



C3P FOOD SECURITY BRIEF NO. 3

FOOD SECURITY IN THE LAKE VICTORIA BASIN OF NORTHERN TANZANIA

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BACKGROUND

One of C3P's activities is to assess and document the status of food security in the regions' households, and the relationship between food security and the C3P mandate crops - East African Highland banana and cassava.

This brief describes three indicators of food security in Tanzania. 'Food security I' contains the actual calorie intake per caput per day from own production and purchases. 'Food security II' depicts the total cal/cap/day capacity of households from own production (both consumed and sold), whereas 'Food security III' describes the capacity of households to purchase food from off-farm income.

FOOD SECURITY AND FOOD SOURCES IN TANZANIA

In 2003, Tanzanians had an average daily calorie intake per person of 1,959 kcal. Of this amount, 90 % comes from vegetal products, 4 % comes from alcoholic beverages, whereas only 6 percent comes from animal products (FAO 2006). Hence, crop production and the calories obtained from crops give a good indicator of food security in Tanzania (Table 1), as the surveyed region is at 103 percent of the caloric intake from vegetal crops in overall Tanzania, as well as at 96 percent of the overall caloric intake.

Table 1: Food consumption for overall Tanzania and the respective districts

	Overall Tanzania	Average Northern Tz
Calories from total vegetal products	1,832	n.a.
Of which from alcoholic beverages	61	n.a.
Calories from vegetal products excl. alc.	1,771	1,832
Calories from animal products	127	n.a.
Daily calorie intake	1,959	n.a.
Percentage calories from vegetals excl. alc. covered in survey	n.a.	103
Percentage calories from total excl. alc. covered in survey	n.a.	96

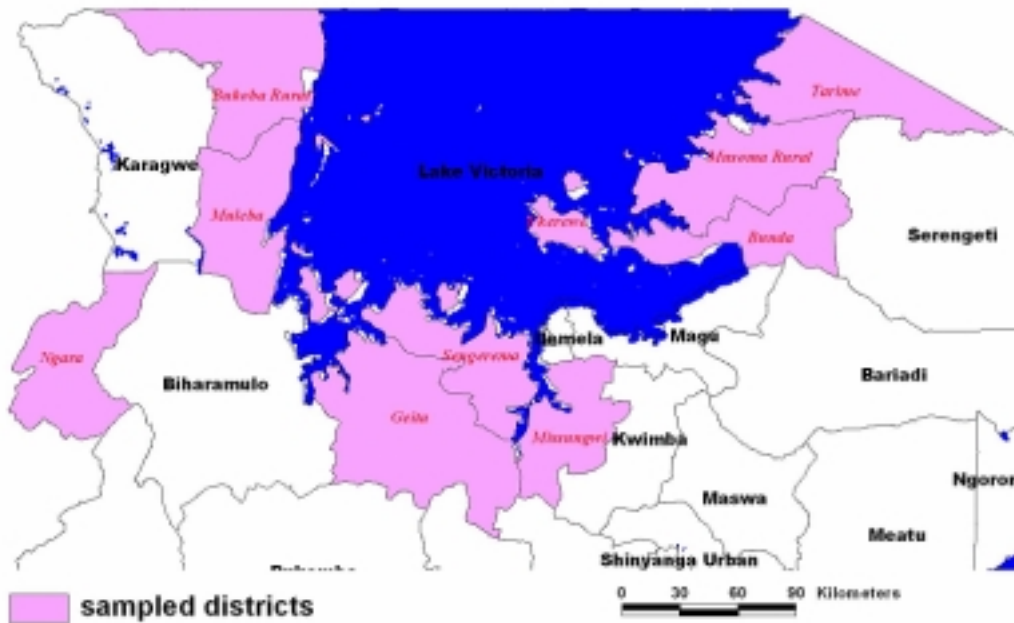
Source: FAO 2006, own data

THE REGION

The region covered in this brief contains 10 Tanzanian districts in Northern Tanzania around Lake Victoria (Map 1).

