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06

CAPITALISATIONS ET EXPERTISES

EATING HABITS IN CITIES OF THE SAHEL REGION

Study of eating habits of women and young children
in Ouagadougou, Niamey and Bamako

Anne Bichard



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Eating habits in cities of the Sahel region

**Study of eating habits of women and
young children in Ouagadougou, Niamey
and Bamako**

Exploratory study conducted in 2018
as part of the Meriem project

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SUMMARY

The objective of the Meriem¹ project (2018-2022) is to improve the range of food products in Burkina Faso, Niger and Mali for babies aged six to twenty-four months and for women, particularly pregnant and breastfeeding women. The Meriem project is funded by the *Agence française de développement* (AFD) and the Bill & Melinda Gates Foundation, and is implemented by a consortium of partners² led by GRET and Hystra³. The Meriem project supports companies in developing and marketing fortified food products of good nutritional quality for women and children.

At the start of the project in 2018, a study was conducted in Ouagadougou, Niamey and Bamako to deepen knowledge of the eating habits of young children and to explore those of women of childbearing age. Qualitative data were collected through observations (sales points, eating establishments and homes), and through fifty focus groups and twenty individual interviews held to collect the opinions and perceptions of about 250 people (men, women and girls) in the three Sahelian capitals. The objective was to explore purchasing practices and frequently consumed products, and to identify the drivers and determinants of eating habits. The lessons learnt from this study were enriched with knowledge acquired during previous GRET projects and compared with the available literature. The study shows how food purchases and consumption are structured by a set of sociocultural practices and norms that are shared in large cities in the Sahel, and how the combination of these practices and norms creates fertile ground for malnutrition. Beyond its use by the project itself, this document is intended for public or private stakeholders who work to prevent malnutrition in urban areas through dietary solutions.

1. Mobilising Sahelian companies for innovative large-scale responses against malnutrition.

2. GRET, Hystra, French National Research Institute for Sustainable Development (IRD), ThinkPlace, *Initiatives conseil international* (ICI), Ogilvy Change, *Institut de recherches et d'applications des méthodes de développement* (IRAM).

3. International consulting firm specialising in inclusive business.

A CONTEXT OF NUTRITIONAL TRANSITION

The Meriem project works with populations in the nutritional transition phase⁴, which is marked by the coexistence of disorders associated with undernutrition and overweight within the same individual or household. In the project's context of intervention, undernutrition remains a reality and micronutrient deficiencies are common among both children and women of childbearing age. At the same time, women are also often overweight. Fried foods (outside the home and at home) and sweetened beverages are commonly consumed daily, right from the first years of life, especially in Bamako.

DETERMINANTS OF FOOD PURCHASES

Whatever the product, the observation of practices and the collection of testimonials confirm certain obvious elements: regular purchases and consumption of a given food are conditioned by a number of factors, including its conformity to the end consumer's taste, its sale price (matching the ability to pay) and its availability at local sales points. The observations also highlight the importance of socio-cultural determinants in the choices consumers make. In the household, men often bear the bulk of food expenses. Women may contribute with their own income, but often only marginally, or in a way that is poorly accepted by both women and men, since men are expected to cover the family's food needs. Men also make most "bulk" purchases and "occasional" food purchases to improve daily life. For their part, women make everyday purchases that are necessary to prepare family meals, very often with money provided by their husbands (called "condiment money"). Finally, individual purchases of sweets, beverages or snacks are made by fathers, mothers and children from an early age.

FEEDING YOUNG CHILDREN

Breast-milk substitutes are the leading food expenditure for children from birth to twelve months

The diet of infants between birth and six months rarely follows health recommendations that advocate exclusive breastfeeding. In fact, infants are often given other beverages from the first days of their lives. Households begin incurring expenses to feed the baby between birth and six months. In many households, breast-milk substitute purchases are the leading food expense for children under the age of one year (particularly in Bamako).

Porridge: The primary food of babies aged six to twelve months

In all three capitals, porridge is usually the first semi-solid food fed to children and the primary food of babies between the ages of six months and one year. It can be home-

4. Gradual changes in food practices accompanying urbanisation and easy access to food.

made, purchased ready to eat in the neighbourhood or prepared using commercial infant flours (fortified or unfortified, imported or local). In Niamey, few babies consume porridge prepared using commercial infant flour. In Ouagadougou, infants from poor households do not consume it either; for other children, parents alternate infant flour porridge with other preparations. In Bamako, the practice is well established. The period during which children consume infant flour porridge is often short (Ouagadougou, Niamey) because they very quickly begin eating the same food as older children. Commercial infant flour is never the only food served to infants, because mothers prefer to alternate preparations to prevent the child from tiring of it, to diversify the diet and reduce expenses by alternating expensive preparations with cheaper ones. Babies are served homemade porridge or porridge bought in the neighbourhood, porridge made with infant flour and sometimes vegetable purées. Regardless of the penetration of infant flours on the market, children continue to consume homemade porridge. In Niamey, some homemade preparations, which consist in mixing flour with boiling water without cooking the mixture, are unsuitable for infants. As long as children are considered "little", porridge is served on demand whenever they cry or ask for it. For this reason, neighbourhood porridge or homemade porridge appears more practical than porridge made with infant flour because it can be bought or prepared in the morning, kept all day and served on demand.

Porridge consumption often continues after the age of two years. In some cases, this porridge is made of infant flour (especially in Bamako where Vitablé, a relatively cheap unfortified local flour, is available), but is generally homemade or bought in the neighbourhood. Cérélac, Nestlé's infant flour, is a flagship product in all three countries. With a historical positioning, a solid distribution network and strong notoriety, its success also relies on heavy investments in advertising, with promotions that violate the WHO's *International Code of Marketing of Breast-Milk Substitutes*. The product is consumed beyond the six to twenty-four month age group (teenagers are also fond of it), with a variety of consumption patterns and packaging in pouch format that is suited to households' purchasing capacities.

A wide-ranging offer of snacks

All children consume snacks that are purchased to please them. "Independent" snack purchases start early (at the age of two) and become daily when children start attending school.

A wide variety of products is available, of highly variable nutritional value. Snacks are eaten between or before or after meals. Aside from crisps in Bamako, which are the most popular snacks among children in this city, it is difficult to identify a product that predominates over others and is favoured by a majority of consumers. In Bamako, industrial beverages (sodas or flavoured sweetened beverages) are commonly consumed. This is more marginal in Ouagadougou and Niamey⁵. Yoghurt is a very popular snack in Niamey for children (among others), but is also an ingredient in traditional flour preparations ("boule"). In Ouagadougou, the recent commercialisation of Grandibien, a sweetened and fortified peanut paste has quickly gained a certain notoriety but its consumption remains limited.

5. Sweetened beverages in Bamako are also much cheaper than in Ouagadougou or Niamey.

EATING HABITS OF WOMEN OF CHILDBEARING AGE

The women targeted by the Meriem project are members of populations that are “at risk” of deficiencies, overweight and obesity. They get little physical activity and enjoy snacking. These women dislike depriving themselves of special foods, which potentially become less “special” as their standard of living rises. Moreover, the representation of the ideal body, though it is admittedly changing, continues to favour corpulence.

Meals eaten at home

In the morning, if breakfast is eaten at home, it often consists of reheated leftovers from the day before, bread or porridge. At lunch, rice dominates. For dinner, the families we met in Bamako eat fried potatoes and meat (but also salad), while in Ouagadougou and Niamey they commonly eat cereal paste (*tô*). Girls, who generally live with their parents until marriage, share at least dinner with the family. Apprentices, university students and working girls often have to eat lunch outside the home. Students who live in university residence are responsible for their own food; they generally eat lunch out but prepare their dinner in the residence. The mothers we met eat most of their meals at home. They are responsible for preparing the meals (sometimes with the help of a maid). Some dishes are seasoned individually to suit each person’s preferences: chilli pepper, for example, can be optional in the family dish to suit the children. Mothers sometimes serve ready-to-eat dishes bought in the neighbourhood from a trusted vendor. These purchases can be for the entire family (especially dishes that they do not know how to prepare at home) or only for members who do not appreciate the family dish. These dishes are bought outside, then usually eaten at home.

Breakfast, often skipped or delayed until later in the morning

It is common for children to go to school without having eaten breakfast: children often skip breakfast at home because they would rather buy something at school (especially in Niamey and Ouagadougou).

Female high school and university students tend to “skip breakfast” because time is short, but also because they want to stay slim. For students living in university residence, skipping breakfast is also a way to save limited resources and they often do not eat their first meal until late in the morning or early in the afternoon. They mention fatigue and difficulty staying focused in class. High school teachers observe a lack of attention from their students; breakfast is recognised as an essential meal, necessary especially for concentration when studying and to prevent anaemia in girls.

Meals taken outside the home and snacking for girls and women: practices are changing

For morning snacks taken at school or at the workplace, baguette sandwiches dominate in Bamako and Ouagadougou. They are filled with meat, fish, tofu (*awara*) in Niamey, avo-

cado in Ouagadougou, and meat, eggs and fried potato or *allico*⁶ in Bamako. In Bamako, fritters (fried wheat flour dough, stuffed or unstuffed) are also very popular. In Niamey and Ouagadougou, girls frequently have cooked meals as snacks (such as *babenda*⁷ and *dambou*⁸) that they buy from street vendors. In Niamey, some students prefer traditional products, such as millet *boule* (liquid preparation made with millet flour eaten with yoghurt or milk, which can be raw (*labdourou*) or cooked (*foura*)). Artisanal beverages prepared by local women are commonly purchased in all three capitals. Sodas and industrial beverages are more common in Bamako than in Niamey or Ouagadougou.

Like children, students enjoy many types of snacks (biscuits, doughnuts, *allico*, yoghurts, etc.) with no product appearing to be more popular than any other. Girls say they like crisps, sweets and biscuits less, considering them to be for children. On the other hand, girls in both Bamako and Ouagadougou consume Cérélac. Sometimes their parents buy it and the girls eat it as a porridge at home. Most of the time, however, they buy pouches of Cérélac that they eat as a snack, without adding water.

Outings are opportunities to eat special things: in Niamey, girls go out infrequently except to ceremonies which they attend "as a family". There, they consume sodas, *dégué*⁹, meat, etc. In Ouagadougou, girls go out more frequently. When they go out with a boy, the boy pays, so the girls take the opportunity to consume expensive, out-of-the-ordinary products such as fish, fried potatoes, sodas or fruit juices. They like when boys suggest they get a hamburger, pizza or *shawarma*¹⁰, but think it would be wrong to ask for them because they are not traditional foods.

The women we met eat at home more often than girls do. In Niamey, snacking between meals is frequent: porridge prepared in the morning is consumed throughout the day. If they feel a little hungry, women in Niamey especially enjoy eating *kopto*¹¹. In Ouagadougou, the mothers we met seem reluctant to admit to snacking outside meals, stating that any snacks (doughnuts, *allico*, *attiéké*¹², etc.) and beverages (made in the neighbourhood) they purchase are always shared by or with their children. In Bamako, outside of meals, women drink tea in groups and some have porridge with their families in the evening after dinner. In terms of purchases for individual consumption during the day, women mention the same products as girls: mainly sandwiches (*allico* and egg, or fried potatoes and meat) but also fritters. Women in Bamako regularly buy sodas or industrial beverages, sometimes daily.

6. Fried plantains.

7. Mossi speciality. Traditional dish made of wild leaves, millet and potash, now modernised with cultivated leaves (sorrel, amaranth and cleome), rice or maize, and sometimes a sauce-condiment made with oil, tomatoes and onions. Consumed as "tô sauce".

8. Millet couscous served with moringa or *kopto*.

9. Pearl millet couscous (more rarely wheat) that is puffed, then boiled and mixed with sweetened milk or yoghurt. May contain certain flavourings.

10. Meat sandwich.

11. Boiled vegetable. It is most often prepared using moringa leaves, but we also heard about *kopto* made with sorrel or boiled cabbage. Most of the time, it is cooked with peanut, couscous (*dambou*) or cassava flour (*gari*).

12. Coastal speciality made with cassava. It is similar to a form of couscous that is eaten mainly with chopped raw or cooked tomatoes and onions, and sometimes with fish or braised chicken.

Pregnancy and breastfeeding, periods conducive to adopting new eating habits

Eating during pregnancy often causes problems for women who report a loss of appetite during the first months. They avoid certain foods that they say make them nauseous (dishes with sauce). On the contrary, they eat other foods that they crave (in Niger, *kopto* and *labdourou*¹³ are particularly appreciated during pregnancy), foods that are recommended by health workers or their entourage, and also special products (meat, fish or fruit) that they can request more frequently because pregnant women are pampered by their husbands.

Men are concerned about their wives' eating habits. They want them to eat well and be healthy: this shows that they assume their role as the head of the family and also ensures that their wife is able to do her share of the work. Men become more attentive during pregnancy and breastfeeding: they realise that their wife is tired, and they are sometimes aware of the problem of anaemia. They believe that the mother's health conditions the health of the baby, so they try to meet their wives' demands and bring home the foods they want if they can. Husbands "spoil" their wives during pregnancy and breastfeeding (especially for the first child).

Pregnant women receive nutritional advice and an iron supplement that they accept (and take) to varying degrees. However, they receive little nutritional advice during breastfeeding. Once the child is born, the advice they receive concerns mainly how to feed their baby. Women more frequently consume certain foods that are considered to be favourable to breastfeeding: semi-liquid milk beverages or preparations (*thiakry*, *zomkom*¹⁴, *labdourou*, porridge), and peanuts in Bamako.

CONCLUSION AND RECOMMENDATIONS

The exploratory study conducted in 2018 provides a snapshot of the eating habits of the targeted populations, as well as strategic avenues for the Meriem project to choose products to be developed and guide marketing strategies or social communication activities to trigger behaviour change in nutrition (awareness). Other investigative work was subsequently conducted by project partners to refine the strategies to be deployed during its implementation. An ongoing capitalisation process will allow lessons learnt to be shared at the end of the project.

This study of demand describes the practices of the intermediate socio-economic classes targeted by the Meriem project, which constitute the majority of Sahelian urban households. Therefore, it may be of interest to other operators wanting to develop food products in the Sahel region or to implement actions to promote good nutritional practices. It should be noted, however, that the situation observed in 2018 will likely change rapidly as

¹³. Raw *boule* of raw millet flour and cold water that is dipped in curdled milk or sweetened yoghurt. Called *goumba* in Hausa.

¹⁴. Also called white water, *zomkom* is a very common drink prepared by mixing millet flour, water and sugar. *Gâpal* is slightly different: chilli, ginger and curdled milk are added, and millet and bran are ground in a mortar.

new products become available, and with the emergence of a middle class and evolving family and marital models. This requires that we remain vigilant and constantly question the relevance of the strategies defined and deployed for urban interventions.

Some recommendations concern products that target both women and children.

The study shows that purchases and consumption are structured by sociocultural practices and norms that must be taken into consideration for awareness-raising strategies encouraging good eating habits. A key point is the central role played by men: they must be one of the main targets of campaigns promoting a food product, even if it is intended for women or children.

Pleasure is essential, so sensory tests must be conducted with the product's end users. However, this aspect must consider nutritional issues: a project like Meriem must not encourage the consumption of products high in sugar, salt or fat. To stem the prevalence of overweight and related diseases, it also appears relevant to encourage physical exercise, especially for women, which implies eliminating certain cultural bans (especially in Niamey).

The economic stakes are key factors and the sale price is decisive: it must be taken into account in order to adjust the size of packaging to consumers' ability to pay.

Purchasing practices must also be considered: regular consumption depends on product availability in the sales points frequented by households. This means conducting detailed studies to understand the location of sales points in the targeted urban fabric and ensuring companies invest in a solid distribution network (with inventory monitoring, solid sales and field reporting, sales team training, etc.). To guarantee regular consumption, it is also recommended that the product be positioned on various buying channels (stocked at different types of sales points, in individual or family packaging to meet individual, daily or bulk purchases).

For children: porridge is the primary food for young children, so high-quality infant porridge appears to be the best nutritional solution to prevent malnutrition. However, it will be necessary to establish the practice of purchasing porridge in Niamey, where homemade porridge dominates. The situation is different in Ouagadougou and Bamako, where a new flour will face competition from local and imported products. A range of products allowing varied preparations could increase the regularity of consumption. The project should also report breaches of the *International Code of Marketing of Breast-Milk Substitutes* that penalise local companies. Since children will continue to receive "homemade" porridge, it is important to work to improve its quality, document the way it is prepared in Niamey and support awareness campaigns necessary to improve the practice.

To limit the purchase of breast-milk substitutes in the household budget, the Meriem project can educate mothers and fathers about the importance of exclusive breastfeeding until the age of six months, but also develop arguments targeting men and explain that the money spent on breast-milk substitutes could be spent elsewhere, such as on high-quality food for breastfeeding mothers, or high-quality infant flour for babies over six months. Finally, awareness campaigns are necessary to warn of the risks of regular overconsumption of sweetened beverages or fatty and salty products (crisps in Bamako).

For women, the study does not identify any characteristic food product in any city. However, several avenues can be explored: one option that could be considered and tested as part of the Meriem project could be home supplementation using enriched spices or condiments. Another can be the development and sale of sandwiches, improving the nutritional quality of the bread or the filling. Moreover, during pregnancy and breastfeeding, women—and their husbands—are concerned about their diet. A light, enriched product whose density compensates for the small quantities eaten, and that is presented as being suitable to the child's development, is likely to find an audience. During breastfeeding, women and their husbands may be attracted to a product rich in vitamins (because mothers believe that vitamins help regain lost weight and promote lactation). It is crucial to systematically target husbands to position fortified products for pregnant and breastfeeding women: men are expected to cover all food expenses and are particularly attentive during these periods (especially during the first pregnancies), concerned about their child's development and their wife's fatigue.

In addition, the study shows that breakfast is considered unimportant, and skipping breakfast is a habit that begins in childhood and can hamper students' ability to learn. Through actions to raise awareness among girls and mothers, it seems appropriate to highlight the importance of breakfast and propose inexpensive and practical food solutions allowing rapid preparation and consumption in the morning before school or university. Parents, who all want to see their children succeed in school, would probably be sensitive to arguments concerning academic success. ●

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ABBREVIATIONS AND ACRONYMS

BMI	Body Mass Index
CSO	Civil Society Organisation
FG	Focus Group
HSPC	Health and Social Protection Centre
II	Individual interview
IRAM	<i>Institut de recherches et d'applications des méthodes de développement</i>
IRD	French National Research Institute for Sustainable Development
IYCN	Infant and young child nutrition
MERIEM	Mobilising Sahelian companies for innovative large-scale responses against malnutrition
RTF	Ready-to-use therapeutic food ●

Introduction

The Meriem project, an innovative approach to nutrition in the Sahel region

THE MANY FACES OF MALNUTRITION IN THE SAHEL REGION

Women of childbearing age and young children, priority targets of policies to combat malnutrition

Malnutrition is a global problem with a colossal human and economic cost: globally, it can represent between 2% and 3% of annual gross domestic product (GDP), and up to 11% in Africa and Asia¹. It affects primarily the poor, and especially women and children in developing countries. In these countries, malnutrition leads to losses in productivity and growth, and is an obstacle to development. More specifically, undernutrition plays a role in about 45% of deaths in children under the age of five. These deaths occur mainly in low- and middle-income countries, where the rate of overweight and obese children is also rising. Globally, between one-quarter and one-third of children under the age of five (191 million) suffered stunting or wasting in 2019—that is, being too small or too thin for their age. Furthermore, 38 million children under the age of five were overweight².

The Sahel is one of the regions of the world where the nutritional situation is of particular concern. In Niger, Mali and Burkina Faso, children suffer multiple vitamin and mineral deficiencies: each year, acute malnutrition (or wasting) rates above the critical level are observed in some regions in the six to fifty-nine month age group. For this age group, rates of chronic malnutrition (or stunting) remain at worrisome levels. The nutritional status of women is also a matter of concern, with iron and vitamin A deficiencies affecting massive numbers of women of childbearing age. More and more women are overweight or obese while, at the same time, underweight and wasting are still common, especially in rural areas.

1. World Bank (2018).

2. FAO (2020).

Malnutrition, some definitions

Malnutrition refers to deficiencies, excesses or imbalances in a person's caloric or nutritional intake.

This term covers three major groups of ailments.

1) **Undernutrition**, which includes:

- **emaciation** or **wasting**, when an individual's weight is low in relation to their height. Acute malnutrition in children is when the weight-to-height ratio is below a standard. In adults, wasting occurs when the body mass index (BMI), calculated as the ratio of the individual's weight in kilograms to height in square meters, is less than 18.5. Acute malnutrition is caused by a recent lack of adequate nutrition and can also result from diseases such as diarrhoea;
- **stunting** (low height for age) or chronic malnutrition, which indicates that a child is too small for their age compared to a reference population. Chronic malnutrition is monitored for children under five years of age. It is the consequence of insufficient nutrition over a long period and can be aggravated by chronic diseases. A child can suffer from both acute and chronic malnutrition.

2) **Micronutrient-related malnutrition** includes vitamin and essential mineral deficiency or micronutrient excess.

3) **Overnutrition** is reflected by:

- **overweight and obesity**: in children, overweight is when the weight-to-height ratio is too high compared to the reference population. In adults, overweight is when the BMI is greater than 25, and obesity when it is greater than 30;
- **noncommunicable food-related illnesses** (e.g., heart disease, stroke, diabetes and certain cancers).

Source: WHO (2021).

Sahelian countries face what is called the "triple burden" of malnutrition, characterised within the population by:

- persistent undernutrition (high prevalence of chronic malnutrition among children, and wasting among children and women);
- the frequency of micronutrient deficiencies;
- the emergence of overweight and obesity, which lead to metabolic overload diseases.

Indicators of malnutrition in Burkina Faso, Niger and Mali reflect this triple burden.

TABLE 1 Multiple facets of malnutrition in Burkina Faso, Niger and Mali

(Source: Olive F. et al., 2020)

	MALI	BURKINA FASO	NIGER
Chronic malnutrition in children (6-59 months)	24.1%	25%	47.8%
Acute malnutrition in children (6-59 months)	10%	8.5%	15%
Sources:	INSTAT, Mali. National Health Directorate. Nutrition Division (2018).	Burkina Faso. Ministry of Health (2019).	INS-Niger (2019).
Iron deficiency in children (6-59 months)	80%	86%	76%
Vitamin A deficiency in children (6-59 months)	58.6%	54.3%	67%
Source:	2-FAS*		
Overweight and obesity in women (15 to 49 years)	35.1%	15.7%	14%
Wasting in women (15 to 49 years)	8.2%	11.2%	16%
Sources:	INSTAT, Mali. National Health Directorate. Nutrition Division (2018).	INSD, ICF International (2012).	INS-Niger, ICF International (2013).
Iron deficiency in women (15 to 49 years)	56%	48%	45%
Vitamin A deficiency in women (15 to 49 years)	16.7%	16.7%	14.7%
Source:	2-FAS		

* Hoogendoorn A. et al. (2018).

The fight against malnutrition is a priority in these three countries, which have joined the Scaling Up Nutrition (SUN) movement, which supports the countries most affected by malnutrition. This has facilitated the development of national policies to combat malnutrition in all its forms. Children under the age of two and women of childbearing age are the preferred target groups of the strategies that are consistent with the “thousand-day approach” based on scientific studies, which identifies the period from gestation to a child’s second birthday as most favourable for actions to prevent malnutrition. Countries receive support from their technical and financial partners and the commitment of many NGOs and civil society organisations (CSO) in implementing these policies. The actions

developed are often directed towards rural, isolated areas suffering chronic food insecurity and recurring humanitarian crises, where the rates of undernutrition among children are the most alarming.

The city, specific nutritional issues

Malnutrition patterns in urban areas are different from those observed in rural areas. For example, undernutrition is less pronounced in cities. There are, however, strong disparities between urban households. A significant proportion of the population in a situation of economic precarity, dependent on unreliable daily incomes, is exposed to food and nutrition insecurity³. Moreover, the prevalence of undernutrition in cities⁴—though less alarming than in rural areas—should not hide the fact that the number of individuals suffering from undernutrition remains high due to the density of the population basins concerned. So, a slight deterioration in the nutritional situation in a capital can be perceived at the national level⁵ and severely penalise countries' ability to meet their malnutrition reduction commitments. The urban malnutrition burden is likely to increase over time, as population growth is twice as rapid in cities as in rural areas⁶.

However, few stakeholders are present in urban areas to support the State's technical departments in preventing malnutrition. For example, although present in rural areas, CSOs offer little support in promoting good infant and young child nutrition (IYCN) in cities. Similarly, food and nutrition assistance programmes generally do not target urban populations because it is implicitly considered that their income and the market provide them access to appropriate food solutions.

The concept of "nutritional transition" was introduced in the 1990s by nutritionists⁷ and characterises the gradual change in food practices that accompanies urbanisation and facilitated access to food. The transition occurs in stages. Initially, the population moves beyond the stage of food shortages and is able to cover its caloric needs, though without necessarily satisfying all of its nutritional needs. Then, the composition of the diet evolves, with the share of cereals decreasing but not sugar, ultra-processed products, fats and animal proteins. This evolution, paired with lower physical activity, leads to changes in stature (overweight) and the emergence of metabolic diseases (hypertension, high cholesterol, diabetes, etc.).

3. Burkina Faso. Ministry of Agriculture and Food Security. Directorate-General for Sectoral Studies and Statistics (2016); Janin P. *et al.* (2008); Suremain (de) C.-E., Razy E. (2008). See also HEA surveys in Niamey (Lecumberri N., 2015a) and Bamako (Lecumberri N., 2015b).

4. Chronic or acute malnutrition of babies aged six to fifty-nine months, and wasting in women.

5. For example, between 2017 and 2018, Burkina Faso saw a national increase in the prevalence of chronic malnutrition in children under the age of five (18% increase, from 21.2% to 25%), largely attributable to an increase observed in the Ouagadougou region (28% increase in the Central region, with the prevalence of chronic malnutrition rising from 5.8% to 7.3%). Source: Burkina Faso. Ministry of Health (2018a) and Burkina Faso. Ministry of Health (2018b).

6. Between 2000 and 2010, the urban population in the Sahel region grew 5.8%, twice the rate of rural areas (OECD/SWAC, 2014).

7. Popkin B. (1993).

TABLE 2 Nutritional transition in Sahelian capitals

(sources: INSTAT, CPS/SSDS-PF, ICF, 2019; INSD, ICF International, 2012; INS-Niger, ICF International, 2013)

PREVALENCE OF OVERWEIGHT AND OBESITY (BMI ≥ 25) IN WOMEN OF CHILDBEARING AGE	MALI (2018)	BURKINA FASO (2010)	NIGER (2012)
In rural areas	22.4%	5.9%	13.1%
In urban areas	42.7%	24.6%	17.8%
In capital cities	46%	29%	43.8%
Nationally	27.8%	15.7%	14%

Sub-Saharan Africa is affected by the nutritional transition, and diseases associated with overweight, such as diabetes, are strongly on the rise⁸. Although the transition was first described in coastal countries⁹, Sahelian urban environments are also affected: in Niger, Burkina Faso and Mali, the prevalence of overweight and obesity is rising among women nationally, and is particularly high in urban areas, and even more so in capital cities. Nearly one in two women was overweight or obese in Bamako in 2018 and in Niamey in 2012.

IMPROVING MARKET SUPPLY TO FIGHT MALNUTRITION, THE GOAL OF THE MERIEM PROJECT

The Meriem project (Mobilising Sahelian companies for innovative large-scale responses against malnutrition) is a pilot project that was conducted between 2018 and 2022 by GRET and Hystra, in association with the Institut de recherches et d'applications des méthodes de développement (IRAM), Initiatives conseil international (ICI), French National Research Institute for Sustainable Development (IRD) and Ogilvy Change and ThinkPlace. It is funded by the Agence française de développement (AFD) and by the Bill & Melinda Gates Foundation.

The Meriem project aims to reconcile two main objectives.

- ➔ **Social objective:** In three Sahelian countries where nutritional issues are significant (Niger, Mali and Burkina Faso), it aims to improve the food supply through fortified products intended for groups most exposed to malnutrition problems: women of child-bearing age and children under two years of age—thousand-day approach.

