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FOOD ACROSS BORDERS

Improving Food Security through Regional Trade in West Africa

Perspectives on Food Security for West Africa until 2025

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Introduction

1. In 2025, there will be approximately 400 million inhabitants of West Africa. Just over half of these people will live in cities. This is a major transformation that raises many concerns as to its implications for the population's quality of life. It poses the delicate question of the nature of the appropriate public choices to be implemented in order to adequately meet the resulting needs of the population: health, education and nutrition. This concern is even more crucial in light of the fact that the past and present of the sub-region are marked by a sprawling impoverishment of both rural and urban populations.

2. In fact, West Africa has been facing cyclical food and nutritional crises since the beginning of the 1930s. Over the last decade, these crises have taken on a recurring form, combining both structural and temporary forms, despite reforms that have been undertaken in the area of agricultural and food policies. Recent crises have highlighted a number of factors capable of jeopardizing the region's food and nutritional security, both in the medium and long term.

3. West Africa is set apart even further because of its very high rate of population growth. It is the only region in the world where the size of the population doubles almost every 25 years. Although there is no explicit cause and effect relationship between population growth and food insecurity, there is evidence nonetheless that the demographic surge in West Africa is beginning to emerge as a key factor, together with the accompanying population changes. The demographic transition has yet to be established, and the region must deal with a rapid growth in food demand, which itself is experiencing a profound transformation under the influence of heavy urbanization and, above all, changes in dietary patterns. This is leading to numerous constraints in meeting the food needs of regional populations.

4. Similarly, ecological conditions are experiencing a continued deterioration as a result of anthropogenic pressures and changes and variability in the climate. Agricultural and pastoral activities are suffering enormously in the absence of proven strategies and adaptation methods. The continued environmental degradation therefore jeopardizes the resilience capacity of agricultural and pastoral populations in the face of repeated shocks: floods, droughts, delays in rainfall, etc.

5. Finally, there is the market, which is still marked on one hand by a weak interconnection between surplus production zones and those in deficit, and on the other hand by numerous fragmented trade, taxation and customs policies. In addition, the regional market is subject to the effects of international market imperfections, due to its very strong opening. The market's expected driving role in the management of regional food security, via the free flow of trade and relative predictability of food prices, is still plagued by the absence of an authentic regional trade policy to ensure the achievement of sector-specific policy objectives, particularly agricultural and industrial policies.

6. Over the next decade, the issue of food and nutritional security in West Africa will be largely dependent on the nature of the policies undertaken to address these three aspects. Beyond the obvious sector-specific solutions in the policies that have been implemented in recent years, the struggle against food insecurity requires innovative strategies. This struggle necessitates the deployment of development policies and strategies that include an awareness of all actors and all industries. Central to this is the implementation of integrated and well-coordinated policies. Faced with the impacts of the three factors previously mentioned, strengthening the resilience of vulnerable populations will require the implementation of coherent inter-sectorial policies.

I. The Food and Nutritional Situation in West Africa

7. The food and nutritional situation of West Africa has long been biased by the estimation methods and assessment tools used. As a result of the serious food crises of the 70s, the food and nutritional situation has long been understood from the standpoint of food availability, especially of cereals, in the Sahel countries, where the problem was something of a challenge. In view of the importance given to cereals within food systems, even in coastal countries, where tubers and roots still dominate food production, the cereal balance sheet thus represented the main barometer for evaluating the food situation or countries' food insecurity risks. Countries were therefore divided into zones according to their level of risk and vulnerability in terms of the agricultural and pastoral situation.

8. The food crises of the 2000s introduced another very vital dimension to the assessment of the food and nutritional situation in the region. The development of information systems has made it increasingly possible to integrate several other household income dimensions, including demographic dimensions, and especially the consideration of nutritional value. Food crises have become less crises of availability than of accessibility. The crises have transformed into [sic], Although the functioning information systems continue to have difficulty in reflecting the relationship between incomes and households' livelihoods, they nevertheless bring into focus the market's prominent place in ensuring the populations' food and nutritional security. Food and nutritional crises are increasingly crises of access to food and not the mere availability of food supplies. The loss of workers in many communities and the soaring prices of goods erode the purchasing power of many households, which increasingly rely on the market to meet their food needs. Similarly, the constraints related to the free flow of trade, particularly the numerous barriers and other obstacles to the free movement of goods, render food access more difficult for one segment of the population: vulnerable households.

1.1. Sustained agricultural performance

9. The regional agricultural sector has recorded significant performance over the last thirty years. Taking all speculations into consideration, agricultural production has increased to an average level of 3.7% per year, compared with a world average of 2.2% between 1980 and 2010

(SWAC, 2012). Over this period, the average population growth rate of West Africa was 2.8%. According to the SWAC, "Burkina Faso and Ghana are respectively ranked 5th and 6th out of 136 by the FAO, and Benin, Niger, Mali and Nigeria are in the top 25" world performers in advances in agriculture.

10. The performance achieved by the production of cereals, which constitute an important food staple for regional populations, is even better. The growth rate of cereal production was 3.8% over the 1980-2010 period. Four of the region's countries have achieved growth levels exceeding 5%: Mali, 6.80%; Mauritania, 6.62%; Benin, 5.32%; and Ghana, 5.09%. Regional cereal production has gone from 16 million tons in 1980 to almost 56 million tons in 2012 (AO + Chad and Mauritania).

11. The progress rates are even more remarkable in the case of root and tuber crops, which saw their production volumes grow by almost a factor of five over the same period, going from 27 million in 1980 to 130 million in 2011. The sector has clearly supplied the production required to sustain the demands of a population that has increased by a factor of 2.3 over the same period, and which has become significantly urbanized (65% rural and 35% urban in 1980, compared with, respectively, 55% and 45% in 2010).

12. Animal production has performed less spectacularly for a variety of reasons (weak recapitalization following weather events). In 2006, poultry flocks were estimated at some 400 million heads, and herds of cattle at 57 million, goats at 100 million, and sheep at 83 million. The best-performing West African countries in annual growth in the livestock sector are: Cape Verde (6.61%); Burkina Faso (4.9%); Togo (4.41%); Guinea (4.06%), Niger (3.55%), and Senegal (3.16%). This represents a regional average estimated at 2.73% (SWAC, 2012).

13. Together with this performance, all other factors being equal, the region has recorded a marked improvement in the population's global food situation. The production of food available for consumption has grown by a factor of 1.4. It has increased from 1,661 kcal per person, per day in 1980 to 2,397 kcal in 2007 (SWAC, 2012). Net availability, including food imports, was estimated at 2,628 kcal over the same year. The first objective of agricultural development policies and strategies, namely that of the region's increased self-sufficiency, has been largely achieved, with the exception of several goods: cereals (rice and wheat), and meat products (meat and milk).

