

# **COUNTRY ECONOMIC MEMORANDUM**

## **AGRICULTURAL POLICY AND PERFORMANCE IN ZANZIBAR**

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In the macro-economic section of this CEM, the structure and performance of the Zanzibar economy in recent years were discussed. The efforts for economic diversification the promotion of tourism and the expansion of the manufacturing sector related to the through activities of the Zanzibar Investment Promotion Agency (ZIPA) and the Zanzibar Export Processing Zone (EPZ). Despite these efforts Agricultural and in particular clove production is still the mainstay of the Zanzibar economy. It is crucial for employment, food security, export earnings and poverty alleviation. In this section we examine the performance of agriculture and its role in the development and growth of the Zanzibar economy. Agriculture is defined in this context to include crop production, livestock husbandry and natural resources i.e. the exploitation of marine and forestry resources. Fortunately in Zanzibar, unlike in the mainland these activities are all administered in one Ministry - the Ministry of Agriculture, Livestock Development and Natural Resources. This makes the collection of data and consultations with officials administratively easier. This in itself however does not guarantee the availability and reliability of data.

### **1.1 An over-view of the Zanzibar Agricultural Sector.**

Zanzibar consists of two main islands Unguja and Pemba and a number of other smaller islands. The main urban area on Unguja Island is also known as Zanzibar. In this Report Zanzibar denotes the two main islands of Unguja and Pemba and the smaller islands that form the "isles" part of the United Republic of Tanzania as distinguished from Mainland Tanzania. The main urban area in Unguja will be referred to as Zanzibar Town. Unguja is 1,658km<sup>2</sup> in area and Pemba is 85km<sup>2</sup> making a total of 2,643km with a population of 850,000. Sixty percent of the population lives on Unguja.

Agriculture is the backbone of the Zanzibar economy contributing about 75 percent of exchange earnings, employing 60 percent of the labour force and is a source of 30 percent of total government revenue. (RGZ 1999a)

The share of agriculture in Zanzibar's GDP (at constant prices) has been fluctuating over a long time. Between 1978-83, the agricultural sector averaged 48 percent of GDP but had fallen in absolute terms by 6.2 percentage points from what it was in 1976. Between 1984-88 agriculture recovered by growing at an annual average of 7.9 percent and increased its share of GDP to 58.4 percent. This good performance can be attributed to the initial success of the economic reforms that were implemented during that period. However this performance could not be sustained and the sector more or less stagnated from there onwards. Because some other sectors performed better, agriculture's share in GDP dropped to 44.7 and 33.6 percent for the 1989-94 and 1995-97 period, respectively (See Macro-economic section).

Zanzibar's agriculture has two zones: The plantation zone found in the more fertile upland areas of both islands and the more marginal coral rag. The cultivatable area in the

plantation zone measures 130,000 hectares 85 percent of which are under permanent free crops. This leaves little room for expansion. Furthermore land holdings are small measuring between and 1.2 hectares each. The average cultivated land holding of 1.6 ha covers 70 percent of the total cultivated land. The remaining 30 percent consist of cultivated land holdings averaging less than 0.8 hectares. In a situation where there are almost no off farm employment opportunities and about 5.4 percent of rural households are landless, unemployment and poverty in the rural areas are serious issues (RGZ, *ibid.*)

Export crops occupy 40 percent of the total land cultivated. Cloves is still the most dominant crop. Chillies, coconuts and a few other export crops are growing in importance but are no rear to cloves in importance – RGZ, *ibid.*). Despite stagnation of production and the uncertainty of demand in the world market, cloves until 1994 accounted for 70 percent of Zanzibar's export earnings.

The remaining 60 percent of total cultivated land is used for food crop production to produce cassava, bananas, sweet potatoes legumes and maize. Cassava is most important to most rural households as source of starch. However rice is the most preferred starchy food and is grown wherever it is possible to grow. Unlike the other food crops which are grown in complex mixtures, rice is grown in pure stand GRZ (1).

Slightly more than 50 percent of households in Zanzibar own livestock 23 percent of whom own low producing indigenous cattle livestock account for 12 percent of GDP. Present per capita annual consumption of red meat milk are estimated at 3 kilos and 4 litres respectively (RGZ 1999 op.cit, p.2). In recent years cattle and goats slaughtered in urban market have averaged 5000 and 4000 annually respectively (RGZ 99 a *ibid.*) Both improved and unimproved poultry species are also kept by some household.

Zanzibar's are well known fishermen even on the Mainland. Fishing contributes 2.5 percent to GDP and 6.3 percent of Total Agricultural GDP. About 99 percent of the annual catch of 11,000 tonnes is sold locally providing Zanzibar's with their main source of protein. In fact fish provide a 100 percent of the protein available to poor households and accounts for 22 percent of the average family expenditure on food. The development of coastal and off-shore fishing needs to be emphasised and has a great potential of from both the supply and demand side. (RGZ, 1999a *ibid.*)

## **2. The Policy Environment**

The first Agricultural Policy was issued by the RGZ in 1984. The objective was to try to turn the agricultural sector around after some years of deterioration or at best, stagnation. The policy emphasized and consolidated the role of the state execute a mechanisation drive and the rehabilitation and development of irrigation facilities. However, the policy lacked "sectoral package and of complementary programmes detailed sub-sectoral policies and institutional support mechanisms necessary for effective implementation and monitoring (RGZ, 1999a *ibid.*)

Furthermore, even as this agricultural policy was being promulgated Zanzibar had already started experimenting on economic liberalization measures especially in the area of trade. In 1986 these experiments were consolidated and formalised into the First Economic Recovery Programme (ERPI). After ERPI there followed ERPII which was implemented from 1991 to 1994. The ERP programmes aimed at food, cash and export crop production, rehabilitating physical infrastructure, to increase capacity utilization in industry it restoration external and internal balance through pursuit of appropriate macro-economic policies. Incentives to producers rather than central government directives would be used to achieve the overall objective of increasing the production of goods and services.

No comprehensive review of the 1984 Agricultural Policy was made to bring it in line with the new macro economic environment ushered in by the ERP. The Zanzibar Ministry of Agriculture, Livestock and Natural Resources (MALNR) assisted by FAO has just finished the exercise of drawing up such a review and on the basis of that review. These new Agricultural Policy has now been submitted to the President and the Cabinet for consideration and possible adoption (RGZ, 199a).

## **2.1 Trade and Fiscal Policy:**

2.1.1 Trade Policy: As pointed out earlier trade liberalization in Zanzibar started earlier than on the Mainland. This was the time when Ali Hassan Mwinyi was the President of Zanzibar. The importation of most goods was liberalized and so was the domestic trade in imported goods. By then imports of consumer and other goods were still rigidly controlled on the Mainland. Consequently a relatively small market for these imported goods in Zanzibar was quickly saturated and a vigorous trade in these commodities developed between Zanzibar and the Mainland. This led to the further expansion of the trade sector in Zanzibar when ERP was introduced on the Mainland in 19895, Zanzibar had already established herself as a cheaper source of imported textiles, electronics and other consumer goods.

Trade liberalization had a positive impact on the economy. It enabled Zanzibar to have shops with fully stocked consumer goods and re-export a big share of these imports to the mainland and neighbouring countries like Kenya. This raised incomes in the trade sector including the informal trade subsector. These incomes must have had spillover effects to rural people directly through increased income by rural trading entities and indirectly through remittances from traders in urban and rural areas to non-traders in rural areas. The increased supply of consumer goods acted as an incentive for increased agricultural production.

This hypothetical cause and effect is supported by GDP Data presented in the macro-economic section. Agriculture grew by 7.9 percent in real terms during the first five year a of the economic reform programmes. As pointed out this performance of the agricultural sector could not be sustained. This is because the trade reforms in the

agricultural sector itself were limited. While trade in food crops was liberalized, trade in export crops was not. This meant that the all important clove-subsector was left out of liberalization., This is further explored later in this report.

### 2.1.2 Fiscal Policy:

Cloves are the only source of export revenue. An export tax is levied on cloves and in the past it was even a more important source of revenue. So far we have been unable to get any details about the nature of this export tax. We know, however, that with the decline in production and exports, the importance of this source of revenue has decreased.

We do not have a clear trend of development expenditure on agriculture by sector. However we have some idea about the provision of subsidies to agriculture. Subsidies to agriculture have been a major agricultural policy in Zanzibar since the revolution. However even since the 80's it became clear that subsidies were largely unsustainable. It was envisaged to do away with subsidies in the introduction of the economic reforms. However it has not been possible to eliminate them all together. Table1, shows recent trends in the provision of subsidies to agriculture. The share of government development expenditure going to subsidies is quite considerable as shown below:

**Table 1: Trends in the provision of Subsidies to Agriculture**

Year	Total available Development Budget (000 shillings)	Agricultural subsidies (000 shillings)	(%)
1994/95	1,051,392	40,489	3.9
1995/96	1,081,427	49,904	4.6
1996/97	627,000	32,860	5.2
1997/98	560,000	54,110	9.7
1998/99	503,000	31,867	6.3

Although resources available from government have been declining quite rapidly subsidies have been increasing. The percentage of subsidies of development funds allocated to agriculture alone would be much bigger. In view of the dismal performance of the sector it is doubtful that this high degree of subsidisation is the best way of allocating public resources.