8. In 2013, estimates of the prevalence of diabetes in African cities were often as high or higher than in high-income countries. It is estimated that more than 500,000 people died from a diabetes-related condition in Africa in 2013, accounting for 8.6% of all deaths; 76.4% of these deaths concerned persons under 60 years of age. The prevalence of diabetes is expected to double in sub-Saharan Africa by 2035 (IDF, 2013).

9. See, for example, Ntandou Bouzitou G.-D. et al. (2005) or Delisle H. et al. (2014).

- **Economic objective:** It aims to encourage private actors to produce and market high-quality food products that can meet the demand of urban consumers, and middle-income households¹⁰ in particular. The approach promoted by the project should make it possible to meet the growing demand of urban markets for processed products¹¹ with local production. Value creation on local agricultural sectors as well as job creation, particularly for women¹², represent potential spill-over effects of the Meriem project.

This innovative approach focuses on urban areas, and more particularly on the three capitals of the countries concerned: Niamey (Niger), Bamako (Mali) and Ouagadougou (Burkina Faso). Nutrition stakeholders have focused little on these areas, and urban environments are generally more conducive to changes that are likely to spread more widely. Market demand is also a guarantee of sustainability for the project's intervention strategy. It is legitimate to target urban markets because they are more promising: large population, higher standard of living than rural areas or isolated cities, household dependence on the market for food and consumption of processed foods.

The Meriem project aims to identify and support partner companies to formulate fortified food products adapted to the needs and tastes of the target groups, and then to support partner operators in producing and marketing these products. At the same time, it must design and implement social communication activities (also called awareness-raising) to promote good feeding practices for young children and women of childbearing age.

UNDERSTANDING FOOD DEMAND OF INFANTS AND WOMEN OF CHILDBEARING AGE

To choose food products, develop appropriate marketing and promotion strategies, develop awareness-raising campaigns and promote good practices, it was necessary to better understand food demand in urban areas and the eating habits of young children and women of childbearing age in the project's intervention cities. As a first step, a literature review (publications, statistical data and project reports)¹³ was conducted to collect data on demographic, nutritional and economic situations of the targeted populations in the three capitals, and to summarise the available data concerning eating habits in urban areas and feeding of young children.

This work identified missing information and defined the general outlines of a **qualitative demand study**, which was conducted in Ouagadougou, Niamey and Bamako between

10. Under the Meriem project's market-based approach, it makes little sense to rely on the demand of households in the poorest quintiles.

11. Staatz J., Hollinger F. (2016).

12. The food economy accounts for 31%, 47% and 51% of urban employment in Mali, Burkina Faso and Niger, respectively. In Niger, food processing represents 50% of manufacturing jobs (2012-2015), nearly 40% in Burkina Faso and more than 30% in Mali. In West Africa, 68% of employed women work in this sector (Allen T. et al., 2018).

13. Bichard A. (2019).

September and November 2018. This study aimed to answer essential questions for the project (presented in the box on the next page) concerning the organisation of household food purchases, and the eating habits of babies aged six to twenty-four months and of women of childbearing age.

The stakes for each of the two targets differ significantly, requiring **confirming** or **deepening** knowledge about the eating habits of children, and **exploring** those of women of childbearing age. Infant feeding practices were already relatively well documented before the start of the project (existing literature on this subject and studies conducted under previous GRET projects in Burkina Faso and Niger). On the other hand, the eating habits of women were less well known and certainly more difficult to characterise in a precise way: young children consume a limited number of foods whereas the possibilities are much broader for women. Moreover, while porridge and infant flours had already been identified by the Meriem project as valuable for babies aged six to twenty-four months, no product had been identified as such for women.

Secondly, since the group of women of childbearing age also includes very different profiles (high school and university students, women working in the formal or informal sector, housewives, with or without children), consumption habits are likely just as varied. It was therefore decided to narrow the scope and focus on the youngest women, i.e. adolescent girls and young mothers. This was done for two reasons: first to facilitate the survey process by limiting the target, but also to focus on an audience for whom actions to promote good practices were likely to have greater impacts in the medium and long term (e.g., adoption of good practices from the first pregnancies, which will be replicated in subsequent ones).

Once analysed, the qualitative data were reported immediately after the survey¹⁴, shedding light on eating habits in Niamey, Bamako and Ouagadougou. This report's value extends beyond the Meriem project, since it can serve as an information base for awareness-raising and the promotion of good eating habits in urban contexts in nutritional transition, or for food production and marketing activities for women and young children.

This document has been created to share these data outside the project framework, based on the results of the study report and enriching them with:

- ➔ information collected during the context study conducted at the start of the project in 2018;
- ➔ elements from the literature supporting the hypotheses proposed in the study report note, in particular, the bibliographic work conducted in 2019-2020 as part of an inventory of local infant flour sectors in six West African countries sponsored by UNICEF and led by the IRD¹⁵;
- ➔ unpublished data (field data and various analyses from GRET's long experience in supporting infant flour production and marketing) or data from previous surveys

14. Bichard A. (2019).

15. Olive F. *et al.* (2020).

conducted for GRET. In particular, this includes evidence from a study conducted in 2010 in Ouagadougou and Gnagna in Burkina Faso on mothers' perceptions of child nutrition¹⁶, and investigative work done within the framework of the *Fortification de produits alimentaires transformés* (Fopat) project funded by the European Union and applied in Niger by the World Food Programme (WFP) in partnership with GRET¹⁷.

The methodology used to conduct the survey is presented in Appendix 1. ●

The main questions asked by the demand analysis study

Analysis of demand was intended not to quantify demand but to understand the determinants of eating habits in young children and women of childbearing age. Specifically, it sought to:

- understand how household food purchases are organised and the role played by men and women in households;
- supplement knowledge available in the literature or obtained from previous studies on the diet of children under two years of age;
- explore the eating habits of babies between the ages of six months and one year, and between one year and two years to identify the importance of porridge and infant flour in child nutrition and other key foods as alternatives;
- explore the eating habits of women of childbearing age (purchase and consumption circumstances or opportunities, places of purchase, types of product, aspirations/expectations) by focusing on the youngest of them, whether young mothers, young brides, or unmarried young women or girls;
- identify new products arriving on the market in order to understand what food target audiences "aspire" to.

16. Bichard A. (2010).

17. Bichard A. (2018).

PART 1

Food spending and household food purchases

Before identifying the targets of social communication strategies for behaviour change in nutrition, to support in a relevant way the business strategies of partner companies and to adapt the strategies promoting fortified products, it was important for the Meriem project to understand how food purchases are organised within urban households belonging to intermediate socio-economic categories. Who makes food purchase decisions? How much is spent? Who pays for the purchases? Who makes the purchases, how often and in what types of sales points? These issues were discussed in individual interviews and focus groups held in the three capitals. The objective was to understand how daily food purchases are organised. Exceptional food consumption, such as for celebrations and ceremonies, are not at the heart of this study because they are not frequent enough to allow us to fundamentally improve the diet. On the other hand, they can be useful to introduce new products, so they were discussed during the interviews.

Food, an expense item traditionally borne by husbands

FOOD, A SIGNIFICANT EXPENSE IN THE HOUSEHOLD BUDGET

The main items of household expenditure mentioned by the men we interviewed¹ are food, electricity, water, (possibly) rent, travel and communication (telephone, internet). They estimate that food expenditure represents more than half of their income. The amounts allocated depend of course on the income and the number of people in the household. According to the data available in the literature, average food budgets vary within households in the intermediate social categories by a factor of two depending on their level of wealth (from 250 to 300 CFA francs² per person per day for the less affluent in the intermediate quintiles, to 400 to 650 CFA francs per person per day for the more affluent³).

The men estimate that food expenditure represents more than half of their income.

Complaints about the rising cost of living were common during discussions. Few men (unlike women) say they are able to save a little money. The structure of household spending can vary: health problems are mentioned as having a very strong impact on the budget. When their children are of school age, school expenses can also lead to major changes. These are all the greater as many families choose—or are forced⁴—to send their children to private schools.

1. Questions relating to the level of spending were asked primarily to men in Bamako and Niamey because they had been introduced in the discussions following the presentation of the first findings of the survey conducted in Ouagadougou. We have very little information on this subject in Ouagadougou.

2. The African Financial Community (CFA) franc is indexed to the euro. 1 euro equals 655 CFA francs.

3. Estimate based on various sources including INSD (2003); Michelon B. *et al.* (2015); Arditi C. (2012); Lecumberri N. (2015a); Lecumberri N. (2015b); INSD (2015); Bichard A. (2019).

4. The lack of space in public high schools, which forces families to send their children to private schools, is mentioned in Ouagadougou during the interviews. It is also known (Pilon M., 2004) that the country's efforts to provide basic education have created a bottleneck at the secondary level and encouraged enrolment in private schools.

HUSBANDS COVER FOOD EXPENDITURE: A COMMON BUT NUANCED NORM

Men bear the financial burden of feeding the family.

Most of the people we met in each of the three capitals state that the men bear the financial burden of feeding the family. This rule is often mentioned in the interviews with some women stating that it is not possible for them to contribute to food expenses. For their part, the men are sometimes embarrassed to admit that their wife pays household food expenses. These attitudes are most noticeable in Niamey, but are also evident in Bamako and Ouagadougou.

In Niamey, the men explain that it is important for them to pay these expenses in order not to lose “power” in their marriage. Others, on the contrary, complain about having to assume all food purchases alone and criticise women for expecting everything from them.

“You have to be careful, if the woman gets the upper hand, you’ll become the wife of your wife [...]. You have to assume your sovereign duties; if at some point you have to chop onions because you’re no longer in charge of daily life, you lose your status, it’s not good.”

FG-9, men (upper middle class), Niamey.

“Some women don’t want to work. That’s the mentality, they think that the husband should do everything.”

FG-6, elderly men, Niamey.

In Bamako, the comments of a group of women show that it can be strategic for them not to ease their husbands’ financial burden because they should not be encouraged to spend “outside the household”.

“Some women get nothing from their husbands. Men have to pay for the family’s food. Otherwise, they go out and spend their wages on their girlfriends.”

FG-1, women (teachers), Bamako.

It is easy to understand that men are responsible for expenses when women have no income of their own. This situation is more common among the women we met in Niamey, which may reflect cultural reticence limiting the integration of women in the labour market in Niger⁵. It should be noted that, in the Zaktouli neighbourhood of Ouagadougou, most of the women we met find themselves in the same situation.

However, household expenses may be borne entirely by the husband even when the wife has a source of income: women pay only for their own expenses and save or send what they do not spend to their families. A young woman in Ouagadougou, a substitute teacher, explains that she does not buy food for her family which is the full responsibility

5. In the early 2000s, of seven West African capitals, Niamey had the lowest female employment rate at barely 35%, compared to 45% in Bamako and 50% in Ouagadougou (Brilleau A. et al., 2004). This situation should be considered in conjunction with cultural constraints that do not favour the employment of women: 17% of West African men think it is unacceptable for a woman to work outside the home. Niger has the highest percentage (33%, compared to 30% in Mali and 20% in Burkina Faso – Bouchama N. et al., 2018).

of her husband, a young researcher, while she earns about 140,000 CFA francs during the school year. This household follows the traditional practice where men are responsible for making the family's food purchases.

"Fuel is a big drain on my salary. Women also have a lot of expenses: hairdresser, clothes [...], cosmetics, ointment, neem soap. I don't pay for food, my husband pays for the food, that's how it is. If I have any money left at the end of the month, I send it to my parents."

II-2, woman (substitute teacher), Ouagadougou.

While this pattern persists in some households, some women do contribute to food costs in each of the three capitals. In Bamako, two brothers explain that the women of their large family contribute to the expenses and compensate for the men's uncertain income. In Niamey, some men first explain that they cannot force women to contribute to household expenses, since it is theoretically up to men to cover all purchases, before acknowledging that the reality is a little different.

In each of the three capitals, we observe women who do contribute to food costs.

"The woman does what she wants with the money she earns; nothing forces her to help with household purchases [...]. That's the man's responsibility. Even if she has a billion CFA francs, nothing forces her to cover shared expenses [...]. But then, every woman does what she wants... many do chip in."

FG-6, elderly men, Niamey.



Shopping bought with "condiment money" in Bamako (2018)

Gender ratio for household expenses

Reluctance to acknowledge the growing role of women in household purchases observed during the study is consistent with analyses conducted in West Africa. In 2009, in Ouagadougou⁽¹⁾, researchers revealed that women's participation in household expenses is a fact when their husbands have material difficulties, though this is not disclosed: it can be difficult for women to admit, because they consider it is not their role to pay for expenses, and they also fear that their husband's failure is a marker of "downward social mobility", or of a lack of commitment to the family or to themselves, which is not something they want to share with everyone:

"A woman whose husband doesn't fulfil his obligations—for example, going to the office without leaving "something" for the sauce or enough to cover the baby's medical prescription—will perceive such attitudes as an expression of her husband's discontent and as a desire to explicitly express this discontent."

Source: Attané A. (2009), *Quand la circulation de l'argent façonne les relations conjugales : l'exemple de milieux urbains au Burkina Faso*, p. 166.

The findings are identical in Dakar: women participate increasingly in covering purchases, but they do not openly state it because they "want to comply with socio-religious norms that assign all household expenses to men⁽²⁾".

Men also hesitate to admit to this, being ashamed that they do not play the role expected of them⁽³⁾. Beyond shame, a fear of losing control is expressed in Ouagadougou: according to the men, women become independent and less submissive when they contribute to household income. One man explains it this way: "Even if the husband accepts his wife's contribution, he does so reluctantly, because if a woman contributes to building the house you're dead, so I prefer her to keep her money⁽⁴⁾." Men's attitudes seen in the press are no different in Niamey: "The man is the pillar of the family, it is up to him to cover the costs of the home." This explains the reluctance to allow women to work outside the home: "If I can afford it, I'd rather my wife not work and stay at home⁽⁵⁾."

(1) Attané A. (2009).

(2) Jacquemin M. et al. (2018), p. 144.

(3) Attané A. (2009).

(4) Thiombiano B. G. (2014), p. 265.

(5) Mounkaïla I. (2018).

Many women agree. They say that men are responsible for buying food, though they say they do spend part of their own income on food: teachers estimate that 10% of their salary is spent on family food in Niamey, 50% in Bamako.

Women acknowledge spending some of their income on food.

When the men are not around: none of the women we met is totally isolated, but many live without their husbands. Some are widows and are cared for by a son or parent, while others raise their child without the father, but with the help of their family. They frequently explain that their husband is absent because he works outside the capital or abroad. Some of the women we met in Ouagadougou live alone with their children, and their husbands send them the money they need. They can also live in a large family: their husbands then give their contribution to food expenses directly to the head of the family, as well as something for their wife so that she can cover her own expenses that are not covered by the large family. ●

"I got married three years ago. My husband [...] is in France, he makes tar for roads. He comes home once or twice a year [...]. He sends money for me every month [...], 50,000 CFA francs. This money is just for me. He also sends money for condiments and cereals to his older brother who runs the big family."

II-10, woman (apprentice seamstress), Bamako.

Purchases for meal preparation at home

WHENEVER POSSIBLE: BULK PURCHASES, MADE BY MEN

Some foods are stored at home and used as needed. These are everyday consumer products that can be easily stored and avoid less economical, day-to-day purchases.

“Bulk” purchases are made by men. These are primarily unprocessed cereals (such as rice, maize and millet, in 25 or 50 kg bags, depending on needs and resources) or processed cereals (such as couscous or macaroni bought by the box) but also oil, milk, coal, tea (called Lipton) and coffee, in some households.

When the stock is exhausted, these products are bought in small quantities if money is short, and bulk if it is available.

“Bulk” purchases are made by men.

The level of income and the frequency of cash inflows determine the frequency and type of bulk purchases.

The level of income and the frequency of cash inflows determine the frequency and type of bulk purchases. If income is high, a wider variety of products can be bought in bulk to take advantage of the prices. When income is more modest, bulk purchases can be limited to cereals and only when money is available.

However, many urban households live on daily income from commercial or artisanal activities. Cash inflows are often limited and households cannot afford to save: they have to make frequent purchases in small quantities and at potentially higher prices.

The sale price of products is a key element mentioned to explain purchasing decisions. On the other hand—and especially for the most modest—it is not the price per kilogram that is considered (which would encourage bulk purchases), rather the unit price. Neighbourhood shopkeepers or resellers adapt to this constraint by selling small bags of sugar or flour, or by selling the quantity corresponding to the amount of money

It is not the price per kilogram that is considered, rather the unit price.

that the customer is ready to pay¹. Manufacturers have understood demand well and are selling more of their products in single-serving packets: instant coffee, laundry detergent, milk powder and even infant flours.

Manufacturers are selling more products in single-serving packets.

The availability of a product in a small package also makes it possible to test a new product without incurring too much expense; it facilitates access to a greater number of consumers and can allow women to contribute to the expense, as noted in Niamey during a previous study:

“Normally, the husband pays for the food [...]. The problem is that he has no regular income, and he doesn’t want me to cover certain expenses [...]. He would get angry if I bought a bag of maize. I ask for maize and he says he doesn’t have the money, but he doesn’t want me to buy a bag of maize. He says that if I buy it, I’ll hold it against him. On the other hand, it’s okay if I buy a small bag.”

Substitute teacher, Niamey (Richard A., 2018, *Le marché des produits transformés au Niger, perceptions et pratiques des consommateurs*, p. 17).

DAILY PURCHASES: “CONDIMENT MONEY”

Every day, the head of the family gives his wife a small sum of money, commonly known as “condiment money”.

In all three capitals, the head of the family gives his wife a small sum of money, commonly known as “condiment money” to buy anything that is not available at home but that is necessary to prepare the day’s meals. The money is not just to buy condiments. It is for ingredients for the sauce (spices, vegetables) but also for small amounts of cereals or oil if the family’s stock is exhausted and the household cannot buy in bulk, as explained by this artisan in Niamey.

“I try to buy rice in bulk. The 50 kg bag costs 21,000 CFA francs and it lasts two months. I also buy half a bag of millet (25 kg) for 12,000 CFA francs. It is for the children’s and parents’ porridge; we eat it every day to tide us over until mealtime [...]. In the morning, if we have rice at home, I give my wife 1,000 CFA francs for lunch, it’s the condiment money. Then I give her another 1,000 CFA francs in the afternoon.”

I don’t give her 2,000 CFA francs in the morning [...] otherwise she wants more for the evening. Before the children were born, I gave her 1,500 CFA francs a day, now it’s 2,000 CFA francs.

If we don’t have any rice at home, I add 750 CFA francs to the 1,000 CFA francs in the morning, and another 750 CFA francs to the 1,000 CFA francs in the evening.”

FG-12, man (plumber, three children between 18 months and six years and a wife with no income), Niamey.

1. The interest of these sales in “small quantities” is explained by a woman interviewed in Niamey in 2017 under the Fopat project: “We buy maize meal from the women in the neighbourhood. Others sell it door to door. The shops sell it in large bags, it is less convenient. The woman in the neighbourhood will sell you just the amount you want. She’ll even sell 100 CFA francs or 200 CFA francs worth if you want.” Richard A. (2018).

Women make daily purchases at the market or the local shops and may be required to justify their expenses to their husbands.

Women make daily purchases at the market or the local shop.

Women can contribute to this budget if their husbands' income is insufficient. Others say they "save" on the condiment money and put a little money aside to buy a treat for the children in the afternoon, or to buy infant flour for the youngest, when their husband does not cover these expenses.

We discussed these daily allowances or "condiment money" with the men and women we met in Bamako and Niamey². The amount appears to be quite "contained": most often between 1,500 and 2,500 CFA francs per day³, while income levels vary and the number of people to be served differs greatly from one household to another⁴.



Imported children's foods dominate in some sales points, Bamako (2018)

2. Budget issues were discussed during the steering committee meeting at the end of the fieldwork in Ouagadougou. This point was not specifically addressed in Ouagadougou, but it was with men's and women's focus groups in Bamako, and with some focus groups in Niamey.

3. Between 1,500 and 2,500 CFA francs for more than 70% of respondents. 50% of respondents say that the household's daily condiment budget is 2,000 CFA francs. The lowest condiment budget reported was 750 CFA francs (one case), and the highest was 3,000 CFA francs (four cases).

4. Between four people for a small household and thirty for a large family.

In poor households, condiment money sometimes has to cover cereal purchases.

It is difficult to compare condiment budgets: in poor households, which are not able to buy in bulk, condiment money sometimes has to cover cereal purchases, whereas these products are most likely already available at home in households with more regular or higher incomes. However, we understand from the testimonials that these budgets are the source of arguments between spouses. It is conceivable that men try to limit these daily allowances, which women take for granted.

On the other hand, it seems that an increase in a man's incomes does not necessarily impact the condiment budget⁵, but rather allows him to make occasional purchases that enrich the family's or children's diet with fruit, yoghurt, meat, but also junk food⁶ (soda, crisps).

MORE OR LESS FREQUENT PURCHASES, AS A TREAT TO IMPROVE DAILY LIFE

Some purchases are made occasionally, most often by men. These are products that are not considered essential on a daily basis but are a treat and improve the household diet: fruit juice, meat, fish, fruit, but sometimes also milk and infant flour for the children. The differences between social groups are undoubtedly clearer for these budgets than for the condiment budget, and there is a stronger ability to innovate through these purchases (search for pleasure and fine food). ●

5. Especially in large families.

6. High-calorie nutrient-poor foods, such as crisps.

Ready-to-eat food purchases

A DAILY BUDGET FOR INDIVIDUAL PURCHASES

All family members—men, women and children (from an early age)—can purchase ready-to-eat products during the day for their own personal consumption. These include meals, snacks, beverages or treats consumed outside the home, at school or at work, or brought back and eaten at home.

The fathers most often finance these purchases.

The fathers most often finance these purchases.

Some mothers cover their own expenses and supplement the money given to children by the fathers from their income or from the condiment money.

All family members purchase ready-to-eat products during the day for their personal consumption.

For students, in Niamey or Ouagadougou, these expenses are common: every school day, most children receive 100 CFA francs in primary school, and 200 CFA francs in high school to buy food during breaks, most often from women selling dishes, sandwiches or industrial foods near the school or in the school or university courtyard. In Ouagadougou, for a family with five children, this represents close to 1,000 CFA francs per day that the household is required to pay just for snacks at school. In wealthier households¹, the budgets for children's snacks are potentially² much larger.

STREET FOOD AND COOKED MEAL PURCHASES OUTSIDE THE HOME, AN INCREASINGLY COMMON PRACTICE

For more than twenty years, numerous studies and analyses have noted a growing trend towards food consumption outside the home in West African cities³. Practices vary accord-

1. The wealthiest quintile is not covered by the scope of the Meriem project.

2. With daily allowances of up to 1,000 CFA francs (statement from resource people).

3. Street food purchases are most common in capital cities, but also in secondary cities (Kibora L.O., 2015).

ing to age, household structure, economic status and place of residence, but include all age groups (children in particular are major consumers of street food), men and women (with a higher proportion of men), wealthy and poor alike.

In 1998, a survey in Bamako showed that everyone but the wealthiest⁽¹⁾ consumed street food. In 2014, the household economy analysis⁽²⁾ conducted in the same city found that buying meals outside the home was common, particularly due to distances between home and the workplace: members of the poorest households spent 200 CFA francs—almost the equivalent of the average daily expenditure for a member—to buy a single meal outside the home on the days they travelled to work.

In Ouagadougou, a 2012 survey of 300 adults found that 91.4% of them occasionally bought meals outside the home, and 90% had eaten more than once outside the home in the previous week. Of these, 95.3% had purchased street food⁽³⁾.

Finally, a recent study⁽⁴⁾ notes that the practice of buying street food is increasing and is associated with a reduction in the number of meals prepared at home: three daily meals prepared at home was the norm in the 1960s and two in the 1970s. Researchers observe a generalisation of just one meal prepared at home beginning in the 1980s.

(1) Ag Bendeche M. et al. (1998).

(2) Lecumberri N. (2015b).

(3) Zeba A.N. (2012).

(4) Konkobo-Yaméogo C., Cheyns E. (2018).

There are several reasons for the increasingly common practice of buying ready-to-eat dishes.

- **The distance between home and the workplace:** working people live farther and farther from their place of work and cannot afford to return home at noon (lack of time or resources for transportation), so they eat away from home and often buy street food. This is the case for the apprentices and students we met during the study (see part 3).
- **The search for special foods:** people have to buy the dishes that they enjoy but do not know how to prepare at home (like *atteké*⁴ in Ouagadougou). Families also buy portions of dishes cooked elsewhere when a family member does not like the family dish.

4. Coastal speciality made with cassava. It is similar to a form of couscous that is eaten mainly with raw or cooked chopped tomatoes and onions, and sometimes with fish or braised chicken.

- **Lack of time to prepare meals:** this is accentuated when women work outside the home. This is an argument, in some households, for buying ready-to-eat porridge for young children (see Part 2).
- **The lack of financial means:** cooking involves expenses (water, fuel, mill) that are sometimes out of reach for the poorest families. The poorest households or households with irregular or unstable incomes may therefore have to buy street food⁵. ●

Cooking at home involves expenses that are sometimes out of reach for the poorest families.



Alloco sandwich vendor at a primary school in Bamako (2018)

5. Richard A. (2010).

The large family restricts individual choices

We find different “household models” in the three capitals: “**large families**”, with the traditional organisation of rural families in which several households coexist and share certain resources and expenses under the control of a head of the household, but also “**nuclear households**” composed of a couple and their children, and possibly an ascendant. Purchasing and eating habits differ significantly depending on the family organisation.

In the “large family” in Bamako¹, several households (usually several brothers and their families, single sisters and their parents) gather to eat together in the same courtyard. The women take turns preparing the meals for the whole family. At the beginning of the month, each head of the household pays a financial contribution towards shared food purchases (bulk and condiments), managed by one of the men (most often the head of the large family, who is usually the father or oldest brother). Then, he gives the women in charge of cooking (one of the wives, who can be assisted by a maid, even in relatively modest families) the ingredients taken from the shared stock (cereals), as well as an allowance to buy anything else that is needed to prepare the meal (condiments) each day. This organisation has consequences on individuals: they eat what they contributed to, even if they would rather eat something else.

They eat what they contributed to, even if they would rather eat something else.

“It’s cracked maize porridge every day at breakfast for the whole family [...]. When I was at home (at my parents’ house), we made millet flour porridge. I prefer millet porridge. Here, there’s only cracked maize and rice. So, if I want to make millet porridge, I have to buy it with my own money, so I don’t eat it any more.”

II-10, woman (apprentice seamstress), Bamako.

“At lunchtime at work, I don’t eat street food. Someone from the courtyard brings me the rice dish that was cooked in the big family and to which we contributed to.”

II-1, woman (Orange Money employee), Bamako.

1. These aspects were discussed and explored with the people surveyed primarily in Bamako.

Collective purchases made for the whole family are supplemented by purchases made by each man for his own household. These can be “bulk” purchases, daily purchases or occasional purchases: one or two bottles of soda for the evening, a case of soda stored at home, a pack of fruit juice for the children’s snack, coffee, milk, but also infant flour. These purchases are not pooled within the large family. ●

Collective purchases made for the whole family are supplemented by purchases made by each man for his own household.

TAKEAWAYS

Some women break with a traditional representation of the family according to which food purchases are men’s responsibility, and contribute financially to the family’s management, thus easing the burden on their husbands. However, attachment to a norm that makes men responsible for food expenditure is noticeable in most of the comments we collected. Therefore, promoting a new product and establishing new practices will require convincing men of their value. Women do not necessarily aspire to “take power”, and men are not necessarily willing to acknowledge that the household’s food may also depend on their wives’ incomes. In fact, food expenses are most often borne by the men, and women’s contribution using their own money is considered marginal. However, these remarks must be put in perspective: women’s contribution to household expenses might be minimised by men, who fear that it represents a loss of control and power for themselves, but also by women, who fear that it will lead to disengagement on the part of their husbands.

