

AN ASSESSMENT OF KNOWLEDGE ABOUT TRADE  
AND MARKETS RELATED TO FOOD SECURITY IN  
WEST AFRICA

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**Bilan des connaissances sur le commerce et les marchés impliqués dans la sécurité alimentaire en Afrique de l'Ouest**

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## EXECUTIVE SUMMARY

Trade and markets have played an important role in allocating supplies in deficit areas as well as reducing food insecurity in the Sahel during these past years. Trade and markets worked well during the crisis of 2004/05. Cereals were available in markets, although, prices were very high. However, we should note that: i) imperfections such as those related to the closing of borders were observed in this “allocation” role; and ii) this allocation role is not always well understood nor followed by actors involved in food security in the Sahel.

WFP, in consultation with its partners, FEWS NET and CILSS, launched a study on the existing knowledge of markets and cross border commodity flows in West Africa in order to clarify the role, and strengthen the monitoring, of markets as they affect food security. This assessment of secondary data, literature and discussions with key informants is considered the first phase of a larger effort to strengthen food security analysis and monitoring of markets and food security. In addition, all secondary data used for this study is available on CD. CILSS and FEWS NET partners’ commented on the initial draft report.

Factors affecting markets and cross border commodity flows were reviewed in chapters 2 and 3. Without being extremely thorough, we can cite: agricultural production in different countries, organization of markets and cross border commodity flows, gaps in prices in different zones, fiscal and trade systems and socio-political events. A selection of key markets to monitor is presented, for instance, in the case of Nigeria for the Dawanau, Potsikom and Maidigou markets.

It has been observed that a large amount of information needed to do a good monitoring of food security and markets already exists, but it is not adequately used. Enhancing markets and food security monitoring is done through strengthening technical, human and financial capacities of national and regional institutions. Strengthened capacities for improving monitoring include the following:

- Improve the use of cereal balance sheets and better interpretation of deficits;
- Place analyses in the sub-regional framework;
- Better recognition of cash crop products including livestock; and
- Monitor the impact of prices on food security rather than simply monitor prices.

The main data shortfall pertains to cross border commodity flows of foodstuff. Knowledge linked to quantities and the direction of flows is necessary for all food security monitoring.

These suggestions aim to strengthen markets and food security monitoring, and were formulated in terms of recommendations (see chapter 5). Implementing those 9 recommendations is the responsibility of all partners involved in food security in the Sahel. In view of its mandate, its knowledge and expertise, WFP wishes to contribute to i) the technical capacity of national and regional monitoring systems; ii) putting in place cross border commodity monitoring (with Southern Africa experience); and iii) develop and implement monitoring tools on the impact of prices on household food security.

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# 1 INTRODUCTION

## 1.1 A BRIEF HISTORY

For many centuries, the Sahelian zone has regularly been subject to climatic variations, especially during the rainy season. Such changes result in a more or less pronounced decrease in the production of cereals, which are the basic foodstuff. This situation, in conjunction with a sharp increase in population and increasing urbanization, has for some years brought about food shortages that are difficult for the affected countries to resolve.

In recent years (since the beginning of the 1970s), severe droughts (especially in 1973 and 1984) have made both governments and lenders aware of just how fragile food security in this area really is. Reacting to the two severe droughts mentioned above, Sahelian country governments tried to bring cereal production and sales under their control. This led to the development of government agencies and offices (or boards) heavily regulating cereal production and controlling cereal marketing so as to be able to provide food to the people. Agencies such as OPAM<sup>1</sup> in Mali (1965), OPVN<sup>2</sup> in Niger (1970), OFNACER<sup>3</sup> in Burkina Faso (1971), OMC<sup>4</sup> in Mauritania (1975), and ONC<sup>5</sup> in Chad (1977) came into being. They were responsible for purchasing part (less than half) of the cereals produced and granting licenses back to the merchants. These agencies were to stockpile cereals and put them back on the market during the pre-harvest period in order to reduce commercial speculation. They set the prices for purchasing from the producers—prices applicable to the merchants even for purchases not made on behalf of the agencies. Importation from and exportation to neighboring countries were thus greatly reduced, and were accomplished through intergovernmental contracts handled through the cereals agencies<sup>6</sup>.

The period from the 1960s to the beginning of the 1980s (Mali) and 1990s (Niger, Burkina Faso, Mauritania and Chad) was characterized by cereal trade that was active but very closely supervised by government agencies. Merchants were required to comply closely with government directives. Their freedom to act was only relative.

In the early 1990s, with the failure of government economic policies, specifically cereal policies, the Sahelian countries were faced with having to implement structural adjustment programs as required by the Bretton Woods. Restrictions on cereals trading were lifted during the 1990s in all of the Sahelian countries (except Mali, where liberalization had begun in 1980 with the implementation of the PRMC<sup>7</sup>). Government marketing agencies were restructured or dismantled (OFNACER). Their role in the cereal markets was reduced to simply managing safety reserves. Cereal prices were determined by the market, and from that time forward, merchants were free to conduct their business as they saw fit.

It took merchants, strongly influenced by 20 years of state control, some time to (re)build relationships with merchants in neighboring countries and to reactivate traditional trading networks. For example, in Burkina Faso, cross-border cereal trading did not (re)gain its once

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<sup>1</sup> *Office des Produits Agricoles du Mali* [Agricultural Products Office]

<sup>2</sup> *Office des Produits Vivriers du Niger* [Niger Food Products Agency]

<sup>3</sup> *Office National Céréalières* [National Cereals Agency]

<sup>4</sup> *Office Mauritanien des Céréales* [Mauritanian Cereals Agency]

<sup>5</sup> *Office National des Céréales* [National Cereals Agency]

<sup>6</sup> V. Caupin and B. Laporte, “L’intégration régionale des marchés céréalières: une approche économétrique,” in *Echanges transfrontaliers et intégration régionale en Afrique de l’Ouest*, Cahiers des Sciences Humaines, ORSTOM, new series, no.6, 1998.

<sup>7</sup> Programme de Restructuration du Marché Céréalière [Cereal Market Restructuring Program]

regional dimension until the 1997-1998 food crisis, when a significant portion of merchant stocks came from traders in Mali. In Niger, the situation was somewhat different, since cross-border trade with Nigeria had always been very active. However, during the 2002 crisis, Niger turned to Burkina Faso to restock its safety reserves. Merchants from Niger also depended heavily on Benin, Ghana etc. for their maize purchases during the 2004/05 crisis.

## **1.2 CONTEXT OF THE STUDY**

Cross-border trade, which in recent years has played such a fundamental role in regulating market supply and reducing food insecurity due to supply shortages,<sup>8</sup> was greatly disrupted during the 2004-2005 marketing year when Sahelian governments intervened and inhibited the freedom to export. Formal and informal border closures in some of the subregion's countries resulted in a large increase in cereal prices in the national markets and made purchases by certain vulnerable population groups impossible.

The chain reactions that followed the halting of cross-border exchanges demonstrated that the mechanisms by which the markets operate are not well understood. Governments and international aid agencies discovered that close relationships and economic ties existed throughout the entire subregional cereal market (Sahelian and coastal countries). Disruption of one of these relationships during a certain period of time can have dramatic consequences on the food security of vulnerable populations.

This difficult experiment revealed the need for more detailed and exhaustive information about, in particular, how the cereal markets function, but also about the "cash" crops that provide people with the income needed for purchasing cereals during the hunger season.

WFP, in consultation its partners like FEWS NET and CILSS<sup>9</sup> are planning to carry out a series of studies designed to increase knowledge of markets and of cross-border flows of agricultural and livestock products in West Africa in order to improve food security analyses for the region. This secondary data study is considered an initial phase to strengthen the analysis and food security process.

The study upon which this current document this based was done by Mme Noelle Terpend (consultant)<sup>10</sup>. The work of Mme Terpend was supported by WFP and implemented under the technical supervision of Geert Beekhuis (WFP, Regional Market Analyst) and Patricia Bonnard (FEWS NET Markets and Trade Advisor). CILSS and other partners reviewed and provided comments on the draft document. The final report will be approved by WFP. It should be noted that the opinions and conclusions contained within this report do not necessarily reflect opinions of WFP and its partners.

## **1.3 SCOPE OF WORK**

### **1.3.1 Objective of the Study**

An analysis of existing knowledge will help identify information on national markets and cross-border trade that is lacking or poorly understood as well as identify variables

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<sup>8</sup> There have been cereals on the markets during all seasons, even though the price is high.

<sup>9</sup> Comité permanent Inter-états pour la Lutte contre la Sècheresse au Sahel or The Permanent Interstates Committee for Drought Control in the Sahel

<sup>10</sup> December 12-31 2005

underlying the prices of commodities that are critical to the food security of Sahelian populations. Particular attention will be given to the information gaps related to the markets' ability to reduce the effects of external shocks on the peoples' means of subsistence.

### 1.3.2 Relevant Products and Geographic Concerns

The assessment, which should focus on commodity markets most relevant to food security and food and financial needs of the vulnerable populations in the Sahel, will cover food crops—cereals (millet, sorghum, maize, rice), tubers (yams, cassava) and legumes (cowpea)—and a certain number of cash crops livestock (cattle, sheep, goats), vegetable crops (onions, sweet peppers) and other products (cotton, shea, dawa-dawa seed, gum arabic) important to the peoples' survival strategies.

While focusing on food security in the Sahel, this assessment will not be limited to studies in the Sahelian countries (Chad, Niger, Burkina Faso, Mali and Mauritania), but must take into account studies analyzing exchange with the other West African countries (Cote d'Ivoire, Ghana, Togo, Benin and Nigeria) that is related to food security in the Sahel

## **2 KEY FACTORS AFFECTING MARKETS AND CROSS BORDER FLOWS**

Food security for populations in the Sahel depends primarily on the availability of cereals (millet, sorghum, maize, rice) and cowpeas. Self-sufficiency is not achieved every year in every country or for every family: people have to purchase food to cover part of their needs. This is where food access, that is, the ability to buy, enters into play. Access depends on two variables: cereal prices and, increasingly, the prices of products that are sold or traded, that is, the price of cash crops and livestock.

Based on this argument, two pieces of information are essential in tracking food security: production volumes and prices of all agricultural and livestock products in the area under study (food and cash crops).

These data show fairly significant variation depending on many factors including climatic, economic, demographic, political and social factors. All of these factors are weighed, analyzed and ranked by market transactions, to determine the final price for the product. So it is important to identify which factors are of major importance in determining this price. Depending on the year or the circumstances, the factors will not always be equally significant in terms of their affect on price: in this system of identifying information, everything is variable, which is what makes analyzing food security so difficult.

### **2.1 PRODUCTION AND EXCHANGE**

#### 2.1.1 Cereal Production in the Sahel

Food security in the Sahel depends on products from within the region and products imported from coastal nations bordering the Sahelian countries.

Food self-sufficiency based on cereal consumption is not identical in all five of the Sahelian countries studied here. Two main groups can be distinguished:

- ◆ Countries that are largely self-sufficient, namely Mali, Burkina Faso, Niger and Chad. These countries produce a large part of their cereal needs and do not import much. It can be estimated that these countries are more than 70% self-

sufficient,<sup>11</sup> regardless of the year or country. Furthermore, these countries frequently have surpluses. They are landlocked and have strong commercial relationships with the southern coastal countries.

- ◆ Countries with a weak ability to remain self-sufficient, namely Senegal, Mauritania, Gambia, Guinea-Bissau and Cape Verde. They are less than 50% self-sufficient and their food security depends heavily on imports (in 2002-2003, Mauritania produced 23% of its needs, Senegal 45%)<sup>12</sup>. They form a separate bloc, much less connected to the rest of the region and more oriented toward the world markets.

The traditional cereals grown (millet and sorghum) are consumed largely within country, and only a small part of the total production is put on the market by the producers, between 10 and 20%<sup>13</sup> in the high-production countries (Mali, Burkina Faso, Niger and Chad), depending on the year: the reliability of these estimates should be verified.

When Sahelian countries experience shortages, they import cereals from three places:

- ◆ Other Sahelian countries that have a surplus. This was the case in 1998 when Burkina Faso, which recorded a significant shortage, imported millet from Mali, which had a surplus.
- ◆ Cereal-producing coastal countries in the areas bordering on the Sahel. This is the case with Nigeria (millet and maize) and with Benin, Togo and Ghana (maize).
- ◆ Countries outside of Africa, particularly on the Asian continent, for rice. This is true of all the Sahelian countries, especially Senegal and Mauritania, which depend heavily on such imports.

Cereal production in the Sahel is tracked very closely by a number of institutions:

- ◆ At the national level:
  - By the agricultural statistics department, which - thanks to its incorporation into the CILSS - uses a specific method to estimate cereal production. This method allows the data-collection process to be standardized among the different countries.
  - By food security programs or coordinating mechanisms, where they exist: PRMC (Mali), CRSPC<sup>14</sup> (Burkina Faso), CMC<sup>15</sup> (Niger), CSA<sup>16</sup> (Mauritania) and ONASA<sup>17</sup> (Chad). Each of these mechanisms incorporates an EWS<sup>18</sup> to track

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<sup>11</sup> According to national statistics—see cereal totals reports

<sup>12</sup> *Joint Monthly Food Security Report for the Sahel*, FEWS NET-CILSS, November 30, 2002.

<sup>13</sup> Figures taken from several documents, including those of Agnès Lambert for Mali.

<sup>14</sup> *Comité de Réflexion et de Suivi de la Politique Céréalière* [Committee for the Consideration and Monitoring of Cereal Policy]

<sup>15</sup> *Commission Mixte de Concertation* [Joint Commission for Dialogue]

<sup>16</sup> *Commissariat à la Sécurité Alimentaire* [Food Security Commissariat]

<sup>17</sup> *Office National pour la Sécurité Alimentaire* [National Food Security Agency]

<sup>18</sup> Early Warning System

the food conditions experienced by people as well as one or more market information systems (SIMs<sup>19</sup>) for tracking markets and prices.

◆ At the regional level:

- By the CILSS<sup>20</sup>, which has for many years been providing support to all of the Sahelian countries in tracking climate changes and harvests and assessing cereal totals.
- By the GIEWS<sup>21</sup>, an early warning system set up by the FAO.
- By the FEWS NET<sup>22</sup> early warning system set up by the USAID.

These structures make available a large amount of information and numerous analyses of cereal production conditions in the Sahel. Yet, they were unable to predict the significant increase in prices, during the 2004-2005 marketing year in terms of food security for poor populations.

### 2.1.2 General Organization of the Markets

First, these markets, found in all West African countries, are like a spider web, with both converging and diverging connections depending on the level of the sale under consideration. However, everything goes back to the wholesalers located in the large urban centers of each country. They weave their webs in the rural areas to collect cereals and other (agricultural or livestock) products through their buyers (commodity assemblers), to whom they give a certain amount of money to buy on local markets or directly from the producer.

These wholesalers stock commodities in their warehouses, and then spin another web of sales, either in the areas experiencing shortage within the country, or, as exports in neighboring countries or at the ports. At this point, they deal with other wholesalers. The vast majority of wholesalers finance purchases of produce themselves and creates a system for recovering their money after the sale. Their business is generally diversified and organized in such a way as to simultaneously handle, on the one hand, a number of products from a single source in succession, and on the other, products from various sources simultaneously. For example, a large cereal wholesaler in Ouagadougou handles both agricultural products and construction products (cement, rebar, sheet metal) in order to diversify his business and make it less susceptible to climatic and economic changes. He handles the agricultural products in succession, beginning the marketing year in October by purchasing cereals at harvest time. He resells the cereals quickly in the areas of the country experiencing shortages, or exports them (if there is a demand). The money freed up by the resale is quickly reinvested in sesame. Once the sesame is sold for exportation out of Africa, he reinvests in shea, then again in cereals as the pre-harvest period arrives, and so on. At the same time, he invests part of his capital in the construction products business, which is more regular and so provides a steadier income.

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<sup>19</sup> *Système d'Information sur les Marchés*

<sup>20</sup> Permanent Interstates Committee for Drought Control in the Sahel

<sup>21</sup> Global Information and Early Warning System

<sup>22</sup> Famine Early Warning System Network

### 2.1.3 The Organization of Trade

The collection and sale of food commodities, more specifically cereals, is organized in the same way in all West African countries. An exchange begins when the producer decides to sell. This decision is made based on the family's financial need, which is not linear throughout the year, but varies with the family's participation in social and religious events. Financial needs are greatest at the beginning of the school year, the end of Ramadan, during the Tabaski holiday and the Christmas season, during the pre-harvest period and at the beginning of the work in the fields. Added to these occasions are weddings, baptisms and funerals, which involve significant expenses. This irregularity of financial needs causes an irregularity in the volume of produce put on the market and the level of local or transnational trading. Knowledge of the producers' social life is essential to an understanding of the variations in volume.

At the other end of the chain, demand is more regular because it corresponds to a need for food that must be met every day. But this is only an apparent regularity, especially where cereals are concerned, because it too is tied to social events (religious celebrations, family events) and especially to the period when the food people grow to for their own consumption is in short supply (lean or hunger period).

Food commodities sold follow a classic path from the local markets to the assembly markets. They are then sent to national urban consumer markets or cross border markets and then end up back on urban or even rural markets.

