



MICHEWENI FREE
ECONOMIC ZONE

MASTER PLAN 2019 -
2039

INTERIM REPORT

February 2019





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List of Abbreviations

BoT	Bank of Tanzania	SADC	Southern African Development Community
EPZ	Export Processing Zone	SEZ	Special Economic Zone
EAC	East African Community	SME	Small and Medium Enterprises
FTZ	Free Trade Zone	UAE	United Arab Emirates
FEZ	Free Economic Zone	VAT	Value Added Tax
FDI	Foreign Direct Investments	ZAWA	Zanzibar Water Authority
GDP	Gross Domestic Product	ZBC	Zanzibar Business Council
ICSID	International Centre for Settlement of Investment Disputes	ZBS	Zanzibar Bureau of Standards
MIGA	Multilateral Investment Guarantee Agency	ZECO	Zanzibar Electricity Company
PPP	Public Private Partnership	ZIPA	Zanzibar Investment and Promotional Authority
RGoZ	Revolutionary Government of Zanzibar	ZSGRP	Zanzibar Strategy for Growth and Reduction of Poverty



1.1 Introduction

Zanzibar is one of the oldest trading hubs in East Africa. It consists of two islands Unguja and Pemba and 52 islets situated in Indian Ocean covering an area of 2,654 square kilometers. It is among the most densely populated countries in Africa with over 530 persons per square kilometers. It is part of the United Republic of Tanzania but with an autonomous government that has a President, Cabinet, Legislature and Judiciary.

Before the development of eastern African mainland ports, Zanzibar was the trade focus of the region for millennia. The location of Zanzibar on the trade routes made it accessible to both traders and colonists from Arabia, South Asia, and the African mainland.

Currently, it has become an ideal for companies who need to do business with many countries in mainland Africa and beyond. Being part of the United Republic of Tanzania, it has market potential with immediate estimated population of 55 million, but with its historical and strategic location, its catchment area goes beyond African Continents to Middle East, Asia and Europe. As such Zanzibar can be made economic, tourist and social hub of the eastern region of Africa.

It is worth noting that Zanzibar is stable politically, socially and economically making it potential for local and foreign investments. It is a member of Multilateral Investment Guarantee Agency (MIGA) of the World Bank.

Also, Tanzania is a signatory to the Convention of Recognition and Enforcement Arbitration Award, and a member of International Centre for Settlement of Investment Disputes (ICSID). It is also a member of East African Community



(EAC) and South African Development Community (SADC).

The Revolutionary Government of Zanzibar (RGoZ) has long recognized the role of private sector in economic development of the country. The excellent response from several private investments within Zanzibar and from abroad is adequate evidence that investors have strong confidence in the political will of the Government.

The country has well articulated planning systems focusing on national, regional and local plans and has set a 2020 National Development Vision which is to **transform Zanzibar into a middle income country** and eradicate absolute poverty in the society by building a strong and competitive economy so as to achieve high-quality livelihoods for citizens and improve good governance and the rule of law without compromising Zanzibar's rich culture (RGoZ, 2011).

This National Vision is in line with Sustainable Development Goals (SDGs) which over ambitiously aimed at ending poverty by 2030. Achievement of Development Vision 2020 to a large extent requires economic policies that

are aimed at creating education, training and employment opportunities; providing basic social services; and encouraging participatory development. The Free Economic Zone Planning is aimed at addressing the aforementioned issues.

1.2 Zanzibar Investment and Promotion Authority and Free Economic Zone

Zanzibar Investment and Promotion Authority (ZIPA) are at the forefront of the investment drive in Zanzibar. ZIPA was established by the Zanzibar Investment Promotion and Protection Act No.11 of 2004 and operates under the Ministry of Finance and Planning. It offers a wide range of opportunities for investors in agriculture, light industries, tourism and Free Economic Zones (FEZ).

Free economic zones have emerged on the scene as a planning tool to help boost economic development including attract investments in Zanzibar and Tanzania in general. In order to attain country's Development vision of 2020, which is to transform Zanzibar into middle income country with high level of industrialization and develop Zanzibar productive sectors such as agriculture, manufacturing and services to enhance their multiplier effect the country formulated 3 main approaches.

These approaches are Zanzibar Strategy for Growth and Reduction of Poverty (ZSGR PIII) commonly known as MKUZA III, the Zanzibar Business Council (ZBC) and Zanzibar Investment and Promotional Authority (ZIPA) as a one-stop centre for investment promotion and

facilitation.

Free Economic Zone is a geographic area where goods may be landed, stored, handled, manufactured, or reconfigured, and re-exported under specific customs regulation and generally not subject to customs duty.

Free trade zones are a type of special economic zones which can be regarded as an investment in industrial infrastructure and a services provider to attract and facilitate foreign investment, integrate local firms into global value chains, promote export-oriented growth and generate employment. Companies that set up their activities in Zanzibar benefit from simplified customs and other administrative procedures.

Core functions of Zanzibar Investment and Promotion Authority (ZIPA) include;

1. Undertaking promotional activities,
2. Establishing, administering and simplified procedures of approving investment projects,



3. Facilitating foreign and local investments,
4. Assisting investors in solving regulatory problems,
5. Identifying new markets or opportunities for the expansion of businesses,
6. Assisting in acquiring land for investments,
7. Facilitating the speedy acquisition of all due incentives, necessary authorization and decisions required by investors including work and resident permits, land leases and other infrastructure services,
8. Playing advisory role to the Government in all investment matters,
9. Overseeing the formation and effective functioning of Zanzibar National Business Council,
10. Stimulating and supporting the growth of entrepreneurship and SMEs and
11. Promoting working relationship with international organizations.

1.2.1 Rationale for Free Economic Zone

There are a number of reasons for setting free economic zones;

1. To help reduce unemployment and gain foreign exchange earnings,
2. To act as engines for industrialisation and economic growth by attracting foreign direct investments. Many of the Middle East FEZs e.g. in the United Arab Emirates (UAE) are designed to attract foreign direct investors,
3. To facilitate technology and knowledge transfer through the creation of forward and backward linkages.

Currently Zanzibar has five Free Economic Zones strategically located throughout Zanzibar namely Fumba FEZ, Amaan FEZ, Maruhubi Free Port, Airport Free Port and Micheweni FEZ.

According to the Zanzibar Investment Promotion and Protection Act No. 11 of 2004, the functions of the Free Economic Zones are to create favorable operating conditions and guarantee them stable business sites, secondly, is to facilitate alone or joint venture investments with government of projects with positive influence for international economic co-operation and technical exchanges in industries and manufacturing.

1.3 Need for the Master Plan of the Free Economic Zone

ZIPA (2014) reports that North Unguja region is the most preferred destination for Foreign Direct Investments (FDI) accounting for 39.6 percent of the FDI stock followed by Urban West with 38.7 percent and South Unguja with 21.4 percent. Pemba regions are the least recipients of FDI stock; this pattern is consistent with low level of infrastructure developments which is one of the key incentives to attract investment.

Therefore, the master plan for free economic zone in Micheweni is crucial to underscore the following:

- i. The Revolutionary Government of Zanzibar declared Micheweni as a Free Economic Zone in 1992 with the aim to promote rapid economic growth and

improve livelihood of the community by attracting local and foreign investments in the area through provision of quality infrastructure complemented by attractive incentive package, business support services, cluster development and minimizing as many obstacles as possible. The master plan is necessary to translate this declaration into practice.

- ii. The Master Plan is required to guide and coordinate the spatial development of the FEZ and direct location of specific uses such as infrastructure (tarmac roads, electric power, water supply, and waste disposal systems), factories, residential and community facilities (education, health, recreational).
- iii. The Master Plan will also be used as management tool to minimize random, uncoordinated and incompatible uses as well as promote developments that protect the environment of Pemba Island in general.
- iv. It has been noted that the site falls short of clear development planning policy, land use planning guidelines, infrastructure prioritization and implementation plan and environmental protection measures. These deficiencies tend to discourage serious investments on the site. The aforementioned situation calls for immediately action to prepare FEZ Master Plan to guide and coordinate sustainably envisaged investments to promote economic growth and welfare of the community and national at large.

1.4 Objectives and Scope of Work

1.4.1 Objectives of the Consultancy

The main objective of this consultancy is to prepare a comprehensive Land Use Master Plan of Micheweni Free Economic Zone area for residential development and economic uses based on the following considerations:

- 1) The future developments should be located in those areas in which public services and facilities can be efficiently and economically provided,
- 2) Due consideration to be given to agricultural and forestry products that are considered as the primary land use activities of the area,
- 3) The preferred development pattern within the designated growth areas should be of mixed use, integrating residential, commercial, open spaces and offices uses,
- 4) Based on the analysis and consultations, some areas should be identified and preserved for key industrial activities and other commercial/production functions,
- 5) The plan should integrate the existing social services and other residential functions into the proposed land use plan and
- 6) Propose suitable interventions in areas identified for potential tourism and other economic developments.

1.5 Technical approach and Methodology

It was crucial to start the process of preparation of Micheweni Master Plan for Free Economic Zone at Micheweni with sensitization and awareness creation campaign to the local

leaders, officials and the community at Micheweni area. Consultative meetings, interviews, focus group discussions, socio-economic survey and collection of secondary data from various offices in Pemba and in Unguja. Methods, institutions visited and offices where interviews were conducted persons are summarized in the matrix below.

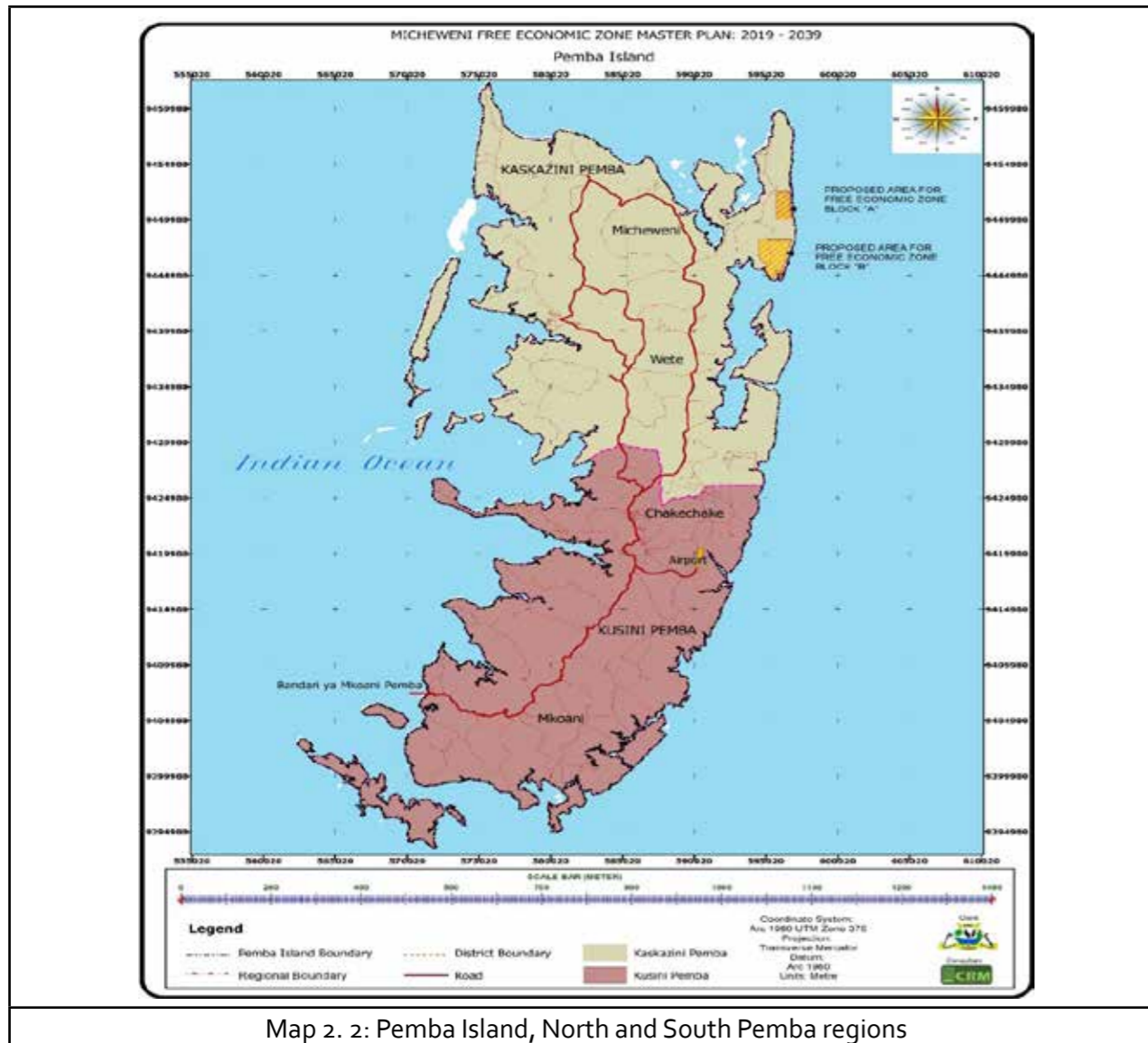
Methods	Office	Interview conducted with...
Interviews	Zanzibar Investment and Promotional Authority	Management- Head Office
		Officer in Charge- Pemba
	Ministry of Lands, Housing, Water and Energy	Officers in charge- Pemba
		Director for Urban and Rural Planning
		Director for Lands
	Ministry of Agriculture, Natural Resources, Livestock and Fisheries	Officers in charge
	Ministry of Finance and Planning	Permanent Secretary
		Officers in Charge- Pemba
	North Pemba	Regional Commissioner
	Micheweni District	District Commissioner
	Office of Chief Government Statistician	Officer in Charge- Pemba
	Kiuyu Mbuyuni, Shanake and Maziwa Ng'ombe <i>Shehias</i>	<i>Shehia- Micheweni</i>
		Household survey- Micheweni
		Focus Group Discussions
	Zanzibar Water Authority (ZAWA)	Officer in Charge- Pemba
	Zanzibar Electricity Company (ZECO)	Officer in Charge- Pemba
	Zanzibar Airports Authority	Officer in Charge- Pemba
	Zanzibar Ports Corporation	Officer in Charge- Pemba
	Chake Chake Town Council	Town Director
	Zanzibar Environmental Management Authority	Officer in Charge- Pemba
The Manta Resort	Investor- Micheweni	
Constance Aiyana Hotel	Investor- Micheweni	

	Misali Beach- Ocean Group of Hotels	Investor- ChakeChake
Soil experiment and analysis: 53 samples were extracted from the Project area and analyzed		
Observation of natural behavior of the community: Sensitization and awareness creation meetings were conducted at Micheweni Project Area		

1.6 Organisation of the Report

This report is organized into six Chapters. Introductory part is presented in Chapter One. Chapter Two deals with Existing Situation which include topography, soil analysis vegetation distribution analysis, transport and spatial linkages, climatic

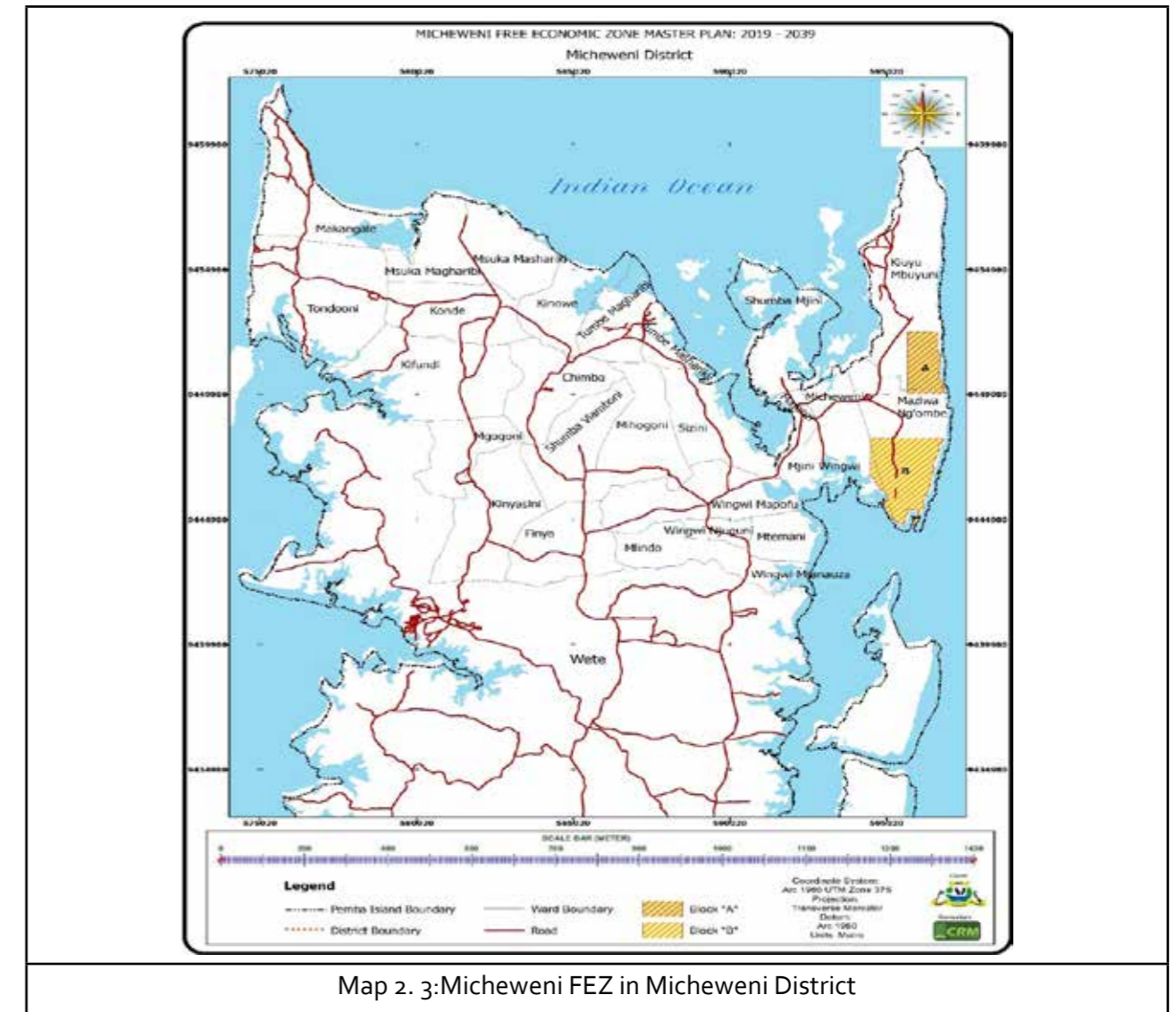
conditions and demography. While Chapter Three provides economic drivers of growth in Pemba, Chapter Four discusses existing social and community facilities and Chapter Five analyses potentials and constraints at Micheweni FEZ. The last Chapter provides an overview of opportunities and initial conceptualization of future land uses.



