



## C3P FOOD SECURITY BRIEF NO. 2

### FOOD SECURITY IN WESTERN KENYA

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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 two indicators of food security in Kenya. 'Food security I' depicts the total cal/cap/day capacity of households from own production (both consumed and sold), whereas 'Food security II' describes the capacity of households to purchase food from off-farm income.

#### FOOD SECURITY AND FOOD SOURCES IN KENYA

In 2003, Kenyans had an average daily calorie intake per person of 1876.16 kcal. Of this amount, 87 % comes from vegetal products, whereas 13 percent comes from animal products (FAO 2006).

The figures below indicate that Western Kenya has a better food supply than overall Kenya (not surprising as the region is both in terms of climate and probably soil fertility better off than many other Kenyan regions). The surveyed region exceeds the overall Kenyan calorie supply by 47 percent taking into account only the "vegetals", and by 29 percent in terms of total overall Kenyan caloric intake.

**Table 1: Food consumption for overall Kenya and the respective districts**

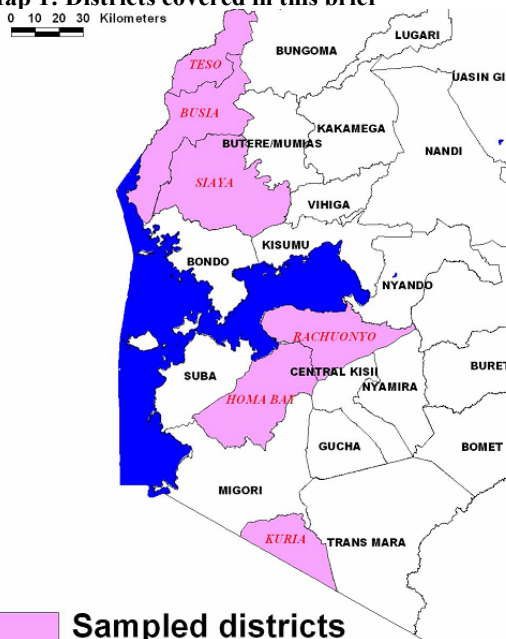
	Overall Kenya	Average Western Kenya
Calories from vegetal products	1,876.16	n.a.
Of which from alcoholic beverages	17.94	n.a.
Calories from vegetal products excl. alc.	1,858.22	2,756.30
Calories from animal products	278.61	n.a.
Daily calorie intake	2,154.77	n.a.
Percentage calories from vegetals excl. alc. covered in survey	n.a.	147
Percentage calories from total excl. alc. covered in survey	n.a.	129

Source: FAO 2006, own data

#### THE REGION

The region covered in this brief contains six districts of Western Kenya, namely Busia, Kuria, Homa Bay, Rachuonyo, Siaya and Teso (Map 1).

**Map 1: Districts covered in this brief**



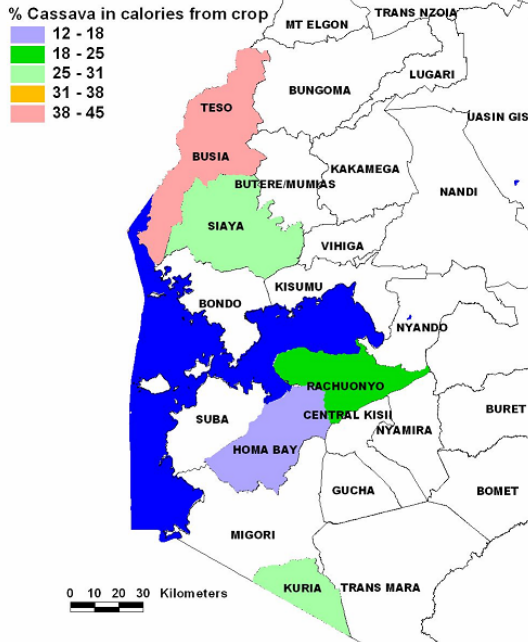
Source: GIS.