## 2.2 Agricultural Marketing and Price Policies

### 2.2.1 Introduction

Due to its geographical location, Zanzibar has been a trading country for a long time. Zanzibar has been a trading country. Cloves have been a dominant export commodity between Zanzibar and the rest of the world for more than a century. At the time of the Zanzibar Revolution prices on the world market were quite good enabling the RGZ to generate revenue and foreign exchange that enabled it to launch ambitious social programmes like free universal 10 year schooling and modern housing equipped with imported modern kitchen equipment like cookers and refrigerator for ordinary people.

RGZ nationalized domestic and export trade in cloves and gave the Zanzibar State Trading Corporation (ZSTC) in monopoly of all trade in cloves and chillies. Before the Revolution Cloves were traded through the Cloves Growers Association (RGZ, 1999a).

### **2.2.2 Marketing Systems:**

Agricultural Marketing systems differ in two main ways. First is the difference between the three export crops still under state monopoly even after trade liberalization – cloves, copra and chillies. The marketing of these is confined to ZSTC. And then there are difference of other crops both for domestic use and for export. For the uncontrolled spices, ginger, black paper, turmeric, cinnamon etc. traders (shopkeepers and exporters) go to producers in search of produce especially when there is a shortage of supplies, otherwise the farmers bring the produce to markets in towns themselves and bear all the risks involved. Second is the difference across commodities be they for domestic use or for export. This is for crops, traders can buy produce from farmers and take into wholesale markets where it is bought by retailers who sell it to consumers. Farmers may also sell the produce directly to the retailers or even the consumer. Fish may be taken to auction markets, many of which are near landing sights where retailers and individual consumers may buy them. Some itinerary fishmongers buy at auctions and sell directly to consumers wherever they may meet them many buy the fish at auctions markets and sell them directly to consumers from door to door. Livestock marketing involves both live animals and their products. Live animals are sold both at wholesale auctions or traded between individual owners and individual traders or consumers. Livestock products are sold directly by producers to either dealers or consumers.

The extension of trade liberalization to the agriculture stimulated production and trade both domestically and for the external market. Thus, the sale of mangoes and other fruits to the mainland, the Middle East and Kenya has increased in recent years. However there is need to carry reberalization further to include the confined commodities cloves, copra and chillies. Furthermore there is need to improve quality control, market information and physical infrastructure.

In a recent FAO - aided Agricultural policy Report (RGZ, 1999b) the Government of Zanzibar has been asked to adopt the objective of improving market efficiency by improving physical infrastructure and appropriate regulations so as to encourage participation of the private sector in production, processing and marketing. The Report details the issues that must be addressed to include the following (RGZ, 1999b op.cit)

- a) disorganized marketing systems and inadequate infrastructure and facilities
- b) Complex procedures involving high transaction costs
- c) Inappropriate regulations of wholesale and retail markets
- d) Inadequate availability of inputs and services
- e) Poor enforcement of quality control measures for exports and imports
- f) Lack of market information

- g) ZSTC's monopoly of the clove trade is not beneficial to the industry and the country
- h) Weak marketing system for livestock and their products
- i) Lack of properly organized marketing channels for fishery products.
- j) Seaweed farmers are poorly rewarded - they get only 10% of the export crop. Here the issue is foreign monopolies who have divided up producing are as among themselves.

The report details proposals and actions to deal with these issues notably through the creation of a competitive environment to encourage the private sector to participate in all spheres of the agricultural sector.

### **2.3 land Policy:**

#### **Land availability and Land Use**

Zanzibar has a total area of 2,654 square kilometers - Unguja Island is 1,666 sq. kilometers and Pemba Island is 988sq. kilometers (Mtatifikolo *et. al.*). In hectares the respective area for Zanzibar, Unguja and Pemba is 265,400, 166,600 and 98800 hectares. According to the 1990 Zanzibar Agricultural Survey, total cultivated area was 122, 436 acres (hectares). With an estimated total agricultural population of 645,555 per capita cultivated land was 0.19 acres or 0.07 hectares. The land cultivated per capita increases to 0.4 acres or 0.16 hectares if we only take into account the 309,087 family workers (i.e. exclude dependants-the old and the young). We define a land holding as the total land owned or allocated for use by one family. This holding is often divided into parcels for cultivating individual crops or individual combinations of crops. In 1990 there were 10547 holdings divided into 352,004 parcels. This means that each holding had about 3 parcels averaging 0.35 acres. There is considerable land fragmentation.

The overall land use picture for 1990 is captured in Table 2 which shows the division of total land into cultivated, area grazing, land forest and woodland and land for other uses notably human settlement. It is seen from the table that cultivated land covers 54% of the total land available "Expansion can only take place on the grazing areas and the forest and woodlands. Most of this must have low agricultural production potential and there are also considerable environmental hazards connected with extending agricultural production to these lands.

#### **2.4 Land Distribution**

It was pointed out above that 5.4 percent of rural households in Zanzibar are landless. There is unequal distribution of land as is shown in Table 4a and 4b. In Unguja 14% of the holdings measure under 2.5 acres each and account for only 2 percent of total cultivated land while 1 percent of the holdings measure 5 acres or more and account for 7 percent of the area. In Pemba there are only 1,08 holdings measuring under 0.25 acres compared to 7,367 on Unguja Island. Also the biggest size category of 5 acres and above

accounts for almost 2 percent of the holdings but accounts for 6.3 percent of the land. As expected because more land is available in Pemba than in Unguja the landholdings are bigger and more equally distributed.

### **2.3.2 Land Tenure:**

#### **2.3.1 Introduction**

To understand the present complicated land tenure systems - because there is in fact more than one system operating side by side, one must go back to the pre-1964 Revolution days when essentially two-land tenure systems existed.

- (a) Individually owned plantations, originally planted by Arabs but some later sold to Shirazi and Indians. Plantations were held under freehold and could be inherited according to Muslim Law. The land could be sold, mortgaged, rented or loaned or disposed off in anyway the landlord deemed fit. Squatters had no say.
- (b) Along the coral rag where there are many indigenous settlements., the land tenure was governed by a combination of communal and Muslim rules.

Sale of plantations between members of different races - Arabs, Indians and Shiraz had to be registered with the Administrator General, but sales between members of the same race were not registered.

The 1921 Public Decree and Decree No. 10 of 1954 established the basis for land ownership. The 1921 Decree essentially allowed natives permission to cultivate on public land without first seeking for permission from the government.

While slavery was abolished in Zanzibar by the 19<sup>th</sup> Century, the landlords allowed former slaves or free immigrants from the mainland to settle and grow non-permanent crops on the plantations so as to indirectly weed the plantation crops freely. These squatters also provided a labour reserve for the labour intensive harvesting of cloves. With the political awakening of the 50's the relationship between the landlords and the squatters deteriorated fast and the tranquil symbiotic connections no longer prevailed. The restless rural squatters were one of the major pillars of the 1964 Revolution.

#### **2.3.2 The Impact of the 1964 Revolution**

Following the 1964 Revolution land was declared state property. Subsequently some of the land was redistributed to landless in 3 acres plots (2 hectares) under the Land Redistribution Decree. About 26,000 hectares were redistributed between 1964 and 1974 66,000 acres were distributed to 13,364 people in Unguja to and 8,898 people in Pemba). This land was to be held on the basis of temporary rights, which could be revoked if the conditions stipulated were dishonoured. The condition stipulated that the land could not be left idle nor could it be fragmented (*ibid*).



### **2.3.3 Recent Legislation:**

The land tenure system that emerged after the Revolution lacked a coherence and security. This was partly due to the fact that it emerged from hurried decrees that did not go through systematic legislative procedures. There was therefore a need to put forward legislative laws designed, among other things to bring the Land Tenure in line with the changing socio-economic realities. In the 80's and 90's the following Land Acts have been passed by the Zanzibar House of Representatives and asserted to by the President of Zanzibar, thus becoming law: (op.cit).