This whole chain of trade is difficult to quantify because no survey has been able to clearly show the volumes placed on the market by the producers. Volumes put on the market vary with the product and the country. However, for dryland cereals in Burkina Faso, it is estimated that between 10 and 20% of cereals produced are placed on the market. The rest is consumed at home by producers. For legumes such as cowpeas, a much larger portion of the production is sent to market because the product is considered by rural residents to be a cash crop. For livestock, some flows are recorded on national exchange markets. This is the case in Niger, where the Ministry of Animal Resources (MRA) does monitor some large-scale markets (see Service statistique [statistical department]/MRA/Niger and the livestock market information system ("SIM bétail").

Another point in the chain of trade, the border crossing, could have been a source of more accurate quantitative information. The measurement had always been poorly executed because, before the creation of the WAEMU commercial framework, cross border trade was sometimes the source of collection of significant formal and informal taxes and the stakeholders in cross-border traffic—merchants and customs officials—had no interest in seeing these figures become known: in the former case because they wanted to limit their taxes, and in the latter case, so that they could continue to supplement their incomes. Since the lifting of restrictions on trading local materials, the quantities are no longer checked.

### 2.1.4 Transnational Trading

#### 2.1.4.1 Geographical orientation of trading

There are three large trading blocs in West Africa. The largest consists of Nigeria and its neighboring countries (Benin, Niger, Chad and Cameroon). The second is formed by Cote d'Ivoire, Mali and Burkina Faso. The third includes Senegal and its neighbors (Mauritania, Gambia, Guinea-Bissau and Guinea). The most active of these is the eastern bloc (Nigeria).

The central bloc was severely disrupted by the events in Cote d'Ivoire in 2003. The western bloc (Senegal) operates more with merchandise imported from the international market.

Trade deals between countries occur especially on cross-border markets and big commercial centers, although, a certain portion of food and animal product exports are handled through oral or written contracts. Written contracts are still very rare and usually involve large quantities of merchandise. They do exist for certain large livestock trades that require "claim right" insurance to be obtained at a bank. The same is true of rice imports from Asia and for a certain amount of local cereals. For example, in 2002, the government of Niger signed a written cereals supply contract with a large wholesaler in Bobo Dioulasso for the replenishment of the safety reserve. In 1998, Ouagadougou merchants who were importing millet from Mali had oral contracts with their Malian counterparts.

The cross-border markets that are hot spots for produce exchange among the countries are located in the intermediate zone between the north and the south, and serve as relay markets (or transshipment points). They play an essential role in exchange between the interior and the coast.<sup>23</sup> They are not all of equal importance. Some of them are crossroads of exchange for several countries. This is the case with the Dawanau market in Kano, Nigeria, created only just 20 years ago. It is the largest cereal market in West Africa, spreading over 21 km<sup>2</sup> and has an impressive storage capacity of around 150,000<sup>24</sup>. It allows for trade among Niger, Chad, Nigeria, and even Cameroon, Benin and Burkina Faso.

Another market that is equally important is Malanville in Benin: it is located where the borders of Niger, Benin and Nigeria meet, and it is also close to Burkina Faso.

Pouytenga market is located near Fada N'Gourma in Burkina Faso. This market supports the cereal trade, in particular maize, among Burkina Faso, Ghana and Niger.

Moreover, a network of towns has developed close to the borders and sustains the cross-border production and exchange areas, the density of which is constantly increasing (Saint Louis in Senegal; Rosso in Mauritania; Kayes, Mopti and Koutiala in Mali; Ouahigouya and Dédougou in Burkina Faso, etc.)<sup>25</sup>.

#### 2.1.4.2 Traded Commodities

As noted previously, the quantities that cross the borders are not well known because local products passing through border stations are no longer subject to customs duties, so the quantities are not checked. Moreover, a portion of the produce is not sent through the border stations at all, this is true particularly for livestock: many animals cross the border in the bush.

The amount of produce crossing the borders is a function of where production and consumption occur. For example, for millet and sorghum, which grow in the Sahelian zone, most trading is done within the national boundaries. Each country consumes about what it produces, and because surpluses are rare, they are either stockpiled within the country by producers with difficult years in mind, or they are exported—but this is the exception. Other than Nigeria, which has regular millet surpluses and exports to Niger each year, only Mali did

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<sup>23</sup> Karim Dahou, "Structure du commerce extérieur et intégration régionale," *Frontières et intégrations en Afrique de l'Ouest*, November 2003

<sup>24</sup> MISTOWA presentation during the CILSS meeting in Nouakchott, 2005

<sup>25</sup> L. Brossard, M. Trémolières, P. Heinriqs, *Unité développement local et processus d'intégration régional*, Sahel and West Africa Club, May 2004

any noteworthy exporting of millet, sending some to Burkina Faso and Niger in 1998 after the poor harvest of 1997.

Cross-border trading of maize, which is produced in the wetter Sudanian zones, is more significant because the production zone is located in the north of the coastal countries and the extreme south of the Sahelian countries, which facilitates trade. Moreover, the coastal countries have other important food products such as tubers (cassava, yams, sweet potatoes, Bambara groundnuts) and plantains. These products are a good addition to the diet and allow the coastal countries to have maize surpluses. Maize-consuming countries in the Sahel import maize each year from Nigeria, Benin, Ghana and Cote d'Ivoire. The cross-border flows of maize are much higher than those of millet throughout the subregion.

A survey done by Niger's agricultural market information system (SIMA)<sup>26</sup> for the years 1999-2000 and 2000-2001 shows that maize represents between 40 and 55% of the country's dryland cereal imports, while millet comprises between 30 and 40% of such imports. In 2001, half of the maize came from Ghana (passing through Burkina Faso) and half from Nigeria and Benin. It would be useful to know usual maize surpluses of the three main producing countries—Nigeria<sup>27</sup>, Benin and Ghana—so as to be able to understand the amount of produce that might be available for the Sahelian countries each year. The flows in Ghana and Cote d'Ivoire are relatively recent<sup>28</sup> and are not built on ties to certain ethnic groups (as in northern Nigeria), but rather on family networks that have appeared with the development of seasonal or permanent migration to Accra or Abidjan.

For their part, tubers, which are more of a secondary product where Sahelian food consumption is concerned, are also imported from the coastal countries (Nigeria, Benin, Togo, Ghana and Cote d'Ivoire). The more prevalent tubers on Sahelian markets are cassava, yams and sweet potatoes. However, cross-border trade is not heavy. Niger's SIMA statistics for the 2001-2002 season show a volume of 1,200 metric tons of yams, 1,800 MT of cassava flour, and 5,500 MT of sweet potatoes, which is only 1/3 the volume of maize imported that year and 1/10 the volume of rice. As with maize, the amount of tubers exported from these five coastal countries to the Sahelian countries should be tracked on a regular basis.

Rice imports are relatively well known in comparison to the other food commodities. Most imported rice originates from Asian countries, and to some extent can be traced, revealing its origins, volumes and prices. This information comes from transactions associated with loans and bank payments, which require that merchants declare their purchases. All of the Sahelian countries import Asian rice. However, there is also some trading of rice between Mali and neighboring countries, which involve rice from the Mopti region. In this case, the information is less fragmented than for other local products because there is a VAT on rice. This allows better tracking of amounts traded.

Cowpea production is rapidly expanding in Burkina Faso and Niger,<sup>29</sup> and cowpeas are part of a very dynamic cross-border market. Cowpeas are exported from Niger to Nigeria and Benin. Although they are eaten by people, they are considered to be a cash crop on which rural residents depend for the purchase of millet. It is a good product for trade because its value is greater than that of millet or sorghum: in 2001-2002, in Niger, the difference was

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<sup>26</sup> SIMA semiannual bulletins, April-September 2001 and 2002

<sup>27</sup> Nigeria's surpluses are decreasing due to the developing production of grain-eating poultry. This industry is growing at an estimated rate of 30% per year, and an estimated 95% of the birds' food comes from Nigeria. "Nigeria/Grain and Feed/Annual," *Grain Report*, USDA, April 2003.

<sup>28</sup> Saadou Bakoye, "After two years of observation of cross-border trade," *Fiche de synthèse* nos. 11 and 12, LARES, January-June 1998

<sup>29</sup> Agricultural statistics for Burkina Faso and Niger

45% in favor of cowpeas.<sup>30</sup> A farmer could buy almost two sacks of millet for one sack of cowpeas.

Livestock has a major place in cross-border exchange. A product destined for the food chain, ultimately it represents one of the main cash products for rural and even urban populations. Livestock is considered a safe form of investing for most people because it allows anyone's small amount of savings to be invested (a "bank on the hoof") with no paperwork and with regular interest (when an animal reproduces). It is the ideal product to provide financial security to vulnerable populations because the market is dynamic, there is high demand, and the work is not very difficult. As a product of the Sahelian zone, livestock is exported primarily to the coastal and Maghreb countries. Depending on the species, the market tends to turn more or less to foreign markets: small ruminants (sheep and goats) constitute the base savings of vulnerable populations because they are more financially accessible and are the most frequently-consumed type of livestock in the Sahelian countries. However, they also represent important export volumes, particularly goats, because their meat is less expensive to the poor populations of the coastal countries. Cattle, especially, are destined for export to the large urban centers of the coastal countries. The market for sheep is particularly affected by the Tabaski holiday, which (in Niger) represents 30% of the year's transactions. During this holiday, there is very high demand for sheep in the coastal countries. During the last few years, this holiday has come during the dry season, which comes just after the cereal harvests. This has allowed many vulnerable people to obtain loans specifically for the purpose of purchasing sheep to resell at a good price during the holiday. The money obtained in this way has allowed these people to supplement their cereal reserves. Camels are particularly involved in trade with the Maghreb countries, as much so for Niger and Chad, which trade with Libya, as for Mali, which trades with Algeria and Mauritania, which also exports its camels. In exchange for camels, exporters bring back dates and manufactured products (especially noodles).

After livestock, cotton is the second most important trade and export commodity of the subregion. Not all of the Sahelian countries produce cotton, as they do livestock, but in those areas where it is produced it, it constitutes an important source of income. Most cotton is exported as fiber to Asian countries or Europe. As a bonus, African cotton is of uniquely high quality because it is picked by hand, which adds value. Cross-border trading in cottonseed is not heavy, because the producing countries use the seed to make vegetable oil that families need for cooking. Production and consumption of this oil are a national phenomenon. The three main countries involved are Mali, Burkina Faso and Chad. Production in the other countries is either more secondary (in Senegal and Niger) or nonexistent (in Mauritania). Still, during droughts, cottonseed is a good addition to the diet of livestock. During the difficult year of 2004-2005, there was more cottonseed trading among the countries, and especially with Niger, which imported it.

In Niger, Mali and Burkina Faso, onions are also a cash crop destined primarily for export. In Niger<sup>31</sup>, the violet de Galmi is sold as is, while the shallot from Mali's Dogon area<sup>32</sup> is processed and sold either dried with the leaves removed or in a fermented ball. These products are destined for all of the coastal countries.<sup>33</sup> The amounts exported are very large, especially for the violet de Galmi. Still, for the past two years, the producing countries have

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<sup>30</sup> SIMA semi-annual bulletin, April-September 2002

<sup>31</sup> Niger is Africa's fourth-largest producer, growing between 200,000 and 350,000 metric tons per year. "L'approvisionnement des marchés en oignons," West African onion industry professional panel, ORO/AOC- MISTOWA, 2005

<sup>32</sup> Mali and Burkina Faso each produce about 38,000 metric tons per year.

<sup>33</sup> 56% of Niger's production is exported.

suffered from poor sales because the markets in Cote d'Ivoire and Ghana have weakened considerably. Prices have also fallen (halved since 2003<sup>34</sup>).

Sweet peppers are grown for export in the eastern part of Niger (Diffa). They bring a certain level of financial security to the people in the area. A study of the sweet pepper industry, financed by the European Commission, was just done in November and December 2005.

All of the Sahelian countries produce gum arabic, especially Chad, which has succeeded in producing 30% of the world's supply. It is the country's second largest export commodity after livestock. The market is booming because gum arabic is used in many other products, including soft drinks and cosmetics, and it is also an ideal cash product for the Sahel's producers, because it needs only very little water and no fertilizer. It is well adapted to the arid soils in the rural areas.

Shea, dawa-dawa and dah (karkade, bissap) are gathered products that make a significant contribution to women's income. The shea market is internationally oriented. Many Sahel and coastal countries are shea producers, with Nigeria being the largest producer (73%). The Sahelian zone (Sahelian countries and northern parts of the coastal countries) is the only area in the world where the tree grows and shea is produced. Shea butter is used primarily in the chocolate industry.<sup>35</sup> Dawa-dawa and dah are mostly consumed locally; fermented dawa-dawa is the base for the *sumbala* condiment used in traditional sauces and there is a heavy market for it in West Africa.

## **2.2 FACTORS AFFECTING CROSS-BORDER TRADE**

Trade between countries is favored by several economic factors resulting from key differences between the countries concerned. Relationships between the Sahelian zone and the coastal zone or among Sahelian countries are based on these differences. Trade increases or decreases depending on whether these differences are intensified or disappear. These differences should be subject to exhaustive tracking on a regular basis.

### **2.2.1 Differences in Productive Potential**

Productive potential depends essentially on the climate of the relevant countries. Drought in the Sahelian zone causes a loss of agricultural productivity. The coastal countries are less affected by drought and so have greater agricultural potential. They produce more cereals<sup>36</sup> and other agricultural products, so changes in their harvests should be followed very closely. This tracking should focus as much on the amounts produced as on area sown to the crop. Niger's failure to take into account the reduction in the area sown in cereals in northern Nigeria can have dramatic consequences in the years when production decreases. The Sahelian countries should pay close attention to changes in cereal production, particularly maize and millet, and tuber production in the coastal countries—especially since production of these crops may also slow as the drought advances.

The difference in climate is also a factor among the Sahelian countries. Niger, Senegal and Mauritania are the northernmost countries of the Sahelian zone, with a very limited area in the wet zone; they experience frequent and very regular shortages in cereal production. Mali, Burkina Faso and Chad each have more than half of their area located in a wetter zone

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<sup>34</sup> Information sheet, "2005, famine au Niger?" Afrique Verte

<sup>35</sup> "Le marché du karité," InfoComm, UNCTAD.

<sup>36</sup> Nigeria alone produces 16 million metric tons of cereals, compared to 14 million m.t. for the Sahelian countries that are CILSS members.

(> 300 mm of water), so they more often have cereal surpluses and can trade millet and sorghum with the neighboring countries. So, it is also crucial for each country in the area to keep track of production in the adjoining Sahelian countries in order to estimate trading opportunities.

In compensation, the Sahelian countries have some geographical advantages over their southern neighbors: their dryness provides important opportunities for vegetable and livestock production. These two commodities are good currency for trading with the coastal countries, whose needs for these products usually are not met by their own production.

This difference in productive potential is the essential criterion for the trade in food products between the Sahelian countries and the coastal countries. CILSS is currently setting up such a tracking system by expanding its data-collection mechanism to the coastal countries. Production estimates for the coastal countries are presented during regular food security follow-up meetings organized by CILSS.

### 2.2.2 Price Differences

Another incentive to trade is the price differences across borders. In countries that use the same currency, it is more difficult to make this difference pay. Yet, when Mali sold millet to Burkina Faso and Niger in 1998, the prices in Mali must have been much lower than those in the two importing countries to bear the cost of transport and still be competitive with the market prices in Burkina Faso and Niger.

Differences in price also arise from changes in exchange rates. There are a number of currencies of varying importance within the subregion. The three of most interest to food security in the Sahel are: the CFA franc, which covers all of the Sahelian countries and a good part of the relevant coastal countries (Cote d'Ivoire, Togo, Benin), the Nigerian naira and the Ghanaian cedi.

The fluctuations of the naira, especially, has a more or less important influence on trade depending on the exchange rate. There is a very large volume of trade between Nigeria and its Sahelian and coastal neighbors, and the naira's value is a permanent part of the equation in analyzing these exchanges. Between January 4 and October 1, 2005, the naira rose against the CFA franc by 4.97%<sup>37</sup> according to the official exchange rate. The unofficial exchange rate, pulled up by high values<sup>38</sup> on the Jibia market, rose by 7.5%. This increase in the value of the Nigerian currency made the price of cereals imported from Nigeria higher. The higher prices for Nigerian cereals due to the rise of the naira added to the 5% increase in prices in Niger due to the rising cost of oil, which meant that imported cereal prices increased by at least 10% on Niger's markets during the year 2005.

### 2.2.3 Changes in Taxes

Within the ECOWAS area, there is no longer an export tax for local products traded among the WAEMU countries. In contrast, customs duties still exist for trade with Nigeria and Ghana. Changing the duties can have a significant impact on the volume of trade.

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<sup>37</sup> *Evolution des cours des principales monnaies des pays membres de la CEDEAO par rapport au Franc CFA*, Central Bank of West African States, October 2005

<sup>38</sup> As reported by SIMA's collectors, in January 2005 the exchange rate was 270 naira/1000 FCFA, and in December 2005 it was 250 naira/1000 FCFA.

Moreover, some countries are instituting new taxes that are collected at the border for reasons of convenience. This is the case in Niger, which at the beginning of 2003, decided that the income tax on livestock merchants (BIC) would be collected at the border crossing. Animals were taxed at a flat rate by species, and camel trade was greatly disrupted because this tax was significant and encouraged foreign buyers to prefer animals from Chad.

#### 2.2.4 Changes in Economic Policies

The economic policies practiced by each of the subregion's countries often have repercussions on neighboring countries.