Map 2. 2: Pemba Island, North and South Pemba regions

Micheweni district is located in northern part of Pemba Island covering geographical area of 241 square kilometer. The district lies between latitude 4°55' and 6°30' south and longitude 39°55' and 39° 90' east. It also borders Wete district to the south and Indian Ocean to the

east, north and west. The district is endowed with number of small Islands such as Ng'ombe, Mbali, Usubi, Kamate, Mwimo, NjiaUze, Kwa Kombo, Sinawe, Hamisi and KijiwaHuu (Map 2.3).



Map 2. 3: Micheweni FEZ in Micheweni District

Micheweni District which carries the name of the Free Economic Zone comprises of 4 Constituents namely Micheweni, Wingwi,

Tumbe and Konde. It also comprises of 8 wards these are Kiuyu, Micheweni, Sizingi, Wingwi, Tumbe, Chimba, Konde and Msuka and 25 Shehia (Table 2.1).

Table 2. 1: Distribution of Constituencies, Wards and Shehias in Micheweni District

S/N	Constituency	Ward	Shehia
1.	Micheweni	Kiuyu	Maziwa Ng'ombe
			Kiuyu
			Shanake
			Micheweni
		Micheweni	Majenzi

			Shumba Mjini
			Chamboni
2.	Wingwi	Sizini	Mjini Wingwi
			Sizini
		Wingwi	Mapofu
			Njuguni
			Mtemani
3	Tumbe	Tumbe	Tumbe mashariki
			Mihogoni
			Tumbe Magharibi
		Chimba	Chimba
			Kinowe
			Shumba vyambonbi
4	Konde	Konde	Konde
			Kifundi
			Kipange
		Msuka	Msuka Mashariki
			Msuka Magharibi
			Makangale
			Tondooni

Source: Draft Micheweni District Profile, 2017

2.3. Topography, Soil and Vegetation cover

2.3.1 Topography

Indian Ocean coastal belt is the most dominant feature in Micheweni FEZ and it surrounds the entire Pemba Island. Micheweni FEZ is relatively flat with the highest point being 11m above sea level and the lowest being 2m, whereas

the southern. The shoreline is characterized by rocky beaches and patches of unspoilt white sandy beaches.

Land in Micheweni FEZ is relatively flat with height between 2m and 11m above mean sea level (Figure 2.1 and Figure 2.2).

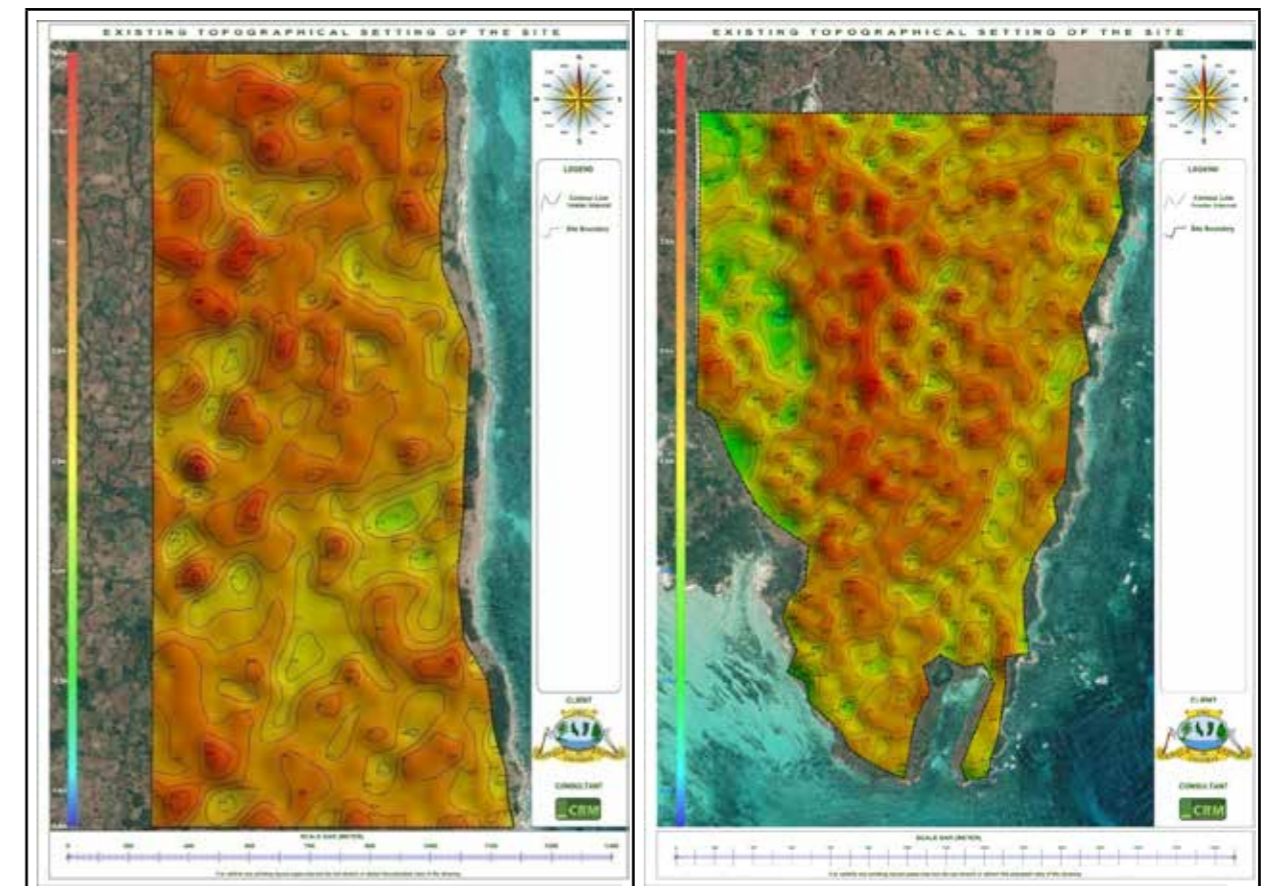


Figure 2. 1: Topography of FEZ Block A

Figure 2. 2: Topography of FEZ Block B

2.3.2 Soil analysis

It is important to assess physical and chemical characteristics of the soil to determine allocation of different land uses based on soil capacity. Soil exploration and analysis reveals that the soils in the area are largely sandy loam which is well drained with high infiltration rates. Soil analysis in Block A and Block B was categorized in 3 distinct soil depths namely

shallow, moderate deep and deep soil.

It was observed that in Block A 64.7 percent of the soil is shallow as opposed to only 30.5 percent of the same in Block B. Moderate deep soil covers 13.9 percent in Block A whereas in Block B moderate deep soil covers 55.7 percent and deep soil covers 21.4 percent in Block A and 13.8 percent in Block B (Table 2.2, Figure 2.3 and Figure 2.4).

Table 2. 2: Soil Depth Categories

Soil category	Depth (Cm)	Coverage in percentage	
		Block A	Block B
Shallow	0-20	64.7	30.5
Moderate deep	21- 50	13.9	55.7
Deep	51- 90	21.4	13.8

Shallow soil is ideal for foundation of buildings because it does not slide, shift or move. Buildings constructed over shallow soil do not have cracks in them from settling the way that structures built over deep soil.

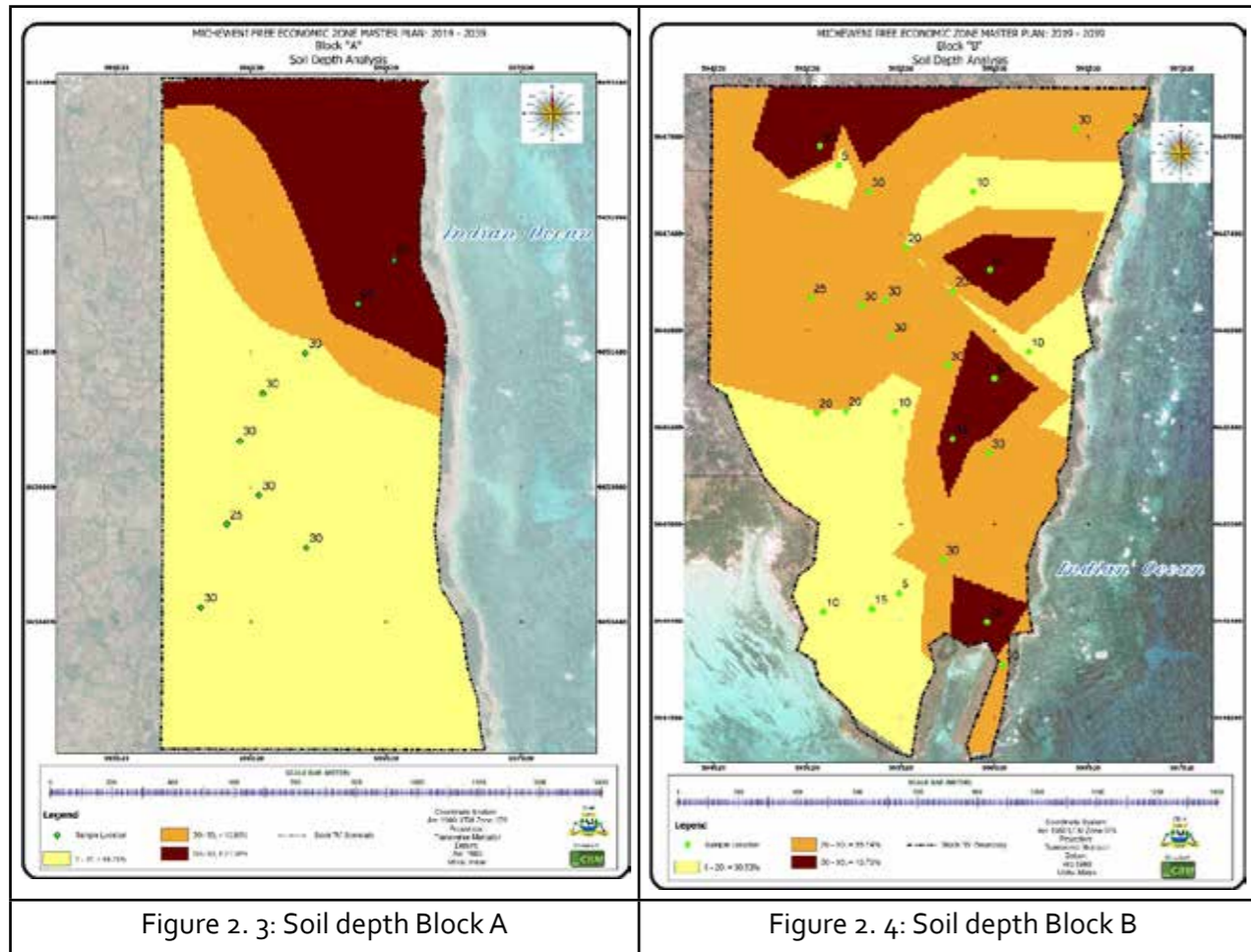


Figure 2. 3: Soil depth Block A

Figure 2. 4: Soil depth Block B

Apart from analysis of soil depth in the Project sites, other soil properties such as texture, pH, electrical conductivity, rock outcrop and EC were determined in order to explore the potential of different land units for different uses.

Soil pH

Soil pH was generally alkaline (Appendix 1). Only one sample was in neutral range and one was in acidic range. The highest level of pH encountered was 8 while the lowest level was 6. The alkaline range especially those at pH 8 may be a manifestation of sodicity. The exchangeable sodium percentage or sodium adsorption ratio will be determined to establish if the soils have

appreciable quantities of sodium. This is because pH 8.5 is a critical pH for sodic soils, although this quantity was not encountered in the present study (the maximum encountered is 0.5 pH units less). The problem of sodicity can be solved by the addition of gypsum. The level of soil pH in Micheweni FEZ is illustrated in Figure 2.5 and Figure 2.6.

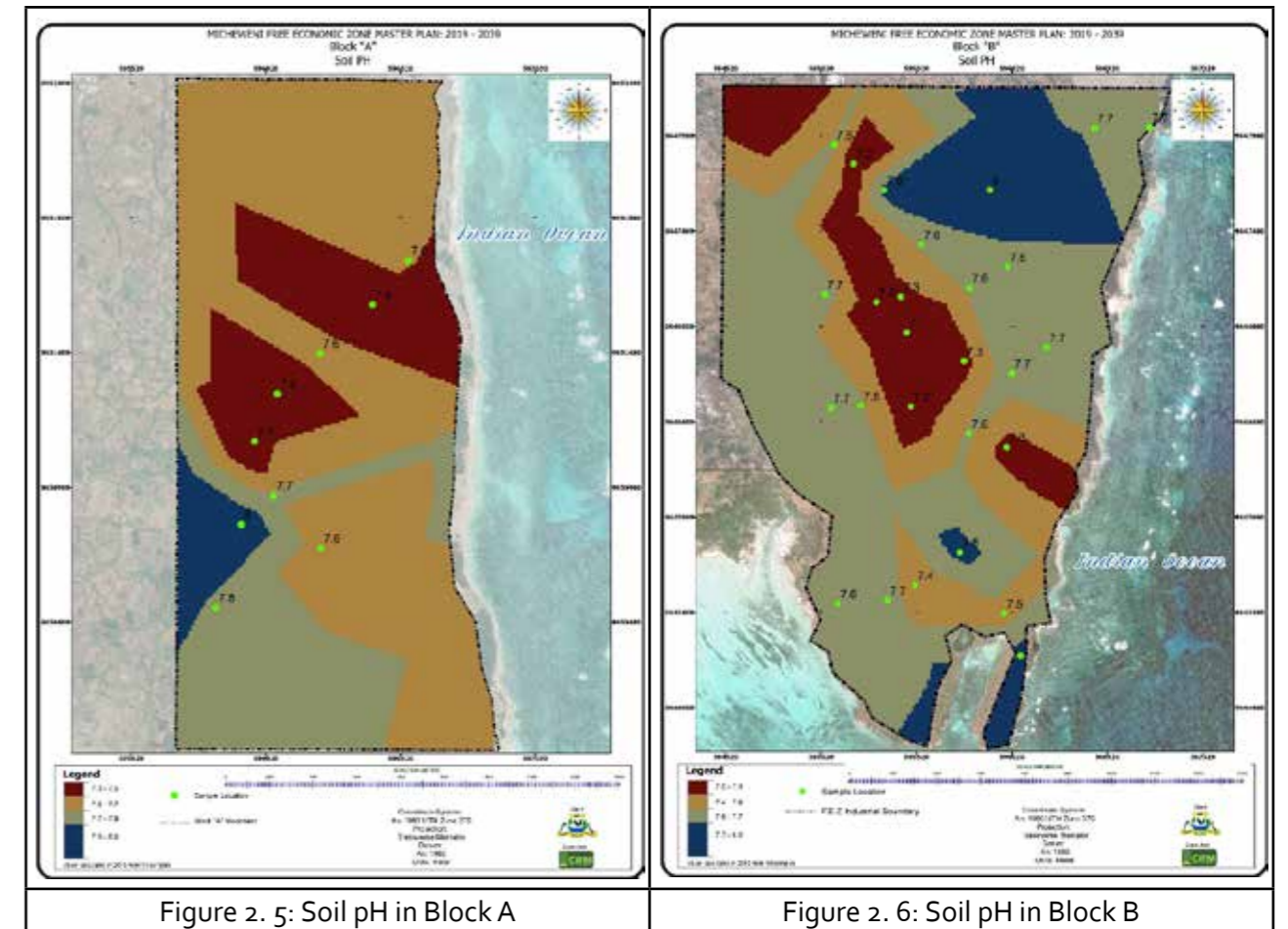


Figure 2. 5: Soil pH in Block A

Figure 2. 6: Soil pH in Block B

Electrical conductivity

Results show that the highest level of soil EC is 0.28 dS/cm (See appendix 1) indicating that the soils are none-saline and therefore the EC poses no threat to any land use type. The soils are considered saline if the level of EC is more than 4dS/cm.

