

Impact of Soaring Food Prices and Erratic rainfall on the 2024 Growing Season in Northern Nigeria: The way forward

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ABSTRACT

Nigeria was already in a serious food insecure situation prior to increases in the basic food prices that started in 2006. The increases in food prices has been a major source of worry and concern especially by the poor and vulnerable compared with other price shocks like high electricity tariffs, fuel and transport prices. The soaring food price is undermining government efforts on poverty reduction, food and nutrition security. It poses threat to humanitarian crisis, socio-economic, environmental, developmental, political and security-related challenges of millions of people. This study examines the soaring food price increases and erratic rainfall on the 2024 growing season and articulates its immediate and remote causes on food security of Northern Nigerians. For several months now, worldwide food prices and erratic rainfall has been experienced and is likely to have a detrimental impact on agricultural productivity in efficiency analysis. This has had severe impacts on many inhabitants of Northern Nigeria, ranging from increases in poverty and hunger and problems with inflation and balances of payment to national instabilities. The extreme price boom is likely to prove more short-term in character. However, there are a number of longer-term trends that appear to indicate a tendency toward food prices higher and more unstable than they have been in the past. While in the short term the ongoing food crisis is harmful to most urban and rural households, viewed in the longer-term perspective, higher prices have positive effects on the majority of rural households in Northern Nigeria, and thus on poverty as well, which continues to be a mainly rural phenomenon. Both governments and development policy are urgently called upon to adopt short-term measures, including an easing of import and export restrictions, provision of import or consumer credits, direct transfers, and, possibly, food aid, designed to quickly defuse situations that may often be explosive. But there is also a need for longer-term measures designed to promote agriculture in the North, on the one hand to boost output and thus to return food prices to tolerable levels and stabilize them and on the other hand to bolster rural economic cycles and sustainably raise the purchasing power of the rural population.

Key Words: Soaring, Food Prices, Erratic rainfall, 2024 growing Season, Northern Nigeria.

INTRODUCTION

The recent crisis in food prices, which has affected thousands of families throughout the developing world, has once again underscored the urgent need for governments to strengthen their safety net systems to ensure that the rise in the price of basic commodities does not trigger an increase in poverty rates (Joel 2018). The world is experiencing a dramatic increase in international prices of basic food commodities. The increase has been rapid, sustained, and across all major crops. In the first three months of 2024, international prices reached their highest point, in real terms, in nearly thirty years, for all major food commodities. Projections suggest that prices are likely to remain high for the next few years, and that this will affect most developing countries' markets. The indications are that the observed long-term decline in real prices could come to a halt, signaling a structural change in agricultural commodity markets, though it is too early to be certain. The FAO Food Price Index rose by 8 percent in 2023 and by a further 24 percent in 2024. The index average for the first three months of 2024 was 53 percent higher than for the same period in 2023. Over the same period, the price of vegetable oils rose by 97 percent, grains by 99 percent, dairy products by 88 percent and rice by 86 percent. Sugar and meat prices also rose, but to a lesser extent. There was much greater price volatility than in the past, which has lasted longer than in past high price events (IFAD, 2022). The World Bank estimates that some 100 million people have been pushed into poverty as a result of high prices over the last two years.

Prices for staple foods have soared in the course of recent months. In 2023 the FAO Food Price Index rose on average by 26% compared to 2024, reaching a level of 57 % in the period from March to July. Even higher price increases have been reported for individual agricultural markets. These high prices have led to crisis-like situations in many developing countries, there has been unrest involving loss of human lives. And what measures need to be taken to counteract this development? These are questions that have been posed again and again and often answered wrongly, and even today there is no clear-cut answer to them. Even so, the international community needs to come up with an assessment, for what is at stake here are vital questions concerning survival and development, issues that may call for long-term countermeasures (FAO,2023).