#### THE ROLE OF CASSAVA AND MAIZE IN THE REGION'S FOOD SECURITY

In Kenya as a whole, cassava plays a minor role in the population's diet, with only 1.7 percent of the daily calorie intake coming from cassava across the whole of Kenya. In the surveyed region, however, cassava is one of the major staple food crops, accounting for between twelve and 45 percent of the daily per capita calorie intake (Map 2). There is a North-South gradient, with cassava being most important in the North and of less importance in the South of Western Kenya.

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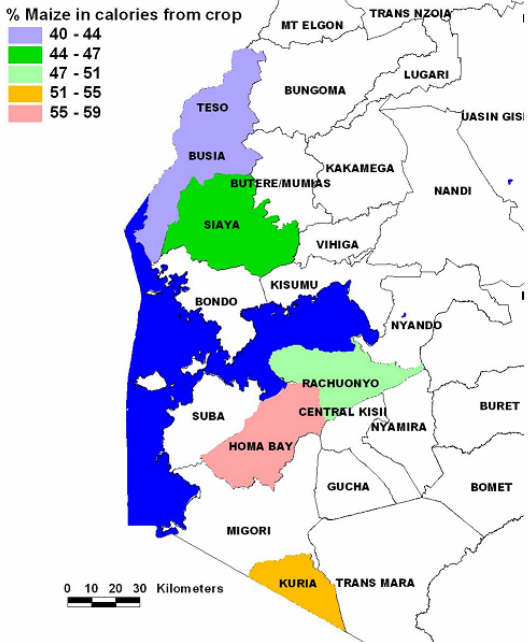
**Map 2: Contribution of cassava to caloric intake**



Source: Own data

Bananas do not play a role in the household's diet in Western Kenya. The major staple crop for this region is definitely maize, which accounts for between 40 and 60 percent of the overall caloric intake (Map 3). For the whole of Kenya, bananas provide 3 percent of the daily caloric intake, whereas maize constitutes 36 percent of the daily caloric intake of the average Kenyan (FAO 2006). The importance of maize seems to be the inverse of cassava importance, as in the South, where cassava is less important, maize is more important, and vice versa in the North.

**Map 3: Contribution of maize to caloric intake**



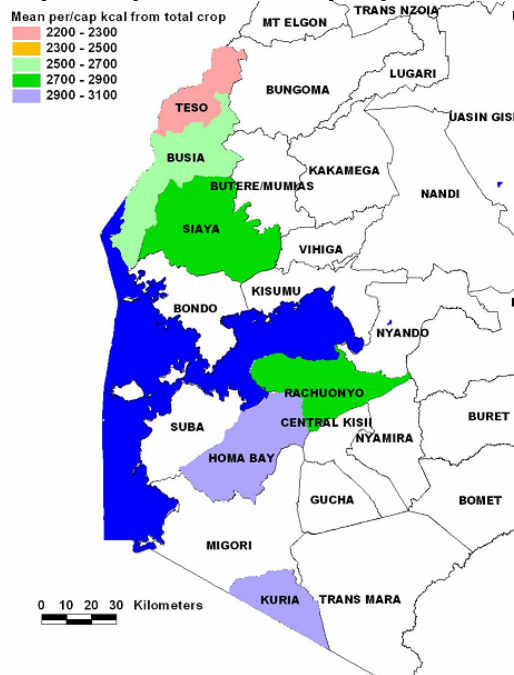
Source: Own data

**FOOD SECURITY I: 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 in times of shortages in production, as households then tend to cut down on marketed sales in favour of own consumption of the produce.

Calorie production ranges from about 2,100 kcal to 3,100 kcal per capita per day (Map 4). There is a clear North-South gradient, with the lowest capacity in the North (Teso). This indicates that the relation between cassava and calorie intake is negative, probably due to frequent problems with cassava diseases, like CMD.