Soil texture

This is one of the parameters that were determined in the present study. Soil texture affects air and water movements in the soils thereby affecting land uses. Sandy soils are well drained, dry out faster, and are less likely to

compact. Fine-textured soils (clays, sandy clays, silty clays) have a small particle size. They can hold water and nutrients, take time to dry out, can be easily compacted when wet and often are associated with poor drainage that limits the use of the fields during wet weather.

Soil texture explains the physical properties of soils such as water holding capacity, hydraulic properties like infiltration rates and the percolation rates.

It can also be used to infer the fertility status of soils. This property is important in engineering aspects because it affects properties like

coefficient of linear of extensibility. Results show that the soils had relatively high levels of sand and low quantities of silt. The quantities of clay are very low making all the soil samples be classified as Sandy Loam (See appendix 1). The soils will have moderate water retention capacity, and moderate infiltration rates. In establishing the vegetation, the effect of sandy separates may be modified through the addition of organic matter amendments.

Surface stoniness and rock outcrops

In the site, surface stoniness and rock outcrops were evident (Plate 2.1). These areas are the ones with soil depth of over 60 cm. the surface stoniness have influence on the type land uses that can be allocated to the area. The appropriate land use that will ensure less disturbance and much alteration of the natural environment will be determined and allocated on the area.

In the FEZ, there is a need to create a microclimate that will provide a comfortable environment for the inhabitants. This microclimate can be achieved through a well designed landscape, which is endowed with well adapted vegetation cover. Therefore the



Plate 2. 1: Rock outcrop

choice of plants that are well adapted to the environment is of crucial importance in order that the vegetation remains green throughout the year. It is therefore important to carryout suitability analysis for different types of vegetation that will be established.

The suitability of any vegetation in a particular environment is governed by a number of environmental factors such as temperature, rainfall, altitude, light intensity and soil properties (soil depth, soil texture, soil fertility, soil salinity, organic matter and soil drainage).

In establishing the Special Economic Zone, soil properties will be improved through addition of organic amendments. In areas that will not be covered by buildings, the soils will be completely covered by vegetation. This will make sure that the whole area will be evergreen thereby creating an oasis microclimate in the area. The close proximity to the ocean means that the site is vulnerable to strong winds from the ocean. It is therefore of prime importance to think on the way to provide wind breaks. Therefore a zone of trees of different heights will be planted in an area bordering the Ocean. It is difficult to manipulate environmental factors to suit the requirements of particular vegetation. It is therefore of prime importance to carefully select the plant species that are well adapted to the environmental conditions of a particular location.

2.3.3 Vegetation

Vegetation in the area is characterized by shrubs and very few trees (Plate 2.1). Most soils are

covered by sparse vegetation. The sparsely distribute vegetation is an indication that there are soil and or weather limitations that do not allow well establishment of vegetation under natural conditions. Soil physical-chemical conditions will be improved to enable the soil to support vegetation. On small patches, farmers grow some crops (Plate 2.2). This implies that the area provides livelihood to the people. The semi arid climate of Micheweni FEZ area supports drought resistant crops grown such as cassava and millet.

2.4 Transport and Linkages

Micheweni FEZ is 75km from the Mkoani Port and 45km from the Chake Chake Airport, the only airport in Pemba Island (Map 2.4). Micheweni FEZ is also connected to other ports of Wete and Weshu which are smaller and can accommodate few local dhows.



Plate 2. 2: Sparse vegetation

Micheweni FEZ is connected to major trunk road which links North Pemba and South Pemba regions. Consequently, the major trunk road links Micheweni FEZ to Karume Airport in ChakeChake. Road network also connects the Micheweni FEZ area to other settlements in Micheweni District. Nonetheless, most of the road length is of single carriageway and is enough for the current low traffic volume.

Additionally, the Micheweni FEZ area is connected to Unguja, Tanzania Mainland and the rest of Africa through the airport and the harbors. Interestingly, distance from Pemba to Mombasa (Kenya) is 110 km, to Unguja is 121 km and to Dar es Salaam is 205 km. Figure 2.4 illustrates distance from Pemba Island to local and international destinations. Apart from market from the produce, additional facilities that Unguja and Dar es Salaam can provide include access to international airports and port facilities.



Plate 2. 3: Small cassava farm

2.5 Existing Land use and Tenure Systems

Existing land at the project area is used for temporary crop production including cassava, sweet potatoes, beans and maize with exception of some areas where there are commercial trees and other artificial forests. Therefore, existing land use in Micheweni FEZ has no significant on-site developments; it represents, largely, a virgin land which may be ideal for several alternative planning concepts. In terms of land tenure, the site was already acquired by ZIPA for FEZ development. Therefore, there are no distinctive land tenure systems that need to be identified and analyzed.

2.6 Climate in North Pemba region

Temperature ranges between 21°C at the coolest and 34°C at the warmest. Traditionally, two rain seasons occur in the area: long rains between March and May and short rains between November and December. The mean annual rainfall is about 1530 mm; the long rains averaging 283 mm per month and short rains at an average of 135 mm per month as illustrated in Table 2.3.

Table 2. 3: Annual Temperature and Rainfall in Micheweni District

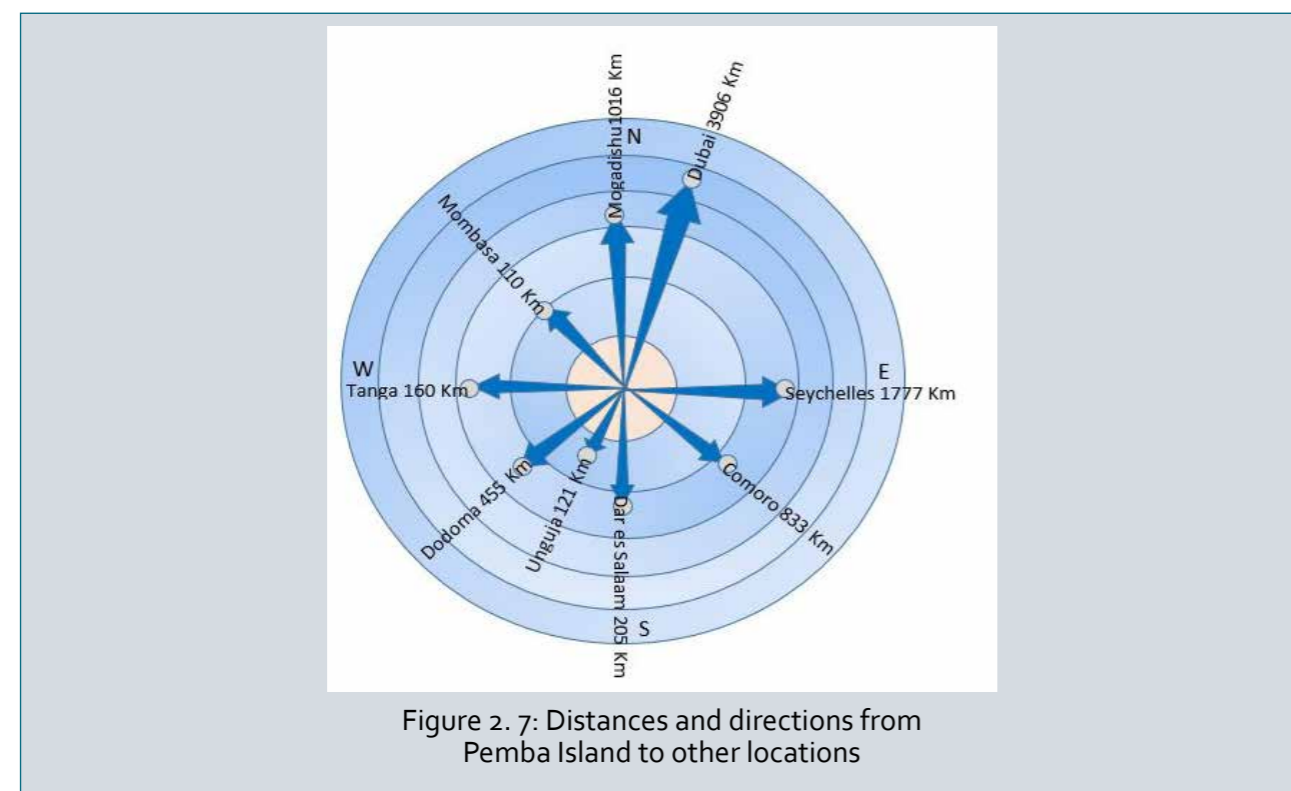


Figure 2. 7: Distances and directions from Pemba Island to other locations

Whether elements	Months											
	01	02	03	04	05	06	07	08	09	10	11	12
Average Temperature (°C)	26.9	27.3	27.5	26.5	25.4	24.6	23.9	23.7	24.3	25	26	26.7
Rainfall (mm)	60	50	119	346	348	111	74	49	37	85	149	99

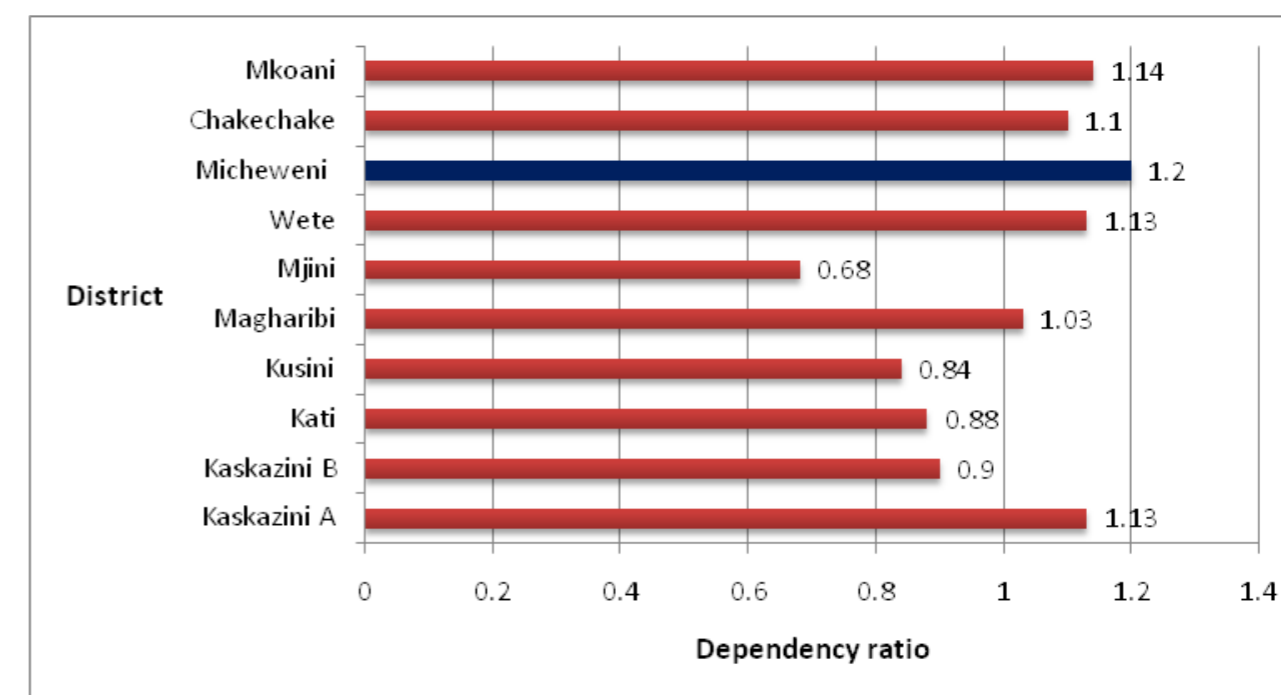
Source: <https://en.climate-data.org/>

2.7 Demography

The National Population and Housing Census carried on 2012 show that Micheweni district has a total population of 103,816 of whom 50,874 males and 52,942 females. The District is largely rural where 96,365 people live in rural and 7,451 are considered urban dwellers. The district has 2.2 percent of annual growth rate, 51 percent is female population. Micheweni is the poorest district in Zanzibar, with 69.9 percent of residents living below the basic needs poverty compared to the 30.4 percent at National level. The District has a poverty head count of 74.2 percent; poverty levels are associated with large

number of household size and dependency ratio (Figure 2.8).

The Free Economic Zone (FEZ) lies in 3 *Shehias* namely Shanake, Kiuyu Mbuyuni and MaziwaNg'ombe with the total population of 12,236. The population in the 3 *Shehias* is projected to be 14,249 in 2019 and 22,020 in 2039 if the FEZ is established but no measures are taken to develop the area. Population of Micheweni District in Wards and Shehias is shown in Table 2.4. Population is an important development resource that may increase the economy of the area by providing labor force.



Source: Population and Housing Census, 2012

Figure 2. 8 Age- Dependency ratio in Zanzibar Districts

Table 2. 4: Population Size and Distribution by Ward and Shehias

S/N	Shehia	Population (Number)		
		Male	Female	Total
1	Micheweni	3,134	3,063	6,197
2	MsukaMashariki	2,018	2,242	4,260
3	Kinowe	2,096	2,284	4,380
4	TumbeMashariki	2,292	2,387	4,679
5	Mgogoni	1,235	1,247	2,482
6	ShumbaViamboni	1,238	1,342	2,580
7	Finya	1,251	1,357	2,608
8	Konde	4,106	4,467	8,573
9	WingwiMapofu	2,194	2,310	4,504
10	KiuyuMbuyuni	3,089	3,327	6,416
11	Makangale	1,348	1,297	2,645
12	WingwiNjuguni	984	1,068	2,052
13	ShumbaMjini	2,412	2,351	4,763
14	Majenzi	1,166	1,204	2,370
15	MjiniWingwi	2,305	2,216	4,521
16	MsukaMagharibi	2,094	2,180	4,274
17	Chimba	1,567	1,513	3,080
18	TumbeMagharibi	2,077	2,151	4,228
19	Sizini	2,586	2,698	5,284
20	Kinyasini	1,541	1,647	3,188
21	Mihogoni	1,259	1,337	2,596
22	Kifundi	1,363	1,433	2,796
23	MaziwaNg'ombe	2,859	2,961	5,820
24	Tondooni	1,335	1,370	2,705
25	Mtemani	1,461	1,556	3,017
26	WingwiMjananza	856	846	1,702
27	Mlindo	1,008	1,088	2,096
Total		50,874	52,942	103,816

Economic drivers of growth in Pemba

3.1 Introduction

The main objective of this chapter is to provide an analysis of the current and future drivers of the Pemba economy that would influence the design and viability of the Micheweni Free Economic Zone (FEZ). The FEZ would be the single largest public investment project aimed at attracting a concentration of both local and foreign investments into the Island. Inevitably, it is expected to influence not only the economic development of the island but in addition it will impact its social and cultural development.

3.2 Zanzibar Macroeconomic context

Zanzibar like mainland Tanzania has experienced average growth rates above 4.8 percent over the last 10 years¹. Gross Domestic Product (GDP) in 2016 peaked at 6.8 percent in Zanzibar compared to 7.1 percent for the entire Tanzanian economy. GDP per capita has grown steadily from \$523 in 2007 to \$830 in 2016.

¹ Zanzibar Statistical Abstract 2016 - <http://www.ocgs.go.tz/php/ReportOCGS/Zanzibar%20Statistical%20Abstract%202016.pdf>

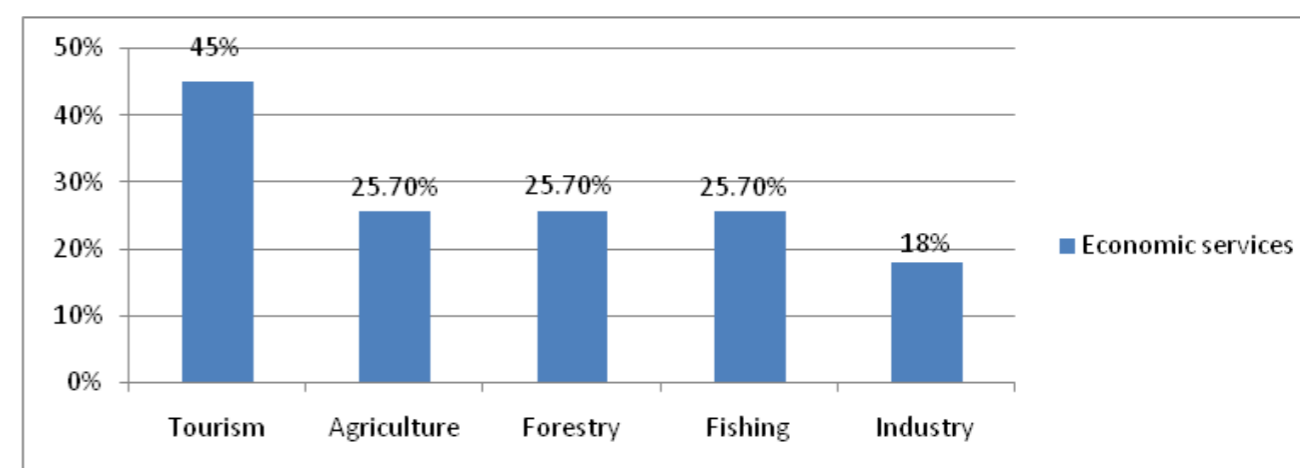


Figure 3. 1: Economic services contribution to GDP in 2016

Services which include tourism constitute 45 percent of the economy followed by agriculture, forestry and fishing at 25.7 percent, and industry at 18 percent².