- ◆ The Land Adjudication Act, 1989 which sets up the administrative process for ascertain land rights and empower the adjudication officer to decide on distributional issues.
- ◆ The "land Surveys" Act, 1989 which deals with the licensing and professional conduct of surveyors.
- ◆ The Registered Land Act, 1989 establishing the legal framework for registered land rights.
- ◆ The Land tenure Act No. 12 of 1992 which defined the law in relation to occupying, owning or leasing land and trees and defines the boundaries of public and confiscated lands
- ◆ The land Tribunal Act, 1994 which created the special land tribunal (court) dealing with land disputes. Although it has quite a lot of powers, its decisions can be challenged in higher courts and only deals with minor legal technical problems.
- ◆ The Land Transfer Act, 1994 which sets up land transfer committees to adjudicate in cases involving transfer and long term lease.

Despite this legislation, there are still many problems connected with land tenure and land use. Basically the problem is that many people are not aware of this legislation. Moreover conflicts have arisen among various land users e.g. crop versus livestock and agriculture and environmental considerations. The new Agricultural Policy has proposed policies and strategies aimed at resolving these problems and conflicts.

## **3. World Price Changes:**

### **3.1 Trends in Output Prices.**

For export crops, prices in the world market are a major determinant of the prices received by the producers domestically. A very sharp change in the prices of an export crop in the world market represents an important shock in the economy exporting that country affecting rural income and therefore general welfare. If the government taxes the exports, then government revenue may also be affected.

#### **3.1.1 World Market Prices for cloves:**

Unfortunately adequate time series data on world market prices were not available. We therefore used the unit export value, which was derived from the quantity of cloves exported in a given year and their Tshillings value by dividing the latter by the former. We then converted this figure into US dollars using the Tsh/Dollar exchange rate. Table 3 shows the quantity, value and unit value of exports of cloves from 1978 to 1996. We shall comment on the quantity at a later stage. It can be seen that in US dollar terms the unit value of has dropped sharply for the whole period shown except for a few years when the price shot up. The trend however is clearly a downward one. The unit prices are also shown in US dollar per Kg Fig 1. The corresponding value and unit value figures in Tshs are shown in Table 4 and depicted in Figure 2. If the exchange rate remained fixed as was the case before the economic reforms, the Tshillings values would have been much lower. However the exchange rate could not fully compensate the producers for the big fall in world market prices for cloves.

### **3.1.2 Copra:**

Prices of copra in world markets over, the 1983-94 have been unstable but the overall trend has been that of decline with sharp declines alternating with sharp rises. The declines in 1995 and 1996 were particularly sharp. The price of copra on the world market declined by over 80 percent between 1984 and 1985. It declined by another 95 percent in 1986 before rising by 36 percent in 1987.

### **3.1.3 Chillies:**

The prospects for chillies in the world market were quite good at the beginning of the period under consideration. Prices rose consecutively in the first three years - 1984-86. Thereafter prices fell consecutively and precipitously for five years to rise modestly for the last three year shown in Table 6 and Figure 3.

## **3.2 Input Prices:**

**Crude oil:** while the price of oil seems to have also been subjected to fluctuations, these fluctuations were less violent in comparison to those pertaining to Zanzibar's external exports-cloves, copra and chillies (we could not find data world sea weeds prices). (See table 6 and Figure 4). This however means that given the general declining trends the prices of Zanzibar's major export, the slight modest decline in the prices of oil could not offer much comfort to Zanzibar.

## **3.3 Imported Food Prices:**

### **3.3.1 Rice**

We saw that food commodities feature quite prominently on Zanzibar's import bill. In terms of foreign exchange conservation imports of rice from the mainland are quite useful.

However since production of rice is subject to fluctuations mainly following the vagaries of the weather, it is necessary for Zanzibar to import outside the United Republic to meet its rice requirement which is the preferred food. Again, as Table 6 and Figure 6 show the price of rice on the world market has been relatively more stable than the prices of cloves, chillies and copra.

### **3.3.2 Wheat:**

In Zanzibar wheat may be relatively be more important than on the mainland. Typically Zanzibaris take one main meal-lunch. The main preferred ingredients of this meal are rice and a protein-fish, beef, chicken or beans or other legume. In the morning (for breakfast, Zanzibar's usually take tea served with bread or some other product made from wheat. Wheat is therefore very important in Zanzibar's food requirements. The mainland grows somewhat but it is not adequate and it is not competitive in taste and price unlike local rice, which has the preferred aroma, and taste. Again as shown in Table 6 and Figure 5, wheat trends in world prices have been fairly stable. However given the big declines in the prices of export crops, like cloves and copra, any slight increases that have occurred have had a considerable impact on Zanzibar's capacity to meet its requirements for food imports.

## **4. Trend in producer Prices**

### **4.1 Cash Crop Producer Prices**

As noted earlier cash crops are still the monopoly of the Zanzibar State Trading Corporation (ZSTC). The prices for each season are fixed in advance on the basis of ZSTC's estimates of the expected world prices and it's marketing costs.

There are two criteria for judging whether a producer has received a fair price for his produce. One is to see to what extent the prices received affects the producer's purchasing power of other goods. Normally these prices are related to the country's consumer price index. Taking the Rural Cost of Living Index is the best way. The other way is to compare the producer price to the export price of the good if it is an export. The bigger the share the farmer receives of the export price as a producer price the better. Yet another way is to relate the producer price to the input prices paid by the farmer for the inputs that went into his production of the crop. Which one of these methods one uses depends on the purpose for making the calculation. It may be useful to use all three in order to see to what the farmer gains from the three different perspectives. Here two more we shall use only two comparisons - comparing the producer price to the export price and relating the producer price to the cost of Living Index. We do not have the data for the input prices and because farmers in Zanzibar use little inputs.

Table 7 and shows the producer prices for three principal export and food crops in nominal prices. The prices in Table 7 are shown in Fig 12.

Table 8 shows the prices of export crops during 1980-1996 in real terms. For each export crop, the nominal and real prices are shown in Figures 13, 14 and 15. The graphs show that while nominal prices have increased much in recent years these prices have more or less stagnated in real terms.

The aim of the government is to pass on to the producer at least 60 percent of the export price. Unfortunately we do not have the required time series to evaluate how successful the government has been in meeting this objective. The following information for cloves and chillies was obtained for cloves and chillies from.

For that year the objective was met if the parallel exchange rate of Tsh. 440/= 1 US \$ was used instead of the official exchange rate of Tsh. 300/= 1 US \$. As the above information shows the cost of production was at prevailing levels of subsidy (which are not specified). It is not indicated whether the explicit export taxes (especially on tax) was taken into account. If we take into account the implicit tax due to the overvalued Tsh. Then the net explicit tax (less the subsidies on input), the producer probably received less than the 40 and 41 percent of the world export price for cloves and chillies respectively.

#### **4.2 Determinants of Producer Prices:**

The produce price paid by a state monopoly like ZSTC is determined by taking into account the following:

- ◆ The expected world price of the commodity.
- ◆ The expected exchange rate of the Tsh. in terms of the currency the commodity is traded internationally (usually the US \$).
- ◆ The efficiency of the marketing parastatal
- ◆ The efficiency of the producer

The first two factors have, been explained above. Below we discuss the rest.

The efficiency of the marketing agency, in the absence of competition, can be examined by looking at the extent to which the agency contains marketing costs and does not allow them to escalate. For example, in 1992/93 ZSTC estimated that it would spend Tshs. 72155.10 per ton in administrative and overhead costs equivalent to 42.70 percent of the total marketing cost representing a 26.5 percent increase over the previous year (RGZ, 1992 p.7).

The production efficiency of the farmer relates to the quality of the crop sent to the buying post. Both cloves and chillies are bought in grades. The available data show that at least in the past ( we do not have' recent data), quality seems to have been a problem as depicted below (RGZ Table 3 p. 5).

## **5. Performance Of The Agricultural Sector**

## **5.1 Cash Crop Production**

The three important agricultural exports are cloves (and its by products), copra and chillies. To these may be added a number of marine products – a variety of fish species and seaweed.

### **5.1.1 Cloves:**

Although declining in output and value, cloves are still very important to Zanzibar for foreign exchange and as a source of income to many rural people.

For export crops the marketed production is more or less equal to total production. As pointed out earlier the market outlook has been bleak for sometime. The 1983 price boom has not been repeated for the last seven years shown in Figure 1. Prices (unit values) were very low. Despite these low prices production booms seem to continue in cycles shown in Fig 7 and Table 5. There are no data to establish a long term trend in yields except for occasional estimates which. Moreover since cloves are often inter-planted with other crops in various combinations of plant densities, it is difficult to have accurate figures of yields. The often-quoted yield is which is quite low. The low yield is attributed to the old age of a big proportion of the replanting does not seem to have proceeded at a pace fast enough to increase the proportion of young trees. Husbandry practices are also said to be poor. In the proposed agricultural policy it is intended to improve extension services and to create incentives for replanting (RGZ 1999b p.).

