliable energy supply will be critical in the tourism development in Mafia. Currently, diesel generators that serve Mafia with electricity are constantly interrupted by lack of diesel or breakdown of the generators. The proposed airport and other potential economic activities, such as copra industries, fish processing, SMEs, and lodges and hotels, will require a reliable energy supply. Therefore, it is important to consider, at the policy level, energy options that will be sustainable and reliable. Two of these options are solar power and undersea cables to connect Mafia with the national electricity grid.

The solar energy option could be developed in Mafia targeting specific service areas as well as local communities to reduce the use of generators. In addition, the airport facilities could run on solar power provided better systems are obtained. This could be considered as a short-term measure while the more reliable option of undersea cables is considered. Connecting Mafia with the national grid will improve livelihoods; guarantee power to industries, SME, and tourism development; and provide local communities with reliable energy in line with national policies. The environmental, social, and political gains arising from this alternative are very significant.

## **Alternative transport system**

In the discussion with the stakeholders in Mafia, it was apparent that their priority is the development of the seaport and not the airport upgrade. Most of the people in Mafia use sea transport and the improvement of the jetty would be a priority. Most of the people prefer the seaport because it is cheap, and they can carry more luggage than on planes. Currently, there are no cargo flights to Mafia. The cost of a return air ticket from Dar es Salaam to Mafia is about Tshs. 187,000 (about US\$161) while the cost of a return boat trip to Nyamisati and bus fare to Dar es Salaam is about Tshs. 30,000 (US\$26). Adopting this alternative may conflict with the MCC/MCA-T and Government of Tanzania agreements and would entail re-designing the compact for Mafia. Therefore, instead of abandoning the proposed activity, this SEA is proposing to include the development of an integrated jetty programme linking Mafia with Kilwa, Rufiji, and Mkuranga district. The overall implication of an improved and expanded transport sector is greater economic and social development on Mafia and other districts, provided environmental issues are internalized in the plans.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

This SEA work concludes that the intended airport upgrade programme in Mafia and the various potential economic activities will have both positive and negative impacts on Mafia Island. Upgrading of the airport will attract economic activities and population growth, which may stimulate the growth of Mafia. Accommodating new activities and economic growth will be a challenge for the Mafia District Council (MDC) and the people of Mafia.

The Mafia District Council lacks the capacity to effectively prepare integrated plans and to implement them effectively. Some of the limiting factors include inadequate labour and the lack of capacity to coordinate and mainstream environmental issues in the district's plans. Other limiting factors are poor harmonization of plans between local and central government and poverty, which is the driver for some unsustainable utilization of natural resources, particularly in fisheries and land. Demand for more fish resources to meet livelihood needs has resulted in clashes with the Marine Park authorities over the issue of conservation and adherence to prescribed fishing laws. Other economic activities, such as agriculture and livestock, are not doing well. The old copra industry, a booming business in the last century, is no longer viable. Tourism is emerging as an alternative economic activity in Mafia.

Underwater experiences and cultural tourism attract most of the tourists to Mafia. However, local people have not benefited much from tourism development because the sector is not fully integrated into the district economy, such that few commodities produced locally find their way into the tourist markets. For example, most of Mafia's excess milk production is wasted due to lack of means to produce and preserve different milk products for local markets and for export. Increased sale of land to lodge developers has resulted in complaints about irregular land acquisition involving local leaders and intermediaries.

The airport upgrade and associated economic activities may also trigger negative impacts, such as increasing pollution and increasing pressure on water, fish, land, and other natural resources (including building materials from Kilwa, Mkuranga, and Rufiji). Other impacts include degradation of the coral reefs, competition for resources, social tension, and resource-use and access conflicts. Other possible effects include risks of increasing HIV/AIDS infections and stress to social services and energy capacities. Impacts on livelihoods, especially for vulnerable groups, may increase. Livelihood strategies could be improved and diversified if the mitigation measures put in place are implemented effectively. In the long term, such changes could influence positive livelihood outcomes. In the light of the insufficient capacity to provide the necessary coordination and guidance for development in Mafia, the socio-economic and ecological sustainability of the development is highly questionable without heavy investment by the central government in supporting key planning initiatives and activities. The central government therefore must prioritize and technically and financially support the following recommendations.

## Recommendations

### ***Improve governance issues.***

The management of the impacts associated with the potential economic activities in Mafia, as well as the proposed airport upgrade programme, requires improvement in governance issues. The Mafia District Council must ensure effective management of the duties and responsibilities in collaboration with local communities and enhance accountability and transparency in decision-making and promoting the rule of law. Specific to the issue of governance, the District Council must undertake the following measures:

- Establish and strengthen the District Environmental Management Coordination Office and the mechanism to coordinate and mainstream environmental issues in the District plans, and between the District and Central Government,
- Undertake targeted Capacity Development programmes (e.g., to the District Planning Department, Finance Committee, and Finance Department) to prepare and manage integrated plans and resources effectively,
- Establish mechanisms that will ensure greater participation of local people in planning and decision-making on issues that affect their livelihoods,
- Sensitize communities, in collaboration with NGOs (such as Haki Ardhi), and prepare them to take advantage of the opportunities the airport upgrading programme and subsequent potential economic activities provide to them. Social, cultural, institutional, and financial barriers must be addressed to allow Mafians to be part of the changing process.

### ***Undertake long-term planning processes and adopt planning tools.***

The proposed economic activities are likely to cause significant changes in the way resources will be utilized in Mafia. It is therefore important to undertake comprehensive planning processes in order to determine various resource uses and to ensure their conservation. The following plans to be developed in participatory ways are recommended:

- **The District Council should prepare a *Comprehensive Land Use Plan for Mafia*.**
  - (I) Prepare a land use plan based on land capabilities and carrying capacity analyses indicating areas suitable for specific development, as well as scales of such development, and ensure compliance of the plans,
  - (II) Establish a special tribunal, specifically for Mafia, to investigate and provide recommendations on the present land use conflict cases, and to set up clear guidelines for protecting both community rights and investors' interests and rights in land transactions on the island,
  - (III) Prohibit direct purchase of land by investors from customary or statutory landowners. All investors should obtain land through the Tanzania Investment Centre (TIC),
  - (IV) Discourage and prohibit locals from selling land; instead, encourage them to go into joint ventures using their land as their contribution to the investment. This approach will implement MKURABITA policies in Tanzania,
  - (V) Design and negotiate a benefit-sharing structure that allows the community to receive, as a right, adequate benefits from tourism and investments in the island. The Chole model of self-management can be refined and applied as an alternative approach on partnerships for benefit sharing and for poverty reduction.

- **The Ministry of Natural Resources and Tourism in collaboration with the Mafia District Council should prepare and implement an *Integrated Tourist Master Plan for Mafia*.**
  - (I) The plan should be based on the analysis of the carrying capacity of the island, the Integrated Coastal Management Strategy, and the Tourist Master Plan of Tanzania.
  - (II) A Tourist Master Plan must provide details about management objectives with the associated indicators and standards/thresholds developed. It should define the type of tourism that will be developed in Mafia and linkages between tourism and the district and national economy.
  - (III) The plan should identify categories of tourist needs/nature of activities and the services that have to be provided to meet such numbers and types of tourists (e.g., tour guiding, scuba diving, nature tourism, cultural tourism, language needs in English, French, and Italian, etc.) that should be met locally from vocational training schools.
  - (IV) The plan should guide developers in terms of type, size, and number of facilities (lodges), boats, and divers in each particular area over time. It must be noted that given Mafia's fragility, large lodges will not be sustained.
- **The Ministry of Infrastructure Development, in collaboration with Tanzania Port Authority and Mafia District Council, should develop an *Integrated Jetty Development Plan*** (to include Kilwa, Rufiji, Mkuranga, and Mafia). The infrastructure will link key economic and growth centres and increase the growth of Kilindoni Sea Port in Mafia, whose development has already been formalized. All districts visited (Kilwa, Mafia, Rufiji, and Zanzibar) have plans to develop jetties, and these plans should be harmonized so that benefits are maximized.
- **The Mafia District Council should develop a Waste Management Plan**
  - (I) The Plan should cover the identification of sites for waste disposal and define waste treatment and handling procedures including incentives to encourage waste minimization.
  - (II) The Plan should articulate need for sensitization of communities to adopt appropriate practices with respect to waste generation, treatment and management.
- **The Mafia District Council should *adopt Environmental Assessment and other tools for assessment of projects and programmes that will be developed in Mafia***. In order to achieve this goal, capacity development for the district staff is necessary.