The trend of the overall inflation rate in Zanzibar for the last four years remained in a single digit. The average annual inflation rate in 2016 was 6.6 percent compared to 5.7 percent reported in 2015. In 2015, the average annual food inflation rate was 7.4 percent and average non-food inflation rate was 4.0 percent while in 2016 annual food inflation rate was 8.4 percent and non – food inflation rate was 4.7 percent³.

Given Zanzibar governance arrangements in the Union with Tanganyika, its trading landscape is captured by looking at the interstate trading performance. Inter-State trade statistics provides an idea about the demand of

commodities produced or consumed in Zanzibar along with flows thereof to the other side of country that is Tanzania Mainland). Different goods transferred include foods and non-foods items, such as building hardware, transport hardware and other imported materials from mainland⁴.

In 2016, Zanzibar recorded a total trade value of TZS 26,322.90 million which indicates a decrease of 32.1 percent compared with TZS 199,348.1 million recorded in 2015. The recorded export values in 2016 was TZS 96,234.9 million which is doubled compared with TZS 42,407.0 million recorded in 2015. Vegetable products contributed TZS 69,077.1 million equivalents to 71.8 percent of the total export value. The exported value of Cloves recorded in 2016 was TZS 64,723 which is equivalent to 67.3 percent of the total value. For the last four years, India appeared to be the major buyer of the exported commodities from Zanzibar, especially cloves.

² Office of Chief Government Statistician- Zanzibar does not provide disaggregated macro-economic data for the regions and as such it is not possible to reference estimates of the island of Pemba's macroeconomic performance.
³ Zanzibar Statistical Abstract 2016 - <http://www.ocgs.go.tz/php/ReportOCGS/Zanzibar%20Statistical%20Abstract%202016.pdf>

⁴ Zanzibar Statistical abstract definition

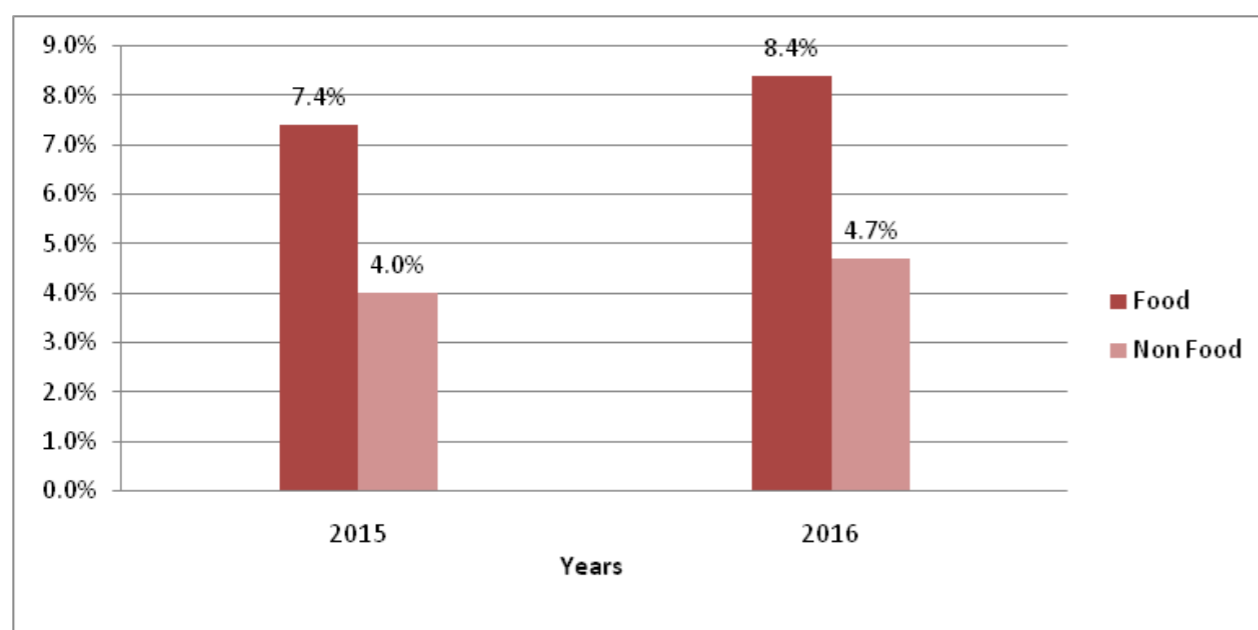


Figure 3. 2: Inflation rate for food and nonfood products

The value of the imports in 2016 was TZS 16,088.0 million which indicates an increase of 6.5 percent compared with 156,941.1 recorded in 2015. Machinery and Mechanical Appliances, Electrical products recorded the highest value of TZS 39,58.6 million of the total import⁵. The trade balance in 2016 has shown a deficit of TZS 70,853.1 million compared with the deficit of TZS 114,534.1 million recorded in 2015 (Table 3.1).

Table 3. 1: Import and export

Year	Import (Million TZS)	Export (Million TZS)
2015	156,941	42,407.0
2016	16,088.0	96,234.9

Monetary policy is handled at the national level by the Union government. A review of the Bank of Tanzania's monetary policy statement indicates that during the first half of 2017/18, Zanzibar domestic revenue amounted to TZS 320.5 billion, or 96.2 percent of estimates for the first half of 2017/18.

Tax revenue amounted to TZS 289.9 billion, while non-tax was TZS 30.6 billion. Total grants amounted to TZS 18.9 billion, higher than the projected amount by 10.5 percent. Total Zanzibar government expenditure was TZS 378.2 billion, out of which recurrent expenditure was TZS 298.3 billion and development expenditure amounted to TZS 79.9 billion. The current account recorded a surplus of USD 34.4 million during the first half of 2017/18 (Table 3.2), compared with a surplus of USD 26.9 million recorded in the similar period of 2016/17.

⁵ Zanzibar Statistical Abstract 2016

The performance was on account of improved receipts from exports of goods and services, mainly cloves and tourism services, as well as higher inflows of current transfers⁶.

Zanzibar continues to grow as expected and projected by the Bank of Tanzania (BoT). The economy is expected to grow at a rate of 7.1 percent in 2018 driven mainly by the tourism services sector. The growth is guided by implementation of the medium and long-term policies including Vision 2020, Zanzibar Strategy for Growth and Reduction of Poverty III (MKUZA III) and Sustainable Development Goals 2030.

Table 3. 2: Government expenditure 2017/ 2018

Expenditure	Amount (Billion TZS)
Recurrent expenditure	298.3
Development expenditure	79.9

3.3 Zanzibar economic sector analysis

A breakdown of sectoral performance provides an indication of the most important and current drivers of the Zanzibar economy⁷.

3.3.1 Agriculture, Forestry and Fishing

These sectors expanded by 5.7 percent in 2016, from 2.5 percent recorded in 2015, attributed to favorable weather. Main contributors to the growth of this activity were crops sub-sector, particularly increase in the production of cloves and horticulture.

⁶ BoT Monetary Policy Statement – Mid-year review 2017/18 <https://www.bot.go.tz/Publications/MonetaryPolicyStatements/MPS%20ENG%20Feb%202018.pdf>
⁷ Compiled from the Zanzibar Statistical Abstract 2016

Growth in fishing subsector slowed mainly attributed to supply-side challenges. Notwithstanding the decline in volume from 34,104.0 tonnes in 2015 to 33,892.0 tonnes, the value of fish sold in the domestic market increased by 0.2 percent to TZS 136.2 billion, owing to increase in the price in the domestic market

3.3.2 Services including tourism

Services including tourism grew by 8.0 percent from 7.9 percent in the previous year, mainly driven by accommodation and food services on account of tourist arrivals that increased by 27.9 percent. Most of the tourists were from Italy, Germany, United Kingdom, United States of America and France.

3.3.3 Industry and Construction

Value added in industry and construction, grew by 9.7 percent down from 10.6 percent registered in 2015 and contributed 20.4 percent of GDP. The outturn was boosted by mining and quarrying which grew by 18.8 percent from 10.0 percent in 2015 on account of increased production and prices of sand and gravel used in construction activities. Construction activity recorded a growth rate of 11.3 percent down from 12.5 percent in 2015; partly due to completion of big projects. Manufacturing grew by 6.2 percent and contributed 6.9 percent of the nominal GDP, mainly driven by processing of dairy products, beverages and bread.

Table 3. 3: Government expenditure 2017/2018

Economic sectors	Year	
	2015	2016
Agriculture, forestry and Fishing	2.5%	5.7%
Tourism	7.9%	8.0%
Industry and Construction	10.6%	9.7%

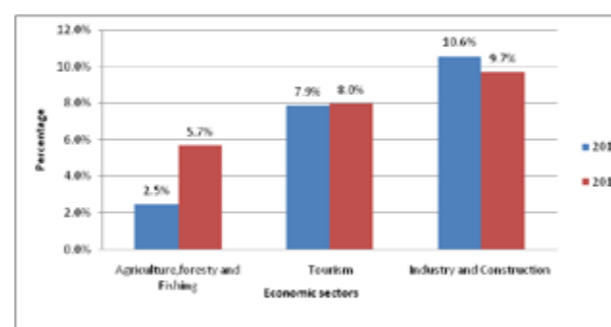


Figure 3. 3: Economic sector growth rate

3.4 Micheweni District economic analysis

The Draft Micheweni District profile (2017) provides useful data on the current drivers of economic activity in the district⁸. On the whole the majority of people in the district are mainly engaged in agriculture.

3.4.1 Agriculture

The main activities are crop production, livestock rearing and fishing. Crop production is concentrated in cereals, roots and tubers, bananas, coconuts, legumes, vegetables and spices – mainly cloves.

The rearing of livestock such as cattle, goat and chicken shows the progressive increase in the district from 2014 to 2017. In whatever type of these livestock is concerned, the rearing of indigenous breed outpaces the improved

⁸ Draft Micheweni District Profile, 2018

one. The cattle rearing reached 23,725 cattle for indigenous and 299 cattle for the improved breed in 2017 from 22,911 and 291 cattle for both indigenous and improved breed respectively in 2014. The milk production decreased in 2017 (54,940 litres) compared to the production of 2014 (69,756 litres)⁹. Cloves and seaweed is grown in the district and they are both important export cash crops for the region.

Table 3. 4: Number of cattle 2014-2017

Types of cattle rearing breeds	Year	
	2014	2017
Indigenous breed	22,911	23,725
Improved breed	291	299

Figure 3. 4; Cattle rearing 2014/2017

Table 3. 5: Milk production 2014-2017

Year	Liters
2014	69,756
2017	54,940

3.4.2 Tourism

Being bordered by Indian Ocean almost in every direction, the district has been at a suitable location for the hotel investors. At North West part of the district in particular is where most of the hotels are found.

That might be influenced by the fact that not only the place is endowed with attractive beaches but also the local people are willing to support the tourism activities around their areas. The most prominent of these investments is the Manta Resort a high-end tourism development built around the eco and sustainable tourism model.

The most exciting tourist attraction in the district is beaches. The district has endowed with long fascinating beaches situated at North

⁹ Draft Micheweni District Profile, 2018

West part of the district.

Though the three major recognised beaches for tourist activities include Vumawimbi, Verani and Panga la Watoro, Vumawimbi has become the most common beaches used not only by local tourists but also the international one. The district has three reserved forest, of which two are used for tourism activities. These forests are Ngezi and MsituMkuu. However, Ngezi is the most common forest for the tourism activities and accommodates various species of both flora and fauna¹⁰.

The district is rich in historical sites, the various historical sites found in the district includes forts, old mosques, graves of the common people, underground caves as well as monuments of the mosque. The most attractive historical sites located at Chwaka Tumbe is the presence of Mazrouwy Fort and Haroun grave.

3.4.3 Fishing

The district has a total of seven official recognised landsite. The distribution of these sites has considered almost all Shehia of the district which are bordered by Indian Ocean. Most of these sites are located in Eastern part of the district. The landsite include Ulingoni, Mitepeni, Taponi, Kwamjawiri, Vumawimbi, Malindi and Tandatumbi.

3.4.4 Mining and quarrying

The demand of sand for construction purposes has increased to keep pace with the increasing population growth. For many years sand mining has been officially taking place at Kishindeni before 2016 the government decided to close the pit and opened a new area for sand mining at Mamoja sand production rising rapidly to

¹⁰ Draft Micheweni District Profile, 2018

51,777 tonnes in 2016, two times higher than the production of 2014. The production of all most all type of quarry products has decreased in 2016 compared to the last two years i.e. 2014 and 2015. A total of 22,469 tonnes of quarry products were quarried in 2014 compared to 18,603 tonnes in 2016.

Also limestone and salt farming activities are taking place in the Micheweni however information regarding the extent has not been made available yet.

3.5 Free Economic Zone as a tool for development

In the case of Micheweni all three reasons (Chapter 1.2.1) are applicable and relevant to the type of development that would enhance and conserve the inclusive and community-based development that are recommended for Pemba. In particular the development of forward and backward linkages into the agriculture, fishing and tourism sectors would generate sustainable employment opportunities while attracting the type of investors interested in the production of high value niche products that are based on the unique brand that is Pemba i.e. organic, environmentally sustainable and sensitive to community development and respect of culture.

3.5.1 Examples of successful Free Economic Zones

The largest numbers of free economic zones in the world are located in China, where there are more than 900 zones and around 40 million employments. Out of all African countries, Egypt, Tunisia and Mauritius have the largest employment rate in their free zones.

Other countries in Africa such as Kenya, Madagascar and Nigeria employ around a total of 35,000 people in their free zones (Stein, 2007)¹². In East Africa, Kenya in 2015 set up an FEZ in Mombasa that expected to attract investments to motor vehicles, household goods, and construction materials. More recently in 2018, Djibouti with Chinese financing built a \$3.5 billion FEZ that included the development of a major port aimed at servicing countries in the horn of Africa – in particular land locked Ethiopia.

While there a number of successful FEZs their record globally is still patchy mainly due to the different reasons for setting them up. In particular, those zones that were set up mainly to fulfill political interests have not been successful and have been a burden on the exchequer.

What is critical is that an FEZ must be set up to exploit the unique comparative advantage that a particular location might have that others in the region do not have. Consequently, it is important that the Micheweni FEZ maximizes the advantages of its location in North Pemba and of the island of Pemba.

This chapter outlines the opportunities identified that tap into the comparative advantage that Pemba and North Pemba region can exploit to deliver sustainable growth, job creation, exports, enhanced livelihoods and development.

¹² A Comparative analysis of Free Trade Zones. Available from: https://www.researchgate.net/publication/280920315_A_Comparative_analysis_of_Free_Trade_Zones [accessed Dec 09 2018]

3.5.2 Incentive structure of FEZs

Although FEZs may be designed and created for different reasons and, as a result, the characteristics that define the concept have been described in many different ways, it appears that a few common characteristics are standard features of the modern FEZs. An example is the incentives generally provided by governments for cooperation within the zone that may include;

1. Fiscal incentives– exemption from some or all export taxes, duties on imports of raw materials/intermediate goods, profit taxes, VAT, free profit repatriation, direct subsidies like water and electricity rates,
2. Indirect subsidies- like grants for training and education, free provision of physical infrastructure, transport, telecommunication, production space, residential and commercial facilities,
3. Administrative services– fast track customs services, simplified licensing procedures, dedicated legal framework, relaxed regulatory environment- easy foreign ownership procedures, leasing and purchasing land, labour law and environment regulations,
4. Export promotion services- in the form of business advisory services, export credit services, sales and marketing support.

3.6 Free Economic Zones Incentive structure for Zanzibar and Pemba

In the case of FEZs in Zanzibar and Pemba, the RGoZ offers the following incentives to attract investments to the FEZs on both islands. These include;

1. 10 –Year Corporate Tax Holiday and 25 percent Tax for the subsequent ten years.
2. 10 –Year Withholding Tax Holiday on dividend to non-residents.
3. 75 percent Duty and VAT Exemption on raw materials, machinery, equipment and other inputs.
4. Stamp Duty Exemption.
5. 100 percent investment deduction on capital expenditure within 20 years.
6. Exemption from tax on dividend for ten years.
7. Duty and Tax Free Import of goods from domestic tariff area permissible.
8. Duty Free import of material for construction of factory buildings.
9. Duty Free export of goods produced.
10. Exemption of Income Tax on interest on borrowed capital.
11. Exemption from payment of all taxes and levies imposed by local government authorities for goods and services produced in a Free Economic Zones.
12. On site customs inspection of goods in lieu of off-port inspection.

3.7 Prospective opportunities catalyzed by the Free Economic Zones

The Micheweni FEZ has the potential to enhance the development of the island of Pemba and in particular the North Region. Discussions with ZIPA and consultations with keys stakeholders in the public and private sectors have provided useful insights into the makeup of the local economy and how the FEZ will help stimulate a number of sectors / economic activities. The following sectors

are expected to be developed or be enhanced following the of the FEZ establishment.