14. Food imports showed a seesaw trend between 1980 and 2005. However, the soaring prices since 2005 have caused an explosion of food imports and an amplification of the agricultural trade deficit. The value of food imports reached 11.8 billion USD in 2007, before falling to 10.4 billion in 2010 (ECOWAS database, 2012). In the long term, imports are at a near-constant weight. However, the regional dependence vis-à-vis a number of consumer products, namely rice and wheat, is increasing. Overall, cereals represent 42% of food imports for the

region. Despite a near doubling of production over the last decade, the region has to import 36% of its rice requirements from the international market (AfricaRice, 2012). In 2009, the region imported the equivalent of 15 kg of rice per inhabitant, compared with 11.5 kg in 1980 (SWAC, 2012).

1.2. The persistence of food and nutritional insecurity

15. Food and nutritional insecurity is a recurring phenomenon in West Africa. Since the 1930s, it has continued in a near-cyclical fashion. However, due to the combined impact of the agricultural performance analyzed above and a better public policy response to certain symptoms of food insecurity, the phenomenon has seen a significant decline. Chronic regional undernourishment has decreased substantially. The situation remains starkly contrasted depending on the countries, and on the regions and zones within each country. While some countries in the Sahel experience near permanent alerts, others, particularly regions benefiting from more favorable climatic conditions, are still not immune.

16. According to the FAO, in 2006-2008, hunger and malnutrition affected more than 33 million people in a structural manner, and many more during endogenous shocks (effects of climate variations and changes, such as floods and droughts) or exogenous shocks (regional or international market failure). These 33 million represent approximately 12% of the regional population that thus found themselves in a situation of food and nutritional insecurity. Close to half of these people living in food insecurity, or 42%, were in Sahelian countries. Overall, while food insecurity has seen a substantial decline, there is still a significant segment of the population that is situationally or structurally vulnerable, a situation that is of major concern. Food insecurity in West Africa exhibits several features, and the level of malnutrition may represent one of the essential barometers of its scale.

1.3. Malnutrition: Barometer for Measuring the Level of Food Insecurity

17. Malnutrition has become one of the major indicators of the level of food insecurity. It is in fact the product of a number of factors that interact with each other. It represents a summary of the results obtained in the treatment of the four dimensions of food security (availability, accessibility, stability and utilization) and in the management of the interactions that contribute to it. It affects a sector of the population that is exposed to the various effects of endogenous and exogenous shocks: climatic shocks, loss of income, and lack of access to food.

18. Malnutrition refers to a medical condition caused by the deficiency or excess of one or more nutrients. Abnormal dietary intake may result from food in proportions that are not suited to requirements (inadequate caloric intake or, contrastingly, excessive) or of poor quality (nutritional deficiencies or excess fat...); other factors, including psychological and pathological factors, may also come into play.

19. There is no one kind of malnutrition, and malnutrition is not simply a matter of whether a mother or child can satisfy their appetite. A child who eats sufficiently in order to alleviate his hunger can still be malnourished. Malnutrition can take a variety of forms

that often appear in combination and contribute to each other, such as protein-energy malnutrition and deficiencies in iodine, iron or vitamin A.

20. Measuring the weight and height of children and comparing them to those of a "reference population" considered to be in good health is the most common way of assessing malnutrition within a population. Acute malnutrition is the type of malnutrition that damages children's health and is life-threatening. In several countries in West Africa, the prevalence of this serious type of malnutrition is equal to, or exceeds, 10%, which is considered the alert threshold by the WHO. Approximately 7.8 million children in the region suffer from acute malnutrition.

21. Chronic malnutrition is due to long-lasting deficiencies in micronutrients—substances like vitamin A and iodine, which are necessary, often in small amounts, in order to ensure normal bodily functions. Chronic malnutrition can turn into acute malnutrition when children become sick or when their daily meals are too lacking[1].

22. In West Africa, a significant bias exists in the assessment of malnutrition. It is generally agreed that the problem should be considered most serious in the countries of the Sahel. This is due to several factors, but it should not obscure a significant risk in diagnosis: "we only see what we observe." The principal explanation for this is the crystallization of food crisis factors, in the event of a shock. The structural factors of chronic malnutrition are cruelly amplified by situational determinants. In the Sahel, the already inadequate food diversity "under normal conditions" is drastically reduced in the event of a crisis, and sanitary conditions quickly deteriorate. These factors are added to structural factors: very short intervals between births, early and abrupt weaning, poor access to health care, deficiencies in foods containing micronutrients, amino acids, vitamins, iron, etc.

23. In reality, the phenomenon is fairly widespread and equally affects humid coastal countries that enjoy better conditions of access to food. The low frequency of surveys has failed to provide a proper assessment of the nutritional situation, which in many cases is comparable to, if not worse than, that of some Sahelian countries:

a. **In Benin,** in 2012 the prevalence of acute malnutrition in children between 6 to 23 months was 19% (Netherlands Embassy, Cotonou, 2012) and overall, 45% of children suffer from chronic malnutrition, 28% of them from severe malnutrition (National Institute of Statistics and Economic Analysis, 2011-2012).

b. **In Burkina Faso**, the initial results of the SMART Survey (2011) indicate that the rate of acute malnutrition is 10.2% and the rate of chronic malnutrition is 34.1% (Inter-Agency Standing Committee (IASC), 2012). **In Cape Verde**, the rates of acute (2.6%) and chronic (9.7%) malnutrition in children under five are much lower than

[1] www.unicef/wcaro/french/4493_4568html.

the alert thresholds of the WHO and the West African average (UNICEF, 2012).

c. **In Ivory Coast**, the rate of global acute malnutrition has risen to 5.4%. According to Prof. N'Dri Yoman (Minister for Health and Aids). In 2000, Ivory Coast recorded a chronic malnutrition rate to the order of 25.4%. In 2006, with the serious crisis of September 2002, this rate rose to 34%. In 2011, the rate fell back, capping at 27.3%.

d. **In Gambia**, the prevalence of chronic malnutrition is 24%. The prevalence of malnutrition has been highest in the North Bank, Central River and Upper River regions (WFP, 2012). The rate of global acute malnutrition is somewhere between 10% and 14.9% (DHS/MICS/SMART Survey, 2011).

e. **In Ghana,** on the other hand, the rate of global acute malnutrition is somewhere between 5% and 9.9% (DHS/MICS/SMART Survey, 2011). At the national level, the rate of chronic malnutrition/failure to thrive is 28 per cent at the national level (WFP, 2011).

