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# Rice crisis, market trends, and food security in West Africa

## Background, scope and methods

The painful experience of the 2008 food crisis raises the question of the implications of West Africa's dependency on global food markets. The study aims to understand how the crisis developed, and its effects on regional food security dynamics in the region. It describes how key market actors responded to the crisis, and what lasting changes have taken place in the years since its occurrence. The study offers an outlook and recommendations.

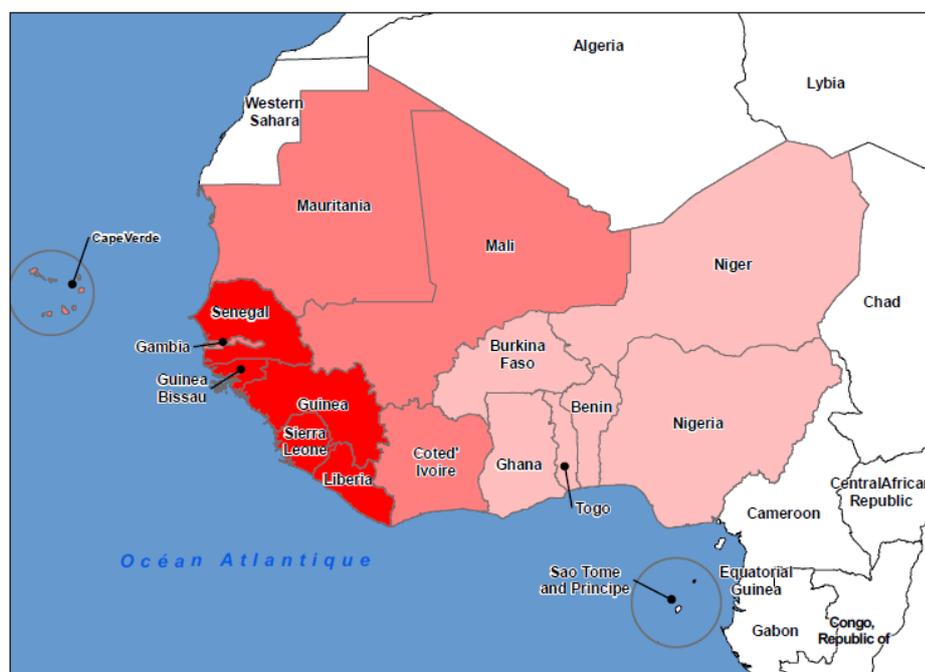
The study, which aims to provide baseline information on the link between the rice market and household food security in the region, was implemented by CILSS, CIRAD, FAO, FEWS NET, WFP and national information systems. The French Trust Fund at WFP funded the study.

**How was the study implemented ?** The countries covered by the study include Benin, Ghana, Liberia, Mali, Nigeria and Senegal. Fieldwork took place from May to December 2010. The study is based on analysis of secondary data from national market information systems. Meetings took place with producers, consumers, traders, and technical staff. Debriefing meetings took place with key stakeholders in the different countries.

## West Africa and the global rice trade

The West African region is endowed with significant rice-growing potential, especially in Nigeria (2.4m hectares), in Guinea (1m hectares) and in Mali (0,5m hectares). Rice cultivation is extensive in West Africa, with low yields between 1.5 and 3.6 tons of paddy rice per hectare, in Liberia and Senegal respectively. Production costs, which vary between \$320 per ton of rough rice to \$140 in Benin, compare favorably with those of the world's main rice exporters. However, low productivity and high processing and marketing costs hamper the competitiveness of local rice on the regional market.

The West African region depends on international imports for some 40% of its rice supply. Thailand, and, increasingly, Vietnam, are the region's main rice suppliers. The main importing are Benin/Nigeria, Senegal and Côte d'Ivoire. West Africa imports some 5m tons of rice, some 20% of rice traded internationally.