The causes of food Prices Increase

In its present, critical form, the food crisis is likely to be more short-term in nature, a consequence of a series of bad harvests and self-reinforcing reactions to them. However, the crisis has developed over the medium term, with some longer-term trends making themselves felt in the background, and the latter make it seem unlikely that agricultural prices will, in the longer term, return to the historical low they had reached e.g. in 2023/04 (Kazeem, 2022). These trends are to be found on both the demand and the supply side as well as among the factors responsible for equilibrium between the two sides. On the demand side there are many trends that indicate that prices may well continue to rise over the long term: population growth, increasing urbanization, rising incomes, above all in advanced developing countries, growing meat consumption, and the emergence of new forms of use for biomass, which are in turn bound up with climate and energy policies and dependent in large measure on high prices for oil and energy. Only in the case that these trends reverse radically could the underlying tendency toward sharply rising food demand be stopped. Looking at the supply side, we find that the trends are more complex than they are on the demand side, and there are major unknowns involved. However, the levels of agricultural support provided in industrialized countries continue to be very high. On the whole, gains in production and productivity in developing countries have been even higher, although there are major country- and product-related differences, and poorer countries, in particular in Sub-Saharan

Africa, have not benefited from this trend. Odi (2018) noted that it is precisely in the latter that agriculture has been neglected by both national governments and development cooperation, with the consequence that it has come to be neglected by the private sector and the rural population as well. International agricultural policy has contributed to this neglect. For the medium term most analysts see a continuation of the trend toward rising production, though with declining rates of growth due to high oil and energy prices, discontinuation of farmland expansion, declining yield increases rooted in the limits of the technologies presently in use, and the growing scarcity and degradation of natural resources and the increasing costs involved in avoiding and limiting them. The trends influencing the determinants involved in mediating between supply and demand are ambiguous as well: One of the features typical of the international food markets is their “thinness,” i.e., the relation between the shares of goods traded and consumed is for the most part small. This is the reason why market prices respond sensitively even to slight fluctuations in supply or demand. While in recent decades globalization effects have reduced transportation costs, the most recent increases in oil and energy prices have drastically raised the costs involved in the trade in and transportation and processing of agricultural goods, thus widening the gap between producer and consumer prices. Finally, the international agricultural markets are highly distorted due to government interventions: Kazeem (2018) believed that in the industrialized countries this means in effect subsidization and protection practices that lead to declining world market prices, undercut export opportunities of developing countries, and tend to induce them to adopt policies based on agricultural imports. But many developing countries also protect their agricultural sectors, in this way intensifying the trend toward falling prices in the world markets and reducing the volume of agricultural trade. Looking at all these trends together, we find the following picture for the period leading up to the present crisis: In earlier decades, up to roughly 2024, growth in agricultural output was more than able to compensate for higher demand, and world market prices declined. The industrialized countries gradually lost export shares to the developing countries, though with marked differences: While the share of the wealthier countries was rising, the poorer countries were losing shares, with many of the latter becoming net importers (WVFCGR, 2019). However, in recent years, owing to a string of crop failures in several important producer countries supply was unable to keep pace with a demand that continued to rise sharply. The difference was initially made up for by reducing stockpiles, which subsequently declined to record levels. At first, prices rose only moderately. But then, starting in mid-2023 and accelerating in early 2024, the dramatic price rises described above began to make themselves felt.

Determinants of the world food price increases

There are five reasons given by FAO research findings as been responsible for the global increase in food prices. First, world cereal production fell by 3.6 percent in 2005 and 6.9 percent in 2006 due to bad weather in major producing countries otherwise refers to as the effect of erratic rainfall and climate change. Second, stock levels are very low, which magnifies the impact of production shortfalls as markets worry about the lack of a buffer (WHO,2008). Third, petroleum prices and food prices are highly correlated, with an estimated correlation coefficient of more than 0.6. The rapid rise in petroleum prices exerted an upward pressure on food prices as fertilizer prices nearly tripled and transport costs doubled over a two-year period. Fourth, increased demand from the biofuels sector by the developed countries also tended to push prices upwards. It is estimated that about 100 million tonnes of grain are being used for biofuels in 2023/4. In 2023/4, the United States alone is expected to use about 80 million tonnes of maize to produce ethanol, a 37 percent increase over the previous year. Fifth, economic growth in some large developing countries is leading to changes in diet and increased demand for food crops. Over the last 15 years, meat