f. **In Guinea**, the rate of acute malnutrition decreased from 8.3% to 5.1%, whereas that of chronic malnutrition decreased from 40% to 34%, with weight insufficiency situated between 20% and 16% (Conakryinfo, 2012).

g. **In Liberia**, widespread chronic malnutrition affects 39% of children under five, 27% of whom suffer from being underweight (WFP, 2008). Acute malnutrition is the cause of death for 20% of infants in Liberia, according to the United Nations International Children's Emergency Fund (UNICEF). In Monrovia, the rate of acute malnutrition is 6.2 per cent, according to the demographic survey on health; this number, lower than the intervention threshold of 10%, which many donors reference, corresponds to 5,000 children suffering from severe acute malnutrition and 20,000 suffering from moderate acute malnutrition.

h. **In Mali**, global acute malnutrition (moderate to severe) allegedly affects 15% of the Malian population, although the international alert level is fixed at 10%. As for chronic malnutrition, it has grown to 38% of children under five within the country, with the international alert threshold being set at 20%. Mali is therefore well above the thresholds fixed by the World Health Organization (UNICEF, 2011).

i. **In Niger**, the national rate of Chronic Malnutrition (SMART Survey June-August 2012) is 42%. The national rate of Global Acute Malnutrition is 14.8% (Smart Survey June-August 2012).

j. **In Nigeria**, the rate of malnutrition is estimated at 11%.

k. **In Senegal**, malnutrition is the direct or indirect cause of death in over 33% of children under five (UNICEF, 2012). The prevalence of acute malnutrition is 10%, and that of chronic malnutrition has reached a rate of 26%.

l. **In Sierra Leone**, in October 2012, more than 300,000 children were identified as suffering from malnutrition, according to UNICEF.

m. **In Togo, according to** the same United Nations institution, in 2006, chronic malnutrition was responsible for 51 per cent of child deaths. The national rate of acute malnutrition is 14.3%, or double those recorded in Benin or in Ghana, neighboring countries of Togo, and the equivalent of those recorded in regions of some Sahelian countries, such as Niger, Burkina Faso or Mali. It is just short of the emergency threshold defined by the World Health Organization, as confirmed by several heads of humanitarian organizations. (UNICEF, 2007)

n. **In Mauritania**, the results of surveys of the Food Security Surveillance System (FSSS) and SMART Surveys show a slight increase in the prevalence of Global Acute Malnutrition (GAM), the rate of which rose from 10.7% in July 2011 to 12.1% in July 2012. The rate of chronic malnutrition is 17 per cent, according to the figures provided by WFP on May 25 of last year.

Table 1: Malnutrition in West African Countries

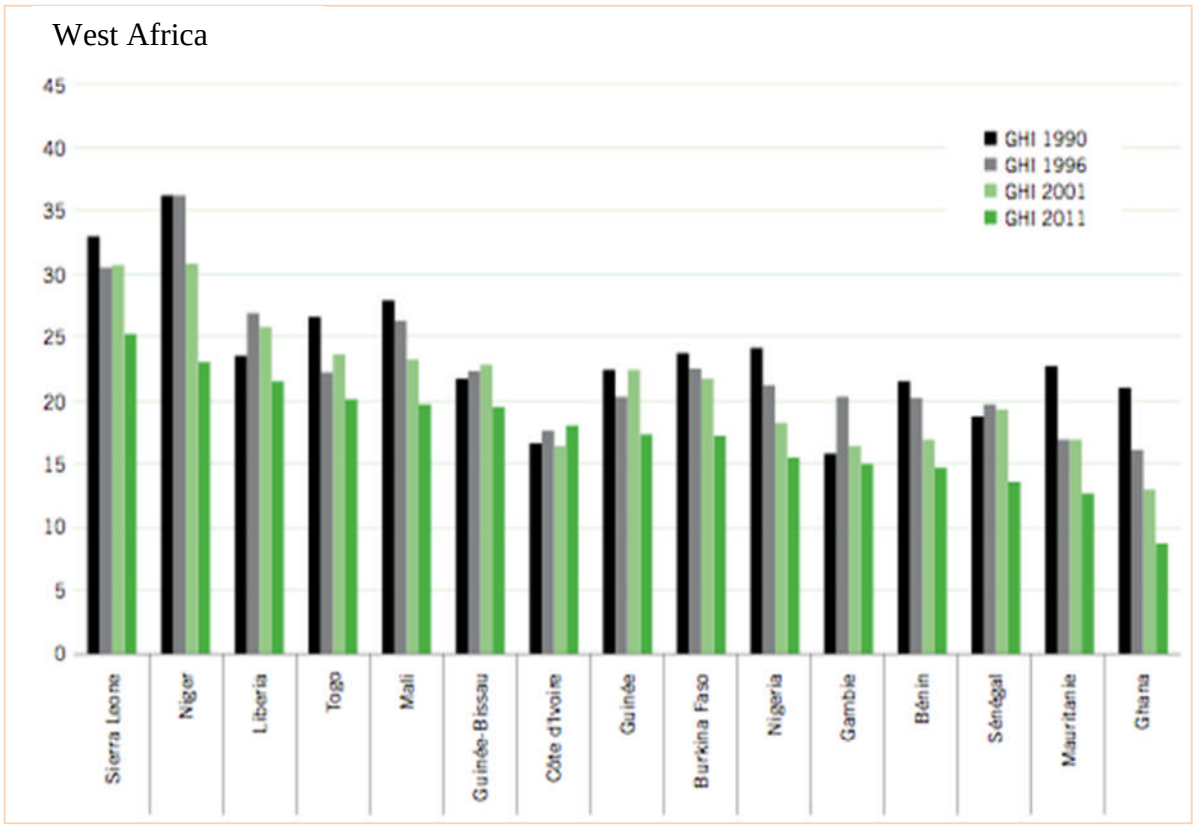
Country	Moderate and Serious Weight Insufficiency	Moderate and Serious Emaciation	Moderate and Serious Failure to Thrive
Benin	18	8	43
Burkina Faso	26	11	35
Cape Verde	-	-	-
Ivory Coast	16	8	40
Gambia	18	10	24
Ghana	14	9	28
Guinea	21	8	40
Guinea Bissau	18	6	32
Liberia	15	3	42
Mali	27	15	38
Mauritania	15	7	23
Niger	40	16	47
Nigeria	23	14	41
Senegal	14	9	19
Sierra Leone	21	10	36
Chad	30	16	39
Togo	17	5	30

Source: UNICEF Report based on MICS, EDS studies and others.

