

## **FROM WORLD MARKET BACK TO INTERNAL MARKETS: DYNAMICS OF AGRICULTURE IN THE HINTERLAND OF GOMBE AND RURAL AREAS IN SOUTHERN NIGERIA**

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### **Introduction**

The hinterland of Gombe – since 1900 a colonization area of Fulani and Kanuri – was an important export producing area of cotton and groundnuts for the world market. Since 1970, after the civil war and with the growing importance of the mineral-oil industry which introduced the process of separation from the world market for agricultural products, small scale farmers in the north were gradually forced to seek for new income sources similar to their neighbours in the south.

Results of investigations, carried out from 1996 to 1998, are showing that the hinterland of Gombe is a food surplus area at present, producing basic foodstuffs like beans, maize, millet and g/corn. The marketing of these products is dominated by Hausa traders. They are selling their goods not only to the nearby booming markets of Gombe Town but also through marketing channels hundreds of kilometers far to markets in Kano State in the north and Delta and Abia State in the south of Nigeria.

The dynamics of agriculture in the hinterland of Gombe are remarkable in particular to the background of the doubling of its population since 1952. Similar changes concerning the marketing orientation were also observed in the palmoil producing hinterland of Uyo, Akwa Ibom State, in SE-Nigeria (studied since 1988), and, at the beginning of such a process, in the cacao farming areas around Akure, Ondo State, in SW-Nigeria (studied since 1999).

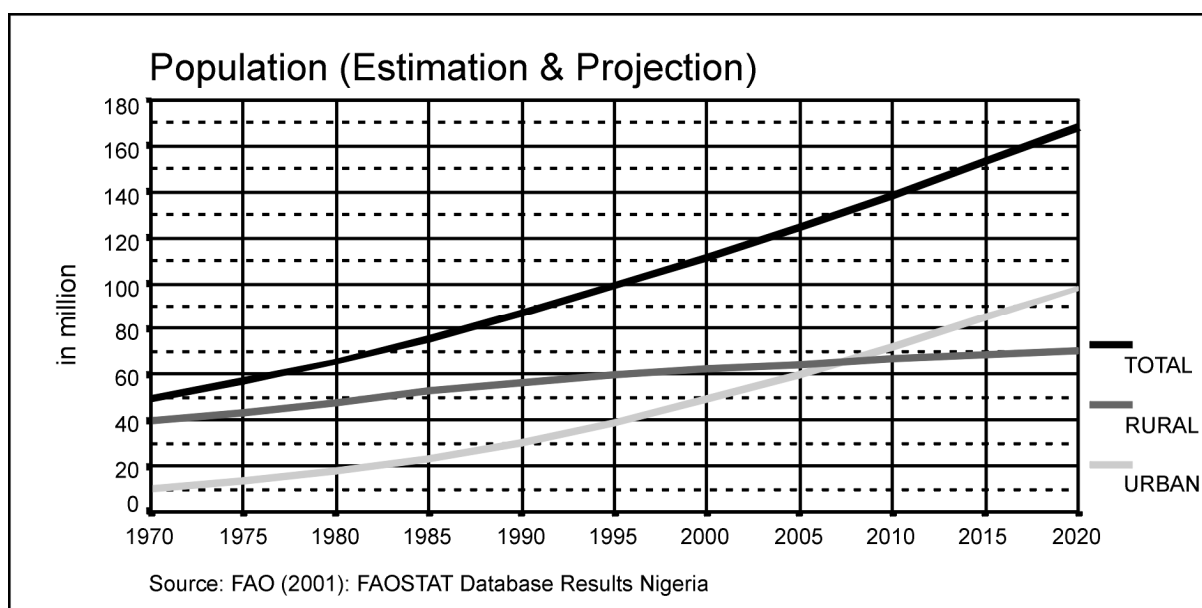
Investigations and research may lead to a hypothesis of the enormous ability of Nigerian farmers to adapt to changing demands of the markets, but the paper will also show the different strategies of small scale farmers to generate income and to survive in rural regions with different geographical structures concerning climate, soil, population density, carrying capacity (not only in an agricultural sense) and others.

### **The Problem of Agriculture and Population - in General**

Until today Nigeria is largely an agrarian country, 62.5 millions out of its 111.5 millions inhabitants are still living in rural areas (2001, see Figure 1). But the role of the agricultural sector has changed totally during the last thirty years. Up to the late

1960s the exportation of commodities like cotton, cocoa, groundnuts and palm oil, mainly produced by small scale farmers, realized the major export earnings for the Nigerian economy. Today Nigeria's economy is heavily dependent on the oil sector, which accounts for 90-95% of export revenues, over 90% of foreign export earnings and around 80% of government revenues. The contribution of agriculture to the GDP comes to 28.5% at the moment (2000), the percentage of the oil sector is claiming 39.4%.

**Fig. 1: Population of Nigeria (Estimation & Projection)**



In contrast to the late 1960s Nigeria's agricultural sector has to feed more than 110 million people (around 50 million in 1970) nowadays, and Nigeria has to import agricultural products (in 1998) for nearly 1.3 billion US\$ or 14% of all imports (IMF 2000). The agricultural imports are including not only processed food, fish, meat, and even basic food crops like rice and wheat, but also former export crops like palm oil. The export earnings from export crops - only cocoa and rubber on a low level remained – came up to 105 million US\$ in 1998.

One of the most serious problems for the agricultural sector in future is the declining share of the rural population against the total population. The rural population as the productive part in feeding Nigeria has to provide foodstuffs for an increasing urban population. Probably in 2007 the ratio rural/urban population will be around 1:1, and in 2020 already 1:1.43.