### **5.1.2 Chillies:**

Whenever prices have been good, producers have responded positively by increasing production. However prices have at times been discouraging and production was negatively affected. On the demand side Zanzibar has at times not produced the preferred varieties and hence the fall in prices. The new policy intends to encourage the production of the preferred varieties and to help improve yields through extension services.

Table 12 gives the trend of production over the period, which has been fluctuating mainly due to the fluctuating prices.

### **5.1.3 Copra:**

Copra comes from processed coconuts. Like cloves, the age of the trees and slow replanting rates have contributed to the low yields in addition to poor husbandry which is responsible for rampant pest and disease infestation of coconut trees. Production figures for copra are depicted in Fig 8 and table 12 .

#### **5.1.4 Non-traditional Exports:**

In recent years, following the liberalization programmes, non-traditional exports have grown in importance. However the increase in the level of these exports has not always been consistent. Table 9 gives details on the volume and composition of these non-traditional exports. While cloves are still the most dominant export-accounting for over 90 percent of the value of total exports, some non-traditional exports have shown that they can contribute significantly to export earnings. As Table 9 shows, Seaweed in particular has great potential. While seaweed is not bought and exported by a state monopoly, the oligopolistic private buyers at present pay too low a proportion of export prices (RGZ, 1999b p.). The government plans to create a more competitive environment that can pass on a higher return to the producer. At present the producer gets only 10% percent of the export price (GRZ 1999bp.)

#### **5.2 Food Crops:**

Before liberalization, the government was actively involved in the purchasing of main food crops and their importation. Even then total production area cultivated were only very rough estimates as the problem is how to arrive at estimates of household auto consumption. The aggregate total area planted with food crops and total output is shown in Table 11 and graphed in Figure 16. According to these data production decreased from 510,982.88 to 243030.0 tonnes between 1984/85 and 1993/94 (as in the last two years shown there rice is excluded the figures for these two years cannot be used for comparison). The decline in output is big amounting to 110 percent. It also appears that yields dropped even further judged by the fact that output in Fig 16 fell more than acreage.

The major problem facing all food crops is the prevalence of low-yielding varieties and disease and pest infestation. Research and extension efforts need to be directed towards food production in order to help attain higher levels of production. This will enable

Zanzibar to attain a higher level of food security and self-sufficiency. Trade between Zanzibar and the mainland is important as a source of food to Zanzibar especially maize and rice. However imports from other countries have become important sources as shown in Table 10 and Figures 9, 10 and 11. It should be mentioned these are imports made by the government. Since liberalization the private sector has been allowed to import food. The private sector has more or less taken over the importation of sugar and wheat.

## **6.0 State Farms and Parastatals**

Following the 1964 Revolution all land was declared state property and was distributed as follows:

- ◆ Government plantations
- ◆ Agriculture and livestock farms/stations for research purposes
- ◆ Nationalized farms that were divided into three-acre plots and distributed to the people
- ◆ Nationalized farms not subdivided some of which were later allocated to state institutions like Prisons JKU (a National Service Unit) etc.

Some of the nationalized land was turned into state farms.

Most of these farms are ill equipped and have little economic justification for carrying on as production units. It is proposed in the new Agricultural Policy to privatise them and invite the private sector to buy some of them while others could be divided up among peasants (RGZ, 1999b).

**6.1 Parastatals:** Recent official sources mention only two parastatals – the Mahonda Sugar and Spirits Company and the Zanzibar Tractor Repair Workshop.

The sugar estate and factory produces sugar cane which is refined into sugar. It also makes spirits from sugar cane. The Tractor Repair Workshop repairs farm machinery and hires the same to farmers. Both parastatals are short of equipment and good management. It has now been decided to privatise them.

## **7. Conclusions:**

The Agricultural Sector has performed poorly in the last decade or so. This is particularly so with regard to food crop production. The situation is at best stagnant or unstable in all

the other sub-sector including livestock and fishery. Although liberalization was introduced vigorously in trade, construction and tourism sectors that have made good gains, the agricultural sector has largely been left largely under state control. Even where marketing has been liberalized, production is hampered by other institutional issues like land policy and land tenure. Under the new Agricultural Policy, the MALNR's role will be confined to public support implementation and management and the promotion of an enabling environment that will enable the private sector to plug an active part in the development of the agricultural sector.

The main goal for Zanzibar's Agricultural Sector will be to promote the sector in a sustainable way for the economic, social and environment needs of the people of Zanzibar.

Specifically the Policy will aim at (RGZ 1966 para 1.3.1):

- ◆ The modernization and commercialization of the sector to achieve sustainable and enhanced productivity and incomes
- ◆ The attainment of national food security and better nutritional status of all the people
- ◆ Increased agricultural exports to earn more foreign exchange.
- ◆ Increased contribution of the sector to national income and employment
- ◆ To increase the quantity and quality of agricultural commodities for which Zanzibar has comparative advantage
- ◆ The promotion of primary processing and the production of raw materials for agro-processing and agro-based industries

The following policies are proposed to achieve the objectives (RGZ 1999b para 1.4)

- ◆ Liberalization and rationalization of the production and processing of both traditional and non-traditional crops.
- ◆ Encouraging private sector investment through providing incentives in agricultural activities.
- ◆ Encouraging increased production by the private sector including commercial farmers and smallholders.
- ◆ Improving the quality of production, grading and processing of commodities



- ◆ Further reforms in agricultural marketing and pricing especially with regard to export commodities.
- ◆ Policy instruments to implement the policies will include
- ◆ Better execution of research, extension and training
- ◆ Regularly review of impact of policies
- ◆ Promotion of small scale irrigation
- ◆ Increase capacity by the Ministry for the acquisition analysis of information relating to prices for inputs and inputs and other information and timely disseminating the results to stakeholders.

## **8.0 Poverty, Food Security and Nutritional Status**

Introduction: Food consumption is basic for survival and human welfare: The measurement of poverty is first and foremost connected with the measurement of the value of food consumed by an individual, a household or even a nation. At the national level, food security is domestic food related to the ability of a country to meet the requirement food for all its people at all time. In the previous sections production, import and prices of food have been discussed. We noted that due to poor yields, food production has not kept pace with population growth. Food imports of the most preferred foods - sugar rice and wheat have increased. While the continuation of production and imports assure national food security this may not be enough for household food security.

### **8.1 The Importance of Household Budget Surveys:**

In order to have an idea of food security at the household level and to understand the different food security and nutritional status, it is important to carry out special surveys to get the data that can be used to analyse food security conditions facing households across different locations and income groups. This has been conducted in Tanzania using Household Budget Surveys and Demographic and Health Surveys and other specialized surveys. HBS work has been carried out in Tanzania since the colonial days beginning with individual urban areas and eventually the one year national survey ( Kapunda, 1987.)

The HBS surveys have been analysed and have yielded interesting parameters. These parameters include engel's ratio which show the proportion of food expenditure that is spent on food across locations (urban-*vis-à-vis* rural households; region x *vis-à-vis* region Y) and across income groups.

The regression coefficients show the relative importance of factors determining total food consumption and the consumption of individual food items across income groups and localities.

An idea of the response of consumption levels to changes in total expenditure (i.e. income) is obtained by computing the expenditure elasticity of demand for all food or individual items and across income groups and localities.

#### **8.1.1 The share of food in total expenditure:**

The findings, based on HBS data basically confirm Engel's Law that the share of expenditure on food in total expenditure is inversely related to total expenditure (i.e. income levels). The low income groups spend a higher proportion of their incomes on food. When food is disaggregated, the consumption of some items decrease with increased income while consumption of other foods increase with higher income. This is

the distinction between inferior goods and luxury goods. As one would expect meat other sources of animal proteins are luxuries, Kapunda (1987), Towo (1987)

With regard to locations, urban areas spend a less of their income on food relative to urban areas.

### 8.1.2 The determinants of food expenditure:

The variables that were used in HBS expenditure studies in Tanzania; vary by author. Generally the earlier studies were simpler and use only a few variables. Mashuda (1970) who used data from the 1962 Zanzibar HBS (1962) and the Dar es Salaam HBS (1958) had two independent variables - total expenditure and household size. Towo (1970) used the 1981/82 Zanzibar HBS data. She used total expenditure, household size, educational level of the head of the household, sex of the head household and location, (rural/urban). Kapunda's analysis (1977) used the 1976/77 Mainland HBS and the 1981/82 preliminary results using total expenditure, adjusted household size, regional average prices literacy levels and urban/rural location. Total expenditure was a common dependent variable to all the studies and in most cases, except for a few functional forms was the most significant variable (at 1% level) explaining variation in expenditure.