1.4. The Persistence of Undernourishment or Chronic Hunger

24. Undernourishment or chronic hunger is the condition of people whose dietary intake is lower than their minimum energy requirements on a regular basis. This is taken from budget consumption surveys or other short household surveys. For several years, based on multiple indicators, the International Food Policy Research Institute (IFPRI) has constructed and has been publishing a composite index: the 2011 Global Hunger Index (GHI), or the index of world hunger, which makes it possible to measure and follow the progression of world hunger, country by country and region by region. The figure below takes into account the trends in malnutrition between 1990 and 2011, according to these indicators.

Figure 1: Trends in Malnutrition in West Africa (1990-2011)



Source: 2011, World Hunger Index; IFPRI et al.

25. The figure above shows that the majority of the countries in the regions have recorded significant progress in the fight against hunger and malnutrition. Ghana has inarguably recorded the best performance, with a rate of undernourishment that has decreased from approximately 22% in 1990 to 7% in 2011. Following are Mauritania and Niger. On the other hand, the situation has worsened slightly in Ivory Coast, with a rate of undernourishment that, in 2011, exceeded those of previous years, even though it remains under 20%.

26. As a whole, the majority of the countries in the region, namely 11 out of 16, have rates varying between 10 and 20%, in the category of those that can be considered serious. However, four report a situation considered alarming, with a rate ranging between 20 and 30%. This applies to Niger (as a result of the effects of climatic shocks), Liberia and Sierra Leone (countries that are emerging from long civil wars), and Togo. The situation of this last country is somewhat paradoxical and may be linked to political troubles and above all to the lengthy disruption of external financial aid, because of a democratic deficit.

Table 2: Index of World Hunger in 2011

	Low (0 to 5%)	Moderate (5 to 10%)	Serious (10 to 20%)	Alarming (20 to 30%)	Extremely alarming
Benin					
Burkina Faso					
Cape Verde					
Ivory Coast					
Gambia					
Ghana					
Guinea					
Guinea Bissau					
Mali					
Mauritania					
Niger					
Nigeria					
Liberia					
Senegal					
Sierra Leone					
Togo					

Source: based on IFPRI data, 2011

II. The fundamental causes of food and nutritional insecurity in West Africa

27. Many causes contribute to the persistence of food and nutritional insecurity in West Africa. Both their frequency and how they manifest themselves determine the nature of the crises, which are situational or structural. The causes of world hunger are numerous and interdependent, and analysts often group them into two broad types of inaccessibility to food:

a. physical or geographical inaccessibility, when food is simply unavailable for various reasons (insufficient production, low market supply, remote areas, etc.)[2].

b. economic inaccessibility, when food is available, but too expensive for the population to purchase it. The food crises that the region has experienced since 2005 are for the most part related to the inability of a significant segment of the population to gain access to food, due to soaring prices and the reduction of household livelihoods.

28. These two types of lack of food inaccessibility are caused by different factors. In West Africa, we can highlight four broad factors that, over the past thirty years, have to a great extent acted as determinants for the conjuncture of regional food and nutritional security: the deterioration

[2] http://fr.wikipedia.org/wiki/Faim_dans_le_monde

of climate conditions, the issues of population and settlement, local and regional crop market imperfections, and lastly, the conflicts that have shaken numerous countries.

2.1. The deterioration of the agricultural and pastoral production environment.

29. The natural conditions under which agricultural and pastoral activities take place have witnessed a continued deterioration over the course of the last forty years. This degradation is attributed to anthropogenic action and to the effects of climate change and variability. In fact, as a result of the latter phenomenon, isohyets have moved 200 km to 300 km southward (FARM, 2008). This shift of isohyets lines has been accompanied by a decrease in rainfall and a lengthening of the drought duration in all agro-ecological areas, a situation that emphasizes the desertification and Sahelization of the region.

30. Climate change and variability have increased the frequency of extreme weather events, such as floods, droughts, extreme heat and heavy rains. These events, combined with human impact, have accelerated the process of land degradation: leaching, plate formation, aridification, etc. The problems of soil fertility have become even more of a concern as agricultural producers are experiencing enormous difficulties in gaining access to inputs (fertilizers, improved seeds), due to low availability and the high prices of goods. The full magnitude of the problems of soil fertility, resulting from low levels of fertilizer use to offset the export of nutrients by crops and erosion, is given by various estimates, which evaluate the average losses in nutrients at 660 kg N ha-1, 75 kg P ha-1, and 450 kg K ha-1 over the past 30 years, over 200 million farmable hectares in 37 African countries. In the semi-arid regions of West Africa, over half of the agricultural lands are plagued by erosion, which is exacerbated by intensive agricultural mining practices.

31. The pressure on agricultural lands has increased as a result of the increase in food demand, in conjunction with upward demographic and urban pressure. This pressure is also highlighted by increased livestock feed requirements for animals, resulting from the increase in herds and the weakening of pastoral methods currently in effect. In almost all the regions of West Africa, the increase in production is more dependent on increasing surface area than on the intensification of agriculture (FARM, 2008). Sown areas grew approximately 229% between 1980 and 2010. Such extensification leads to a reduction of ground vegetation and exposes soils to erosion, thus exacerbating their degradation. It disrupts the process of replenishing land fertility, without the development of agricultural systems that make it possible to manage this fertility. As a result, the productivity gains have only contributed a mere 40% to the total growth of West African agricultural production.

32. Cyclical shocks related to the effects of climate change and variability amplify the very strong inter-year variations of agricultural production and livestock farming. They accentuate the vulnerability of the poorest households, particularly small producers. In fact, the succession of situational crises affects the resilience capabilities of such households, whose coping strategies are achieved through the decapitalization of productive assets (land, equipment) and family