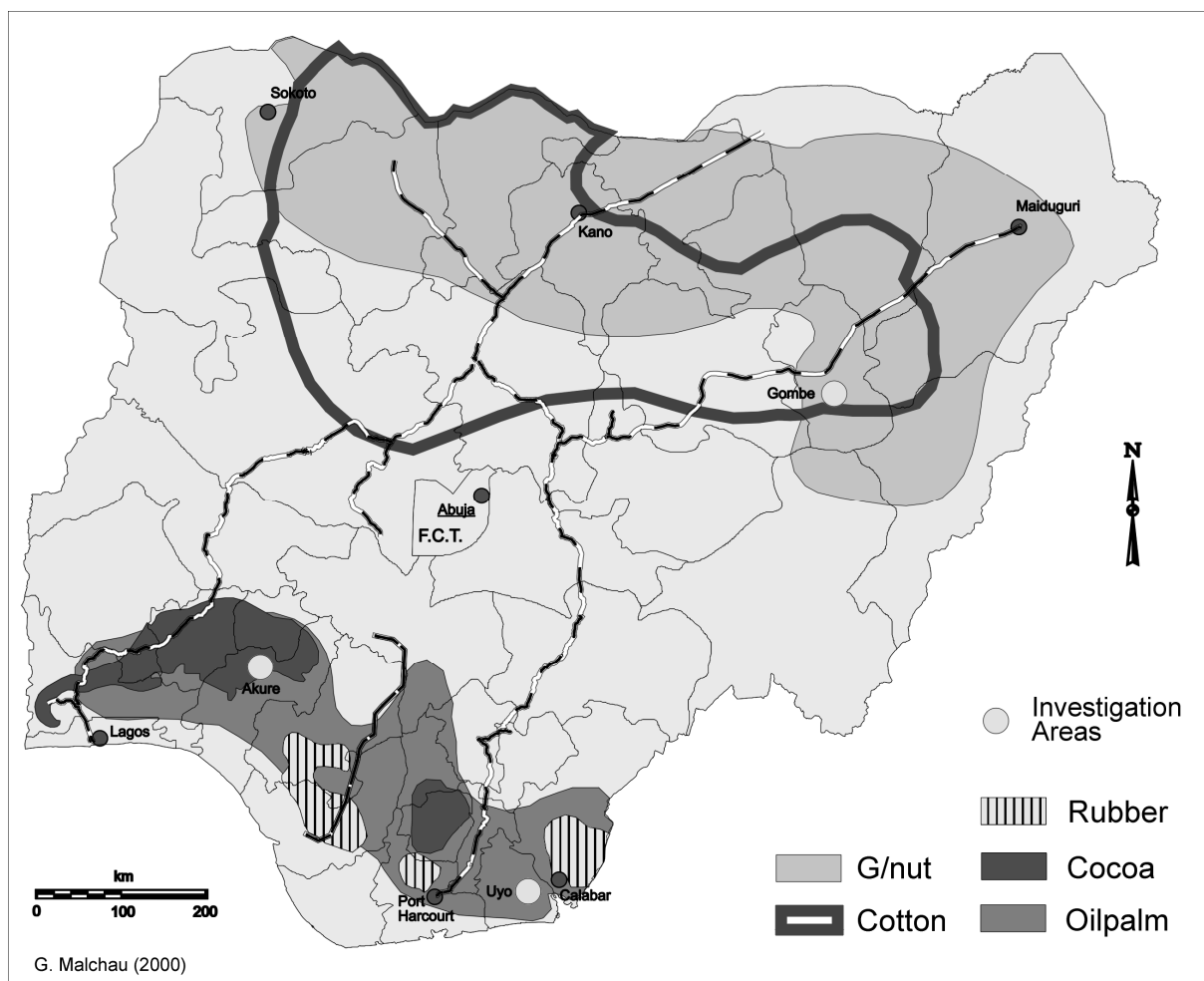
### Export Crops and Investigation Areas

Until 1970 – as already mentioned - four important export crops for the world market were cultivated in Nigeria: Groundnuts and cotton in the north (Gombe area), and cocoa (Akure area) and oilpalms (Uyo area) in the south (see Map 1). Rubber, also

grown in the south, was introduced to a greater extent during the 1980s. Many small scale farmers, not only in the investigated areas, were dependent on cultivating export crops in view of their income generation at that time.

After 1970 the astronomical growth of government investments into the oil sector, the price policy of marketing boards, falling world market prices for export crops, and increasing imports of basic food stuffs were responsible for the declining importance of the agricultural sector. This development produced a different result for small scale farmers in the export crop sector. One of the possible solutions was the cultivation and marketing of food crops which could be sold on domestic urban and rural markets as cash crops, and which are used not only for self-sufficiency.