**Per capita rice consumption**

**Consommation de Riz\***

- Consommation Faible (<30 kg/héte/an)
- Consommation Intermédiaire (30 - 60 kg/héte/an)
- Consommation Forte (>60 kg/héte/an)

\* Moyenne 2003 - 2007

L'indication des frontières et des noms ainsi que les désignations utilisées sur la carte n'impliquent ni leur approbation ni leur acceptation de la part des Nations Unies

0 200 400 600 Km

Rice consumption is especially high in coastal countries. In Guinea, Guinea-Bissau, Liberia, Senegal and Sierra Leone, rice availability exceeds 60kg per capita per year. These countries are net rice importers. Rice accounts for a high proportion of the overall food intake of poor households; in these countries, imported rice is the cornerstone of household food access.

## What was the impact of the 2008 crisis?

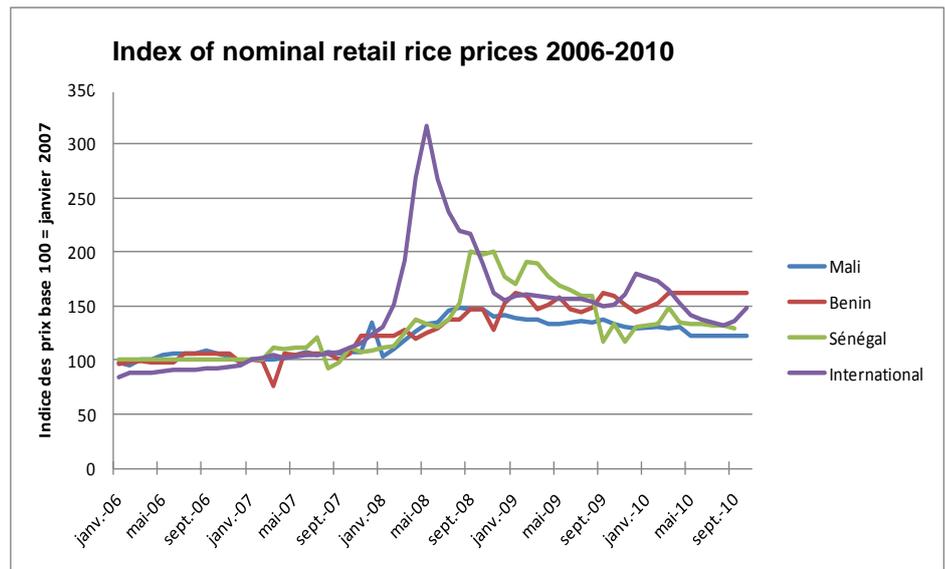
Rice prices rose in West Africa 2 to 3 months after they did on international markets. Local food availability, exchange rates and local policies mitigated the extent of pass through to West African markets. Whereas rice prices tripled between January and April 2008, they 'only' doubled in Senegal. During the same timeframe, they increased by 50% in Mali and Benin.

Rice imports remained stable in Benin, due to the purchasing power of Nigeria. The Nigerian Naira, whose value was buoyed by record high oil prices, appreciated against the US dollar, allowing the country to continue purchasing rice on the international market. By contrast, rice import volumes in Senegal dropped by 16% in 2008 compared to 2007. The impact of the crisis on consumers led to a drop in demand.

Overall, the crisis was not an opportunity for imported rice traders. Senegalese rice importers had no choice but to sell at a loss when wholesalers and retailers lost their customers. Traders squeezed their margins, in Mali and Liberia. In Monrovia, margins shrank from 4.3% to 3% in 2008. Conversely, local rice traders holding stocks during the crisis made windfall profits.

The rice crisis led to an increase in the prevalence of food insecurity in urban areas. City dwellers in countries with high rice consumption levels spend 20 to 25% of their income on rice. In such contexts, the spike in rice prices had serious implications for household

food security. In Monrovia, for instance, severe food insecurity affected 8% of households in June 2008, twice the level observed a year earlier. The increase in prices, which affected all food commodities, led to a deterioration of household food consumption.