Different shopping practices and opportunities exist: “bulk” purchases are made by men and concern products stored at home and renewed when the stock is exhausted. Men also make “occasional” food purchases that improve daily life. For their part, women make daily purchases to prepare family meals using “condiment money”, most often dispensed by their husbands. Finally, fathers, mothers and children make individual purchases for treats, beverages or snacks. The purchase of ready-to-eat foods bought on the street and brought home for individual (or collective) consumption is a widespread practice. In large families, part of the food expenditure is shared, and meals are prepared by the women in turn; these collective practices sometimes lead to people having to eat dishes they do not particularly like.

PART 2

Feeding young children

Interviews were conducted with fathers and mothers about what they feed their infants (six to twelve months) to confirm the frequency of porridge in their diet and to complete knowledge about the consumption of fortified infant flours. They also served to explore children's eating habits and identify the key foods that babies are fed and like. The discussions were not necessarily limited to the six to twenty-four month age group, which is the priority for the Meriem project's nutritional objective. Products likely to concern children beyond two years of age and to constitute a market opportunity for partner companies were also discussed. Discussions were launched with general questions: What do you feed your very young children, and why? At what age, how often and why? Who pays, who buys, who prepares and serves the product to the children, and why? We also invited the people we met to share their opinion about certain products found at nearby sales points (local and imported infant flours, snacks and beverages).

Liquids in addition to milk, right from birth

EXCLUSIVE BREASTFEEDING, RARELY PRACTISED

Monitoring recommendations for infant and young child nutrition (IYCN)

The WHO recommends breastfeeding right from birth and exclusively from birth until six months. Complementary foods should be introduced at six months, but ideally, breastfeeding should be continued until the age of two years. According to national surveys, practices in Burkina Faso—and in Ouagadougou in particular—generally follow international recommendations fairly closely for the key indicators of IYCN with most children being breastfed exclusively from birth until six months (55%). However, the practice remains a minority in Niger and Mali (29% and 37%). Although low, the percentage of children between six and twenty-three months who receive a minimum acceptable diet is also better in Burkina Faso (20%) and Ouagadougou (39%) than in Niger and Mali (6%), and their respective capital cities (17% in Niamey and 9% in Bamako)⁽¹⁾.

(1) Analysis of surveys in Burkina Faso (Burkina Faso. Ministry of Health, 2018a), Mali (INSTAT, Mali. National Health Directorate. Nutrition Division, 2017) and Niger (INS-Niger, 2016a).

In each of the three capital cities, the mothers we met usually breastfeed their children for twelve or eighteen months. Children are rarely breastfed until two years of age. The women we met in Ouagadougou seem to be more familiar with the WHO recommendation on exclusive breastfeeding than women in Niamey and Bamako. However, this practice is insufficiently adopted in all three capitals. Indeed, mothers often state that they give their babies beverages other than breast milk very early in life; they give their baby orange juice or water

Exclusive breastfeeding is insufficiently adopted in all three capitals.

right from the first month of life. In Bamako, women give tamarind juice at birth, even before breast milk, while men report traditional practices of giving the child decoctions from birth, which they consider harmful and which would explain the health problems encountered by some children in their families.

“Overall, the women of the courtyard are healthy; we’re lucky. Just one of the women lost two children but still has three living children. We decided to stop, she shouldn’t have any more children. Four of the six women of the courtyard weren’t born in Bamako: they take traditional medicines from the village. That’s not good. They take decoctions during pregnancy, and give them to their baby after childbirth, and then there are problems.”

FG-10, men (large family), Bamako.

BREAST-MILK SUBSTITUTES COMPLEMENTING BREASTFEEDING: A VERY COMMON PRACTICE

In addition to water and various juices, breast-milk substitutes¹ are very frequently mentioned during discussions with mothers and fathers as products that are bought and fed to babies in the first months of life. This practice is confirmed by observations of sales points and during conversations with shopkeepers and resource people²: according to the testimonies collected, breast-milk substitutes are the product most frequently purchased for young children in all three capitals.

In 2023, the total breast-milk substitutes market was estimated at more than 41 billion USD⁽¹⁾ and is a very strongly growing sector: between 2008 and 2013, the total volume of global sales of breast-milk substitutes rose by 40%, from 5.5 to 7.8 kg per infant/child during the 2008-2013 period⁽²⁾.

Between 2005 and 2019, global sales doubled, growing from 1 to 2.2 million tonnes per year, driven by a small handful of agro-food giants and boosted by the Chinese and Asian market⁽³⁾. West African cities, however, are of interest to breast-milk substitute leaders: research shows that in Abidjan in 2019, health workers were regularly approached by multinationals marketing breast-milk substitutes⁽⁴⁾.

(1) Kent G. (2015).

(2) Baker P. et al. (2016).

(3) Baker P. et al. (2021).

(4) Emerson J. et al. (2021).

1. In this document, breast-milk substitute refers to artificial milk intended for infants. The *International Code of Marketing of Breast-Milk Substitutes* prefers the use of the term “breast-milk substitute” over “infant formula”.

2. Shopkeepers, pharmacists, health workers, a Nestlé executive.

Some parents explain that the purchase of breast-milk substitutes is sometimes constrained by the situation of mothers who are high school or university students, or if they have to go back to work. However, this is not always the case, as the use of breast-milk substitutes is observed sometimes from the very first days of the child's life when the mothers do not have any particular activity that would prevent breastfeeding. In Bamako, some mothers explain that they give breast-milk substitutes to their child on the advice of health workers, with some doctors even prescribing a specific brand.

In some cases, the use of breast-milk substitutes is observed from the very first days of the child's life.

Purchases on demand or as a treat

Mothers most often explain that they start giving substitutes in addition to breast milk because they feel that they do not have enough milk. So, they ask the child's father to buy some. Among those interviewed, the fathers always pay for the child's milk.

In other cases, fathers sometimes buy milk for the baby on their own initiative.

"For my eldest daughter, I added Picot³ milk when she was six months old. My husband wanted it because he heard that other milk was necessary in addition to breast milk. So, the baby got my milk, Picot milk and porridge."

FG-6, women (unemployed, merchant husbands), Ouagadougou.

"For our first child, it was my husband who decided: we gave NAN-14⁴, the pharmacist suggested it. Our baby liked it."

FG-10, women, Ouagadougou.



Children, Ouagadougou (2018)



Women's nutrition information session in Bamako

3. Breast-milk substitute imported from France (Lactalis Group).

4. Breast-milk substitute from the Nestlé group.

Through the interviews, we learn that men buy breast-milk substitutes to please the child and the mother and to show that they are able to take care of their family. They speak of it with pride and undoubtedly feel that they are doing the right thing. These purchases testify to the attention that fathers pay to the child, and by extension to the mother, and are generally well received by the mother.

Men buy breast-milk substitutes to please the child and the mother and show that they are able to take care of their family.

These purchases are not inconsequential because breast-milk substitutes are expensive (about 3,000 CFA francs per box) and can weigh heavily on household budgets. In Bamako, milk purchases are frequent and sometimes continue for almost a year. So, the budget allocated to breast-milk substitutes appears to be much greater than that devoted to the purchase of infant flours, even in families that purchase flour regularly:

"A box of France Lait costs 3,500 CFA francs and lasts two weeks. I gave it from birth until one year [more than 80,000 CFA francs devoted by the household for a breast-milk substitute]."

FG-4, women (small merchants), Bamako.

"I buy one box of Cérélac⁵ per month (2,000 CFA francs) and two pouches of Vitablé⁶ per month (1,400 CFA francs). I buy milk every five days [close to 20,000 CFA francs per month for milk, six times the budget allocated to infant flour]."

II-1, woman (Orange Money employee), Bamako.

Some babies are fed breast-milk substitutes (in addition to breastfeeding) for up to six months, and up to a year for others, before they are switched to standard powdered milk. Breast-milk substitutes are not always consumed alone, and are sometimes added to millet porridge, or even to infant flour porridge. ●

5. Nestlé's infant flour is available in all three countries.

6. Infant flour from Grands Moulins du Mali, sold in Mali and some cities in Burkina Faso, but not in Ouagadougou at the time of the survey.

Porridge, the flagship food of babies aged six to twelve months

INTRODUCTION OF COMPLEMENTARY FOOD, A VARIETY OF PRACTICES

The introduction of complementary food ends exclusive (or almost exclusive) breastfeeding. When referring to the period preceding this stage, mothers often mention fatigue and weight loss caused by breastfeeding, which is a source of concern. Some express discomfort at the thought of their child being hungry and not producing enough milk to satisfy them. Women see the introduction of complementary food as a release and a relief, even if they continue to breastfeed.

Women see the introduction of complementary food as a release and a relief, even if they continue to breastfeed.

"It will be easier for me too, I'll be happy because my child will nurse less. I can get a little rest. It's tiring, my baby nurses a lot and cries because she wants to eat, she needs porridge. My baby nurses but I don't have enough milk, so she's always nursing, it's tiring. It's making me lose weight, I don't like it."

Young mother, province of Gnagna (Bichard A., 2010, *Étude de la perception et des attentes des mères d'enfants de 6-12 mois concernant les aliments de complément au lait maternel dans le contexte burkinabè*, published report).

Porridge is very often introduced well before or well after the age of six months.

The age at which porridge is introduced varies: some women scrupulously wait six months to the day, and do so on the advice of their health centre¹. However, this practice is uncommon, and porridge is very often introduced well before or well after the age of six months. Focus groups reveal that practices regarding the age at which the product is introduced vary widely, even within relatively homogeneous groups.

1. This scrupulous respect of health recommendations by some mothers is seen especially in Ouagadougou, which seems to be consistent with the IYCN indicators that are more favourable than in Bamako and Niamey.

"I give my baby Cérélac, we started when he was two months old. My husband bought it so I could get some rest."

- *"When I went to have him weighed, they told me to wait until 14 October before feeding him porridge, that's when my baby will be six months old."*
- *"I started at six months with maize porridge that I buy on the street."*
- *"I'm waiting until four or five months, then I'll feed him Cérélac and porridge that I prepare at home with pearl millet, peanut, or tô porridge."*

FG-2, women, Ouagadougou.

Mothers delay introducing the complementary food if they feel that their baby is developing well with milk alone, or if the baby reacted badly when introduced to a complementary food (stomach ache, digestive issues). During our study, late introduction of complementary foods was observed especially in Niamey, at seven, eight or even nine months.

"There's a mandatory vaccine for the baby at nine months. To get the vaccine, you have to spend a week at the Integrated Health Centre² to learn how to make porridge. I started giving porridge after that."

FG-1, women (unemployed or irregular employment), Niamey.



Mural – health centre, Ouagadougou

2. The Integrated Health Centre is the local health centre in Niger.



Women's nutrition information session, Ouagadougou



Koko Vita flour in Niger, Pafan project

Late introduction of foods complementing breastfeeding is described in many West African contexts³. According to UNICEF, this practice affects one in three children worldwide, and represents "a threat to growth and development at the global level"⁴ which requires greater awareness of the need to introduce food at six months.

Late introduction of foods complementing breastfeeding is described in many West African contexts.

On the other hand, **porridge is introduced early** for several reasons: mothers feel that they do not have enough milk, or they think their babies want it or need something other than the breast because they cry or are not growing fat. Mothers' workload, schedules and fatigue also motivate them to introduce porridge early. Finally, some mothers need to return to work and so they have to introduce complementary food early so that their child can be cared for by others.

THE CHOICE OF COMPLEMENTARY FOOD SERVED TO THE BABY

Regardless of the product served to the baby, mothers' arguments justifying the choice of a specific food or recipe are based on the product's actual or perceived quality, which has beneficial consequences for the child and, therefore, for the mother. Discussions in Niamey, Bamako and Ouagadougou in 2018 confirm this, which had been mentioned during a study in Burkina Faso a few years earlier.

3. In 2004, researchers observed late introduction of food in the province of Gnagna in Burkina Faso (23% of mothers introduce food at eight months, 17% at ten months) where mothers traditionally introduce food late out of fear of disease (Sawadogo M., 2006). In Ouagadougou, in 1999, 35% of babies aged six to nine months admitted to recovery and nutrition education centres (CREN) in the recovery phase had been given only breast milk (Somé J.-F., 1999). In Senegal, a recent study revealed late introduction of solid foods in Peuhl communities in Ferlo (Sougou N., Boetsch G., 2016).

4. UNICEF (2016).

FIGURE 1 The desired qualities of a porridge according to mothers in Burkina Faso

(Source: adapted from Richard A., 2010)



PORRIDGE...	THE BABY...		THE MOTHER...
tastes good.	likes it, eats it eagerly, is not hungry.	is happy.	is happy to please her baby.
is nourishing.	is full, is not hungry.	does not cry, sleeps well, feeds less frequently during the night, does not need to be cared for or watched over.	is less tired.
is digestible and healthy.	does not have a stomach ache, is healthy.	receives compliments, is pretty.	no longer has to ask for money for baby health expenses, parents no longer argue.
is nutritious.	is healthy looking, is not skinny.	is independent.	is proud of her baby, her entourage congratulates her.
	develops well: sits alone before others, plays alone, walks early, quickly learns to eat like a big boy/girl.		no longer has to carry her baby on her back all day. Is less tired and can go about her activities, get back to work and earn money, have time for herself and the rest of the family.
is affordable.	can eat porridge regularly (every day) and for a long time (after the first birthday).	is not "frustrated" by being refused food he wants.	can purchase the product (alone or with the support of the father). Feeding the baby does not cause tension between the parents. Porridge purchases are not at the expense of other essential purchases.
is prepared with flours and other local ingredients.	gets used to the tastes of foods he/she will eat later.	switches easily to family dishes.	can easily feed the baby family dishes when she feels the time is right; the "baby food" period does not last long.

A VARIETY OF TYPES OF PORRIDGE IS SERVED IN ADDITION TO BREAST MILK

Porridge is generally the first semi-solid food served to babies: most babies aged six to twelve months eat it in Niamey, Ouagadougou and Bamako. However, while the word “porridge” is used in all three cities, it refers to different types of preparations. It can be traditional “home-made” and “neighbourhood” porridge, and porridge prepared from infant flours (discussed later in this section).

The word “porridge” is used in all three cities but refers to different types of preparations.

Traditional porridge

Home-made porridge

It is prepared at home from raw ingredients, with different processes depending on the household and country. These may include:

- family porridge, which is not reserved exclusively for the baby but is eaten by the entire family;
- simple porridge, which is fed only to the baby because the family does not eat porridge;
- improved porridge (with added baobab, peanut, cowpea, etc.) which is prepared only for the baby.



Home-made porridge in a courtyard in Bamako

Children eat home-made porridge in all three capitals.

Regardless of socio-economic background, babies eat home-made porridge in all three capitals.

In Bamako, children eat family porridge (made of millet, maize or rice), often before six months in families who eat it at breakfast (half of the families we met) and sometimes at dinner. By contrast, the women surveyed rarely use improved home-made porridge recipes⁵.

In Niamey, we observed a surprising practice: babies are often fed an uncooked traditional porridge.

In Niamey, uncooked traditional preparations

In Niamey, home-made porridge is the food that is most commonly served to young children. In some families, adults also eat it regularly. In addition to porridge, other semi-solid flour-based preparations are also frequently eaten: “*boule*” or *labdourou*⁽¹⁾ is a liquid preparation made with millet, and eaten with milk or yoghurt. Raw *boule* can serve as a base to prepare porridge. The porridge is then made available in the courtyard and eaten by all family members throughout the day.

In Niamey, the mothers we met explain that they serve the children uncooked “porridge”: a paste is made with millet flour and cold water, which can be set aside for a while to ferment. Then they add boiling water, and the porridge is ready. This is “simple porridge”, which many mothers feed to their babies. Other recipes use a mixed flour prepared with a mixture of cereals and leguminous plants, which might also be roasted and stored dry. To prepare porridge, water is simply added (see Appendix 3 for details on the methods of preparing home-made porridge in Niamey).

“I started feeding my baby porridge around seven months. I tried earlier, around five or six months, but he didn’t want it. At seven months, he started eating porridge bought in the neighbourhood. Most often I buy it, but sometimes I make it for him. I make lumpy porridge: I take the millet flour and mix it with a little cold water. I let it sit for a few hours, then I add the boiling water and it’s ready.”

II-3, Unemployed woman (husband in the military), Niamey.

In all the groups and individual interviews where the question of porridge preparation was discussed in Niamey, the information is consistent: preparing porridge involves pouring boiling water on a paste (fermented or not) made of flour (simple or mixed) and cold water. According to the president of a neighbourhood association, neighbourhood porridge is prepared in a significantly different way but is also

(1) If it’s cooked, it’s called *foura* in Hausa.

5. Many also say that the health centre shares recipes but that they do not attend the information sessions there.

uncooked. These processes are surprising and different from what is observed in the sub-region⁽²⁾. We discussed them extensively with the Nigerien GRET team, who confirm that this is a common practice. While this is not mentioned in the literature⁽³⁾, the observations made by GRET in Niger outside Niamey confirm the existence of identical practices. A survey of one hundred women conducted after the study of the Meriem project in Niamey estimated that half of the mothers do not cook the porridge they serve to their child⁽⁴⁾. We also note a lack of cooking when using the Misola flour from free distributions held in 2018 in the eastern part of the country⁽⁵⁾.

However, consumption of this uncooked porridge can be harmful to children's health (low digestibility of raw starch, potential presence of antinutritional factors, hygiene issues) and have consequences on children's nutritional status⁽⁶⁾. Therefore, it appears necessary to investigate more precisely how porridge is prepared in Niger and to hold awareness campaigns to improve it, if necessary.

- (2) The porridge recipes listed in the literature we consulted always mention a cooking step (Greffeuille V., Mouquet-Rivier C., 2010; Tankoano A. et al., 2017).
- (3) It should be noted, however, that the national IYCN strategy states that in "the east of the country (Magaria), *boule* (a preparation that does not necessarily involve cooking) can be given to a child from the first week of life" (Niger. National Directorate of Nutrition, 2008).
- (4) Janvier M. (2019).
- (5) "The women we met told us that they do not cook the flour, contrary to the instructions given to them." (Leturque H. et al., 2019).
- (6) The prevalence of chronic malnutrition among six-to-twelve-month-old babies in Niamey is clearly the highest of the three capitals covered by the survey (19%, compared to 12% in Bamako and 6% in Ouagadougou) according to nutrition survey figures consulted during the context analysis (Burkina Faso. Ministry of Health, 2018a; INS-Niger, 2019; INSTAT, Mali. National Health Directorate. Nutrition Division 2017).

Neighbourhood porridge

It is bought ready to consume at a neighbour's home or in the street near the home. Like home-made porridge, neighbourhood porridge can be eaten by the whole family or solely by the baby. This porridge is sometimes "improved" when it is fed to babies, with the addition of a breast-milk substitute or milk and sometimes even Cérélac. Neighbourhood porridge is less common in Bamako than in Ouagadougou or Niamey, with no ready-to-eat porridge vendors in some of the neighbourhoods we visited (e.g., Hamdallaye and Aéroport). In every city, some mothers do not want to serve neighbourhood porridge to their babies due to a lack of confidence in the quality of the product. On the other hand, other women consider that neighbourhood porridge is "smoother" than home-made porridge, making it ideal for babies. In Niamey, texture (smooth or lumpy) and acidity (level of fermentation) are frequently used to qualify porridge and explain the choices made for the babies.

Neighbourhood porridge can be eaten by the whole family or solely by the baby. It is sometimes "improved" when it is fed to babies.

"It's good to start with millet porridge from the neighbourhood because it's light and smooth."

FG-5, women (unemployed or episodic employment), Niamey.

"Home-made porridge is preferable to neighbourhood porridge because it isn't sour, it's not fermented. We don't give our babies neighbourhood porridge before six months, because it's bitter compared to the one we make. It's too fermented, it's not good for the baby. Especially in the hot season, the vendor makes it at night and the flour ferments."

FG-10, women (teachers), Niamey.

PORRIDGE, SERVED ON DEMAND TO VERY YOUNG CHILDREN

Very young children are not required to follow the rhythm of adult meals. Porridge, like the breast, is given on demand and mothers do not count the number of times it is eaten in a day.

"When babies are six months old, we give it whenever they cry. We don't count the number of times we give it."

FG-10, women, Ouagadougou.

This practice does not favour the consumption of commercially available infant flours because, like family porridge, neighbourhood porridge is purchased/prepared in the morning, then served at any time throughout the day. However, once prepared, porridge made from commercial infant flour cannot be kept, so feeding babies on demand implies preparing it multiple times per day. They are also more expensive, and therefore served more sparingly.

Once prepared, porridge made from commercial infant flour cannot be kept, so feeding babies on demand implies preparing it multiple times per day.

"Neighbourhood porridge is convenient because you buy it in the morning and you can serve it all day long. You can't keep Cérélac, so you have to make it fresh every time."

FG-10, women, Ouagadougou.

"When there's millet porridge, babies eat it several times a day. Between four and eight months, Cérélac is just once, in the morning."

II-4, woman (graduate, job hunter), Bamako.

Alternating recipes for variety and savings

Mothers do not always feed their babies the same porridge, and try to vary the preparations by alternating home-made porridge, neighbourhood porridge or infant flour, changing the brand of flour or modifying the recipes they use. In this way, they try to vary the food to avoid boring the child (maintain appetite) and diversify the diet (nutritional issue) and to alternate between expensive and cheaper preparations to control the baby's food budget (not giving infant flour every day, which is the most expensive option).

“We spoiled our youngest, he had comfort. He ate porridge from the Health and Social Protection Centre alternated with imported infant flour. I alternated so he wouldn’t get sick of it. I also gave him soup and potato purée.”

II-1, woman (midwife), Ouagadougou.

“We don’t feed infant flour at every meal because we have to diversify. One day, I give my baby Cérélac, one day home-made porridge, one day purées, or some light tô with sauce.”

FG-2, women, Ouagadougou.

A consumption period based on the family’s means and the preparation cost

When the **family porridge** served to the baby is similar to that eaten by the family, the child is introduced to it at a few months old and can consume it all his life.

“We never stop making porridge for our children. We make porridge and serve it to our children until they get married! Here, in the big family, everyone eats porridge. We make it early in the morning, and we eat it before going out, and if there is any left, the children finish it when they come home from school, around 10 a.m. during recess.”

FG-9, women (large family), Bamako.

As children grow up, the frequency with which they eat family porridge varies from household to household:

- **daily** (more frequent in Niamey and Bamako than in Ouagadougou), at breakfast (Bamako, Ouagadougou), starting at noon (Niamey), in the late afternoon (“early evening”) or before bed (Bamako);
- **weekly**, porridge on weekends when there is more time to prepare it or to buy it from a local vender;
- **occasionally** (e.g., for Lent).

The time available to make the family porridge affects the frequency of consumption and the choice of product (home-made or neighbourhood). The time associated with preparing the porridge is a constraint that explains the value of instant porridge.

The time available to prepare the family porridge affects the frequency of consumption and the choice of product (home-made or neighbourhood).

“We make porridge for the parents for breakfast; my wife makes it with millet or rice. We also buy street millet porridge, because we don’t have time. My wife works and she does housework; it would be nice to have flour for instant porridge for the family.”

FG-4, men, Ouagadougou.

On the other hand, infant porridge prepared especially for the baby is a transitional food to the family diet. Its period of consumption has a beginning and an end, and it can be very short (a few months, between six and eight months for some children), or longer (up to the age of two, or five in some cases).

"Up to a year, we feed babies special food, after which they eat like everyone else; they still eat porridge but it's the same one that [...] we buy on the street [for the family]."

FG-2, women, Ouagadougou.

Infant porridge prepared especially for the child is a transitional food to the family diet.

Mothers use different arguments to explain why they stop making porridge only for the baby. The baby's preference and needs are often highlighted: the child stops eating infant porridge when he no longer wants it, when he is able to eat like everyone else and when he is able to eat food with chunks. Mothers might also consider that the child no longer needs it. Other arguments may also come into play: some mothers may be in a hurry to stop child porridge to save time. Although not always discussed openly, cost is sometimes underlying and often decisive. Finally, while a fairly expensive porridge may be served to a six-month-old child, it can no longer be allowed when he and his appetite grow.

"At first I fed her Blédina and Cérélac. But when my daughter was a year old I stopped and gave her neighbourhood porridge. She ate a lot and it cost too much."

FG-10, women, Ouagadougou.

"We gave my seven-year-old son Cérélac until he was sixteen months old. But, at the end, the box only lasted three days because he liked it too much. So we bought neighbourhood porridge, which is cheaper. We add Nido (Nestlé powdered milk) to the neighbourhood porridge, so it's better. He eats porridge at every meal, morning, noon and evening. He still eats porridge today. At home, my wife and I only eat porridge in the morning: neighbourhood porridge."

FG-5, men and women, Ouagadougou. ●

Commercial infant flours

PRESENTATION OF INFANT FLOURS PRESENT IN ALL THREE CAPITALS

In Bamako: Vitablé and Cérélac

Different brands of imported infant flours can be found in Bamako: Cérélac in cans or pouches, but also Phosphatine and Blédina. However, no one mentioned the latter two in the interviews. A local flour, Vitablé, is also very present in sales points, even in neighbourhood shops. Note, however, that in the relatively affluent Aéroport district, one shop owner does not carry it because he believes that there is no demand for this product and that customers prefer imported brands. However, Vitablé is the example that a local flour can “compete” with imported flours. The product has certain advantages: it is available in local sales points (significant investment in the distribution network by the company that develops it), and enjoys strong notoriety maintained by advertising campaigns. Word of mouth is very good and its price is very competitive¹, facilitating access to many people. Unfortunately, Vitablé has a very low protein content, making its formulation unsuited to the nutritional needs of children².

Vitablé has a very low protein content, making its formulation unsuited to children’s nutritional needs.

Vitablé is the example that a local flour can “compete” with imported flours.

“The first porridge is Vitablé. We give Vitablé because people say that it’s good, that they’re happy with it. And then the advertisements say the product is good.”

FG-3, women, Bamako.

“I gave the triplets Vitablé: feeding Cérélac to three babies cost too much.”

FG-1, woman (teacher), Bamako.

1. Vitablé is sold in Bamako for between 700 and 800 CFA francs per 500 g bag (between 1,400 and 1,600 CFA francs per kilogram). The price per kilogram of Vitablé is three to four times less than that of Cérélac, whose price per kilogram varies from 5 000 CFA francs for 25 g or 50 g bags to 5,500-6,300 CFA francs for 400 g metal cans.

2. Olive F. et al. (2020).

In Bamako, Vitablé's sale price seems to allow quite long consumption periods, sometimes up to four or five years, which is not seen in the other two cities surveyed.

"Our baby (six months) eats a lot of Vitablé. His older brother used to too, but we stopped because he was taking it in a bottle and people made fun of him because he was too big for a bottle; he was four years old. The children ate Vitablé every day from four months to four years."

FG-4, women (small merchants), Bamako.

"I give Vitablé at six months, until the baby doesn't want it anymore. Our oldest ate it only for a year; the last three (one, four and seven), all want it. If they're around when I make it, I give it to all three. But I often wait until the older ones have gone to school before making it for the youngest: if only the baby eats it, the bag lasts two weeks; otherwise it doesn't last a week."

II-5, woman (powdered milk and nappy shop), Bamako.

In Ouagadougou, Cérélac dominates over other brands

Cérélac dominates the market: it is the best known and most frequently fed to children.

There is greater diversity on the Ouagadougou market in the offer of local infant flours than in Niamey or Bamako. Consumption of infant flour in Burkina Faso is more common today than in the past, but this increase seems to benefit mainly imported flours (see box on the next page). Although there is a wide variety of local infant flours on the Ouagadougou market, Cérélac dominates: it is the best known and is fed most frequently to children.

Some mothers are able to spontaneously mention only Cérélac, and cannot remember the names of other flours they have used. Only when they are shown the bags are they able to identify the ones they are familiar with and that they have sometimes fed to their children.

Mothers are not necessarily familiar with the qualities and characteristics of local products, even if they have used them. This is the case, for example, of Vitaline³ flour, which some mothers do not know is instant. None of the mothers we met mention the fact that this local flour is certified under the national standard.

Mothers are not necessarily familiar with the qualities and characteristic of local products.

"Cérélac is easy to make.