***Undertake measures to address environmental implications of development activities.***

The proposed development will trigger various environmental changes that must be addressed in order to ensure the desired development does not adversely affect the environment. The following specific recommendations are offered for consideration.

- **Water availability**
  - (I) Ministry of Water and Irrigation, in collaboration with MDC, should conduct a groundwater survey to determine available sources and quality before large-

scale development takes place in Mafia. Water is critical in determining limits of acceptable use for lodges and industries in Mafia.

- (II) MDC and Ministry of Water and Irrigation should require new development to introduce and apply water efficiency measures, including rainwater harvesting techniques, in all their facilities to reduce pressure on the resource.
- (III) MDC and Ministry of Water and Irrigation must enforce a system of payments for environmental services (e.g., for drawing water) and use the proceeds to improve water conservation programmes.
- (IV) MDC must ensure that safe and clean water is distributed to the people through an improved water distribution system and network. Special consideration must be given to small islands that do not have reliable sources. Rainwater harvesting techniques must be considered.

- **Energy requirements**

- (I) Ministry of Natural Resources and Tourism should require new tourism development projects to use at least 50 percent of their energy from renewable sources (e.g., solar and wind).
- (II) Treasury should provide incentives to investors who adopt renewable energy technologies in the form of targeted and short-term tax breaks.
- (III) As a long-term measure, Ministry of Energy and Minerals should connect Mafia District to the national power grid through underwater cables.

- **Waste management issues**

- (I) EIAs should be enforced for all new development in which the issue of waste is clearly articulated to include measures for sanitation and for waste disposal.
- (II) MDC should ensure waste collection, sorting, and treatment is done properly. MDC can subcontract in the private sector to undertake this activity with fees paid by customers.
- (III) MDC should undertake sensitization and education programmes to local communities about waste management issues.

- **Circulation and visit to tourist sites**

- (I) Ministry of Natural Resources and Tourism should set limits on the number of visitors to particular sites (cultural areas, marine areas for diving) according to a Tourism Master Plan for Mafia and as informed by the Limits of Acceptable Change.
- (II) MDC, in collaboration with TANROAD and Ministry of Infrastructure, should develop internal roads linking various parts of Mafia and also develop sea transport linking the Mafia main island and the small islands.

- **Undertake measures to implement activities aimed at enhancing economic benefits.**

The proposed development could stimulate growth of economic activities; however, for the Mafians to benefit, the following recommendations are provided:

- (I) MDC should sensitize communities to take advantage of opportunities and improve agriculture, livestock, and fisheries production.
- (II) MDC, in collaboration with the Ministry of Education and Vocational Training, must mobilize resources and build a Vocational Training Centre in

Mafia that would train local people in various skills that could be needed in Mafia (e.g., masonry, electrical services, plumber, painting, mechanical, carpentry, tailoring, tour guiding, languages, etc.).

- (III) MDC, in collaboration with Ministry of Industries, Trade and Marketing, should encourage value-added processing of agricultural production.
- (IV) MDC, in collaboration with banks, should encourage establishment of credit schemes to benefit small entrepreneurs.
- (V) MDC, in collaboration with Ministry of Industries, Trade and Marketing, should promote SMEs, including women and youth groups.
- (VI) MDC should help revitalize coconut farms and the copra industry to provide more income to the farmers.

- **Undertake measures to implement activities aimed at reducing social effects.**

The proposed development and the ancillary activities could have negative effects on the social systems and relationships in Mafia. The following recommendations are provided to address the social implications of the proposed development.

- (I) MDC should sensitize local communities about cultural issues and tourism.
- (II) MDC, in collaboration with the Ministry of Natural Resources and Tourism and lodge owners, should develop and enforce a *code of conduct* for tourists.
- (III) MDC should mobilize resources to build more secondary schools and provide them with modern communication facilities (computers), and ensure girls complete secondary education.
- (IV) MDC and Ministry of Health should provide a mobile sea boat clinic.
- (V) Prime Minister's Office Regional Administration and Local Government should provide more staff and equipment to meet expected demand.
- (VI) MDC and Ministry of Health should support existing NGOs and District HIV/AIDS programmes, outreach, mobile testing, expansion of treatment, and information centres.
- (VII) Ministry of Health should provide voluntary counselling and testing (VCT) facilities and curb stigmas against HIV/AIDS victims.
- (VIII) MDC and Ministry of Health should provide sensitization and education on HIV/AIDS pathways.

Recommendations regarding development of plans or strategies may start as soon as possible and as resources permit. These plans and strategies will enable MDC to make appropriate decisions regarding specific measures that need guidance from the plans. The preparation of the plans or strategies can be undertaken while the airport upgrading is taking place, provided the land-use plan is prioritized first because this will provide the basis for future land use. In addition, the activities targeting the airport upgrade programme could continue, provided mitigation measures that have been suggested in the project EIA as well as from this SEA are fully integrated into the designs. The Government of Tanzania, MCC, and MDC should seriously consider the issue of resource (labour and finance) mobilization that would enable the Mafia District Council and its partners to develop the plans and strategies in a relatively shorter period.



International Resources Group

*IRG is ISO 14001 Certified*

---

**MUHTASARI WA TAARIFA YA  
MPANGO MKAKATI WA  
MAZINGIRA WA WILAYA YA  
MAFIA**



Kilindoni, Mafia District © H. Sosovele, 2008



Mafia Airstrip, Boubacar Thiam, 2008

Umeandaliwa kwa pamoja

Na International Resource Group  
(IRG), Washington, DC

Na Taasisi ya Kutathmini  
Rasilimali, Chuo Kikuu, Dar es  
Salaam,

Na International Union for the  
Conservation of Nature (IUCN),  
Ofisi ya Dar es Salaam

Kwa niaba ya Millennium  
Challenge Account-Tanzania, Dar  
es Salaam

November 25, 2008



# MUHTASARI WA TAARIFA YA MPANGO MKAKATI WA MAZINGIRA KWA WILAYA YA MAFIA

## UTANGULIZI

Hii ni taarifa ya utafiti uliofanyika Kisiwani Mafia kuanzia Mwezi June 2008 ambapo watafiti walianza na udadizi wa kwanza. Utafiti ulihusha njia mbalimbali iliwa ni pamoja na kutembelea maeneo mbali mbali na kuhojiana na wananchi kwa undani ulianza mwezi July 2008 na kukamilika mwezi Agasti 2008 mwishoni. Watafiti walikamilisha utafiti wao kwa kuhojiana na watendaji na baadhi ya viongozi wa Serikali kuu, Wilayani, kuzungumza na wananchi katika maeneo yao kwa mikutano ya Kata ambayo ilihudhuriwa na wanavijiji na viongozi wao kutoka kata hizo. Vile vile watafiti walizungumza na kuhojiana na viongozi Wilayani na Wizara husika Dar es Salaam na Kibaha, Mkoa wa Pwani ili kupata maoni na mapendekezo yao.

Madhumuni ya Utafiti huu wa Mkakati wa mazingira ni kuweza kubainisha matatizo ya mazingira na kijamii yanayoweza kutokea kutokana na mipango mbalimbali ya maendeleo wilayani Mafia ikiwa ni pamoja na kuboresha uwanja wa ndege wa Mafia. Utafiti huu unakusudia kupendekeza utayarishaji wa mipango ya mendeleo ya mfupi na muda mrefu kwa ajili ya Kisiwa cha Mafia ambayo itaisaidia MCC na Serikali ya Tanzania kuweka mipango ya kipaumbele katika uwekezaji ambao utaibuliwa na uboreshaji na ujenzi wa uwanja wa ndege wa Mafia ili kuhakikisha kuwa shughuli hizo zinakuwa endelevu.

Kwa sasa, Kisiwa cha Mafia ni muhimu sana kwa sekta ya utalii. Bila ya kuzingatia uwezo na uhimilivu wa kisiwa katika nyanja mbalimbali, maendeleo ya utalii na mengineyo yanaweza kuleta athari mbaya katika mazingira na raslimali zake ambazo zinategemewa na sekta hiyo.