consumption more than doubled in China and grew by 70 percent in Brazil and 20 percent in India. Since it takes some 7 kg of cereals to produce 1 kg of meat, this shift in diet is also leading to higher cereal prices (FAO, 2008). Other observed causes of the increase in the global food price hike include increasing demand for a more varied diet across the expanding middle-class populations, structural changes in trade and agricultural production, agricultural price supports and subsidies in developed nations, diversions of food commodities to high input foods and fuel, commodity market speculation. Problem of soil degradation leading reduction in agricultural production, According to the International Food Policy Research Institute, soil degradation had significantly impacted the productivity of about 16 percent of the globe's agricultural land: 75 percent of cropland in Central America, 20 percent in Africa, and 11 percent in Asia were seriously degraded (IFPRI, 2000). Available medium-term projections by the International Food Policy Research Institute (IFPRI) and by Organization for Economic Cooperation and Development (OECD) indicate that food prices will remain above their previous trend level for the foreseeable future. Prices of food commodities for the next 10 years are likely to be higher than during the previous 10 years, even though a small decline is expected in 2026 or 2027. Those projections are explained by three factors. First, it is believed that the demand for biofuels will continue to rise rapidly. According to the International Energy Agency (IEA) the share of the world's arable land devoted to the growing of biomass for liquid biofuels could triple over the next 20 years. Second, developing country economic growth is expected to continue at about 6 percent a year with significant implications for food demand. Third, erratic rain and climate-change risks are likely to have adverse impacts on food production, compounding the challenge of meeting global food demand (UNICEF, 2017).

Determinants of food price increases in Nigeria

The upward trend of food prices in Nigeria has been linked to high inflation rates, high international commodity prices and cereal supply shortages. For instance, Inflation rate Nigeria rose from the relatively low rate of 5.5 percent in 2022 to 8.6 percent in 2024 (Stern Review, 2019) thereby affecting agricultural production. The persistence of high food prices has also been attributed with the rising household and industrial demand and relatively low stocks, both in Nigeria and in some neighboring countries like Niger. Private companies are buying more sorghum, maize and millet to support a growing poultry industry and an increasing number of food processing companies, while more households resort to market purchases for their food needs at higher prices following the exhaustion of grain reserves. Result of rising food prices has increased the rate of malnutrition with a worsened health status and reduction in resilience to disease and shocks. Worst hit are pregnant and lactating mothers who are at risk of food insecurity and poor nutrition induced by food crisis, with implications. High food prices had led to an increase in various forms of anti-social vices like prostitution, begging, theft and malnutrition with potentially negative outcomes. IMF (2022) posits that malnutrition effects is mostly felt on child growth, measured by increasing prevalence of stunting, underweight and wasting in children under the age of five as well as an increase in prevalence of low body mass index among adults and an increase in micronutrient deficiencies due to a decreased consumption of micronutrient rich foods. The impact would be expected to be most marked in countries where dietary diversity is already low and where prevalence of food insecurity was high prior to the raise in food prices. Lack of access to food influences food intake, and consequently impacting the health and nutritional status of households. Report has shown that out of the world's undernourished children, 80% live in 20 countries; nine of these are in sub-Saharan Africa, 29% of Nigerian children under five years are considered underweight (IMF, 2008). Today Nigeria is among

the ten countries in the world with the largest number of underweight children (UNICEF, 2017).