### 8.1.3 The impact of changes in income:

The change in the quantity demanded of a commodity resulting from a change in total expenditure is the expenditure elasticities for both total food and for individual food items across income groups and locations. Again like the Engel ratios, the elasticities vary by income group and individual food items. Generally elasticities for rural areas both in Zanzibar and the Mainland were higher rural areas than in urban areas (Table 18). Across commodities, expenditure elasticities for inferior goods had low elasticities while those for normal goods have higher elasticities. When attempting to run a regression model for the determinants of nutritional status, we failed to achieve good results when we included the maize variable in the case of Zanzibar. Maize is an inferior good in Zanzibar consumed mainly in rural areas. Even in rural areas cassava is preferred to maize. The elasticities for individual food items computed by Mashuda (1970) and Towo (1989) for Zanzibar were as follows:

Table 18:

Commodity	Mashuda's Study		Towo Study	
	Expenditure	Family size	Expenditure	Family Size
Maize	-0.03	-0.04	-0.16	-0.20
Rice	1.15	1.25	0.62	-0.09
Bread	1.70	1.80	-1.42	0.06
Sugar	1.20	0.90	0.50	-0.60
Meat	0.70	0.55	0.82	-0.14
Fish	0.60	2.01	1.01	-0.04
Clothing	0.62	1.25	1.42	0.36

Source: Towo (1989).

#### **8.1.4 Nutritional Status:**

Nutrition is related to the quality of the food. The most important matter is whether households receive food that is not deficient in any essential nutrients. Often children and mothers are the most vulnerable to deficiency in essential nutrients. The nutritional status of households in a country is best captured by looking at the nutritional status of women and children. Table 13 from the Health and Demographic Survey (1996) shows the nutritional status of children in Tanzania by residence - Mainland, (broken into Total Urban, Dar es Salaam, Other Urban Total Urban ) and Zanzibar. Unfortunately there were no finer details about Zanzibar. A rough comparison shows that children in Mainland Tanzania may be enjoying a better nutritional status than children in Zanzibar especially on the basis of weight - for height and weight for - age criteria.

Table 14 shows the nutritional status of mothers in both Mainland and Zanzibar. Again there were no locational breakdowns for Zanzibar. The data indicate roughly that mothers on the mainland may be better off nutrition-wise.

#### **8.1.5 Other measures of well-being:**

Food security and good nutrition are important to human welfare and well-being. There are, however, other indicators of wellbeing that are also important and may in fact be more important in as far as they enhance the impact of good nutrition for the human body. Below we consider a few of these!

#### **8.1.6 Demographic and Health Factors:**

##### **Infant and childhood mortality:**

The decline in infant mortality has been big in Tanzania. The DHS (1996) estimates that infant mortality has declined by 14 percent in the last 14 years. This may be due to the fact that pre-natal, delivery and post-natal care has increased. Here are again there are some differences between Zanzibar and the Mainland - in the last 5 years before the DHS 47.0 percent of births took place in a health facility against the 48 percent that took place at home in contrast to the 31.2 and 67.4 that took place in a health facility and at home respectively in Zanzibar. In Dar es Salaam 86.3 percent against 11.6 percent of births took place in a health facility and at home in the Mainland respectively. On the Mainland assistance at delivery given by Traditional birth attendants accounted for 216.4 percent of the births while over 50 percent of the births were attended by Traditional birth attendants in Zanzibar.

Another area in child health where Tanzania has achieved remarkable success is child vaccination. Table 15 from the DHS shows that 75.4 percent of the children required to, receive vaccinations in Zanzibar had received all the required vaccinations, against 70.3 percent for Mainland, 79.1 or Dar es Salaam and 80.2 percent for other urban areas.

#### **8.1.7 Education**

Tanzania had made great strides in primary education having reached close to universal primary schooling in the eighties. That achievement was not maintained. Truancy abounds and there are complaints from many people about the quality of education. The general picture revealed by the DHS is shown in Table 16.

About 49.6 percent of people age 6 upwards have no education whatsoever in Pemba. In fact the percentage for the whole of Zanzibar is 43.4 while Dar es Salaam has the best achievement with only 22.0 percent of all people age 6 and above having received no schooling.

When it comes to higher levels of education, Zanzibar's record is much better. Mainland Tanzania for some time deliberately emphasized primary education at the expense of secondary and tertiary education. On the other hand Zanzibar's primary education included some years of secondary education since Zanzibar was aiming at 10 years universal education. Over - all Pemba scores the lowest median years of education for women - 0.0 years against 6.0 years for Dar es Salaam, 2.2 years for Unguja and 0.2 for rural Tanzania. The scores for median years of education are higher but relative positions across locations do not change much.

#### **8.1.8 Employment:**

Employment is a source of income. In an agricultural country like Tanzania, everyone can work on their own farm or work for others on the land. After all the landless are really few. Incomes however in agriculture are by far lower than in other sectors. There are bound to be people seeking for employment outside agriculture. The DHS reported the data in Table 17 regarding occupation in non-agricultural activities. It is seen that Zanzibar leads the percentage number of men not currently employed - 19.6, almost one fifth of all the men in the sample. As can be expected the biggest percentage of professional/technical skilled people is in Dar es Salaam and the other urban centers.

#### **8.1.9 Income Inequality and Poverty:**

The HBS for the mainland and Zanzibar are now done using the same methodology. Since they are not done at the same time it is difficult to make direct comparisons between the two. Similarly both parts of the United Republic have separate cost of living indices which are not related to each other. Since there is a high level of cooperation between the two Departments/Bureau of Statistics it should be possible to relate the two CP, and to carry out the HBS during the same periods.

The Bank of Tanzania prepares some macro-economic statistics in its monthly, quarterly and annual bulletins and reports, which cover both parts of the Republic. BOT could work with the two Bureau to improve comparability of economic data for the two parts of the United Republic of Tanzania. In the absence of this comparability is difficult and at times hazardous to make such comparisons.

#### **8.1.10 Expenditure levels:**

The HRD Survey (1993) put expenditure per adult equivalent and expenditure per capita at T.shs 250,284 and 168,824 respectively equivalent to 455 and 306 US \$ respectively at the then prevailing exchange rate of T.sh 550 to the US Dollar.

World Bank (1996) made a comparison between the expenditure levels in the 1991 HBS and those in the 1993 HBS and concluded from the comparison that incomes had improved within that span of three years. As World Bank (1996) pointed out one has to be careful about such a comparison. On the other hand GDP figures seem to confirm that incomes, in some sectors - notably trade construction increased during this period raising total GDP in the process. For income distribution purposes we should note that although income and well-being may have improved this improvement did not affect all sectors. Some people's welfare therefore did not improve. This includes farm incomes.

The other observation made in World Bank (1996) is that Zanzibaris are better off than their counterparts in the Mainland. May be. The main argument seems to center on the observation that people in Zanzibar seem to spend a small share of their total expenditure on food. This could be quite straight forward true if we were comparing Zanzibaris buying the same prices. Moreover, anecdotal evidence has it that Zanzibaris have different eating habits - Lunch is their main meal. In the evening they take bread (in the urban areas cassava in rural areas and tea). We may not be comparing the same things.

#### **8.1.11 Inequality:**

In the absence of new data there is little that can be said about inequality and the measurement of poverty more than what was said in World Bank (1996). In this Report we have added some information about other aspects of wellbeing connected into health and education.

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**Table 2: Zanzibar: Land use pattern**

Land Category	Ha	% of total
<b>1: Cultivated Land:</b>		
(a) Sugar Cane	1850	1
(b) Reinfed rice	13780	6
(c) Irrigated rice	405	0
(d) Other continual rotational cropland	20795	8
(e) Purestand tree crops	33520	14
(f) Complex associations		
(i) Association of tree crops	41835	17
(ii) Association of tree and food crops	18715	8
(iii) Other association	670	0
<b>Total Cultivated area</b>	131570	54
<b>2: Grazing land:</b>		
(a) Ranch and dairy farms	2140	1
(b) Unimproved grazing	77560	32
<b>3: Forest and Woodland</b>	30595	12
<b>4: Other landuse</b>		
(a) Settlements	2995	1
(b) Other	310	0
<b>Total</b>	245170	100

Source: Ministry of Agriculture, Agricultural Statistical Bulletin, Issue No. 3

**Table 3: Domestic Exports of Cloves (in USD): 1978-1996**

Year	Value (in mill. USD)	Quantity	Unit value/Ton	Unit value/Kg	% change
1978	9.11	1364	6000	6	-
1980	61.89	7977	7000	7	14.28
1982	39.13	4588	8000	8	12.5
1984	129.21	2073	60000	60	86.66
1986	16.83	2620	6000	6	-900
1988	72.01	2638	20000	20	70
1990	7.72	3520	2000	2	99.92
1991	3.69	2411	1000	1	-100
1992	4.19	4450	900	0.9	-11.11
1993	3.74	6026	600	0.6	-50
1994	1.52	2585	500	0.5	-20
1995	3.48	4427	700	0.7	28.57
1996	1.35	2331	500	0.5	-40