**Map 1: Regional Distribution of Cotton, Groundnuts, Cocoa, Oilpalms, Rubber and Investigation Areas**

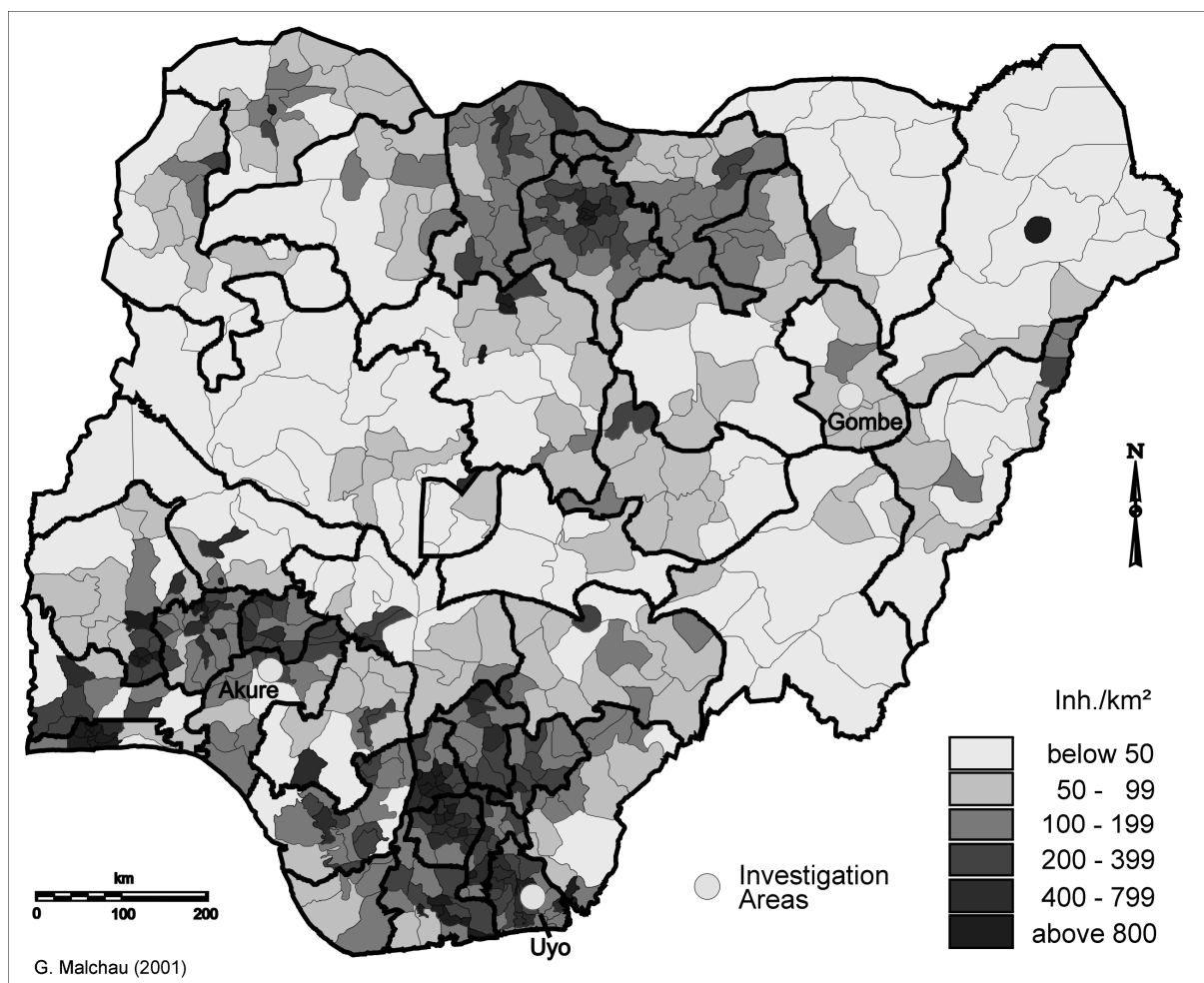


Source: Nigerian Atlas for Social Studies (1982); BALOGUN, O.Y. (2000)

Important food crops are root crops like yams, cassava and cocoyam, cereals like sorghum (guinea corn), millet, maize and rice, pulses like beans, vegetables like onions and tomatoes, after processing some of the export crops like oil palm fruits and groundnuts for vegetable oils and at least a large variety of fruits with banana

and plantain as the most important ones for daily meals. As well as in the case of export crops nearly 90% of food crops are produced by small scale farmers.

**Map 2: Population Density on LGA Level in 1991 and Investigation Areas**



Source: NPC (1998)

The capability of farming many food or export crops at certain regions in Nigeria is associated with the climatic conditions and the character of soils which itself is a combination of interactions between rainfall, wind, temperature and basic material during the time. For example soils developed on sandstones are usually less fertile than soils developed on rocks of the basement complex. Another component is population density (see Map 2), which can be a limiting factor for sufficient supply especially of food crops. In general it can be said, that the long double peaked rainy season in the south favoured the growing of root crops and the north with its short rainy season and long sunshine periods favoured the growing of cereals. But there are exceptions, maize can also be grown in the south as well as rice as swamp type, and cassava can also be grown in the north because this root crop is highly adapted to various environments. Between south and north lies a zone of transition - the middle belt. Till today it is a less developed region inside Nigeria, with low population density

but with ecological conditions that allow the farming of both, root crops and cereals.

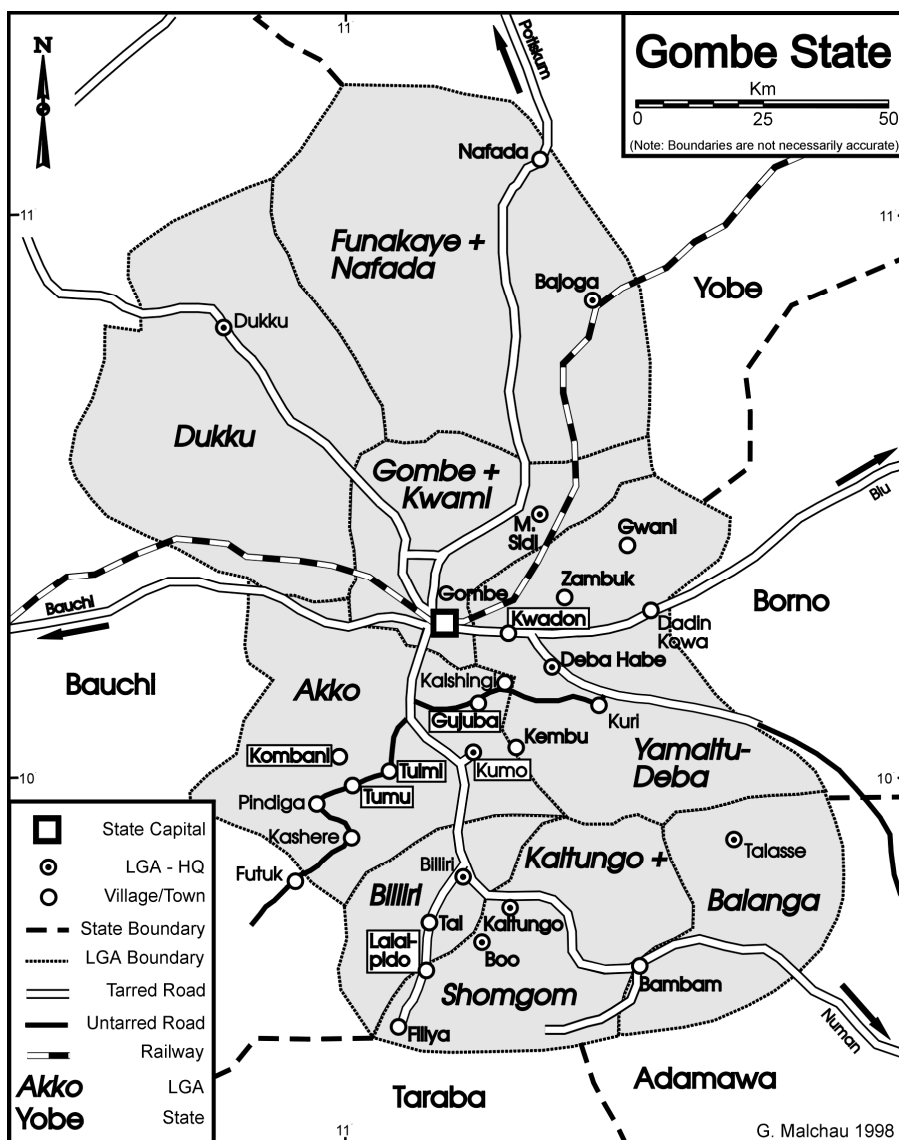
Population density combined with migrational tendencies of members of different ethnic groups to live in other parts of the country, progressing urbanization, changing feeding habits, and different climates and character of soils (ecological zonation) are forming an enormous economic potential for production and marketing of food crops in certain regions of the country. The output of major food crops in Nigeria only for feeding was estimated at 62.1 million tonnes in 1999 (FAOSTAT), and half of this output is not consumed in producer areas but in urban centres and in rural areas which are not self-sufficient with basic food crops. Against the background that around 50% of the working power in Nigeria is engaged in agriculture, these facts are offering a chance for small scale farmers to find new income sources.

### **Investigation Area in Gombe Hinterland**

The study area is situated in the southern hinterland of Gombe, the capital of Gombe State in NE-Nigeria. Three villages situated in the Gombe Slope and Hills on both sites along the road from Gombe to Numan were chosen as well as four big wholesale markets. For interviews a set of structured questionnaires was used, in addition informal interviews were carried out.