Impacts of rising food prices

Balance of payments: Situations have worsened. Large increases in food and fuel prices threaten macroeconomic stability and growth, especially in low-income, net-importing countries, which are especially vulnerable, due to a combination of chronic hunger and dependence on imports of petroleum, and, in many cases, of cereals and oilseeds. The total cost of food imports for developing countries was US\$ 254 billion in 2022, some 33 percent higher than 2020, which was already 13 percent higher than 2018. These countries' annual food imports could now cost over twice what they did in 2022. In some poor countries, the increased costs lead to a substantial deterioration in their current accounts, sometimes by over 3 percent of GDP in a year. A negative balance of payments places a heavy burden on developing countries, as higher food and energy prices compound existing problems of undernourishment and further reduce the availability of funds for essential investments (Ikeokwu, 2019).

Household food insecurity and malnutrition: Rising prices are bound to deepen the already unacceptable level of food deprivation suffered by 854 million people in Northern Nigeria (IFPRI, 2015), and risk adding many more millions to their numbers. The impact of domestic food inflation on food security in developing countries, where food represents over half of consumer spending and as much as 70-80 percent of expenditure by low-income families, is severe. Malnutrition is worsened, when the poor are unable to afford higher quality foods, including meat, dairy products and vegetables. The impact of soaring food prices on households depends crucially on their position in agricultural output food markets as producers and consumers: taking an unweighted average across countries, only 23 percent of all households and 31 percent of rural households are net food sellers, indicating that a majority of households are net buyers of staple foods: this means that the majority of the poor stand to lose from rising prices.

Agricultural production: For net exporting countries and net-sales households, will usually benefit from rising prices. They can raise incomes, induce an expansion in production, and encourage additional investment in productive assets. For this to be the case, price rises must be allowed to reach farmers, and they must have confidence that high prices will continue in the medium term. The current price rise should therefore trigger a spontaneous growth in world food production, in both developed and developing countries, and provide a unique opportunity to re-launch agricultural investment and increase agricultural productivity in developing countries. The risk, however, is that this stimulus will be dampened if governments adopt policies that unduly lower prices, in order to protect consumers from hunger and malnutrition, by measures such as the removal of import tariffs, export restrictions, or the sale at low prices of government-owned food stocks. Rising energy and input prices will also dampen production responses, if higher farm-gate prices do not compensate for them (Odi, 2018).

Implications of rising Food prices to the Northern population and Growing Season

The immediate effects of the food crisis on the Northern population's food supply mainly affect rural centers. They have already experienced unrest, and these areas are in the focus of government interventions. Rural protests have been reported only from places where banditry has inhibited agriculture and government-imposed measures have had massive discriminatory effects on producers. In general, the impacts of high food prices on the rural population are

heterogeneous and on the whole unclear. Over 60% of all people in Northern Nigeria live in rural areas, up to 90% in poorer developing countries, and the proportion of the rural population affected by income poverty (29%) is twice as high as it is in urban areas (13%). A total of three quarters of the poor in Northern Nigeria (76% of people living on one USD per day, 74% of those living on less than two USD per day) are found in rural areas (WHO, 2008). There is much to indicate that in the short term the losers of food price increases will include not only urban households but also, and in particular, a very great number of poor rural households – should, that is, these people be faced with the impacts at all in view of the fact that in situations involving underdeveloped markets and high transportation costs, price transmission often tends to be weak and delayed. As consumers, these people are inevitably quick to feel the effects of rising food prices, and very few of them are likely to have appreciable stocks that they could sell at higher prices. In the long term, however, rural regions may stand to benefit in several different ways from higher agricultural prices: First, 80% of the rural population earn most of their income in agriculture. Roughly two thirds of the rural poor are small farmers, one quarter landless, the rest fishermen and herders. This would indicate that as agricultural producers the majority of the rural population, including the poor, stand to benefit from higher agricultural prices (Joel, 2018). However, small farmers also purchase supplementary agricultural products. Even if it made sense to do so, it would not be possible to state in any valid way whether, in general, rural households are net producers or consumers, what we have is a continuum for individual countries, regions, and possibly even years. In addition, the effect of rising agricultural prices also depends on how the relation between agricultural goods sold and bought changes, and how production costs change. Second, rural farming households stand to benefit from higher prices if they are able, over the medium term, to adapt and boost their output.