This was the case in 2005 in Nigeria, which placed limits on the importation of rice and instituted much more stringent monitoring of illegal importation of commodities. In combination with higher oil prices, these economic measures caused food prices to climb. People then turned to less expensive cereals: millet and sorghum. Moreover, the expansion of poultry production resulting from the closure of the borders to imported frozen chickens from Europe and elsewhere caused a high demand for cereals, especially maize, which increased cereal prices and reduced exports. These few economic steps taken by Nigeria had a direct impact on Niger's economy, which depends heavily on Nigerian surpluses to solve its dryland cereals shortage problems.

It is also the case in Cote d'Ivoire, which has been experiencing a profound political crisis and a severe economic recession since 2002. The fact that the country is divided by conflict seriously disrupts the flow of merchandise from the port of Abidjan to the Sahelian countries. In the other direction, exports from the other countries to Cote d'Ivoire have essentially ceased. Cotton exported from Mali and Burkina Faso to destinations outside of Africa must now pass through Ghana. Livestock, cowpeas and vegetables (onions from Niger) exported from the Sahelian zone must find new outlets. Poor sales of these cash crops cause income for the rural populations in the Sahelian zone to fall or dry up and undermines their food security.

These two examples of economic policy changes or changes in the political situation of the two most-developed countries of western Africa are good illustrations of how the economies in the Sahelian countries and the coastal countries are linked with each other and overlap.

#### 2.2.5 Social and Religious Events

Social and religious events can have a significant impact on the smooth flow of trade between the countries.

In November 2002, racial rioting broke out in Kaduna in northern Nigeria. There were over 100 victims. The problems began after the national newspaper *This Day* published an article challenging the Muslim groups that were condemning the Miss World contest taking place in the country at that time. The subsequent insecurity greatly slowed the flow of trade between Niger and Nigeria—especially for Muslim livestock merchants from Niger, who were taking their animals to Lagos and Abuja while traders awaited the return of calm between the southern Christians and the northern Muslims.

In October 2000, then throughout 2001, Cote d'Ivoire plunged into xenophobia. The economic crisis was severe, the country was poisoned by corruption, and the successive structural adjustment plans (six since 1981) had made inequalities even greater. As everywhere, there was a fertile breeding ground for the resurgence of the demons of racism and xenophobia, especially in a country with a traditionally high rate of immigration and

mixed blood and where “foreigners” were accused of holding economic power. Foreign populations (primarily from the Sahel) fled to their countries of origin. In September 2002, the country divided itself in two, ending economic life in Cote d’Ivoire. The flow of products between the Sahelian countries and Cote d’Ivoire stopped. The country became dangerous for Sahelian merchants.

These two types of events have had a definite impact on cross-border trade, stopping the flows toward the troubled country. The result of halting these flows was poor sales for the adjoining countries, which initially caused the prices of the products normally traded to decrease.

## 2.2.6 The New Economic Environment in Western Africa

All of western Africa has seen profound changes in its economic environment since the end of colonization: in particular, since the beginning of the 1990s.

### 2.2.6.1 Structural Adjustment Policies

Structural adjustment policies were implemented after the Bretton Woods institutions determined that African countries were living beyond their means. They have had both positive and negative repercussions for economic development in each country of the subregion and on their food security.

#### MIXED RESULTS FOR MERCHANT INVOLVEMENT IN FOOD SECURITY

Where cereals and the management of food security are concerned, structural adjustments focused on the elimination of government companies or agencies responsible for purchasing, managing and stockpiling cereals. The lifting of restrictions on cereal trading favored private merchants and gave them enormous responsibility in managing food crises. They became solely responsible for supplying markets and setting sale prices. Unfortunately, not all merchants were ready for such responsibility. Furthermore, they have been excluded from participation in the national institutions for managing food security. Consulted only in the matter of restocking the safety reserves, their knowledge of the market has been ignored to this day.

Structural adjustment was not done in an atmosphere of thorough understanding of the complementary roles of government and the private sector. The restructuring of the public cereal agencies and the restriction of their role to strictly managing the safety reserve were good decisions, because these administrative agencies did not have sufficient flexibility and commercial adaptability to manage the cereals sector well. On the other hand, governments reacted poorly to the resumption of cereal trading by the merchants. Governments and lenders ignored merchants, excluding them from discussions within the national food-security management institutions/agencies. Considered to be mere pawns on the food security chessboard, merchants continued to be “summoned” by the Ministers who were responsible during times of food crisis. Merchants “responded” to invitations to tender like mere service providers. At no time was their essential role in supplying the markets acknowledged. Unable to participate in discussions about food insecurity and the social and human dimensions of product price determination, they continued to act as simple service providers without scruples. Yet, if one talks with them, one can see that they are not indifferent to the famine and poverty experienced by their fellow citizens.

Governments and lenders who helped finance food security missed an important step in food security management. If merchants had been fully involved in the management of food security right from the start, their knowledge of structural adjustment impacts, markets,

prices and the economies in adjoining countries could have benefited the food security institutions. Merchants could have been effective observers and useful to the discussions taking place within the food security institutions.

Moreover, the implementation of short-term food security policies by the governments in response to economic crises often come as a surprise to the private stakeholders, thus disrupting the normal functioning of the markets. This situation increases the risk to private-sector investment in marketing activities, especially stockpiling during the year and interannually.<sup>39</sup>

An attempt to involve merchants in the discussions of Burkina Faso's food security agency or committee (CRSPC<sup>40</sup>) was made in 1998 and 1999. However, the merchants who attended the meetings should have had training so they could constructively participate in the discussions.<sup>41</sup>

#### POSITIVE RESULTS FOR THE DEVELOPMENT OF CROSS-BORDER TRADE

Structural adjustment caused a cross-border trade boom. In the 1990s, trade was still very much limited by customs duties and restrictions of all sorts. It was then determined that the lifting of restrictions on the foreign currency exchange markets stimulated cross-border activities by expanding access to currency through legalization (or quasi-legalization) of unofficial foreign currency exchange. This facilitated the exchange of commodities. Product exchange also got a boost from variations in the timeline, scope and degree of enforcement of reforms, thus triggering general confusion in the official economy—which greatly benefited cross-border trading opportunities.

It seems that cross-border flows of consumer goods<sup>42</sup> from the international market increased during the first decade of structural adjustment, particularly in Benin, Niger and Gambia. At the same time, the flow of goods arriving from Nigeria also increased considerably in the context of a significant devaluation of the naira and a demand for inexpensive goods throughout West Africa.

Trade in local agricultural and livestock products also benefited from this boom. The devaluation of the CFA franc in February 1994 made certain imported products (imported frozen meats) uncompetitive, and consuming countries within the CFA zone, such as Cote d'Ivoire, turned to subregional production to meet their needs. This was the case for livestock, rice, onions and potatoes. Subregional products were then highly sought after. On the other hand, trade between Niger and Nigeria decreased sharply<sup>43</sup> because of the CFA franc's devaluation with respect to the naira. These changing flows tended to correct themselves over time.

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<sup>39</sup> “Regional Conference on the Agricultural and Food Situation and Trade Opportunities in the Sahel and West Africa,” Bamako, Mali, March 16-18, 2005, *Final Report*, CILSS/IFDC, March 2005

<sup>40</sup> *Comité de Réflexion et de Suivi de la Politique Céréalière* [Reflection and Followup Committee for the Cereal Policy]

<sup>41</sup> Some did not understand French, many experienced difficulties analyzing the information they had, most had never participated in such a body and said nothing.

<sup>42</sup> Especially textiles, used vehicles, cigarettes, and electronics

<sup>43</sup> The flow of Nigerian cereals to Niger decreased from 100-200,000 metric tons in the 1980s to about 80,000 metric tons in 1995. Kate Meagher, *op cit*.

### 2.2.6.2 Abolition of Monopolies and Dissolution of Government Companies

The end of the cereals and rice marketing monopolies was a positive aspect of structural adjustment and for food security. Often poorly managed, government companies that organized purchases and/or imports (for rice) had become commercial “machines” used to generate funds for the public and government sector. All too often, the public good was relegated to the background.

The abolition of the monopolies brought competition back to the essential food products economy. Their demise allowed diversification of cereal suppliers, who were no longer subject to licensing, thus ensuring more opportunities for supplying the markets (more merchants and more products), and allowed adjustment of supply and demand prices, which is often good for the consumer. However, it did take merchants a few months to learn how to adjust the market supply: during some periods, purchases were made that were too large, causing a drop in prices;<sup>44</sup> there were also times of inadequate supply that caused price increases. But for many years now, supply has, overall, been well adapted to demand.

In contrast, the recent food crisis revived the discussion about which structures are supposed to provide the functions formerly handled by the pre-1990 cereals agencies, namely market regulation and supply during famines.<sup>45</sup>

### 2.2.6.3 The Creation of Favored Areas: ECOWAS<sup>46</sup> and WAEMU<sup>47</sup>

The ECOWAS was set up in 1975. Its objective was to promote integration of the West African region through actions simultaneously affecting the free circulation of goods and people and their freedom to set up shop, the creation of a single monetary zone, the adoption of national economic reforms, and the stimulation of investment. However, because of a lack of involvement and interest on the part of the governments in implementing these various aspects, ECOWAS was not able to obtain convincing results. Rather, the 1990-1991 assessment was very disappointing. Only the national economic reforms had been completed, under pressure from the lenders, in order to stop the accelerated deterioration of economic and financial equilibrium.<sup>48</sup>

Finally, in 1993, the revision of the Cotonou Treaty allowed ECOWAS to be recognized as the only institution for the integration of West Africa, and its decisions were given the force of law (introduction of the principle of supranationality).

Following these treaty revisions and the devaluation of the CFA franc, the WAEMU was created in 1994. It succeeded the WAEC,<sup>49</sup> which had existed since 1973. On the foundation built by the latter<sup>50</sup> (implementation of the TCR<sup>51</sup> and compensation of unrealized losses by

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<sup>44</sup> After the end of the General Equalization Fund (CGP) monopoly, there were periods of excessive importation in 1998 and 1999

<sup>45</sup> Forum on food security in the Sahel and West Africa: medium- and long-term challenges. Summary of the presentations and discussions. Organized by the Sahel and West Africa Club (SWAC)/OECD, the Permanent Interstates Committee for Drought Control in the Sahel (CILSS), and the Economic Community of West African States (ECOWAS), Paris, October 18, 2005-November 2005

<sup>46</sup> Economic Community of West African States

<sup>47</sup> West African Economic and Monetary Union

<sup>48</sup> Daniel C. Bach, “Crise des institutions et recherche de nouveaux modèles,” in *Intégration et coopération régionales en Afrique de l’Ouest*, Karthala, 1996.

<sup>49</sup> West African Economic Community

<sup>50</sup> West African Community

<sup>51</sup> *Taxe de Compensation Régionale* [regional cooperation tax]

the CDF<sup>52</sup>), the WAEMU was to establish mechanisms for making budgetary and fiscal policies consistent: restoring the banking systems, standardizing legal and regulatory frameworks for governing economic and business activity, creating a regional financial market and creating a free-trade area. The results very quickly surpassed those obtained by the ECOWAS thanks to the progressive nature of the TCR mechanisms and the existence of a common monetary base. Functional cooperation is progressing (several treaties have been signed and financial aid from lenders is picking up again after the devaluation of the CFA franc). However, roadblocks still exist where transfer of sovereignty comes into play.

This long task of integration, begun just after decolonization, has not been easy because the existing significant monetary and tax and customs disparities were sources of more immediate and secure revenues than the gains expected from the liberalization of trade between neighboring countries.

In 2005 customs integration was well on its way. It can be supported by making the best use of the facilities granted to developing countries by the WTO. First, the common external tariff (CET) that the ECOWAS is developing could take advantage of the possibilities offered by consolidated rights (20% is currently used, whereas the maximum authorized for the WTO is 80%) in order to favor domestic production and limit imports. Moreover, West Africa could make use of the principle of "special and different" treatment, consisting of specific provisions of the WTO agreements that confer special rights to developing countries, and allow developed countries to grant developing countries more favorable treatment than that given to other WTO members. For example, these specific provisions allow longer periods for implementing agreements and commitments, or measures aiming to increase commercial opportunities for these countries.

#### 2.2.6.4 Urbanization

The redistribution of populations within the region is an important determining factor on food security. In particular, the concentration of people in the cities brings a new dimension to food insecurity. It means that in the future, rural lands must produce more with less labor, to feed a concentration of population that has been steadily expanding for over 40 years.

Around 1930, there were not many cities larger than 50,000 inhabitants in the West Africa (hardly more than 10). It was between 1950 and 1975 that the region saw its first phase of intense urbanization, resulting from both heavy rural emigration and sustained natural growth (2.7% per year). In 1960, there were 600 urban centers with more than 5,000 inhabitants, and the total urban population was nearly 13 million for the entire subregion - an average level of urbanization of 13%. This movement accelerated between 1960 and 1970 when urban growth exceeded 7% per year. In 1980, a count revealed some 2,300 urban centers with a population of more than 5,000, and a total urban population of 50 million, including 30 million in Nigeria this constituted levels of urbanization of 34% and 42%, respectively.

Since the beginning of the 1980s, urban growth has slowed in nearly all of the countries due to the reversal of the world economic situation and the effects of structural adjustment policies. In 1990, there were almost as many people living in the cities as in rural areas, while in 1960 rural residents had been six times as numerous.

Overall, and despite all sorts of uncertainties, the image of an essentially rural Africa no longer matches reality, and will continue to move farther away from it. More and more, cities

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<sup>52</sup> Community Development Fund

are becoming a feature of the African landscape, especially since, as we know, their economic and political weight is disproportionately greater than their demographic size.

The growth rates recorded for the urban populations from 1960 to 1980 are on the order of triple those recorded in European cities at the height of the Industrial Revolution: they include both natural growth and the contribution of rural migration. Both rates are much higher than in Europe during the period of industrialization.

Moreover, it is clear that urbanization accentuates the region's tilt toward the Nigerian federation, which today contains 3/5 of West Africa's urban population, with a level of urbanization approaching 50% and an urban population density of 50 people per square kilometer (four times greater than the regional average of 12).

The growth of the cities has had a notable impact on food needs. When there are fewer rural residents and more urban ones, the yield per producer must increase each year to keep up with, on the one hand, natural population growth, and on the other, urban growth. Imports have had to adapt to this increasing demand. The flows have increased. Still, some portion of urban food needs—although the size is difficult to specify (more than 20%)—is met without turning to the market. This phenomenon is related to a secondary urban and peri-urban agriculture,<sup>53</sup> and can also be explained by non-market exchanges between urban and rural areas thanks to family ties.<sup>54</sup> In effect, city-dwellers and their rural relatives often continue to constitute a single “production-consumption unit,” if not a single production-reproduction unit, through multiple trading of monetarized and non-monetarized goods and services. This is especially true of first-generation city-dwellers.

#### 2.2.6.5 Intra-Regional Migration

There are few other regions in the world where people are as mobile as in Africa. Of the 150 million international migrants, nearly 20 million (13%) originate in Africa. Moreover, of the 9 million persons displaced internally in Africa, a third are from West Africa. Migration in this region remains primarily intra-regional and is done mostly between neighboring countries.<sup>55</sup> For West Africa, Cote d'Ivoire and, more recently, Nigeria, have drawn in the populations of the Sahel because these countries offer(ed) monetary opportunities that are attractive to vulnerable families of the northern countries. These seasonal migrations fall into the category of survival strategies – those used especially to make up for a food deficit. However, these migrations do not seem to yield very good results for the vulnerable northern areas: it seems that the migrants, who are young men, on the one hand, seldom or no longer participate in farming, and on the other hand, are incapable, when they return, of supplying the means necessary to make up the food shortage. Migration brings in very little or nothing at all.<sup>56</sup>

Migrant populations take their dietary habits along with them, so these migrations are sources of a flow of food products to supply migrants that live in coastal countries. For example, transfers of millet and sorghum are needed in the large coastal cities (Abidjan, Abuja, Accra, Cotonou, Lomé) to meet the demand of the “non-native” populations originally from Mali, Burkina Faso, Niger and Chad, especially for social and religious events such as the Tabaski holiday, the end of Ramadan, weddings and baptisms.

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<sup>53</sup> Crops grown in outlying areas of the city

<sup>54</sup> Philippe Antoine. “L'urbanisation en Afrique et ses perspectives,” *Aliments dans les Villes* review, FAO, 1997

<sup>55</sup> International seminar on migration policy in West Africa, Dakar, December 18-21, 2001

<sup>56</sup> Florence Boyer-Migrinter

### 2.2.7 The Development of Communications Networks

Since the beginning of the 1980s, these networks have developed in all senses of the word "communication": communication routes (interior and border routes), telecommunications (appearance of the mobile telephone), panel discussions and regional meetings. All of these are behind more energetic trading.

Roads have developed a great deal thanks to aid. The European Union took over from the World Bank for the completion of these large projects. The border routes are particularly important because they facilitate cross-border trade. One of the last large projects (2003) was the repair of the Burkina Faso-Niamey border road, which had become a real obstacle to trade flows between Niger and Cote d'Ivoire, Ghana and Togo. The road from Nioro (Mali) to the Mauritanian border was also recently completed (in 2004), facilitating flows from Mali to Mauritania. The road from Natitingou (Benin) to the border of Burkina Faso was completed in 2002.

The appearance of mobile telephones was a real revolution in African trade. Now, merchants can reach and be reached while they travel. The mobile telephone has greatly speeded up the transmission of information, which is still an important asset in the business world.

### 2.3 THE EVENTS OF THE 2004-2005 SEASON

Since the last great famine in 1984, the media have not said much about food insecurity in the Sahelian zone. Although the shortages of 1990-1991 and 1997-1998 were significant,<sup>57</sup> they did not provoke a media campaign on famine in the Sahel.