Utafiti wa kuandika huu Mpango Mkakati umefanywa na Taasisi ya Kutathimini Raslimali ikishirikiana na IRG ya Marekani (USA) kwa niaba ya Wizara ya Miundombinu ikishirikiana na Millenium Challenge Compact na Millenium Challenge Account (MCC/MCA-T) ambao ndio Wadau wa mpango huu.

Rais George W. Bush wa Marekani na Rais Jakaya Kikwete wa Tanzania walitia saiani mwezi Februari 2008, makubaliano ya msada wa Dola za Marekani Millions 698. 1 kwa ajili ya kutekeleza Mpango wa Changaamoto ya Milenia. Lengo la Mpango wa Changaamoto ya Mileai ni kupnguza umasikini Tanzania, kuamusha ukuaji uchumi, kuongeza kipato ngazi ya kaya na kuongeza ubora wa maisha kupitia uboreshaji wa miundo mbinu kama usambazaji wa maji, barabara na nishati. Uboreshaji wa Uwanja wa ndege wa Mafia ni mpango mmojawapo kati ya hiyo.

Kwa muuda mrefu njia pekke ya usafiri kwenda Mafia ni usafiri wa baharini, ambao si bora na salama. Wilaya ya Mafia haifikiki kiurahisi na hali hii imedunisha maendeleo wilyani humo na kuwakatisha tamaa wataalam wengi ambao wamepangiwa kufanya kazi huko. Hali hii imedumaza maendeleo ya Mafia. Ubireshaji wa uwanja wa ndege unaweza kuamsha na kuchochea kukua kwa shughuli mbali mbali za uchumi, ambazi zinaweza kuathir mazingira na hali ya kijamii Mafia. Ni kwa kutambua hali hii, Wizara ya Miundo Mbinu kwa kushirikiana na Ofisi ya Akaunti ya Changaamoto ya Milenia Tanzania, wameamua kufanya tathmini ya Mkakati ya Mazingira ili kubaini matatizo ya kiseru na program yanayoweza kujitokeza na kutoa mapendekezo ya namna ya kukabiliana na changamoto hizo na kuboresha faid zitokanazo na utakelezaji wa miradd mbalimbali Wilayani Mafia. Muhtasari huu unatokana na taarifa ndefu ambayo inaainisha masuala mbali mbali ya kuzingatiwa endapo miradi na shughuli mbali mbali za kiuchumi zitatekelezwa Mafia.

## **HISTORIA KWA UFUPI- WILAYA YA MAFIA**

Mafia ni mojawapo ya Wilaya 6 za Mkoa wa Pwani ambao makao yake makuu ni Kibaha. Uchumi wa Mafia unategemea mazao ya kilimo kama vile minazi, korosho, mpunga, mboga na viaza vitamu pamoja na mifugo. Uvuvi ni sehemu kubwa ya shughuli za uchumi katika Wilaya ya Mafia kwa ujumla. Kilimo hakifanyiki sana katika visiwa vidogo vya Mafia kwa kuwa vingine havina ardhi ya inayofaa kwa kilimo. Wananchi wengi wa Mafia wanakipato cha chini, na wanaofuata sana utamaduni wa Pwani wenye utando wa mshikamano mzito wa familia na maadili ya dini.

Mafia ina utajiri mkubwa wa mazao ya bahari ya Hindi ikiwa ni pamoja na zaidi ya aina 350 za samaki pamoja na kamba na pweza. Upungufu wa samaki katika maeneo mengine ya bahari nchini Tanzania umefanya wavuvi kuhamia Mafia kwa uvuvi na kuendeleza uvuvi haramu. Hii imekuwa ikisababisha msugvano wa mara kwa mara kati ya wavuvi na kati yao na serikali kutokana na matumizi ya njia haramu za uvuvi, kumalizaika kwa samaki na uharibifu wa mazingira ya bahari. Mwaka 1995 Hifadhi ya Bahari ya Mafia ilianzishwa ili kuendeleza uhifadhi wa viumbe mbalimbali vya bahari na mazingira yake. Hifadhi hiyo ni ya matumizi mbali mbali pamoja na makazi ya zaidi ya asilimia 50 ya tu wa Mafia ambao wanaishi na kufanya shughuli zao ndani ya hifadhi.

Mafia inautajiri mkubwa. Pamoja na hifadhi ya bahari na viumbe wake maarufu kama vile Potwe, kuna Popo na baadhi ya aina ya vyura na mijusi ambao hawapatikani maeneo mengine yoyote duniani. Kuna mapango ya asili, magofu yenye historia ya kale na utamaduni ambao haupatikani maeneo mengine yoyote nje ya Mafia. Hivyo Mafia inakuwa ni sehemu mojawapo kuu ya Utalii Tanzania. Utalii huu ukiboreshwa utakuwa kichocheo kizuri cha kuinua kipato cha wananchi, kuboresha maendeleo na kuondoa umasikini. Usafiri wa anga kwa Mafia umeongezeka kuanzia mwaka 1999 na unatarajiwa kuongezeka zaidi kufikia wasafiri 180,000 na mizigo kilo milioni 1 and laki nne kufikia mwaka 2030. Mafia pia imeanza kuwa muhimu katika utafautaji wa nishati ya gesi pale Ndagoni.

Mipango mbalimbali ya ewekezaji Mwafia inaweza kuleta madhara na hasara katika uchumi wa wilaya, wananchi na utamaduni zao, mazingira na mahusiano ya kijamii. Uharibifu wa mazingira unaweza kundelea hat pasipo kuboresha uwanja wa ndege japo kuwa kiwango na kasi ya uharibifu huo vinaweza kuwa kidogo. Hata hivyo uharibifu huo na msukumo mkubwa katika matumizi ya rasilimali, vinatokea pasipo kuwepo na uwezo wa kutosha wa Wilaya kupanga na kusimamia matumizi ya rasilimali.

## **MAKUSUDI YA TATHMINI YA MKAKATI WA MAZINGIRA KWA MAFIA**

Wizara ya Maendeleo ya Miundombinu kwa kushirikiana na Akaunti ya Changamoto ya Milenia Tanzania waleanzisha ufaiti na tathmini hii ya Mkakati ya Mazingira kwa Mafia. Tathmini za ain hii ni nyenzo za kuwezesha kuoanisha masuala ya mazingira katika mipango na mikakati mbalimbali Katika kiwango cha sera na maamuzi ya kisiasa. Masual ya mazingira yanaingizwa Mwanza kabisa katika mipango kabla maamuzi ya kisiasa hayajachukuliwa. Pia tathmini hizo zinatoa fursa kwa viongozi kutafakari juu ya sera na programu mbadala zanzohifadhi mazingira na kufanikisha malengo yale yale ya maendeleo.

Tathmini hii imetumia njia nyingi mbalimbali za kuwahusisha wadau ikiwa ni pamoja na mikutano ya vikundi maalumu vya wataalamu, watu maarufu, mahojiano na mti mmoja mmoja, kutembelea sehemu mbalimbali Mafia, Kibaha, Rufiji, Zanzibar and Kilwa kuona na kuongeza na wadau mbalimbali juu ya mipango ya maendeleo kwa Mafia na jinsi inavyoweza kuathiri shughuli zao katika maneno yao. Pia watafaiki wameongea na viobgozi mbalimbali wa wilaya, wizara na

taasisi za umma na binafsi ili kupata maoni yao. Dhana ya ushirikishwaji ulzingatiwa katuka kila hatua ya tahtmini hii.

Tathmini hii imeongozwa na Sheria ya Mazingira Na 20 ya 2004 na Muongozo kutoka Changamoto ya Milenio juu ya thathmini za aina hii na mūsala ya mazingira. Sheria ya Mazingira ya Tanzania inatoa mwongozo juu ya maeneo ambayo yanatakiwa kufanyiwa Tathmini ya Mkakati ya Mazingira. Maeneo hayo ni sera, mipango, programu, sheria na mikataba ya kibiashara. Uboreshaji wa uwanja wa ndege wa Mafia ni Mkakati ambao unaweza kusababisha mabadiliko makubwa ya kijamii, kisera, kiuchuni na kimazingira hivyo imekuwa lazima tathmini hii kufanyika na kutoa ushauri wa mambo ya kuzingatia.