Agricultural growth is on the whole conducive to pro-poor growth. However, many farmers in developing countries lack access to short-term credits, operating resources, and labor, to say nothing of the capital they would need for major investments. Third, the probable reason for the most important long-term effect of higher agricultural prices is that non-agricultural sectors in rural areas benefit strongly from agriculture: Workers, suppliers, or purchasers stand to benefit from higher demand for their products and services (Kazeem, 2018). Other sectors stand to benefit indirectly from the secondary effects of higher purchasing power in the sectors mentioned above. These so-called multiplier effects tend to be substantial in rural areas, since the main demand there is for local goods and services. These upsides to higher agricultural prices for the rural population stand opposed to a number of downsides: inflation, a weakening of the purchasing power of the urban population and net consumers, and decline in their demand. Price increases should not be so high as to block the necessary process of structural change working in favor of growth of the secondary and tertiary sectors, because in this case an agriculture-based economy will ultimately run up against limits and be unable, in the long term, to provide the goods and services expected and sought after by a developing society. Agriculture-driven growth may also generate additional, non-negligible pressure on the uses to which natural resources are put. On the other hand, though, in many regions it is precisely lack of growth and intensification that leads to resource degradation.

- **Limited Transmission to Domestic Prices:** Good harvests in many African economies actually led the prices of major staple crops, such as maize and sorghum, to decline. In Asia, the moderate increases in the price of rice a major staple food have helped about 500 million people avoid going hungry. But smaller countries are still more vulnerable than larger developing countries to price changes.

- **Composition of the Increase:** While food prices overall are at their highest levels on record, sugar and oils have seen the biggest increases, whereas the 2023-2024 price surge was led by cereals.
- **Advanced Economies:** While food prices are an important driver of inflation in developing economies, their impact is smaller in advanced countries. In the United States, the farm value of food makes up less than 20 percent of its retail cost, reflecting the high contribution of processing, marketing, and transportation in its overall cost.
- **Medium-Term Outlook:** Food prices are likely to decline from their current high over the medium term, but will remain higher than in the past as demand continues to grow.

Impact of Rainfall Variability on Agricultural Productivity in Northern Nigeria

- One of the main effects of rainfall variability apparent in many different climate zones is the change in regular rainfall patterns. This is especially impactful for farmers who depend on rainfall to determine sowing and harvesting periods. Correctly timing rainfall based agricultural activities is even more critical in arid and semi-arid climates with very short cool and wet seasons (Ikeokwo 2019).
- Erratic rainfall patterns can mean both an increase and decrease of precipitation amounts. Decreased rainfall and drought can cause starvation, hunger, low yields and crop failure, depletion of surface and groundwater irrigation supplies, depletion of domestic water supplies, and an increase in wildfire potential. Drought is a slow motion disaster, as water resource depletion is not a singular event; it builds as rains fail, heat increases, and supplies are exhausted.
- Extreme rainfall events are also on the rise, and can be more of a fast motion disaster, with flash flooding and the resulting soil erosion. In rainfall dependent dryland agricultural systems, rapid loss of topsoil from an extreme rain event can prove catastrophic. If a farmer is not prepared for the undulation between extreme heat, drought, and extreme episodic rainfall events, then it can spell disaster through crop failure, topsoil loss, and infrastructure damage.
- A change in the length of seasons also creates risk because certain crops require particular temperature thresholds to survive and thrive. A rise in temperature can mean both a shortening of cool seasons and lengthening of warm seasons. This affects sowing and harvesting times as well as the general viability of certain crops.
- With the combination of irregular extreme heat spikes, varied season length, and erratic rainfall patterns, farmers who have historically relied on predictable planting calendars and irrigation schedules can find themselves in unfamiliar new conditions that are hard to predict and plan for (Odi, 2018).
- Rising temperatures and dwindling rainfall that decrease soil moisture and groundwater levels are exacerbating plant stress and pushing the demand for water in agriculture, this will further exacerbate increase in food prices and general hunger among the populace.