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Map 1: Districts covered in this brief

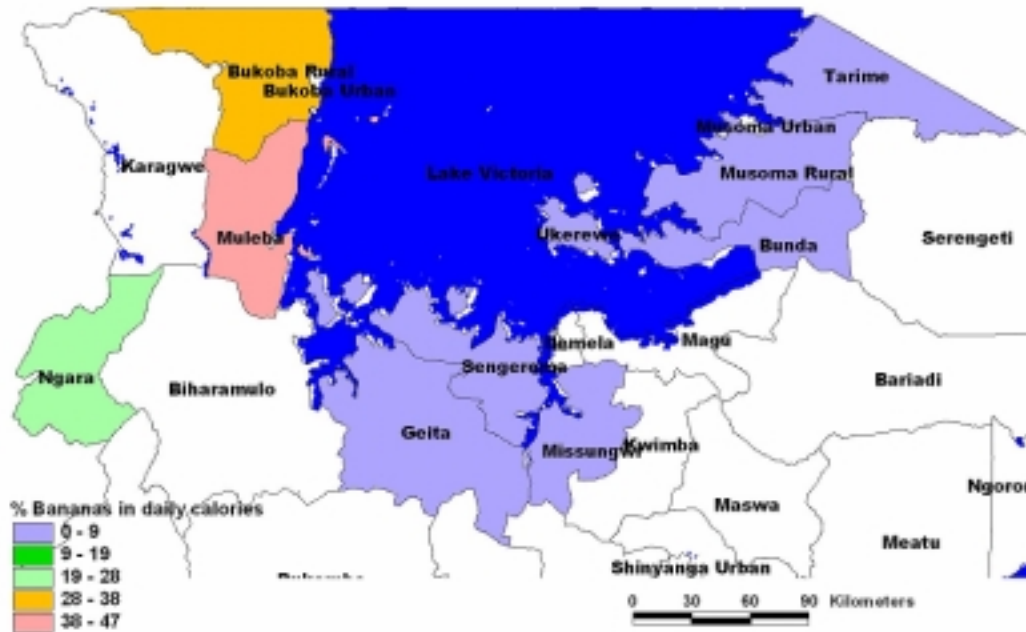


Source: GIS.

THE ROLE OF BANANA AND CASSAVA IN THE REGION’S FOOD SECURITY

Bananas play a minor role in the household’s diet in most of the districts, except for the Western part of the region, in Bukoba, Mulewa, and Ngara, where cooking bananas account for between 20 and 40 percent of the calorie intake. (Map 2). For Tanzania as a whole, bananas provide only about 1.7 percent of the daily caloric intake (FAO 2004).

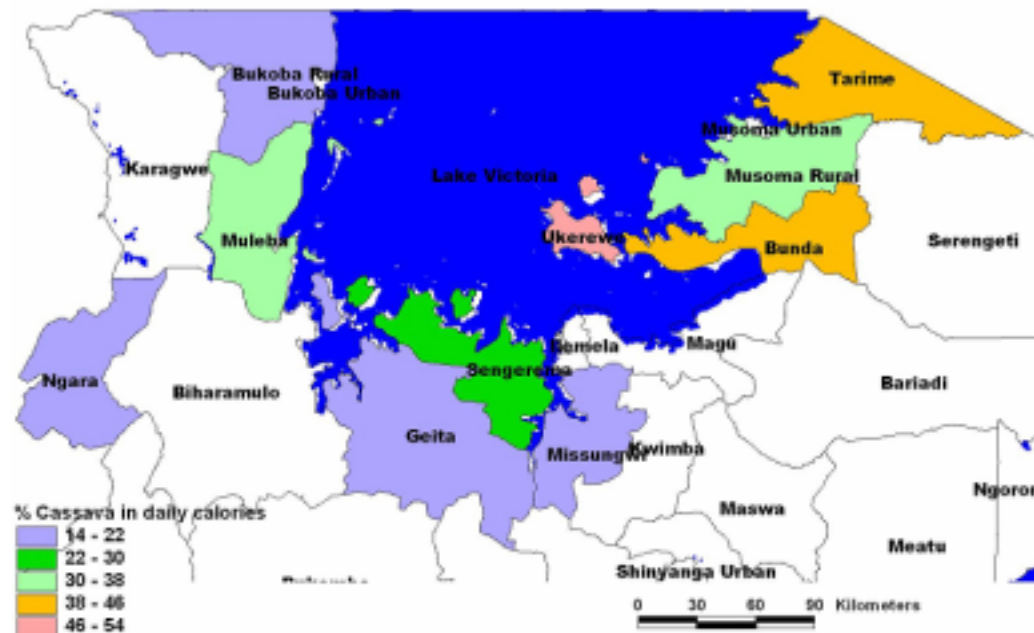
Map 2: Contribution of bananas to caloric intake



Source: Own data

Cassava plays a major role in the household's caloric intake in the region. For the whole of Tanzania, cassava provides around 15 percent of the daily caloric intake. In the ten districts assessed here, it provides between 15 and 54 percent of the total calorie intake (Map 3).