The 2004 production year suffered from drought and locusts, but production results were not particularly alarming compared to other years. In 2004, the shortage was only 223,000 metric tons in Niger, i.e., relatively modest. Production reached a level of 2.6 million metric tons, or 11% less than the average for the past five years, but was still 35% higher than in the 2000 season,<sup>58</sup> which was bad but did not give rise to a major food security crisis.<sup>59</sup> The drought affected pasturelands more than cultivated lands.<sup>60</sup> The joint CILSS/FEWS NET/WFP mission in October 2004 estimated that the fodder shortage was 154% greater than that recorded in 2000; it was considered to be the largest shortage ever recorded in Niger<sup>61</sup>. The information systems worked well, since the livestock farmers were warned by the livestock departments and the media of the situation very early on, and the seasonal migration to the designated reservoirs in the coastal areas was massive and took place very early in the season. But farmers that did not follow the advice sold or lost a significant amount of their flock or herds.

Although the crop production shortage was relatively limited, there was an extremely large price hike for millet in July 2005, with an average price of between 25,000 and 30,000 FCFA per 100-kg sack, depending on the market. After relative stagnation at around 13,000 FCFA/sack between October and January, the increase began in the month of February, with the price rising to about 15,000 FCFA/sack, followed by another climb in

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<sup>57</sup> The 1997 production season ended with large shortages totaling 760,000 metric tons in Niger and 370,000 m.t. in Burkina Faso

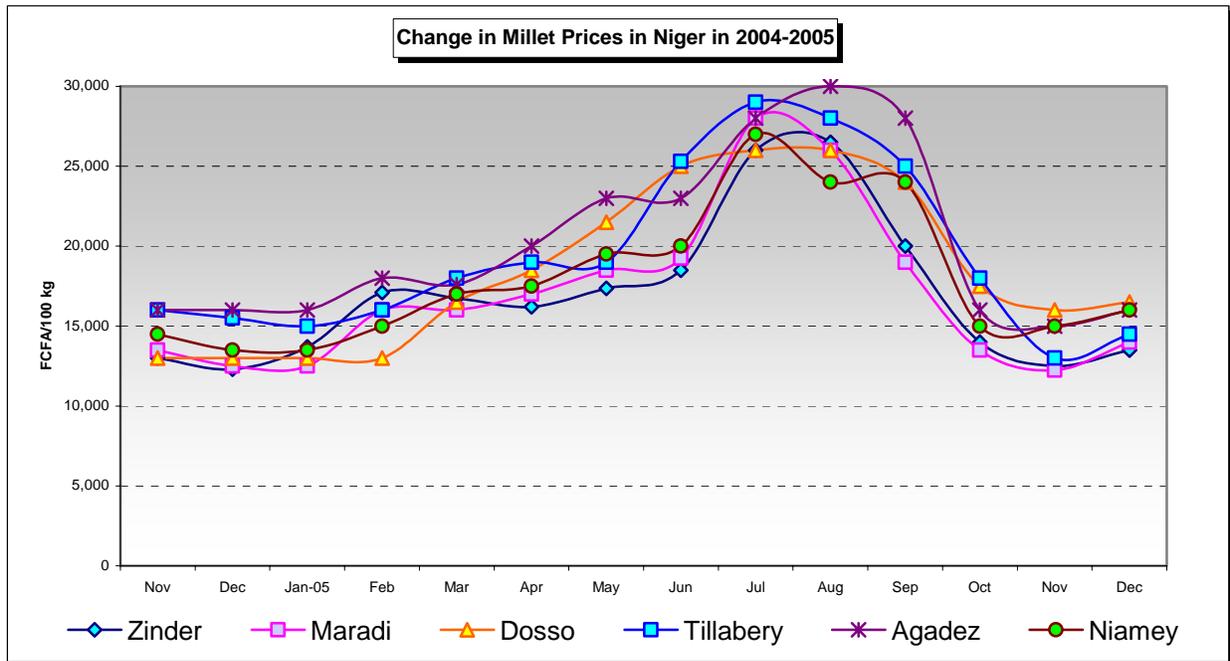
<sup>58</sup> Production in 2000 was 1.9 million metric tons

<sup>59</sup> "Niger: An Evidence Base for Understanding the Current Crisis," FEWS NET/USAID, July 28, 2005

<sup>60</sup> "Les facteurs endogènes et régionaux qui sous-tendent la crise alimentaire du Niger," FAO/GIEWS world followup, August 2005

<sup>61</sup> "Niger: An Evidence Base for Understanding the Current Crisis," FEWS NET/USAID, July 28, 2005

April, when millet was selling at about 20,000 FCFA/sack. These prices were still reasonable compared to their development during, e.g., the 2000-2001 agricultural season, a season when there were greater shortages. But the upward jump was particularly sharp in July, when the price of a sack of millet shot up to between 25,000 and 30,000 FCFA, depending on the market. These were the highest prices ever recorded in Niger. Beginning in August they subsided slightly, falling back to about 25,000 FCFA/sack in September. They returned to their normal level of 15,000 FCFA/sack in November.



Source: Afrique Verte bulletin and SIMA

What happened on the cereals market to cause the prices to reach levels never before seen when the shortage was not very large? The price increase was the result of insufficient supply in relation to demand. But, it was also the result of the fact that the price index increased by 5% between March and July in response to the increase in oil prices.

What happened in July to cause such an increase, when the next season's rains had arrived and the new season was starting off rather well? A number of factors came together prior to July of 2005:

First, imports dropped. Cereal supply suffered from the after-effects of shortages that are usually satisfied in Niger through imports from Nigeria, Burkina Faso and Mali for millet, and from Nigeria, Benin and Ghana for maize. In 2000-2001, millet imports had reached 100,000 metric tons, of which 75,000 MT came from Nigeria; sorghum imports were 21,000 MT, including 17,000 MT from Nigeria and maize imports were 90,000 MT, of which 19,000 MT came from Nigeria and 70,000 MT from Burkina Faso and Ghana. So Niger had imported a total of 111,000 MT of cereals from Nigeria. In 2005<sup>62</sup> these imports could not balance production deficits for the following reasons: i) high prices in Nigeria and in other areas of the sub-region; ii) a drop in agricultural production (Cameroon, Nigeria, Chad); iii) formal and informal obstructions of cross border commodity flows and iv) structural changes

<sup>62</sup> In 2004-2005, Niger officially imported slightly more than 5,000 metric tons from Nigeria and a total of 25,000 m.t. from all sources (DPV figures). Geert Beekhuis, "Niger: Profil des marchés céréaliers," WFP, August 2005

in demand - due to the increase in urban population<sup>63</sup>, a rise in food<sup>64</sup> prices that drew consumers towards cheaper cereals (millet, sorghum) and the political decision<sup>65</sup> to reduce rice imports – and in supply resulting from a reduction in production in northern Nigeria, caused by a decrease in area planted to cereals in favor of more lucrative crops like sesame<sup>66</sup>, There was also a lack of encouragement from Niger's government to support inland production.

Prices in Nigeria, which had been higher than in Niger for several months, increased again due to demand from a number of consuming areas (both internal and border areas. Given the high level of integration between the markets of northern Nigeria (Dawanau) and southern Niger (Maradi and Zinder),<sup>67</sup> the prices in Niger matched the Nigerian increase.

Moreover, Niger's government, in the context of its aid to vulnerable populations and through the intermediation of the CCA,<sup>68</sup> issued two invitations to bid (at the end of April and in mid-May 2005) to supply a volume of 30,000 metric tons of cereals for subsequent sale at moderate prices. The invitation to bid made reference to private sector purchases to be made outside of Niger. The only country from which these purchases could be made was Nigeria, but prices on the Nigerian markets were higher than those on the markets of southern Niger.<sup>69</sup> Since the government was asking merchants not to exceed 20,000 FCFA/sack, the merchants had no other choice but to turn to the markets in Niger. So the invitation to bid was answered with cereals from Niger, and the purchases were made during June, causing supplies on the Maradi and Zinder markets to dry up and pushing prices up (+30% during the second two weeks of June). At the beginning of July, prices reached more than 30,000 FCFA per 100-kg sack. Under the influence of MSF [Médecins sans frontières] announcements and media campaigns during the month of June, the international and Nigerien NGOs wanted to help populations at risk in their geographic areas of influence, so they began to buy cereals from Niger markets.

Finally, increases in prices also resulted from the effects of announcements concerning both the shortage affecting the entire Sahelian zone and the health and food conditions of children in the Maradi region (one of MSF's areas of intervention), among others. The media campaign undertaken by the MSF had a negative impact on markets because it implied a serious food crisis. Everyone "holed up" at home (closure of the borders, excessive stockpiling by the producers and merchants). Commodities markets that are highly volatile and sensitive to the least bit of information hinting at shortages or surpluses, and West Africa's liberalized markets are no exception to the rule that applies to the large international markets.

It was this combination of events that caused prices to rise abnormally sharply in July on Niger's markets. In the following diagram, 2005 prices are by far the highest for the last 5 years because of the hike of July.

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<sup>63</sup> Population growth is estimated at more than 3.3 million people per year

<sup>64</sup> Doubling of the price of some products like gari, cowpea, rice or maize – Source: Daily Champion journal recaptured in SMIAR publication of August 2005

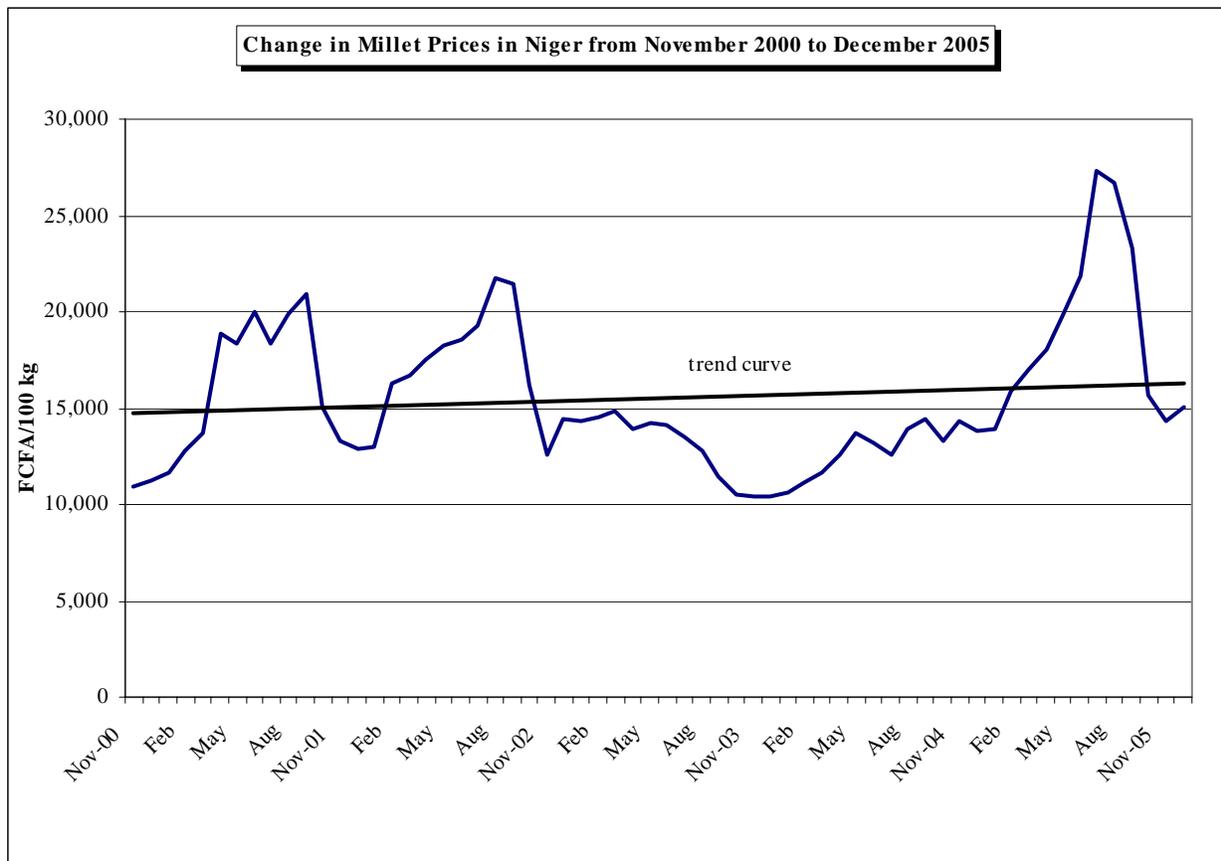
<sup>65</sup> Food industries experienced rapid development these past years and so enjoy a protection without measure against imports. A special mass production of food program (SMFPP) was launched in the state of Kano in January 2004 – FEWS NET – Trip Report to Nigeria – From the 23<sup>rd</sup> of August to the 3<sup>rd</sup> of September 2005

<sup>66</sup> Mission report of the Nigerian SAP on a visit in Northern Nigeria in February 2003

<sup>67</sup> V. Caupin and B. Laporte, "L'intégration régionale des marchés céréaliers: une approche économétrique," in *Echanges transfrontaliers et intégration régionale en Afrique de l'Ouest*, Cahiers des Sciences Humaines, new series no. 6, ORSTOM, 1998

<sup>68</sup> *Cellule de Crise Alimentaire* [Food Crisis Unit]

<sup>69</sup> Since May, millet prices on the Jibia market (a Nigerian border market) had been higher than prices in Niger, and reached 30,000 FCFA per 100-kg sack when prices in Maradi, in Niger, were scarcely above 25,000 FCFA/sack for the same month.



Source: SIMA

Why was the public so dramatically affected by the price increase? Firstly, this was because prices were very high, but especially, because the standard of living and health situation of at-risk populations was particularly fragile and already very unstable. The standard of living was decreasing, especially in rural areas. As during all food crises, at-risk populations tried to sell their livestock. The animals that stayed in Niger<sup>70</sup> suffered from lack of pasture, and with the increase in animal sales and poor animal health conditions, prices fell, as usual. Terms of trade for millet and livestock deteriorated.

Aside from livestock, income from onions (harvested during the pre-harvest period) normally used to purchase cereals was two-and-a-half times less than in 2003<sup>71</sup> because demand in Cote d'Ivoire and Ghana dropped. Between March 2004 and March 2005, prices had fallen by 60%. The market seems to have suffered from the effects of increased imports of onions from Europe into markets of the coastal countries.<sup>72</sup>

### 3 IDENTIFICATION OF THE HINGE MARKETS TO BE MONITORED

In this chapter, a first attempt to identify hinge markets to monitor is presented. This will be improved by a more in-depth analysis of cross border commodity markets as proposed in "Recommendation # 3" section (chapter 5).

<sup>70</sup> A large part of Niger's flocks and herds had left for the seasonal migration to the coastal countries.

<sup>71</sup> The price fell from 250 FCFA/kg in March 2003 to less than 100 FCFA/kg in March 2005. FEWS NET monthly report, March 2005

<sup>72</sup> This information could not be verified.

### **3.1 NIGER**

One might say that all of the subregion's markets offer transactions involving food products (except, strictly speaking, the livestock market). So, product flows go in two directions: from the producer who has a surplus to the wholesaler, via the collector/assembler; and from the wholesaler to the consumer located in either a rural or an urban area, via a retailer. In this exchange structure, the "hinge" markets are the assembly markets where cereals and other food products are brought together and stored before being distributed to urban or rural consumers at the national or regional level.

The "collecting markets" or assembly markets category includes markets where products are stored before being resold at the local or regional level. Some of these markets have a major impact on food security. In Niger, markets such as those at Maradi, Zinder, Diffa, Tillabery, Tahoua and Agadez, which are in Niger's large urban centers, have a very significant impact on the survival of non-cereal-producing populations. Not only do these markets supply urban consumers; they also supply rural areas experiencing shortages. The system for the flow of products within the country is the same in the other Sahelian countries. Tracking the supply for these markets is a good tool for evaluating the region's food security. Prices in these markets are generally tracked by the Sahelian countries' market information systems, but the quantities stockpiled are estimated poorly or not at all.

These same markets (the large urban centers in each country), along with certain other, more specific markets, are also of prime importance to the survival of at-risk populations because they concentrate all of the exchanges involving the sale of cash products. Depending on where these cash products are produced (in Niger, Diffa for sweet peppers; Galmi, Dosso and Niamey for onions; Balleyara, Bakin Birgi, Tchín-Tabaradène, etc. for livestock; Balleyara and Bakin Birgi for cowpeas), these markets are the point of departure for exports. Prices and quantities on these markets also need to be tracked to see the changes in income of at-risk populations in the production zones.

Other markets along the border with Niger are also assembly markets that are important to trade with this Sahelian neighbor: Jibia, located 40 km from Maradi; Illela, 5 km from Birni-Nkonni; and Damasak, near Diffa. These markets are trading points not only for cereals, but also for many other products from the two countries (cowpeas, onions). The prices in these markets are currently tracked by Niger's agricultural market information system, but the quantities stocked are not. For livestock, there are more specific markets that are tracked by Niger's livestock market information system (SIM détail).

### **3.2 NIGERIA**

An analysis of cereals in the eastern part of West Africa shows that all flows seem to depart from or converge in Nigeria. Nigeria is the main regional center for cereal transactions. Thus, the longstanding structural millet and sorghum shortages in Niger and Chad, and the more recent maize shortages have been made up by surpluses coming from the states of Sokoto and Kebbi in northwestern Nigeria; Katsina, Kano, Kaduna, Jigawa and Bauchi in north-central Nigeria; and Yobe and Borno in northeastern Nigeria.