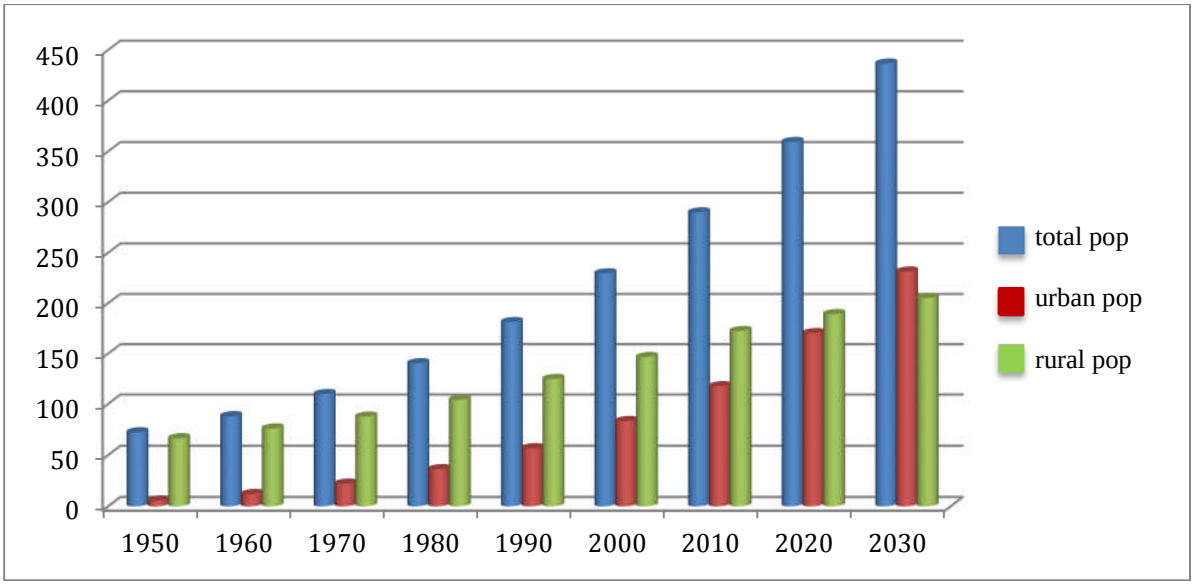
assets (bicycles, motorcycles, jewelry, etc.). They do not manage to rebuild their capabilities (resilience) before the next shock. They are very dependent on the labor market and the food market, and the pressures on these two markets complicate their living standards.

2.2. Population and settlement issues

33. Population and settlement issues represent a far-reaching trend in the West African economy in general and in agricultural development in particular. Population and settlement are very dynamic and poorly managed due to actual capacities for generating additional resources in order to satisfy the populations' continually growing food requirements.

34. Between 1950 and 2012, the West African population grew by a factor of 4.1, increasing from 72 million to 300 million people. Over the same period, the rural population grew by a factor of 2.6, increasing from 66 million to 172 million, whereas that of cities increased from 6 million to 128 million, or a growth of 2,033% in 52 years. Thus there is a population shift in favor of cities, which by 2030 will accommodate approximately 53% of the total population in the region.

Figure No. 2: Trends and distribution of the West African population



Source: based on SWAC data, 2012

35. This dynamic presents strong disparities between states and between zones within the region. While the population growth rate remains relatively high in countries in the Sahel (Niger[3], Mali and Burkina Faso), more than 60% of the regional population currently lives in more southern regions.

[3] Niger, which is considered the country most vulnerable to the various shocks that are the causes of recurrent food and nutritional insecurity, will see its population increase from 15.5 million in 2010 to 24 million in 2030.

36. The West African demographic context has an ambivalent impact on food and nutritional security. Clearly, as a result of the high prevalence of poverty, the largest families are often the most impoverished in all kinds of capital, and are the ones most vulnerable to diverse shocks. The strong upward demographic pressure thus places households in a vicious circle of need and vulnerability. Close to 60% live in rural areas, with more than 50% engaged in agricultural and pastoral activities, operating small family farms. In many countries, the percentage of farms running marketable surpluses rarely goes beyond 20%. The majority practices subsistence agriculture, and as a result of the strong monetization of rural areas, they are required to sell a portion of their harvest and turn to the market for their supplies during the hunger gap. The large number of workers involved in agriculture is undeniably one of the major causes of low productivity in the agricultural sector, and therefore of continued vulnerability.

37. On another level, the upward pressure of population and of urbanization has led to a dual effect on issues of food and nutritional security: a very high increase in the need for food and a change in dietary habits, which the current structure of local production has a difficult time meeting. Cereals, particularly rice, are growing in importance in the populations' diet, both in urban and rural areas. According to (AfricaRice 2012), between 1961 and 2010, the volume of regional demand for rice has increased by a factor of more than 11. With an average annual growth rate of 4.98% over this period, the total regional rice consumption exceeded 10 million tons in 2010. The significant food deficit that the region has recorded for some products, such as rice and meat products (meat and milk), can be accounted for by this trend.

38. However, the ongoing shift in settlement, which leads not only to strong urbanization, but also to the emergence of population clusters, has a dual impact on food security. It leads to growth in market farming and in the development of poultry and small animal farming in the urban outskirts. But the most important point is the improvement of productivity under the two-fold effect of agricultural modernization and a significant reduction in agricultural workers[4], in the context of increasing agricultural production. Although the use of fertilizers, particularly chemical fertilizers, is still very low, there has been an improvement in productivity in zones or production areas that have taken advantage of incentives and safer access to markets. This is the case for rice in the Office du Niger in Mali and in the Senegal river region, etc.

2.3. Crop market imperfections

39. Markets play an increasingly major role in ensuring food and nutritional security. In fact, in recent years, there has been an intensification in regional trade of agro-pastoral products: live animals, dry cereals, fish products, root and tuber products and off-season products (onions). Many surplus-production areas (Nigerian Middle Belt and the cotton-producing Sudanese

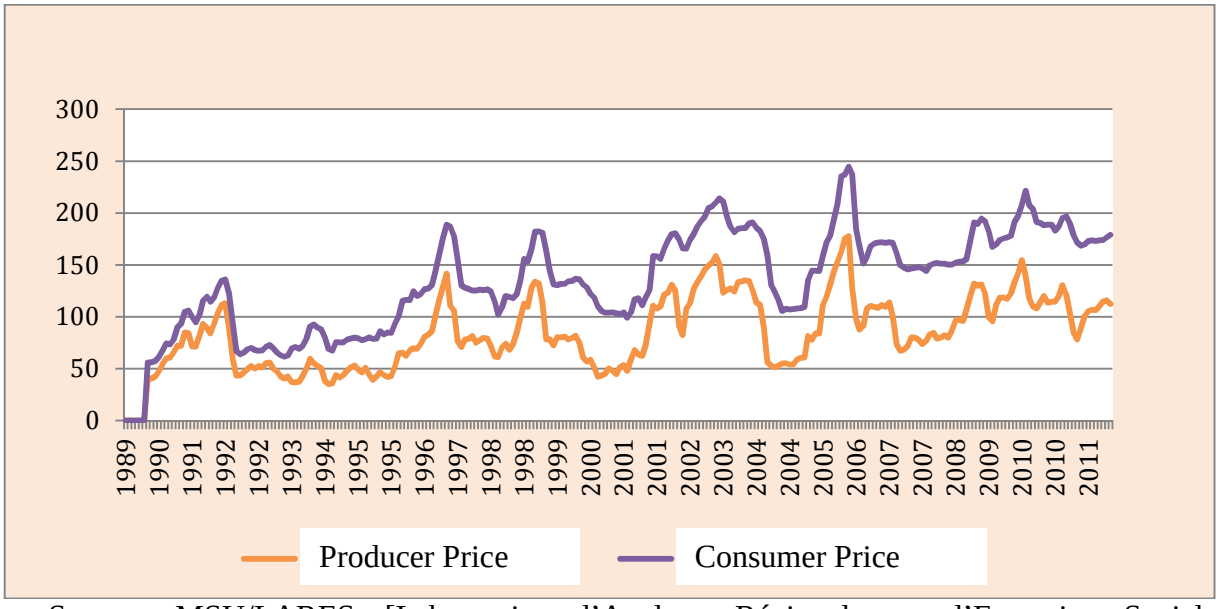
[4] *Although the rural population remains significant, the number of workers directly involved in agricultural production continues to decrease.*