This area, with its fertile “mixed farming soils” and heavy “black cotton soils” suitable for the cultivation of cotton was a former production area for the world market. Besides farmers of this area were able to use oxen and plough since the 1940s (TIFFEN 1975). Thus cash crops like cotton and in addition groundnuts were the dominant agricultural products till to the end of the civil war and the beginning of the oil boom in the early seventies.

The investigated villages are Kombani, Tulmi and Gujuba (see Map 3). All of them are belonging to Akko L.G.A., which is one of the most densely populated L.G.A.s in Gombe State with 105 inhabitants/km<sup>2</sup> (NPC 1998). Kombani is a Fulani settlement founded around 1905. W. Fricke (FRICKE 1965) has already done field studies on agriculture in the early sixties and Kombani was of special interest for this field study in regard of the possibility to compare data on settlement and agricultural areas, range of farmcrops etc.. Today the number of inhabitants is calculated to 2,959 persons living in 483 households. The calculation is taken from a micro census (10% sample) carried out in all investigated villages. Tulmi as second village was also founded by Fulani settlers at the beginning of the fifties, but has a mixed ethnic population today. 3,898 persons are living in 606 households. Many of them are former farm labourers originating from Gombe or Kano area but even from the Tchad. Later they were able to buy or to rent land from the Fulani founders and to settle with their families in Tulmi. The last village is Gujuba, an Kanuri settlement that was founded around 1905 like Kombani. It is the smallest village with 2,133 persons living

**Map 3: Investigation Area South of Gombe**

Source: Fed. Surveys (1997), Stat. Div. of Budget & Planning (1996)

in 363 households.

Apart from the villages the trade of agricultural products on periodic markets was investigated (see Map 3). At first there are the markets of Kombani, Tulmi and Gujuba, all of them are smaller markets where retailers were interviewed. Further on wholesale markets or markets with a big wholesale section like Tumu, Kumo, Lalaipido and Kwa-don Mkt. were visited. For these markets the wholesale trade with beans, maize, millet and guinea

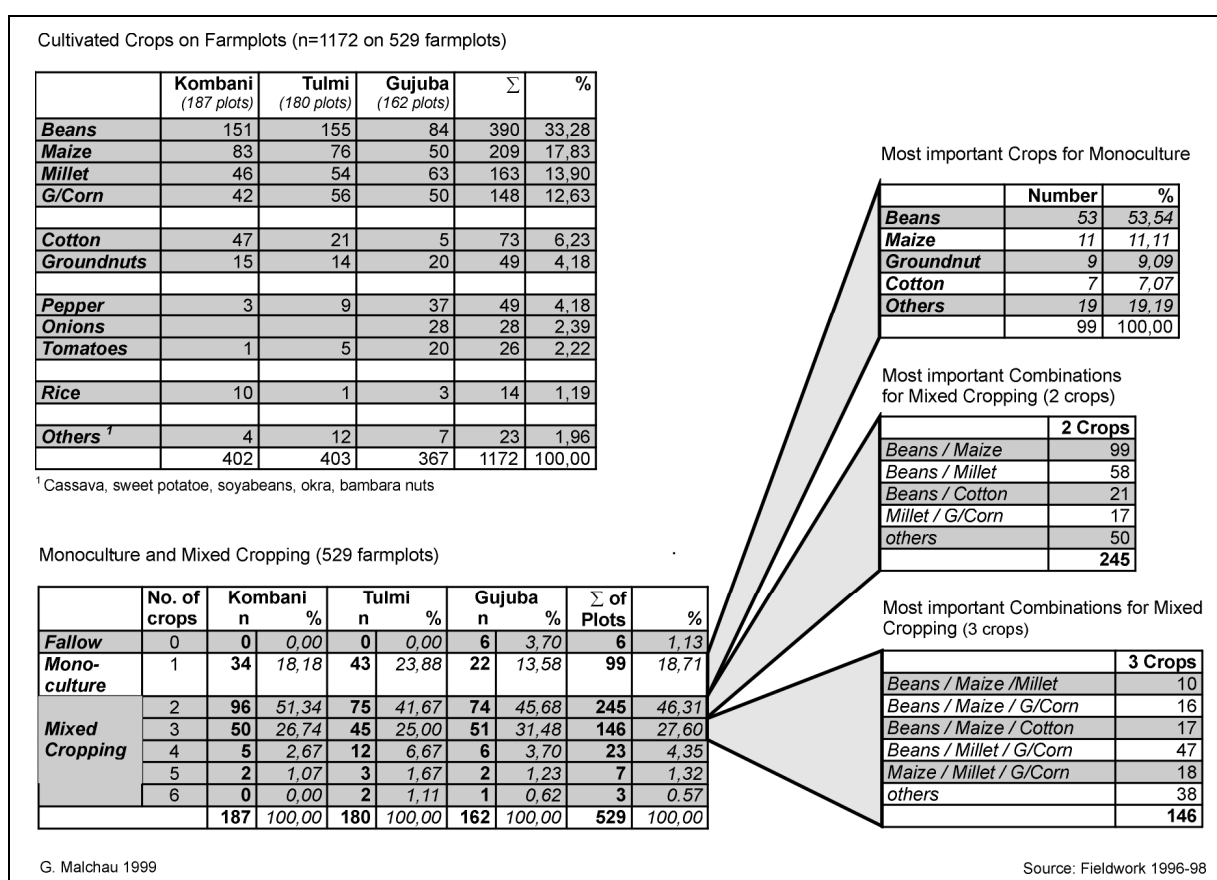
corn was totally recorded.

### **Cultivation of Agricultural Products in Gombe Hinterland**

As already mentioned the investigated villages are situated in an area covered by "mixed farming soils" and "black cotton soils". With the introduction and spreading of cotton since the early 1940s these soils were simultaneously and gradually cultivated by oxen and plough (FRICKE 1965, 247; TIFFEN 1976, 77). At the beginning of Independence the largest portion of farmland in Akko L.G.A. was already affected by the new farming method, and at the same time more than 50 percent of the farmplots were used for the cultivation of cotton. In 1965-66 the farmers of Gombe Emirate sold 17,000 tons of cotton and 6,000 tons of groundnuts to the Marketing Board (TIFFEN 1975, 27).

The importance of cotton and groundnuts for Kombani, one of the investigated villages of the present study, is also shown in a landuse map of W. Fricke (FRICKE 1965) surveyed in 1961. Initiated by the landuse map of Kombani, air photographs taken from the Nigerian government in 1964 and a set taken by the author in 1997 were compared with each other to find out if there was a change in the size and distribution of farmplots within the last 33 years. Although the compound area has extended over a bigger area today, the size of farmplots shows only a little or no change. New farmland necessary for a growing population was taken from bush land around Kombani .