3.7.1 Aquaculture sector

It refers to two key economic activities (seaweed and pearl farming) that have the potential to transform the lives of those involved and generate significant exports for Pemba.

Fishing

It is the mainstay of some of the communities in Micheweni and Pemba in general. Current fishing activities are undertaken on a subsistence level with limited commercialization. The industry has potential, however that potential is yet to be exploited. There is no fish processing facility nor cold storage facilities and as such fishermen are forced to sell all they catch in order to limit losses if the fish is not sold on the day of the catch.

As such, the FEZ presents an opportunity to attract investment into fish processing which in turn would catalyze the professionalization of the sectors and boost incomes in the fishing community. The following components of the value chain have been identified;

1. Processing – simple methods include drying, smoking and salting the fish in order to preserve it and sell to various segments of the market in Pemba and Unguja. This low level of value addition is possible and would not require significant investments but would have a positive impact on income for the fishing community (Plate 3.1).
2. Trading and export – there is potential to use the FEZ to attract investors willing to setup a processing operation that would create a viable and sustainable fishing sector.



Plate 3. 1: Fish processing in Togo



Plate 3. 2: Seaweed farming

Seaweed farming

Seaweed farming is already established in Pemba and specifically in the Micheweni district (Plate 3.2). Currently there are significant number of women groups involved in growing the crop with seeds and equipment provided by traders (Phillipino and Chinese). The traders aggregate, dry, and package the seaweed for export to the Asian market. To date very little processing and value addition is done in Pemba and hence this creates opportunity to attract investors including the existing traders to set up a drying, processing, and value addition facility within the Micheweni FEZ.

The seaweed value chain can be broken down into the following constituent parts;

1. **Nurseries** – where various strains of the

seedlings are grown and tested in order to produce the best seedlings for the sea conditions around Micheweni and other areas of Pemba. Currently, the traders are providing the seedling.

2. **Equipment supply** – currently provided by traders but this could also be an opportunity for the local suppliers of fishing and farming equipment to participate in the distribution of the equipment.
3. **Out-growers** – the current seaweed farmers can be organized into outgrowers linked to the processing plant in the FEZ. This will ensure that there is some form of contract farming that ensures that the farmers have a market and in return the prospective investor in the processing plant has guaranteed supply to justify the investment in the processing plant.
4. **Storage and aggregation** – opportunity for the outgrowers further from the Micheweni to be serviced by storage agents whose key task is to aggregate and transport the seaweed to the processing facility in the FEZ.
5. **Processing value addition and export** – current traders can be encouraged with the right incentives to invest in the small processing facility in the FEZ. Value addition is critical in extracting the best export price for the seaweed
6. In order to generate the volume of raw seaweed required to justify the investment in a small processing plant, the Zanzibar government will have to work with the seaweed farmers to increase the number of farmers and provide access to good quality seedlings and equipment. The farmers should be encouraged to organize into cooperatives

in order to facilitate the government providing the requisite support and extension services that would help boost harvests.

Pearl farming–Oyster farming

It is done in both fresh and saltwater. Given the seawater quality in Pemba, it is possible to start an oyster farming industry which will lead to the production of saltwater pearls. The average time it takes to culture a pearl is 6-8 months. Given that this would be a new farming practice, significant capacity building will be required to support the fishermen who are best suited to take on the task of farming the oysters at sea.



Plate 3. 3: Pearl farming and extraction



The following stages of the value chain have been identified as opportunities in the development of this new sector in Pemba Island.

- Breeding** – breeders would identify the most productive and fast-growing oysters and these would be bred to fit the sea conditions in Pemba. The breeders would then sell on the oysters to the pearl farmers
- Farming the oysters** – a unique opportunity for the current crop of fishermen in Micheweni and surrounding districts to diversify into pearl farming. The farmers would need significant training on the farming and extraction techniques.
- Traders / processor** – for the value chain to be developed a critical component is finding buyers / traders who have access to various pearl trading markets in the middle east and Asia. The ideal situation would be for the traders to set up a polishing operation in the FEZ however, this would require Pemba to prove that it can produce high quality pearls that would command a significant premium in order to justify investments in a polishing operation

3.7.2 Agriculture sector

Agriculture is one of the most important sectors in Pemba. Agriculture is and will continue to be the mainstay of the island's development. The FEZ presents an opportunity to add value to the island's produce in order for it to attract higher prices in the local, regional and international markets. There are a number of current agricultural value chains that can be professionalized and commercialized in addition to new value chains that would help the island attract investment in the FEZ. These include;

Expanded Clove farming

There is existing clove farming and processing operation in Pemba. The processing of the cloves into valuable oil is undertaken at a

government owned facility. The number of people farming cloves could be increased either through the sign-up of more out growers or attracting investors to the industry who then grow cloves on large farms.

Given that the processing plant is already located outside the FEZ, then the opportunity would be for investors seeking to add value to the clove oil who could use the oil as an input in the production of other value-added products. There is also the opportunity to move into the highly valuable organic spice market, however for this to take place current government regulations on the processing of the cloves would have to change in order to open up the sector to investments and commercialization.

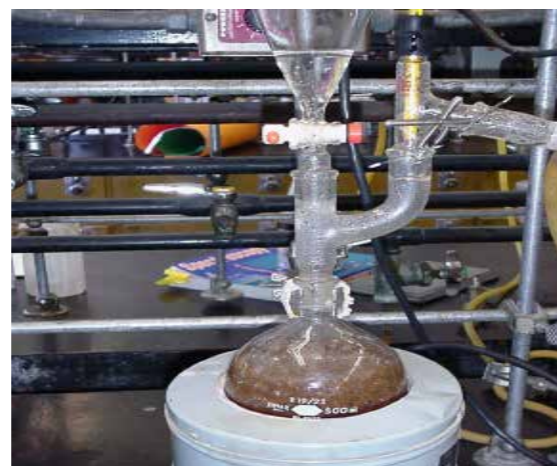


Plate 3. 4: Clove oil extract



Spice farming

Pemba has a history of growing other types of spices and with this background it would be possible to expand the cultivation cardamon, cinnamon, nutmeg, black pepper. The opportunity lies in the organic market segment where it would be possible for Pemba to be established as a source of organic spices.

Micheweni FEZ to attract investors to process organic spices ready for export to identified niche markets.

One such programme (Supporting Indian Trade and Investment for Africa- SITA) is already underway in Rwanda and Uganda linking large global food companies seeking organic spices to small holder farmers in growing organic spices. Tanzania is part of the project and as such it could be extended to Pemba.



Plate 3. 5: Nutmeg farming and processing

Vanilla farming

Vanilla is an extremely valuable crop that can be grown in Pemba. Global vanilla prices are at their highest and demand for the extract is significant. Pemba has some of the typical growing conditions and climate similar to Madagascar the largest grower of vanilla on the African continent. The industry in Madagascar has attracted significant investments from Asian investors. Vanilla could be grown in Pemba under an out-growers scheme with the product being sold on to processors based in the FEZ.

The government would have to undertake an extensive programme on soil testing and demonstration farms that would train and equip farmers with the knowledge and skills required to grow vanilla. The regulations for the sector need to be organized in such a way as to encourage value addition in Pemba and not just the export of dried vanilla.



Plate 3. 6: Vanilla farming and drying in Uganda

Chili farming

Chilli farming is like the spice farming; the market for organic chilies is growing and could be serviced from Pemba and the Micheweni FEZ. Currently, there is significant demand for organic chilies from Africa given the limited use of fertilizers and pesticides.

The opportunity for Pemba is in growing and processing the chilies ready for export to arrange of buyer in Europe and India.

Some of these buyers could be targeted to invest in the small drying, processing and export of the chilies from the Micheweni FEZ. The International trade center is currently implementing an aid for trade programme (SITA) that creates business linkages between Indian companies and African firms in the agro-business sector. The project covers Tanzania and as such could be tapped to develop the spices and chili sector in Pemba.



Plate 3. 7: Chilli farming and value addition

Fruit farming

Pemba has a wide selection of fruit grown mainly for the domestic market. In order to make the fruit industry attractive both local farmers and investors there has to be some level of value addition.

The Development of the FEZ would create an opportunity to attract investors interested in processing / adding value to the fruit in order to create products of significant value that could be exported beyond the east African region. For example, dried fruit is a growing business and organic dried fruit has a premium and would create enough value to justify the investments in a processing facility in the FEZ as well as targeting niche markets in Europe, the Middle East and Asia. Fruit farming would benefit hundreds of farmers in on the island and in the Micheweni district.



Plate 3. 8: Fruit drying equipment and products

Coconut farming

The coconut plant has over 100 uses and can be exploited to improve the lives of thousands. Currently its mainly being used for coconut oil and copra however in Asia every part of the coconut is used widely in making household goods, furniture, cutlery, as base for essential oils, soaps etc. In particular, its use as a base for essential oils combined with the spices grown on the islands offers a good integration of the two value chains. The processing of the various uses of the coconut could be located in the FEZ.



Plate 3. 9: Coconut products

Vegetables

Vegetables are currently being grown mainly for subsistence with surplus sold to the local markets.

Pemba has the climate and soils that can support the intensification of horticulture farming with a focus on the type of vegetables demanded in Unguja.

Given the perishability of vegetables, the ferry link to Unguja will be critical in tapping the potential as well as a cold storage facility that would facilitate the washing and drying of the vegetables before they packed to be shipped to Unguja and potentially the mainland (Plate 3.10). The farmers would have to be organized

in groups and provided the requisite technical assistance to ensure the knowhow.



Plate 3. 10: Vegetable farming and packaging

Dairy farming

Currently there are a number of farmers raising 2- 10 cows for milk and meat. The last census of livestock recorded 23,725 for indigenous and 299 cattle for the improved breed in 2017 from 22,911 and 291 cattle for both indigenous and improved breed respectively in 2014¹³. There is no processing facility for the milk and the meat.

The milk has to be consumed as soon as possible to prevent it from going off. There are no value-added products like cheese, butter, yogurt to supply the hotel developments on the island.

The processing facility and slaughter house could be located in the FEZ to produce mainly for the domestic market and any surplus could be 'exported' to Unguja and the Tanzanian mainland (Plate 3.11).

¹³ Micheweni District Profile 2018 - Zanzibar Planning Commission



Plate 3. 11: Dairy farming and processing

Mineral sector

The Northern Pemba region and Micheweni district have significant deposits of limestone, sand and quarry stones. Currently, the limestone is extracted and hewn into bricks used in construction of the local houses. It is possible to develop a construction materials sector that would service the residential and commercial sector all over the island. In particular, the construction of the FTZ should utilize as much of this local material in order to jumpstart the development and professionalization of the sector.

Tourism sector

This sector will be at the heart of the island's development for the next 20 years and has the potential to employ thousands both directly and indirectly. Following visits to see all segments of the tourism offer, it is clear that a hotel

development on the FEZ would not be advisable given the

1. Lack of sandy beaches on the coastline bordering the FEZ,
2. The significant rough seas and currents in the area that limit swimming and diving
3. The resistance that the locals have expressed about hotel development and their perceived impact on their way of life. The development of the tourism sector needs to respond to the unique characteristics of this island. Pemba has to offer something that is different from Unguja in order to build its brand that would appeal to the following market segments

- a. **High-end tourism** – this segment has already been tested by the luxury Manta Resort and Constance Ayana Hotel. The island could accommodate 2-3 more luxury hotels however this would be depended on improved air access especially a direct flight from Dar es Salaam into Pemba. These types of tourists don't want to spend their time on lengthy airport layovers or connecting through other destinations like Zanzibar. Improving the air access is critical and will be expanded on in the section of pre-requisites for the success of the FEZ.

- b. **Low end tourism** – Pemba eco-tourism model is appealing to the backpacker's segments of the market. Backpackers are happy to take lengthy ferry journeys and would happily board the ferry from Dar es Salaam to Unguja and then onto Pemba. This type of traveler is always looking to cheap accommodation in

some cases home stays. This type of tourism has significant impact on communities given that these travelers live within the communities and patronize the local shops, restaurants and entertainment establishments.

Cottage industries sector

Pemba has the opportunity to develop cottage industries that would support community-based light manufacturing in areas such as soap making, handicrafts (Plate 3.13 and Plate 3.14), woodcraft, shoemaking, etc. These types of economic activities would employ women in Pemba who traditionally are confined to their homesteads. They would provide additional sources of income to support the family and help in improving livelihoods.



Plate 3. 12: Soap making cottage industry



Plate 3. 13: Woodcraft cottage industries

4 Chapter

Existing Social and Community facilities

4.1 Introduction

The main objective of this chapter is to shed light on the existing social and community facilities available in Micheweni District in general and the surrounding Shehias where the Project area is located. These facilities include water, energy, sanitation, education and health. Additionally, the chapter enlightens on the culture and values of the community, their hopes and fears in relation to the development of the FEZ. In order to prepare acceptable and inclusive Land use Master plan that bring people together and create a sense of belonging in the community, it is critical to incorporate community values at the earliest phase of planning.

4.2 Social facilities

4.2.1 Water supply

Pemba Island is short of river or lake to supply fresh water hence it depends on ground water

as the main source of its supply. Various water boreholes have been drilled to serve the communities in the island and they are the sole water sources. The water sources are managed by the Zanzibar Water Authority (ZAWA).

Studies to identify portable water sources within the Micheweni Free Economic Zone (FEZ) indicate that the ground water in the area is saline and un-exploitable. Therefore there is no potential water source within the area. However potential water sources are available near the zone as is indicated in Table 4.1.

Table 4. 1: Water sources in Micheweni District

S/N	Location	Volume	Remarks
1	Kijichame borehole Mjini Shumba	15m ³ h ⁻¹	
2	An old water supply scheme	17 m ³ h ⁻¹	<ul style="list-style-type: none"> Constructed in 1969 Not operating due to pump failure

3	Second bore-hole	30 m ³ h ⁻¹	
4		50 m ³	<ul style="list-style-type: none"> -No longer usable due perforations of the tank -Inlet/outlet pipes as a result of rusting
5	Kiuyu-Mbuyuni and Mazi-waNg'ombe	30 m ³ h ⁻¹	<ul style="list-style-type: none"> -Located closest to the Project site -Constructed in 2010
6	Kiuyu-Mbuyuni and Mazi-waNg'ombe	250 m ³	<ul style="list-style-type: none"> -Located closest to the Project site -Concrete water storage tank -10 m elevated

Mbuyuni and MaziwaNg'ombe Shehias that accommodate the Project site are supplied water by a relatively new scheme constructed in 2010. The scheme is composed of a borehole (30 m³h⁻¹), a six inches transmission line (uPVC PN10), an elevated (10 m) concrete water storage tank with a capacity of 250 m³ (Plate 4.1) and distribution pipe lines of both HDPE and uPVC. 36 percent of private households use piped water from Zanzibar Water Authority (ZAWA), 32 percent depend of handed well, 22 percent use machine drilling well and 10 percent use both wells respectively. At least every household have access to safe water for drinking and other use. Both male and female have equal access to water source.



Plate 4. 1: The water storage tank for the Kiuyu-Mbuyuni and MaziwaNg'ombe scheme

Water plans for the Micheweni area

There is already a new drilled borehole which is 80m deep with a capacity of 40m³/hr whereby plans are in place to rehabilitate the Micheweni water scheme by replacing the distribution system connect to the new borehole. A pump will thereafter be installed.

Wastewater Management

The Micheweni uses onsite wastewater management systems whereby a mixture of septic tanks and pitlatrines are the most predominant. In the outskirts of the Micheweni center and near to the free economic zone traditional unimproved latrines can still be found.

Solid waste management

Since the Micheweni free economic zone is not inhabited, there is no any sort of solid waste management in the area. General trend for solid waste in the towns of Pemba indicate that waste is improperly managed as the waste is unsorted at all levels and ends in unsanitary dumping sites.

The collection, transport and disposal of waste is managed by the local government however payment of the service is mainly done by business men rather than households. The collection efficiency is less than 50 percent

and the revenue collection is low. Despite the presence of well defined structure and procedures for waste management, practice is still a challenge as waste is collected unsorted from the households and the collection points.

In the neighborhood of the free economic zone, the Micheweni centre and its villages, solid waste is generated at household and managed at household. There is no waste sorting, no waste collection points, no transport means and no designated disposal point. The waste is managed onsite by burning and burying.

Storm water management

Surface runoff depends on the intensity of rainfall and is affected by the nature of the surface on which runoff flows and the catchment area. Surface runoff in the Micheweni economic free zone is expected to be minimum with less soil erosion. This is due to the fact that the area is vegetated and water is trapped to percolate in the soil after the rains.

4.2.2 Energy

The main energy sources in Pemba include electricity, biomass, fuel and gas. In terms of electricity, Pemba is served with power from the national grid connecting via the offshore line from Tanga power station to the Weshu power station.

The installed capacity for the submarine cable is 20MW. From the station two major lines do branch one serving the northern part and another southern part of Pemba. Each of the line has the capacity of 15MW. Overall, there is more than enough electricity for the FEZ.

The line that serves the Micheweni area is a radio feeder though there are plans to improve it and become a circuit line. The current electric power consumption for Pemba is 8.5MW. Electric energy is supplied to individual customers and each is installed with prepaid meter (99 percent of the customers) with exception of few (mostly institutions) that are still installed with postpaid meters. The main energy source in Micheweni FEZ area includes firewood which is used by 66 percent of the population for cooking followed by Kerosene and Charcoal. Kerosene is used by 70 percent of population for light followed by electricity and solar at 8 percent (Fieldwork, 2018).