- It's more convenient than the others because you just have to boil the water, you don't have to cook it like the others.*
- But Vitaline is instant, too.*
- We didn't know that!*
- I cooked Vitaline when I used it."*

FG-6, women (unemployed, merchant husbands), Ouagadougou.

3. Local instant infant flour from Sodepal certified under the national standard.

Growing consumption in Ouagadougou benefits imported infant flours

The IRD conducted studies in Ouagadougou in 2004⁽¹⁾ and 2017⁽²⁾ to characterise the infant flour market and consumption.

In 2004, traditional porridge (home-made or neighbourhood porridge) was much more frequently consumed than commercial infant flour; among infant flours, local flours were better positioned than imported ones. That trend was reversed in 2017 with a decrease in traditional porridge (34% of home-made porridge and 14% of neighbourhood porridge), and infant flours dominating over porridge preparations for infants (52%). On the other hand, this increase in consumption benefits more imported flours, with Cérélac flour having the highest consumption.

(1) Hervé S. et al. (2004).

(2) Colin A. et al. (2017).

While the majority of people met in each of the three capitals say they are more interested—in principle—in a local product than an imported one (for “economic patriotism” reasons or because a local product is fresher, richer in vitamins and therefore of better quality)⁴, the mothers and fathers interviewed in Ouagadougou are sometimes unaware that some flours are local and that Cérélac is imported.

The mothers and fathers interviewed in Ouagadougou are sometimes unaware that some flours are local and that Cérélac is imported.

“I didn’t know Cérélac was imported and the others were local products.

- *I want money to stay here so I would prefer a local flour.*
- *I don’t think the origin is most important, what matters is that the baby loves the product.”*

FG-2, women, Ouagadougou.

“If it’s local, it means it’s richer, it’s fresher, there are more vitamins.”

FG-4, men, Ouagadougou.

Some mothers have understood the economic value of the local product; they do not compare “prices per kilogram” but how long the pouch lasts, and they find that local products are a better value because they last longer.

4. Positions identical to those found during the Fopat study in Niger in 2018 (Richard A., 2018).

Others do not seem to realise that local flours are very advantageous in terms of price:

“We buy Cérélac because it’s cheaper, 150 CFA francs (50 g).

- But a box of Cérélac costs 2,250 CFA francs, while this local flour costs 1,000 CFA francs.*
- I didn’t know other flours were cheaper.”*

FG-2, women, Ouagadougou.

In Ouagadougou, we held discussions with the mothers we met to get their opinion on the different packaging types and sizes for infant flours available on the market. Concerning weight, some prefer small bags that are very accessible, while others recognize the advantage of 400 g and 500 g packaging, which lasts longer and is more economical. Many women do not appear to read the information on the package. Those who do, first look at the age at which the product can be fed to the child, but especially the product’s expiry date. Opinions are divided on the type of packaging: some appreciate the high-end packaging of products like Céréalor (identical to that of Vitablé in Bamako) or the double packaging (bag + box) of Petit Gourmet (identical to Blédina) which guarantee good product protection, while others think that the transparent plastic bag is preferable because it allows visual verification of product quality.



Itinerant neighbourhood porridge vendor in Ouagadougou

In Niamey, infant flour is not commonly eaten

Unlike Ouagadougou or Bamako, commercial infant flours are rarely consumed in Niamey. Some women report an unsuccessful one-off purchase, either because the child did not like the porridge, or because they could not afford to buy it again. Some women mention flours that they occasionally received from the health centre but whose names they do not know. Local flours such as Vitamil⁵ or Misola⁶ are not mentioned spontaneously and are often not known. The best known products are imported: Cérélac and the

5. Infant flour developed by STA.

6. Flour developed by the Misola association, which supports infant flour production in five West African countries (twenty production units in Burkina Faso, eighteen in Mali, three in Niger, one in Senegal and one in Benin: www.misola.fr).

“yellow bucket”, which is Custard imported from Nigeria⁷. The few opinions expressed on these products are divided: half of the children liked the Custard or Cérélac, while the other half did not. On the whole, the women we met seem rather uninterested in the products on the market.

“There’s Cérélac and Custard, but I prefer my own porridge. We’ve all heard about Cérélac or seen the boxes, but we’ve never bought it.”

FG-3, women (unemployed), Niamey.

“I’m familiar with the yellow bucket (Custard); I tried it one year, but my baby didn’t like it, so I stopped. My nephew ate it all, he was eight months old. After that, my sister kept buying it. I didn’t buy Cérélac; since he didn’t like the yellow bucket, I didn’t try anything else.”

II-3, Woman (unemployed, police officer husband), Niamey.

On the whole, the women we met seem rather uninterested in the products on the market.

Several hypotheses can be advanced to explain why infant flour is consumed less in Niamey than in Bamako and Ouagadougou:

- **poor availability of infant flours:** individually portioned pouches (50 g or 25 g) are not sold in neighbourhood shops in Niamey as they are in Bamako and Ouagadougou, and the offer of local products is limited. There is neither the same variety as in Ouagadougou, nor alternatives to Cérélac like Vitablé in Bamako;
- **socio-economic reasons:** infant flour demands an expense specifically for the baby, and many of the women we spoke to in Niamey do not work and have no income. Moreover, they seem reluctant to incur food expenses even when they have resources, because they consider that their husbands should pay for them;
- **available time:** often without employment, the women in Niamey have time to devote to preparing meals. Preparing the baby and family porridge may also give them social status; since they have a reason to go to the mill, which can be an asset compared to infant flours that their husbands bring home. Cooking also gives mothers something to do during the day, and the women of Niamey we met often report a certain degree of boredom;
- traditional porridge prepared in large quantities in the morning is better suited to **consumption throughout the day**, which is a common practice in some families;
- **knowledge:** women in Niamey may be less aware of the importance of complementary feeding than those in Ouagadougou or Bamako.

7. Corn flour to which artificial flavours and colours are added. It is a product of low quality.

TABLE 3 Types of porridge served to young children

HOME-MADE PORRIDGE	NEIGHBOURHOOD PORRIDGE	PORRIDGE MADE WITH INFANT FLOUR		
<p>Simple porridge, not improved, most often made with millet, but also maize or rice. This porridge is for the entire family or prepared just for the child.</p> <p>Improved porridge, the recipes are shared between women or through health centres: flour is enriched with peanut or cowpea, for example.</p> <p>Home-made porridge is becoming less popular in Ouagadougou and Bamako. It is the most common option in Niamey, with some preparations consisting of adding boiling water to a paste made of millet flour and water.</p>	<p>Ready-to-eat porridge made from maize or millet, sold by women in neighbourhoods. There are different recipes in each country.</p> <p>We observe very different practices depending on the family. Neighbourhood porridge is sometimes eaten:</p> <ul style="list-style-type: none"> - only by young children; - only by children; - by the entire family (every day or on specific occasions, such as on weekends). <p>Some households do not trust the quality of neighbourhood porridge and cannot imagine serving it to a small child.</p> <p>This porridge is more common in Niamey and Ouagadougou. It is not available in some middle-class neighbourhoods in Bamako.</p>	<p>These are local or imported flours, instant or not.</p> <ul style="list-style-type: none"> - Cérélac (Nestlé) is the most common imported flour on the markets in all three capitals combined, and the most familiar to consumers. There are also other imported flours (Blédina, Phosphatine), but they are less popular. - Local flours (fortified or not): the offer is highly diversified in Ouagadougou, dominated by one brand in Bamako (Vitablé) and little present in Niamey. <p>We find both products with professional packaging (Petit Gourmet in Ouagadougou, Vitablé in Bamako) and other very rudimentary ones (simple plastic bag with an adhesive label). Some flours are formulated taking standards and recommendations into account, some are fortified and others are not. Most flours are “to be cooked” but we find an instant flour in Ouagadougou that is labelled as complying with the national standard (Vitaline).</p>		
<p>It is kept all day and served to the child on demand. It is sometimes improved for the child by adding powdered milk (ordinary or artificial), sugar or infant flour (Cérélac).</p>		Ouagadougou	Niamey	Bamako
		<p>There is a wide variety in the offer of local infant flours complementing imported flours. Infant flours are frequently consumed. Cérélac dominates.</p>	<p>Infant flours are rarely consumed. The offer of local flours is limited. Nigerian Custard is cheap and of low nutritional quality, but enjoys a degree of notoriety.</p>	<p>Infant flours are very commonly consumed, with the market shared by Cérélac and Vitablé (local brand whose formulation is not adapted to the needs of children).</p>

INFANT FLOUR PURCHASING PRACTICES

Fathers are most often responsible for buying infant flour, although in rare households the expense is borne by women (one example in Ouagadougou and one in Bamako). In these two households, food spending for the baby is shared: the men cover the powdered milk (ordinary or for the child) and the women buy the flour.

“My husband pays for the milk, and I buy the Vitablé and Cérélac. He can’t afford to pay for everything, so we naturally share. I spend my salary on Cérélac and Vitablé for our baby. I also buy laundry detergent. But my husband pays for toiletries. I put the rest of my money in a tontine to save, I deposit 22,000 CFA francs each month [almost 50% of my salary].”

II-1, woman (Orange Money employee), Bamako.

In most cases, women ask their husbands to buy infant flour.

In most cases, however, women ask their husbands to buy infant flour.

If the husbands **agree to the expense**, they either give their wives the money they need, or buy the product themselves. This is the case in many households, because the men go into the city or to the sales points more frequently and are already responsible for certain purchases. As a result, some mothers do not even know where the infant flour they use was bought. While men most often buy the product their wife asks for, in some cases they may instead follow relatives’ or the merchant’s advice.

If men **cannot afford** or **do not agree** to buy infant flour:

- some women give up and feed their child neighbourhood or homemade porridge;
- some women suggest their husbands buy cheaper infant flour;

“We get Vitablé more because it’s cheaper. My husband doesn’t argue about buying Vitablé, but Cérélac is more complicated. Cérélac costs 2,500 CFA francs. It’s too expensive.”

FG-3, women, Bamako.

- others save condiment money received from their husbands to purchase flour.

“Men around here aren’t used to giving money for porridge. They give money for condiments: so, if you want, you can ‘scrimp’ and use the money for porridge.”

FG-7, women (very modest standard of living), Ouagadougou.

Fathers who are convinced of the value of feeding the child infant flour are more willing to purchase the product. However, they are not always aware of the needs and importance of infant nutrition. In Niamey, some (elderly) men do not even know that infant flours exist, and are even surprised that one might spend money on them.

“It’s strange to buy a product for children of this age. If my wife brings me a prescription, I’ll buy it, otherwise no [two other men in the group nod].”

FG-6, men, Niamey.

Purchase frequency

Some households never buy infant flour, as is the case of most of the households we met in Niamey, and the most modest households in Ouagadougou.

"I don't buy Cérélac; it costs too much. It's not worth it if you start and then you can't afford to continue. You shouldn't let your child get used to eating things that you can't serve every day."

FG-15, women, Ouagadougou.

Infant flour is considered a necessary product, just like oil, salt or milk.

In some households, infant flour purchases are sporadic: they bought one box, but the purchase was not repeated due to lack of resources or—an argument often put forward—because the child did not like the product. On the other hand, in other households, infant flour is bought again as soon as the box is empty. This is the case for most of the households we met in Bamako and for many in Ouagadougou. Infant flour is considered a necessity, just like oil, salt or milk.

"I always buy flour for my baby. I always make these purchases: either I buy it or I give my wife money to buy it. When the box is almost empty, my wife asks me to get some more."

FG-5, man (traditional healer), Ouagadougou.

CÉRÉLAC: REASONS FOR THE SUCCESS OF AN IMPORTED FLOUR

Cérélac flour is present on the market of all three capitals and is clearly a leader on the Ouagadougou market. Therefore, it seems relevant to understand how parents perceive this product in order to draw useful lessons for the future positioning of local infant flours. This consideration was discussed mainly in Ouagadougou, where Cérélac seems to have imposed itself against other flours. Data collected in Bamako and Niamey, as well as interviews with resource persons, complete this analysis.

An established and maintained reputation

Cérélac has been known "forever", and some mothers ate it as children as well. This is the product that is recommended by family members, friends and neighbours. It maintains its dominant position through regular advertising campaigns and an intensive promotion strategy at sales points, mobilising public health stakeholders. While it does not appear compatible with the *International Code of Marketing of Breast-Milk Substitutes*, it is successful: Cérélac is frequently purchased for the first time following a recommendation at the health centre.

It maintains this dominant position through regular advertising campaigns and an intensive promotional strategy.

The *International Code of Marketing of Breast-Milk Substitutes* was developed by the WHO in 1981 to protect breastfeeding, followed by various resolutions of the World Health Assembly. It establishes rules for marketing products that are substitutes for breast milk, such as infant formula or any other product presented as replacing mother's milk.

Infant flours are complements to breast milk and not substitutes (such as powdered milk), and the design of their packaging and their promotion are governed by the *International Code of Marketing of Breast-Milk Substitutes* and the resolutions relating to it, in particular, that of May 2016 on *Guidance on the Inappropriate Promotion of Foods for Infants and Young Children, A69/7*. In addition, national reference documents and implementing decrees provide recommendations applying specifically to complementary foods.

The Code and the resolutions can be downloaded from: <http://www.ibfan.org/international-code/>

"I bought Cérélac the first time because the health centre recommended it to my wife.

- *Cérélac has been around for a long time. The other products are new, we're not familiar with them. We see Cérélac everywhere, local products aren't promoted."*

FG-4, men, Ouagadougou.

"There's advertising, we see Cérélac advertised on TV [...] and it says that Cérélac makes babies strong and smart, and that it contains vitamins."

FG-2, women, Ouagadougou.

In Ouagadougou, Cérélac is often the only infant flour brand known to fathers, who are responsible for both the expense and the purchase. For them, Cérélac is a quality standard inscribed in the dietary norm, and deviating from it represents the risk of their child refusing the product, but also of upsetting the mother. By buying Cérélac, fathers are convinced they are doing the right thing:

"If I don't buy Cérélac, my wife might be angry with me for buying the cheapest product to save money."

FG-4, men, Ouagadougou.

**For fathers,
Cérélac is a quality
standard inscribed
in the dietary norm.**

Children's taste, a condition for sticking with the product

The child's preference is often the first reason mentioned by mothers or fathers to explain the purchase of Cérélac (just like that of another flour).

"There are other flours at the pharmacy, but I'm not familiar with them. Once I tried to switch to a pearl millet flour, but my baby didn't like it, so I never bought it again."

FG-4, men, Ouagadougou.

An available and practical product

Cérélac is available at all shops and pharmacies in Ouagadougou and Bamako, and is never out of stock. Parents have easy access to it at any time near their home, which is often not the case for other flours.

In addition, it requires no cooking, so it is faster to prepare, something that is appreciated at night when babies want to eat. Note, however, that the fact that it is instant is not always considered an advantage: one mother in Bamako explains that she likes to cook her child's porridge, while women in Ouagadougou express doubts about the vitamin content of instant preparations.

"It isn't the same preparation. You have to cook Vitablé, but you just add boiling water to Cérélac. I prefer Cérélac, it's simpler.

- *I prefer to cook food for my baby; it doesn't take very long and it makes me happy."*

FG-5, women (employed, middle class), Bamako.

The product's different forms of packaging are also appreciated: some mothers prefer the 25 g or 50 g single-portion pouch because it lets them try it to see if their child likes the product without having to buy a whole box. It can also be used as a "stopgap solution" when the family is short of money, and mothers can buy it with "condiment money" without having to bargain with their husbands. Single servings can also help secure the ration of the child for whom it is purchased, guaranteeing that the product will not be shared with the rest of the family. On the other hand, others prefer the box because it is an "economical" solution.

"The pouch is better, otherwise the other children help themselves to the box. I'll even help myself because I like it. With the pouch, we can be sure that it goes to the baby."

FG-2, women, Ouagadougou.

"Cérélac is more expensive [than Vitablé] but there are pouches for 250 CFA francs⁸, so it's affordable. I buy the boxes, but if the box is finished and you're short of money, you can buy the pouch."

FG-5, women (employed, middle class), Bamako.

A high price that seeks to adapt to household means

Many households mention the price of Cérélac as being the main barrier to purchasing it. Nestlé's strategy for calibrating the new packaging of its portion pouches was dictated by households' purchasing capacity: 50 g pouches (250 CFA francs) are gradually being replaced by 25 g pouches at 125 CFA francs. Theoretically, a meal for one baby requires two pouches. In practice, several people mentioned that they often used a 50 g pouch to make two meals.

8. Price of the old format (50 g), still available in some shops but appears destined to be replaced by the 25 g pouch.

By reducing the size of its pouch, Nestlé is not seeking to adapt to the portion size served but rather to offer the pouch at a price that will allow it to reach a large audience: 250 CFA francs is a prohibitive price for many households, so the price and (the size of the pouch) were cut in half. The objective is to adapt to the limited purchasing capacity of the majority of the population and to facilitate the daily purchase of flour.

The objective is to adapt to the limited purchasing capacity of the majority of the population and to facilitate the daily purchase of flour.

Diverse audiences and multifaceted consumption

During interviews conducted in Ouagadougou and Bamako, it appears that consumption of Cérélac is not limited to children between six and twenty-four months but is also of interest to other audiences and the subject of other consumption patterns.

Cérélac in addition to a local baby porridge

In Ouagadougou, some mothers add Cérélac to less expensive porridge; whether a neighbourhood porridge, or porridge made with local infant flour. So, Cérélac is then no longer the main ingredient of the porridge but a supplement that enriches it. This practice uses less Cérélac and cuts costs without reducing the volume of the food served to the child, while serving a product that is still considered beneficial for health.

Cérélac, family porridge

The testimonies collected in Ouagadougou illustrate the desire of older children and even mothers to help themselves to the Cérélac box when there is one at home. In Bamako, several women of the upper middle class admit to regularly eating Cérélac porridge in the evening.

"I have one box at home for my baby and another for me and my husband. My husband buys it. My husband and I have some porridge in the evening around 10:00 before going to bed. I used to eat it even before my baby was born. The box for me costs 2,200 CFA francs and I buy more as soon as it is empty. A box doesn't last a week."

FG-8, student (relatively well-off), Bamako.

"Cérélac isn't just for my baby. I eat it, too, mixed with milk."

FG-1, woman (teacher), Bamako.

Cérélac, a treat for young and old

Mothers also explain that their husbands bring Cérélac pouches home as an alternative to biscuits or other snacks for their children. They eat it dry, without adding water.

"Husbands buy it and give it to older children. They suck on the pouches. We don't make porridge with it [the other women nod]."

FG-10, women, Ouagadougou.

In Ouagadougou and Bamako, girls also admit to buying bags of Cérélac to eat straight without preparation. They like the new 25 g format, which makes the product more affordable. Although this practice is common among students in Bamako, girls do not necessarily admit to it, nor do their parents approve of it.

"I know Cérélac, I eat it when we have it at home for my little brother."

FG-5, girl (17 years old), Ouagadougou.

"We don't talk about it in front of everyone; we only tell close friends.

- It's for babies.*
- My mum yells at me and says I'll get fat. And she says that eating things like that isn't African. It's normal for her to say that, she wants us to keep the same habits, otherwise we don't eat together anymore."*

FG-8, students (relatively well-off), Bamako. ●

Alternatives to porridge

VEGETABLE PREPARATIONS: PURÉES, SOUPS AND BABY FOOD JARS

In Bamako and Niamey, and to a lesser extent in Ouagadougou, vegetable purée and soup are alternatives to porridge. Fathers and mothers mention them as complements to breastfeeding. In each of the three cities concerned by our study, mothers mention vegetable preparations, most often with potatoes but also squash or carrots. Soup is often made with fish and, more rarely, with meat (practice mentioned in Bamako). The recipes are more or less elaborate.

Vegetable purée and soup are alternatives to porridge.

This is not necessarily a dish prepared specifically for the baby, but a preparation intended for the family from which some vegetables are taken, mashed and served to the child. In Niamey, while men mention these vegetable preparations, they consider porridge to be the main food for the baby.

“Aside from porridge, we give purées made with vegetables, potatoes, squash and cowpea leaves. Around six or seven months. These are recipes for children; we’ve all made it.”

FG-5, women (unemployed or occasional employment), Niamey.

“We make soup with tomatoes, datou¹, onions, garlic, peppers, salt and pepper, and some bouillon cube. We cook it for a long time, then add fish and potato. We buy a piece of fish for 200 or 500 CFA francs. We cook it, then we mash the potato and the fish and feed it to the baby.”

FG-9, women (large family), Bamako.

In Bamako, some mothers believe that these preparations should be the first food to be fed to the child, even before porridge. In Ouagadougou, it is the opposite: porridge is fed first, followed by soup.

1. Condiment prepared from fermented sorrel (*dah*) seeds.

"At four months, I made soups with meat and fish to get my baby used to eating food. Then I gave porridge at six months."

FG-3, women, Bamako.

"At six months I give porridge, at nine months I start giving biscuits, potatoes and soup."

FG-10, women, Ouagadougou.

Most often, however, porridge and soup or purée are introduced more or less at the same time and served alternately. So, purée is a way to vary the child's meals, an objective highlighted by the mothers.

"I don't make porridge every day; one day I'll make porridge and one day soup with potatoes, and sometimes fish or potatoes with milk."

FG-13, women, Bamako.

Most often, porridge and soup or purée are introduced more or less at the same time and served alternately.

In some cases, which are nevertheless exceptional², babies between six months and a year eat purée and soup, but not porridge. Mothers feel that it is not necessary, or that their baby does not like porridge.

"I tried feeding my baby Vitablé and Cérélac porridge, but he didn't like it, so I fed him mashed potatoes."

FG-1, women (teachers), Bamako.

Baby food in jars for children

In Bamako, imported baby food jars of vegetables (or fruit) are sometimes bought for children. These products are very expensive, so they cannot be served every day by most households. The fact that they are spontaneously mentioned may demonstrate a higher purchasing power among those interviewed in Bamako, but perhaps also an attraction for luxury preparations.

FAMILY DISHES

Between the ages of six months and a year, babies are gradually introduced to family dishes. Some are fed family meals very early (as early as six months), which is a source of parental pride. This step sometimes takes longer, but at a year, babies usually eat the family dish, which is gradually introduced: first they taste the sauce, and the dish is adapted to the child's development and taste. We observe that the consistency begins to be important for them, they want "chunks" and no longer settle for smooth porridge.

2. Reported only in Bamako: some women do not serve porridge at all, only vegetable preparations.

Baby food jars in Bamako, a luxury mentioned spontaneously by some parents

Blédina brand baby food jars are available in Bamako. These are vegetable (or fruit) preparations sold for between 700 and 1,000 CFA francs per 130 g jar. Baby food jars are available in both pharmacies and shops in middle-class and wealthy neighbourhoods (Hippodrome).

About a dozen people we met in Bamako say they bought baby food jars. The purchase is motivated by advertising as well as by the advice of friends or family who live in Europe, and is justified by the product's nutritional value and the sanitary quality.

"My sister in France told me it was good."

EI-4, woman (graduate, job hunter), Bamako.

"I also bought baby food jars at the pharmacy. It's expensive (750 CFA francs) but it's very rich in vitamins."

FG-3, women, Bamako.

"I prefer to buy carrots or baby food (rather than porridge) for my baby. I saw it advertised on TV. It's good for the baby, it improves his health. I could make it myself but I think my preparation would be less hygienic than the baby food in jars."

FG-4, women, Bamako.

All acknowledge that the price is high: it is a luxury product. Since husbands can refuse to buy it, mothers will use their own resources to be able to feed it to their baby.

"I also bought baby food for my second child (in addition to porridge) because I had money at the time. I paid 900 CFA francs for a jar. I didn't buy it for the other children. I don't ask my husband for this kind of thing, because he'd say it's a waste of money and refuse."

EI-4, woman (graduate, job hunter), Bamako.

However, this propensity to buy "prestige" products in Bamako has its limits: some shops in working-class neighbourhoods report that they stopped carrying the product because demand was too low. One woman admits that these purchases are unreasonable:

"I used to buy vegetable baby food for 700 CFA francs. He liked it, but we can make it ourselves. I stopped because I realised it wasn't worth it."

FG-5, women, Bamako.



Baby food in a shop, Hippodrome district in Bamako

If the child is curious, and asks for it, the transition is faster. During this transition period, the family dish is fed in small quantities in addition to the porridge or purée, and then alternated. In the end, the baby “eats like everyone else”.

When the family eats a dish that the baby doesn't like, they feed the baby porridge or purée, or another dish might be bought outside the home as is done for older children. ●

Between six months and a year, babies are gradually introduced to family dishes.

“Treats”

“PLEASURE” PURCHASES

Fathers and mothers buy their children treats, as do other family members (particularly aunts and uncles). Very early on, sometimes even before the age of two, parents give their children a coin to buy something they want. This leads a man from Niamey to make the following remark: “Today the baby comes into the world with his eyes wide open about money.”

Children are allowed to choose, and parents don’t always know how they spend their money.

“In the afternoon, I give him 25 or 50 CFA francs to buy crisps, fried potatoes or fritters. We give our children money at the age of two and they go to the shop with the adults.”

FG-1, women (teachers), Bamako.



Treats sold in a school courtyard in Ouagadougou

"50 CFA francs for the little one (two years) who doesn't go to school yet. I give him 50 CFA francs every day and go with him to the shop. He buys what he wants. If I keep the coin, he cries. It's important for him to hold the coin in his hand."

FG-7, men, Niamey.

Mothers usually buy cheap products that are consumed quickly.

Mothers buy food as treats for their children when they go to the market, shop or return home from work. They do not remember the names of the biscuits they buy but remember their price. They usually buy cheap products (25 or 50 CFA francs) that are consumed quickly. They buy what is affordable and what makes the children happy.

Fathers often bring treats home for their children in the evening (yoghurts, beverages, biscuits, etc.) as well as "pleasure" foods (meat, fruit, fried potatoes) to improve or vary the whole family's meal. According to reports, fathers buy fewer treats than mothers but make larger purchases and choose more "luxury" products (e.g., juice boxes, where mothers would buy juice in bags made in the neighbourhood) or bulk products for longer-term consumption (in Bamako, this might be a case of soda, whereas mothers would buy individual cans for immediate consumption).

Fathers buy treats less often than mothers but make larger purchases and choose more "luxury" products.

Aside from milk or infant flour, no food or treats are purchased specifically for the youngest children. At the age of one or two, children are interested in the same foods as school-age children, and parents buy the same products for everyone.

It seems difficult for some parents to refuse a purchase if it is cheap and the child demands it, even if they are not convinced of its value. If children demand something at the shop, they give in.

"We don't know whether the crisps are good or where they're made, but the kids love them so you can't say no."

FG-3, women, Bamako.

"Soda's for kids; but it's not good for them. It's too sweet, too bubbly, and gives them a stomach ache. We don't buy it unless they cry and demand it, then we will."

FG-5, women (employed, middle class), Bamako.

Food purchases of school children⁽¹⁾

In Niamey and Ouagadougou, children who go to school are given some money every day to buy something to eat, either before classes, or at recess at 10 a.m. This money is sometimes presented as making up for the absence of breakfast: in the morning, time is often limited and parents find it more convenient to give their children some money. Sometimes children refuse to eat breakfast at home so they can receive snack money. If they receive no money, they may refuse to go to school.

“The children eat at school in the morning. We give our youngest child in primary school 150 CFA francs and 200 CFA francs to our four older children in high school. So, we spend 950 CFA francs every school day.”

FG-13, women, Ouagadougou.

“Even if you give them a snack, you still have to give them a little money. Children at school watch each other, so if everyone else is buying something, your children have to buy something, too. On the other hand, they don’t all have the same means: your child might have 100 CFA francs but the rich children have 1,000 CFA francs. The children don’t complain, they know where they come from.”

FG-10, men (large family), Bamako.

In Bamako, most parents say they prefer to give their children a snack rather than money when they go to primary school. However, this statement should be taken with a pinch of salt since sandwich and juice vendors are observed in school courtyards both here and at schools in Niamey and Ouagadougou.

The choice not to give money to the child is based on educational or moral reasons, on the desire to control the nutritional quality of the snack and to avoid poor choices, as well as on hygiene considerations:

“If they get nothing, they’ll steal to get money; so you don’t want them to get used to having money every day.