**Fig. 2: Most Important Farmcrops in the Investigated Villages**

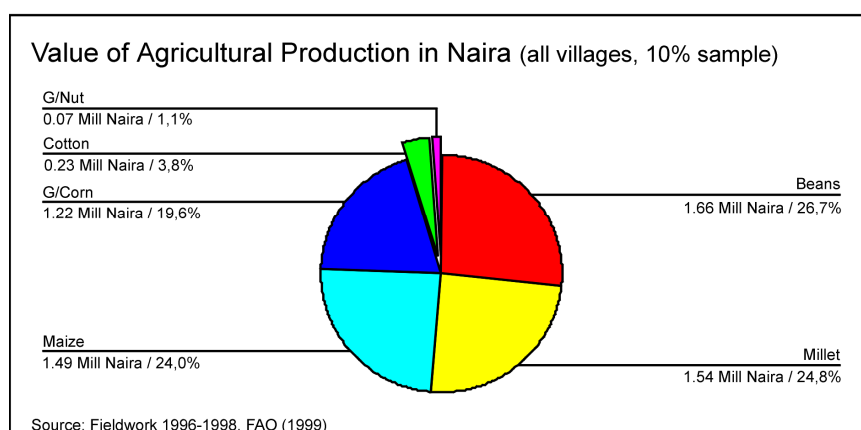
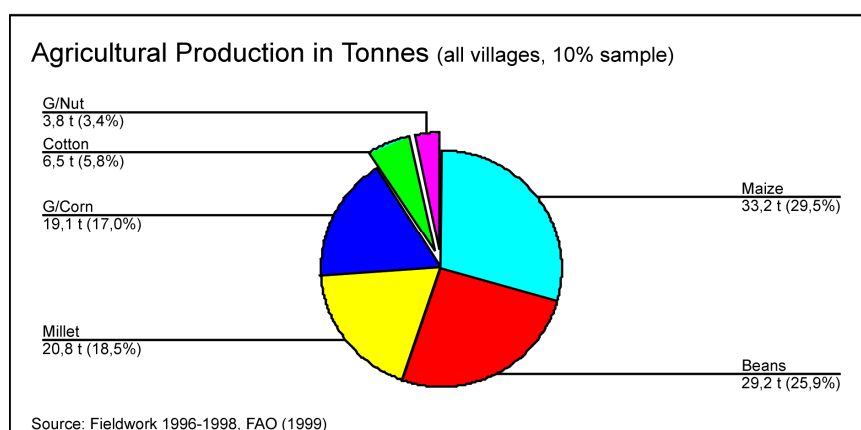
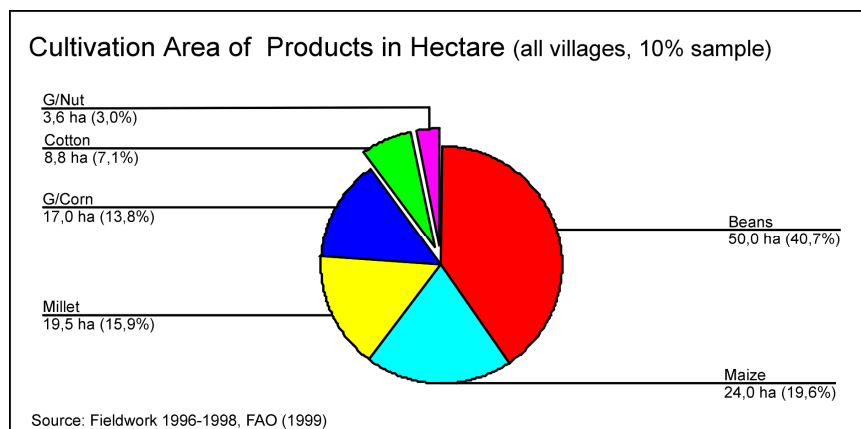


Source: Fieldwork 1996-1998

Interviews carried out for the present study are showing landuse data in regard of each household especially variables as number of farmplots, cultivated farmcrops, ownership, use of fertilizer and/or manure etc.. Concerning the cultivation of the most important farmcrops in Kombani, Tulmi and Gujuba 529 farmplots in 155 households were recorded (Figure 2). Because of multiple answers per farmplot (mixed cropping) 1,172 answers were given relating to the cultivated crops. It is not difficult to realize, that today the former world market cash crops cotton and groundnuts (around 10% of answers) are far away to play an important role again compared to the situation at the beginning of the sixties. The most important farm products are beans (33,28%),

followed by maize (17,83%), millet (13,90%) and guinea corn (12,63%). At the time of

**Fig. 3: Products in the Investigated Villages – Cultivation Area, Crop Yield and Value**



investigation nearly every farmplot in Kombani and Tulmi was cultivated with beans, only Gujuba is an exception. Gujuba is specialized in vegetables like red and green pepper, onions and tomatoes instead of beans. The reason might be the relative short distance to Gombe Town Market (see theory of v.THÜNEN), although the transport linkage (transportation costs) for these sensible products through Kalshingi or Garko to Gombe Town Market is even worse compared to Kombani and Tulmi.

Another result is permanent cultivation in combination with a high percentage of monoculture (nearly 20%). With

more than 50% beans are the dominant crop in the group of monoculture as well as they are dominating the combinations for mixed cropping. Millet and guinea corn as traditional food crops of the North and the investigation area are covering around 25 % of the answers.

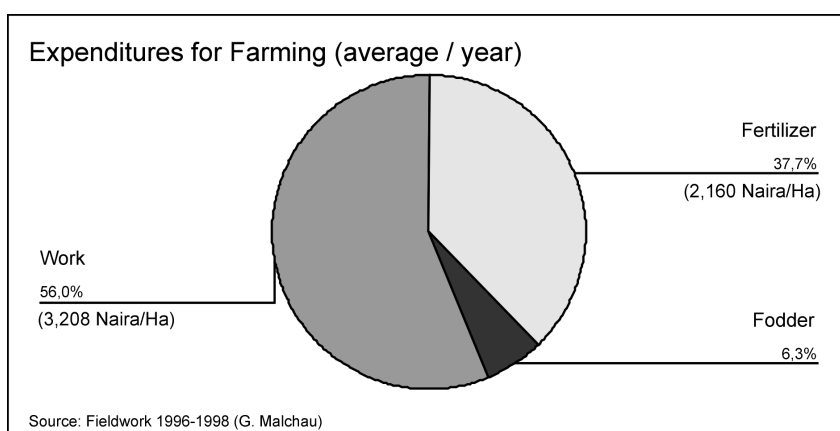
A classification scheme traced out to calculate sizes of farmplots allowed an evaluation of the acreage of agricultural enterprises in the villages. Together with av-



erage yields and market prices of farmproducts it was possible to calculate the output capacities of all investigated villages as well as to give an impression of changes in the agricultural structure during the last 30 years (see Figure 3). The cultivation of groundnuts and cotton are covering only 10,1% of the cultivation area. The output in tonnes aggregates to 9,2%, and the value in Naira of the former two export crops comes only to 4,9%. The important products for marketing in respect of area, output and value are basic food stuffs like beans, millet, maize and guinea corn at present.