#### **MARKETS TO BE MONITORED**

Dawanau is located just outside the city of Kano, 240 km from Maradi and 600 km from the border with Chad. It is the largest assembly market, and a large part of the marketable surpluses are found there. It draws merchants from throughout the eastern part of West Africa (Burkina Faso, Niger, Chad, Cameroon and Benin), and they bring not only products

but also information, from their own regions and countries. This is the largest cereal market in the West African region. Markets in the neighboring countries, especially those in Niger, are particularly connected to this market: there is a high degree of correlation between prices on the Dawanau market and those on Niger's main assembly and consumer markets. The presence on this market of merchants from many neighboring countries, in association with the information they bring on the situation in their countries, is a contributor to changes in prices. Similarly, these changes are quickly reflected on the markets from which the merchants come. Tracking of prices and quantities on the Dawanau market, as well as the information circulating there, should be undertaken to improve analysis of the situations, relationships and repercussions of each country on the food security of the others. The recently instituted MITSOWA project, implemented by the IFDC with American financing, is now following all events on this market. Many FEWS NET and CILSS missions, along with their partners started analyzing market performance since 2005 as well as its role in the sub-region for all the products they deal with (cereals and cash crop products).

The market of Potiskom is located in the center of the maize-producing region, about 330 km from Zinder and halfway between the Dawanau market and the Maiduguri market. It is a large maize-trading center.

The Maiduguri market is located in the center of a cereal production region, but relatively close to the border and to three large cities in three different countries: 230 km from N'djamena (Chad), 170 km from Diffa (Niger) and 190 km from Maroua (Cameroon). As with the Dawanau market, all sorts of agricultural and livestock products are traded on this market by the four countries.

### **3.3 OTHER COUNTRIES OF THE COAST**

Several markets or trading zones should be followed.

First, the market of Malanville in Benin is a border market located 5 km from the Gaya market in Niger. The Malanville to Gaya route is developing both local and regional cross-border dynamics and is notable for the volumes traded (100,000 metric tons of cereals, mainly maize) and the development of secondary corridors across the three borders: Malanville (Benin), Gaya (Niger) and Kamba (Nigeria).<sup>73</sup> This market plays an important role in inter-regional exchange: Benin is represented by cereals (millet, sorghum, maize, rice, cowpeas), tubers (yams, cassava, gari, tapioca), fruits and a few vegetables. Niger brings cowpeas, tiger nut, tomatoes and natron. Nigeria trades garlic, ginger and green pepper.

The Lomé market serves as an assembly market for Niger because Nigeriens living in the city buy maize and other products from this market and send them home to their families in Niger. Accra and Cotonou play the same role.

The Korhogo market in Cote d'Ivoire, located about a hundred kilometers from the border with Mali and Burkina Faso, is an important market for cereals trading (millet, maize and rice) among the three countries<sup>74, 75</sup>.

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<sup>73</sup> Guy Michel Boluvi, "Malanville-Gaya: comptoir commercial et couloir de spéculations," *Frontières et Intégrations en Afrique de l'Ouest*, July 2004

<sup>74</sup> WFP, market profile of Cote d'Ivoire, 2006 ([www.wfp.org](http://www.wfp.org))

<sup>75</sup> Pascal Labazée, "Les échanges entre le Mali, le Burkina Faso et le Nord de la Cote d'Ivoire," in *Grands commerçants d'Afrique de l'Ouest*

### **3.4 BURKINA FASO**

For this Burkina Faso, markets that should be followed are Bobo Dioulasso and Pouytenga, close to Koupela. The latter is a special market as it is located in a small production zone of Burkina Faso and relatively far from boundaries. It has become a market for important exchange with Ghana, Togo and Niger. Cereals and maize, in particular, dominate this market. Livestock market is also important.

## **4 KNOWLEDGE GAPS**

The gaps in knowledge are not always a case of missing information. A great deal of information already exists. Rather, this information is not included in food security analyses. As noted above, many factors interact to determine product prices. Sometimes, factors that have little to do with the price of food and cash crops in West Africa can influence the food security of populations in the Sahel. Take, for example, frozen poultry imports from the European Union. When these imports were halted in Nigeria, Nigerian poultry production increased, causing an increase in maize consumption in Nigeria, thus decreasing the maize available for export to Niger. This situation caused prices to rise because there was a demand in Niger. Now imagine that European subsidies on poultry were to disappear, stopping their importation in all West African countries. It is difficult to quickly see what relationship there would be between these subsidies and feeding of at-risk populations in the Sahelian countries.

All this is to say that there will always be great uncertainty in the analysis of food-product prices. Often, it is only after the prices have climbed with no obvious explanation that assessments are done to determine the “derived” factors behind the price hikes. Meanwhile, the food situation has deteriorated.

Since much of the information already exists, let us first take a look at existing information on the major factors influencing prices and production, namely climatic, economic, demographic, political and social information.

### **4.1 AVAILABLE INFORMATION**

A general survey of published information concerning food security and cross-border trade quickly reveals a natural classification: regularly (continuously) collected, practical and dynamic information; and sporadically collected, more descriptive and theoretical information. These two types of information complement each other in creating a good food security analysis. The first type gives a concrete idea of the market and the second provides various perspectives, depending on the topics covered, from which an analysis of the facts can be done.

#### **4.1.1 Practical Information**

Many structures and agencies provide this type of information. Data collected are for production, markets and the food situation of the population<sup>76</sup>.

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<sup>76</sup> Presenting this information is limited chiefly to markets subjects and its links to food security. More information is available on malnutrition and food security that are not identified in the current chapter

#### 4.1.1.1 Production Information

Two types of structures provide information concerning the production of agricultural and livestock products.

The statistical departments from various West African countries and the statistical departments in the nine Sahelian countries collect data on cereal yields using the collection system set up by the DIAPER project (estimate + yield squares). For other products and in the other countries, each statistics department has its own data collection system. The data are not considered highly reliable, but they are the only existing primary source of information on each country's production.

The CILSS, which has existed since 1973 and brings together the nine Sahelian countries, works by using data from the national statistical departments and comparing them to estimates made from satellite images, with the support of the FAO and FEWS NET. Its role is to enable the Sahelian country governments to understand issues related to food security and management of natural resources on a sub-regional scale, and to suggest effective measures for solving them problems. The AGRHYMET regional center's Information and Research Department (one of the three CILSS sites), based in Niamey, is responsible for tracking the development of the agricultural seasons (for cereals) in the nine CILSS countries, as far as both climate and production are concerned. Thanks to the AP3A program supported by FEWS NET and the FAO, it has also defined structurally vulnerable zones to be tracked. It collects, analyzes and distributes information on climate, agrometeorology, water, grazing and plant health as well as data concerning natural resources (soils, water, forests, etc.). It helps the Sahelian countries publish an annual cereal totals report. This information can be found online at [www.aghrymet.ne](http://www.aghrymet.ne).

#### 4.1.1.2 Market Information

The national market information systems (SIMs) and product observation posts collect, process, analyze and publish prices for various products. SIMs have existed in most West African countries (both Sahel and coastal countries) for a fairly long time (OMA in Mali ([www.oma.gov.ml](http://www.oma.gov.ml)), SIM/CSA in Senegal, SIMA ([simc@intnet.ne](mailto:simc@intnet.ne)) and SIM bétail ([sscdsimb@intnet.ne](mailto:sscdsimb@intnet.ne)) in Niger, SIPAG in Guinea, OCPV in Cote d'Ivoire, SIM/SONAGESS in Burkina Faso ([www.statistika.net](http://www.statistika.net)) etc.). The newest are Togo's SIM, generously supported by RESIMAO,<sup>77</sup> and the PASIDMA<sup>78</sup> project (based in Bamako) and financed by the USAID through the Michigan State University. These market information systems often issue two types of publications:

- ◆ Weekly radio broadcasts of prices in ethnic languages, intended for market players, but especially, for producers and consumers.
- ◆ Monthly, semiannual and annual written publications, depending on the institution or agency. Unfortunately, these publications are difficult to consult online because these information agencies do not have websites.

RESIMAO, a regional information systems network based in Bamako that brings together all of the subregion's market information systems (Burkina Faso, Cote d'Ivoire, Guinea, Mali, Niger, Senegal, Benin and Togo) and covers 390 rural and urban West African markets. It publishes weekly prices from the regional market information systems at [www.resimao.org](http://www.resimao.org).

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<sup>77</sup> Réseau des Systèmes d'Information sur les Marchés d'Afrique de l'Ouest [West African Market Information Network]

<sup>78</sup> Projet d'Appui aux Systèmes d'Information Décentralisé du Marché Agricole [the Mali Market Information Project]

Customs statistics and crop protection departments collect information on the imports and exports of each country. Data are not usually very reliable, especially for raw materials produced locally, and are little used except to determine orders of magnitude for cross-border trade. These services are not accessible online.

MITSOWA<sup>79</sup> is a network set up by the IFDC and financed by the USAID. Its goal is to promote regional agricultural trade and to improve food security in West Africa through better integration of the efforts underway in the region. The project publishes a large amount of very practical commercial information (prices, conferences/meetings/panels/selected events and their proceedings, contact lists by country, projects, etc.). This information can be found at [www.wa-agritrade.net](http://www.wa-agritrade.net) and [www.mistowa.org](http://www.mistowa.org).

The NGO Afrique Verte, financed by several lenders including *La Coopération Française* and the European Commission, supports cereal producers in selling their produce. It facilitates relationships among producers in surplus and deficit areas in three countries: Mali, Burkina Faso and Niger. Each month, it publishes an analysis of cereal prices in these three countries based on data collected by the national market information systems. These publications can be found online at [www.afriqueverte.org](http://www.afriqueverte.org).

#### 4.1.1.3 Information on the Food Situation

The national EWSs in the various Sahelian countries are the source of the collection and analysis of a certain amount of data. Information collected includes quantitative information about nutritional status, market prices and production estimates for agricultural products and forage; and qualitative information on food-related and economic behavior. Mali's EWS can be visited online at [www.sap.gov.ml](http://www.sap.gov.ml); Mauritania's EWS is found at [www.csa.mr](http://www.csa.mr). The other EWSs appear not to have websites.

Washington DC-headquartered FEWS NET<sup>80</sup> is an early warning system financed by the USAID. The field offices in six western African countries analyze food security in these countries. FEWS NET publishes monthly food-security reports for each country tracked and joint bulletins with the CILSS covering all of West Africa. This structure provides accurate and complete information on rainfall and plant cover (maps and satellite images), price changes and production estimates, livelihoods as well as coping and survival strategies of the people and emergency operations. This information can be found at [www.fews.net](http://www.fews.net).

GIEWS,<sup>81</sup> based in Rome, is the FAO's early warning service and also publishes monthly reports on the status of food security in all West African countries. GIEWS is assisted in these countries by the FAO official representatives. It publishes monthly analytical bulletins for each country. This information can be viewed at [www.fao.org/giews/french/](http://www.fao.org/giews/french/).

FIVIMS<sup>82</sup> is an FAO project financed by a number of lenders. Its objective is to improve information concerning food security and vulnerability. FIVIMS is a network that collects, analyzes and disseminates information regarding people vulnerable to food insecurity: their geographical location, the reasons for their vulnerability, and the risks to which they are

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<sup>79</sup> Regional networks of market information systems and agricultural trading in West Africa

<sup>80</sup> Famine Early Warning System Network

<sup>81</sup> Global Information and Early Warning System

<sup>82</sup> Food Insecurity and Vulnerability Information and Mapping Systems. The website [www.afriquefrontieres.org](http://www.afriquefrontieres.org) is published by the Sahel and West Africa Club, 94 rue Chardon Lagache, 75016 Paris.

exposed. Two West African countries participate in FIVIMS: Burkina Faso and Cape Verde. The information published by the FIVIMS is available online at [www.fivims.net](http://www.fivims.net).

Finally, WFP undertakes structural vulnerability assessments (VAM) and cyclical (food security evaluations). All documents are available on the WFP website at [www.wfp.org](http://www.wfp.org).

#### 4.1.2 Prompt, Descriptive and Theoretical Information

Food security information is very diverse in nature and issued by a large number of agencies and research centers. An attempt to classify it by general topic is made in the appendix, with the topics being: the crisis of 2004-2005, industry studies by product and by country, trading in Africa, regional integration, commercial policies in the countries of the subregion and demography and urbanization.

Several important information sources stand out in particular:

##### REFERENCE BOOKS:

- ◆ *Echanges transfrontaliers et intégration régionale en Afrique de l'Ouest* (Cahier des sciences humaines [Social Sciences Journals] no. 6, Autrepart collection, Edition de l'Aube), ORSTOM, 1998 (229 pages)
- ◆ *Grands commerçants d'Afrique de l'Ouest* (Hommes et Sociétés collection), IRD éditions, 1993 (226 pages)
- ◆ *Intégration et coopération régionales en Afrique de l'Ouest*, Karthala/IDRC, 1996 (393 pages)

##### SPECIALIZED PERIODICALS:

- ◆ *Politique Africaine* – [www.politique-africaine.com](http://www.politique-africaine.com). Published by *Les éditions Karthala*, *Politique Africaine* is a multidisciplinary review analyzing policy in Africa. It was created in the early 1980s, and is published quarterly. Each issue is structured around a case history concerning a particular topic, country or regional area. Consisting of a half-dozen articles, each case history is the equivalent of a miniature collective work written by top specialists on the topic.
- ◆ WABI<sup>83</sup> - [www.afriquefrontieres.org](http://www.afriquefrontieres.org). This website is published by the Sahel and West Africa Club (SWAC). In May 2002, the club's secretariat arranged a seminar in Accra bringing to light the new dynamics of regional integration in West Africa. On this foundation, it built a "frontiers" program under which it seeks to establish the relationship between experiences in the field and political decision-making. Along with Enda Diapol, SWAC's secretariat is behind the WABI initiative. Publication of the working documents is irregular. The site also publishes a borders-related page.
- ◆ DIAL (Development Institutions and Analyses for the Long term) -[www.dial.prd.fr](http://www.dial.prd.fr). DIAL is a research laboratory for development economics set up by the IRD<sup>84</sup> in

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<sup>83</sup> West African Borders and Integration

<sup>84</sup> *Institut de Recherche pour le Développement* [Institute for Development Research]

partnership with the AFD<sup>85</sup>. It regularly publishes about fifteen working documents per year, as well as a semi-annual newsletter.

- ◆ “Food Supply and Distribution to Cities” collection [www.fao.org/ag/sada.htm](http://www.fao.org/ag/sada.htm). Created in 1997 by the FAO’s AGSM service, the “Food Supply and Distribution to Cities” collection (consisting of texts, photos, slide shows and videos) tasks itself with analyzing food-security challenges posed in the least well-off households by the expansion of urban areas, poverty and the increased costs of access to foodstuffs; and helping to formulate policies and strategies to strengthen food supply and distribution systems, in which local communities and community-based organizations play an important role.
- ◆ The LARES network ([www.bj.refer.org/benin\\_ct/eco/lares](http://www.bj.refer.org/benin_ct/eco/lares)), which tracks commercial exchanges between Nigeria and the neighboring countries, was created in 1985 with support from La Coopération Française and implemented by IRAM. Its objective since 1996 has been to observe the flow of products and unofficial exchange markets in order to help define economic policies in the CFA-franc countries that have some form of interdependencies with Nigeria. The network has a series of reports, articles and books published since 1987. Since 1995, the journal *L'écho des frontières* has been publishing quarterly case histories.
- ◆ The OMC [Mauritanian Cereals Agency] oversees the country’s commercial policies and publishes regular analyses of these policies, which can be viewed online at [www.wto.org/french/tratop\\_f/tpr\\_f/tpr\\_f.htm](http://www.wto.org/french/tratop_f/tpr_f/tpr_f.htm).

Added to the above are the working documents and other publications of all of the structures working in support of development in West Africa (see the list of documents in Appendix 1).

## 4.2 IMPROVING FOOD SECURITY ANALYSIS

Information on improving food security analysis falls into two categories: information that, for the moment, is not collected (i.e., does not exist), and information that exists, but is fragmented or not regularly tracked and analyzed.

### 4.2.1 Information to be Collected or Tracked

- ◆ To be collected: import and export flows for the main agricultural and livestock products, by country. Formal and informal trading.
- ◆ Each country’s market information and early warning systems should track: prices of cereals and other agricultural and livestock products in the main cross-border markets, especially the markets at Dawanau in Nigeria, Malanville in Benin, Korhogo in Cote d’Ivoire, and Pouytenga in Burkina Faso. The process of collecting this information has started by the MISTOWA for some agricultural products. This effort should be strengthened by extending the geographic coverage and products (animal and crops) as well as by regular analysis of Sahelian countries.
- ◆ To be identified: each Sahel country’s consumption of its own produce and the proportion put on the market (estimate) based on different production scenarios

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<sup>85</sup> Agence Française de Développement [French Agency for Development]

(shortage, balanced conditions, surplus). The numbers currently put forward are too nebulous.

- ◆ To be collected periodically and analyzed: farmer stockpiles in the countries of the CILSS zone. Revive and improve the survey that existed in the DIAPER survey.
- ◆ To be collected: merchant cereal stockpiles in the large urban centers.