- *They eat bread, it’s more nutritious than sweets. [Otherwise] they’ll spend it on cigarettes or playing table football.”*

FG-1, women (teachers), Bamako.

“I give money for afternoon snacks because the children buy something in the neighbourhood, especially packaged products like crisps and biscuits. I trust that more. I’m afraid that the food sold at school isn’t hygienic, it isn’t prepared well, and the women serve leftovers from the day before.”

FG-3, women, Bamako.

(1) Some points concerning food consumption at school are developed in the chapter on the eating habits of girls.

A WIDE VARIETY OF PRODUCTS

Some of the treats consumed include:

- products produced artisanally in the neighbourhood, such as beverages based on natural products (*bissap*¹, ginger, baobab) or artificial products (reconstituted orange or tropical-flavoured beverages). There are biscuits, doughnuts, *awara*², sesame and baobab confectioneries, but also fried potatoes and fritters (fried wheat dough);
- local industrially produced products (yoghurts and “sweets”, i.e., sodas or sweetened flavoured beverages);
- imported products: very cheap biscuits from Asia or Arab countries, crisps in small packages (starting at 25 CFA francs in Bamako), beverages of variable quality (real fruit juice or sweetened flavoured beverages).

Given the diversity of products consumed, it is difficult to define consumption profiles for each of them.

Biscuits

Women from the neighbourhood sell homemade biscuits and doughnuts either in the street or at shops. The same imported biscuits and brands of candy and chocolates are found in shops in all three capitals. Some common brands are mentioned during the interviews (ParleG, Glucose, Lausanne, Biscoco) but none really appears to be the most popular product.

Bamako crisps, children’s favourite snack

Crisps are sold in neighbourhood shops in Bamako. Students explain that these products did not exist when they were young and were introduced recently.

Crisps are by far the most popular snack product among children in Bamako.

Interviews with parents and observations of sales points show that crisps are by far the most popular snack among children in Bamako. Many parents say they buy crisps for their children every day because it is “what their children prefer”. Available in bags for 25 CFA francs, they are accessible to the most modest households and children coming alone.

“I buy him little treats to please him. He prefers crisps, so I buy the bag for 100 CFA francs. I buy crisps for my children every day.”

EI-2, woman (sandwich vendor), Bamako.

1. Drink prepared by brewing dried hibiscus calyces (equivalent of *karkadé*).

2. Soy tofu (Niamey). Can be fried and served in a sandwich.

Beverages

Beverages are consumed almost daily in the three capitals. They can be artisanal, produced locally or imported.

Juices produced in the neighbourhood: juices are the beverages most frequently consumed by children, sold cold in pouches or recycled plastic jugs. They are made from natural ingredients, but also (mainly in Bamako) from chemical powders to reconstitute a flavoured sweet drink (e.g., Foster Clark's). Children drink juices prepared at home or bought in the neighbourhood almost every day.

Children drink juices prepared at home or bought in the neighbourhood almost every day.

“Fruit juices” in cartons, imported (e.g. Exotica) or produced locally (Dafani in Burkina Faso), are also consumed but less frequently. Sold in one-litre cartons, they are bought by fathers and brought home for children. These are occasional purchases, the frequency of which varies with the household's means.

Fruit juices sold in cartons are occasional purchases, the frequency of which varies with the household's means.

These products, sold at about 1,000 CFA francs per litre, convey an image of quality. In Bamako, simple imported flavoured beverages are considered quality fruit juices because they are sold in Tetra Paks. This is especially the case of the Lafi brand, which is sold in individual juice boxes with a straw (100 CFA francs), which attracts some parents; they buy it for their children's snack at school.

Locally produced soft beverages or sweetened and flavoured industrial beverages.

The frequency of consumption varies greatly among the three cities.

- **In Ouagadougou**, consumption is rare. Sodas are sold for between 400 and 450 CFA francs and are bought only for special events (ceremonies, parties or exceptional outings).
- **In Niamey**, local Oriba brand sodas are sold for 350 CFA francs per unit. They appear to be consumed slightly more frequently than in Ouagadougou and some parents buy them from time to time for their children. However, there are a number of negative opinions about them:

“Sometimes I buy Exotica juice for children. I bought some the day before yesterday and ten days ago before that. I buy a jug for 1,000 CFA francs, it's only for the kids [...]. The children have to grow up, they have to share their cup. I'm familiar with Oriba, I know the kids would like it, but I don't think it's good so I don't bring it back.”

FG-12, men (artisans) Niamey.

- **In Bamako**, children consume soda much more frequently. The market for sweetened beverages is more developed and products are more affordable.

There are many brands of soda (D'jino for 250 CFA francs and Planet for 200 CFA francs per unit) or non-carbonated flavoured beverages (AMI, PP). Some households

purchase sweetened industrial beverages several times a week. Sodas are purchased in bulk (case) or individually.

"Juice is more for children. I buy NBB orange soda, it costs 300 CFA francs per bottle. I bring some home once a week."

FG-6, men (artisans), Bamako.

"Last night, I brought home Tropical for 250 CFA francs and apple juice for 250 CFA francs [two sodas]: one bottle for my wife and one for the children. It makes the children happy."

EI-9, man (welder, father of two), Bamako.

"The children like D'jino pineapple that costs 250 CFA francs or 200 CFA francs. We buy it for them and for us, too. I usually drink one a day, unless I don't have the money."

FG-10, men (large family), Bamako.

Some households purchase sweetened industrial beverages several times a week.



Sweetened drink advertising in Bamako



Range of sodas available in Bamako



Fried foods stand at the University of Niamey

In Bamako, the budgets devoted to family beverages are far from negligible: an artisan estimates that his household's beverage budget represents between 30% to 50% of the "condiment budget":

"I give my wife 1,000 to 1,500 CFA francs every day for sauces. Condiment money doesn't pay for coffee, milk, mayonnaise and bread, because I buy that separately. And we spend about 500 CFA francs per day on drinks."

EI-9, man (welder), Bamako.

However, in Bamako and Niamey, some parents think that sodas are not good for young children:

"Children love [...] D'jino but I don't buy it for them. I don't think soft drinks are good for kids. I don't drink it either, but people buy it a lot, it's very popular."

EI-7, man (shopkeeper, relatively well-off), Bamako.

Others attribute therapeutic qualities to soda and one man says he buys it for his children when they suffer from "bloating":

"I buy sodas because it relieves children's bloating, it helps their digestion. I buy Bramali or Planet apple soda for 250 CFA francs. The last time was last night, I bought a jug for my two children. When their mother tells me that the child is bloated, I try to bring some home. If I have enough money, I'll get two bottles, one for the children and one for their mother, otherwise just one. Soda is good for health. But the powdered juices in food aren't good, they cause stomach aches."

EI-9, man (welder), Bamako.

Junk food, a new arrival in the eating habits of children in West Africa

With soda consumption declining in North America and Europe, multinationals are investing heavily in more promising Southern markets⁽¹⁾. They face local competition that produces industrial beverages (carbonated or not) at low cost⁽²⁾. This competition “democratises” the consumption of industrial sweetened beverages.

Although considered exceptional or associated with parties or ceremonies a few years ago, the consumption of beverages (and fatty and salty or very sweet snacks) in the city is now common, starting from a very young age.

Various research studies demonstrate this trend:

- According to a survey in 2019 in four West African countries⁽³⁾, 69% of young children aged six to twenty-four months in Mali (49% in Niger, 46% in Ivory Coast and 45% in Burkina Faso) had consumed either snacks (sweet or salty) or commercially purchased sweetened beverages in the previous twenty-four hours. Children in wealthy households are most exposed to junk food consumption, but even the most modest are not immune: 20% of Malian children in the six to twenty-three month age group from modest households living in cities had consumed sweetened beverages bought at a shop the day before the survey.
- In 2014, in Dakar, a survey of mothers of young children revealed a similar situation⁽⁴⁾: 80% of babies aged six to twenty-three months had consumed purchased snacks the week before the survey. Crisps are the most commonly consumed form of junk food: nearly two-thirds of children between eighteen and twenty-three months and nearly half (48%) of those aged six to twenty-three months had eaten crisps the day before the survey. 27%, 19% and 10% of babies aged six to twenty-three months had consumed one, two or three snacks, respectively, the previous day and half of children snack every day or almost every day. Spending on these types of products weighs on household budgets and competes with other purchases that could be more beneficial to children: on average, women spend 300 CFA francs a day on snacks or beverages. According to the same survey, three-quarters of mothers in Dakar said they would give other food if they could afford it. Infant flours were the most frequently mentioned foods they would like to serve more frequently⁽⁵⁾.

(1) Taylor A. L., Jacobson M. F. (2016).

(2) Maussion E. (2019).

(3) Nordhagen S. *et al.* (2019).

(4) Feeley A. B. *et al.* (2016).

(5) The study's authors estimate the cost of a ration of infant flour at 65 CFA francs (local flours) and 225 CFA francs (imported flours).

TABLE 4 Beverages in Bamako, a wide variety of practices

	CHEMICAL POWDER (E.G., FOSTER TIARA)	BEVERAGES RECONSTITUTED FROM POWDER (E.G., FOSTER TIARA)	ARTISANAL JUICES PREPARED FROM LOCAL INGREDIENTS (BISSAP, GINGER, ETC.)	SODAS, SWEETENED FLAVOURED BEVERAGES (PLANET, D'JINO, AMI, TAMPICO)	"FRUIT" JUICES OR BEVERAGES CONSIDERED NATURAL IN BRICK OR CAN (IVORIO)
Who buys	Women	Women and children	Women and children	Women and children	Men (upper socio-professional category)
What use	For shops (sale of cold reconstituted juice in the neighbourhood) and children.	Women and children	Women and children	Women, men and children	Primarily children
Context	Purchased to make juice at home: for small shops or to consume at home.	Daily consumption outside the home and at home.	Daily consumption outside the home and at home.	Variable consumption: daily, weekly or special (not related to standard of living).	Regular consumption by households of higher social class (but not daily).
Prices	175 CFA francs	25 to 100 CFA francs	25 to 100 CFA francs	200 to 250 CFA francs	Highly variable depending on quality: <ul style="list-style-type: none"> - Exotica: 1,000 CFA francs per litre. - Lafi Jus: 100 CFA francs per 100 ml. - Ivorio: 500 CFA francs per 250 ml can.
Perception	Chemical, not healthy but well liked by children.		Affordable but can be made at home.	Highly appreciated by children. Better quality than powders. Negative opinion among higher class.	Good quality and natural beverages, the purchase makes the buyer look good.

Yoghurt

In each of the three cities, children begin having yoghurt at a very young age. However, it is not reserved specifically for them, because parents can drink it as well. Yoghurt is bought in pouches, and sometimes prepared at home by mothers. It appears to be the most popular in Bamako and Niamey.

In each of the three cities, children begin having yoghurt at a very young age.

In Niamey, whatever the brand, yoghurt is always called Solani, the name of the company that began producing yoghurt in Niger and sells it today in pouches for 100 CFA francs³. Some children begin eating yoghurt at six months. Yoghurt is very popular with children and was spontaneously mentioned in Niamey when we asked what young children eat and like.

"Small children eat porridge, milk, mostly milk. Milk is Solani and consort. Children cry for Solani."

– *"Yes, they demand Solani, you have to buy it for them."*

FG-6, men, Niamey.

In Niamey, the fathers buy yoghurt. A relatively wealthy young man, father of a seventeen-month-old girl, explains that he buys Solani every day before dropping off his daughter at the nursery, which asks parents to bring a pouch every day, as well as *dambou*⁴, to feed to the children during the day.

Yoghurt is not just a treat. It is also a key ingredient in the preparation of certain family dishes.

Yoghurt is not just a treat: it is also a key ingredient in the preparation of certain shared family dishes. Children suck on the contents of a pouch during the day, but also consume it with "*boule*"⁵, a highly appreciated traditional dish in Niamey. Yoghurt sometimes replaces the sauce and is served with flour paste (*tô*).

"When I get out⁶, and I have money in my pocket, I buy boule and I go home. The last time was a week ago. I buy some about once a week. I buy 200 CFA francs worth of boule, three Solani (300 CFA francs), ice cream (25 CFA francs) and sugar (50 CFA francs). It's for the whole family, we have it after dinner. Everyone loves it. Children start eating boule at around five or six months, it's like porridge. We don't have it every day because it's too expensive."

FG-12, man (artisan plumber-mason), Niamey.

3. So, it is difficult to know which brands Nigeriens prefer.

4. Millet couscous accompanied by moringa, often eaten with *kopto*.

5. Millet preparation. *Boule* refers to *goumba* or *foura* in Hausa. In Zarma, it is called *labdourou* or *donou* depending on the type of preparation.

6. End of the working day.

In Bamako, yoghurt and milk are very commonly given to children during the day or “as dessert” at the end of a meal. There are several brands, but Ardo and Mali-Lait are the most frequently mentioned. Yoghurt is also eaten with millet in the form of *dégué*⁷. A pouch of Mali-Lait is sold for 150 CFA francs; note that it is cheaper than soda.

“We buy Mali-Lait for 150 CFA francs or 100 CFA francs. Yoghurt is cheaper than D’jino [soda], but children prefer D’jino.”

FG-10, men (large family), Bamako.

Grandibien in Ouagadougou, a range of fortified products for children and women

Grandibien products, made by Nutriset in France, have been imported by Barika⁸ since 2016 and distributed through a network of sales points in Ouagadougou. Three products are available: Nutriset Grandibien Maman, Nutriset Grandibien Bébé (six to twenty-four months, in 20 g pouches sold for 150 CFA francs), and Nutriset Grandibien Enfant (from twenty-four months and sold in 30 g pouches for 200 CFA francs per unit).

Grandibien products were never mentioned spontaneously during discussions in Ouagadougou. After presenting pouches during meetings to encourage discussion, several observations were made:

- Grandibien is relatively well known, proof that the advertising and promotion campaigns conducted in health centres have paid off. However, some promotional activities fail to comply with the *International Code of Marketing of Breast-Milk Substitutes*⁹. Despite its notoriety, few consumers have tried the products (only eight people). Among them, opinions differ regarding their flavour. Half think it tastes good, or feel that their child likes it, while the other half disagree.

Grandibien products are similar to ready-to-use therapeutic foods developed by Nutriset for the treatment of acute malnutrition (Plumpy’Nut or Plumpy’Sup).

Naturally very high in calories, promoting their consumption may contradict WHO warnings⁽¹⁾ on approaches to treating or preventing malnourishment, which recommends considering the risks of obesity in the medium and long term associated with practices to prevent or treat undernutrition.

(1) WHO (2017).

Grandibien products are never mentioned spontaneously during discussions in Ouagadougou.

7. Couscous made with pearl millet (more rarely wheat) that is puffed, then boiled and mixed with sweet milk or yoghurt. May contain certain flavourings. Used for children’s snack or dinner.

8. Distribution network set up by Nutriset for its products.

9. For example, a poster promoting the product displayed in the consultation room of a health centre or activities conducted at the health centre constitute violations of the Code.



The Grandibien range available at sales points in Ouagadougou (2018)

- Consumers identify the Plumpy'Nut – Grandibien affiliation, and their comments illustrate misuse of Plumpy'Nut, which is intended to be consumed only by people suffering from acute malnutrition:
 - The sale price of these products is considered too high by most of the people we met. Only two of them have nothing negative to say about it. The first is a grilled chicken seller who is very serious about his family's diet. He has tested many brands of infant flours with his children, took his wife to information sessions at the health centre and knows good child care practices. He believes that the high price is justified by the "density", the richness of the product. The second person is a middle-class woman whose mother is a community health worker. She believes that the product is better than the treats for children available on the market, so it is normal for the price to be high.
 - The remainder of the sample believes that the product is much too expensive and that the small pouch of Grandibien Maman and Grandibien Béb  should be sold at 50 CFA francs instead of 150 CFA francs, and the large pouch of Grandibien Enfant at 100 CFA francs instead of 200 CFA francs.
- Consumers are not sensitive to the targets mentioned by the products in the range (babies aged six to twenty-four months, pregnant and breastfeeding women and children over two). One high school student purchases some from time to time and buys "whichever one is available".

Consumers are not sensitive to the targets mentioned by the different products in the range.

- The parents we interviewed believe that Grandibien products for children will find a market more easily than products for women: they think that “chocolate”, a term commonly used to designate Nutriset ready-to-use therapeutic foods in the Sahel, is not a product designed for them. Shopkeepers who sell Grandibien confirm this: the products for children “sell the best”.

“I bought Grandibien for my wife. It’s like peanut paste, I didn’t like it. It costs 150 CFA francs per pouch. It’s good for children, they like it and it’s better to give them that than chocolate from the shop. It’s like Plumpy’Nut: my ten-year-old son was severely malnourished, we gave him Plumpy’Nut. I ate it, it was good.”

FG-2, women, Ouagadougou.

“I’m familiar with it, a man came to the health centre, he’s a health worker. He introduced the product, and said it helps children grow. I bought some for the children, three pouches of each. I only bought it once when I had the money. I asked my husband to get more because the children liked it but he said it was too expensive.”

FG-6, women (unemployed, merchant husbands), Ouagadougou. ●

TAKEAWAYS

The food fed to infants from birth to six months rarely follows the WHO's recommendations. Babies are often given beverages from the first days of their life, while breast-milk substitutes are very frequently purchased from the first weeks of life (especially in Bamako and Niamey), sometimes initiated by fathers with no need having been expressed by mothers. Budgets for the purchase of breast-milk substitutes often exceed those spent by families for the purchase of infant flour.

While infant flour is present in the three countries surveyed, consumption trends vary from one to the other and are strongly influenced by the characteristics of supply. So, in Niamey, the offer is poorly diversified, local flours are poorly known and local or imported infant flours, of variable quality, are ultimately not widely consumed. Homemade and neighbourhood porridge dominate, but they are potentially of poor quality because they are often served without being cooked. In Bamako, on the other hand, babies are very often fed infant flour, and Vitablé, a local flour whose formulation is not adapted to the needs of children, is very well positioned. In Ouagadougou, babies are also very often fed infant flours: there are many local flours, of varying quality, but the brands are not well known.

In Ouagadougou and Bamako, Cérélac enjoys a strong reputation maintained by advertising campaigns, local promotions (at sales points and at markets), very strong merchandising and promotional sessions conducted in health centres, in violation of the *International Code of Marketing of Breast-Milk Substitutes*. This product offers many advantages: availability, convenience and diversity of packaging. It also lends itself to various purchasing practices such as purchases in bulk, most often by the child's father, and purchases in pouches for testing or one-off purchases. It is also the subject of "off-target" eating habits, with students, girls and households expanding the potential market of this product.

In all three cities, when served to children, local infant flours are alternated with traditional porridge, imported flour porridge or other types of preparations (e.g., purées or vegetable soups). Consumption is often stopped quite early (at around a year) in favour of family porridge, then the family dish. Porridge consumption continues after the child's first birthday: with traditional porridge in Ouagadougou and Niamey, and Vitablé and homemade porridge in Bamako. When porridge is part of the family's habits, it continues to be consumed regardless of the child's age.

All children eat treats that their family members buy to please them or that they buy themselves in the neighbourhood from an early age. A wide variety of products is available, of highly variable nutritional value: biscuits, crisps, sweets, doughnuts, sandwiches, yoghurts, beverages, etc. They are eaten between or alongside meals. Apart from crisps in Bamako, the most popular treats for children there, it is difficult to identify a product that takes precedence over others and wins the support of a majority of consumers. Yogurt is appreciated, especially in Niamey and Bamako. In Bamako, industrial beverages (sodas or flavoured sweetened beverages) are available in all sales points, and children, even very young ones, consume them frequently. In Ouagadougou or Niamey, the consumption of artisanal beverages produced in the neighbourhood dominates. In Ouagadougou, Grandibien products, recently marketed, have quickly gained a certain notoriety, but their availability is low and their level of consumption remains confidential.

PART 3

Eating habits of women of childbearing age

Women of childbearing age (fifteen to forty-nine years) are physiologically exposed to micronutrient deficiencies⁽¹⁾. In addition, the mother's nutritional status has an impact on that of her children. Beyond these nutritional issues, for companies marketing fortified foods, women of child-bearing age constitute a more interesting target than do babies aged six to twenty-three months. They represent a broader target, and a consumer of fortified food is likely to buy fortified products for her children, which is not the case for young children who constitute a "market" that must perpetually be reconquered.

The interviews and focus groups conducted as part of the Meriem project aimed to provide a better understanding of the food products favoured by women of child-bearing age and their eating habits. These questions were explored through individual interviews and discussions in homogenous groups composed of either men, mothers or girls⁽²⁾. The discussions focused on daily food consumption in order to understand the constraints on regular choices, as well as consumption associated with specific situations (outings, parties, etc.), to identify products and practices that appeal to women and girls, what makes them dream and what they aspire to. Eating habits during pregnancy, breastfeeding and in times of fatigue were also discussed to identify the products they consider to be vectors of health. Issues related to weight and physical activity emerged spontaneously in the discussions.

(1) Due to blood loss during menstruation, but also because of pregnancy and breastfeeding.

(2) With the exception of a mixed group (men and women) in Ouagadougou.

Students and apprentices

ONE, TWO OR THREE “FAMILY” MEALS FOR GIRLS WHO LIVE WITH THEIR PARENTS

Prior to marriage, the vast majority of the girls or young women we met live with their families¹. These are high school or university students, apprentices or employed. Some of them are mothers² but continue to live with their parents if they are not married, and their parents take care of the child.

Girls and young women who live with their parents share family meals. High school girls eat two (lunch and dinner) or three meals at home, and most often buy a snack at school in the morning. Since schools or work are often far from home, the students, employees or apprentices do not return for lunch and only eat one meal (dinner) or two (breakfast and dinner) at home. At lunchtime, they frequently eat street food.

At lunchtime, students, employees and apprentices frequently eat street food.

“We live too far away, so we eat here. It's better to bring something from home but we can't. We buy babenda³, rice, beans, bissap, teedo⁴, ginger, and we eat together. Together, the four of us spend 1,000 CFA francs [each meal: 250 CFA francs].”

FG-18, women (apprentice seamstresses), Ouagadougou.

Like elementary school pupils, high school and university students receive pocket money from their parents (usually their father) every day (sometimes monthly for university students) to cover their daily expenses. This money pays for the morning meal taken at school or

1. With their parents, or with a relative or guardian if they live in the village or if their parents have died. Students living in university residences (Bamako and Ouagadougou) escape this classic model.

2. When young mothers are not married, they are considered “girls”. The resource people who helped us form the groups included young mothers still living with their families in the girls group, considering that the birth of the child did not fundamentally change their way of life.

3. Mossi speciality. Traditional dish formerly composed of wild leaves, millet and potash, now with cultivated leaves (sorrel, amaranth and cleome), rice or maize, and sometimes a sauce-condiment made of oil, tomatoes and onions. Consumed as a “tô sauce”.

4. Baobab juice.

High school and university students receive pocket money every day from their parents.

university, but also, if necessary, lunch and other potential expenses: bicycle parking, transportation, etc.

The high school students we met receive about 200 or 300 CFA francs per day for snacks, and the university students between 500 and 1,000 CFA francs for snacks and a meal.

"I give her 200 CFA francs, that's sort of the norm: 200 or 250 CFA francs for a fifteen-year-old girl. But the children of wealthy merchants get 500 CFA francs for food. Some children come to school with nothing, it's a problem, and their parents are irresponsible. Children feel marginalised if they can't buy something at recess, some drop out of school because of it."

El-1, woman (life and earth sciences substitute teacher), Ouagadougou.

DISHES PURCHASED IN THE NEIGHBOURHOOD, AN ALTERNATIVE TO FAMILY MEALS

For dinner or lunch, when they don't like the family dish, girls (and boys) can receive money from their mother to buy a dish outside the home, which they then eat at home.

"I don't like potato leaf sauce. If I don't like what we're eating, Mum gives me money to get something else."

FG-8, students, Bamako.

These purchases reflect the girls' preferences. In Ouagadougou, dishes bought in the neighbourhood are often those they buy from vendors during recess (primarily *babenda* or *dounkounou*⁵). In Niamey, it is *dambou*.

"I don't like tô. I often don't eat dinner. When dad comes home, he sometimes gives me money to buy bread and eggs."

FG-2, high school students (public high school), Bamako.

"I don't like rice and cowpea. When mum makes this, she gives me money, usually 300 CFA francs to buy bread and milk, or else I buy gari [cassava couscous] or dambou."

- *It's the same for me, I don't like cowpea, so mum gives me 200 CFA francs and I buy dambou."*

FG-4, high school students (public high school), Niamey.

5. Dish from Ghana made from fermented whole maize and chilli.

BREAKFAST, EATEN LATER IN THE DAY OR SKIPPED ALL TOGETHER

In all three cities, some high school girls (and more generally children) eat nothing before leaving home in the morning and often take their first meal at 10:30. There are several reasons for this: high school girls do not want to lose the pocket money their father gives them for their “snack”, they are not hungry or do not have time to eat, or their mother does not have time to warm up leftovers from the day before⁶ or to prepare breakfast for them. This habit continues and potentially worsens for university students (especially those living in a university residence, where time and resources are scarce), who often wait until noon or 1 p.m. to have their first meal.

“We often don’t have time for breakfast in the morning. Then, if you spend money for breakfast, you have nothing left for lunch.”

FG-16, students (in university residence), Ouagadougou.

This practice can have harmful consequences, with one high school teacher explaining that her students are unable to pay attention in the morning because they are hungry. The absence of meals in the morning can explain the fatigue that young girls feel. Breakfast is recognised as a beneficial eating habit, which facilitates concentration and learning for students⁷, and also helps reduce the risk of deficiencies⁸. Moreover, some studies report that skipping breakfast is associated with an increased risk of overweight and obesity in adolescents⁹.

Breakfast is recognised as a beneficial eating habit, which facilitates concentration and learning for students.

“We don’t eat breakfast but it’s okay, we’re used to it.”

– *“I think that if you don’t eat breakfast, you have trouble studying.”*

FG-19, high school girls, Ouagadougou.

STUDENTS LIVING IN UNIVERSITY RESIDENCE, A DIET CONSTRAINED BY COST

Most¹⁰ of the university students we met and who do not live with their families reside in university residences. Life in a university residence is appreciated differently depending on the groups surveyed:

6. Eating leftovers from the previous day’s tô dish, referred to as “tô couché”, is a very common practice in Burkina Faso.

7. Various studies highlight a correlation between eating breakfast and the ability to concentrate, memorise and achieve academic results (FRAC, 2016).

8. Studies also show a correlation between skipping breakfast and micronutrient deficiencies or anaemia in adolescent girls (see Andiarna F., 2019).

9. Nuru H., Mamang F. (2015).

10. Only one of the girls we met—a university student—lived alone in Niamey. None of the university students we met in Niamey resided in a university residence.

- ➔ In Ouagadougou¹¹, students living with their parents aspire to live in a university residence to have more freedom, to be relieved of household chores and to be able to devote themselves to their studies. On the other hand, students in university residences felt that life at home was easier: they struggled to make ends meet and missed the time when their family took care of them.
- ➔ In Niamey and Bamako, girls do not want to live in a university residence and feel lucky to live at home. In Niamey, the situation of university students is somewhat paradoxical: the most deserving girls have access to a room in university residence, but their status is not envied because it is considered that they have too much freedom and can suffer bad influences.

University students who live in residence are responsible for all of their meals on very tight budgets. They receive a scholarship from the State¹², or assistance from their parents who send them money or provide them with cereals that they store in their residence room. Most often, however, they need to work or get a part-time job (called “gombo” in Ouagadougou) to meet their needs (retail, saleswoman, hostess on weekends). Apart from food, their main expenses are photocopies for classes, transportation, personal hygiene and personal care products: “girls’ expenses”¹³. They say that exceptional health expenses come as a shock that they struggle with.

Constrained by limited financial resources, students have to make choices to stay within their budget. Available money is the main factor determining the choice of food they purchase, and the comments made by the girls interviewed clearly reveal the deprivations imposed by a lack of means and time to eat properly.