## How did governments respond ?

The 2008 food crisis demonstrated the capacity of government and their partner capacity to marshal resources for emergency and longer term measures.

Governments implemented **emergency measures**, some of which are still in place three years later. West African authorities proceeded to reduce the taxation of rice imports. Such measures were expensive, form 1.2% of Liberian gross domestic product, and 0.8% of Senegalese GDP. If Nigeria and Senegal promptly reinstated import duties in late 2008, in Liberia, the import of rice remained duty-free as of early 2011. Such measures also involved restrictions on food trade – which are still in place in the cases of Guinea, Liberia and Mali. In Senegal, a subsidy on rice was implemented from May to August 2008. Considering the effects of the crisis on the poorest, governments launched programs to mitigate impacts. Although such programs were generally well funded, the crisis revealed significant gaps in the coverage of social protection systems in West Africa.

Ambitious **long-term measures** to strengthen self-sufficiency in rice were adopted in 2008: the 'Rice Initiative' in Mali, the GOANA in Senegal, the PUASA in Benin. These programs offer subsidies for seeds and fertilizer, as well as credit to producers. Authorities have supported the extension of irrigated areas and have constructed rice mills – sometimes hastily, as was the case of Benin.

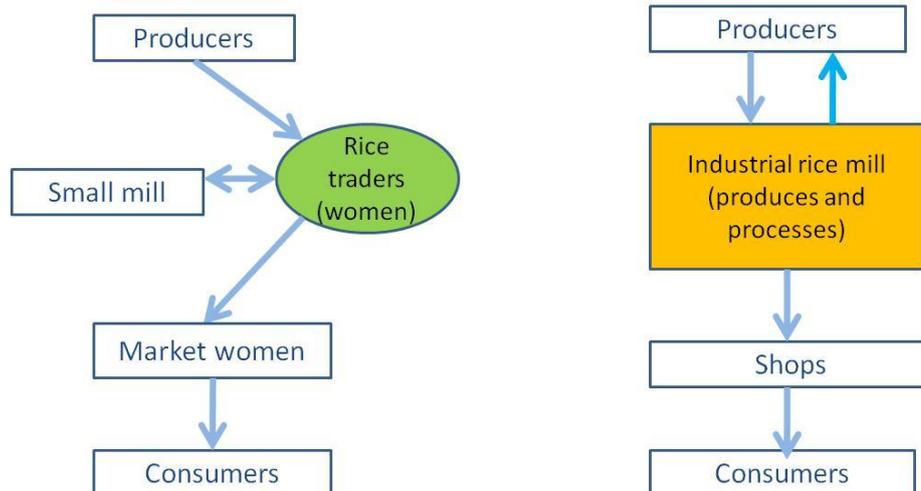
States have also attracted new actors in the rice business by facilitating their access to land. The case of the *Malibya* joint venture in the *Office du Niger* in Mali being the most publicized example. Following the Libyan crisis, it is likely that new investors will step in and pursue this emblematic project. Overall, authorities and their partners were able to mobilize significant resources to implement short and medium term measures. The food crisis therefore led to a redeployment of public and private resources to agriculture.

## Three years later, how has the rice value chain adapted ?

Whereas the state withdrew from the rice value chain during the 1980s; it has been active at all marketing stages since the 2008 food crisis. In recent years, West African producers have been regularly receiving subsidized inputs. In Benin, government agencies give away improved seeds. The establishment of public grain reserves (Ghana, Nigeria) or the implementation of government rice purchases from smallholder farmers (Mali, Niger) represents a strategic change in public interventions on grain markets. Rice represents a smaller share of food aid since 2008, following a rise in the commodity's price. Some agencies have increased their purchases of local rice and are buying directly from farmers organizations (case of WFP's 'Purchase for Progress'), signalling their willingness to support market access for local rice producers.