4.3 Social services, Culture and Lifestyle of Micheweni District

Social services include education, health and housing conditions of the Project area and the District as a whole. People in Pemba Island are known for preservation of their Islam religion and culture associated with it. This was also learned through community sensitization meetings, social household survey and focus group discussions held at the level of Shehias particularly Shanake, Maziwa Ng'ombe and Kiuyu-Mbuyuni. Other important information that was learned includes the level of education, health as well as their expectations from the FEZ and fear of the same.

4.3.1 Education

According to the household interview conducted in *Shanake*, Kiuyu Mbuyuni and Maziwa Ng'ombe Shehias in November, 2018, 36 percentage of population have reached

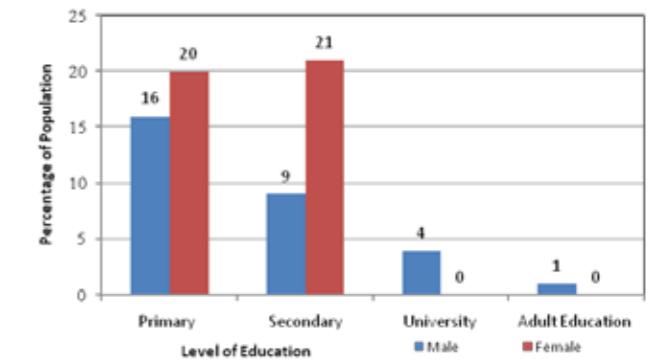
primary school level while 31 percentage of population have attained secondary school level of education. The remaining has not attended formal education but have a completed *Madrasa*¹⁴.

only 16 percent attended primary school and 9 percent secondary school (Figure 4.1). This is because the socialization of male and female children is determined by the expected social roles in their adulthood. Male children are prepared to be family providers while female children are prepared to take care of the family.

Hence, while still at tender age, male children in Micheweni are engaged in economic activities such as limestone cutting and fishing. The tertiary education is completely dominated

¹⁴ Madrasa is an Arabic word which means the establishment of learning where the Islamic sciences are taught www.oxfordislamicstudies.com

by males because it is customary for girls to be married after completion of secondary education.

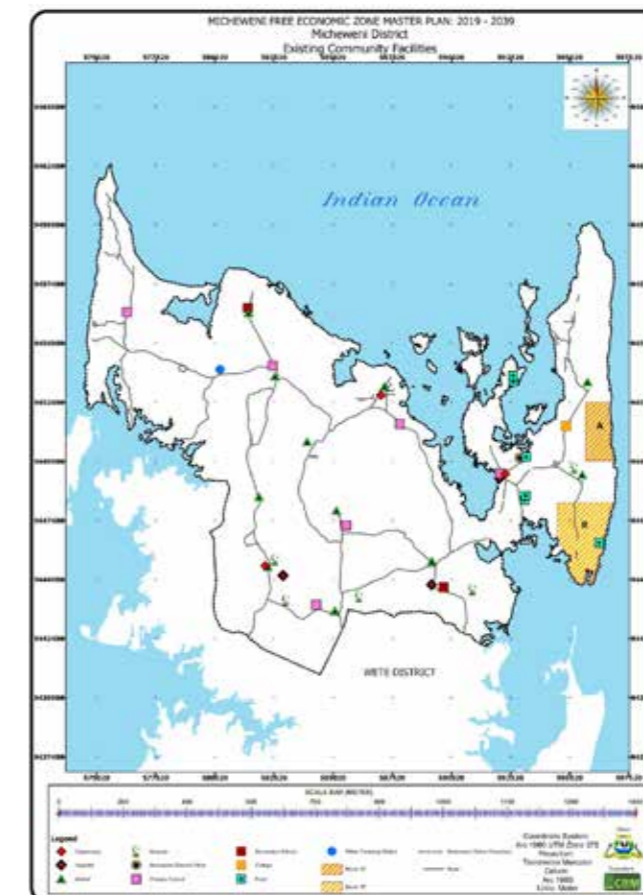


Source: Fieldwork (November, 2018)

Figure 4. 1: Education distribution in 3 Shehias by Sex

4.3.2 Health

According to the Fieldwork (2018), 45 percent of males and 55 percent of females have access to hospitals. And negligible number has Health



Map 4. 1: Social facilities and Services in Micheweni District

Insurance, two (2) percent for males and only one (1) percent for females. The community depends on the Health facilities to get health services.

4.3.3 Cultural and Lifestyle

The culture of Micheweni people is almost the same to that of all parts of Zanzibar. Being Muslims, their long dresses identify and differentiate them from other cultures. *Khanga*, *Hijabu* or head scarf (*kilemba*) are the most common for women and *Kanzu* (*dishdasha*) with sewn caps and sandals (*makobasi*) for men. It is unacceptable and rare for women including young girls to expose their heads in public.

Formal education, Madras and Islamic education is a deemed as a way of life for children.

Men are heads of households performing large parts of the daily work particularly farming and fishing activities while women engage on caring for children, house chores, seaweed and handicraft. The Micheweni Community inclusively maintains these traditions as their identity and belonging.

They are a closely knit community, this can be observed through weddings, funerals, political ceremonies, public and religious holidays when dances and drama are usually performed. Moreover, there are traditional festivals and sports which gather the community together women and men, young and adults.

These festivals include both water sports famous known as Ngalawarace (Boat races) and land sports (Bull Fight, Bicycle races) which were normally celebrated and actively involve the whole community once in a year. However

nowadays, this tradition is adversely affected by poverty so it is not common as it was previously.



Plate 4. 2: Traditional Fishing Boats

4.3.4 Economic activities

The main economic activities include fishing (38 percent), seaweed farming (30 percent), both livestock keeping and farming (5 percent), livestock-keeping (9 percent), farming (8 percent), while business and other entrepreneurship consists of 10 percent of the population. Micheweni residents pursue multiple livelihoods to ensure a food supply and subsistence income for their households but fishing is the main livelihood for men, while seaweed farming is the main activity for women.

Farm sizes are relatively small, the largest is three (3) acres and the smallest is 0.25 acres. Table 4.2 illustrates percentage of populations against farm sizes in the FEZ area where 65.4 percent of the community own small farms of 0.25 acres for subsistence only. This is typical as Zanzibar agriculture is smallholder (with a per capita land holding of 0.25 ha), highly dependent of rainfall and characterized with limited use of improved productivity enhancing technologies (RGoZ, 2009).

Table 4. 2: Farm sizes and population

Farm sizes (acres)	Population size (%)
0.25	65.4
0.5	7.7
1.0	7.7
2.0	7.7

3.0

11.5

Source: Fieldwork, November, 2018

88 percent of residents Kiuyu, Mbuyuni, Shanake nad Maziwa Ngombe earn less than Tanzanian Shillings (TZS) 50,000 per month, 11 percent earn between TZS 50,000 and TZS 300,000 and one (1) percent earns between TZS 300,000 and TZS 800,000.

4.4.5 Gender relations in Micheweni

Traditional cultural orientations limit the types of economic activities involving women. In Micheweni and many other coastal areas, fishing is reserved for men, women don't fish. As noted earlier, women also play a major role in seaweed farming, providing significant income generation opportunities to some households, although the work is time and labor-consuming and income earned is low.

4.4.6 Housing conditions

Housing is a major element of people's material living standards; it is one of human basic needs that offer shelter and sense of security. According to the indicators of the building numbers per family and living space per person, Micheweni is not far from the average rates in the Kaskazini Pemba. The most common household model in Micheweni is a family with Five members and above.

Most houses in Micheweni are common constructed from limestone blocks, which are relatively cheaper than the normal sand-cement blocks also the quality of limestone blocks is good (Plate 4.2 and Plate 4.3).



Plate 4. 3: Limestone brick-cutting in Micheweni FEZ



Plate 4. 4: House constructed by limestone bricks and Aluminium sheet roof

Limestone blocks pose a potential as a building material for the development of Micheweni FEZ and hence improve the standard of living among the communities involved in its production.

4.5 Typical risks and other social impacts

Economic activities discussed in Chapter 3.4, include farming, livestock-keeping, fishing, and mining, quarrying and tourism. These activities are found throughout the Micheweni District. Tourism is not practiced in these three (3) Shehias of Maziwa Ngombe, Kiuyu Mbuyuni and Shanake as local community fears about changing their culture by tourists. Additionally,

Focused Group Discussions (Plate 4.5 and Plate 4.6) informed more threats for the local community associated by the development of Micheweni Free Economic Zone in Table 4.3.



Plate 4. 5: Discussion with Kiuyu Mbuyu ni Shehia



Plate 4. 6: Community at Maziwa Ng'ombe Shehia offering a Prayer of blessing for the successful Land use Planning and implementation of Free Economic Zone

Table 4. 3: Perceived Threats of Micheweni FEZ to the local Community

S/N	Perceived Threats	Description	Remarks
1	Displacement	<ul style="list-style-type: none"> Effects of displacement of <i>Shehia</i> Maziwa Ng'ombe located between Block A and Block B of the FEZ 	<ul style="list-style-type: none"> Community members will be replaced from the area Compensation of properties and psychological disturbance
2	Disturbance of livelihood activities	<ul style="list-style-type: none"> Impacts related to reduced access to land resources for grazing and farming and sea for fishing and seaweed Livelihood losses through material impacts caused by restricting access to and use of the natural resources e.g. firewood, medicinal plants etc Livelihood losses through non-material impacts related to social, recreational, spiritual, cultural, knowledge and educational values of the land/ resources to be restricted 	<ul style="list-style-type: none"> Planning and development implies the area will no longer be free for the community use Compensation of properties and psychological disturbance
3	Disturbance of Indigenous people	<ul style="list-style-type: none"> Disturbances of spiritual and cultural identity Potential for ethnic conflicts stimulated by project activities-for instance in situation with conflicting cultural practices Lifestyle impacts including diversity in economic activities 	<ul style="list-style-type: none"> Shared customs, obligations, values, language, religious belief and other elements which make a social economic or ethnic group distinct must be observed. e.g. No breweries, festival or sports that will display the big part of the body for both men and women etc.

4	Standard on Cultural Heritage	<ul style="list-style-type: none"> Non-material impacts due to restrictions access to cultural resources including natural feasters with spiritual significance Negative impacts from the promotion or use of cultural resources 	<ul style="list-style-type: none"> Master Plan should acknowledge traditional forest space for the Spiritual Activities.
5	Other Social Impacts	<ul style="list-style-type: none"> Increased marginalization of groups due to project activities Elite capture of projects benefits or natural resources that aggravate internal differentiation Disturbances of patterns of social relations and community cohesion Perpetuation of unequal power relations or inequalities between men and women Impacts of human health and safety including injury or death through project activities 	<ul style="list-style-type: none"> Infrastructure, and services, must benefit the community development process through participation of the Micheweni residents as investors. Quality of life impacts need to affect the community first. Engage community member in employment opportunities and skill developments Bring investment opportunities that will not disturb the social economic equilibrium.
6	Climate Change	<ul style="list-style-type: none"> -Increased vulnerability of local communities if project activities fail to take climate change impact into account 	<ul style="list-style-type: none"> Avoid industries which will damage the environment and the natural habitat.

4.6 Analysis of Alternatives

The potential of Land use Master Plan is recognized and supported through recommendations from community which are based on their knowledge on threats, dreams and ambitions. For instance, the community from Maziwa Ng'ombe Shehia proposed 20 percent of land in the FEZ area should be allocated for the free use of community specifically for farming and grazing.

Communities in Shanake and Kiuyu Mbuyuni Shehias proposed that at least 40 percent of employees should be local to Micheweni District or Pemba Island. These alternatives and recommendations came in as the best way to overcome their fear of losing their land while continue supporting their local economy growth of the community as well as individual livelihood and are further explored in section 4.8.

4.7 Recommendations

Communities in the Micheweni FEZ recommended the following activities to be considered in the planning phase:

1. Sports and Cultural Activities
2. Industries including fish processing and packaging, sea weed processing etc.
3. Textile industries and shoes industries
4. Secondary schools
5. Hospitals
6. Housing
7. Salt farming and processing
8. Limestone Branding at the project site and export
9. Infrastructure land and air transport
10. Horticulture promotion activities

Potentials and Constraints

This chapter classifies the potentials and constraints for the development of the Micheweni FEZ. It forms the basis for determining the future land use planning of the Master Plan.

5.1 Potentials

There are various potentials for establishment of the Micheweni FEZ that needs to be exploited in the Master Plan preparation. They include:

5.1.1 Strategic Location

Micheweni FEZ is strategically located in the Islands with deep natural harbor that can open Zanzibar into a Transshipment Hub for big vessels from Oman as well as the middle and Far East. Zanzibar has a long historical tie with Oman that can be used to transform Zanzibar into the Transshipment Hub. The current hub is located in Durban, South Africa that serves big vessels from Oman.

5.1.2 Accessibility

The Micheweni FEZ is well accessible with all

significant modes of transport. The tarmac trunk road that runs through Pemba provides easy accessibility for cars and trucks. Furthermore, the existing port and airport in Pemba are likely to be used for transportation of raw materials and the manufactured goods for export and domestic markets. As said earlier, Micheweni FEZ is located 45 km from Karume Airport and 75 km Mkoani Harbor. Also, part of the coastline within Micheweni FEZ is suitable for large port structures, which can constitute an important economic activity as well as provide a port of departure for the region's industry (Refer Chapter 2.3).

5.1.3 Arable Land

The existing agricultural activities and availability of arable lands in Pemba can be harnessed with establishment of cottage agro-related industries in the Micheweni FEZ.

Pemba has an estimated area of 6,990 hectares under cultivation that includes spice farming, cloves, vanilla, chili, fruit, coconut and horticulture farming.

Furthermore, the Ministry of Agriculture, Natural

Resources, Livestock and Fisheries can be used to spearhead the concept of out growers for increase of agricultural products and thus, ensures reliable supply of raw materials and improves the economic condition of the residents. The possible cottage agro-related industries to be attracted in the Micheweni FEZ includes spices such as soap and oil making cottage industries, others are Zanzibari furniture-making, fishing, milk-processing,

5.1.4 Access to Sea

The Indian Ocean that bounds the Micheweni FEZ can be used for establishment of fishing industries as well as for deep sea fishing.

Fishing industries that are attracted in the Free Economic Zones include fish farming, fish processing and fish canning. Furthermore, the ocean that is rich in the flourishing sea weeds can be used for supply of raw materials and establishment of cottage industries related with aquaculture sector that includes seaweed and pearl farming.

5.1.5 Quality of Nature and Culture

Micheweni has both natural and cultural potential, which could promote tourism and peculiar industries in the region. The cultural Islamic heritage that revolves around the area in terms of dressing and food is a tourism potential. Furthermore, the peculiar fabrication of Islamic dressings such as Kanza, Baragashia and Makobazi that has good market in Oman and the Middle and Far East can be promoted in the cottage industries to be attracted in the Micheweni FEZ.

5.1.6 Topographical Nature

Micheweni FEZ is relatively flat with the gentle

sloping terrain towards the ocean, the slope ranges from 2m to 11m respectively. This topographical characteristic is favorable to all kinds of development without problems of draining storm water. Refer Figure 2.1 and Figure 2.2. Topographical Map with cross-sections

5.2 Constraints

There are various constraints in the planning process for Micheweni FEZ. However, these constraints can be turned into new potentials when seen from the development perspectives.

5.2.1 Lack of Local Area Plans

Planning of the Micheweni FEZ has to conform to the National, Regional and Local Area Plans. However, there is no Local Area Plans in Micheweni District that could provide connectivity of spatial land use planning and infrastructure provision to the FEZ. This limits spatial and visual qualities of the planned Micheweni FEZ as it mostly likely to be surrounded by unplanned settlements and degrade its aesthetic value.

Also, there is difficulty in connectivity of service infrastructures from the FEZ, such as electricity, water supply, sewerage and solid waste management. However, this constraint can be turned into planning potentials as the planning of the Micheweni FEZ could bring together the Ministry of Land, Water, Energy and Environment; the Ministry of Finance and Planning; and ZIPA to pull up resources for the preparation Local Area Plans in Micheweni District and harmonize infrastructure and land use developments with the Micheweni FEZ.

5.2.2 Preservation of Culture

The life of people in Micheweni is conservative to change in terms of Islamic culture and traditions. This is a constraint in terms of mixed societies in development of the FEZ. However, this can be turned into a new planning potential if they are seen as a tourist attraction for cultural Islamic heritage in the area in terms of dressings and food.

5.2.3 Low Education and the Economic Condition

Skills development – If the community is to benefit from the FEZ, they have the appropriate skills and training to access the jobs and economic opportunities that emerge. The RGoZ as to signal that it is willing to develop the local workforce which in turn will give investors comfort that the necessary workforce is available and labour would not have to be imported at significant cost.