## **ATHARI ZA MIPANGO YA MAENDELEO NA MIRADI MBALIMBALI KWA MAFIA**

Mipango mbalimbali ya maendeleo inayoweza kutekelezwa kufuatia uboreshaji wa uwanja wa ndege wa Mafia ikiwa ni pamoja na uboreshaji wenyewe wa uwanja wa ndege inaweza kuleta faida na hasara katika uchumi, masuala ya kijamii, utamaduni na mazingira ya Mafia.

Baadhi ya faida zinazoweza kupatikana kotokana na mipango hiyo kutekelezwa ni pamoja na:

- Kukua kwa nafasi kiuchumi kutokana na kukua kwa utalii na uboreshaji wa miundo mbinu Ambato itarahisisha usafiri na usafirishaji
- Kuongezeka kwa masoko ya mazao yazalishwayo Mafia; mazao ya bahari, mifugo na kilimo
- Kuboreshwa kwa nafasi za kuzalisha mali na kuongeza kipato
- Kuboreshwa kwa huduma za jamii, mawasiliano, benki na jinsi ya kupata taarifa muhimu
- Kuongezeka kwa fursa ya kuongeza na kuboresha utengenezaji na uuzaji wa mazao ya mikono
- Kuongezeka kwa mapato ya Halmashauri na Serikali Kuu
- Kuongezeka kwa nafasi za ushirikishwaji wa wananchi katika maamuzi na utekelezaji miradi ya maendeleo
- Uwezekano wa kuboresha maisha na kuondoa umasikini kutokana na kuboreshwa kwa huduma za jamii, nafasi za kushiriki kiuchumi na kuboreshwa kwa utaalumu na uwezo
- Uwezekano wa kuboreshwa maeneo ya utalii pamoja na magofu ya Kua, vijana kupata ajira na vijiji kupata kipato kutokana na kuanzisha na kushiriki katika shughuli za kitalii.

## **MATOKEO YENYE KULETA ATHARI**

Baadhi ya shughuli za maendeleo Mafia zatakazotokana na uboreshaji wa uwanja wa ndege na mipango mingine ya maendeleo, zinaweza kuleta hasara kama ifuatavyo:

- Uharibifu wa misitu kutokana na ukataji wa miti kwa ajili ya mkaa na ukataji mikoko kwa ajili ya ujenzi na kutengeneza vyombo vya usafiri. Ukataji kufanyika Mafia, Rufiji na Kilwa.
- Utupaji hovyoy wa taka ngumu na taka maji na kusababisha uchafuzi wa mazingira, kuathiri maji ya chini ya ardhi, chemchem, bahari na viumbe vyake.
- Uharibifu wa matumbawe kutokana na wingi wa watalii na shughuli zao baharini na katika fukwe na kuharibu maeneo ya mazalia ya Kasa, Potwe, Nguva n.k
- Kumalizika kwa samaki kutokana kuongezeka kwa uvuvi haramu na uharibifu wa mazingira na maliasili za bahari (fukwe, mikoko, maeneo ya mazalia/viota)

- Uwezekano wa ongezeko la watu ambao utaweka shinikizo katika uvunaji kupita kiwango wa maliasili zilizopo, kuongeza mahitaji mbali mbali (huduma za afya, elimu, maji, umeme, ajira).
- Uwezekano wa kuongezeka kwa magonjwa ya kujamiiana (zinaa) pamoja na Ukimwi kutokana na mahusiano ya mapenzi yasiyo salama; kuongezeka kwa magonjwa ya mlipuko (kipindupindu, homa ya uti wa mgongo n.k) kutokana na ongezeko la watu visiwani Mafia.
- Upungufu wa usalama kutokana na ongezeko la watu na uwezekano wa Mafia kupata wageni wenye tabia tofauti na wenyeji na kuvuruga umoja, mahusiano yaliyopo sasa Ambato kwa kiwango kikubwa bado ni bora ikilinganishwa na maeneo mengi nchini.
- Kuongezeka kwa ajali barabarani na majini (barabara nzuri, mwendo kasi, kujazana kwa kupita kiasi katika boti).
- Kuharibika kwa magofu na maeneo ya kitalii kutokana na wageni wengi kuyatatembelea (kutasababisha mtikisiko, kukaliwa, kuguswa).
- Kuongezeka kwa msugvano na ugomvi kugombania ardhi na raslimali mbali mbali kati ya wenyeji na asasi za usimamizi wa mazingira na maliasili (MIMP, Halmashauri); kati ya wenyeji na wamiliki wa hoteli na biashara za utalii; baina ya wenyeji kugombania maeneo na baina ya wawekezaji katika sekta ya utalii na biashara husika,
- Kupanda kwa gharama za maisha na bidhaa muhimu kutokana na kuongezeka kwa mahitaji na watumiaji
- Kupoteza haki ya miliki ardhi na raslimali zake na haki ya matumizi ya mapito ya njia kwenda baharini na kwenye fukwe kutokana na uuzaji holela wa ardhi (usiozingatia sheria na haki), fukwe na mazingira yake kwa biashara ya utalii.

## **MIKAKATI NA MBINU YA KUDHIBITI ATHARI MBAYA**

Mpango Mkakati wa Mazingira Mafia umezingatia vigezo mbali mbali katika kushauri mkakati endelevu wa kuboresha mipango mbalimbali ya maendeleo na uboreshaji wa uwanja wa ndege na Utalii Kisiwani Mafia. Ni muhimu kutambua kuwa hakuna mradi wowote wa maendeleo usiokuwa na madhara isipokuwa ni muhimu kuangalia uwezo wa mazingira na raslimali zake na viwango vyake kuhimili vishindo vya maendeleo bila athari kutokea. Uhimilivu wa eneo (carrying capacity) ni uwezo wake wa kubeba mzigo au majukumu yaliyopo na kutoa huduma itakiwayo bila kuathiri utoaji wa huduma husika. Kila kitu au raslimali (watu au maliasili/baoanuai) ina kiwango chake cha mwisho cha uhimilivu kabla hakijateteleka. Wakati mwingine kiwango hicho hufikiwa kwa majadiliano na maamuzi ya ukomo gani utumike wa kufanya shughuli fulani kwa mfano ukomo wa wingi wa watalii kwa msimu ambao hautaathiri utalii na vivutio vyake. Wingi au idadi ya watalii au watu katika eneo moja, majengo katika eneo husika, magali katika eneo husika n.k ni kigezo muhimu kuzingatia ili kuimarisha hifadhi ya mazingira na kusaidia shughuli husika kuwa endelevu.

Hivyo basi, Tathimini ya Mkakati wa Mazingira kwa Mafia unsahuri kuwa uongozi wa Wilaya ya Mafia na Serikali Kuu budi ufahamu ubaya na uzuri wa maamuzi fulani ili uweze ukafanya maamuzi yanayozingatia vigezo maalum vya kisayansi sio tu matakwa ya hisia au muelekeo binafsi. Kwa mfano, maamuzi ya kuboresha utalii budi yazingatie baadhi ya mambo muhimu yafuatayo:

- Uboreshaji mazingira
- Uwezekano wa kupoteza fedha (Kuwekeza sana katika utalii halafu wasiendeleo kuja). Hivyo maamuzi lazima uangalie mengi pamoja na:

Aina ya utalii/watalii wajao na mahitaji yao; idadi na aina ya hotel za kitalii, uwezo wa hoteli na Mafia kwa ujumla katika kukidhi mahitaji ya watalii na wengineo wajao au waliopo wa kuhudumia sekta ya utalii. Maamuzi yafanyikayo yataathiri pia wawekezaji katika utalii.

- Wizara husika (Miundo Mbinu, Mali Asili na Utalii, Maji na miundombinu ya umwagiliaji) kuwa na mikakati endelevu ya uwiano inayokwenda na wakati na inayozingatia vigezo na maangalizo muhimu yatokanayo na ufuatiliaji yakinifu wa mipango na utekelezaji angalifu katika sekta ya utalii, maendeleo jamii na mazingira.