zone of Mali and Burkina Faso) are increasingly better connected to deficit zones and countries (such as Niger, Mauritania and Senegal), to only name the most significant ones.

40. Ensuring the food security of Niger (a country that is structurally deficit in one out of every two years) depends less on international assistance, which can certainly be substantial in some years, than on supplies on the Nigerian market. The surpluses of Nigeria (the leading agricultural power in the region for food products) supply the marketing channels headed toward all of its bordering countries (Niger, Benin, Chad and North Cameroon).

41. However, the West African market is still far from playing the full role that is expected of it in ensuring the population's food and nutritional security. Like the agricultural markets of developing countries, the West African markets are marked by a dual price volatility: i) inter-seasonal volatility and ii) inter-annual volatility. This dual volatility is the manifestation of fluctuations in agricultural production volume, variations that can reach 30%, even more over the years.

Figure 2: Comparative Changes in Producer Prices of Millet (in Koutiala) and Consumer Prices (in Bamako) (nominal prices)



Source: MSU/LARES [Laboratoire d'Analyse Régionale et d'Expertise Sociale (Laboratory of Regional Analysis and Social Expertise)] Mali's Cereal Marketing Patterns, 2011

42. Volatility is also related to market imperfections related to the many fragmentations (trade, monetary, fiscal and regulatory) combined with persistent technical barriers to regional trade (such as export bans in the event of price tension, the erection of checkpoints, robbery, etc.). The conclusions of the 18th report of the Observatory of Abnormal Practices, published in 2011, noted a rise in rackets operated by inspection forces: (i) the minimum number of inspections per 100 km is around two. It is 2.4 in Ivory Coast and 2.5 in Mali; (ii) the minimum amount of extortion per 100 km is 804 CFA francs and has been observed in Togo.

The maximum is 4,582 CFA francs and has been observed in Mali; (iii) inspection times per 100 km vary between 11 minutes (in Togo) and 27 minutes (in Mali), with an average of 20 minutes spent at each inspection. In 2011, as a rule, a truck spent 35,000 CFA francs illegally per voyage, on average. Regarding agricultural products, the data are even more troubling. Generally, the certificate issued by the Chamber of Commerce of the country of origin should enable trouble-free movement within the ECOWAS along the entire route. On the Dakar-Bamako axis, while there are, in theory, only 3 authorized checkpoints, carrier stops are much more frequent, as shown in the table below.

Table No.: Trends in indicators for agricultural products per 100 km in the 5 monitored corridors from the Observatory of Abnormal Practices (OPA)

Value Chain	Corridor	Distance	No. of Inspections per Trip	No. of Inspections per 100 km	Illegal levies per Trip	Illegal levies per 100 km	Inspection time per trip	Inspection time per 100 km
Onion/shallot	Kantchari (Burkina Faso) - Accra (Ghana)	1,316 km	31	2.4	88,872	6,753	142	1 min
Livestock/Meat	Fada N'Gourma (Burkina Faso) -Parakou (Benin)	469 km	13	2.8	122,692	26,147	11	6 min
Corn	Techiman (Ghana) - Koutiala (Mali)	976 km	26	2.7	30,293	3,104	73	11 min
Rice	Bama (Burkina Faso) - Koutiala (Mali)	273 km	11	4.0	34,300	12,564	30	2 min
Millet/Sorghum	Koutiala (Mali) - Dakar (Senegal)	1,865 km	60	3.2	218,255	11,703	50	5 min

Source: 18th report of the OPA (2011)

43. In the southern corridor between Lagos and Abidjan, a corridor that records more than 60% of regional trade, the technical barriers are even more numerous. Between Lagos and Cotonou, only 120 km apart, there are more than 15 checkpoints, or one checkpoint every 8 km. Such checkpoints lead to racketeering and drive up the prices of products, thus reducing the food access opportunities of many populations with low purchasing power.

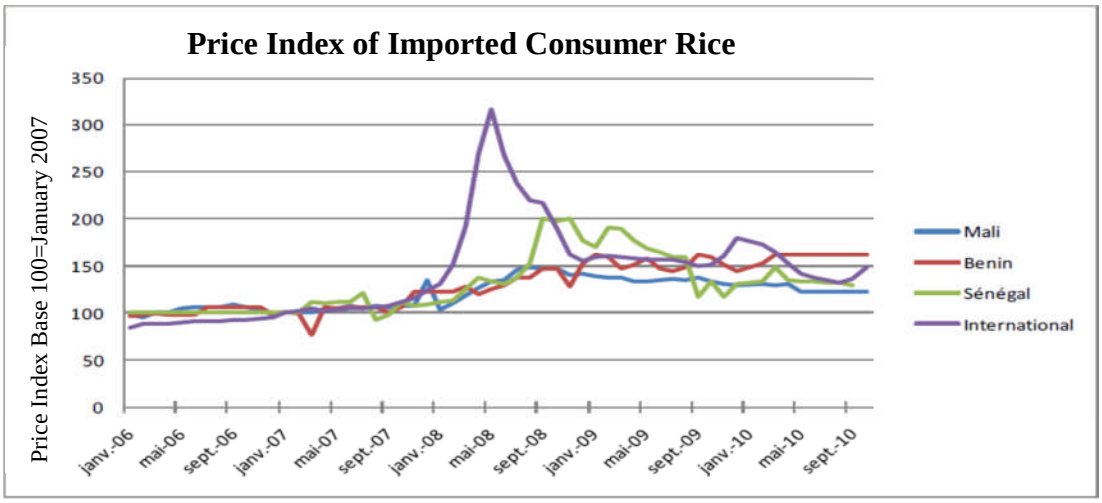
44. Regional crop market performance is thus distorted by the weak development of local products. Despite the efforts undertaken in recent years in the area of transformation, most regional transactions involve products that are undeveloped or poorly developed and standardized. This results in the poor competitiveness of these products in local markets.