Details about income generation and expenditures per household will be given later. To look at the agricultural production as a whole the expenditures for farming

**Fig. 4: Expenditures for Farming**



Source: Fieldwork 1996-1998

Naira per hectare farmland. But remarkable is the amount which is spent for fertilizer (N-P-K) per hectare. Although soil and climate are well suitable for the use of fertilizer the quantity a farmer could buy for this money for one year and hectare was coming up to 135 kg. Calculated for one square meter 13,5 grammes can be ploughed under. The requirements are 3 to 6 times higher and farmers in this area would be able to meet them. But high blackmarket prices are not only in contrast to single farm-budgets but also against the background of the already described problems of the agricultural sector.

In the following the marketing structures of beans, maize, millet and guinea corn on wholesale markets within the study area are examined.

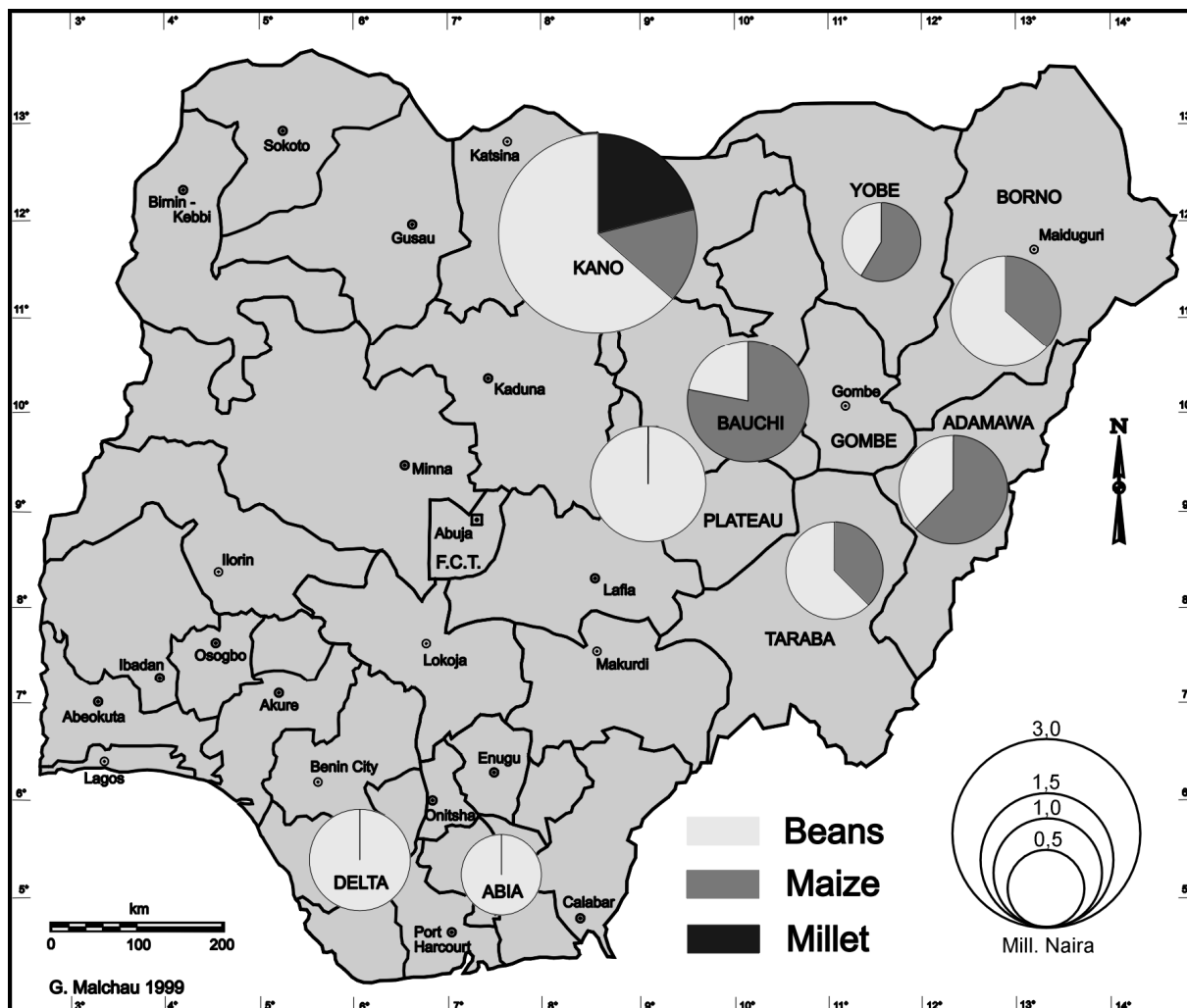
### Marketing of Agricultural Products

To get information about the marketing structures of the most important farmcrops inside the study area like beans, maize, millet and guinea corn and about marketing flows to other regions of Nigeria weekly interviews were carried out on wholesale markets like Tumo, Kumo, Lalaipido and Kwadon. Wholesale buyers of the above mentioned products were asked about quantities, prices and destinations of their goods. In this way average sales per week in monetary units and units of weight

are giving further interesting details (see Figure 4). Traditionally farmers in this area are dependent on hired farm labourers for planting and harvesting – during field work the average per household was 56,0% of the total expenditures or 3.208

were identified for each product and each market.

**Map 4: Destination of Sales for Selected Agricultural Products from the Investigation Area South of Gombe (weekly average in Naira between Nov. 97 and April 98)**



Source: Fed. Surveys (1997), Fieldwork 1996-98

The marketing of the most important crops like beans, maize, millet and guinea corn can be distinguished into three different sectors. There are local marketing flows, in the most cases goods are meant for destinations nearby. Further on there are marketing flows to Gombe Town Market (retail market) and at last flows to other regions outside Gombe State. Smaller wholesale markets like Tumu and Lalaipido have large proportions for local trade and especially for Gombe Town Market. Bigger wholesale markets like Kumo and especially Kwadon Mkt. have access to inter-regional markets on national level. From Kwadon Market for example 70% of the weekly sales are leaving Gombe State. The weekly average in units of weight comes to 186.5 tons of beans, maize, millet and guinea corn or calculated for one year to 10,000 tons of basic food stuffs intended for the interregional trade.