Map 3: Contribution of cassava to caloric intake



Source: Own data

It is quite clear that in contrast to Uganda, where food consumption is dominated by cassava and banana, in Tanzania, and in particular in this area, food production and consumption patterns are much more diverse. Table 2 gives an overview on the major food crops consumed in the region. Apart from cassava, maize is the most important food crop, with even more households consuming maize than cassava. Sweet potato is the third most important crop, followed by beans. Bananas are the least important crop among the major staples.

Table 2: Food consumption patterns

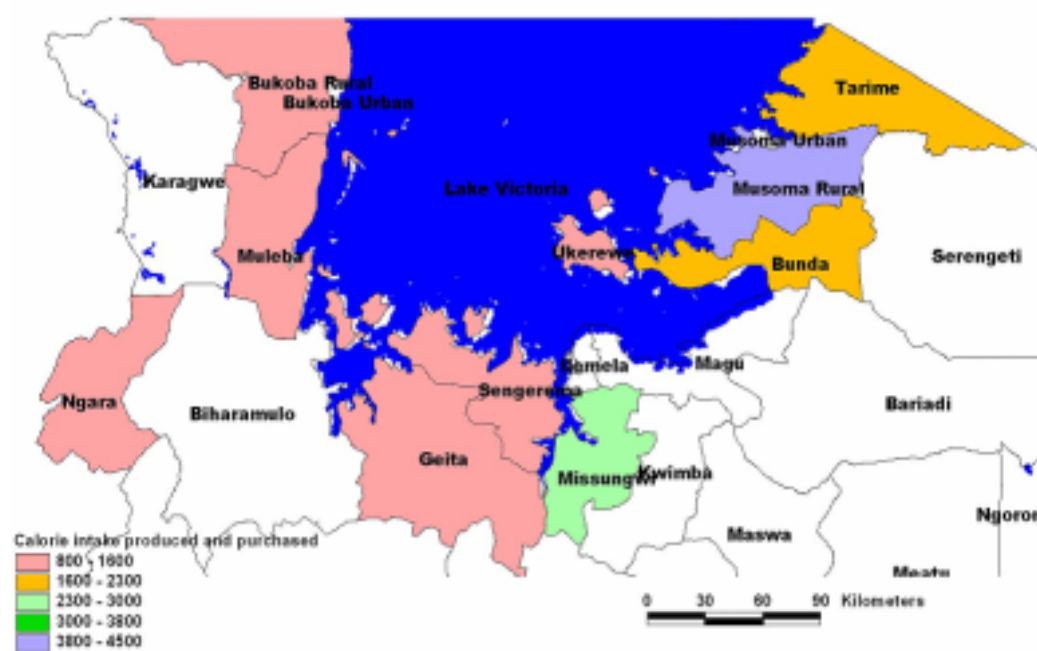
Crop	Percentage of households consuming the crop
Cassava	84
Banana	26
Maize	87
Beans	30
Sweet potato	61

Source: Own data

Food security I: Daily calorie intake from subsistence production and purchases

This indicator comprises the actual intake from own production, not including the calories from crops that were sold on the market, as well as the intake from food purchases. The average is around 1,860 kcal/caput/day, which is well below the recommended level of 2,100 kcal per day. The range is from 800 kcal per day in Ngara (West) to 4,200 kcal per day in Musoma. Reasons for these sometimes severe food shortages are droughts and diseases like CMD and banana bacterial wilt (Map 4).