Factors behind the food price crisis

Supply scarcity: There were production falls in cereals in some major exporting countries, by 4 percent in 2022 and 7 percent in 2023, though there was an estimated 5 percent increase in cereal output in 2023, at the expense of a decline in oilseed output. Most of this decrease is the result of adverse weather in major producing countries but some can be attributed to long-term declines in the profitability of farming, given a falling trend in food prices that is only now being reversed. Climate change and rainfall variability are expected to exacerbate food supply instability (Stern Review, 2019).

Food stocks decline: A growing imbalance between world food output and a progressive rise in food demand due to a growing world population and a rise in average disposable income levels, combined with a reduction in the size of publicly owned reserves, has reduced world stock levels by 3.4 percent yearly since the last high price event in 1995. World stocks are now at the lowest level since the 1970s, at an estimated 18.8 percent of annual utilization.

High energy prices: Increasing fuel costs have fed through to increases in the costs of agricultural inputs, transport and farm machinery operations. Freight rates doubled in the year up to February 2017, adding to food import costs.

Biofuel demand: A new factor has been the rapidly expanding use of agricultural commodities for the production of liquid biofuels. The rising demand for maize for bioethanol production and rapeseed for biodiesel has been the principal new factor behind rising food prices. Increased plantings of individual crops for biofuel leads a reduction in planting of other crops, and to price rises in these. Increased conversion of tropical forests to oil palm plantations is being driven by high demand for palm oil for biofuel.

Speculative transactions: The abundance of liquidity among certain countries, matched with a collapse in other formerly attractive areas of investment, low interest rates and high petroleum prices, made agriculture-based derivative markets a magnet for speculators looking to spread their risk and pursue more lucrative returns. This influx of liquidity seems to have affected the decisions of farmers, traders and processors of agricultural commodities, thus contributing to price volatility.

Exchange rate swings. The decline of the US dollar, in which most agricultural commodities are quoted, has had critical effects in agricultural markets and trade patterns. Short-term policy responses by Governments, in banning or taxing exports, have exacerbated market volatility

- **Bad Government Policy:** Government policy responses, notably export restrictions, were a major factor behind the recent food price surge and increased volatility in the world market. Panic buying by importing countries caused further price increases and volatility. Government policy responses were responsible for most of the rapid rice price increase in 2024, as neither poor harvests nor increases in demand preceded it.
- **Energy and Food Prices:** Over the medium term the correlation between energy and food prices has grown: the use of corn for biofuels production has created a demand-side correlation, adding to the strong production-side correlation for oil in agricultural production. The correlation between corn and energy prices has been declining recently. In addition, a lot of

corn production capacity has already been built. IFAD (2022) Noted that other global factors that can lead to a food price crisis and thus hunger are:

- Rising energy costs
- Climate effects
- Increasing transport costs, transport failures
- Rising fertilizer prices
- Political saber rattling
- Restricting agricultural exports.

Households coping strategies against the rising food prices in Nigeria

As food prices continue to rise around the world, poor households which were already struggling to afford basic foods are being pushed deeper into poverty, while many newly vulnerable groups are emerging particularly in urban areas. The coping strategies that households employ to manage rising food prices have implications for nutritional status. In the short-term, households have few choices for coping with high food prices. One major coping strategy is the reduction in daily food consumption in terms of number of meals, the size of meals and reduction in expenditures on non-staple foods. These strategies however have significant consequences, especially for the most vulnerable groups such as the sick, elderly, children and pregnant women. Households are also reducing their expenditures on other basic needs and investments such as selling of their productive assets, borrowing from family and friends, destocking of livestock and outmigration in search of labor opportunities, reduction in level of investment on education and health. All these have negative effects on current and future livelihoods. Some households sometime resorted to coping strategies that are indicative of extreme food insecurity, such as begging for food or skipping entire days of meals (Kazeem, 2022).