Source: Based on Mtatifikolo et al. "Zanzibar Economy", Unpublished Manuscript, Appendix Table 5, pp.46



**Table 4: Domestic Exports of Cloves (in Tshs.): 1978-1996**

YEAR	Value (in mill. TShs.)	Quantity	Unit value/Ton	Unit Value/Kg	% change
1978	70.2	1364	50000	50	
1980	507.5	7977	60000	60	16.66
1982	360	4588	70000	70	14.28
1984	1977	2073	950000	950	92.63
1986	399	2620	150000	150	-533.33
1988	7151	2638	2710000	2710	94.46
1990	1499.5	3520	420000	420	99.95
1991	849.4	2411	350000	350	-20
1992	1257	4450	280000	280	-25
1993	1505.8	6026	240000	240	-16.66
1994	790.6	2585	300000	300	20
1995	2151.9	4427	480000	480	37.5
1996	883.9	2331	370000	370	-29.72

Source: Calculations based on Mtatifikolo et al. "Zanzibar Economy", Unpublished Manuscript, Appendix Table 5, pp.46

**Table 4 a: Distribution of Holdings According to Size Category: Rural Unguja:**

Size of Holding (in Acre)	Number of Holdings	%	Area	% of Area
Under 0.25	7367	14	1132	2
0.25-0.50	11627	22	4305	9
0.50-1.25	20377	39	16362	33
1.25-2.50	9906	19	16924	34
2.50-5.00	2505	5	7172	15
5.00 and above	581	1	3236	7
Total	52363	100	49131	100

Source: Ministry of Agriculture, Agricultural Statistical Bulletin Issue No. 3

**Table 4b: Distribution of Holdings according to size Category (Pemba)**

Size in Holdings (In Acre)	Number of Holdings	%	Area	% of Area
Under 0.25	1108.0	2.1	214.0	0.3
0.25-0.50	3127.0	5.9	1209.0	1.6
0.50-1.25	25773.0	48.5	22362.0	30.5
1.25-2.50	18192.0	34.3	31933.0	43.6
2.50-5.00	4017.0	7.6	12984.0	17.7
5.00 and over	877.0	1.7	4603.0	6.3
Total	53094	100.0	73305.0	100.0

Source: Ministry of Agriculture, Agricultural Statistical Bulletin Issue No. 3

**Table 5: Marketed production of Cloves (in Tons and annual percentage changes): 1983/84-1995/96.**

YEAR	AMOUNT	% change
1983/84	13080.05	-
1984/85	4989.28	-162.163
1985/86	4009.79	-24.4275
1986/87	7130.37	43.76463
1987/88	2189.93	-225.598
1988/89	218.75	-901.111

1989/90	1663	86.84606
1990/91	1875.31	11.32133
1991/92	1692	-10.8339
1992/93	1843	8.193163
1993/94	4927	62.59387
1994/95	1576	-212.627
1995/96	10339	84.75675
1996/97	2111	-389.76

Source: Calculations based on Mtatifikolo et al. "Zanzibar Economy", Unpublished Manuscript, Appendix Table 5, pp.46 and BOT, Economic Bulletin, 1998.

**Table 6: World market prices of Selected primary commodities (USD/metric ton)**

Years	wheat	% change	Rice	% change	Crude petroleum	% change	Copra	% change	Chillies	% change	Photo
1983	158.1	-	276.8	-	28.4	-	495.8	-	1794.6	-	3
1984	153.3	-3.13	252.3	-9.71	28.3	-0.35	709.3	30.10	3009.8	40.37	3
1985	137.8	-11.24	217.3	-16.10	27	-4.81	386	-83.75	4036.6	25.43	3
1986	114.9	-19.93	210.2	-3.37	13.8	-95.65	197.6	-95.34	5898.9	31.57	3
1987	114.5	-0.34	229.8	8.52	17.8	22.47	309.2	36.09	5775.6	-2.13	
1988	146.4	21.78	301.6	23.80	14.2	-25.35	397.7	22.25	4601.9	-25.50	
1989	170.1	13.93	320.3	5.83	17.2	17.44	347.9	-14.31	2851.3	-61.39	4
1990	136.8	-24.34	287.2	-11.52	22	21.81	230.7	-50.80	1792.4	-59.07	4
1991	128.9	-6.12	314.2	8.59	18.3	-20.21	286.4	19.44	1418.4	-26.36	4
1992	151.1	14.69	287.4	-9.32	18.2	-0.54	380.4	24.71	1470.4	3.53	4
1993	141.8	-6.55	268	-7.23	16.1	-13.04	295.4	-28.77	2318.5	36.57	
1994	150.9	6.03	358	25.13	15.1	-6.62	417.3	29.21	3073.5	24.56	

Source: UCTAD, Commodity Year Book (1995).

**Table 7: Prices paid to producers for principal crops (Shs/Kg.) in nominal terms.**

CROPS	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Cloves	15.4	15.4	19.25	19.25	19.25	25	25	25	65	65	100	100	15
Copra	-	-	-	2.75	8	8	8	8	16	16	25	25	40
Chillies	-	-	-	13.3	13.3	13.3	13.3	13.3	13.3	13.3	80	80	17
Maize	-	-	-	3.41	3.3	3.3	6.67	6.67	5.8	20	20	38	38
Sorghum	-	-	-	4.44	4.44	4.44	7.41	7.41	8.2	30	30	52	62
Rice(Paddy)	-	-	-	3.89	5.56	5.56	5.56	5.56	8.89	11.67	16.7	22.22	50.

Source: Ministry of Agriculture, Agricultural Statistical Bulletin Issue No. 3 and Ministry of Planning Zanzibar.

**Table 8: Prices paid to producers for principal crops (Shs/Kg.) in constant 1980 producer prices.**

CROPS	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Cloves	19.25	16.84	13.23	13.95	10.07	8.45	16.66	12.46	12.90	9.04	9.84	8.75	6.85	5.35
Copra	19.25	2.40	5.49	4.46	3.22	2.70	4.10	3.06	3.22	2.26	2.62	2.06	1.76	3.35
Chillies	-	11.63	9.14	7.42	5.35	4.49	3.40	2.55	10.32	7.23	11.16	16.48	12.85	11.18
Maize	-	2.98	2.26	1.84	2.68	2.25	1.48	3.83	2.58	3.43	2.52	2.21	1.78	1.75

Orghum	-	3.88	3.05	2.47	2.98	2.50	2.10	5.75	3.87	4.70	4.11	3.50	2.82	2.53	2.6
Rice	-	3.40	3.82	3.10	2.24	1.87	2.27	2.23	2.15	2.00	3.30	2.59	1.88	1.52	4.2

Source: Calculated from Table 7

**Table 9: Volume and composition of non-traditional exports Table 2: Food Production and Area Cultivated From 1984/85-1995/96**

Product	1992	%	1993	%	1994	%
Shark Fins	1.50	-	0.20	-	0.60	-
Beachdemer	37.3	95.97	6.10	96.72	45.40	98.6
Skar	1.90	-1863.15	0.20	-2950.00	100.00	54.6
Shells	30.00	93.66	40.00	99.5	30.00	-233
Lobsters	11.40	-163.15	3.20	-1150.00	150.90	80.1
Fresh fish	7.20	-58.33	1.00	-220.00	77.20	-95.4
Seaweed	2343	99.69	2095.80	99.95	2542.00	96.9
Skin of Grouper	0.30	-780900.00	8.40	-24850.00	-	-
Octopus	2.20	86.36	-	-	-	-
Rubber	94.30	97.66	208.00	-	137.00	-
Mangoes	58.00	-62.58	41.90	-396.42	76.50	-79.1
Pineapples	-	-	1.10	-3709.09	-	-

Source: Ministry of Planning Zanzibar.