Map 4 shows only marketing flows of those products important for interregional

trade. Guinea corn which is still interesting for the supply of Gombe Town can not be found on national level again. Also millet as traditional foodcrop of Northern Nigeria is only sold to Kano State and there mostly to markets in Kano Town. But maize and especially beans have a wide variety of destinations not only to markets in Northern Nigeria but also to the Middle Belt and to the South.

### **Income Generation and Expenditure in Gombe, Uyo and Akure Hinterland**

The hinterland of Uyo, Capital of Akwa Ibom State in SE-Nigeria is one of the most populated rural areas in Nigeria (see Map 2). The average population density of Akwa Ibom State comes to 326 inhabitants/sq km (NPC 1998) and the rural area of the investigated part of the hinterland carries up to 480 inhabitants/sq km (MALCHAU 1998, 52). Although the absolute density values are exceedingly high for a rural area, a population growth of 1,89% per annum from 1953 to 1991 is moderate compared to the Nigerian average with 2,70%.

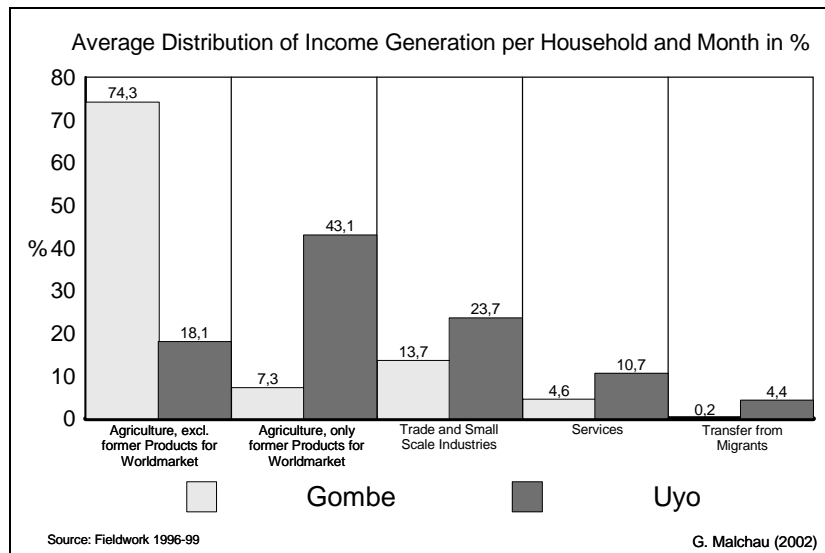
Small scale farmers in the hinterland of Uyo who constitute approximately 80% of the population are cultivating foodcrops like tubers, beans, vegetables and maize. There is a marketing of seasonal surplus at local periodic markets, but the production of food crops hardly covers the needs for self-sufficiency in food in many parts of Akwa Ibom State, especially in the investigation area. Most of the small scale farmers who reside within this region are not able to produce enough basic foodstuffs for themselves and their families. They therefore have to buy additional foodstuffs such as cassava, gari, cocoyam and yam, which are brought down to periodic markets in the Uyo urban region imported from the northern parts of Cross River State, and other areas of Delta State.

In addition to the cultivation of foodcrops, there is a production and marketing of oilpalm products. The fruits of oilpalms are processed to palmoil and palmkernels and sold as cash crops to large stock collectors on big periodic markets in the area. Against former times the export of palmoil for the world market, which was also a very important factor in the Nigerian external trade before the civil war, does not play any longer an economic role in the hinterland of Uyo.

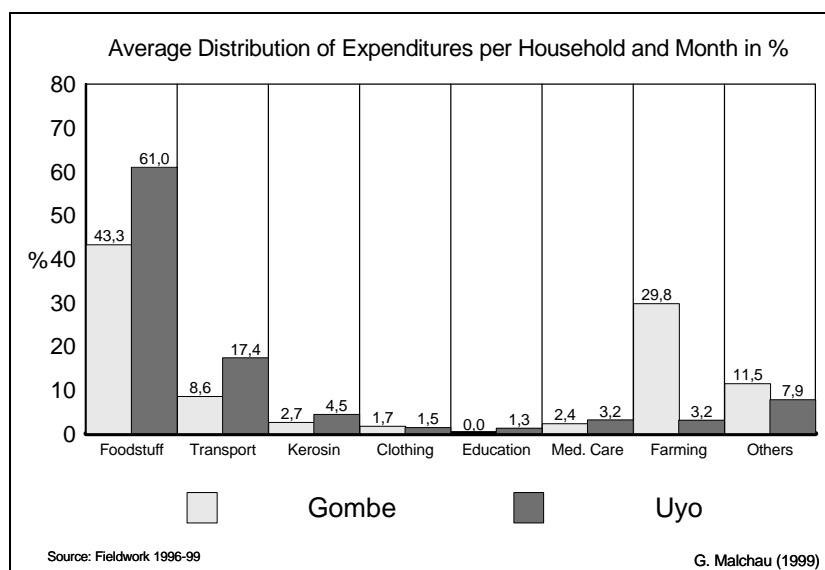
To identify and to compare the economic activities in Gombe and Uyo hinterland important for the generation of monetary income it was distinguished between 5 sectors: (a) agriculture, excluding former products for the worldmarket, (b) agriculture concerning only former products for the worldmarket, (c) trade and small scale industries (d) services and (e) money transfers from migrants (see Figure 5). As a result it can be realized that the income generation structure between Gombe and Uyo hinterland is completely different. Small scale farmers in the densely populated areas of Uyo hinterland with land scarcity had not been able to increase their food crop production for marketing. They are still dependent on oilpalms although the percentage

is much lower nowadays. In the sixties more than 80% of income were generated from oilpalms (USORO 1990, 185). The options these farmers had to look for new income sources are trade, small scale industries, services and migration. Especially

**Fig. 5: Income Generation per Household**



**Fig. 6: Expenditures per Household**



migration plays an important role, and at least for nearly 40% of all households in the investigated villages financial support comes from migrated family members.