Ushauri ufuatao unatolewa wa kudhibiti athari mbaya:

#### Mbinu za Kudhibiti Athari

Wizara/Idara Husika (Mdau)	Shughuli za kutekeleza
Wizara ya mali asili na Utalii na Halmashauri ya Mafia	Tayarisha mpango Kamambe wa Utalii ambao utazingatia uwezo himilivu (Carrying capacity) na ustawi wa Kisiwa. Ujio wa watalii na wageni wengine wengi utahamasisha uwekezaji na shughuli nyingine nyingi ambazo zitaleta athari mbaya kwa kisiwa. Bila ya kuwa na mpango kamambe wa uwiano wenye kuzingatia usimamizi bora wa mazingira na wa kisheria Mafia itaweza kupata mabadiliko Mabaya ya kudumu yasiyorekebisha. Haya yataweza kuzidisha badala ya kuondoa umasikini na kuboresha uchumi. Mfano, kwa sasa kuna hotel iza kitalii 8 za vyumba jumla ya 78. Kuna mpango wa kujenga 5 zaidi. Abiria wa ndege pamoja na watalii kuanzia 2007 huja 40 kwa siku (13,240 kwa mwaka) Inategemewa wataingia 100 kwa kila saa wastani wa 486 kwa siku (kwa mwaka 177,503), ndege 56 kwa situ (20,611 kwa mwaka ifikapo 2030. Hivyo kutatakiwa kupunguza idadi ya wageni polepole ifikapo 2030 wawe nusu ya wanaokisiwa hapo juu ili kupata mapato ya faida ya muda mrefu bila kuharibu mazingira.
	Kutengeneza mkakati wa kufaidika kwa wananchi wa mafia kutokana na utalii na shughuli nyingine za uwekezaji Mafia. Mfano, ipangwe ni jinsi gani wananchi watafadaidika na utalii (kifedha, ajira na namna nyingine); viwanda, uchimbaji nishati na uwekezaji (ujenzi wa hoteli) na uwekezaji mwingine uingiao Mafia wa watu binafsi, mashirika na miradi ya serikali na yasiyo ya serikali. Kuwe na mikataba na sheria ndogo ndogo ya kulinda kufaidika huko na ufuatiliwe na hatua za kisheria kuchukuliwa inapokiuwa. Wananchi wenye ardhi waelimishwe jinsi ya kuingia ubia wa haki na wawekezaji bila ya kudhulumiwa.
Wizara ya mali asili na Utalii na Halmashauri ya Mafia na Hifadhi ya Bahari (MIMP)	Kuweka kiwango cha idadi ya watalii na mipaka ya matumizi ya maeneo ya nje na ndani ya hifadhi kwa watalii na kuangalia upya sheria ya matumizi ya hifadhi kulingana na wakati na vigezo vya matokeo ya uhifadhi vilivyofikiwa ili kupunguza migogoro na uharibifu wa hifadhi na viumbe vyake.
Halmashauri ya Mafia na Tume ya Mipango ya Matumizi ya Ardhi (Land use Comisión).	Zitengeneze mpango wa matumizi bora ya ardhi Mafia pamoja na kuweka kanda (zones) za aina ya matumizi ardhi (mfano eneo la hoteli na utalii tu, makazi tu, viwanda tu, kilito tu, hifadhi, utalii wa namna fulani tu).
Halmashauri ya Mafia	Kuhakikisha kuwa kila uwekezaji unafanyiwa utafiti wa athari za mazingira na jamii kwa kila mradi uanzishwao kulingana na matakwa ya Sheria ya Mazingira Namba. 191 ya 2004.
	Kuwa na kutekeleza mpange endelevu wa kujenga uwezo kiutendaji wa idara zake katika kutekeleza majuku yahasuyo. Pia, kujenga uwezo wa wananchi ili waweze kujenga kujajiri (katika utalii, kilimo, ufugaji wa faida, uvuvi, kazi za stadi za mikono na kuuzia watalii na wengineo ndani ya nchi na kusafirisha nje ya nchi).
	Kutekeleza shughuli za maendeleo na kuboresha uchumi ambazo zinatumia teknolojia rafiki na kuwa hazitoi taka hewa, maji na taka ngumu ambazo zina madhara. Na kuona ya kuwa vigezo/viashiria vya nchi na vya kimataifa vya mazingira (maji, hewa, ardhi) na vinginevyo vinazingatiwa.
	Kwa kuzingatia Sera na Mkakati wa Ukimwi kuelimisha wananchi wake

	kwa waume, vijana na wazee kuhusu masuala yote ya Ukimwi na matatizo mengine ya afya yanayoweza kuletwa na uboreshaji wa uwanja wa ndege na utalii na jinsi ya kuepuka.
	Kuhamasisha na kuwaelimisha wananchi wa Mafia jinsi gani wanaweza kutumia fursa zilizopo na zijazo kwa kuwajibika; aina ya uwajibikaji unaotakiwa; kuwawezesha inapobidi ili waweze kutumia fursa hizo. Kufuatilia kuona pale fursa zilipotolewa zimetumika kikamilifu ili kufikia malengo.

## NJIA MBADALA ZA KELET MAENDELEO MAFIA

Tathmini ya Mkakati wa Mazingira kwa Mafia imezingatia njia mbadala za kuele mandeleo Mafia. Hat hivyo inasisitizwa hapa kuwua kila mradi utakaotekelzwa Mafia, uzingatie sheria za mazingira na kufanya tathmini ya athari ya mazingira kwa kila mardi husik kulingana na sheria.

Njia mbadala zailizozingatiwa ni kama zifuatazo.

- **Mbadala wa Mpango wa kutokuwa na Uboreshaji wa |Uwanja wa ndege na utalii ili kuepuka madhara.**

Mkakati huu unamaanisha hakutokuwa na uboreshaji uwanja wa ndege na miundo mbinu ya utalii. Mkakati huu utapunguza magali ya madhara yajayo na uwanja wa ndege. Isipokuwa, utakuwa na athari mbaya kisera na kisiasa na kimaendeleo kwa ujumla. Kwani, kwa miaka mingi usafiri wa Mafia umekuwa ukitegemea boti za kienyeji zisizo na vigezo vya usalama, njia ya mzunguko kupitia Rufiji na Mkuranga; ndege ndogo zilizotua mara chache hasa wakati wa kiangazi kutokana na ubovu wa uwanja.

Kuchukua mkakati huu ni kuendeleza umasikini Mafia na hisia ya wananchi kuwa serikali yao haiwajali. Lakini mkakati huu haumaanishi na kuhakikisha ya kuwa utazuia mmomonyoko wa maadili na uharibifu wa mazingira. Kwani, tayari kuna ishara kuwa maendeleo na athari mbaya hazikwepeki kwa vile wananchi husafiri maeneo mbali mbali na kuiga au kuleta mambo ya huko (video, madishi ya satelite, mavazi, n.k). Muhimu zaidi ni kuwa Mkakati huu utapingana na Sera ya MKUKUTA, Sera ya Utalii ya kufaidisha wananchi, ya MCC/MCA-T na makubaliano yake na Serikali ya Jamuhuri ya Tanzania. Hivyo, Mkakati huu hautokubalika na Siasa za Serikali ya Tanzania.