**Table 10: Imports of major foodstuffs: Zanzibar (In metric Tons and annual growth rates).**

YEAR	SUGAR	%change	RICE	% change	WHEAT FLOUR	% change
1980	0	-	10000	-	-	-
1981	6000	100	14000	28.57	10500	-
1982	5000	-20	22000	36.36	21000	50
1983	6000	16.66	20000	-10	12000	-75
1984	3000	-100	33300	39.93	6000	-100
1985	11500	73.91	36700	9.26	12000	50
1986	8000	-43.75	40000	8.25	12000	0
1987	6000	-33.33	27400	-45.98	12300	2.43
1988	12200	50.81	21000	-30.47	15000	18
1989/90	5772	-111.36	15000	-40	8950	-67.59
1991	13400	56.92	13000	-15.38	8800	-1.70
1992	1545	-767.31	44515	70.79	5423	-62.27

Source: Ministry of Agriculture, Agricultural Statistical Bulletin Issue No. 3

**Table 11: Total area planted with food crops and total output.**

YEAR	AREA (in Ha.)	Production (Tonnes)	% change
1984/85	54172	5109828.8	-
1985/86	46160	341882.2	-93.30
1986/87	37740	268472.1	-21.47
1987/88	51012	335827.1	25.08
1988/89	33311	181441.1	-45.97
1989/90	49979	302810.5	66.89
1990/91	49849	258583.6	-14.60

1991/92	41206	286263.6	10.70
1992/93	37347	231074.2	-19.27
1993/94	42447	243303	5.29
1994/95	44221	178980.9	-26.43
1995/96	44995	178926.1	-0.03

Source: MALNR, Zanzibar.

Note: Production and Area figures include rice cultivation, cassava, maize, sorghum/millet, bananas, sweet potatoes/yams, pulses and ground-nuts.

**Table 12: Marketed production of Zanzibar Major Export Commodities (Metric tons) and Annual growth rates (1985-1997)**

YEARS	CLOVES	% CHANGE	COPRA	% CHANGE	CHILLIES	% CHANGE	CLOVE STEMS	% CHANGE	SEAV
1985	1548	-	3769	-	0	-	155		1
1986	11303	86.30	6379	40.91	0.1	100.00	115	-34.78	
1987	1880	-501.22	4812	-32.56	0.1	0.00	130	11.53	
1988	9992	81.18	5293	9.08	0.2	50.00	108	-20.37	
1989	4192	-138.35	5823	9.10	3.2	93.75	1053	89.74	
1990	2004	-109.18	6926	15.92	4.2	23.80	-		8
1991	15394	86.98	3691	-87.64	2	-110.00	482		2
1992	1692	-809.81	4060	9.08	1.2	-66.66	943	48.88	2
1993	1843	8.19	3677	-10.41	2.1	42.85	38	-2381.58	1
1994	4227	56.39	3293	-11.66	1.6	-31.25	450.4	91.56	2
1995	1575.6	-168.27	2758	-19.39	1.1	-45.45	251	-79.44	4
1996	10339	84.76	2223	-24.06	3.5	68.57	1624	84.54	4
1997	2111	-389.76	766.6	-189.98	0.2	-1650.00	754.6	-115.21	4

Source: BOT, Economic Bulletin, 1998

**Table 13: nutritional status of children by background characteristics**

Percentage of children under five years of age who are who are classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, and mean Z-scores, by selected background characteristics, Tanzania 1996

	Height-for-age			Weight-for-height			Weight-for-age			Mean-Z-score	Number of children
	% below -3SD	% below -2 SD <sup>1</sup>	Z scores	% below -3SD	% below -2 SD <sup>1</sup>	Z-scores	% below -3SD	% below -2 SD <sup>1</sup>			
Mainland	17.9	43.6	-1.8	1.3	7.1	-0.3	7.7	30.5		-1.3	5180
Total	12.0	32.9	-1.4	1.6	7.6	-0.2	4.1	19.5		-1.0	898
Urban											
Dar es Salaam city	13.4	31.1	-1.4	1.4	8.8	-0.2	3.5	23.0		-1.1	239
Other urban	11.5	33.5	-1.4	1.7	7.2	-0.1	4.4	18.3		-1.0	659
Total rural	19.2	45.9	-1.8	1.3	7.0	-0.4	8.5	32.9		-1.4	4282
Zanzibar	14.7	37.1	-1.6	1.8	11.0	-0.6	8.8	33.8		-1.5	163

<sup>1</sup> Includes children who are below -3D

Source: Bureau of Statistics Plan, Demographic and health Survey (1996)

**Table 14: maternal nutritional status by background characteristics**

Among women who had a birth in the five years preceding the survey, percentage of woman under 145 centimetres, mean body mass index (BMI) of women, and percentage of women whose BMI is less than 18.5 (Kg/m<sup>2</sup>), and mean DHS Z-score and percentage of Tanzanian mothers who are more than -2SD below the median of the DHS population, by selected background characteristics.

Residence	Height			BMI			BMI (DHS)		
	Mean	% age < 145	Number of women	Mean	% age < 18.5	Number of women	Mean DHS Z-score	Z-score below -2SD	Z-score number
Mainland	156.4	2.7	4198	22.0	9.0	3524	-0.7	6.6	3516
Total	156.4	2.1	809	23.1	8.1	710	-0.3	4.9	710
Urban									
Dar es Salaam city	155.6	3.0	227	23.5	7.3	207	-0.2	4.5	207
Other urban	156.7	1.7	582	22.9	8.4	503	-0.4	5.0	503
Total rural	156.4	2.8	3389	21.7	9.2	2814	-0.8	7.0	2806
Zanzibar	155.4	2.9	129	21.4	15.4	105	-0.9	13.1	105

Source: Bureau of Statistics Plan, Demographic and health Survey (1996)

**Table 15: vaccinations by background characteristics**

Percentage of children 12-23 months who had received specific vaccines by the time of the survey (according to the vaccination card or mother's report) and the percentage with a vaccination card, according to selected background characteristics, Tanzania 1996

Residence	All <sup>2</sup>	None
Mainland	70.3	3.4
Total Urban	80.6	0.4
Dar es Salaam city	79.1	1.1
Other urban	81.2	0.0
Total rural	68.0	4.0
Zanzibar	75.4	0.7

<sup>2</sup> Children who are fully vaccinated (i.e., those who have received BCG, measles, and three doses of DPT and polio (excluding polio 0))

Source: Bureau of Statistics Plan, Demographic and health Survey (1996)

**Table 16: educational level of the female household population**

Percent distribution of the female household population age six and over by the highest level of education attended, and median number of years of schooling, according to selected background characteristics, Tanzania 1996.

Residence	No education	Primary incomplete	Completed primary	Some secondary and higher	Don't know/missing	Total	Median years of schooling	Total number
Mainland	41.7	29.0	25.8	2.6	1.1	100.0	1.2	152
Total Urban	24.7	29.0	37.0	8.3	1.0	100.0	4.4	300
Dar es Salaam city	22.0	25.4	38.2	12.6	1.8	100.0	6.0	87
Other urban	25.8	30.5	36.5	6.6	0.6	100.0	3.9	12
Total rural	45.9	29.0	23.0	1.1	1.1	100.0	0.2	23

Zanzibar	43.4	30.4	9.5	15.5	1.2	100.0	1.0	484
Pemba	49.6	32.6	6.5	10.4	0.9	100.0	0.0	200
Unguja	39.1	28.8	11.7	19.0	1.3	100.0	2.2	283

Source: Bureau of Statistics Plan, Demographic and health Survey (1996)

**Table 17: occupation: men**

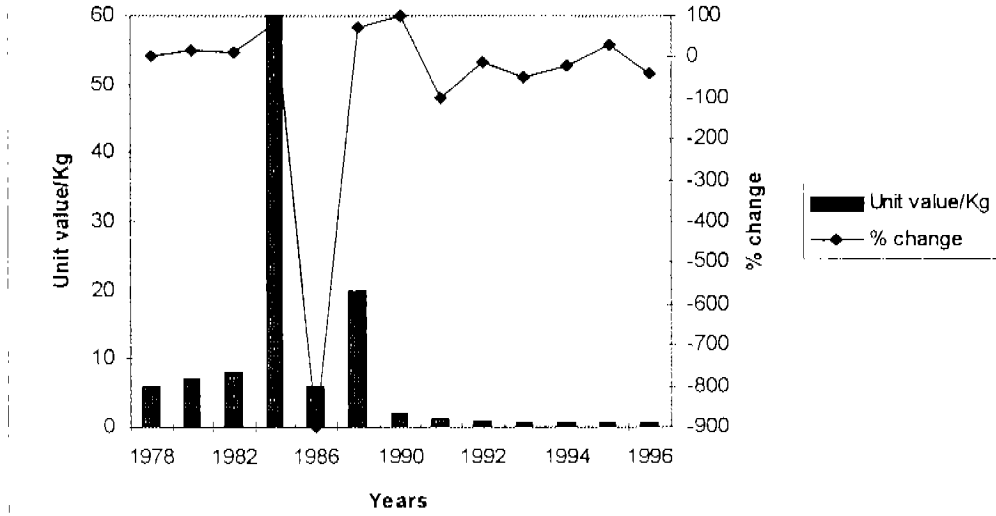
Percent distribution of men by current occupation and type of monagricultural employment, according to selected background characteristics, Tanzania 1996