#### 4.2.2 Improving the Food Situation analysis

Three types of analyses are necessary to predict food insecurity problems linked to markets:

- ◆ An analysis of the country studied in the context of the sub-regional market.
- ◆ An assessment of cyclical and structural deficits that takes into consideration response from the private sector as well as from consumer.
- ◆ An analysis of the impact of markets evolution on household food security and the determining the populations at risk through an analysis at the market and household levels.

##### 4.2.2.1 The Country in the Context of the Subregional Market

Each year at the beginning of the marketing year, at the end of the agricultural products harvest (October-December), each Sahel country should embark on an in-depth analysis of its situation within the West African environment. This analysis should take a number of pieces of information into account:

- ◆ The country's cereal reserves (production and producers' estimated stockpiles) and estimated level of consumption (gross cereal totals), which would reveal any gross surplus or deficit (already in practice).
- ◆ The status of the reserves in the countries within the subregion: other Sahelian countries and coastal countries. Identify countries with shortages and be aware of the usual cereal trading undertaken with these countries. Cereal prices in the countries with shortages should be the subject of an in-depth study throughout the marketing year and should regularly be compared to those in the countries analyzed, because high prices in the countries with shortages will cause cereals to flow toward these countries.
- ◆ Climatic, economic, social, commercial and political changes in the countries that are usually cereal exporters. Each year (and during the year when necessary), a study should be conducted in these countries before the results for the production year are available in order to identify the major events that have affected the country during the year and their impact on the surrounding countries with shortages. The analysis should focus on the effects of these events, not only on the cereal market but also on the main cash products market in each country with a shortage.
- ◆ The markets for the main cash crops in the analyzed country should be tracked from the point of view of quantities and prices, along with all major events that have influenced the marketing channels for these products, in order to diagnose the households' financial capacity and their ability to buy food. On this topic, a

new analytical tool needs to be created that would allow for the estimation of the ability to purchase in relation to cereal prices: instead of calculating the terms of trade for each cash product in relation to cereal prices (an analysis that is not completely satisfactory because the concept of at-risk populations' ability to purchase is too fragmented), a reference price would be established for cash products, taking into account the weighted prices of a pre-defined basket of cash products (adapted to those produced by each country). It would be this weighted price that would be compared to cereal prices.

For the five West African countries that are net annual importers of cereals (primarily rice), i.e., Senegal, Mauritania, Cape Verde, Gambia and Guinea-Bissau, the analysis should be done a bit differently, because in their case an in-depth analysis of the rice market in Asian countries should be done, since the Asian countries are essential suppliers of rice imports to the five African nations. Prices and the events that drive this import industry should be tracked throughout the year. An annual analysis of the economies of the transit countries for rice (Gambia and Guinea-Bissau in particular, and even Guinea depending on how much rice it re-exports) should also be done.

#### 4.2.2.2 Analysis of Shortages at the national and regional level

In the Sahelian countries, some areas suffer chronic shortages, year after year. When there is a crisis, these shortages are included along with the cyclical shortages in the country's total shortage. The failure to distinguish between the two types of shortages seems result in "exaggerated" numbers. So a means of distinguishing, for each crisis, the portion of the shortage that is chronic and the portion that is cyclical, must be developed in order to limit interventions in the field to cyclical situations.

Response from the private sector in terms of import, trade and storage should be analyzed in order to estimate probable deficit. It is clear from preceding studies that the private sector has a capacity to compensate for production deficits through imports and/or storage. So, in order not to overestimate deficits, this type of information should be taken into consideration in the computation of deficits.

Substitution of a consumption product that has experienced a hike in price compared to another commodity which has not experienced an increase should be taken into account when analyzing deficits. For example: a decline in sorghum production in Mauritania thus making its price to rise will be reconciled by a greater consumption of wheat.

#### 4.2.2.3 Food security analysis at the village/household level

Village level food security analyses will show the link between analyses in the subregional and national levels and those of the village and household levels. In order to make the link, an understanding of the population's dependence on markets is necessary. This understanding will come out of in-depth food security analysis like the ones conducted by the CILSS. It is clear that these in-depth analyses also touch many other subjects that are not handled here.

## 5 CONCLUSION AND RECOMMENDATIONS

The 2004-2005 crisis, which puzzled experts from market information systems by its unexpected range and magnitude, could happen again if all the recommendations to improve systems are not put in place. Indeed, despite the identification of new types of information to be taken into account in the analyses, no information system can take into account all of

the facts that might affect food security of populations already severely compromised by poverty. The derived effect of certain events is sometimes so complex that it would seem difficult to incorporate all of this information.

This report has shown that much of the information exists, but is not used by the Sahelian countries' market information and early warning systems. So, not only is there an information problem, but also a problem with the ability to analyze this information and make it a real preventive tool.

Current analyses focus too heavily on production, despite the liberalization of trade in all of the Sahelian countries nearly fifteen years ago and the institution of a subregional common market (WAEMU) ten years ago. The information analyzed concerns the unfolding of the production year (plant cover, rainfall, etc.). The base data are collected and thoroughly analyzed. As soon as we turn to the analysis of production itself, the data are more vague and the analyses less relevant. And when we move on to the marketing year, there is no longer any analysis at all. There are no tools used for consistent, reliable analysis of this part of food security (trading).

Further to these observations, several recommendations can be made for improving food security analysis in the Sahelian zone. Based on the fact that there is already a great deal of information available, the recommendations are ranked, with actions to be taken based on existing information coming before recommendations on additional information to be gathered. The first recommendations correspond to the top priorities.

### **Recommendation 1: Improve National Analytical Expertise**

This recommendation is essential to advancing knowledge on food insecurity mechanisms. Expertise should be improved at various levels:

- ◆ Especially at the level of the early warning and market information systems, which use information from various sources and should be capable of evaluating which pieces of information in the existing pool are important, and the impact they will have on the country.
- ◆ At the level of the Ministries, which collect the base data (Agriculture, Animal Husbandry, Health, Customs, Meteorology, etc).

### **Recommendation 2: Better Use of Cereal Balance Sheets**

Since their development, cereal balance sheets have been recognized as being approximate by all of food-security stakeholders. But they are currently the only tool for managing annual cereal amounts available in each country. The least reliable items from the balance sheet remain the commercial import and export estimates and the level of food aid, which varies throughout the marketing year depending on how the year unwinds. It is therefore impossible to estimate quantities imported or exported for commercial or humanitarian purposes at the beginning of the year. These three items should be kept only for a retrospective balance sheet at the end of the marketing year.

For the forecast balance sheet done at the beginning of each season, governments and lenders should work on the rough draft of the balance sheet that takes into account production, consumption and producer and merchant stock estimates. Information collected from these four data types needs to be improved, especially for the estimate of producer and merchant stocks at the beginning of the year, which for the moment is not reliable. The

production estimate method certainly needs to be refined, but it is already giving good results with the DIAPER system.

A cereal balance sheet report at the beginning of the lean period (halfway through the marketing year) needs to be added. This report will focus on the level of producer and merchants' stock. For example, if the official date when the lean period begins is set at April 1<sup>st</sup>, it would be very useful to know at that moment the national stock levels held by producers and merchants and where these stocks are located. The government could then make recommendations to these two stakeholders so that markets would continue to be regularly supplied during the lean period.

### **Recommendation 3: Set Up a System for Tracking Import and Export Flows**

The lack of information about cross-border formal and informal flows remains a major handicap to a good understanding of trading and how the subregion's markets work. Despite its importance, this type of monitoring system has always been rejected due to the cost. However, the CILSS and its partners have initiated discussions at the end of 2005 to determine the best way to monitor cross border commodity flows. In the context of this initiative, it is first of all recommended that an assessment of formal and informal cross border commodity markets be undertaken in order to know how markets operate, how they are supplied, how stocks are managed and how prices are formed. It is also recommended to put in place a cross border commodity flow monitoring system as soon as possible (2006) which will contribute the regular food security analysis of SAP, CILSS, SIMA, WFP and FEWS NET.

### **Recommendation 4: Better Estimates of Deficits**

Confusion over structural shortages and cyclical shortages will end as soon as a mechanism that allows for differentiating these two types of shortages is devised. On the other hand, the absence of an in-depth analysis of the private sector (substitution, imports) in terms of a rise or fall in production will lead to over/underestimation of deficits. These two sources of confusion should be eliminated from the deficit analysis in order to reduce controversies during discussion regarding the food security plan.

### **Recommendation 5: Institute a System for Tracking Merchant and Producer Stocks**

For accurate tracking of markets and exchange, it is important to be able to track changes in merchant stocks. This could involve weekly tracking of the main merchants in each town or village (less than five for small urban centers and less than ten for large urban centers). The end goal to be achieved by using a constructive approach and working productively with merchants and traders, would be to have the merchant do the summary himself on a daily basis. Having officials collect the information should be avoided. The market information system agents, who are generally well regarded by the merchants, could be assigned to do this sort of survey. The information collected could also be used to create the three annual cereal totals reports recommended above (forecast report, a midseason or lean-period report, and retrospective report).

### **Recommendation 6: Undertake a Study of Interactions between Markets and Vulnerable Groups**

We need to understand, for different livelihood systems, how vulnerable groups depend on markets. For instance, there are some groups who benefit from a rise in millet prices whereas another group benefits from the rise of the price of rice and/or a decline in millet

prices. Understanding these interactions will allow us to better follow and predict the consequences of future markets events and developments.

### **Recommendation 7: Improve/Expand the Analyses of Food Security on Cash Crop and Livestock Products**

It is now clear that cereal balance sheet commentaries should be followed up with an economic analysis of cash crops and livestock. CILSS at the regional level and the EWSs at the national level should include an economic analysis of the main agricultural products and livestock that are produced in each Sahelian zone for monitoring food security. Every type of animal and cash crop product will be monitored - its price, quantity and the main events that encourage or discourage production and trade. This monitoring will be based on thorough knowledge of the cash crop and livestock channels (see next recommendation).

### **Recommendation 8: Undertake a Study of Cash Crops and Livestock Market Channels in Producer and Consumer Countries in the West Africa Region**

Livestock is probably the cash crop with the greatest impact on food security of families. The market for various species of livestock is not well understood and so remains difficult to analyze. Therefore, a market study must be done for each category of livestock (cattle, sheep, goats, camels and donkeys) and each producing country (Mali, Burkina Faso, Niger and Chad). Such a study would require a long time series of prices for each species.

Cowpea is a product that has been booming for several years and in a number of countries in the subregion (Burkina Faso and Niger, in particular). This product is used as a family food source, but is considered to be a cash crop because it is much more often sold than consumed at home. It is also in high demand in Nigeria. This product's marketing channels are not well known and should be studied in depth to gain a better understanding of how much is consumed at home and especially of its market within the producing countries and in other countries.

### **Recommendation 9: Undertake a Study of Urbanization and Its Impact on Food Security in the Sahelian countries**

Rapid urbanization of the Sahelian countries brings a new dimension to food security. There is much talk of food insecurity among rural populations, but what about urban populations? The fact that an increasingly significant portion of the population is living in cities and that a large amount of foodstuff must be produced during the production year with a decreased labor force is a challenge to food security in the Sahelian countries. Are rural populations able to produce enough food for a country's needs and are city-dwellers able to purchase it? What impact does this challenge of feeding a growing urban population have on cross-border trade? These are some of the questions that such a survey will have to answer.

## **APPENDICES**

## Appendix 1: List of Publications

2004-2005 Crisis		
Document Title	Authors/Agency	Topics
Point sur la situation alimentaire au Sahel [Update on Food Conditions in the Sahel]: November 2005; September 2005; May 2005]	Afrique Verte	Cereal price changes in Mali, Burkina Faso, and Niger in main markets of each region.
2005 Famine au Niger? Crise alimentaire au Sahel [2005 Famine in Niger? Food Crisis in the Sahel], information sheet, August 2005	Afrique Verte	Production and harvest in Niger – cereal totals report – price changes – crisis prevention mechanisms – steps taken by the government and its partners – food security outlook in Niger – the work of Afrique Verte.
Les facteurs endogènes et régionaux qui sous-tendent la crise alimentaire au Niger [Endogenous and Regional Factors Underlying the Food Crisis in Niger] August 2005	GIEWS - FAO	General poverty and very high rates of malnutrition – Food availability reduced, prices high – Nigeria's commercial policy
Situation alimentaire de plus en plus sérieuse dans certaines régions du Sahel [Food Situation Increasingly Serious in Certain Regions of the Sahel] May 2005	GIEWS - FAO	Food conditions in Niger, Burkina Faso, Mali, Mauritania Senegal and Chad.
The Cereal Markets Play a Predominant Role in Managing Food Crises in the Sahel, Monthly Food Security Update for the Sahel and West Africa	FEWS NET, CILSS	Production and prices in the Sahel – Evaluation of the present food situation in Chad – trading opportunities in the Sahel aTd West Africa
Evaluation rapide de l'état des cultures et de la situation alimentaire au Nord du Nigeria [Quick Evaluation of Crop Status and the Food Situation in Northern Nigeria], September 2005	FEWS NET, CILSS	Agricultural conditions in northern Nigeria – present food situation in northern Nigeria – cereal trading between Nigeria and the Sahel – economic and structural factors behind the 2004-2005 crisis
Niger: An Evidence Base for Understanding the Current Crisis, July 2005	USAID	Famine in Niger real or not? – people affected by the crisis – causes of the crisis – malnutrition – change in cereal prices
Assistance aux populations affectées par la sécheresse et l'invasion acridienne en 2004 [ <i>sic</i> , read 2005] [Assistance to the Populations Affected by Drought and Locust Invasions in 2005]	WFP	Causes of structural food insecurity – causes of cyclical food insecurity – government aid policy/actions – WFP assistance
Monthly Food Security Update for the Sahel and West Africa – July 2005	FEWS NET	June 2005 conditions in the Sahelian countries – agricultural, water, and weather conditions – food markets and outlook

2004-2005 Crisis		
Document Title	Authors/Agency	Topics
Record Grain Harvests Expected in West Africa, August 2005	FEWS NET	July and August conditions in the Sahelian countries – agricultural, water, and weather conditions – food markets and outlook
Lutte contre la crise alimentaire au Niger [Preventing Food Crises in Niger], July 2005	Aide et action	The context of the food crisis – Intervention by Aide et Action
Niger: Vraie crise fausses réponses [Niger: real crisis, wrong responses], October 2005	CADTM – Claude Quemar	A crisis announced –government incapable of handling it – a structural crisis with social roots

Industries by Product		
Document Title	Authors/Agency	Topics
Le commerce des céréales au Niger [Cereal Trading in Niger], June 2002	Kalil Kouyate, Sani Laouali, Assoumana Samaila – Niger's cereals market information system	Organization of marketing channels for cereals – marketing pathways for cereals – profitability of pathways – cereal markets (typology, market networks) – cereals stocking (producers, merchants in rural areas, wholesalers) – commercial strategies developed by cereals trading stakeholders (producers, merchants) – characteristics of the trade in cereals with other countries of the subregion (Nigeria, Benin, other countries)
Les flux transfrontaliers du bétail Camerounais et du bétail Chadien en transit vers le Nigeria [Cross-Border Flows of Livestock from Cameroon and Chad Into Nigeria]	Jeannot Engola-Oyep, Javier Herrera	Increase in exports to Nigeria => price increases in Cameroon – high profit margins – livestock from Chad going to Cameroon and Nigeria – Estimate of the flow into Nigeria.
Le commerce transfrontalier de bétail [Cross-Border Livestock Trading], December 1996	LARES	The importance and stakes of livestock trading – livestock supply and demand in the subregion – the market and the stakeholders – presentation of some marketing pathways – deciding factors and the intensity of cross-border trade
Les échanges de coton [Cotton Trading], March 1996	LARES	Importance of cotton – organization of the industries –outlets – regional exchanges – trading in cotton fiber – trading in cottonseed
Le commerce transfrontalier des produits maraîchers [Cross-Border Trading of Vegetables], March 1997	LARES	Regionalized production – production fragmented – flows and the factors that determine them– margins – organization of marketing
Filières maraîchères [Vegetable Industries], December 1998	CILSS	African market driving development? – the production environment – availability of water and labor – fertilizers and seed – ease of transport – loans and popularization – selling under duress – future challenges
Analyse du fonctionnement des marchés	RESAL – Agnès Lambert	Analysis of how agricultural and livestock products markets work – assessment of

Industries by Product		
Document Title	Authors/Agency	Topics
des produits alimentaires et propositions d'actions à mener [Analysis of How the Food Products Market Operates and Suggested Actions], July 1999		actions intended to improve market operation – suggestions
L'approvisionnement des marchés en l'onion [The Market Supply of Onions], May 2005	ORO/MISTOWA – Maliki Barhouni	Analysis of supply and demand in Niger and the other countries – analysis of the supply from outside of Africa – trading opportunities – changes in onion prices – market constraints and dysfunction – market supply model
La filière rice au Mali: compétitivité et perspectives de marché [The Rice Industry in Mali: Ability to Compete and Market Outlook], September 2005	AFD – Jean Barris, Serge Perrin, Jean Zaslavsky	World market and situation in West Africa – new perspectives on the rice industry in Mali – the ability of <i>Office du Niger</i> rice to compete – new strategies for Mali's rice – implications in terms of public policy
Sécurité alimentaire et modes de vie des ménages: implication économique de la mévente de l'onion au Niger [Food Security and Household Ways of Life: Economic Implication of Poor Onion Sales in Niger], in Niger: rapport mensuel sur la sécurité alimentaire [Niger Monthly Food Security Report], March 2005	FEWS NET	Decrease in onion prices in 2005
Niger: Profil des marchés céréaliers [A Profile of Niger's Cereal Markets], August 2005	Geert Beekhuis – SENAC/WFP	Supply and demand for main agricultural products (production, imports, food aid, demand, assessments) – markets and chains of sale – price changes
Cote d'Ivoire: Profil des marchés en Cote d'Ivoire [A profile of Cote d'Ivoire's Markets], September 2005	Johan Stessens, Daouda Dao – SENAC/WFP	Supply and demand for staple foods – marketing channels
Nigeria: Grain and Feed – Annual report 2003	Ali Michael David – USDA - Lagos	Production – consumption – trade – policy – stocks – wheat marketing – sorghum – rice – maize
"Lorsque le gros maigrît, le maigre meurt": l'organisation du commerce de l'onion en Afrique de l'Ouest ["When the fat get fatter, the thin die": the organization of onion trading in West Africa], 1998	Olivier David, Paule Moustier, pages 105-123 in <i>Echanges transfrontaliers et intégration régionale en Afrique de l'Ouest</i> [Cross-Border Trading and Regional Integration in West Africa], Cahier des sciences humaines [Social Sciences Journals] no. 6, Autrepart collection, Edition de l'Aube,	Consumption, production and supply – supply stakeholders – competition and complementarity of the industries on the Abidjan market