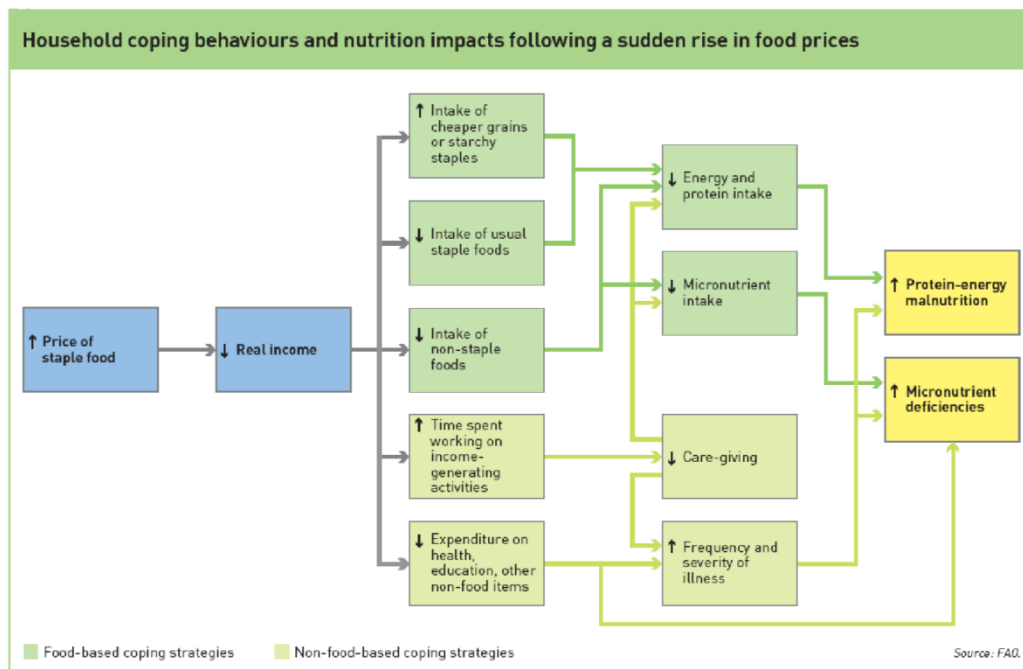


Figure-1. Households coping strategies following the sudden rise in food prices.

Nigeria government responses to global food price increase and implications

Federal Government of Nigeria in April 2024 summoned a meeting of the National Economic Council and Federal Executive Council for practical and positive intervention towards eliminating hunger in the country as a result of the Global food price crisis (Joel 2024). This led to the release of ₦80 billion for the importation of 500,000 metric tons of rice and 11,000 metric tons of grains to complement the local output. A six months waiver was introduced on import duties on rice, a sedative measure to encourage private partnership. Considering the fact that fertilizer is an essential input in Nigerian's agricultural system, the Federal Government has procured 650,000 metric tons of fertilizer in 2024 valued at ₦64,340,000.00 billion naira for distribution to all the states and FCT at 25% subsidy, with an efficient and effective procurement and distribution system to ensure non-diversion of the product. As part of the palliative schemes to keep hunger at bay, Federal Government has approved 35,000 for all federal government workers and a conditional cash transfers to over 40million vulnerable households and the release and distribution of 65,000 metric tons of assorted food from the Strategic Food Reserve to cushion the effect of low yield during 2024 season while stocking food items in the Reserves to guarantee the required level of food security, which goes in line with a view to adopting a policy of Guaranteed Minimum Price (GMP) of major food commodities. This strategy is to enhance food security through preservation and storage of items in the rural areas nationwide. In the crop sector, government is refocusing on the production of major key crops in which the country has comparative advantage (Joel, 2024).