Map 4: Daily calorie intake from own production and food purchases



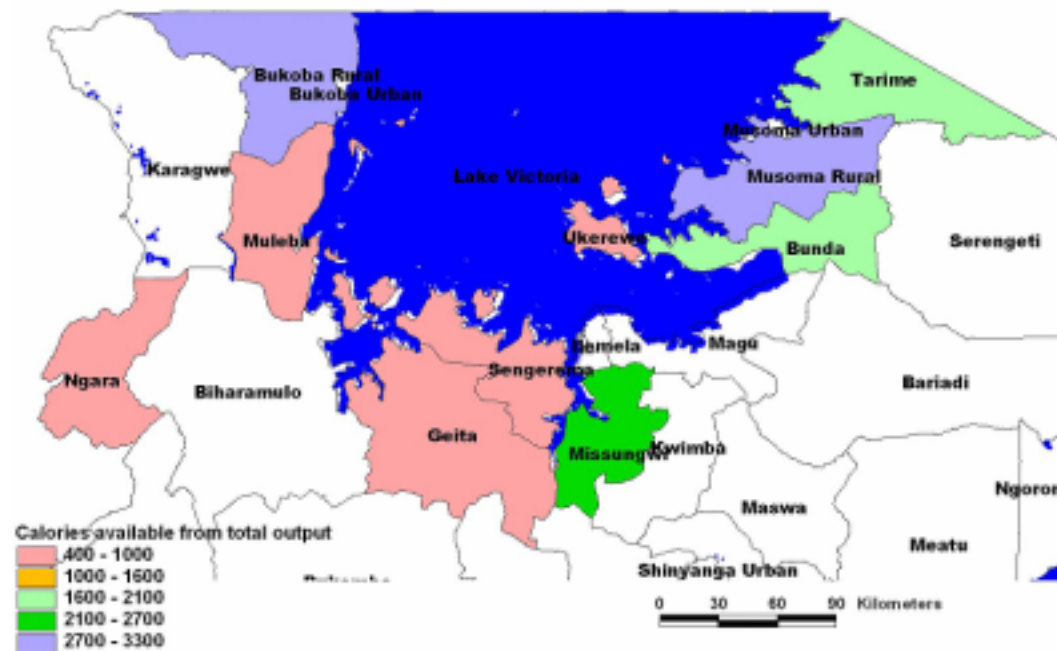
Source: Own data.

FOOD SECURITY II: DAILY CALORIE CAPACITY FROM TOTAL CROP PRODUCTION

The daily calorie potential comprises the overall production of edible vegetal crops in terms of kcal. This figure includes the calories produced and self-consumed, as well as the calories that could be potentially obtained from crops that are presently grown but sold on the market. This is particularly relevant for times of shortages in production, as households then tend to cut down on marketed sales in favour of own consumption of the produce.

Contrary to the recently depicted status of Uganda (see Food Security Brief No 1), the amount of calories obtained from own production is lower than the actually consumed amount (Map 5). This means that the region's household suffer from food shortages and have to purchase food. The daily intake capacity from own production averages at about 1572 kcal per capita per day and ranges from 600 to 3,200 kcal.