New relationships between public and private actors are emerging. Increasingly, the state is participating in the development of rice production. The state is contributing to private investments, by financing the construction of new rice mills (Benin, Nigeria) or taking a stake in intensive rice production schemes.

The emergence of an integrated local value chain constitutes a fundamental change in the West African rice sector. The crisis of 2008 has accelerated the creation of new industrial and semi-industrial rice mills, capable of producing milled local rice of high quality. These mills enter into contractual relationships with out-growers, who receive seeds and inputs from



the mill. The out-growers sell their rice production to the mill. This allows mills to secure a reliable supply of high quality paddy rice. This rice is then processed into milled rice of high quality that is sold through a network of shops, thereby competing directly with imported rice. The industrial rice mill is fast becoming a leading actor in the West African local rice market. A diversity of models exist: in Ghana and Nigeria, American and Singaporean multinationals are the drivers of the integration of the local rice value chain, whereas in Benin, NGOs and farmer organizations are at the forefront.

Following the measures taken in 2008, the annual rate of increase of West Africa's rice production has risen from 3.8% to 5.4%. However, the increase in consumption remains at 5 to 6% per year, a rate that is too high for local production to make a lasting impact on self sufficiency in the region. Thanks to support measures and to an increase in local production, imports slowed in 2008 and 2009. In 2010, imports began to increase again as international rice prices fell. The increase in production has not, as of yet, led to a lasting reduction in the region's dependence on international imports.

The 2008 food crisis led consumers to turn to substitutes. Food consumption has switched from rice to cassava flour, a trend that has been observed in Guinea, Liberia, Sierra Leone, Ghana, Benin and Nigeria. An increase in the production and trade of cassava farina in West Africa is evidence since 2008. Moreover, the rate of increase in rice consumption has declined in Senegal, to the benefit of maize. In Senegal, the consumption of maize – produced in West Africa or brought from overseas – has increased by 18% a year since 2008.

## What are the consequences for household food security?

The chronic nature of the West African rice deficit implies that the region will remain dependent of international market and its vagaries. Vulnerable groups in high consumption countries will continue to be exposed to the risk that a new spike in global rice prices would constitute.

Buoyant demand for rice represents an opportunity for producers who are integrated to the market, especially in the Eastern Basin around Nigeria. Nigerian traders already buy paddy rice in Benin and Niger. The

installation of large processing capacities since 2008 in Nigeria will lead to an increase in the level of demand for rough rice, which will in turn lead traders to seek supplies in neighboring countries. Incomes for producers should increase, should their access to the market remain unfettered. Projects aiming to support rice production in such areas would take place in a favorable environment, especially in Benin where production costs are low. However, barriers to trade applied in numerous countries will only limit the opportunity that participation in the regional market.

In the upper Senegal River valley, and in the *Office du Niger* in Mali, rice producers' livelihoods are progressively being eroded. Whereas a farmer *Office du Niger* cultivated 10 hectares of irrigated land in the 1970s, the average landholding dropped to 2 hectares per farmer in 2009. In some areas of the Office and in the upper Senegal River valley, new producers are receiving a quarter hectare of irrigated land – an area too small to cover the food needs of a household, let alone irrigation charges and input credit. At present, own production covers less than one third of the food needs of the poorest households in these areas. A poverty trap is closing in on such producers, victims of a system that has reached its limits. The multiplication of smallholdings -- itself the consequence of demographic growth and the lack of arable land – will reduce the availability of marketable rice surpluses. Water scarcity has begun to affect the *Office du Niger*, a phenomenon that will become more severe with the extension of cultivated areas.

## Recommendations

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- ✓ Information systems on the rice sector at the regional level should be improved;
- ✓ Institutional rice purchases from farming organizations should leverage partnership opportunities with industrial rice mills;
- ✓ The question of the role of grain reserves or state companies in the rice value chain should be discussed. Should these institutions be economic actors, or regulators of prices and markets? This debate could take place under the auspices of CILSS.

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