- **Mbadala wa kuwa na uingiaji wageni wengi Mafia**

Huu unaweza kukuza uchumi kwa kuongeza kipato na uwanja wa ndege unaweza kuboreshwa sambamba na wingi wa wageni. Pia, itabidi kujenga hoteli na huduma nyingine za kukithi mahitaji ya wageni na katafuta vivutio zaidi kwa ajili ya utalii. Lakini bila ya kuwa na mpango kamambe wa uwiano wenye kuzingatia usimamizi bora wa mazingira na wa kisheria Mafia itaweza kupata mabadiliko mabaya na uharibifu mbaya wa kudumu usiorekebishika wa mazingira, maliasili na jamii. Haya yataweza kuzidisha badala ya kuondoa umasikini na kuboresha uchumi. Kupunguza wingi wa ujio wa wageni kidogo kidogo na kufikia idadi himilivu itakuwa mbinu na uamuzi/mkakati bora. Hata kama mkakati huu utapunguza mapato ya serikali, faida za uboreshaji mazingira zitakuja kuzaa matunda ya kipato bora baada ya muda mrefu wa utekelezaji uhifadhi. Maamuzi makini yenye mantinki Ki-Sera yafanyike sasa kuchagua mkakati huu kwa kupima na kubaini faida na hasara ya kila mkakati mbadala husika kuupata ule mzuri na endelevu. Tayari MCC na Serikali wanajadili juu hili na kuna mpango kua idiadi ya wageni kwa situ itapingua hadi 40 kwa saa badala ya 100 kwa saa kama ilivyokusudiwa mwanzo. Mabadiliko haya hayataathiri michoro na mipango ya baadaye ya kukua kwa utalii kwa Mafiaa endapo dhana ya ukuaji wa uchumi itazingatiwa

- **Kuwa na watalii wachache wenye thamani kubwa**

Ina maanisha kuwa na watalii wachache ambao watapunguza wageni kuwa wengi na kusababisha msongamano na uharibifu. Isipokuwa hao wachache ni wale watakaolipa pesa nyingi kutokana na shuguli zao. Hoteli na huduma za kitalii zitakuwa chache na bora sio ujezi mwingi wa hoteli. Mkakati huu unawiana na mkakati wa Taifa wa utalii wa kuwa na watalii wachache wa kutoa pesa nyingi. Kumudu mkakati huu budi kuboresha miundo mbinu ya utalii na kuwa na mpango wa watalii au wageni kujiandikisha na kuwahi nafasi (booking) za ujio wao Mafia kama njia ya kuzuia ujio mwingi holela wa watalii wengi kwa pesa kidogo. Pia muhimu ni kupanua vivutio anuai vya utalii wa wao kulipa pesa nyingi lakini wakaburudika kwa hali ya juu na kuutangaza utalii Mafia wakirudi kwao.

- **Kuboresha Hoteli zilizopo na kuzuia kujenga Hoteli mpya.**

Kuna mpango wa kujenga hoteli zaidi 5 kuongeza 8 zilizokuwepo. Wawekezaji wamelenga fukwe zaidi na wengine wamelenga visiwa vidogo vidogo ambavyo ni maeneo ya mazalia ya viumbe vya bahari. Ili kupunguza madhara ya wingi wa hoteli, serikali inaweza kuweka mkakati na sera ya kuboresha na kupanua uwezo wa hoteli za kitalii zilizopo kwa kuweza kupokea watalii/wageni wengi zaidi kama mbinu mbadala ya kuepuka kujenga hoteli nyingi zaidi zitakazoathiri mazingira na maeneo tete ya mazalia ya kasa na viumbe vinginevyo vya bahari na nchi kavu. Upanuzi budi uzingatie vigezo vya kimataifa. Hii itasaidia pia kupunguza uchafuzi wa mazingira utokanao na maji taka na taka za mahoteli mengi; msugvano katika suala la ardhi itakayotakiwa na wawekezaji kutoka hasa miliki za mila; kuingilia maeneo ya uvuvi mdogo mdogo kwa shughuli za kitalii; usumbufu na shinikizo kwa ya maisha ya samaki mfano Potwe na wengineo.

Kuboresha kwa kupanua vivutio ni gharama. Serikali ifikirie sera za motisha za kiuchumi ambazo zitawavutia wawekezaji katika sekta ya utalii kuboresha hoteli na huduma ili mazingira yawe bora na endelevu. Kuunganisha utalii wa Mafia na maeneo mengineyo ni mbinu mojawapo katika mkakati huu kuweza kukithi haja za watalii.

- **Kuboresha matumizi ya Nishaji Mbadala**

Kuwa na nishati endelevu inayotegemewa inayopatikana wakati wote ni jambo muhimu katika maendeleo ya utalii wa Mafia. Serikali itaathirika kwa kukosa kodi na wananchi watakosa huduma na mapato. Kwa sasa, umeme wa Mafia hautabiliki kutokana na kukatika katika au kutokuwepo kila siku kutokana na ubovu/uzee wa genereta na mara nyingi kuisha nishati ya diseli ya kuendesha mitambo ya kuzalisha umeme. Kutokana na hayo hapo juu, ni muhimu kuamua ki-sera matumizi ya nishati mbadala ambayo ni endelevu ya kumudu gharama inayosaidia uwepo wa mazingira salama.

Kuna nishati mbadala za aina mbili. Moja ni Nguvu ya Jua (Solar power) kama mbadala ila ya muda mfupi au ya nyongeza ikiwepo na ingine pale zinaposhindwa kuwepo. Solar inaweza kuzalishwa ndani ya Mafia ikalengwa kukidhi sekta muhimu (hoteli, uwanja wa ndege, ofisi, kaya). Hii itapunguza matumizi ya dizeli na matatizo ya uchakavyu/uharibifu wa mashine.

Ya Pili ni waya ya umeme ya kupita chini ya bahari hadi Mafia (kutoka Dar es salaam, Kidatu, Songosongo n.k gridi za taifa) ambao utakuwa mkakati wa nishati wa muda mrefu. Hii itasaidia kuendesha viwanda, shughuli za ofisi, nyumbani na utalii na kuwezesha watu kujikimu na kuondoa umasikini. Hii itaendandana na sera ya nishati ya taifa ya kuufikisha umeme kwa wananchi ambayo ni nishati ya uhakika ya kuendesha viwanda. Manufaa ya mkakati huu ni mengi kimazingira, kijamii na kiuchumi isipokuwa gharama zake za kupitisha kebo baharini ni kubwa pamoja na kuweka uwiano kati ya upatikanai wa umeme na mikakati ya ulinzi wa vyazo vya maji, matumizi ardhi endelevu na ulizi wa mazingira.

## HITIMISHO

Taarifa hii ya Mpango Mkakati wa mazingira kwa Mafia inonnesha kuwa uboreshaji wa uwanja wa ndege wa Mafia na shighuli nyingine zitakzotokana na ujenzi huo zitaleta faida na hasara kwa Mafia na taifa kwa ujumla.

Tathmini imeonesha kuwa Halmashauri ya Mafia haina uwezo wa kutosha wa kuandaa mipango ya uwiano wa maendeleo ya kisiwa na kuitekeleza kwa ufanisi kutokana na sababu zifuatazo:

- Upungufu wa watumishi na vitendea kazi (vifaa vya ofisi au vitendeakazi, usafiri)
- Uwezo mdogo wa kuwianisha, kuelekeza (mainstream) na kuratibu masuala ya mazingira katika mipango yote ya maendeleo ya Halmashauri pamoja na ya sasa pamoja na yajayo kama inavyoelekezwa katika Sheria ya Mazingira Na 191 ya 2004.
- Uwezo mdogo wa kuwianisha mipango yake na ya serikali kuu
- Umasikini walionao wananchi ambao ni sababu mojawapo kubwa ya matumizi yasiyo endelevu ya raslimali zilizopo hasa katika uvuvi na ardhi. Mahitaji ya samaki wengi kwa kipato imeleta uvuvi haramu na msugvano kati ya wananchi na wasimamizi wa hifadhi katika masuala ya uzingatiaji sheria. Hii inatokana pia na kuwa sekta nyingine za uchumi hazina ufanisi wa kutosha (kilimo, ufugaji, viwanda, biashara ndogo ndogo n.k). Vingine kama vile viwanda vya mbata vilivyokuwa vikitoa ajira miaka mingi iliyopita vimekufa na utalii ndio kwanza unaanza kukua.
- Utalii wa chini ya maji, wa mazingira na kiasi wa utamaduni unavutia watalii wengi kuja Mafia. Isipokuwa wananchi wengi hawajafaidika na utalii moja kwa moja na utalii huo (isipokuwa kwa kiasi kijiji cha Chole). Kutofaidika kukiendelea kunaweza kuathiri utalii suala la kuzingatiwa na halmashauri
- Uwezo mdogo wa kuhamasisha kila sekta iwafaidishe wananchi. Mfano ni sekta ya mifugo ambapo maziwa mengi hayapati soko na kumwagwa kutokana kuwa hakuna jinsi ya kuyahifadhi kwa matumizi ya ndani na kuyasafirisha kuyauza nje ya Mafia-Dar-es-salaam.
- Usimamizi mdogo wa masuala ya ardhi umesababisha baadhi ya wananchi kuuza ardhi kiholela kwa wawekezaji wa hoteli au wawekezaji kugawiwa ardhi rasmi jambo ambalo limezalisha malalamiko na kuhusisha viongozi na wasaidizi wao. Masuala ambayo yanahitaji kushughulikiwa ili kuwe na utalii endelevu

Taarifa hii ya Mkakati wa Mazingira wa Mafia inshauri kuwa kwa kuzingatia umuhimu wa mipango ya maendeleo na Mafia na mradi wa uboreshaji wa uwanja wa ndege na athari zake, Serikali Kuu na Serikali ya wilaya hazina budi kutoa kipaumbele na kutenga fedha kutekeleza mapemdekezo yafuatayo.