Map 5: Daily calorie intake capacity

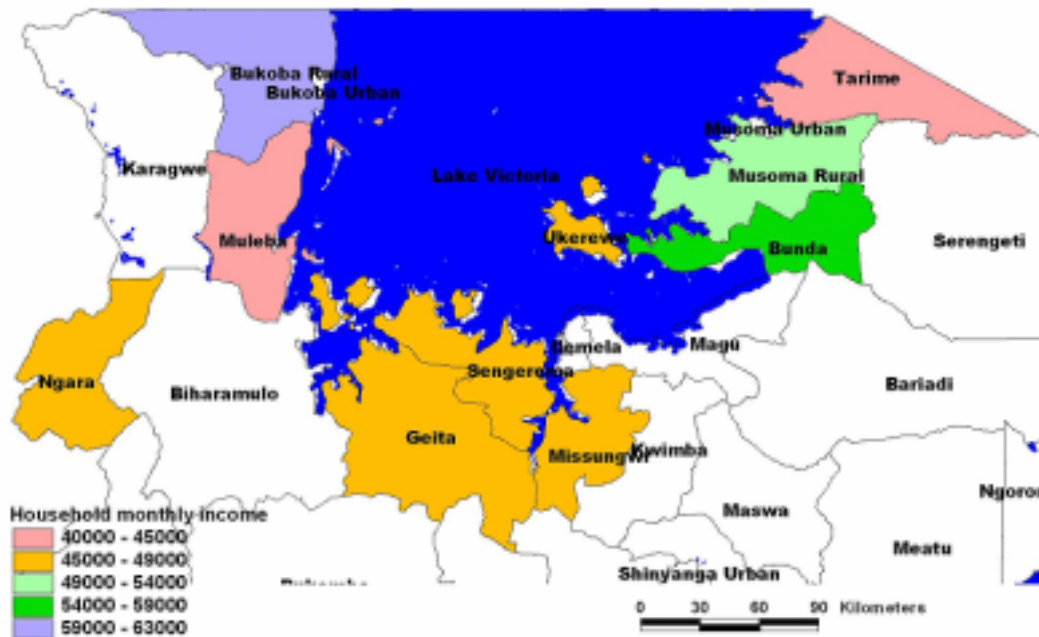


Source: Own data

Food security III: Off-farm income

Off-farm income provides an additional access to food through purchases from markets. The monthly off-farm income ranges from 39,000 Tanzanian Shillings per household (an equivalent of about 30 US \$) in to about 63,000 Tanzanian Shillings (50 US \$). The distribution is depicted in Map 6.

Map 6: Monthly off-farm income per household

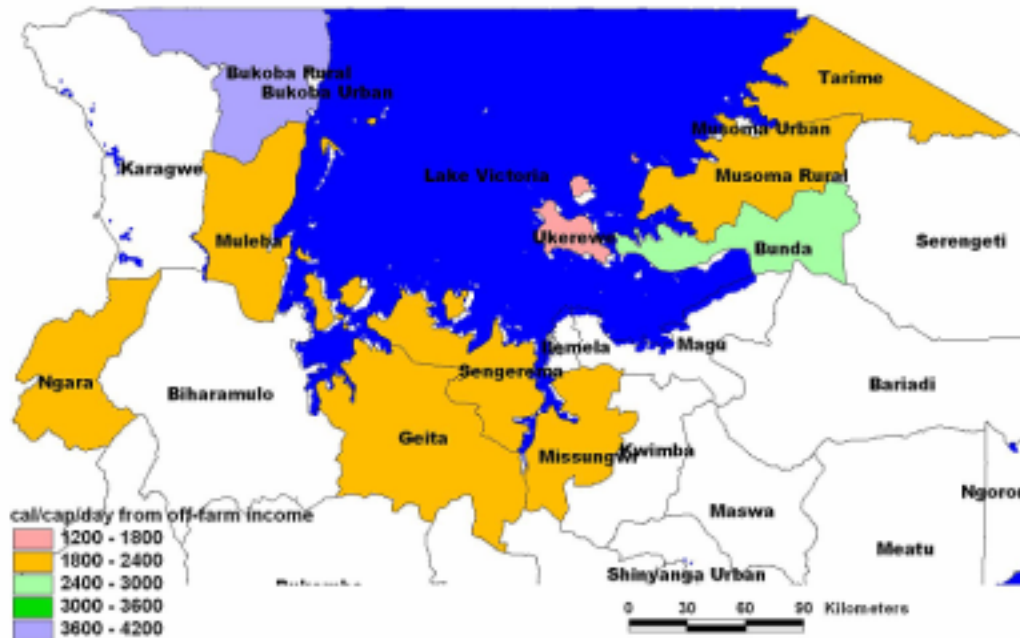


Source: Own data.

How does this translate into food security? If we transform the household income in maize equivalents by dividing the income by the price per kg of maize and transform the available

maize quantity from cash income into calories, we get the calorie intake capacity from off-farm income. Map 7 shows that households in Northern Tanzania do not always have sufficient off-farm income to cater for their food needs in times of crises. The off-farm income capacity ranges from 1,250 kcal/cap/day to almost 4,300 kcal/cap/day.

Map 7: Calorie intake capacity from off-farm income.



Source: Own data, FEWSNET

CONCLUSIONS

Households in Northern Tanzania around Lake Victoria can definitely not be regarded as stably food secure. Although they may have sufficient access to food in good harvest years, they are quite vulnerable in years of drought or high disease pressure. In some cases, they do not have enough own production potential to cover their food needs, in some cases their off-farm income does not suffice to secure their food intake. The fact that in most of the regions cassava, which is prone to CMD and CBSD and maize, which is prone to drought, are major food crops increases the vulnerability. The regions where bananas play a large role in food consumption are not well off in terms of calorie intake either.

So it is clear that interventions have to be made in terms of increasing cassava productivity by offsetting the diseases, as well as by countering bxw in some regions. However, interventions will also have to consider other crops, in particular maize, beans, and sweet potatoes, which are major food crops in the region.

Editorial

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