The comments made by the girls interviewed clearly reveal deprivations imposed by a lack of means and time to eat properly.

Overall, university students consider that they ate better when they lived at home and miss that time.

“Before, I ate three meals a day at home: breakfast, lunch and dinner. I often snacked during the day, too. I can’t do that any more, there are two problems: time and money.”

FG-16, students (in university residence), Ouagadougou.

“Here we can’t buy foods with vitamins, like bananas, oranges, meat and fish. We eat them too rarely, once a week.”

FG-17, students (in university residence), Bamako.

11. In Ouagadougou, many students come from inland but also from abroad (mainly Ivory Coast).

12. Access to, and the amount of, scholarships vary by country.

13. Sanitary towels.

UNIVERSITY DINING HALLS

On the campuses we visited in Bamako, we saw no university dining halls, just kiosks/cafeterias for meals and snacks. Students complain that the prices charged at the kiosks are much higher than those in the city. In Niamey and Ouagadougou, on the other hand, university dining halls offer three subsidised meals per day. Although the students acknowledge that the service is very affordable, they are very critical of the quality of the meals served and try to go there as little as possible. They prefer to:

- pay more and eat at kiosks or small restaurants on campus, which serve dishes for 300 CFA francs;
- prepare meals in their room;
- skip meals.

“At the hospital, I was told that I shouldn't eat at the university dining hall, that it was dangerous for my health. So I don't eat there anymore.”

FG-16, students (in university residence), Ouagadougou.

“Sometimes I go to the ENAM restaurant¹⁴, that's if I have the money. You have to pay 300 CFA francs for the rice and sauce, it is more expensive than the university dining hall but it's a lot better. If I don't have 300 CFA francs, I don't eat or I buy myself a cake. We're used to not eating. We only feel hungry when we have a lot of work.”

FG-16, students (in university residence), Ouagadougou.

FOR SNACKS: SANDWICHES OR TRADITIONAL DISHES

Girls snack during the day: in the morning, during school recess for example, or in the afternoon between lunch and dinner. It is a question of feeling “peckish” until they can have a more consistent meal.

High school girls feel that they do not eat the same things as younger children, saying they are less tempted by sweets and biscuits during recess and want more nourishing food. They prefer the sandwiches and cooked dishes (Ouagadougou and Niamey) sold by women in or near the school courtyard.

“When you're little, you like sweets and biscuits, but now we don't like them as much any more.”

FG-2, high school students, Niamey.



Fritter saleswoman in the courtyard of a high school in Niamey

14. Ouagadougou National School of Administration and Magistracy, located on the university campus.

"We don't eat crisps anymore, that's more for kids. After the age of twelve or thirteen, we stop eating them much."

FG-16, university students living with their parents, Bamako.

In Bamako, sandwiches are the snack girls eat most frequently.

In all three cities, sandwiches made with baguette are the most frequently sold snack during the day. In Bamako, sandwiches are the snack girls eat most frequently. It almost always contains something fried (potato or plantain – *alloco*), but also meat and eggs. The alternative to a sandwich is a fritter (fried wheat flour).

However, according to the manager of a kiosk at a university site, sandwiches were not always as common:

"Before, we made fewer sandwiches, we made couscous and attiéké. Today, for breaks, I only make sandwiches with meat, alloco, eggs and fries. I sell them for 200, 300 or 500 CFA francs, depending on the size and what's in them."

Woman (manager of the kiosk at the Catholic University), Bamako.

In Niamey and Ouagadougou, high school students also eat sandwiches (with meat, fish or avocado in Ouagadougou; appetizers¹⁵ and *awara* in Niamey), but not as commonly as in Bamako. Cooked dishes, such as couscous, *dambou*, *kopto*¹⁶ and *babenda*, are popular and frequently consumed mid-morning by high school girls as a snack.

In Niamey, girls like traditional *boule* and porridge recipes that they buy themselves to eat in the morning, evening or during the day.

In Niamey, girls still like traditional recipes of *boule* and porridge.

"In the evening, I buy boule from an old lady in the neighbourhood. I buy boule for 200 CFA francs and I add two Solani [100 CFA francs each] that I eat in the evening and in the morning. This boule and Solani are just for me, I don't share them at home. In the morning, I'd rather have warmed up leftovers, but I don't have time."

FG-8, students living with their parents, Niamey.

"For my porridge, I buy raw boule [...]. I come about twice a week to buy boule for 200 CFA francs. I bring the boule home, then I add hot water to make porridge; I keep the porridge in a dish and drink it throughout the day. I only add sugar when I eat it. I like this porridge, but I don't like neighbourhood porridge; it's too smooth. There are lumps in 'boule porridge'; it's better. My mum used to make this porridge with boule. The university students I know do that, too. Near me, there are mostly girls from Maradi and Zinder. They bring back dried boule and other things like dried moringa from home in the east. They make porridge with dry boule in Niamey. All Nigeriens eat 'boule porridge'."

E-12, student, Niamey.

15. Vegetables (tomatoes, lettuce, carrots, etc.) and mayonnaise.

16. Boiled vegetable, most often prepared from moringa leaves, but we also heard of *kopto* for sorrel or boiled cabbage. Most of the time, it is cooked with peanut, couscous (*dambou*) or cassava flour (*gari*).

AFTERNOON SNACK, IRREGULAR CONSUMPTION

When they have the means, the girls will buy something to nibble on in the afternoon. As with children, practices vary widely: *allico*, wheat doughnut, pancake, sweet potato, sweet or savoury cake, *bourmasa* (doughnut), *koura koura* (peanut pancake), peanuts in the shell, fruit, yoghurt, *thiakry* and artisanal beverages (bissap or tamarin juice, tigernut juice or *horchata*¹⁷, *zomkom*¹⁸, etc.) are available in the neighbourhoods and purchased on the way home from school or in the late afternoon. No single food seems to dominate.

In Ouagadougou and Bamako, girls love Cérélac, consuming it regularly. In Bamako, one of them says she buys it two or three times a week, eating two pouches each time since the size of the pouch has changed.

EXCEPTIONAL FOOD CONSUMPTION

High school and university students do not mention any exceptional food expenses other than energy drinks during exams. Despite a very tight budget, one student in Ouagadougou buys them to cope with fatigue, lack of sleep and to pass her exams. The price of a can is practically the same as food expenses for an entire normal day.

“No extras, only occasionally. Last Saturday for example, I bought XXL, an energy drink that costs 800 CFA francs. It was to help me work, this is the third time I’ve bought it.”

FG-1, student (in university residence), Ouagadougou.

Exceptional foods are most often associated with ceremonies (weddings, baptisms, funerals, religious festivals), which are very frequent for girls living with their families. In Ouagadougou and Bamako, outings with friends are also occasions for exceptional food purchases.

Exceptional foods are most often associated with ceremonies.

In Ouagadougou, girls talk easily about going out with boys, which are opportunities to eat and drink special things: “We have to seize the opportunity to ask for products that we never have otherwise.” They order juices (Dafani), sodas, meat, fish, fried potatoes and the boy pays: the bill is never shared.

“If a boy asks us out, we want him to take us to a “real restaurant”: an ice cream parlour, a restaurant, a fast food joint, somewhere to have chicken, ice cream or braised fish. Somewhere with good food. It’s important that the boy pays for good food. We never buy Coca-Cola or Fanta, but we expect the boy to buy it for us. What we want is meat, fish and sweets¹⁹.”

FG-16, students (in university residence), Ouagadougou.

17. Tigernut is also called sweet pea.

18. Also called white water, *zomkom* is a very common drink prepared by mixing millet flour, water and sugar. *Gâpal* is slightly different: chilli, ginger and curdled milk are added, and millet and bran are ground in a mortar.

19. Sweets refer to beverages and often sodas like Fanta or Coca-Cola.

"If I go out with a boy, it's at least one Dafani (one litre at 1,300 CFA francs) and fish that costs 2,500 CFA francs. I don't pay. If I offered to pay, the boy would be offended and would refuse. He has to pay, it's his duty. On the other hand, when I go out with other girls, we each pay."

FG-18, girl (hairdresser), Ouagadougou.

While outings are an opportunity for something special, the choice of products consumed is not completely spontaneous. One girl from Ouagadougou explains that she never drinks beer when she goes out with a boy in order to "stay in control". One group also explains that a girl cannot afford to demand "western" food from the boy (such as pizza or hamburger): they are delighted if he offers it, but they are afraid he will think badly of them if they ask for it.

"We can't say 'I'd like pizza, or chawarma²⁰', otherwise the boy thinks we're putting on airs."

- *It is not a question of price, it's just that they're not things we usually eat. It would be shameful to ask for it. If the boy suggests it, it's fine. But in general, boys prefer meat or fish."*

FG-18, Girls (apprentices, employed girls), Ouagadougou.

In Bamako, a large proportion of the students we met say they do not go out or rarely go out as a matter of choice. Some go out in groups or with their fiancé during the holidays. It appears that it is more acceptable for girls in Bamako to pay their way when they go out with a boy, unlike in Ouagadougou.

In Niamey, the last time they had Oriba soda or thiakry is often the last ceremony they attended.

In Niamey, girls' outings are very closely monitored by their families: these are primarily ceremonies (weddings, baptisms) to which the girls are accompanied. The last time they had Oriba²¹ soda or thiakry is often the last ceremony they attended.

"For ceremonies, we leave after prayer when there is a marriage or baptism. We leave around 3 p.m. and come home at 6 p.m. There, we eat other things, like yoghurt, thiakry, juices, Oriba sweets, skewers, biscuits and chocolate. Sometimes we ask our parents for yoghurt or Oriba outside ceremonies; sometimes they buy it but sometimes they don't."

FG-4, high school students, Niamey.

Outings with girlfriends and boys are extremely rare in Niamey. The day before the interview, the students we met at Niamey University had gone to a birthday party for the fiancé of one of the students: they said that this kind of event is an exception. Safety issues, chores but especially social and religious rules all limit girls' outings.

20. Lebanese sandwich.

21. Nigerien soft drink brand.

- “Our parents let us go [to the birthday party]. They don’t always agree; they’re afraid it’s dangerous if it’s at night, especially on the right bank, there are problems. They say we have to do the cleaning, the laundry, the cooking, but these are all excuses not to let us go out. Birthday parties like yesterday are very rare; the last time was... years ago. We can’t afford to organise things like that. Plus, people don’t approve from a religious standpoint.*
- *In Islam, it’s forbidden to celebrate birthdays because girls and boys dress in weird ways. We’ve never had a birthday party. Yesterday we had Oriba, pasta salad with eggs and lettuce. She [his fiancée] brought the cake.”*
- FG-8, students, Niamey. ●

Eating habits of mothers of young children

MEAL PREPARATION

The mothers we met eat most of their meals at home. They prepare the meals, sometimes with the help of a maid. While the meal is normally the same for everyone, accommodations can be made. Some dishes are seasoned individually to take into account each person's tastes: chilli pepper, for example, can be optional for the children.

Some dishes are seasoned individually to take into account each person's tastes.

"When I buy kopto, it's for the whole family. Everyone gets the same recipe, but we don't put chili pepper in the children's portion."

II-2, woman (porridge vendor), Niamey.

Mothers sometimes serve ready-to-eat dishes, most often bought in the neighbourhood from a trusted person.

Mothers sometimes serve ready-to-eat dishes, most often bought in the neighbourhood from a trusted person. This practice seems very common in Ouagadougou¹ and provides a family meal when mothers do not have time to prepare it or when they want to serve dishes that they do not know how to make (they mention recipes from the Coast such as *plakali*² and *attiéké*). It is also a way to satisfy family members who do not like the family dish.

However, this is not systematic, since some of the girls we met say they have to eat the family dish whether they like it or not. Most do acknowledge that their mother will buy them food in the neighbourhood if they do not like the sauce or dish cooked at home.

In Niamey, women seem more reluctant to buy ready-to-eat food: still, girls here mention this practice, like those in Ouagadougou. In fact, it may be that people frown on women who do not prepare the meal themselves, and mothers underreport how often they buy food outside the home.

1. Heron R. (2016); Konkobo-Yaméogo C., Cheyens E. (2018).

2. Macerated cassava in flour then formed into a *boule*. Eaten with *tô* sauces or rice. Bought from a caterer, rather long to cook. Speciality from Ivory Coast.

INDIVIDUAL EATING OUTSIDE MEALS

The mothers we met eat outside the home less often than girls do.

In Niamey, food is eaten frequently throughout the day: between meals, women have porridge that is prepared or purchased in the morning and then drunk throughout the day, or reheated leftovers. If they feel a little hungry, they especially enjoy *kopto* (moringa) that they prepare (or season if they buy on the street) at home. We get the impression that some women eat constantly all day long.

"Whenever I'm hungry I eat.

- *The porridge is there in the courtyard, you have some whenever you feel like it.*
- *Women drink porridge all day, then they don't understand why they are overweight."*

FG-3, women (unemployed), Niamey.

In Niamey, food is eaten frequently throughout the day.

In Ouagadougou, individual consumption is not as common. Mothers mention buying treats (doughnuts, *alloco*, *attiéké*, etc.) and beverages (made in the neighbourhood) throughout the day, but they claim that they always share these products between or with their children.

"Mothers don't eat alone. When a mother has food, she always shares it. If we go to the market, we buy a little something: peanuts, fresh water, oranges, bananas, thiakry, zomkom, horchata or pineapple juice, but we bring it home and we share it."

FG-6, women (unemployed, merchant husbands), Ouagadougou.

In Ouagadougou, individual consumption is not as common.

In Bamako, all of the women mention buying food for individual consumption throughout the day.

In Bamako, outside meals, women drink tea (often in groups) and some have porridge in the evening after dinner (as a family). All women, however, mention buying food for individual consumption during the day. They buy the same products as the girls. These are nutritionally rich snacks involving frying: sandwiches (*alloco* and eggs, or fried potatoes and meat), but also fritters. Some women consume these snacks daily.

"I buy a fritter in the afternoon. I pay 250 CFA francs, it has egg, onions, bouillon cube, salt and pepper inside fried wheat dough. I often buy it in the afternoon before dinner."

II-10, woman (apprentice seamstress), Bamako.

Women in Bamako also buy sodas or industrial beverages regularly, sometimes daily.

"I buy something to drink about every other day. If I have the money, I'll buy one as a treat in the afternoon.

- *I buy a single bottle, it's just for me, I don't share it."*

FG-9, women (small merchants, large family), Bamako.

In each of the three capitals surveyed, some women also eat biscuits and crisps. However, these products are often considered for children.

"Biscuits are for children."

FG-9, women, Bamako.

"I don't eat crisps but I like all kinds of biscuits. I don't know the brand names. I buy them myself at the shop with money that my husband gives me in addition to the condiment money."

II-6, women (unemployed), Bamako. ●

Pregnancy and breastfeeding, dietary challenges

PREGNANCY

Few foods are not permitted

Traditionally, pregnant women are subjected to food taboos; defying them would expose them to the risks of not carrying the pregnancy to term, having a difficult birth, giving birth to a child in poor health or with physical or mental impairment. Depending on the culture, pregnant women may be prohibited or discouraged from eating meats, some fruits, eggs, ice water, etc.¹

However, the women we met in the three capitals do not seem to be subject to traditional food bans. The only ban mentioned by several people in Ouagadougou and Bamako is Coca-Cola, which could cause miscarriages.

“During pregnancy, women eat like they always do. Some foods are banned, such as Coca-Cola that causes miscarriages, but otherwise we don’t change our diet.”

FG-11, men (upper middle class), Ouagadougou.

The women we met in the three capitals do not seem to be subject to traditional food bans.

The baby’s birth weight, whether high or low, is a concern that might prompt particular food choices, although some women feel that access to health centres is easier in the city today, so there is less to worry about.

“Traditionally, there were prohibitions, but we no longer follow them today. It used to be no sugar, no butter or concentrated milk, otherwise the baby will gain too much

1. For example, in Burkina Faso, the literature mentions prohibitions concerning eggs, squash and giant pouched rat (Kabore P. et al., 2007). A recent study in Niger reports that women consider it better to avoid consuming bouillon cubes, pepper, salt and acidic foods during pregnancy, without this actually being a cultural ban (Rosen J.G. et al., 2018).

weight and for birth we prefer our babies to be small. It's easier. Now in the city it's different, women give birth at the health centre, but it's more complicated in the village. Old women also say not to drink ice water because it makes you fat."

II-1, woman (life and earth sciences substitute teacher), Ouagadougou.

A fluctuating appetite and cravings specific to each woman

Being healthy means having a good appetite.

Many women consider that the main changes in eating habits during pregnancy are due to a variation in appetite: they sometimes mention cravings, but more often a loss of appetite due to nausea, which is a source of concern. Being healthy means having a good appetite, and weight loss during the first months of pregnancy worries women and their entourage.

In Ouagadougou and Bamako, no main food

The interviews conducted in Ouagadougou and Bamako reveal no food that most women consider to be suitable or satisfactory for pregnant women: each one adjusts her diet according to her desires and dislikes. However, in Ouagadougou, some mention *thiakry* or *zomkom*, although these opinions remain isolated. In Bamako, women say that dishes in sauce make them nauseous and lose their appetite. Others mention eating more meat, fish, porridge or fruit. Men, on the other hand, notice mainly an increase in their wives' desire for meat.

"We don't eat much during pregnancy. We can't stand some dishes. I don't eat rice, it makes me vomit.

- *For me, it's peanut sauce.*
- *For me, onion sauce.*
- *We have different cravings: I crave skewers and fish, I eat more when I'm pregnant, I buy them night and day.*
- *I crave salad, fish and meat."*

FG-9, women (large family), Bamako.

In Niamey, some preferred products

In Niamey, on the contrary, certain foods are often mentioned by women when they talk about their diet during pregnancy. The favourite food of women in general is *kopto*, and it is also the one they say they eat more of when they are pregnant: they are not acting on the advice of the health centre, but because they crave it.

"The most common food consumed during pregnancy and breastfeeding is kopto [the four women nod] [...]. No one particularly recommends we eat kopto during pregnancy, we usually eat it, but during pregnancy, we eat more of it because we crave it."

FG-1, women (unemployed or episodic employment), Niamey.

"Since my wife got pregnant, she loves [kopto]. She wants it all the time."

FG-12, man (artisan plumber-mason), Niamey.

Less frequently cited than *kopto* are *labdourou*² and, to a lesser extent, porridge.

“During pregnancy, I eat millet boule more, especially raw boule, labdourou.

- I love porridge.*
- I love raw boule, too. No one says you should eat it, but I craved it. I had little appetite, but I could eat that. I have it when I’m not pregnant too, but less often.”*

FG-3, women (unemployed), Niamey.

“I usually drink porridge, but I drink less of it right now. On the other hand, I’ve been drinking labdourou ever since I got pregnant. I drink a lot more labdourou than porridge. I had some yesterday, I buy it from a lady in the neighbourhood. She brings me some at home around ten or eleven in the morning, I pay 250 CFA francs. I go to the shop to buy Solani, I pay 100 CFA francs.

At home, I mix everything together and then drink it throughout the day. I only buy it for myself, I never give it to my son, he has porridge.”

II-3, woman (pregnant, at health centre), Niamey.

As in Ouagadougou and Bamako, women also mention other fresh, juicy and vitamin-rich foods such as fruits, or foods considered rich and nutritious (meat, fish, eggs), and they also complain about their lack of appetite and disgust with dishes in sauce (rice, pasta).

“When you’re pregnant, you don’t eat much.

- Food with sauce makes me nauseous.*
- The foods I crave are fruits, bananas and mangoes.*
- I crave kopto and mango.”*

FG-11, women (breastfeeding mothers), Niamey.

Risky practices

Several women mention difficult pregnancies and difficult deliveries (“a subserum pregnancy”, “diseases”, “caesarean section”), but also difficulties directly related to their diet. One young woman explained that she basically drank only soda during her pregnancy because she could not stand any other food, and another mentioned excessive weight gain and the need to go on a diet.

Several women mention difficulties directly related to their diet.

“I have no appetite when I’m pregnant, I only drink. I drink a lot of D’jino during pregnancy because it doesn’t make me feel sick. I vomit if I eat, but drinks are fine. I drink a little milk, no porridge, a little soup, I eat fruit, oranges, rarely bread. I lose weight with every pregnancy. I took iron tablets and the doctor told me to eat well. I told him that I was only drinking juice [sodas], and he told me that I had to force myself to eat even if I vomit. I was tired, but I had big babies, they were 4 kg, 4.5 kg and 5 kg at birth.”

II-5, woman (small merchant), Bamako.

2. Raw *boule* of raw millet flour and cold water that is dipped in curdled milk or yoghurt sweetened with sugar. Called *goumba* in Hausa.

"I gained too much weight during pregnancy: I weighed 80 kg before my pregnancy and 115 kg after giving birth. The doctor told me to go on a diet during my pregnancy. At thirty-two weeks, he told me to eat less in the evening, and eat less salt and sugar. So, to lose weight, I ate only porridge and nothing else at dinner, porridge with no sugar or salt. Now I'm back down to 90 kg and I'm still being careful."

FG-1, women (teachers), Bamako.

BREASTFEEDING

Searching for a diet that facilitates breastfeeding

Some foods that are already part of women's eating habits are consumed in greater quantities during breastfeeding because they are said to promote lactation. These are often liquid or semi-liquid preparations, mainly milk-based, such as *thiakry* in Bamako and *labdourou* in Niamey.

We collected the most information on foods considered by women to promote lactation in Bamako. These are *thiakry*, peanut (peanut sauce), porridge, soup and milk. These are foods that women usually eat and consume more regularly during breastfeeding. They are convinced that these foods encourage milk production since they have tried it themselves.

"We eat thiakry to produce milk. We also have thiakry on Friday after prayer, and for Lent too. We feed it to the children. We either make it ourselves, or we buy the ready-made bag at the shop."

FG-4, women (small merchants), Bamako.

"Foods that are recommended during breastfeeding are peanuts, porridge and milk. We already eat porridge every day even when we're not breastfeeding. But when you're breastfeeding, you eat more."

FG-5, women (employed, middle class), Bamako.

**In Ouagadougou,
women know
that breastfeeding
implies greater
dietary needs.**

In Ouagadougou, women know that breastfeeding implies greater dietary needs, without systematically citing foods suited to this specific period. *Zomkom*, or white water, a drink made from millet flour and baobab, is considered in some regions of Burkina Faso to be good for breastfeeding; however, only a few women mention it, along with porridge or milk.

"When we breastfeed, we eat whenever we want outside meals."

FG-10, women, Ouagadougou.

"No change of diet during breastfeeding. You can have gapal [zomkom and milk], zomkom, horchata and curdled milk. But we eat that when we're not breastfeeding, too."

FG-10, women, Ouagadougou.

"Since I'm breastfeeding, I eat porridge, it's helps your milk come in. We buy porridge on the street because it takes too long to prepare, it's hard to get up in the morning. Otherwise we have tô porridge."

FG-2, women, Ouagadougou.

“She has to eat soup and milk when she’s breastfeeding and when she gives birth.”

FG-5, man (traditional healer), Ouagadougou.

In Niamey, raw *boule* (*labdourou*) and porridge are most frequently eaten to promote breastfeeding. In a group of breastfeeding women, all had been eating raw *boule* every day since they began breastfeeding. Two of them had it twice a week before breastfeeding, and two others did not eat it before.

“I eat more labdourou [raw boule] and koko [porridge in Niger] to make more milk.”

II-3, woman (breastfeeding, at health centre), Niamey.

However, this practice is not widespread, and many do not change their eating habits when breastfeeding.

“When I was breastfeeding, I didn’t really change my diet: I eat porridge from time to time and don’t eat any more than usual. I never eat gomba³.”

II-4, woman (unemployed), Niamey.

ADVICE FROM HEALTH WORKERS DURING PREGNANCY AND BREASTFEEDING

Most of the women we met know that pregnancy exposes them to greater risk of anaemia and mention the dietary advice given to them by health professionals: leafy vegetables are often recommended by health workers in Ouagadougou, while leafy vegetables, vitamins, milk, offal and eggs are recommended in Niamey. In Bamako, one woman explained that the doctor advised her to “eat well” without giving her any clear recommendations. Another mentioned fish and leafy vegetables. According to some, while they receive recommendations during pregnancy, no one gives them dietary advice for breastfeeding. After childbirth, attention is focused on the child.

No one gives young mothers food advice about breastfeeding. After childbirth, attention is focused on the child.

“Right from birth, we are told how to breastfeed, but no one gives us advice on how we should eat, ourselves.”

FG-3, women (breastfeeding, at health centre), Niamey.

A health worker in Ouagadougou explains how difficult it is to give group dietary advice when some women are overweight, while others struggle to reach the minimum recommended weight.

“We hold talks during pregnancy: women are told to eat more but people don’t have the means, so it’s complicated. Then, we have both overweight women and skinny

3. Raw *boule* in Hausa.

women. We tell everyone to eat well, without excess. It's not easy. Since many women are poor, it's hard to say "don't eat too much sugar or fat". For those who have nothing, that's hard to hear. We recommend they cook with soubala⁴, and prepare sauces with baobab leaves."

II-1, woman (midwife), Ouagadougou.

Some women never receive advice from health centres, either because they do not attend information sessions or because they rely primarily on traditional medicine and advice from their mother-in-law. According to the health worker we met in Ouagadougou, the poorest women are the least likely to attend the information sessions held during prenatal consultations.

"I don't change my diet during pregnancy. I come to prenatal appointments, they give advice on eating well, they say to eat rice.

– [Pressed]

– *Actually, I didn't attend the information sessions."*

II-4, woman (unemployed), Niamey.

"My buramusso [mother-in-law] gives me advice. She tells me to take traditional medicines, she gives me the names of the products and I go get them. Then I drink them in an herbal tea. I don't tell the doctors at the health centre that I do this because they don't ask [...]. She says not to take clay [kaolin]⁵, she says it's not good, that it will plug the baby's nose and hurt it. The doctors also give advice, but I don't remember what. I don't go to the information sessions, I'm not interested."

II-10, woman (apprentice seamstress), Bamako.

"Some women are worried and come to all the talks. Others, the poorest and the most ignorant, come only for childbirth. It's not that they don't have time, it's that they don't see the value."

II-1, woman (midwife), Ouagadougou.

Apart from dietary advice, health centres prescribe iron (and folic acid) supplements that appear to be inconsistently followed by the women we met: some say they make them nauseous, others mention headaches. Often, they stop the treatment or do not regularly take the medications prescribed for them.

"I was prescribed a syrup but I didn't take it because it gave me a headache."

II-10, woman (apprentice seamstress), Bamako.

"During pregnancy, they tell us not to eat too much salt or too much Maggi⁶. They tell us to eat kopto, cowpea, liver, eggs, and to make baobab leaf sauces. The midwife tells us this.

4. Spice used in West Africa, traditionally made with fermented locust bean seeds.

5. The consumption of clay (geophagy) is a traditional practice that continues to be common among pregnant women in Africa (Njiru H. et al., 2011).

6. Maggi (Nestlé) is the generic name given to all bouillon cubes, whatever the brand.

- *We know about anaemia, it's a problem with the blood. You can die of it. The midwife tells us to eat these foods to prevent anaemia.*
- *She also gives us pills, I take them.*
- *I don't take them because they taste really bad.*
- *If I feel nauseous, I don't take them. They taste bad even after you swallow them."*

FG-3, women (breastfeeding, at health centre), Niamey. ●

Men's perspective on women's nutrition

WOMEN'S DIET IS A REFLECTION OF THEIR HUSBAND'S CARE

The men we met say they generally pay attention to their wife's diet. It is important for them that she have a good appetite: it is a sign of good health, and by extension a sign that they are good husbands.

Men are responsible for ensuring their wives eat well. Perhaps they also think that a healthy woman is a woman who can take on her share of work.

**Men are responsible
for ensuring their
wives eat well.**

"My wife eats well. She eats everything, especially fish and meat. I'm very happy with my wife because she works all the time, from morning to night, she's in great shape."

FG-6, men (artisans), Niamey.