## MAPENDEKEZO

Na	Pendekezo	Maelezo
1	<b>Boresha Utawala Bora</b>	Hakikisha kuna ufanisi katika utekelezaji wa majukumu na usimamizi, uwajibikaji na ushirikishaji wananchi. Kuwe na uwazi katika maamuzi yanayozingatia sheria: <ul style="list-style-type: none"><li>• Anzisha/boresha katika Halmashauri ya Wilaya Ofisi ya Uratibu wa masuala ya Mazingira ili iweze kuingiza na kuwianisha masuala ya mazingira katika mipango yote ya maendeleo ya wilaya na ya serikali kuu inayotekelezwa wilayani</li><li>• Tekeleza mpango wa kujenga uwezo wa Kamati tendaji za Halmashauri katika kuandaa, kusimamia na kutekeleza mipango ya uwiano ya maendeleo.</li></ul>

Na	Pendekezo	Maelezo
		<ul style="list-style-type: none"> <li>• Boresha ushirikishaji wananchi katika maamuzi, kupanga na kutekeleza masuala yanayohusu maisha yao na shughuli za kujikimu</li> <li>• Kwa kushirikiana na AZISE mfano Haki Ardhi hamasisha na kuelimisha wananchi kuhusu sheria ya ardhi na jinsi gani wanaweza kutumianafasi zilizopo na zinazokuja kuboresha maisha yao. Saidia kuondoa vikwazo kijamii, ki-desturi, mifumo ya taasisi na mikakati na vikwazo vya fedha ili kufanikisha wa Mafia wawe na utayari na washiriki wao wenyewe ndani ya mchakato wa maendeleo yajayo.</li> </ul>
2	<p><b>Panga Mpango Mpana wa Maendeleo Endelevu na wa muda mrefu</b></p>	<p>Hakikisha kuwa kunapangwa mpango mpana (comprehensive) wa uwiano (integrated) ambao ni wa muda mrefu ambao utalenga maendeleo na ulinzi wa mazingira:</p> <p><b>Tayarisha mpango wa matumizi ya ardhi unaoweka zone za matumizi borevu.</b></p> <ul style="list-style-type: none"> <li>• Zingatia raslimali zilizopo na uhimilivu wa bioanua hizo</li> <li>• Anzisha Tume Maalum ya wataalamu wa ki-sheria kwa kuchunguza matatizo na malalamiko yaliyopo kwa sasa yahusuyo ardhi. Kisha, weka mwongozo wa kulinda maslahi na haki ardhi kwa wananchi na wawekezaji. Elekeza utendaji wa haki katika mapatano ya amali ya ardhi.</li> <li>• Toa mafunzo ya sheria ya ardhi kana inavyotakiwa na sheria hiyo na mifumo yake</li> <li>• Zuia kisheria ununuzi wa ardhi ufanyao na wawekezaji kutoka wamiliki wa ardhi ya kimila (wananchi) na kutoka serikalini. Wawekezaji wote wazingatie sheria ya uwekezaji ya kupata ardhi kutoka TIC (Kituo cha uwekezaji).</li> <li>• Zuia/kataza na elimisha wananchi wasiuze ardhi bali waingie ubia wa haki na wawekezaji kwa kuzingatia sera ya MKURABITA</li> <li>• Unda mfumo wa kunufaisha wananchi kutokana na uwekezaji pamoja na utalii kisiwani wapate haki ya mafao. Mfumo wa kufaidika na utalii unotumika Chole unaweza kuboreshwa ili utumike katika maeneo mengine Mafia ili kuondoa umasikini. Mfumo huo utasaidia wananchi kutokuuza ardhi kwa kificho na kukubali kuwekeza katika ubia ili wanufaika.</li> </ul>
		<p><b>Wizara ya Mali ya Asili na Utalii na Halmashauri ya Mafia itayarishe Mpango wa Utalii endelevu</b></p> <p>Hakikisha ya kuwa mpango wa utalii endelevu unazingatia uhimilivu wa kisiwa katika kubeba mzigo wa utalii unaotarajiwa, Mpango uliopo wa Uwiano wa Usimamizi wa Raslimali za Pwani na Mpango wa Taifa wa Utalii. Mpango budi:</p> <ul style="list-style-type: none"> <li>• Uwe na malengo, viashiria na viwango na ufafanue aina ya utalii na maeneo gani yatahusika; uonyeshe jinsi utakawianishwa na maendeleo ya wilaya kwa ujumla ili mapato yaboreshe maendeleo yake</li> <li>• Mpango utoe mwongozo kwa wawekezaji katika utalii kuwa wanatakiwa kufanya nini na wasifanye nini katika shughuli hizo mbali mbali za utalii na kuhakikisha kuwa wanazingatia</li> <li>• Mpango utambue na kuonyesha mahitaji ya sekta ya utalii na kuhakikisha yanapatikana au kufanikishwa. Mfano mahitaji ya huduma mbali mbali, wahudumu kujua kuongea kiingereza na lugha nyingine muhimu mfano Kifaransa, Kiitaliano, Kiswahili fasaha na kuhakikisha kuwa kunajengwa Chuo cha Mafunzo cha kukithi mahitaji hayo na kuwa vyuo binafsi vinaelekeza mitaala katika kukidhi mahitaji ya mafunzo ya stadi za kazi katika sekta husika za Mafia (languages, tour guide, hotel management, housekeeping, food &amp; beverages, languages, boat rides &amp; repair services).</li> <li>• Kutoa mwongozo kwa wawekezaji, vyombo vya usafiri (boti, ndege nk.) katika sekta ya utalii kuhusu idadi ya watalii inayoruhusiwa kwa msimu/mwaka, inayoruhusiwa kutembelea eneo fulani au kufanya shughuli fulani ya utalii kwa siku, aina ya utalii unaokaribishwa, idadi na aina ya majengo ya hoteli na ukubwa wake ili kupunguza shinikizo haribifu kwa kisiwa kidogo chenye ukomo fulani wa kubeba mzigo. Kila kitu duniani kina ukomo wake wa kupokea kuelemea.</li> </ul>