The community need to develop strategies to enhance skills which are in alignment to its industrialization, tourism and investment strategies

5.2.4 Lack of infrastructure

The Micheweni FEZ has little infrastructure that meets a standard adequate for attraction of investments. All necessary infrastructure such as roads, power supply, water supply and sewerage system must be constructed during the transformation of the area, and therefore developing infrastructure is the main issue. If the tourism sector is to be developed to its maximum potential the air link to Pemba must be upgraded to include the following:

- *Lengthening the runway*
Lengthening the runway to allow larger aircraft like the ATC Q400 to fly directly from Dar to Pemba. The runway expansion would mean that connecting passengers can be transported to the island directly without having to transit through Unguja. In addition, the Q400 will be able to increase the arrivals on each flight from the average 19 to over 50 using the Q400. This increase capacity will provide a significant boost to the economy.
- *Upgrade the airport navigation equipment to facilitate night flights*

Upgrade the airport navigation equipment to facilitate night flights in landing and takeoff. The current airport can only operate during daylight hours and hence this restricts the ability to link international passenger flights from Unguja and Dar directly to the island on the same day without layovers. The majority of the type of tourist Pemba is attracting would not want to layover in Dar or Unguja. Same day transfers are vital in providing seamless access to Pemba.

- *Infrastructure investments (roads and utilities)*
The road network and the utilities to the FEZ and the surrounding districts will need to be upgraded in order to signal to potential investors that the RGoZ is serious about attracting investment to the Micheweni FEZ. The build out of the FEZ will also send a strong signal to the community in the district and beyond that the government is serious about the development of the area. This will also enable the domestic investors plan how to effectively participate in exploiting the opportunities / economic activities in the FEZ.

5.2.5 Existing Land Uses

The proposed Micheweni FEZ site currently has a number of scattered farms, forests with planted trees, grazing land with nomadic buildings, fishery as well as seaweed facilities. These will have to be relocated before the project can be realized (Refer Existing Land Use Map 2.5 and Map 2.6).

5.2.6 Unplanned Settlement Bisecting the FEZ

Micheweni FEZ consists of two blocks A and B that are bisected by Maziwa Ng'ombe *Shehia* which is unplanned settlement. This unplanned settlement constrains continuity of the FEZ land use developments. However, this *Shehia* can be turned into a new planning potential through regularization and thus, provides residential to the FEZ workers.

5.2.7 Land Acquisition:

At the moment most of the land in the FEZ area is used by residents for various socio-economic activities. This means that ZIPA will have to acquire the land for the project after payment of compensation to clear the third-party interest.

6

Chapter

Planning Framework for the Micheweni Free Economic Zone

6.1 Introduction

This chapter identifies the planning framework for Micheweni FEZ and provides a roadmap for the preparation of the Master Plan. The main components considered in the planning framework are the policies and laws on planning and free economic zones. The planning framework has been prepared taking into consideration the Revolution Government of Zanzibar's planning objectives on regional and local levels.

6.2 Policies Relevant for Development of Free Economic Zones

The Zanzibar Investment Policy (ZIP) is the main policy that governs development of FEZs in Zanzibar. The policy objective in manufacturing intends to transform Zanzibar economy to a more diversified and semi industrialized economy with emphasis on agro and marine product processing. It also intends to promote small and medium enterprises that serve both the domestic and export markets as well as

to identify and promote micro enterprises that have potential for output expansion, employment generation and which serve both domestic and export markets.

The investment policy provides specific policy strategies for Export Processing Zones and Free Economic Zones that among others includes:

- a) To identify industries that instrumental in job creation and transfer of technology.
- b) To promote local resources-based investments with backward linkages.
- c) To promote Investment in exports manufacturing, assembly, processing and recycling.
- d) To promote service-based investments that has positive impacts on site preparation and development of FEZs.
- e) To ensure development of essential infrastructure in all EPZ/FEZ sites so-as-to increase industrial estate capacity and

balance their locations.

6.3 Acts Relevant for Development of Free Economic Zone

The following is a legal framework in Zanzibar that provides guidance in the planning and preparation of the Master Plan for the Micheweni FEZ.

6.3.1 Zanzibar Investment Promotion and Protection Act, 2004

The Zanzibar Investment Promotion and Protection Act, 2004 defines the designated FEZs that includes Micheweni FEZ in Pemba. According the aforementioned legislation the Zanzibar Investment Promotion Authority is responsible for administration, control and management of the FEZs and thus.

- a) Draw up the development plans, such as Master Plans, of the FEZs and organize their implementation.
- b) Examine and approve enterprises (type of industrial firms) and investment projects to be attracted in the FEZ.
- c) Handle land allotment for industrial and commercial enterprises in the FEZs.
- d) Coordinate working relations among the banking, insurance, taxation, customs, frontier inspection, postal and telecommunication and other organizations in the FEZs.
- e) Ensure orderly development of the FEZ.
- f) Determine entry of personnel into the FEZs.

The Act explains the purpose of the FEZ as to provide investors with a wide scope of operation, create favorable operating conditions

and guarantee stable business sites. The Act also provides a room for investors to establish with their own investment or in joint ventures with the Government all projects that have positive significance for international economic cooperation and technical exchanges including industry and manufacture involving high technology and business of common interest to investors and the Government.

6.3.2 Zanzibar Micro, Small and Medium Industrial Development Agency Act, 2018

The Act provides for the category of industries in terms of size. These industries that may be attracted into the FEZ include:

- a) **Micro Industries:** These are industries or enterprises that has a total value not more than TZS 11,000,000/= or has employments not more than 4 employees
- b) **Small Industries:** These are industries or enterprises that has a total value between, TZS 11,000,000/= and TZS 57,000,000/= or has employments between 5 and 19 employees
- c) **Medium Industries:** These are industries or enterprises that has a total value between TZS 57,000,000/= and TZS 650,000,000/= or has employments between 20 and 99 employees.

In establishment of these categories of industries, the Micro, Small and Medium Industrial Development Agency (SMIDA) shall be responsible, among others, to:

- a) Promote the creation and development of micro, small and medium industries.

- b) Establish, coordinate or facilitate affordable credit schemes and other financial and non-financial services for micro, small and medium enterprises.
- c) Coordinate and contribute in carrying out market research in goods manufactured and services provided by micro, small and medium industries.
- d) Facilitate development of micro, small and medium industries through encouragement of utilization of locally available knowledge, skills and resources.
- e) Provide technical assistance to persons engaged in micro, small and medium industries.
- f) Provide and promote training facilities for persons engaged in employment or to be employed in micro, small and medium industries.
- g) Improve the standard and quality of the products through technology development and transfer, packaging, innovation and technical services.
- h) Facilitate national, regional and international market access for micro, small and medium industrial products and services.

6.3.3 The Clove Development Act, 2014

For establishment of agro-processing industries that are related with clove, and for the purpose of ensuring steady supply of raw materials for clove related industries, the Act has provided for establishment of the Clove Development Fund. The uses of fund, among others, include:

- a) Support and promote improvement and expansion of cloves cultivation,

plantation, production, experiments and investigation in connection with clove development.

- b) Provide financial assistance for the promotion of clove farmers for the purposes of raising productivity, extension services support, and sustainably raising the volume of produced quality cloves and allied products that includes leaves and any part of the clove trees and products related to or originating from clove trees.
- c) Support any infrastructure development projects in clove plantation areas.
- d) Support branding activities and other marketing information systems.

6.3.4 Fisheries Act, 2010

For establishment of agro-processing industries that are related with fishing, and for the purpose of ensuring steady supply of raw materials for fish related industries, the Act has provided for establishment of the Department of Fisheries.

The functions of the department, among others, include to:

- a) Promote, develop, control and monitor the purpose of proper management of all fisheries and related activities in artisanal and semi industries.
- b) Encourage sustainable use of marine resources, quality control, value addition and marketing.
- c) Administer fisheries activities and all marine products from related industries.
- d) Carry out scientific research or other

activities for proper management of fisheries related industry.

6.3.5 Public Private Partnership Act, 2015

The Public Private Partnership Act, 2015 provides for partnership between the Government and a Private Partner to deliver infrastructure and services that are required in development of the FEZs. The scope and form of partnership may include any or combination of the following.

- a) The design, construction, financing, maintenance and operation of new public infrastructure project.
- b) The rehabilitation, modernization, financing, expansion, maintenance and operation of existing public infrastructure.
- c) The administration, management, operation, maintenance or other services pertaining to public services or new or existing public infrastructure.

To facilitate this partnership, the Public Private Partnership Department was established within the Zanzibar Planning Commission. This department is the coordinating entity responsible for ensuring that all PPP projects implemented in Zanzibar conform with the Government objectives and that all proper procedures are followed and approvals are obtained during development and implementation of each project up to signing of the agreement.

Some of the PPP projects as listed in the Schedule that are relevant in development of the FEZ includes:

- a) Water supply, including production, management, cleaning and distribution, sewerage and drainage.
- b) Generation, transmission and distribution of all types of energy.
- c) Public roads, highways, expressways, bridges, tunnels and their engineering structures.
- d) Airport, terminals and related aviation facilities.
- e) Port development including terminals, piers, handling, storage, freeport infrastructure and other related facilities and services.
- f) Environmental and solid waste management projects including composting plants, collection facilities, incineration, landfill, recycling and other municipal and rural services.
- g) Development of industrial zones, information and other export zones.
- h) Housing scheme project, public shelter and social work.

6.3.6 Vocational Training Act, 2006

Vocational training is necessary for providing education or training outside the regular education system for empowering trainee (Micheweni residents, for example) to secure either employment in the employment market, such as in the FEZ, self-employment, or to go back in regular education system. The Act therefore, provides for establishment of the Vocational Training Centres owned by the

Government, Non-Governmental Organization, or private individual person.

The Act also provides for establishment of the Vocational Training Authority for the purpose of supervising vocational training by determining the standards of training, assessing/evaluating the vocational training centres, registering the centres and assessing/evaluating and approving the capacity and skills of trainers and trainees.

Coordinating vocational training. Furthermore, the Vocational Training Authority is responsible for coordination of vocational training by conducting research of the employment market, preparing scheme (curriculum, syllabus of long-term course and short course), dealing with the vocation training, enhancing develop capacity and skills of the trainers and leaders of the vocational training; provide vocational training and to confirm all certificates issued by registered vocational centres.

6.3.7 Disasters Management Act 2003

Disaster means any occurrence of natural or man-made, causing a catastrophic situation whereby the day-to-day patterns of life are widely and suddenly disrupted and people are plunged into helplessness and suffering and as a result need to be provided with protection, food, clothing, shelter, medical and social care and other necessities of life. Man made disaster, among others, includes industrial accidents. Disaster prevention is therefore, necessary to be taken into account in the design of the FEZ Master Plan. There is also the Zanzibar Disaster Risk Reduction and Management Act 2015.

The Act also provides for establishment of the Disaster Co-ordination Commission that is responsible for, among others to:

- a) Coordinate all disaster relief operations and preparedness measures. Disaster preparedness means the state of being able to anticipate a disaster and undertake timely measure designed to minimize the loss of life, property and environment and to organize and facilitate effective emergency relief operations in time of disaster.
- b) Solicit resources from inside and outside the country which can assist in various activities for relief co-ordination and disaster prevention. Disaster prevention means any measure designed to prevent natural phenomenon from causing or resulting in disaster.

6.3.8 Zanzibar Standards Act, 2011

To ensure quality commodities produced or manufactured, rendered within, or imported into Zanzibar, the Zanzibar Standards Act of 2011 established the government agency known as the Zanzibar Bureau of Standards (ZBS). Thus, through ZBS, all commodities produced in and out of the FEZ are expected to be of high quality. The functions of the ZBS, among others, includes to:

- a) Establish, publish, promote, amend or modify from time to time an updated version of a standard for the quality, quantities and units of measurement to be used, which shall be in conformity with the latest version of the international system of units.
- b) Undertake measures for quality control,

quality assurance and certification of commodities, services and environment of all descriptions and to promote standardization in industry and trade.

- c) Provide for the inspection, sampling and testing of locally produced, manufactured, agricultural and imported commodities with a view to deter whether the commodities comply with the provisions of this Act or any other law dealing with standards relevant to those commodities.
- d) Make such inspection and take such samples of any material or substance as may be necessary to see whether any article or process in relation to which the Standard Mark has been used conforms to the National Standard or whether the Standard Mark has been improperly used in relation to any article or process with or without a license.

6.3.9 Zanzibar Trading Act, 2013

For marketing of the commodities produced in the FEZ, the Zanzibar Trading Act of 2013 makes provisions for the establishment of the Department of Trade that is responsible for the administration and supervision of trade and trading in Zanzibar. The functions of the Department of Trade, among others, includes to:

- a) Promote domestic, regional and international market.
- b) Seek and provide business information service related to sale and purchase of consumer goods and other commodities and advise the Government, business

community as well as individual businessmen.

- c) Administer domestic, regional and international trade and to provide educational and other awareness services necessary for promoting trade.
- d) Provide mechanism conducive for establishment of public private partnership especially in planning, execution and administration of agro processing initiatives for agricultural products.
- e) Promote business enterprises including small and medium enterprise and assist in developing and expanding profitability in the domestic, regional and international trade transactions.

6.3.10 Land Tenure (Amendment) Act, 2010

The issue of land tenure is crucial especially for investment purpose, such as industries that are long term investment. To ensure security in investment in the Micheweni FEZ, the Act provides power to the Minister to lease land to any person, Zanzibar or non-Zanzibar, for investment purposes after approval by ZIPA. Also, the Act explains that the lease of land after being developed according to ZIPA approved investment plan, may be sold, assigned, sub leased or sub divided, inherited or mortgaged, provided that the lessee shall not make any disposition without approval by the Land Transfer Board.

Furthermore, the Act provides that the land holder, before the lease to an investor, should be paid compensation based on a fair market value

of the land and improvements on the land. With this provision, land holders within Micheweni FEZ should be paid compensation before land allocation to the investors.

6.3.11 The Land Transfer (Amendment) Act, 2007

As the case of land tenure security, land transfer is also an important aspect for investment purpose, such as industries that are long term investment. The Act provides that the permanent transfer of land or long-term lease should take place after review and approval of the transaction by the Land Transfer Board. This provision provides flexibility and attraction of investors in the Micheweni FEZ.

6.3.12 Zanzibar Environmental Management Act, 2015

Protection of the environment in the FEZ is a critical aspect. The Zanzibar Environmental Management Act, 2015 provides the general environmental obligation that every person is obliged to protect the environment for the welfare of present and future generation. It provided further that every person should ensure that development plans and activities are implemented in environmentally sound and sustainable manner.

Furthermore, the Act provides for establishment of the Environmental Advisory Committee. The function of this committee, among others, include:

- a) To advise on implementation of policy, strategy and environmental management plan.
- b) To mediate and resolve any disputes between government institution, private institutions or society on matters pertaining to environment.

6.3.13 Public and Environmental Health Act, 2012

Land and environment pollution are among the negative effects from the industrial developments in any part of the world, including the FEZs. This Act was therefore, prepared for the purpose of protection of residents of Zanzibar from infections and or disease propagation.

With respect to waste management, the Act provides that the Director General of Health shall protect the public by prescribing the optimum biological and chemical standards for solid waste, liquid waste, medical waste and emission management before being discharged or disposed to the environment.

With respect to dumping site, treatment plant or transfer station, that are also required in the FEZs, they should be located in safe environment in consultation with the department responsible for environment. Prior to the establishment of these sites, the

following should be done:

- a) Carry out or cause to be carried out an Environmental Health Impact Assessment as provided by the Zanzibar Environmental Management for Sustainable Development Act of 1996.
- b) Ensure that the designated area is adequate in terms of size and is situated away from residential areas.
- c) Ensure the designated area is fenced off, placed warning signs and secured to prevent unauthorized persons from entering.

Furthermore, the Act provides for management of the infectious wastes, hazardous wastes, medical wastes, veterinary wastes, chemical wastes as well as gaseous wastes that might also be produced in the FEZ.

6.4 Conceptual Framework

Conceptually, the Economic Zones at the regional level (East African Community), may include the following components which are often categorized as Economic Zone schemes:

- a) Township Zones
- b) Export Processing Zones

- c) Industrial Parks
- d) Free Economic Zones
- e) Free Port Zones
- f) Free Trade Zones
- g) Tourist and Recreational Centres
- h) Information Communication Technology Parks
- i) Science and
- j) Technology Parks
- k) Agricultural Zones
- l) Regional Headquarter Zones
- m) Institutional Zones
- n) Financial Service Zones

The Economic Zones in Zanzibar consists of:

- a) **Free Economic Zones.** The declared Free Economic Zones include Fumba and Amaan in the Island of Unguja as well as the Micheweni in the Island of Pemba.
- b) **Free Port Zones.** The declared Free Port Zones include Maruhubi and Airport Zones in the Islands of Unguja.