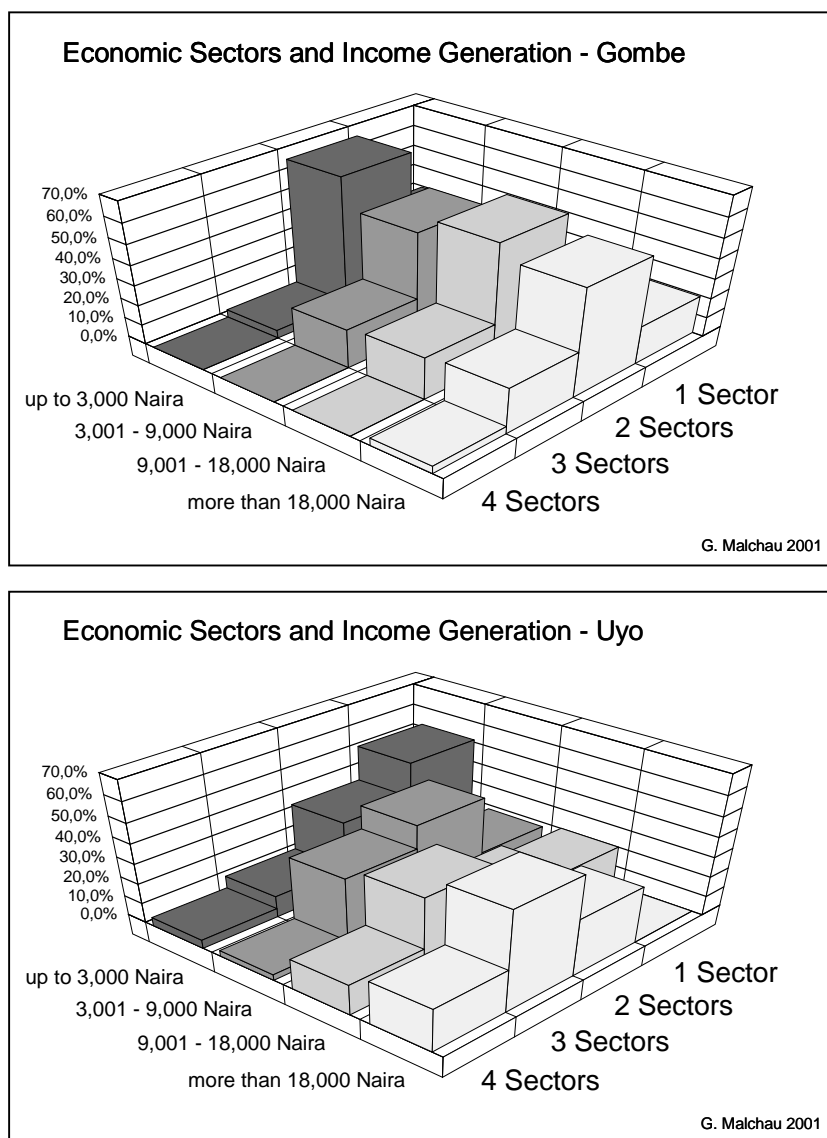
In many cases jobs in small scale industries, trade and services can not be found in the villages but at the next big market, LGA head-quarter or the capital Uyo itself. This is reflected in the high expenditures for transportation (see Figure 6). Compared to Gombe Uyo hinterland could be characterized as an area of transformation - 38,8% of the generated income are not

produced in agriculture against 18,5% in Gombe area. Expenditures in farming are also low against Gombe and one result of small investments are overaged palmtrees, low yields and because of traditional processing methods of many farmers an unsatisfying quantity and quality of palmoil.

In a next step generated income from farmer households in the investigation areas in Gombe and Uyo has been classified into 4 classes. The income classes have been adjusted with the number of economic sectors providing money (see Figure 7). Gombe shows a relative constant distribution. Most of the income in all income

classes is originating from two sectors – food crop production and production of the

**Fig. 7: Income Generation by Number of Economic Sectors – Gombe and Uyo**



former export crops cotton and groundnut. The amount a household can generate is more or less a function of the availability of land.

Income generation in Uyo area is more complicated. Land is scarce, around 10% of households do not own a single plot. And those who have enough land are very often engaged in three or even four sectors. The majority of households in the income class up to 3,000 Naira and generation of income from only one sector are those with only one or two members. In the most cases they are those who left in the villages to

Source: Fieldwork 1996 –1998 (Gombe) and 1998 – 1999 (Uyo)

be supported by their family members who migrated to towns or other rural areas. And those who can be found in an upper income class are not able to generate their income only from agriculture. One or two sources of income outside the agricultural sector are inevitable.

For the hinterland of Akure (see Map 2) it is not possible to give detailed data at the moment. Statistical work is still going on. But Ondo State with 202 inhabitants/sq km and the investigation area around the capital Akure with almost 350 inhabitants/sq km (NPC 1998) are also belonging to a densely populated area inside SW-Nigeria. Apart from the production of food crops like cassava, maize, yams and

beans for own consumption and for marketing up to 70% of the small scale farmers are engaged in the growing of cocoa. Cocoa is the only cash crop from the investigation areas which is still sold for the world market. But the business is difficult, since 20 years the real producer prices are falling.

Cocoa is a tree crop which does not allow the planting of food crops on the ground – it is too dark. That is an important disadvantage compared to the traditional oilpalm trees in Uyo area, where the cultivation of e.g. cassava or maize is possible. The cocoa trees in Akure area are also overaged and many are sick. Expensive farm investments are necessary either to buy chemicals for spraying or to renew the smallholder plantations with trees. And although a big cocoa processing company in Akure is also buying cocoa beans, many small scale farmers like to cut their old trees to cultivate food crops for the town market in Akure and partly for own consumption. This seems to be the beginning of a process similar to that one in Gombe area – a change for cultivation and marketing of food crops for the domestic market.

## **Conclusion**

The results of the household and market studies are showing that small scale farmers in the study area of Gombe hinterland were able to change their production of cash crops like cotton and groundnuts for the world market successfully to the production of food crops like millet and guinea corn for regional markets and beans and maize for interregional markets. Although the population density in rural areas like Akko L.G.A. has more than doubled in the past 35 years the study area can meet the growing demand of its own area, of Gombe Town with a fast growing population as newly created state capital and in addition even for markets on national level. This development was supported by fertile farm soils, the use of oxen and plough and the use of fertilizer.

The wealth of Uyo area are the oil palms, especially against the background of high population density and sandy soils which are not suitable for a surplus production of food crops. But just the palm oil producing sector was neglected during the last 30 years. Small scale farmers had the choice either to migrate to the big towns in the SE and SW or as far as possible to find a job in trade, small scale industries and services in their home areas. Educational standards in the south were a helpful support for the expanding small scale industries sector and service sector.

Akure area is still producing for the world market. Climate and soils are excellent for cocoa but also for food crops. High population density in rural areas and unattractive world market prices for cocoa can produce a further change to the increased production and marketing of food crops on former cocoa farmplots.

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