Na	Pendekezo	Maelezo
		<p><b>Wizara ya Miundombinu kwa Kushirikiana na Mamlaka ya Bandari na Halmashauri ya Mafuia itengeneze mpango kamambe wa ujenzi wa Gati</b></p> <p>Wananchi walio wengi wanategemea usafiri wa bahari ambao kwa sasa hutumia gati ya Kilindoni Mafia, Mkuranga, Rufiji na Kilwa (Kisiju, Nyamisati n.k). Mpango wa kuboresha gati ya Kilindoni umekwisha kukamilika. Kutokana na historia ya kijamii, uchangianji raslimali na maeneo ya uvuvi, mawasiliano ya jamii kati ya Zanzibar, Mafia, Rufiji, Mkuranga na Kilwa; kuwepo kwa ukuaji utalii kanda ya kusini (Mafia, Kilwa, Selou-Rufiji) ni vizuri mpango wa uboreshaji gati wa maeneo yaliyotajwa hasa Rufiji, Kilwa, Mkuranga yakaoanishwa kwa manufaa ya wilaya hizi zote kwani kila moja imekutwa ina mipango ya gati, kuboresha uchumi na utalii.</p>
		<p><b>Halmashauri Iboreshe Mpango mkakati wa utupaji taka maji na taka ngumu</b></p> <ul style="list-style-type: none"> <li>• Mpango utenge eneo la utupaji taka ngumu na utoe maelekezo jinsi kutekeleza mpango na shughuli za utupaji taka pamoja na mfumo wa motisha kwa wale watakaopunguza uchafuzi wa mazingira</li> <li>• Kuhamasisha wananchi katika kuelewa madhara na kuzingatia misingi salama ya utupaji taka katika vifao wanavyomudu na usimamizi shirikishi wa usafi wa mazingira</li> <li>• Halmashauri kutumia nyenzo za tathimini ya Mazingira pamoja na tathimini ya miradi katika athari zake katika uchafuzi na uharibifu wa mazingira na maisha ya watu kwa miradi yote itakayoanzishwa. Kujenga uwezo wa watumishi wa halmashauri kutahitajika ili hili litekelezwe kikamilifu</li> <li>• Kutekeleza miradi ya vyoo bora, usafi wa mazingira na kuwa na mkakati wa kuzoa taka ambazo zitatupwa na kutendewa (waste management) kuzingatia sheria na viwango vilivyowekwa kitaifa na kimataifa. Halmashauri inaweza kutoa mkataba kwa kampuni au AZISE kusimamia suala na utupaji takamaji na taka ngumu pamoja na kinyesi na kuona kuwa hakuna utupaji hovy katika mazingira (ardhi, bahari, mito)</li> </ul>
3	<p><b>Chukua hatua ya kushughulikia Athari za Mazingira</b></p>	<p><b>Upatikanaji wa Maji</b></p> <ul style="list-style-type: none"> <li>• Wizara ya Maji na Miundombinu ya Umwagiliaji pamoja na Halmashauri ya Mafia ifanye utafiti wa maji ya ardhi kujua kiasi kilichopo na utoshelevu wake kwa matumizi mbali mbali kabla ya kuruhusu uanzishaji mkubwa wa hoteli, viwanda n.k</li> <li>• Kuwataka wawekezaji wa viwanda, hoteli, kutumia teknolojia sanifu ya maji inayopunguza upotevu wa maji na kuwataka wawekezaji katika vyanzo mbadala vya maji (mfano ya mvua) a mbayo yatapunguza tegemezi ya maji ya ardhi.</li> <li>• Kutumia sheria ya ulipaji kwa kiasi cha maji yanayotumiwa na kutumia mapato katika kuboresha miundombinu husika ya maji (mapato ya maji yaboreshe mfumo wa maji)</li> <li>• Kuhakikisha ya kuwa maji salama yanawafikia wananchi na kutoa kipaumbele kwa wale waishio katika visiwa vidogo nje ya kisiwa kikubwa cha Mafia na kuwa miundombinu yao ya uvunaji maji inaboreshwa</li> <li>• Wizara ya Mali asili na Utalii kuona kuwa inaweka</li> </ul>
		<p><b>Mahitaji ya Nishati</b></p> <ul style="list-style-type: none"> <li>• Wizara ya Mali Asili ya Utalii iwatake wawekezaji wapya katika sekta ya utalii kukithi angalau asilimia 50% ya mahitaji yao ya nishati kutoka bionuai mbadala za nishati (mionzi ya jua, upepo).</li> <li>• Hazina itoe motisha ya mapungufu ya kodi kwa wawekezaji watakaokidhi mahitaji yao ya nishati kutokana na teknolojia salama na borefu ya mazingira ambayo itapunguzia serikali mzigo wa kuwapatia nishati ya umeme kutoka gridi ya taifa. Halmashauri inaratibu waanzilishi hao na kuihakikishia Hazina kuhusu wawekezaji hao.</li> <li>• Wizara ya Nishati na Madini iangalie na kutoa kipaumbele cha kuipatia mafia umeme kutoka gridi ya Taifa kupitia kebo salama za chini ya bahari.</li> </ul>

Na	Pendekezo	Maelezo
4	<p><b>Kutengeneza mkakati wa kuboresha maendeleo kiuchumi</b></p>	<p>Ili wananchi wa mafia na wilaya ifainike kiuchumi na maendeleo yajayo yafuatayo yanasisitizwa:</p> <ul style="list-style-type: none"> <li>• Halmashauri na TANROAD na Wizara ya Miundombinu kuhakikisha barabara za ndani kubwa na ndogo zinaboreshwa na kuunganishwa na kuboresha usafiri wa bahari kuiunganisha Mafia na Bara</li> <li>• Kuhamasisha wananchi watumie nafasi zilizopo na zitazo za uchumi na kuboresha shughuli zao katika sekta zao husika kwa manufaa yao</li> <li>• Halmashauri na Wizara ya Elimu kuhakikisha ya kuwa wanajenga na kukisimamia Chuo cha Mafunzo ambacho mtaala wake utakidhi mahitaji ya stadi za kazi zinazohitajika Mafia kukidhi suala ya wananchi kupata ajira na kujajiri wenyewe katika miradi mbali mbali.</li> <li>• Halmashauri na Wizara ya Viwanda, Biashara na Masoko kuhamasisha kiwanda/viwanda vya mchakatuo wa mazao ya kilimo ambavyo vitatoa ajira na kuboresha kipato (wananchi wameomba kurejeshwa kiwanda cha zao la minazi).</li> <li>• Halmashauri ikishirikiana na Bank ifanikishe mikopo nafuu kwa ajili ya wajasiriamali ambao nao wapate mafunzo ya kujua wajibu wao katika mikopo na maendeleo yao. Kutoa kipaumbele kwa vijana na akinamama.</li> </ul>
5	<p><b>Chukua Hatua ya Pupunguza Makali ya Athari katika Jamii</b></p>	<p>Ili kupunguza athari mbaya ya maendeleo kwa jamii yafuatayo yazingatiwe:</p> <ul style="list-style-type: none"> <li>• Kuwaelimisha wananchi kuhusu madhara ya utalii katika mila na desturi.</li> <li>• Kwa kushirikiana na Wizara ya Utalii, Halmashauri itunge mwongozo wa kuwafahamisha watalii desturi zitakiwazo kuzingatiwa wafikapo na wawapo Mafia na kufuatilia kuhakikisha kuwa hoteli za kitalii na watalii wanazingatia hayo</li> <li>• Halmashauri ifanikishe kujengwa kwa shule za kutosheleza za sekondari ambazo zitakuwa kamilifu katika vifaa vya kisasa (pamoja na computer), walimu na kuhakikisha kuwa watoto wa kike na wakiume wanasoma na kumaliza masomo.</li> <li>• Halmashauri ishirikiane na Wizara ya Afya na Ustawi wa Jamii kuona kuwa kunapatikana boti ambayo itatumika kama ambulensi ya kusaidia kusafirisha wagonjwa wa dharura hasa akina mama wajaawazito wenye matatizo ya kujifungua.</li> <li>• Vilevile Halmashauri na Wizara ya Afya na Ustawi wa Jamii iwezeshe AZISE na Idara husika za Wilaya utekelezaji wa kuzuia maambukizi ya Ukimwi kama sera na mkakati wa kutokomeza Ukimwi unavyoelekeza. Kuwa na mipango kamambe ya kuelimisha wananchi kwa undani jinsi mmaambukizi yanavyowezekana na isivyowezezana; kuwahasisha kupima katika vituo mbadala, kuwapatia taarifa wanazohitaji, kutokomeza nyanyapaa, kusaidia waathirika na yatima na kuzingatia miiko ya kazi.</li> <li>• Ofisi ya Waziri Mkuu Wizara ya Tawala za Mikoa na Serikali za Mitaa (TAMISEMI) ihakikishe kuwa Idara za Halmashauri zina wafanyakazi wanaotakiwa kama kasma inavyosema na kwa ujuzi unaotakiwa. Hawa wawe na vitendea kazi na usafiri ili waweze kuwa na ufanisi na kukidhi mategemeo na utoaji huduma unaotegemewa.</li> </ul>

Utekelezaji wa ushauri huu unaweza kuanza mara moja kama raslimali (fedha, vifaa, watumishi) vinapatikana mara moja. Utayarishaji wa mipango iliyotajwa katika taarifa hii nayo inaweza ikaanza mara moja wakati uwanja wa ndege unaendelea kujengwa mradi tu madhara na mikakati borefu iliyotajwa katika tathimini ya mazingira ya uwanja wa ndege na huu Mkakati wa Mazingira wa Mafia itazingatiwa ili kuleta ufanisi katika utekelezaji kwa muda mfupi iwezekanavyo.