Residence	Not currently employed	Agric	Professional/technical	Sales/Service	Skilled manual	Unskilled manual	Other	Missing	Total
Mainland	11.3	64.8	3.2	2.9	7.7	8.3	1.4	0.5	10
Total Urban	14.1	24.4	5.9	6.8	21.5	24.5	2.3	0.5	10
Dar es Salaam city	13.6	4.0	6.6	12.5	25.0	33.5	3.3	1.5	10
Other urban	14.3	34.7	5.6	3.9	19.8	19.9	1.9	0.0	10
Total rural	10.4	77.0	2.4	1.7	3.5	3.4	1.1	0.5	10
Zanzibar	19.6	44.5	4.1	0.0	11.5	15.9	3.3	1.1	10

Source: Bureau of Statistics Plan, Demographic and health Survey (1996)

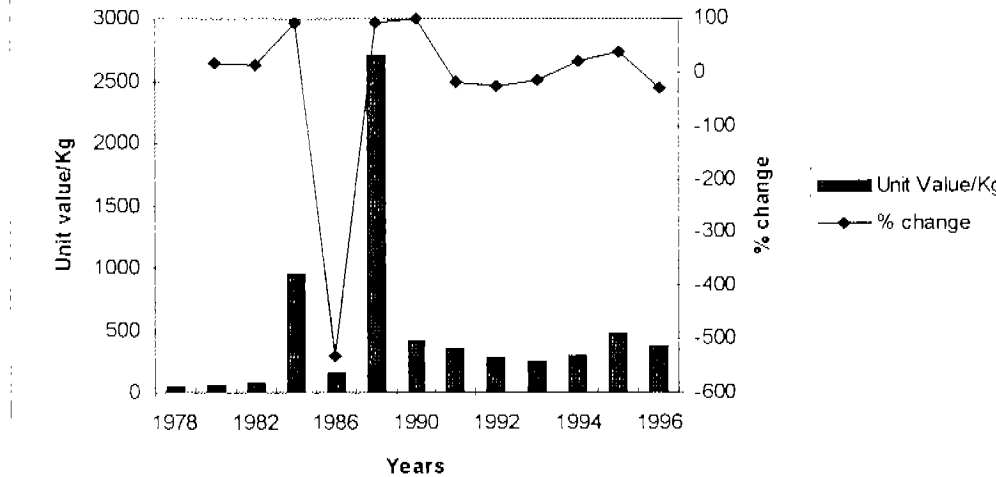
## LIST OF FIGURES:

**Fig 1: Domestic exports of Cloves: Unit Value/Kg and Annual growth rates (in USD)**



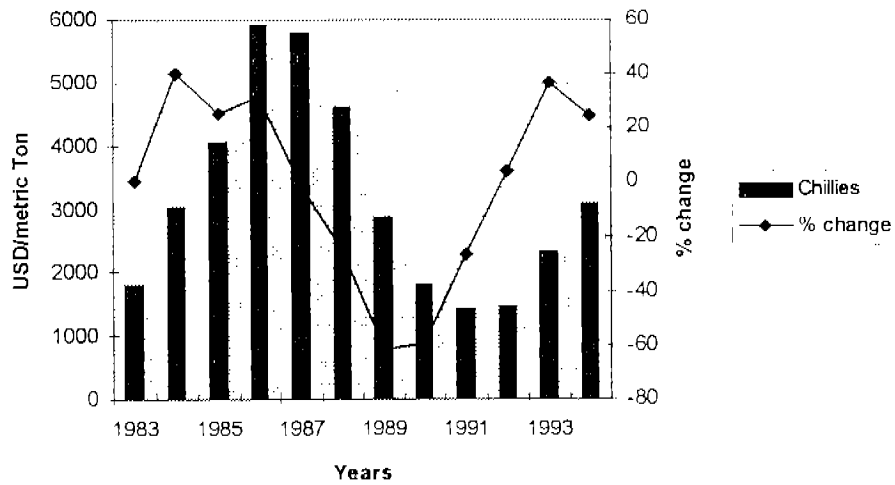
Source: Based on Table 3

**Fig 2: Domestic exports of Cloves: Unit Value/Kg and Annual growth rates (in TShs.)**



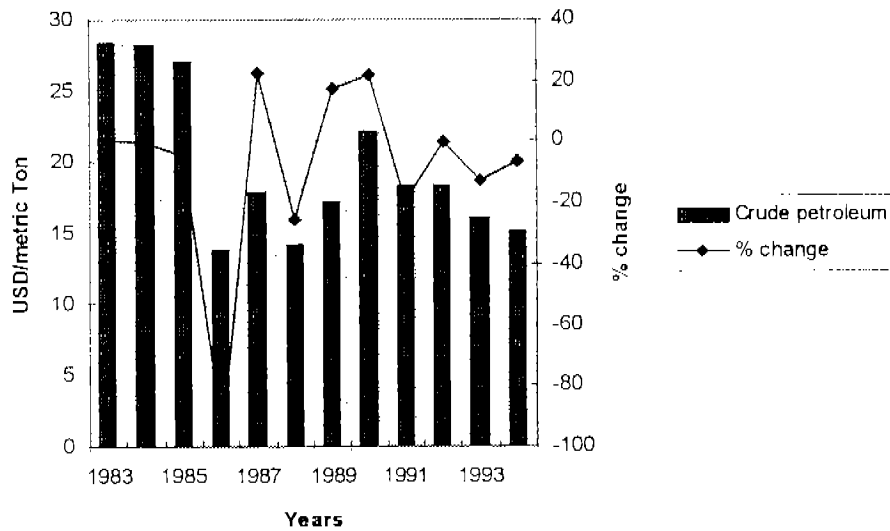
Source: Based on Table 4

**Fig 3: World market price of Chillies (USD/metric Ton and annual growth rates)**



Source: Based on Figure 6

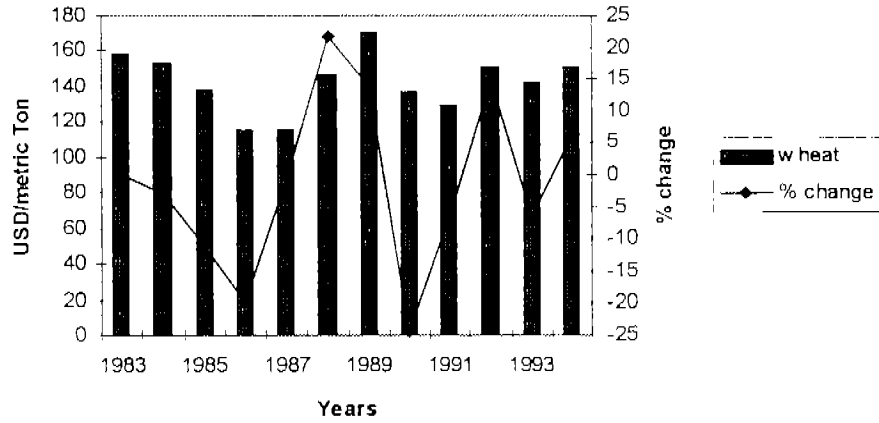
**Fig 4: World market price of Crude Petroleum (USD/metric Tone and annual growth rates)**



Source: Based on Table 6

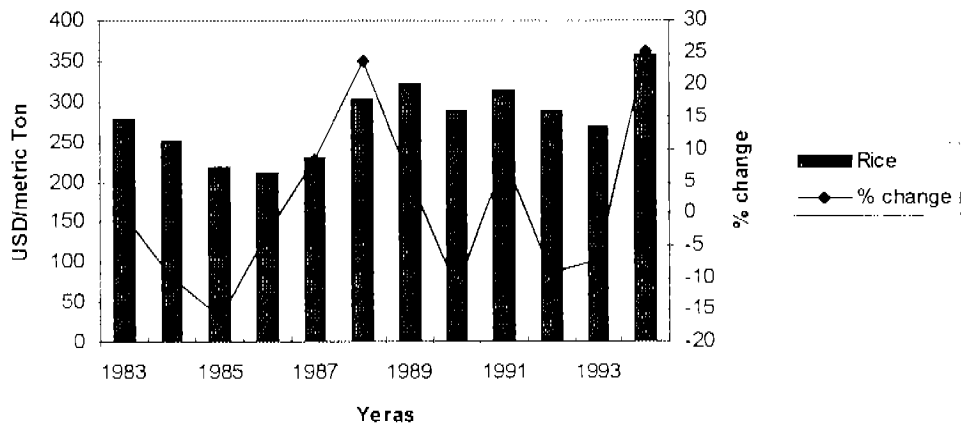
**Fig 5: World market price of Wheat (USD/metric Ton and annual growth rates)**





Source: Based on Table 6

**Fig 6: World market price of rice (USD/metric Ton and annual growth rates)**



Source: Based on Table 6

**Fig 7: Marketed production of Cloves (Metric Tons and annual growth rates)**

