45. For a long time, the region has suffered very little from the effects of such volatility and the weakness of regional trade, due to its very strong opening onto the international market, and above all to the low prices of some cereals over the long term. Low international prices have long enabled the region to make up for production deficits by less expensive external supplies. In the short term, imports made it possible to control food price inflation and helped to ensure access to food for vulnerable populations, especially as countries were practicing very low levels of border protection.

46. The soaring prices of staple products in 2007 represented a real shock to regional food security. They magnified internal price volatility by transmitting international market imperfections to local markets. The soaring prices highlighted the region's level of reliance on

the international market for its own supplies. The price volatility of primary products had an enormous effect on the purchasing power of consumers and other vulnerable households. Although the situations may vary greatly from one country to another, the crisis generated by the soaring prices emphasized the major role that the market plays in the food security of both rural and urban households. Above all, they have raised the central issue of the pricing policy to be implemented in order to ensure the population's food security.

Figure 3: Consumer Price Index of Imported Rice (January 2007=100)



Source: AfricaRice, 2012

Box No. 1: Impact of soaring prices on food security.

"In recent years, the world food market has been marked by higher and more volatile prices. This situation has serious consequences for vulnerable individuals with few options to adapt to sudden rises and rapid changes in prices. The volatility and increase in prices are generated by three factors: the increased use of agricultural products for biofuel production, extreme weather events and climate change, as well as the excessive volume of transactions within agricultural futures markets. These factors are exacerbated as a result of extremely concentrated export markets, in which countries importing staple foods rely on a handful of export countries, as a result of cereal stock at historically low levels, and because of an acute shortage of up-to-date information on the status of the world food system, even when this type of information could prevent excessive market reactions in the face of moderate fluctuations in supply and demand. Both volatility and increased prices weaken the purchasing power of vulnerable households and limit their access to a wide range of essential goods and services. Price volatility also leads to a deterioration in the nutritional status of these households, with a decreased number of calories taken in daily, with fewer meals of lower quality and less rich in nutrients."
Source: IFPRI, Index of World Hunger, 2012

47. The situation represents a dilemma for public decision-makers. In fact, food prices perform two central functions in production and marketing systems.

a. They create incentives for production and marketing. In fact, with higher prices, producers, marketers and processors have a greater incentive to invest in their activities.
b. At the same time, the price level is a determining factor of economic access to food for consumers (and especially for poor consumers, both in rural and urban areas); the more prices rise, the more difficult food access becomes.

48. For the moment, politicians content themselves with vague strategies while extolling prices deemed "encouraging" or "profitable" for producers and "guaranteeing" the purchasing powers of consumers, however low. This situation, which demonstrates the continuing poor quality of the governance and management of both national and regional agricultural policies, fails to put strategies in place that contribute effectively to the fostering of poor households' resilience to various shocks.

2.4. Political and social conflicts

49. Over the last thirty years, West Africa has recorded both open and concealed conflicts that have occasioned numerous displacements of populations. Whether these involve conflicts in Liberia, Sierra Leone, Guinea Bissau, Ivory Coast, Mali, post-electoral crises (Togo), or the

rise in cultural or identity imperatives (the Boko Haram phenomenon), West Africa is subjected to particularly difficult conditions that impact economic activities in general, and agricultural production in particular.

50. According to the UNHCR, "forced population displacements have greatly increased in West Africa: the estimated number of displaced persons in Ivory Coast has reached one million, whereas that of individuals seeking refuge in neighboring countries, chiefly in Liberia, Ghana and Togo, has exceeded 200,000." Such displacements of populations accentuate the food and nutritional insecurity resulting from abandoned lands and farms in the departure zones and the inability to engage in production activities in the receiving zones. Feeding displaced populations is dependent upon aid from humanitarian organizations, aid that often arrives late and in insufficient quantities. Therefore, this results in nutritional crises, of which Ivory Coast and Sierra Leone are the most obvious cases in recent years. In these countries, relatively endowed with natural resources, the level of undernourishment remains high.

51. Mali's current conflict has, beyond the displacement of numerous populations that it has brought about, undermined the fight against locust plagues in countries of the Sahel. Even though the phenomenon may have been contained this year, the persistence of the crisis can, in the medium term, compromise development efforts of livestock farming and agricultural activities and exacerbate the vulnerability of Sahelian populations.

52. On another level, the conflicts in adjacent regions also have repercussions on the food and nutritional security of West African populations. The Libyan conflict, for example, has led to a massive flow of migrants from African countries, particularly Nigerians and Malians. This situation has had a twofold consequence: (i) a drying-up of the transfer of funds and (ii) an increase in the number of people receiving assistance.

III. Regional Food Trends by 2025

53. The preceding analysis demonstrates that the global food situation of West Africa has improved considerably over the last thirty years. Food available for consumption per inhabitant has measurably increased; the vast majority of the region's population has left the brackets of extreme and alarming undernourishment.

54. This improvement is chiefly the result of the increase in production that is higher than the world average, and of the level of population growth. In part, this increase has occurred by the extension of areas under cultivation. Clearly, this model is not sustainable in the long term; productive natural resources, particularly land, cannot be extended. We therefore have every right to ask whether West Africa is capable of eradicating hunger and undernourishment in the medium term, especially by 2025. This also means questioning the ability of the policies currently in place to develop strategies for fostering the population's resilience to the three major factors that will determine regional food and nutritional security.

55. Over the past five years, the region has in principle adopted agricultural policies that have set the goals of achieving a national 6% growth rate in the agricultural sector, a rate considered vital in order to have a chance of reducing the incidence of poverty by half in each of the states, with deadlines varying between 2015 (MDG) and 2020. Such national strategies are sustained by a regional investment program, which, by including policy instruments, seeks to contribute to improved governance over the agricultural and food policies in the region.

56. However, the implementation of these strategies, coupled with national growth policies for the reduction of poverty, has fallen behind in many countries. What's more, the recent food crises (2004-2005, 2007-2008, 2010-2011 and 2012) have revealed that the agricultural policies will be inadequate to have any hope of significantly influencing undernourishment, to which 10 to 20% of the regional population falls victim. Clearly, the current dynamic of food security offers hope for a positive development by 2025, but not to the point of eradicating hunger in the sub-region.