**Map 4: Daily calorie intake capacity**

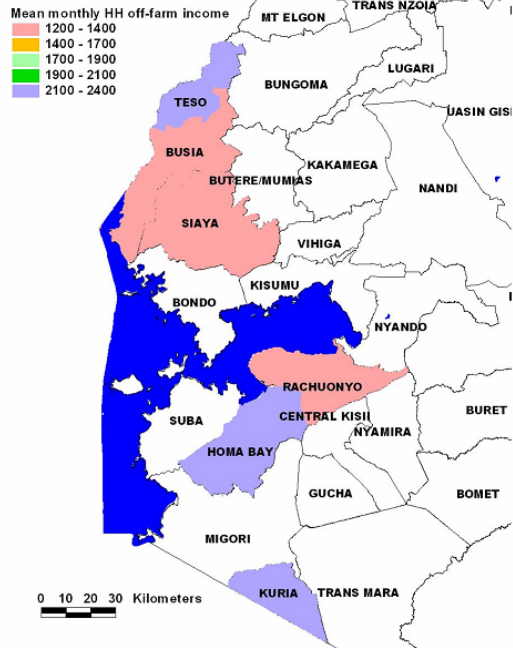


Source: Own data

**Food security II: Off-farm income**

Off-farm income provides an additional access to food through purchases from markets. The monthly off-farm income ranges from 1,200 Kenyan Shillings per household (an equivalent of about 17 US \$) to about 2,400 Kenyan Shillings (34 US \$). The distribution is depicted in Map 5.

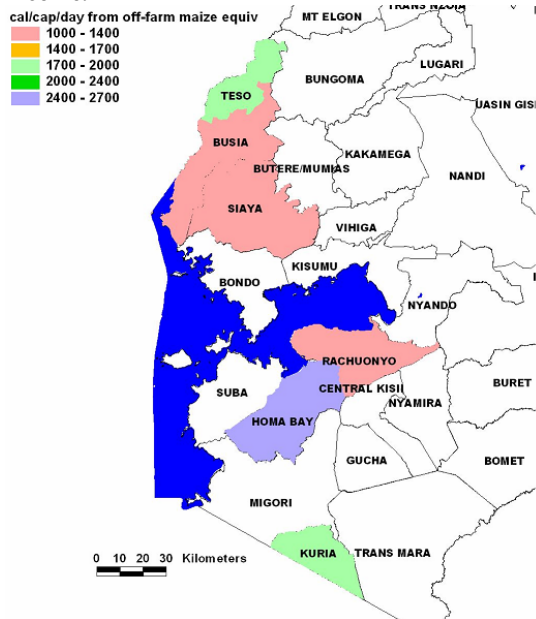
**Map 5: Monthly off-farm income per household**



Source: Own data.

This off-farm household income would translate into a per capita calorie intake potential between 1,000 and 2,700 kcal per day. Map 6 shows the respective distribution across districts.

**Map 6: Calorie intake capacity from off-farm income.**



Source: Own data

**CONCLUSIONS**

Households in Western Kenya are food secure; however, they are not in a situation of abundance, like for example the households in Central and Eastern Uganda. They are heavily dependent on cassava and on maize, so that a loss of either crop or both crops at the same time would bring them into

distress. The recent examples of droughts destroying the maize harvest and CMD destroying cassava harvests give a good example of this. A disease of cassava, like the CMD pandemic of the mid-nineties that basically destroyed half of the crop would leave the households totally vulnerable to maize losses, which have become more frequent in recent years due to drought.

**Editorial**

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**How to cite:**

Abele, S., Twine, E. and C. Legg (2006): Food security in Western Kenya. C3P Food Security Briefs No.2. Ibadan, Nigeria (IITA). <http://c3project.iita.org/>

**Acknowledgements:**

We are most grateful for the following contributions and assistance in this work:  
The work on which this brief-issue is based has been funded by USAID, as well as IITA core funds. Data collection and analysis was done in collaboration with NARO, Uganda.