Women, on the other hand, measure their husband's attention by the occasional purchases he brings home for them and their children. In Ouagadougou, the women call the bag containing meat, yoghurt and fruits that men sometimes give them when they come home the "black bag". The black bag symbolises the importance that men give to their wives, importance that can decrease over time or with the arrival of co-wives. Therefore, women monitor the frequency of the black bag and its contents carefully and demand it if it is slow to appear.

"We often see the black bag at the beginning of the marriage, and then it becomes less frequent. You have to demand it."

FG-17, women (unemployed, merchant husbands), Ouagadougou.

This pressure from wives is reflected in the words of some men: women won't hesitate to let them know if they are not satisfied.

"I'd know if my wife wasn't eating well. She complains right away if she doesn't eat well. Sometimes I bring food home and if she doesn't like it, she says so and won't eat it."

FG-4, man, Ouagadougou.

PREGNANCY AND BREASTFEEDING: CARING FOR WOMEN MEANS CARING FOR THE CHILD

Men know that the mother's health determines the baby's health and development.

During pregnancy and breastfeeding, men care more about their wives' diet because they know that the health of the mother determines the health and development of the baby. They notice their wives' loss of appetite during pregnancy, and while it "saves money", it is more a source of concern and compassion.

Some men know that women are at risk of anaemia during pregnancy and that they sometimes take medication during this period.

They also notice that pregnant women are tired and are no longer able to perform all the tasks they usually do. To alleviate the workload of pregnant women, sometimes the women of the courtyard of a large family in Bamako hire a maid:

"Pregnancy is complicated, because women ask for special things. They're demanding, they're tired but they continue doing all the work: they prepare the meals, they do the laundry. The women in the courtyard chip in to pay for a maid. It's good when there's a pregnancy because it relieves some of the work for the women of the courtyard. We don't hire the maid. The women take care of it and pay for her with their money."

FG-10, men (large family), Bamako.

In Bamako, one young father explains that in his household, he helps his pregnant wife with her work. His attitude is probably atypical, as men in West Africa are still very reluctant to take on some of the household chores that are done by women¹.

"During pregnancy, my wife doesn't feel well, she's tired. She asks for help with things she usually does. When she was pregnant, I did the laundry, I made the meals. I made coffee every morning. I know how to do everything because I worked in Equatorial Guinea where we had to do everything ourselves. It's normal to help out at home, especially during pregnancy. Now that she's not pregnant any more, she's strong again and she has energy."

II-9, man (welder), Niamey.

Fathers recognise that during pregnancy, women become more demanding about food and want specific products such as meat, fish or fruit. These products are costly expenses in addition to the health costs caused by pregnancy.

In Bamako, one man seemed little affected by the demands of his pregnant wife:

"During pregnancy, she wants fish. If we have the money we buy it, otherwise no. We don't make any more effort than usual."

FG-11, men (upper middle class), Bamako.

1. Urbanisation leads to changes in family organisation, but household chores are still largely the responsibility of women (Thiombiano B. G., 2018; Jacquemin M. et al., 2018).

The other fathers appear (or want to appear) to be caring husbands: they say they bring home the products that their wife demands because they know that it is important to satisfy her to guarantee the health of the child: the baby is asking through the woman.

The baby is asking through the woman.

“The pregnant woman and the breastfeeding woman must eat well so that the baby develops well.”

FG-4, men, Ouagadougou.

“During pregnancy, I make the effort for her and also for the baby. My wife isn’t usually demanding, so when she asks for things during pregnancy, it’s not her who’s asking, it’s the baby. If you don’t have the money, you manage somehow. If you don’t have credit, you can always steal.”

FG-11, men, Bamako.

For their part, some women acknowledge being “spoiled” during their pregnancy and being able to ask for anything they want:

“When I was pregnant, I ate everything. The good thing when you are pregnant is that you are pampered. I asked for English bread [sandwich bread] and my husband got it. Whatever you ask for, he gets it for you when you’re pregnant.

– *I asked for cabbage and attiéké, and he got it.”*

FG-10, women, Ouagadougou.

Men seem to put up with certain demands. When the family has lost young children, the health of women is of increased concern for their husbands, who try to do their best to meet their desires.

“My wife has to eat special things because she’s pregnant. She wakes me up at night and says she wants something; I have no choice, I get up and go get it. Later, when I bring it to her, she says she doesn’t want it any more. You have to be patient!”

FG-12, man (artisan plumber-mason), Niamey.



Man at an information session on women’s nutrition in Bamako



Woman preparing porridge in Niger (Pafan project) © Gret

"During pregnancy, there are things she doesn't want any more, like peanut paste. She didn't want rice because it's too heavy, but she wanted meat, whereas meat is heavier than rice. They're sneaky [...]. My wife was complicated. She lost three babies, then two babies were born by caesarean section, so it's complicated and I try to bring her what she needs."

II-7, men (upper middle class), Bamako. ●

Diet, health and well-being

THE LINKS BETWEEN DIET AND HEALTH

Diet, responsible for certain diseases

In Ouagadougou, women and girls are well aware of the risks associated with excessive eating; they can “recite” the risks of diabetes associated with excess sugar consumption, the risks of hypertension associated with excess salt consumption, the risks of heart disease or obesity associated with excess oil consumption and the risks of ulcers associated with peppers.

In Niamey, women seem less aware of the links between diet and health, and we had to push them to get responses regarding the health risks associated with the consumption of spoiled products, but also those associated with individual intolerances and problems of malnutrition if we do not eat enough. A few women mention diabetes and tension, potentially linked to dietary issues, but public health messages appear to have gotten through less well than in Ouagadougou.

In Niamey, public health messages seem to have gotten through less well than in Ouagadougou.

In all three capitals, bouillon cubes, very widely used, are mentioned as a harmful product. Anaemia is known in particular to pregnant women and mothers, who know what foods are recommended to prevent it.

Apart from health issues, some women make the link between diet and beauty, and especially skin beauty.

“If you don’t eat well, you have wrinkled skin like an old person, but if you eat well, you have beautiful, smooth skin.”

FG-3, young women, Ouagadougou.

Many women and girls mention fatigue. They associate it with too busy days, with household chores that must be done, but don’t establish the link with a poor diet.

"I feel tired [others nod]. When I get home from school, I have to do housework but then I don't have the energy to study, I just want to sleep. We don't talk about it, because if we do, our parents say we're lazy. Mum says that it was harder for her because she had to fetch water, etc."

FG-19, high school girls, Ouagadougou.

Sources of Information and advice

Women and girls say they receive dietary information and advice through different channels.

- **The entourage:** the mother and older sisters for girls, the mother-in-law and neighbours for young mothers. Mothers also comment on their daughters' weight and shape, encouraging them to gain or lose weight, as appropriate (see following pages).
- **Some high school teachers** are true advisors for girls: life and earth sciences teachers provide advice, inform girls of the risks associated with consuming certain products or recommend other products. Girls also listen to the physical education teacher¹: girls consult him when they want to exercise and refine their figure. He advises them, both for physical activity and for diet.

"The life and earth sciences teacher says not to eat simply anything. He says you also have to eat vitamins. You have to eat babenda and milk."

FG-8, high school girls, Ouagadougou.

- **Health workers** are key stakeholders, especially during pregnancy when visits to the health centre are frequent. However, high school girls never mention them as providing advice.
- **Facebook** is a source of information mentioned by some students. While connecting to the Internet, for a fee, is not always easy, connected students talk about discussion groups or information groups on Facebook. The high school girls we met do not have easy access to the Internet, and the women do not mention it.
- On the other hand, they all watch **television**, which is a major source of information. In Ouagadougou, the RTB programme *Santé Mag* was mentioned several times. Women learn about the risks associated with certain dietary practices:

"Santé Mag says that Maggi isn't good, that we shouldn't eat too much sugar and salt. It also says that condensed milk that's too sweet isn't good."

FG-3, young women (unmarried), Ouagadougou.

In addition to specialised programs, fictional programming, and in particular the series that all women enjoy and watch in their free time, provides advice on diet and health: "Even movies give advice."

1. It should be noted that, in some religious schools, girls do not participate in sports.

SLIM BUT SHAPELY

Some studies in Africa show that women underestimate their body size and want to be “bigger” than they are². The women and girls we met in the three capitals have more varied aspirations.

Contradictory advice

Most women, regardless of their age, want to change their figure: some want to “gain weight” but others try not to gain weight or want to “lose weight”. This can be related to several factors:

- ➔ some men’s taste for shapely women, reproducing traditional canons of beauty that associate corpulence with beauty, health, wealth and social success, whereas wasting or slimness are associated with poverty and disease;
- ➔ the evolution of the canons of beauty and the emergence of an ideal of slimness that is pleasing to some men. Overweight is also considered a constraint that makes it difficult to move, perform activities, causes fatigue and health risks, and is mocked.

Discussions during the focus groups show that there are conflicting representations of the ideal body and that women receive contradictory advice:

“I eat only twice a day. I started a diet to lose weight. That’s also why I get exercise. I heard on TV that you have to get exercise and eat less. All the women around me want to lose weight. I don’t know anyone who wants to gain weight; they all want to lose weight. The problem is tradition: men love shapely women and we do everything to please them. But then, when you’re overweight, you don’t feel well, and you have health problems.”

II-2, young woman (civil servant, single), Niamey.

Women who want to “gain weight” ...

However, some women we met want to gain weight to get the curves back they had before breastfeeding or before pregnancy. In polygamous households, wives look at each other and the “ideal” is sometimes established by comparing oneself with the co-wives:

“I want to gain weight. I lost weight with pregnancy and breastfeeding. My co-wife is bigger than me.”

II-11, woman (teacher), Bamako.

For their part, girls (high school and university students) often say they want to “gain weight”. They actually want larger breasts and buttocks to have a “Coca-Cola silhouette”. They know of ointments available on the market or that can be ordered on Internet, which—according to them—are effective. They mention brands, but of course, none confess to buying them.

Most women, regardless of age, want to change their figure.

Girls actually want larger breasts and buttocks to have a “Coca-Cola silhouette”.

2. Holdsworth M. et al. (2004).

"I wish I were bigger. If I'm too skinny, people will say I don't look good. Some girls take products to gain weight, like Dynewell, it's a drug that makes you gain weight only in your buttocks. You shouldn't gain weight everywhere: you need big buttocks, hips and breasts, and you should be thin everywhere else."

FG-14, girls (high school and university students), Ouagadougou.

... whereas others want to "lose weight"

"Not being fat" is a goal for most women.

Comments gathered in the three capitals show that slimness—or rather "not being fat"—is an objective for most women. For some, it's a personal choice: not being "fat" is more "practical" and makes you feel more comfortable.

"I know I shouldn't get fat. I have to work and if I get fat, I can't work as much. Even if my husband wanted me to, I wouldn't try to get fat because if I'm too fat, I can't work any more."

FG-13, women, Ouagadougou.

However, some comments betray the existence of social pressure on overweight women. As in the West, these women are exposed to criticism in Niamey, Bamako and Ouagadougou.

"I want to gain some weight, but my mum says I shouldn't get too fat."

FG-2, high school student, Bamako.

"Obesity is more prevalent in girls than boys. Boys play sports, but girls are stuck at home in the kitchen. They play less sports, they get less exercise and have more temptations. Girls who want to lose weight don't talk too much about it, especially if they're really fat. There's discrimination. Students make fun of obese kids when they go to the blackboard."

II-1, woman (life and earth sciences teacher), Ouagadougou.

Although men have a reputation for preferring large women, the comments show that some do not want their wives to gain weight. Some wives diet to please their husbands:

"My husband doesn't like fat women. He lets me know if I gain weight."

FG-3, women (unemployed), Niamey.

"If [my wife] wants to be thin, that's good. When she gains too much weight, I tell her to be careful."

FG-9, men (middle and upper middle class), Niamey.

Beyond aesthetic issues, men are aware of the risks that being overweight represents for their wife's health and the household budget:

"My wife is fat, she eats a lot at night. I forbade her to eat at night because I'm afraid she'll get too fat [...] and she could get sick. I've already spent 120,000 CFA francs on treatments for her, I want her to be healthy. On TV they say that if you're too fat you'll have health problems."

FG-6, men (artisans), Niamey.

Subjected to these pressures, women pay attention: they cut portion sizes, try traditional medicines, skip meals, take lemon juice, etc. They sometimes do this in secret if their husband wants them to gain some weight.

"I'm on a diet, I eat little or nothing in the morning. At 10 a.m., I have Lipton³, at lunch I have a sandwich and in the early evening I have biscuits with milk, then I don't eat anything else."

FG-8, student, Bamako.

"My husband wants me to gain weight, but I don't want to. I don't eat breakfast but he doesn't know."

FG-3, women (unemployed), Niamey.

Dieting and depriving oneself of food is not necessarily easy for women who feel that opportunities to enjoy themselves are too rare, or who are very attached to sugar consumption.

"The foods that make you fat are beer and mayonnaise. We almost never have those because of the price, so whenever we have a chance, we treat ourselves."

FG-13, women, Ouagadougou.

"The last time I had Oriba was last Wednesday. Before I used to drink two bottles for myself, but the doctor told me not to have it any more to keep my blood sugar down, so I only have one, but I can't stop completely. I shouldn't eat anything sweet, but I love it too much; I can't not have it."

FG-10, women (substitute teachers), Niamey.

Some of the women we met are undeniably overweight and suffer from it. They would like to be slim as they were in their youth, be able to dress as they like and be attractive for their husbands, who complain about them being too fat and eating too much. They see not being able to control their weight as a failure.

"I don't want to be fat, but I am. I want to lose weight but I like to eat and I don't like to exercise, I don't like to walk. I just can't do it. My husband says I have to lose weight and complains that I eat too much. All my friends are like me: they all want to lose weight. They take traditional medicines but they say they have side effects so I prefer not to take them. I want to lose weight so I can wear the clothes I want, trousers, tight tops. That's hard with the shape I'm in. Before I wasn't like that, my pregnancies made me fat. I'm okay on top, but my bottom is too big. It also causes health problems, my back hurts because of my weight. The doctor tells me to go on a diet and walk but I don't feel like it. It's a problem if a girl like her [indicating a slender girl] comes to my house. What does my husband think when he compares her to me?"

II-8, woman (seamstress), Bamako.

WOMEN AND SPORT

Support from the husbands is important: in Niamey and Bamako, in some households, simply walking in the neighbourhood requires the presence of husbands.

In each of the three capitals, we can see men (mainly) but also a few women running or walking in the street, school courtyards, squares or public parks at the end of the day. While most of the women we met are relatively unathletic, some do exercise regularly in groups. These are mainly women approaching their forties. Girls are divided: some are not at all interested in exercise, while others exercise regularly and some would like to exercise but have neither the time, nor their parents' permission to do so.

When we talk to men about sport or physical activity for women, they often laugh. They do not necessarily seem opposed to this idea but claim women do not have the time or the desire to exercise or are not interested in sport. Their support is important: in Niamey and Bamako, in some households, simply walking in the neighbourhood requires the presence of husbands. In Niamey, young men are divided on this issue.

"My wife told me she wanted to lose weight. We started getting exercise, I walk with her to protect her so she can get exercise.

- *At the stadium, we see women and men, women on one side and men on the other. There are also couples walking together. If she were pregnant, I would do it, it would be my duty.*
- *I don't agree, couples who go to the stadium together, that's weird. I'm not going to do that. My wife isn't fat. If she was maybe I would think about it, but it's senseless."*

FG-9, men (middle and upper middle class), Niamey.

"If we're pregnant, our husband walks with us in the neighbourhood to protect us. After pregnancy, that stops. We know that it's good to walk, so when we go visiting we leave the motor bike at home and go on foot."

FG-5, women (employed, middle class), Bamako.

The report of a Nigerien student sheds light on the social constraints limiting the possibility for Nigerien women to get regular physical activity: physical activity is hardly compatible with social respectability.

"Certain cultural prejudices suggest that physical activity leads the woman to a libertine life, to sexual delinquency, to marriage at an old age, the entourage is highly suspicious of any woman who practises physical activity." ●

Source: Ibrah Kaka I. A. (2010), *La pratique des activités physiques par les femmes de la communauté urbaine de Niamey, Niger*, p. 59.

TAKEAWAYS

No discussion allowed the identification of food products specifically targeting women or girls⁽¹⁾ or products that are specifically “reserved” for them.

Like children, **high school girls** tend to skip breakfast in favour of a snack bought outside the home. If they have lunch and dinner at home, they still, however, purchase cooked dishes in the neighbourhood if the family dish is not to their taste. **Students and apprentices** eat their lunch outside the home, and those living in a university residence report deprivation imposed by insufficient means and time. Exceptional outings and consumptions vary greatly depending on the cities and the level of freedom granted to girls, and sometimes reproduce gender norms: in Ouagadougou, boys have to buy girls beverages and food that change from the everyday and reflect the attention they pay to them. It should be noted that girls in Bamako and Ouagadougou spontaneously mention consuming Cérélac.

Mothers most often eat their meals at home but make outside purchases for snacks.

All women and girls snack throughout the day: sandwiches and fritters in Bamako; *boule* (*foura*, *labdourou*), porridge and ready-made meals (*kopto* and *dambou*) in Niamey; and sandwiches and ready-made meals in Ouagadougou. The beverages consumed are mainly artisanal, with sodas reserved for special events (ceremonies, outings) in Ouagadougou and Niamey. In Bamako, on the other hand, mothers consume it very regularly, sometimes daily. In Ouagadougou, the women we met do not admit to poor personal eating habits and claim they always share their snacks, beverages and treats with their children.

Women very frequently mention the difficulties they encounter in eating when pregnant, reporting a loss of appetite during the first months of pregnancy. Some foods are considered nauseating (dishes with sauce) and are avoided, while others are craved (*kopto* and *labdourou* in Niger, desires specific to each woman in Ouagadougou and Bamako) or are recommended by health workers and the entourage. Pregnant women receive special attention from their husbands, a fact that encourages them to demand expensive foods (meat, fish, fruit) more frequently. Pregnant women receive nutritional advice and an iron supplement that they accept (and take) with varying degrees of acceptance. On the other hand, they are often left to their own devices during breastfeeding. Once the child is born, the advice received concerns the feeding of the child and the mothers are forgotten. However, some foods considered to be favourable to breastfeeding are consumed more frequently by breastfeeding women (mainly beverages or semi-liquid milk preparations, as well as peanuts in Bamako).

For their part, men are concerned about their wife’s diet, in particular during pregnancy and breastfeeding, aware that she risks fatigue and anaemia. They think that the health of the mother determines that of the baby so they want their wife to be healthy. They try to best meet her needs and bring home the food she wants.

Women are often “spoiled” by their husbands during pregnancy and breastfeeding.

The link between diet and health is more or less well understood. Some foods (widely used elsewhere) are unanimously considered bad for health. Others have a good image

(fruits, vegetables and dairy products). The links between sugar and diabetes, and between salt and hypertension, are spontaneously mentioned in Ouagadougou but seem less well known in Niamey and Bamako. Weight control is an issue for most women and girls, who receive contradictory information, some urging them to lose weight while others encourage them to gain it. Lastly, physical activity and sport are recognised as necessary and favourable to good health. Some women get exercise, or intend to, but this sometimes involves defying certain social prohibitions, especially in Niamey.

- (1) Grandibien for pregnant/nursing women is the only example of a product specifically targeting pregnant or nursing women. Its distribution is still very confidential. White water (*zomkom*) developed by GRET a few years earlier was no longer for sale at the time of the survey.

PART 4

How to better meet food demand in urban areas

Recommendations and conclusion

The demand exploratory study for the Meriem project application was conducted in Bamako, Niamey and Ouagadougou in late 2018 to provide a photograph of the eating habits of children and women of childbearing age. The objective was to provide better knowledge of the context to guide the first stages of project implementation.

The results of the study reveal the existence of a situation of nutritional transition in all three capitals studied that is likely to evolve rapidly with the availability of new products (and in particular with the increased accessibility of processed products), the emergence of a middle class with strong aspirations, and the evolution of family and marital models. Therefore, these results must be placed in this context and require that we remain vigilant to identify changes, understand the evolution of practices and constantly question the relevance of the strategies defined and deployed by the project team.

The elements collected made it possible to formulate recommendations, which were presented and discussed during the project steering committee in early 2019. They are underpinned by two objectives directly linked to the ambitions of the Meriem project:

- ➔ How to successfully market a food product targeting children or women on the Ouagadougou, Bamako and Niamey markets.
- ➔ How to contribute to improving the nutritional situation of the targeted audiences.

Some findings from the study confirm knowledge already acquired by GRET in projects supporting the production and marketing of infant flours.

Some of the recommendations or courses of action formulated at the end of the explanatory investigation exceed the scope of intervention of the Meriem project. However, they have not been excluded and are presented on the following pages because they are likely to be reused in the framework of other GRET projects or by other stakeholders in the area of diet and nutrition.

This exploratory work has limitations: it explores numerous questions and fields, so it has been difficult to provide clear answers on certain topics. On the other hand, this approach had the advantage of being very open, of not limiting the subjects explored and, therefore, of allowing us to begin with no pre-conceived ideas. It has made it possible to consolidate

certain orientations by placing them in a broader context and to provide information for project considerations at different stages: choice of products, targets, packaging, construction of key advertising messages and identification of priority themes for the social communication planned in the project.

CONSIDERING NUTRITIONAL ISSUES, ECONOMIC AND SENSORY DETERMINANTS, AS WELL AS THE ASPIRATIONS OF THE TARGET GROUPS

The comments made in the three capitals allow us to reformulate some preconditions for a food product marketing strategy in the Sahel region. They also focus on areas of attention or activities to be promoted to mitigate the negative effects of the nutritional transition.

- **Socio-cultural determinants:** The demand study recalls that food purchases and practices are far from determined solely by economic or nutritional imperatives; they are largely shaped by social and cultural norms that regulate behaviours and practices, and that, in a way, standardise and reproduce them when these sociocultural frameworks are shared by social groups. These norms are shaped and evolve under the influence of the social group, the neighbourhood, the family, and peers or influencers. They are also amplified or maintained by marketing (advertising, television, social media, etc.). They lead individuals to make choices motivated by logics of social belonging where behaviours and practices serve as social markers of belonging, sometimes going against their economic interests or even their health.

✓ *The strategies adopted must take into account both economic and nutritional issues and sociocultural logics, which are more complex to understand, in order to meet the aspirations of the various targeted actors.*

- **The pleasure dimension is decisive:** To be accepted, a product must conform to the taste of the final consumer. For example, parents will not purchase an infant flour a second time if the child does not like it. In the same way, parents buy treats that their children prefer.

✓ *Sensory tests validating the taste quality of the products must be conducted with final consumers.*

- **The price is crucial:** If the product is tempting, but the price is too high, regular consumption is compromised. So, the majority of households cannot buy baby food jars in Bamako, or Grandibien pouches in Ouagadougou every day. Soda is consumed more frequently in Bamako than in Ouagadougou and Niamey because it is more affordable. The sale price per kilogram is not necessarily the criterion observed by the consumer; instead, it is often the cost per unit that matters. Thus, Cérélac flour is often considered to be “affordable” because of its portion or half-portion packaging.

✓ *Adjust packaging, as far as possible, so that the price of the product is attractive to a large share of the population.*

- **Product availability** at local sales points is decisive and guarantees the possibility of regular consumption. This explains, for example, Vitablé's success in Mali.
 - ✓ *Conduct detailed studies of the sales networks and of the location of sales points in the urban fabric. Ensure that companies invest in a solid distribution network (monitoring inventory, robust sales and field reporting, training of salespeople, etc.) to ensure continuous availability of the product at nearby sales points.*
- **Enter different buying channels:** At the start of the study, individual purchases were identified as the most interesting because they prevented the sharing of a product designed for a particular target. Without abandoning this approach, however, it seems relevant to rethink it because bulk or regular purchases by the head of the family guarantee regular consumption, which is important if we are to have an impact on the nutritional status through fortified foods. It is also important for a company that wants to find a way to guarantee better consumption frequency.
 - ✓ *Enter different buying channels (various types of sales points, individual or family packaging) to promote regular purchases.*
- Product purchase and consumption are strongly linked to **the level of information** conveyed about the product by the media (television) and by a wide range of influencers (health workers, entourage, social media influencers). It should be noted that women in the three capitals watch television a great deal: particularly Nigerian series and telenovelas. In Ouagadougou, the program Santé Mag is a source of information on health and nutrition issues for women and girls.
 - ✓ *Enter different information channels to publicise products and promote good practices.*
- **Men are key players:** They make some of the food purchases and are expected to cover the bulk of household expenses. Men and women remain committed to this model, whether or not it is respected.
 - ✓ *Men must be one of the main targets of campaigns promoting a food product, even if it is intended for women or children. They must also be considered in awareness strategies on good eating practices.*
- **Take nutritional transition issues into account:** Girls and women are concerned about their weight in a proven context of nutritional transition (growing overweight and obesity, with comorbidities such as diabetes or cardiovascular disease). Under the pretext of combating micronutrient deficiencies with fortified products to improve nutrition, **the Meriem project must not encourage products that are rich in sugar, salt or fat** whose regular consumption could have harmful consequences for health in the medium term. Nor should it give a positive image of families of foods that contribute to the progression of metabolic diseases (hypertension, hypercholesterolemia, diabetes, etc.). In terms of awareness, the prevention of overweight and obesity is becoming a public health priority in Sahelian cities, and must be included in the messages developed in awareness activities and the promotion of good practices. Beyond dietary

advice, the issue of physical exercise is a real issue: many women say they want to walk more and be less sedentary.

✓ *Through awareness and promotional activities, it seems relevant to encourage women to exercise and to encourage their husbands to support them in this (removing cultural barriers).*

INFANT FLOURS, THE BEST FOOD SOLUTIONS FOR INFANTS¹

Breast-milk substitutes, treats and sweetened beverages weigh on the household budget

The demand study was intended to identify the importance of porridge and infant flour in infants' nutrition and other key foods as alternatives. It appears that there is no convincing alternative to porridge in the diet of children between six and twelve months.

Food expenditure for children under one year of age is often dominated by purchases of breast-milk substitutes. After the age of one year, baby foods are progressively abandoned in favour of family food. Children eat like adults, with the exception of treats and sweetened beverages, which they consume very regularly from the age of two. The availability of industrial or artisanal products that are very inexpensive (25 CFA francs, 50 CFA francs per unit) and very attractive for children, represents a risk to their health.

✓ *As part of its awareness actions, the Meriem project can communicate on the importance of exclusive breastfeeding up to six months to both mothers and fathers, who sometimes buy breast-milk substitutes spontaneously without their wife asking them to do so. The project can also develop arguments linking health and financial savings by suggesting that the expenses for breast-milk substitutes that weigh on the household budget can be allocated to other purchases, such as good quality food for breastfeeding mothers, or good quality infant flour when the child is over six months old.*

✓ *During awareness sessions, the project can also warn about excessive consumption of fatty and sweet products, especially in Bamako where crisps, sweetened beverages and fried foods are very popular and frequently consumed from an early age.*

For school-age children (not targeted by the Meriem project), snacks taken during recess are unavoidable. They represent significant expenses for families with several children in school. The food available in the courtyards is also of variable nature and quality.

Porridge is the flagship food of babies aged six to twelve months but local infant flours struggle to find a market

Fortified infant flour porridge is suitable for children from six to twelve months of age, since it is part of the eating habits of young children.

1. For this section, the lessons of the study were enriched with knowledge acquired (published or not) by GRET's long experience in the field of infant nutrition, and more particularly in support of the local infant flour sector (www.nutridev.org; <https://www.gret.org/themes/sante-nutrition/>).

✓ *It is relevant to support private initiatives to make available cheap infant flour that is adapted to children's taste and needs.*

While there is a potential market for infant flour, it remains small: in Niamey, most children do not consume it, while in Ouagadougou and Bamako, the period of consumption of fortified infant flour porridge is relatively short and the product is quickly replaced by "ordinary" porridge or the family dish. During the period of consumption, alternating preparations is very common. Finally, this narrow market is competitive: products developed by local, but especially international, companies are already very well positioned.