Industries by Product		
Document Title	Authors/Agency	Topics
	ORSTOM	
Commercialisation de la gomme: Faible réponse à une forte demande mondiale [Marketing Gum [Arabic]: A Weak Response to Strong World Demand]	Naygotimti Bambe – in <i>Chad et culture</i> [Chad and Agriculture] – no. 231 – November 2004	Chad's production is 10% of potential – many constraints – quality helps beat the competition
Le marché du karité [The Shea Market]	InfoComm – UNCTAD	Production – consumption – international trading

Trading and Exchanges in West Africa		
Document Title	Authors/Agency	Topics
L'antichambre de la globalisation? ajustement structurel, globalisation et commerce transfrontalier en Afrique de l'Ouest [The Antechamber of Globalization? Structural Adjustment, Globalization and Cross-Border Trade in West Africa], July 2003	Kate Meagher, <i>Frontières et intégration en Afrique de l'Ouest</i> [Borders and Integration in West Africa] collection, Sahel and West Africa Club	Adjustment and transformation of cross border trading – structural adjustment, economic turbulence and expansion of cross-border trading – globalization: economic conditions and marginality – antechamber of globalization or stumbling block? – erosion of government capabilities
Analyse sociale des dynamiques frontalières dans la zone de Ouahigouya (Burkina Faso) [Social Analysis of Border Dynamics in the Ouahigouya zone (Burkina Faso)], September 2004	Saidou Sanou, <i>Frontières et intégration en Afrique de l'Ouest</i> collection, Sahel and West Africa Club	Social relationships – commercial pathways – communications and transport routes – access to service – use of natural resources – the view of stakeholders in the field
Analyse sociale des dynamiques transfrontalières dans la zone de Mopti au Mali [Social Analysis of Cross-Border Dynamics in the Mopti area of Mali], May 2004	Cheick Kamate, <i>Frontières et intégration en Afrique de l'Ouest</i> collection, Sahel and West Africa Club	Social relationships – commercial pathways – communications and transport routes – access to service – use of natural resources – the view of stakeholders in the field
Approche comparative des réseaux marchands ouest-africains contemporains [Comparative Approach of Modern West-African Merchant Networks], 1993	Emmanuel Grégoire and Pascal Labaze, Introduction of <i>Grands commerçants d'Afrique de l'Ouest</i> [Large Merchants of West Africa], "men and societies" collection, IRD éditions	Merchant networks faced with changes of the African economic landscape – social organization of merchant networks over the long term – spatial arrangement of merchant networks – detours taken by trading capital via religious figures – trading networks and governments: complicity and conflicts surrounding the accumulation of private income
La trilogie des réseaux marchands	Emmanuel Grégoire, in <i>Grands</i>	Hausa trading networks in the Maradi region – regional networks – national

Trading and Exchanges in West Africa		
Document Title	Authors/Agency	Topics
haoussas: un clientélisme social, religieux et étatique [The Hausa Merchant Network Trilogy: Social, Religious and Government Clientelisme], 1993	<i>commerçants d'Afrique de l'Ouest</i> , "men and societies" collection, IRD éditions	networks – cross-border networks – international networks – the role of Islam in the business world – trade acquisition and Islamization – the <i>Izala</i> movement – the ties between the Alhazai and the marabouts – the ties between merchant networks and governments
Les circuits d'approvisionnement alimentaires des villes et le fonctionnement des marchés en Afrique et à Madagascar [Food Supply Pathways and Functioning of the Market in Africa and Madagascar], 1997	Laurence Wilhem, <i>Aliments dans les villes</i> [Food in the Cities] collection, FAO-ISRA	Supply pathways and markets – the market sector in the towns (organization) – the issue of wholesale markets – developing and equipping markets – managing markets, status and form of occupation by the merchants
Les commerçants africains: hommes d'affaires ou spéculateurs? [African Merchants: Businessmen or Speculators?], 1993	Emmanuel Grégoire and Pascal Labaze, ORSTOM, <i>Actes du séminaire d'économie et de sociologie nigérienne (année 1992-1993)</i> [Proceedings of the Seminar on the Economy and Sociology of Niger (1992-1993)], published by the Mission française de Coopération	Trans African commercial networks: perpetual adjustment to the subregional area – merchants, income and speculation – case study: Hausa trading networks
Sécurité alimentaire et échanges régionaux de céréales [Food Security and Regional Cereal Exchanges], September 1997	Topical sheet 9 - LARES	Tension over cereals: expression of precarious food situation – where are the problems coming from? – autarchic reactions of the public powers – a precarious food situation alleviated by market integration – how the exchanges work – concerning profitability – local cereals, imported cereals and food security
Après deux ans d'observation des échanges transfrontaliers - 1998	Topical sheets 11 and 12 - LARES	Bilateral relations between Nigeria and the adjoining countries – Nigerian products' competitiveness – cross-border exchange of hydrocarbons – Niger: cereal challenges – Benin: re-exportation business – Chad: cross-border trading of gum Arabic
Les échanges entre le Mali, le Burkina Faso et le nord de la Côte d'Ivoire – l'économie marchande à l'état pratique [Exchanges Between Mali, Burkina Faso, and Northern Côte d'Ivoire – the Merchant Economy in a Practical State], 1993	Pascal Labaze – in <i>Grands commerçants d'Afrique de l'Ouest</i> , "men and societies" collection, IRD éditions	The Korhogo merchant sphere: from neighborhood business to inter-regional exchanges – business, policy and Islam: recent transformations of the merchant population – Merchant networks, strategies of arbitration and capturing border income – formation and reconstitution of business networks: merchant capital in its various states – small contraband businesses, an area of business activity dominated by cross-border exchanges – regional sale of textile products – textile supply: the international connections of regional distribution – from international supply to local distribution: outline of a trading cycle
Sahara nigérien: terres d'échanges [The Sahara in Niger: Trading Grounds], 1998	Emmanuel Grégoire, in <i>Echanges transfrontaliers et intégration régionale en Afrique</i>	The Algerian way: legal and illegal commerce – the Libyan way: the cheating government

## Trading and Exchanges in West Africa

Document Title	Authors/Agency	Topics
	<i>de l'Ouest</i> [Cross-Border Trading and Regional Integration in West Africa], Cahier des sciences humaines no. 6, Autrepart collection, Edition de l'Aube, ORSTOM	
Grand commerce féminin, hiérarchie et solidarités en Afrique de l'Ouest [Large-scale Trade Conducted by Women, Hierarchy and Solidarity in West Africa]	Béatrice Humarau, in <i>Politique Africaine</i> [African Policy], no. 67, October 1997	Struggling with market uncertainty – women bosses and leaders: woman merchants with large and small businesses within women's associations – women in large and small business – women with large businesses: a very exclusive club – woman merchants and power – reinterpretation of the traditional des hierarchies
Le commerce parallèle en Afrique de l'Ouest Intégration informelle ou subversion économique? [Unofficial trading in West Africa: Informal Integration or Economic Subversion?], 1996	Kate Maegher, in <i>Intégration et coopération régionales en Afrique de l'Ouest</i> [Integration and Regional Cooperation in West Africa], IDRC/Karthala	Historical approach and populist myths – the myth of African solidarity – the myth of redistribution – the myth of independence from the government – the myth of the advancement of women – unofficial trading in the 1970s and 1980s – general characteristics of the unofficial pathways – unofficial trading networks in West Africa – unofficial trading and regional integration
Performances commerciales de l'Afrique subsaharienne: une diversification nécessaire [Commercial Performance in Sub-Saharan Africa: A Necessary Diversification], 2002	Jean Baptiste Gros, Gaëlle Letilly, Sylvie Martinet, DIAL working document	Mediocre performance of exports from West African countries – growth in sectoral specialization slight and determined by competitiveness – insufficient diversification
L'Etat doit-il abandonner le commerce des vivres aux marchands [Should the Government Abandon the Food Business to the Merchants?], 1990	Emmanuel Grégoire, in <i>Politique Africaine</i> , no. 37, March 1990	Regional networks – border networks – international networks – whom would liberalization benefit?
Malanville-Gaya: comptoir commercial et couloir de spéculations [Malanville-Gaya: trading market and corridor of speculations], July 2004	Guy-Michel Boluvi, <i>Frontières et intégration en Afrique de l'Ouest</i> collection, Sahel and West Africa Club	A socio-cultural community without borders – Cross-border dynamism on the exchange (market) and circulation of the product (transit) – Gaya, underused commercial corridor – liberalization of prices or blank check for speculation – legal and regulatory environment
Les déterminants des échanges transfrontaliers [Determining Factors in Cross-Border Exchanges]	<i>L'Echo des frontières</i> , quarterly bulletin no. 17, January-March 2001, LARES	Determining factors in exchanges – exchanges – impact – outlook
Encore du chemin à parcourir: réforme des marchés agricoles en Afrique subsaharienne [A Long Way to Go: Reformation of Agricultural Markets in Sub-Saharan Africa], 2004	Mylène Kherallah, Christopher Delgado – <i>information document</i> , IFPRI	Necessary reform – impact of reforms – persistent constraints

Economic and Commercial Policies by Country		
Document Title	Authors/Agency	Topics
Analyse structurelle et conjoncturelle de l'économie ghanéenne [Structural and Cyclical Analysis of Ghana's Economy], June 2002	Christophe Barat, Benoît Massuyeau, Gilles Spielvogel, DIAL working document, <i>CIPRE research center, AFD</i>	Structural characteristics of Ghana's economy – cyclical analysis: from financial crisis to stabilization – macroeconomic forecasts and outlook for the years 2001 and 2002
L'économie ivoirienne, la fin du mirage? [Cote d'Ivoire's Economy: End of the Mirage?], December 2002	Denis Cogneau, Sandrine Mesple-soms, DIAL working document, <i>CIPRE research center, AFD</i>	The path of Cote d'Ivoire's economy (cash economy) – macroeconomic stabilization – structural reforms: liberalism breaks down – dynamic of standard of living and distributive conflicts
Les secteurs de l'élevage du coton de la gomme arabique du sucre des céréales et du vivrier au Chad [The Livestock, Cotton, Gum Arabic, Sugar, Cereals and Food Sectors in Chad], July 2003	N'Djaména economic mission, "Investir en Zone France[*]" (IZF)/WAEMU/CEMAC – ( <a href="http://www.izf.net">www.izf.net</a> )	Stock farming – cotton – gum arabic – sugar
Examen des politiques commerciales du Benin [Study of Benin's Commercial Policies], May 2004	WTO –Secretariat's report	Economic environment – context of the commercial policy – change in commercial policy – change in sectoral policies – outlook
Examen des politiques commerciales du Burkina Faso [Study of Burkina Faso's Commercial Policies], May 2004	WTO –Secretariat's report	Economic environment – context of the commercial policy – change in commercial policy – change in sectoral policies – outlook
Examen des politiques commerciales du Ghana [Study of Ghana's Commercial Policies], February 2001	WTO –Secretariat's report	Summary
Examen des politiques commerciales du Mali [Study of Mali's Commercial Policies], May 2004	WTO –Secretariat's report	Economic environment – context of the commercial policy – change in commercial policy – change in sectoral policies – outlook
Examen des politiques commerciales du Niger [Study of Niger's Commercial Policies], June 2003	WTO –Secretariat's report	Economic environment – context of the commercial policy – change in commercial policy – change in sectoral policies – outlook
Examen des politiques commerciales du Nigeria [Study of Nigeria's Commercial Policies], April 2005	WTO –Secretariat's report	Economic environment – context of the commercial policy – change in commercial policy – change in sectoral policies – outlook

Regional Integration		
Document Title	Authors/Agency	Topics
Compte rendu de l'Atelier régional sur la coopération transfrontalière en Afrique de l'Ouest [Proceedings of the Regional Workshop on Cross-Border Cooperation in West Africa], July 2 and 3, 2003	<i>Frontières et intégration en Afrique de l'Ouest</i> collection, Sahel and West Africa Club	Some national political and strategic views – initiatives and concrete cases – several scales, an ambition: typology of the “border countries,” local to regional integration, the necessary regional vision of the dynamics of population, decentralization, regional integration and territorial development, foreign trade, and regional (dis)integration – Convergence and autonomy: decisions from the Ouagadougou workshop: a network [on] “borders and integration in West Africa, towards a regional border watch”
Unité développement local et processus d'intégration régionale [Local Development Unit and Regional Integration Process], May 2004	Laurent Bossard, Marie Tremolières, Philipp Heinrigs, Sahel and West Africa Club Secretariat	Emergence of a new regional reality – the local in the regional construction – challenges – field dynamics for a medium- and long-term view of the regional integration process – development of local initiative and integration into the ECOWAS agenda – approach – work schedule – working as a network and dissemination/communication strategy – strategic partnerships – funded budget
Structure du commerce extérieur et intégration régionale [Structure of Foreign Trade and Regional Integration], October 2003	Karim Dahou, <i>Frontières et intégration en Afrique de l'Ouest</i> collection, Sahel and West Africa Club	Establishment of “privileged” trading relationships with the European powers – dependencies with regard to the export of raw materials and disintegration of territories – low level of direct foreign investment and industrial transformation – rules of the game in world trade – integration of the regional exchange networks and globalization – coastal urbanization, food trading and the growth of secondary cities – disparities of production systems and “emancipation” of the West African peasantry – persistence of the regional commercial networks
Fonctionnement et gestions des “pays frontières” en Afrique de l'Ouest – L'expérience vécue du Nigeria et de ses voisins immédiats [Functioning and Management of the “Border Countries” in West Africa: the Experience of Nigeria and its Immediate Neighbors], May 2002	Antony I. Asiwaju, <i>Frontières et intégration en Afrique de l'Ouest</i> collection, Sahel and West Africa Club	Priorities – the context in which the “National Boundary Commission” was created – creation and functioning of the “National Boundary Commission”
Intégration et coopération régionales en Afrique de l'Ouest [Integration and Regional Cooperation in West Africa], 1996	IDRC/Editions Karthala	Sphere of activity for integration and regional cooperation in West Africa (Réal Lavergne) – second part: economic outlook: national policies and regional integration (Ousmane Badiane), unofficial trade in West Africa (Kate Meagher), a strategy for trading and growth in West Africa (Dirck Stryker, Jeffrey Metzel and Lynn Salinger), the lessons from WAEMU (Rohinton Medhora), monetary

Regional Integration		
Document Title	Authors/Agency	Topics
		integration in light of the European debate (David Cobham, Peter Robson)
L'intégration régionale: un thème phare de la politique de coopération européenne [Regional integration: A Leading Theme of European Cooperative Policy]	Claire Mainguy, Jean Jacques Gabas, GEMDEV <sup>86</sup>	The effects of regional integration in the context of the EPAs – the outlook in West Africa – other pending issues
Regional integration assistance strategy for West Africa, July 2001	World Bank, report no. 22520-AFR	Regional context: forces and constraints – West African integration: strategies, institutions, policies –assistance from the World Bank – strategic points of assistance from the Bank – the World Bank's program – Cooperation with other partners
Introduction, 1998	Johny Egg – Javier Herrera in <i>Echanges transfrontaliers et intégration régionale en Afrique de l'Ouest</i> , Autrepart collection, Edition de l'Aube, ORSTOM	A networked space – a multiplicity of reference logic systems – autonomy, sampling, globalization – how can the integration of markets be measured? – the system of exchange between Nigeria and the franc zone – Integration of the markets and competitiveness vis-à-vis Nigeria – The scope of cross-border exchanges with Nigeria – The importance of non-registered exchanges to the regional whole
L'intégration régionale des marchés céréaliers: une approche économétrique [Regional Integration of the Cereal Markets: An Econometric Approach], 1998	Vincent Caupin, Bertrand Laporte, pages 145-163 in <i>Echanges transfrontaliers et intégration régionale en Afrique de l'Ouest</i> , Autrepart collection, Edition de l'Aube, ORSTOM	The cereals trade between Niger and Nigeria – spatial integration of markets analyzed econometrically
L'intégration régionale en Afrique de l'Ouest – résultats de la conférence internationale à Dakar [Regional Integration in West Africa— Results of the International Conference in Dakar], January 11-15, 1993	Momar-Coumba Diop and Réal Lavergne, IDRC	Views and outlook for regional integration – economic integration – education, culture, information and research – political and institutional dimensions
SénéGambia méridionale: dynamiques d'un espace d'intégration entre trois Etats (Gambia, Guinée-Bissau, Sénégal) [Southern SeneGambia: Dynamics of An Integrated Space With Three countries (Gambia, Guinea-Bissau, Senegal)], April 2004	ENDA prospectives dialogues politiques in partnership with OXFAM America, <i>Frontières et intégration en Afrique de l'Ouest</i> collection, Sahel and West Africa Club	Southern SeneGambia in space and time – commercial dynamics in SeneGambia between extroversions and integration – production industries with varying potential for integration –concerted management of natural resources, integrated development of the territory and subregional policies
La coopération transfrontalière du local au régional pour une intégration des	ENDA prospectives dialogues politiques, research-action	West Africa's regional integration policies in the face of new stakes – Southern