Therefore, the planning, design and development of the Economic Zone areas may make use of one or more of these schemes. Micheweni is to be developed in terms of the

Table 6. 1: Economic Zone Components to be attracted in the Micheweni FEZ

S/N	Economic Zone Component	Description of the Component	Details of Production
1	Industrial Park/Zone	1.1) Clove Processing Industries	<ul style="list-style-type: none"> • Tea • Oil • Fruit • Medicine • Air freshener and perfumes • Soap • Cleaning Products • Dental • Toothpaste
		1.2) Spice Processing Industries (Vanilla, Ginger, Cinnamon)	<ul style="list-style-type: none"> • Tea • Beauty Oil • Beauty Soap
		1.3) Coconut Processing Industries	<ul style="list-style-type: none"> • Cooking Oil • Beauty Oil • Milk • Water • Husk • Shell • Decorative Ornaments • Dish Sponge • Body Sponge • Bowls • Mosquito Repellant
		1.4) Fish Processing Industries	<ul style="list-style-type: none"> • Deep Sea Fishing • Fish Canning • Dried Fish
		1.5) Aquaculture Processing Industries	<ul style="list-style-type: none"> • Sea Weed • Pearl Farming • Decorative Ornaments
		1.6) Zanzibar Furniture and Wood Processing Industries (Coconut and Jackfruit Timber)	<ul style="list-style-type: none"> • Zanzibari Chest • Zanzibari Door • Zanzibari Louvre Windows • Chairs, Table and Beds
		1.7) Fruit Processing Industries (Dry Fruit, Fresh Fruit and Juice)	<ul style="list-style-type: none"> • Mango • Banana • Pineapple • Pawpaw • Guava
		1.8) Milk Processing Industries	<ul style="list-style-type: none"> • Fresh Milk • Butter • Yoghurt • Cheese • Body Lotion and Soap
		1.9) Beef Processing Industries	<ul style="list-style-type: none"> • Meat Canning • Beef Sausage • Fat Oil (can also be used for margarine, lip sticks and beauty soap) • Medicines

		1.10) Cottage Industries	<ul style="list-style-type: none"> • Decorative Ornaments (Bones, Horns, Coconut, Leather, Cow and Goat Skull) • Leather (Balls, Shoes, Bags, Carpet and Rugs) • Glue • Utensils • Islamic Culture Industries (baragashia, kanzu, makobazi, etc.) • Mikeka • Cultural Festivals
		1.11) Fishing Vessel Factories	<ul style="list-style-type: none"> • Boat Making and Repair • Canoe Making and Repair
2	Agricultural Zone	2.1) Clove Demonstration Farm 2.2) Spice Demonstration Farm 2.3) Coconut Demonstration Farm 2.4) Fruit Demonstration Farm 2.5) Animal Husbandry	<ul style="list-style-type: none"> • Clove Trees Farm • Vanilla Trees Farm • Ginger Farm • Cinnamon Farm • Cardamon Farm • Black Pepper Farm • Nutmeg farm • Coconut Trees Farm • Mango Trees Farm • Banana Trees Farm • Pineapple Farm • Pawpaw Farm • Guava Farm • Cattle
3	Tourist and Recreational Centre	Culture and Tourism	<ul style="list-style-type: none"> • Hospitality Industry • Film Festival • Sautiza Busara • Ngalawa Race • Bull Fighting
4	Residential Zone	Apartments Zone Semi Detached Housing Zone Detached Housing Zone	<ul style="list-style-type: none"> • Block of Flats • Semi Detached Houses • Detached Houses
5	Central Facilities Zone	Central Facilities Zone	<ul style="list-style-type: none"> • Administration Block (ZIPA Offices, SMIDA Offices, • Clove Development Office, Department of Fisheries, ZBS Offices, Department of Trade) • Parking (Trucks and Cars) • Vocational Training Centre • Secondary School • One Stop Centre (Customs, TRA, and Migration Offices) • Bank and the Shopping Centre • Fire Station • Dispensary
6	Conservation area/ Green Corridors	Green structures for tree planting	<ul style="list-style-type: none"> • Tree planting

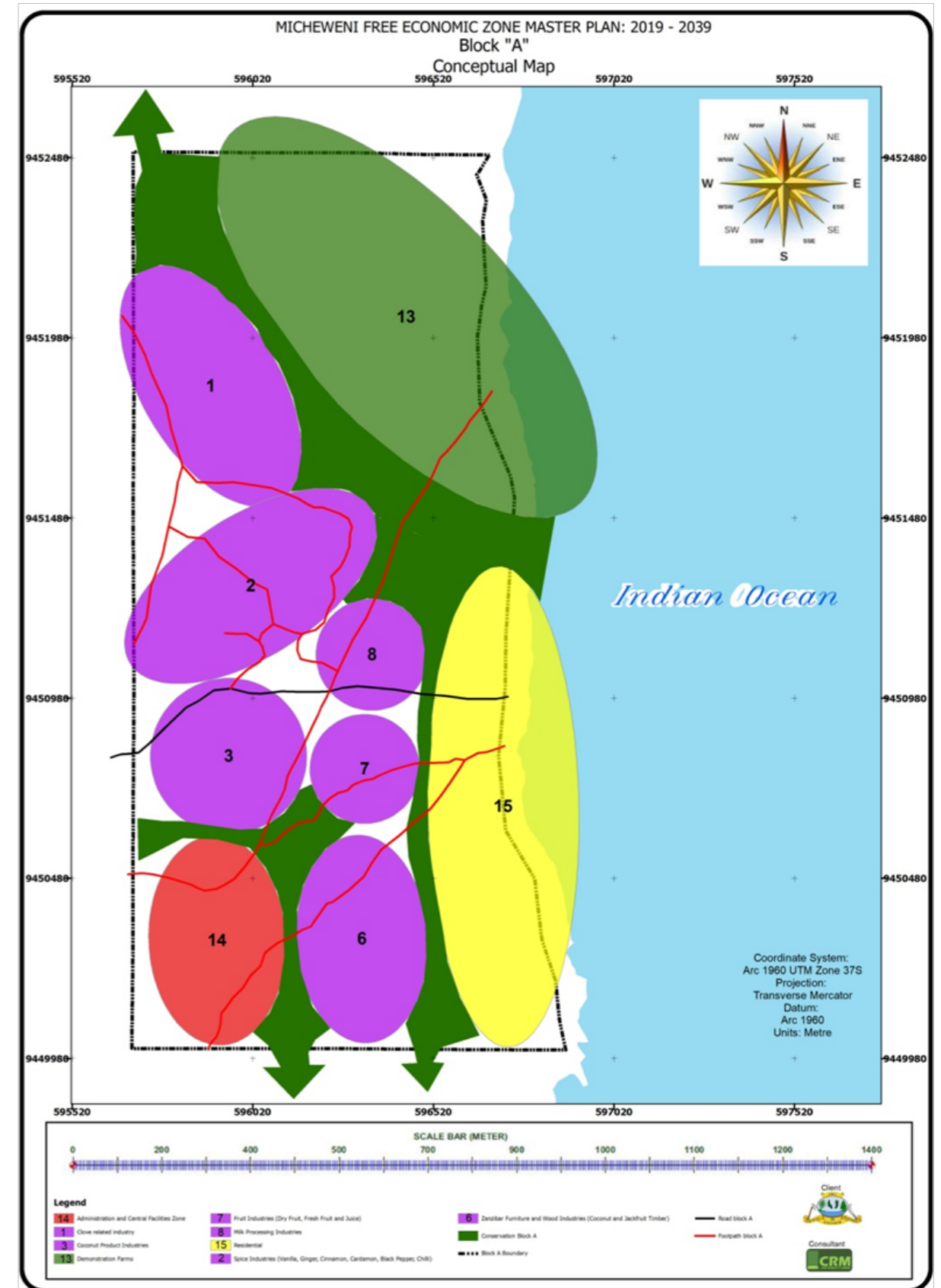
Free Economic Zone that is expected to attract the following components of the envisaged master plan for the FEZ (Table 6.1).

Table 6. 1: Economic Zone Components to be attracted in the Micheweni FEZ

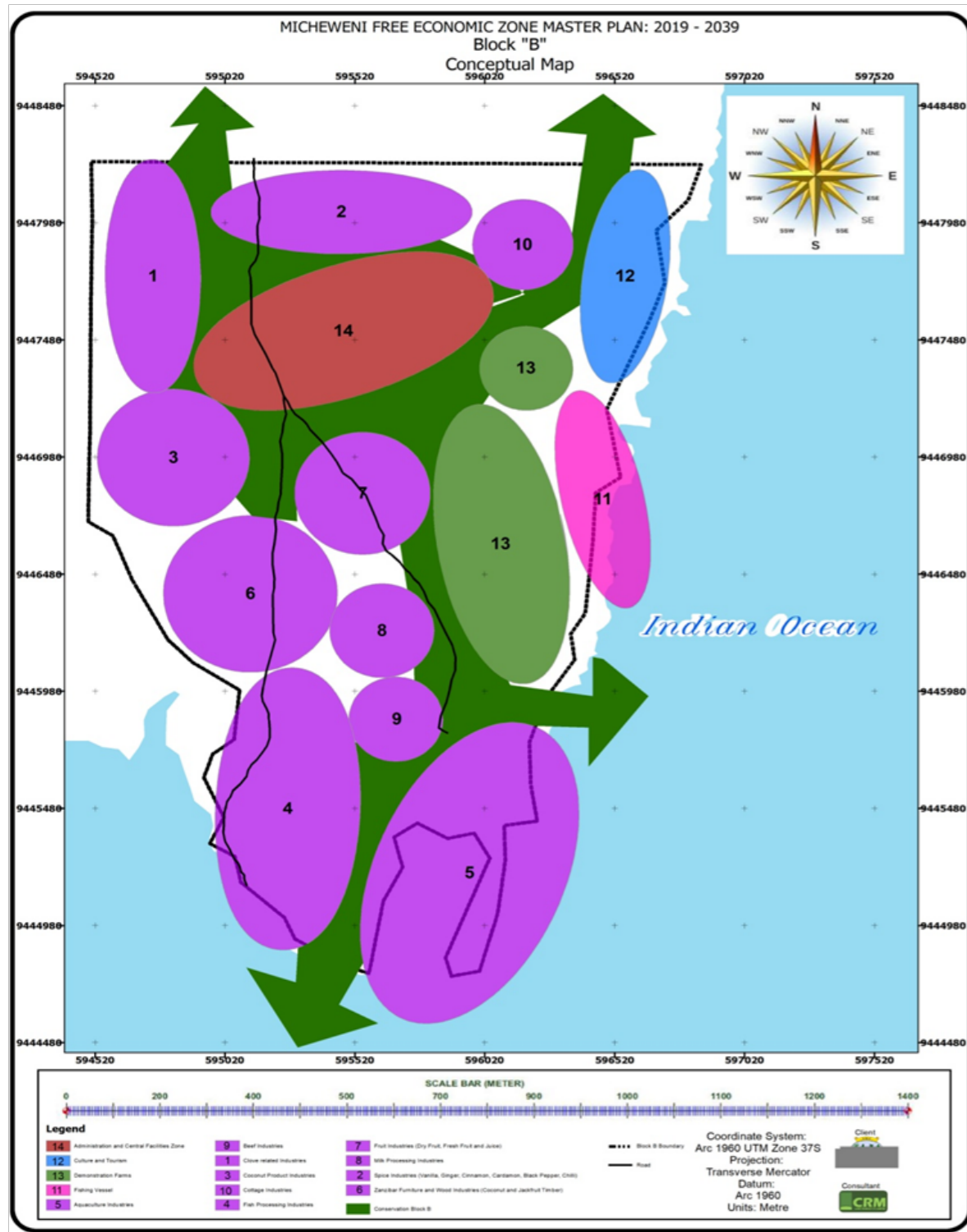
The clustering concept by the use of land use compatibility was used in the design of the Micheweni FEZ. There are five main land use clusters that have been considered in the design. They are the Industrial Park/Zone, Agricultural Zone, Tourist and Recreational

Centre, Residential Zone, Central Facilities Zone and the Conservation area. In application of the clustering concept, the related functional clusters according to land use compatibility are clustered to together. Also, the incompatible land uses from one cluster/zone to another have been segregated by the use of green corridors. These green corridors function like the breathing lungs to improve air circulation in the clusters/zones and hence aeration in the Free Economic Zone at large.

Furthermore, soil and topography was used to



Map 6. 1: Conceptual FEZ Master Plan Block A



Map 6. 2: Conceptual FEZ Master Plan Block B

support the clustering of the economic zone components. Map 6.1 and Map 6.2 show the conceptual plan that has been proposed for the spatial development of the Micheweni FEZ.

6.5 Phasing of economic opportunities in Free Economic Zone

The table provides a phasing of opportunities that could be developed over the next 20 years. The most important task is the development of a coherent and cohesive set of strategies that align Pemba’s growth and poverty reduction strategy with its tourism and investment strategies.

It is critical that the FTZ development strategy for Micheweni is aligned with the Island’s tourism strategy if the forward and backward linkages are to be exploited to derive growth and development for the district and island. These strategies have to be developed before the implementation of the FTZ in order to ensure orderly development of the FTZ. Investors need to be guided by integrated

strategies and policies that clearly outline the enabling environment.

Table 6. 2: Proposed phasing of the economic sectors

Short-term – 5 years	Medium term – 10 years	Long-term – 20 years
Expand fishing processing	Vanilla farming	Pearl Farming
Expand sea-weed farming	Spice farming	Oil exploration
Expand clove farming	Fruit farming	
Chili farming	High end tourism development	
Coconut farming		
Horticulture (vegetables)		
Dairy farming		
Mineral sector		
Cottage industries sector		
Low end tourism		



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Appendices

APPENDIX 1: FIELD DATA

Block	Site	X utm	Y 37m	Altitude asl (m)	Max Soil depth (cm)	pH (1:2.5) soil/H ₂ O ratio	EC (1:2.5) mS/cm	%Sand	%Silt	%Clay	T. Class
1	P1	9451959	596692	-23	60	7.8	0.220	63	31	6	SL
1						7.8	0.191	55	39	6	SL
1	P2	9451821	596549	-13	60	7.6	0.145	53	41	6	SL
1						7.6	0.122	63	31	6	SL
1	P3	9451658	596416	-11	60	7.4	0.165	69	25	6	SL
1						7.6	0.149	73	21	6	SL
1	P4	9451476	596221	-1	30	7.6	0.202	67	26	7	SL
1	P5	9451326	596063	3	30	7.4	0.192	67	27	6	SL
1	P6	9451150	595978	6	30	7.3	0.223	75	19	6	SL
1	P7	9450949	596049	11	30	7.7	0.196	85	9	6	SL
1	P8	945084	595929	10	25	8.0	0.261	67	27	6	SL
1	P9	9450533	595834	11	30	7.8	0.265	67	27	6	SL
1	P13	9450754	596224	10	30	7.6	0.143	67	27	6	SL
2	P1	9445526	595107	7	10	7.6	0.168	73	20	7	SL
2	P2	9445541	5995366	6	15	7.7	0.183	71	18	11	SL
2	P3	9445622	595511	9	5	7.4	0.176	75	15	10	SL
2	P4	9445794	595747	9	30	7.8	0.209	76	19	5	SL

Block	Site	X utm	Y 37m	Altitude asl (m)	Max Soil depth (cm)	pH (1:2.5) soil/H ₂ O ratio	EC (1:2.5) mS/cm	%Sand	%Silt	%Clay	T. Class
2	P5	9445474	595980	12	60	7.5	0.279	68	26	6	SL
2						7.9	0.163	70	25	5	SL
2	P6	9446252	596065	12	30	7.8	0.150	72	23	5	SL
2	P7	9446345	595992	16	30	7.3	0.092	66	28	6	SL
2	P8	9446418	595795	16	45	7.6	0.103	68	27	5	SL
2	P9	9446559	595491	16	10	7.2	0.081	64	30	6	SL
2	P10	9446562	595227	17	20	7.6	0.143	64	31	5	SL
2	P11	9446553	595072	16	20	7.7	0.170	74	20	6	SL
2	P12	9447147	595039	11	25	7.7	0.179	76	19	5	SL
2	P13	9447107	595310	18	30	7.2	0.215	76	18	6	SL
2	P14	9446948	595469	16	30	7.0	0.063	66	29	5	SL
2	P15	9446798	595770	14	30	7.3	0.196	68	27	5	SL
2	P16	9446731	596020	16	60	7.7	0.131	66	29	5	SL
2						7.8	0.126	74	21	5	SL
2	P17	9446868	596202	15	10	7.7	0.195	76	19	5	SL
2	P18	9447292	595996	15	60	7.6	0.132	64	30	6	SL
2						7.8	0.140	66	29	5	SL
2	P19	9447181	595797	14	20	7.6	0.163	72	23	5	SL
2	P20	9447134	595438	14	30	7.3	0.055	70	25	5	SL
2	P21	9447831	595190	14	5	7.2	0.160	74	20	6	SL
2	P22	9447695	595351	12	30	7.8	0.111	68	27	5	SL
2	P23	9447408	595545	12	20	7.6	0.105	76	18	6	SL
2	P24	9447696	595905	11	10	8.0	0.255	70	24	6	SL
2	P25	9447931	596088	11	90	7.6	0.042	72	23	5	SL
2	P26	9448018	596453	11	30	7.7	0.180	72	22	6	SL

Block	Site	X utm	Y 37m	Altitude asl (m)	Max Soil depth (cm)	pH (1:2.5) soil/ H ₂ O ratio	EC (1:2.5) mS/cm	%Sand	%Silt	%Clay	T. Class
2	P27	9448024	596741	13	30	7.7	0.216	70	24	6	SL
2	P28	9448028	596811	13	30	7.6	0.126	74	21	5	SL
2	P29				10	7.5	0.233	65	29	6	SL
2	P30				30	6.7	0.011	67	27	6	SL
2	P31				30	7.1	0.121	69	25	6	SL
2	P32	9448391	595184	8	25	7.0	0.184	73	21	6	SL
2	P33	9448493	594973	11	25	7.8	0.189	75	19	6	SL



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