- ➔ The strategies developed to position fortified infant flours must be adapted to the constraints and opportunities of each location; the aim is to *establish the practice in Niamey and increase the frequency and duration of consumption, and manage competition between infant flours in Ouagadougou and Bamako.*
- ➔ We must succeed in positioning ourselves among local, often unfortified or poorly formulated and inexpensive flours, and imported flours that are too expensive to be consumed on a daily basis by a large audience of children. The market must be expanded to ensure a regular supply of fortified flour, and to motivate the investment of a private operator. The project could seek to:
 - increase the frequency of consumption and meet the demand for variety by *developing a range of products (range of infant flours or development of vegetable preparations);*
 - extend the period of consumption beyond the age of one year by *considering follow-on porridge, or enriched family porridge with an adapted price* that is less expensive than infant flour. It could extend the period of consumption of fortified products but also open the company that sells the product to a broader market. It is instant, making it easier to eat breakfast at home during the week;
 - *monitor any other consumption of the product* such as that observed with Cérélac flour (by children, girls or women as porridge or as a snack) *and design the product so that it can meet uses other than just consumption by the youngest children.*
- ➔ Regardless of the success of the infant flours developed, homemade and street porridge will continue to be served to children. It is therefore relevant to *contribute to improving the quality of traditional porridge by promoting "improved" family recipes. In particular, it seems interesting to document the methods of preparing homemade porridge in Niamey to confirm the absence of cooking and to support awareness campaigns necessary to improve the practice.*

TABLE 5 Main consumption profiles of infant flours

	NO PURCHASE OF INFANT FLOUR	ISOLATED PURCHASE	OCCASIONAL PURCHASES	REGULAR PURCHASES
CONSUMPTION PROFILES	Poor households in Ouagadougou and Bamako. Households of all living standards in Niamey: context less conducive to the purchase of infant flours (more limited offer, less word of mouth, women without income, attachment to homemade preparations).	The purchase of infant flours was attempted but not repeated because the child did not like it (argument given), because household means are insufficient or because the product is no longer available at the usual sales point.	Infant flours are purchased from time to time, when men or women can afford to buy it or when the child is sick.	Men or women buy infant flours regularly. A new box is purchased when the last is empty. The product is alternated with other infant flours or preparations (homemade porridge or porridge bought in the neighbourhood, family dishes, purées, etc.).
	Majority of cases in Niamey			
		Majority of cases in Ouagadougou		
		Majority of cases in Bamako		
OBJECTIVES	MAKE LOCAL QUALITY FLOURS KNOWN			
	ESTABLISH CONSUMPTION	REPEAT THE PURCHASE AND CREATE LOYALTY, INCREASE THE FREQUENCY OF PURCHASE AND CONSUMPTION	IMPOSE ONESELF AGAINST THE COMPETITION	

- Cérélac, the leading product on the infant flour market, is promoted in violation of the WHO *International Code of Marketing of Breast-Milk Substitutes*. **It is therefore important to contribute to initiatives undertaken in the countries of intervention to ensure compliance with this code** to protect the practice of breastfeeding, and to prevent unfair competition from international companies. This also means **respecting the WHO Code to the letter: health workers must not be “used” to promote specific food brands for young children. The partner companies of the Meriem project must commit to this.**

NO FOOD SPECIFICALLY INTENDED FOR WOMEN, BUT FOCUS ON EATING OPPORTUNITIES

When meals are eaten at home

When meals are eaten at home, the dishes are shared. This is a constraint if we want to offer a fortified food specifically targeting women and that can be consumed during family meals.

- One option that could be considered and tested as part of the Meriem project could be *supplementation using enriched spices or condiments*. In Bamako, we observe the purchase of condiments produced by a local company (SAK) in small packets, which could prefigure individual use pouches to season a single portion.

Breakfast is often skipped

Breakfast is often skipped or postponed until later in the morning. The constraints limiting breakfast are the lack of time and means. This concerns pupils but also university students.

- It would be relevant to *raise awareness of the importance of breakfast for girls* and, more broadly, for all children (outside the scope of the Meriem project). It would also be interesting to *propose practical and inexpensive solutions allowing rapid food preparation and consumption. Parents, who all want their children to succeed in school, would probably be sensitive to arguments about academic success*. Different options could be tested and proposed to ensure breakfast is taken, such as a sandwich targeting young girls (see below) or instant flour for breakfast. Instant family porridge can find a market; it is part of the eating habits of some families who consume it in the morning (in all three capitals). However, this implies formulating the product, reducing fortification levels, and thus potentially reducing the impacts of consumption on nutritional status. Portioned pouches may also be of interest to students in university residence.

Meals taken outside the home by girls, changing practices

In addition to home-made dishes, ready-to-eat foods are frequently purchased in the neighbourhood or on the street. While we observe the purchase of cooked dishes, no manufactured product truly emerges. Women are attracted by sandwiches, which they consume instead of breakfast in the morning, for lunch or as snacks throughout the day. In Bamako, sandwiches often contain fried products (potato, plantain banana). Women also enjoy cooked dishes bought outside the home, whether as a snack or for meals.

- ✓ *Consider the production of sandwiches with good nutritional value, improving the nutritional quality of the bread or the filling.*

Pregnancy and breastfeeding, periods conducive to introducing products targeting women

During pregnancy and breastfeeding, women and their husbands are concerned about their diet. Loss of appetite, nausea, inability to eat large amounts, fear of being too weak and weight gain are among the concerns of pregnant women.

✓ *A light, enriched product, whose density compensates for the small quantities eaten, presented as suitable to the development of the child, is likely to find an audience.*

Women are very well monitored during pregnancy but do not receive advice for breastfeeding. They are concerned about excessive weight loss, as well as their ability to produce enough milk for the baby to grow and develop as well as possible. They consider that the consumption of certain food products (peanuts in Mali, *boule* or *thiakry* in Niger) promotes lactation. They mention the need for “vitamins” to regain weight after breastfeeding.

✓ *Awareness of women’s specific needs during this period and support during the baby’s first months would be welcome. It could be interesting to highlight the vitamins in the fortified product, since they are associated with weight gain—an objective of most women after the period of breastfeeding—and to rely on preparations considered to promote lactation.*

✓ *Systematically target men to position fortified products intended for pregnant and breastfeeding women, since they are particularly attentive during these periods (especially during the first pregnancies). Highlight the issues concerning baby development, but also women’s fatigue.*

CONCLUSION

The exploratory study conducted at the start of the Meriem project delivered a very rich and precise photograph of the context, providing the project with many strategic avenues. Other investigative work, using varied and complementary methods, was subsequently conducted by the various partners of the Meriem consortium to refine and validate the strategies to be deployed. This work was conducted in particular to establish a panorama of existing companies; formulate and develop fortified foods; refine the understanding of the aspirations of the various target groups and measure their appreciation of the products developed by the project; describe market networks and map sales points; develop marketing, communication and awareness strategies; and monitor the effects and impacts of the intervention. Despite being at the core of the Meriem project, the subjects of the perception of food fortification and quality markers were insufficiently addressed in this study but were the subject of additional studies, notably by IRAM and IRD.

A capitalisation process, in progress, will eventually allow sharing of the lessons learnt.

Finally, this study focused on intermediate socio-economic classes. It does not provide information on the diet of the wealthiest groups, which can nevertheless play a pioneering role with spill-over effects on the middle classes, nor that of the poorest who are nevertheless strongly impacted by problems of undernutrition. However, it does make it possible to describe an important intermediate class that is poorly known because less studied and less present in the literature. It can therefore be of interest to other operators engaged in actions to improve the nutrition of women and children in Sahelian cities, and thus help scale up this type of action to prevent malnutrition. ●

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APPENDIX 1

METHODOLOGY USED TO ANALYSE DEMAND

The demand study was conducted using a qualitative research approach based on individual interviews and focus groups composed of girls, mothers and fathers of young children, and resource people (health workers, teachers, civil society organisations). Discussions with parents focused on the issue of children's and women's nutrition, but discussions with girls or young women without children addressed only their own diet. Ouagadougou was the first field of investigation, followed by Niamey and Bamako. The neighbourhoods surveyed in each of the three capitals were chosen to prioritise those concentrating middle-income households, the main target of the Meriem project. Thus, overly residential neighbourhoods and very poor neighbourhoods were excluded.

Participants in the focus groups and individual interviews were identified through the GRET network and resource people. In order to explore the diversity of practices, different profiles were sought: girls, high school students, university students or employed young women, living or not living with their families, parents of young children from the socio-economic backgrounds targeted by the project¹, with or without regular employment and income, employed women but also women not necessarily having their own income.

In order to encourage speaking, homogeneity was promoted within the groups by choosing people residing in the same neighbourhood, of similar socio-economic status, belonging to the same age group, speaking the same language², etc. The number of participants in focus groups was generally fewer than six because it is difficult to collect every point of view and involve all individuals in the group if it is too large³.

Each meeting was conducted with one or two investigators (identified by GRET), speaking the local languages. Interviews with high school students, as well as some more educated groups, were conducted in French, but most were conducted in the local languages⁴, with one of the investigators providing translation.

All of the information collected was entered in French and shared with the investigators for amendment. "Hot" reporting was done at the end of each field of investigation for the GRET project team and country teams. These presentations made it possible to confirm certain hypotheses and discuss others, but also to raise specific questions that were then integrated into the interview framework and, as far as possible, addressed during subsequent interviews. Thus, the fields explored changed significantly between the

1. The Meriem project targets households in the middle quintiles; the wealthiest 20% and the poorest 20% are not the targets.

2. Mooré, Dioula or French in Ouagadougou; Hausa, Zarma or French in Niamey; Bambara or French in Bamako.

3. However, it was difficult to ask people who had travelled especially to attend a focus group to go home: this is why some groups have more than six people.

4. Mooré and Dioula in Ouagadougou; Djerma and Hausa in Niger; Bambara in Bamako.

survey conducted in Ouagadougou and those conducted in Niamey and Bamako in order to take into account the requests made by the project team during these reports.

The information collected was then analysed to best answer the questions raised by the project and revealed the existence of practices common to all three capitals, or to certain neighbourhoods, or subject to consensus within certain social categories. Hypotheses on the determinants of certain practices were developed following these results, discussed with the teams and compared with the available literature.

Characteristics of the surveyed populations

During the fieldwork, about 250 people (men and women) were met through about 50 focus groups and about 20 individual interviews (see Appendix 2 for details). The majority of respondents belong to households in the intermediate quintiles. Some are employed in the public sector (e.g., substitute teachers) or in the private sector (telephony, NGOs), but most work in the informal sector (small artisans, day labourers, small merchants).

Approximately 10% to 20% of those interviewed do not fall within the project target. These are households in the poorest quintile living in the unplanned Wentenga neighbourhood in Ouagadougou and households in the wealthiest quintile in Bamako. The targeted neighbourhoods were adjusted in Bamako because the initially identified standard of living in the Hippodrome neighbourhood and the lack of contacts in this neighbourhood led to the recruitment of people who are too well-off.

There may be differences in profiles between the people met in the three capitals; some may reflect differences related to context, while others may be random.

- In Niamey, most of the women we met are not employed and have no personal income. Women in the same situation are found in Bamako and Ouagadougou (particularly in the Zagtouli district), but they do not represent the majority of respondents.
- In Bamako, we met more people having lived abroad or who come from a country in the West African sub-region (Senegal, Burkina Faso, Ivory Coast). Several women we met live without their husbands who work abroad (in the sub-region or in Europe).
- In Bamako, we find “large families” (as opposed to nuclear households) in our sample more frequently than in Ouagadougou or Niamey. ●

APPENDIX 2

DETAILS ABOUT RESPONDENTS

TABLE 1 Survey field, number and types of respondents

	NIAMEY	OUAGADOUGOU	BAMAKO
Neighbourhoods	<ul style="list-style-type: none"> - 3 neighbourhoods identified with GRET's team. - 2 "old" neighbourhoods relatively near the centre of Ouagadougou: Wentenga and Dassasgo (including undeveloped areas bordering Wentenga). - 1 recent offset district (Zagtouli). - 2 university residences. 	<ul style="list-style-type: none"> - 2 outlying neighbourhoods (Sari Koubou and Banga Bana), chosen with the GRET team in Niamey. - 1 university (Abdou Moumouni University). 	<ul style="list-style-type: none"> - 4 neighbourhoods (Hamdallaye, Hippodrome, Djokoron and Niamakoro). The Hippodrome neighbourhood was tested and then abandoned after a few attempts (difficulty in identifying profiles belonging to intermediate quintiles). - 2 university sites (Catholic University and University of Bamako).
Resource people	Community health workers, education workers, community leaders (<i>zagtouli</i>), university services.	Neighbourhood leaders, presidents of women's groups active in the neighbourhoods, Sari Koubou health workers, national centre for university services and the university students' association.	Health workers, university officials, teachers and two resource people close to GRET who used their knowledge in the neighbourhoods.
Number of individual interviews (II)	5	5	11
Number of focus groups (FG)	20	12	18
Total number of people	120	53	80
Of which mothers	60 (8 FG)	23 (5 FG)	36 (7 FG and 7 II)
Of which fathers	20 (5 FG)	17 (4 FG)	14 (4 FG and 1 II)
Of which girls	40 (7 FG)	13 (3 FG)	30 (7 FG)

In consultation with the interviewers, the economic level of the respondents was assessed after each individual interview or focus group based on the information collected (income, activity, occupation, expenses, appearance, living environment, etc.). While this subjective assessment is sometimes simple (especially for the wealthiest and poorest), it may be subject to doubt for intermediate profiles.

TABLE 2 Assessment of the economic level of respondents

CODE	NEIGHBOURHOOD	No.		ECONOMIC LEVEL			COMMENTS
				Poor	Middle	Wealthy	
FG-1	Patte d'Oie CU	2	Girls				20-25 years
FG-2	WTG	8	Women				Planned neighbourhood
FG-3	WFG	5	Girls				Planned neighbourhood
FG-4	WTG	5	Men				Planned neighbourhood
FG-5	DSG	5	Men and women				Planned neighbourhood
FG-6	ZAG	7	Women				Unemployed women; unplanned neighbourhood (being established)
FG-7	WTG	8	Women				Unplanned neighbourhood; outside Meriem scope (too poor)
FG-8	WTG	3	Girls				Unplanned neighbourhood
FG-9	WTG	2	Men				Unplanned neighbourhood; outside Meriem scope (too poor)
FG-10	DSG	5	Women				Planned neighbourhood; small merchants/artisans or unemployed, husbands are low-level white collar workers or artisans
FG-11	DSG	6	Women				Planned neighbourhood
FG-12	DSG	7	Men				Planned neighbourhood
FG-13	DSG	5	Women				Planned neighbourhood; older women (40-49 years)
FG-14	DSG	7	Girls				Planned neighbourhood

	CODE	NEIGHBOURHOOD	No.		ECONOMIC LEVEL			COMMENTS
					Poor	Middle	Wealthy	
OUAGADOUGOU	FG-15	DSG	3	Women				Planned neighbourhood
	FG-16	Larle	18	Girls				20-25 years, live in a university residence
	FG-17	ZAK	6	Women				Unplanned neighbourhood
	FG-18	ZAK	3	Men				Unplanned neighbourhood
	FG-19	WTG	5	Girls				General high school, 14-17 years old
	FG-20	WTG	7	Young women				20-30 years, apprentices
	II-1	Wayalgue	1	Woman				40 years old, midwife
	II-2	DSG	1	Woman				30-40 years old, life and earth sciences teacher
BAMAKO	FG-1	HDL	6	Women				Teachers
	FG-2	HDL	4	High school students				15 years old, public high school
	FG-3	HDL	5	Women				Planned neighbourhood
	FG-4	HDL	3	Women				Small merchants
	FG-5	HDL	3	Women				Employed women, middle class
	FG-6	HDL	5	Men				Artisans, heterogeneous group
	FG-7	HDL	5	Students				2 girls out of 5 out of scope (too wealthy)
	FG-8	HDL	3	Students				1 girl out of 5 out of scope (too wealthy)
	FG-9	DKR	6	Women				Large family
	FG-10	DKR	2	Men				Large family
	FG-11	DKR	5	Men				1 man out of 5 out of scope (too wealthy)
	FG-12	NMK	2	Women				1 maid and 1 young bride (married 5 months before the interview, husband in France)

	CODE	NEIGHBOURHOOD	No.		ECONOMIC LEVEL			COMMENTS
					Poor	Middle	Wealthy	
BAMAKO	FG-13	NMK	2	Women				1 maid and 1 mother (about 40 years old)
	FG-14	Univ.	4	Students				Students living at home
	FG-15	Univ.	6	Students				Students living at home
	FG-16	Univ.	5	Students				Students living at home
	FG-17	Univ.	3	Students				Students living in university residence
	II-1	HPD	1	Woman				Young Orange Money employee, large family
	II-2	HPD	1	Woman				Sandwich vendor, born in Bobo
	II-3	HPD	1	Woman				Unemployed, originally from Burkina Faso
	II-4	HPD	1	Woman				Graduate, job hunting
	II-5	HPD	1	Woman				Small merchant, husband from Bobo
	II-6	HPD	1	Woman				Originally from Bouaké, unemployed
	II-7	HPD	1	Woman				Merchant; out of Meriem scope (too wealthy)
	II-8		1	Woman				Seamstress; out of Meriem scope (too wealthy)
	II-9		1	Man				Welder, worked abroad
II-10		1	Woman				Pregnant, husband in France, large family	
II-11		1	Woman				Pregnant, health centre	
NIAMEY	FG-1	SK	7	Women				3 women unemployed, the others with irregular employment
	FG-2	SK	4	High school students				2 of the 4 high school girls have family in the village
	FG-3	BB	4	Women				Unemployed women
	FG-4	BB	4	High school students				Heterogeneous group

	CODE	NEIGHBOURHOOD	No.		ECONOMIC LEVEL			COMMENTS
					Poor	Middle	Wealthy	
NIAMEY	FG-5	SK	6	Women				3 women unemployed, the others with irregular employment
	FG-6	SK	5	Men				Retired
	FG-7	SK	5	Men				Guards
	FG-8	Univ.	5	Students				All live with their parents
	FG-9	BB	5	Men				Middle class and upper middle class
	FG-10	SK	4	Women				Substitute teachers
	FG-11	SK	4	Women				Breastfeeding women, health centre
	FG-12	SK	2	Men				Artisans (1 with child, 1 with pregnant wife)
	II-1	SK	1	Woman				Widow, porridge vendor
	II-2	BB	1	Student				20-25 years old, pastor's daughter, student
	II-2b	Univ.	1	Woman				35-40 years old, civil servant returning to studies
	II-3	SK	1	Woman				Unemployed, military husband, health centre
	II-4		1	Woman				Unemployed, police officer husband, health centre ●

APPENDIX 3

DETAILS CONCERNING THE PROCESSES FOR MAKING PORRIDGE AND BOULE IN NIAMEY

FRENCH	ZARMA	HAUSA	PREPARATION
Raw <i>boule</i>	<i>Labdourou</i>	<i>Goumba</i>	Raw millet flour + cold water. Form a <i>boule</i> (ball) and dip it in curdled milk or yogurt with sugar.
"Cooked" <i>boule</i>	<i>Donou</i>	<i>Foura</i>	Millet flour + cold water. Form a <i>boule</i> (ball) and immerse in boiling water for 30 minutes. Remove the <i>boules</i> and crush. Form another <i>boule</i> and dip it in curdled milk or yogurt with sugar.
Boiled	<i>Koko</i>	<i>Kounou</i>	There are several recipes, always without cooking. Porridge is prepared from simple millet flour, millet <i>boule</i> , flour made from a mixture of flours and roasted legumes. The preparation of porridge consists in pouring boiling water over a dough prepared with millet flour and cold water. Neighbourhood porridge is also potentially made without cooking but includes a fermentation step.

Simple porridge recipe prepared from millet flour

- ➔ **FG-3:** "It's quick to prepare the porridge, since you have gas, it's very easy. It takes 10 or 20 minutes and it's ready for the whole day. We boil the water, we have the millet flour that is ready; we pour the water on the flour and mix, it's ready. Then we don't cook it again. I don't add anything to the preparation, then at the time of drinking everyone can add as much sugar as they want."
- ➔ **FG-5:** "For homemade porridge, we take millet, go to the mill, wet the millet, we get a flour, it ferments a little [*moru*]. Then we add hot water and it's ready. We don't cook it. If it's too runny, we can also cook it, but it's not necessary. When homemade porridge is slightly fermented and not smooth, we don't feed it to babies under six months, we feed it to them when they're a little older."
- ➔ **II-3:** "I started feeding him porridge at about seven months; I tried before, at about five or six months but he refused to eat it. At seven months, he started on porridge that I bought in the neighbourhood. Most often I buy it, but sometimes I make it for him. I make a lumpy porridge, it isn't smooth. I take millet flour, mix it with a little cold water. I let it sit for a few hours, then I add the boiling water and it's ready."

Preparation of *boule*

- **FG-3:** “*Boule* takes longer [than porridge]. You take the flour, you pour cold water on the flour, you make little balls, *labdourou*. Then, to make “cooked” *boule* [*donou*], you put the *boules* in the water. Then, you crush the *boules* with the mortar with a little water and you reform the *boules*. To eat it, you mix with milk or Solani.”
- **FG-10:** “We buy the millet, we remove the bran. We soak it for a few minutes, we pour off the water, we go to the mill, we come back with a flour, we sift it, we make a *boule* with cold water: this is *goumba* [raw *boule*].”

Recipe for porridge prepared from uncooked *boule* (*labdourou*)

- **FG-3:** “You can make porridge with the *boule*. You take the uncooked *boule* [*labdourou*], you mix it with cold water, then you add boiling water and it’s ready.”
- **FG-10:** “You can make porridge with the raw *boule* [*goumba*]: you have to let the *boule* ferment a little for a few hours. You boil the water. You break the *boule* up and knead it with cold water. Then we add hot water and it’s ready. You usually don’t need to cook it again afterwards.”
- **II-2:** “For my porridge, I buy raw *boule* [*labdourou*]. I go to Banga Bana to buy it from a saleswoman I know: I go about twice a week to buy *boule*. I go by taxi (50 CFA francs), I buy the *boule* for 200 CFA francs, I bring the *boules* home. Then, I add hot water to make porridge; I keep the porridge in a dish and drink it throughout the day. I only add sugar when I have it. I like this porridge, but I don’t like neighbourhood porridge because it’s too smooth. There are lumps in “*boule* porridge”, it’s better. My mum used to make this porridge with *boule*. The students I know do that, too. Near me, there are mostly girls from Maradi and Zinder. They bring back dried *boule* from the East.”

Enriched porridge recipe for children

This is a mixture of roasted flour/legume flours with the possible addition of other ingredients. These are always uncooked preparations.

- **FG-10:** “I have a recipe: we mix millet, rice, sorghum, cowpea and peanut; we take it to the mill, and we get a mixed flour. Then we cook the flour for a few seconds in a hot pot without water, we take it out, we dry it “so that the heat comes out”. Then we mash bananas, eggs, biscuits that aren’t too sweet in the mortar and mix it with the flour. Then we sift it, dry it inside, away from the sun. Then, when you want to make porridge, you take the measure you need, add boiling water, and that’s it. Sometimes we add extra milk.”
- “My recipe is simpler: You mix millet and other cereals, take it to the mill, boil the water, pour boiling water over the flour and it’s ready. We don’t cook it after adding the boiling water.”

Neighbourhood porridge recipe

Recipe described by the president of the women's group, and not by the porridge sales-woman.

- **FG-10:** "You can't feed neighbourhood porridge to babies under six months. It's bitter compared to the one we make. It's too fermented, it's not good for the baby. Especially in the hot season, because the vendor prepares it at night and the flour ferments. The vendors' preparation is not the same as ours [...]. She takes unhusked cereal and water to the mill, she gets a dough and not flour like us. Then she adds cold water to the dough, filters it through a clean cloth; the bran stays in the cloth and the flour passes through with the water. She lets the flour and water sit all night: it ferments a little when the weather is cold and a lot when it's hot. In the morning, the water floats, it is transparent; we separate it, we keep the dough, add boiling water and it's ready. For homemade porridge, if we put the bucket in the courtyard in the morning it is not yet fermented, but in the evening, it is fermented." ●

APPENDIX 4

MEALS FOR GIRLS AND WOMEN

<p>Breakfast</p>	<p>Very often skipped by students in university residence, due to a lack of time and means.</p> <p>When eaten:</p> <ul style="list-style-type: none"> - at home: <i>tô couché</i> (reheated leftovers from the day before), porridge or bread (depending on family habits); - outside the home: often delayed (10:30); - dry bread with nothing if we do not have the means. Otherwise, bread with a filling (e.g., eggs); - neighbourhood porridge near the university residence: 25 CFA francs of porridge and 100 CFA francs of sugar and milk (Ouagadougou).
<p>Lunch and dinner</p>	<ul style="list-style-type: none"> - University dining hall when there is no other choice (students in Ouagadougou and Niamey). - Campus or workplace canteen: 250 to 300 CFA francs the dish (often rice) drink included (artisanal juice or water). - In university residence: preparation in the room. The recipes are identical to those made in the family. - Family or alternative meal purchased in the neighbourhood.
<p>Snacking</p>	<p>Choices are guided by the price of the products (choice of artisanal beverages). There are many options, as for children. In Niamey and Ouagadougou, often fried dishes (Bamako) and served in sandwiches (Ouagadougou and Bamako).</p>
<p>Exceptional meals</p>	<ul style="list-style-type: none"> - Energy drink during examinations for students. - During outings with boys: expensive beverages (soda, Dafani), fish or meat dishes, fried potatoes. - Ceremonies: sodas, <i>thiakry</i>, skewers, etc.

TABLE 1 Snacks taken in the morning during recess or break

NIAMEY	OUAGADOUGOU	BAMAKO
Cooked dishes are popular, as are leafy vegetable dishes among girls and women (<i>kopto</i> in Niamey, <i>babenda</i> in Ouagadougou). The price is adjusted to the quantity served (base price: 50 CFA francs).		
Sandwiches are more expensive (300 CFA francs) and less popular than in Ouagadougou or Bamako.	Bread dominates – the most common medium of the snack (applies to all age groups).	
	<ul style="list-style-type: none"> - ¼ baguette for 100 CFA francs. - ½ baguette for 200 CFA francs. - Toppings: meat, fish and avocado. 	<ul style="list-style-type: none"> - Very common use of frying in all sandwiches (<i>alloco</i> or fried potatoes), an essential ingredient. - The “fritter” (fried wheat flour dough) is the alternative to bread.
<ul style="list-style-type: none"> - Artisanal beverages (iced pouches/jugs). - Water. 	<ul style="list-style-type: none"> - Artisanal beverages (iced pouches/jugs), <i>bissap</i>, <i>teedo</i>, or ginger (50 CFA francs). - <i>Thiakry</i> (200 CFA francs). 	<ul style="list-style-type: none"> - Artisanal beverages (iced pouches/jugs). - Frequent consumption of sodas and industrial beverages.
Biscuits for the morning snack is mostly a practice of children in primary school. High school students prefer a sandwich or a cooked dish. Sweets and industrial products are sold in the courtyard for primary pupils (too sweet and too chemical for girls according to them).		
	Cérélac is very popular among high school and university students. ●	

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EATING HABITS IN CITIES OF THE SAHEL REGION

Study of eating habits of women and young children in Ouagadougou, Niamey and Bamako

Sahelian urban areas face a triple burden of malnutrition with the persistence of undernutrition, multiple deficiencies and the progression of overweight and associated pathologies.

The Meriem project (*Mobilising Sahelian companies for innovative large-scale responses against malnutrition, 2018-2023*), supported by the *Agence française de développement* and the Bill & Melinda Gates Foundation, is being implemented in Niger, Mali and Burkina Faso by a consortium of partners led by GRET and Hystra. With the aim of improving food supply in the cities of Niamey, Bamako and Ouagadougou, it supports local companies in developing and marketing fortified products for women of childbearing age and young children, two groups that are most exposed to malnutrition.

At the beginning of the project, a qualitative study was conducted in the three capitals to deepen knowledge of eating habits of the targeted populations. This work opened avenues to develop appropriate and attractive local products, position them on the market and build adequate communication.

This document is intended for public and private actors involved in preventing malnutrition in urban areas in the Sahel region. It shares the results of this study, enriched with lessons learned from other GRET projects.

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