<sup>86</sup> Groupement d'intérêt Scientifique pour l'Etude de la Mondialisation et du Développement [Scientific Interest Group for the study of Globalization and Development]– [www.gemdev.org](http://www.gemdev.org)

Regional Integration		
Document Title	Authors/Agency	Topics
territoires, des économies et des sociétés: le cas de la SèneGambia méridionale [Cross-border cooperation from the local to regional levels for integration of territories, economies and societies: the case of southern SeneGambia], April 2004	collection	SeneGambia as a space of integration – some elements of a conclusion
Integration and African development in the context of structural adjustment, 2002	T. Ademola Oyejide, in <i>African voices on structural adjustment</i> , ICRC/CODESRIA/Africa World Press	Commercial policy in a context of stabilization and structural adjustment – regional integration and the liberalization of trade in Africa

Other Topics		
Document Title	Authors/Agency	Topics
L'impact du marché des céréales sur le marché du bétail [The Impact of the Cereals Market on the Livestock Market], May 2005	Noëlle Terpend, <i>Marchés Tropicaux</i> [Tropical Markets] journal, May 2005	General development of the two markets – comparative development of the two markets – improvement of the living standard for livestock farmers and crop/livestock farmers.
Sustainability Impact Assessment of the New Economic Partnership Agreements Between the ACP and the GCC States and the EU (European Union) – summary, January 2004	Pricewaterhouse Coopers/CE ( <a href="http://www.sia-acp.org">www.sia-acp.org</a> )	West African structural model – develop competitive West African exports – develop a commercial partnership between the ECOWAS and the EU – sustainable development ties in West Africa – the “development” dimension of the EPAs: promote regional integration as a prerequisite for improved commercial flows
Ajustement structurel et politiques alimentaires en Afrique subsaharienne [Structural Adjustment and Food Policies in Sub-Saharan Africa]	R Hirsh, in <i>Politique Africaine</i> , no. 37, March 1990	Adjustment, instructions – stakes and debates – today's sacrifices will be repaid tomorrow – do food policies exist in Africa –vague impulses toward food policies – structural adjustment and the food situation– world market value: an unavoidable datum
Analyse démo-économique rétrospective et esquisse d'image à long terme de la région Afrique de l'Ouest [Retrospective Demo-Economic Analysis and Outline of the West African Region's Long-Term Picture], June 1993	Jean-Marie Cour, working document no. 2 in <i>Perspectives à long terme en Afrique de l'Ouest</i> [Long-Term Perspectives in West Africa] – CINERGIE – OECD/CILSS/ ADB (WALTPS report)	Why create a regional demo-economic picture – demo-economic analysis of the West African region – outline of the regional demo-economic image for 2020
Les enjeux de l'urbanisation dans les pays en voie de développement [The Stakes of Urbanization in Developing Countries],	Jean Marie Cour, in <i>Perspectives à long terme en Afrique de l'Ouest</i> – CINERGIE – OECD/CILSS/ADB (WALTPS	Population and urbanization – urbanization, economic growth and development – development of the country/territory, urbanization, decentralization and regional integration – financing, investment, population, and development needs – some

Other Topics		
Document Title	Authors/Agency	Topics
December 1995	report)	implications for managing the urbanization process
Etat de réflexions sur les transformations de l'agriculture dans le Sahel – Note de synthèse [Status of Reflections on the Transformation of Agriculture in the Sahel – Summary Note], September 1996	Serge Snrech, Sahel and West Africa Club/OECD	Presentation by the CILSS/[Sahel and West Africa] Club program on the transformation of agriculture in the Sahel – structural transformations of agriculture in the savannahs and the West African Sahel – stakes of rural development in the Sahelian countries
Conjoncture économique dans les pays de l'UEMOA [Economic Situation in the WAEMU Countries], June 2004	Central Bank of West African States	International environment – economic situation within the union
Etat-nation et migrations en Afrique de l'Ouest: le défi de la mondialisation [The Nation-State and Migrations in West Africa: the Challenge of Globalization], November 2004	Papa Demba Fall, UNESCO	The appropriation of the borders by the post-colonial State – cross-border dynamics and territorial reconstitution in West Africa – toward an Africa without borders: some elements of the debate
Migration and urbanization in francophone West Africa: a review of the recent empirical evidence, September 2003	Cris Beauchemin – Philippe Bocquier – DIAL/CIPRE working document	Context (paradoxical urbanization – migration, urbanization and development – data and sources) – the contribution of migrations to the increase in urban growth – migrants and cities
Nourrir, éduquer et soigner tous les Nigériens – la démographie en perspective [Feeding, educating and caring for all the people of Niger – Demography in Perspective], March 2004	John F. May, Soumana Harouna, Jean Pierre Guengant - <i>Document de travail</i> [Working Document], World Bank, Africa Region, Department of Human Development	Niger's demographic totals – resources, performances and structural reforms – poverty reduction and demographic constraints – a forecast total – on the urgency of taking action
La prévention des crises alimentaires au Sahel – Dix ans d'expérience d'une action menée en Réseau [Preventing Food Crises in the Sahel – Ten Years of Experience from an Action Undertaken in a Network], 1997	Johny Egg and Jean Jacques Gabas, STATECO no. 87-88, August-December 1997	Food security information mechanisms – dialogue and coordination among different stakeholders – household food security: changing ideas – key readings for the report on preventing food crises in the Sahel – data tracked by the FEWS NET project – the GIEWS – an example of the use of Meteosat data
Nouvelle donne, nouvelle information [New Deal, New Information], March 1990	Jean Pierre Minvielle, in <i>Politique Africaine</i> , no. 37, March 1990	Structural adjustment and overdevelopment of the need for information – the organization of the information creation industry: putting together the puzzle – an illustration: Burkina Faso's market information system
Définir les priorités pour la recherche sur les politiques alimentaires et nutritionnelles en Afrique de l'Ouest [Defining Priorities for Finding Food and Nutritional Policies in West Africa], 2004	Joachim von Braun – IFPRI	Food security conditions in West Africa – identifying research priorities with respect to policies – framework for an action policy – the road to progress

Other Topics		
Document Title	Authors/Agency	Topics
Une Afrique sans frontières – les fondations de la croissance régionale [An Africa Without Borders – the Foundations of Regional Growth], 2005	Information document, IFPRI	Investing in commerce: targeting the African markets (improve economic integration – reduce marketing costs) – investing in research and development – strengthening regional institutions – forging ahead
Espaces d'échanges, territoires d'Etat [Spaces of Exchange, State Territories], 1998	Agnès Lambert, pages 27-39 in <i>Echanges transfrontaliers et intégration régionale en Afrique de l'Ouest</i> , Cahier des sciences humaines no. 6, Autrepart collection, Edition de l'Aube, ORSTOM	Spatial dynamics in West Africa (exchange spaces, monetary spaces, political spaces) – the colonial partition – modern State and territoriality

## Appendix 2: Summary or Main Market Characteristics and Trade by Product

Product Category	Product Types	Distinctive Characteristics of the Products
Food Products	Cereals	<p>* Millet = remains the essential cereal for feeding the populations of the central Sahel (Mali, Burkina Faso, Niger, Chad), and, in particular, rural populations</p> <p>* Product present on all markets of the central Sahel. It represents a large part of food products transactions on the markets. Principal regional market = Dawanau in Nigeria – regular cross-border exchanges between Nigeria and Niger; and, more exceptionally, between Mali and Niger.</p>
		<p>* Sorghum = essential cereal for feeding the rural populations of some countries such as Mali and Burkina Faso. Substitution cereal for Niger</p> <p>* Product with a high level of home consumption by families and less often involved in transactions. It is consumed entirely within the producing countries and is not involved in cross-border trade. The price of this product closely follows that of millet but is always lower.</p>
		<p>* Maize = substitution cereal for the central Sahel. Is becoming an essential cereal for urban populations because it is sold in the form of flour that is easy to prepare.</p> <p>* Less of this product is produced in the Sahelian countries, but it is significantly involved in cross-border trade because it is produced mainly in the northern parts of the coastal countries. Its prices with respect to millet do not stand in the same relationship in each country (in Niger, the prices are equal; in Burkina Faso, the price of maize is lower than the price of millet) because of the origin of the crop (imported and produced within the country, respectively). The main markets involved in the cross-border trading of maize are Dawanau, Malanville, Pouytenga and Korogho.</p>
		<p>* Rice = essential cereal for all populations in the coastal Sahel (Mauritania, Senegal, Gambia, Guinea-Bissau) – essential cereal for urban populations in the central Sahel</p> <p>* Imported from Asian countries for the vast majority of countries except Mali, which produces a large amount and largely covers its own needs. This product is quoted on the international market and its price varies as a function of the international market. It is subject to significant subregional transit flows (existence of “warehouse” countries such as Gambia and Guinea-Bissau, which send it to Senegal, and importation through the coastal countries’ ports for the countries of the central Sahel)</p>
	Tubers	<p>*Yams, cassava, sweet potatoes and Bambara groundnuts are not consumed much in the Sahelian countries. Consumption involves only the border zones with the coastal countries, where these crops are produced, and, to a small extent, large cities.</p> <p>* The Sahelian countries do not trade in these products much. One of the main cross-border markets for yams is Korogho in Cote d’Ivoire</p>
	Legumes	<p>* Cowpea = production of this product has been booming for some years in the central Sahel. It is consumed a great deal by the local populations.</p> <p>* A substitution product for millet in the central Sahel, but also an important cash crop for vulnerable populations because its price is high. It is involved in significant cross-border trading, especially into Nigeria.</p>

Product Category	Product Types	Distinctive Characteristics of the Products
Other Agricultural Products	Cotton	<ul style="list-style-type: none"> <li>* A cash crop <i>par excellence</i>, it is important in Mali, Burkina Faso and Chad.</li> <li>* It is the base for three different markets: the fiber market, for which prices are set on the world market ; the oil market, which focuses on the national market (high level of consumption within the producing countries); and the oil-cake market, which is still focused on the national territory of the producing countries but is beginning to be exported for livestock feed.</li> <li>* This product provides a high monetary income but it is limited to the Sudanian zones in the Sahelian countries, so the population that receives income from it is geographically limited. The fiber market is very competitive and the prices are not always competitive due to the United States' protectionist policies</li> </ul>
	Vegetable products and off-season products	<ul style="list-style-type: none"> <li>* Produced mainly by Mali, Burkina Faso, and Senegal. In Niger, production has begun much more recently and is less developed. The most important products are still tomatoes, okra, eggplant and the various leaves used in sauces. Production is concentrated in outlying areas of cities. This is an important cash crop for vulnerable populations; production can be begun quickly if there is a food crisis.</li> <li>* There are three types of outlets: <ul style="list-style-type: none"> <li>⇒ national market: the products are sold mainly in the cities. Demand is high.</li> <li>⇒ regional market: products such as tomatoes, okra, and eggplant are exported to the coastal countries because the Sahelian countries have an undeniable comparative advantage in growing them. Flows are light because there are great difficulties with preservation and with managing the production period. Prices are not always attractive.</li> <li>⇒ European market: for off-season green beans grown in Burkina Faso, Mali, and Senegal. Unfortunately, the revenues are very uncertain and it is difficult to produce them profitably because of draconian European standards.</li> </ul> </li> </ul>
	Onions	<ul style="list-style-type: none"> <li>* Onions are an important cash crop in the areas where they are grown: southern Niger, the Agadez region and the Dogon land in Mali.</li> <li>* They are involved in large cross-border exchanges between the Sahelian zone and the coastal area. However, at the moment, onion prices are falling due to the insecurity in Cote d'Ivoire, which was one of the markets where demand was the highest. This product is also facing competition from onions imported from The Netherlands.</li> </ul>
	Shea	<ul style="list-style-type: none"> <li>* A prime example of a gathered product, shea is an income-producer for women. They are the ones who harvest, process and sell it. It is a cash product for women.</li> <li>* The market is mainly international. Nearly all shea produced is used in chocolate-making. The market is competitive because there are substitutes for shea.</li> <li>* This product is important to the survival of rural families in the Sahel, because the income it produces is used to feed the family.</li> </ul>
	Gum arabic	<ul style="list-style-type: none"> <li>* Production of gum arabic is increasing in the Sahelian zone as projects are set up, especially in Mali. Le Chad remains by far the largest producer. This is a cash product for the producers.</li> <li>* The market is international and its production gives rise to transit flows toward the coastal countries.</li> </ul>
Other Products	Livestock	<ul style="list-style-type: none"> <li>* A number of species are involved: cattle, goats, sheep, camels, and donkeys. Production does not require large investments. It can be said that every Sahel family has at least some animals. The main countries concerned are</li> </ul>

Product Category	Product Types	Distinctive Characteristics of the Products
		<p>Chad, Niger, Mali, and Burkina Faso; Mauritania and Senegal.</p> <p>* Each species has a specific market that reacts to the effects of religious holidays and important family events. Demand in the producing countries is limited. There is especially high demand in the coastal countries, because their production is very low. For all species, the market is very dynamic. Cross-border flows are relatively unimpeded outside of a few specific rough spots. During periods of food insecurity, livestock prices change in the opposite direction from cereal prices. At those times, the livestock market strongly contributes to the vagaries of the cereals market. Outside of these periods, the markets are independent of each other.</p> <p>*A cash product <i>par excellence</i> for all Sahel families, it acts as a safe product for saving the family's wealth: it plays the role of a "bank on the hoof" and a very important role in family food security.</p>
	Poultry	<p>* Production is generalized to all Sahel families. Mainly chickens and guinea-fowl are produced. However, production is difficult due to epidemics, which cause high mortality.</p> <p>* The market is very dynamic because urban demand is high. The market is essentially national. There are few cross-border exchanges, involving mainly guinea-fowl, which are not raised much in the coastal countries and so are in high demand.</p> <p>*This is a cash product. The income produced is not large, because poultry prices are low, but it can be regular</p>

### Appendix 3: Persons Interviewed

- ◆ Henri Josserand – Director of GIEWS, FAO, Rome. Interviewed on December 16, 2005 at 1:30 p.m. - [Henri.Josserand@fao.org](mailto:Henri.Josserand@fao.org)
- ◆ Pascal Delorme – Statistician and economist, independent consultant working with the CILSS on the cereal totals report data, Saint Clar. Interviewed on December 17, 2005 at 11:00 a.m. - [pascal.delorme20@wanadoo.fr](mailto:pascal.delorme20@wanadoo.fr)
- ◆ Johny Egg – Agricultural economist at INRA, working on the study IRAM is doing for La Coopération française concerning “external evaluation of the national food crisis prevention and management mechanism in Niger,” Paris. Interviewed on December 19, 2005 at 9:30 a.m. - [j.egg@iram-fr.org](mailto:j.egg@iram-fr.org)
- ◆ Moussa Cisse – Coordinator of the “Accès aux Marchés” regional market-access support program, Ouagadougou. Interviewed on December 19, 2005 at 11:00 a.m. - [sadajr\\_cisse@yahoo.fr](mailto:sadajr_cisse@yahoo.fr)
- ◆ Sani Laoulali Addoh and Assoumana Samaila, Niger’s SIMA [agricultural market information system], Niamey. Interviewed on December 21, 2005 at 10:00 a.m. - [simc@intnet.ne](mailto:simc@intnet.ne)
- ◆ Gary Eilerts - Program Manager/CTO, FEWS NET/USAID, Washington DC. Interviewed on December 20, 2005 at 6:00 p.m. - [geilerts@afr-sd.org](mailto:geilerts@afr-sd.org)
- ◆ Alain Houyoux – European Union Technical Assistant to Burkina Faso, Ouagadougou. Interviewed on December 23, 2005 at 4:00 p.m. - [ahouyoux@cenatrin.bf](mailto:ahouyoux@cenatrin.bf)
- ◆ Amadou Konate –Permanent Interstates Committee for Drought Control in the Sahel (CILSS), Ouagadougou. Interviewed on December 23, 2005 at 6:00 p.m. - [amadou.konate@cilss.bf](mailto:amadou.konate@cilss.bf)
- ◆ Marie-Cécile Thirion – Ministry of Coopération. Interviewed on December 27, 2005 at 10:30 a.m. - [Marie-cecile.THIRION@diplomatie.gouv.fr](mailto:Marie-cecile.THIRION@diplomatie.gouv.fr)
- ◆ Anne Joseph – food security department of the European Commission. Interviewed on January 3, 2006 at 11:00 a.m. - [anne.joseph@cec.eu.int](mailto:anne.joseph@cec.eu.int)
- ◆ Guido Carrara – Directeur général du Développement – DG/DEV/D2, European Commission. Interviewed on January 4, 2006 at 10:00 a.m. - [Guido.CARRARA@cec.eu.int](mailto:Guido.CARRARA@cec.eu.int)