57. Many analysts predict a favorable development generated by the current transformation of population settlement. In effect, the acceleration of urbanization, together with the development and proliferation of medium-sized towns, and the development of non-agricultural activities in rural areas, will lead to the following:

a. The significant reduction in workers directly involved in agricultural production and livestock farming, the "freeing up of arable land," for the benefit of agricultural entrepreneurs. This will result in opportunities to consolidate land, which are favorable to the development of highly capital-intensive agriculture.

b. Improved productivity following an increase in financing, the introduction of incentives, and the creation of an environment that is favorable to agricultural development. In addition, incentives include the establishment of supply and distribution systems for effective inputs and multi-purpose water management. A particular emphasis should be placed on land reforms and the improvement and integration of domestic agri-food markets. Land reforms must integrate the security of arable land, while the promotion of the regional market must seek to (i) lift trade barriers, (ii) promote new value chains, and (iii) increase the development of infrastructure that supports trade.

c. Similarly, a vigorous policy for social protection is vital for strengthening the resilience of populations and vulnerable households.

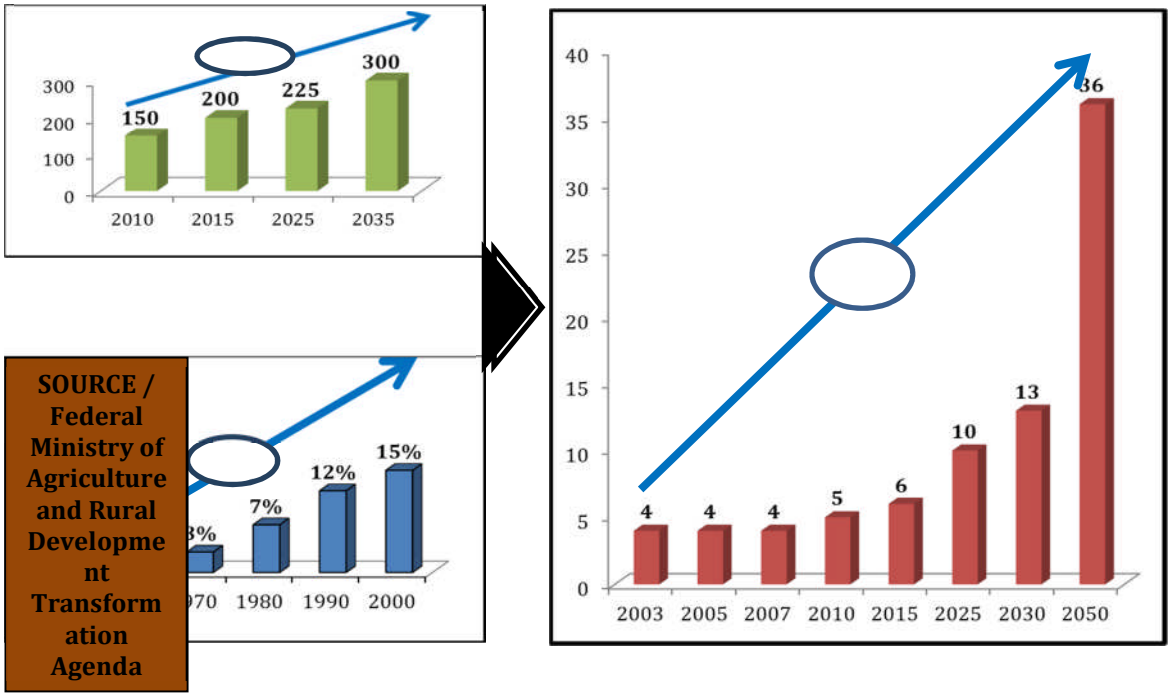
58. This situation should be viewed in the context of food demand. This remains high and is very complex in relation to urbanization and its demand for other purposes (cattle feed, industry, etc.). Within this context the issues related to food will come into play in two categories of products: cereals (corn, rice and wheat) and the by-products of livestock farming (meat, milk and dairy products). The demand for such products remains very high. The regional deficit in these products, with the exception of corn, is still considerable.

- **The Achilles' Heel of Regional Food Security: the case of rice.**

59. In essence, rice is one of the products that receives the most attention from decision makers faced with the challenges and issues of regional food and nutritional security. It has become a strategic and highly significant grain. Demand for rice is strongly correlated with three crucial factors: strong urbanization (one of the deeply-set trends of settlement in the region), improved income and changes in dietary patterns. Despite the region's enormous potential, West Africa is still far from self-sufficiency in rice.

60. According to AfricaRice, 2012, "if the current rate of production (+5.12% per year) and consumption (+3.2% per year) trends remains unchanged, all other things being equal, the total cumulated production of West Africa would be 81.98 million tons between 2010 and 2018, for a requirement estimated at 106.29 million tons over the same period. Therefore, despite a significant reduction, the regional deficit in rice would persist over time. From 2010 to 2018, the cumulated deficit will be 24.31 tons, or an additional requirement of 2.7 million tons per year."

61. The graph below shows specifically the correlation that exists between population growth, urbanization, income and rice demand in West Africa. The situation of Nigeria (the region's demographic, economic and agricultural powerhouse) demonstrates the rice problem's crucial significance in the food issues and challenges of West Africa.



Conclusion

62. In light of the foregoing analysis, we can nourish a moderate optimism regarding the prospects of food and nutritional security in West Africa. Current changes (increase in production and productivity) are still too slow if we are to hope for an eradication of hunger by 2025. In fact, public policies, both at the regional and national levels, are still poorly coordinated to be able to influence hunger and malnutrition in the sub-region. It is no exaggeration to state that the governance of the three factors appearing decisive for regional and nutritional security is both irrelevant and inefficient.

a. Demographic issues, particularly the high birth rates in some countries, are still considered taboo, and they prevent the implementation of appropriate policies and strategies to provide effective support for the region's current demographic shift.

b. Climate change and variability have increasingly become major constraints to further production improvements. Although research has developed innovative technology packets, their dissemination and transfer to producers and livestock farmers continues to be plagued by numerous deficiencies.

c. The regional market still lacks a trade policy that is consistent with the directions of other sector-specific policies (agricultural, for instance). In view of the importance of its on-going and future role in ensuring food security, the regional market must undergo fundamental reforms: (i) developments of infrastructure, strengthening networks of actors, promotion of new value chains, lifting barriers to regional trade; and (ii) adoption of a trade policy that recognizes the many free trade agreements that the region is negotiating with its partners: Europe, America and emerging countries.

63. On the broader front, the objective is to improve the governance of regional agricultural, food and nutritional issues: (i) to support the region's leadership regarding all current initiatives; (ii) the development of inter-sectorial policies that make it possible to coordinate the actions of all participants; and (iii) to implement effective social protection policies.

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