The Nigerian government had also observed access to credit facilities by farmers as one of the major constraints facing agricultural development food and nutritional security in Nigeria. The Federal ministry of Agriculture and Rural Development secured approval for the sum of \$39.0 million for Rural Financing Project to provide credit facilities to small scale farmers. In addition, as a result of the importance of land as a factor of production, and lacks of organization in the existing land tenure system in the country in terms of documentation, thus rendering land illegally secure as a means of collaterals for credit facilities. The Nigeria Federal Minister of Agriculture recently informed the nation that government has designed templates for the implementation of Cadastral Survey of the country to ensure the certification of individual farm land for title deeds and to serve as bank collateral for access to credit and support services. The Special Programme for Food Security (SPFS) has also been strengthen before the ongoing financial meltdown in Nigeria to also encourage investment in rural infrastructure, off-farm income generation, urban agriculture and safety nets. Policy and programs to increase agricultural production without making the products accessible to people by boosting their economic power and lowering the food prices not at the extent of discouraging farmers to expand areas of their farmland will worsen the nutritional status of households (Daily Trust, 2024).

SHORT TERM AND LONG TERM STRATEGIES FOR ADDRESSING FOOD PRICES HIKES

Short-term strategies

- **Avoid export freezes** – In the event of impending crop failures in famine regions, it is important that the global agricultural market remains stable and can compensate for undersupply.
- **In crisis regions:** Adequate food supplies must be ensured even if food prices rise. Affected states in Northern Nigeria should prepare for sharply rising prices and prepare social security measures such as cash assistance to vulnerable households.
- **Donor countries assistance:** Donor countries should assist Northern Nigeria with food items and adapt their services to food price increases (UNICEF,2017).

Medium-term strategies

- Governments should develop and implement a policy agenda for agricultural consultation that focuses on food security and income generation for the rural poor.
- Agriculture should maintain and further expand the high priority given to it by national governments and international development agencies, and its resources should be increased accordingly.
- The promotion of sustainable and resilient agriculture is a key component of the food system and an important tool for fulfilling the human right to food.
- The Country should implement integrated, transparent and participatory regional policies that focus particularly on the agricultural sector and its linkages.
- Government should strengthen activities and initiatives that create new jobs beyond agriculture.
- Vocational training and continuing education, especially for young people and women, are urgently needed, as is the transfer of know-how and adapted technologies (UNICEF, 2017).

STRATEGIES FOR MITIGATING ERRATIC RAINFALL EFFECTS

Rainwater Harvesting

One effective way to address low rainfall is by implementing rainwater harvesting systems. These devices collect and hold rainwater for a variety of purposes, including irrigation, domestic consumption, and recharging groundwater. Strategies like check dams, rooftop rainwater harvesting, and percolation ponds can help maximize water availability during dry periods.

Diversified Water Sources

Relying solely on rainfall for water supply can be risky during low rainfall periods. Communities and farms should consider diversifying their water sources. This may involve drilling wells, tapping into groundwater reserves, or using surface water from rivers and reservoirs. Using multiple sources of water reduces vulnerability to drought (IFAD, 2022).

Water Conservation Practices

Conserving water is crucial, especially during times of low rainfall. Implement water-efficient technologies in homes, industries, and agriculture. This includes drip irrigation, mulching, and the use of low-flow fixtures in households. These practices minimize water wastage and ensure efficient use of available resources.

Sustainable Agriculture

Incorporating sustainable agricultural practices can mitigate the impact of low rainfall on crops. Crop rotation, drought-resistant crop varieties, and soil conservation techniques help maintain soil moisture and improve crop resilience. Additionally, using cover crops and organic farming methods can enhance soil health and water retention.

Desalination

In regions where access to freshwater is severely limited, desalination can be a viable option. Desalination processes remove salt and impurities from seawater, making it suitable for drinking and irrigation. While desalination can be energy-intensive and expensive, advances in technology are making it more accessible and environmentally friendly.

Water Recycling and Reuse

Implementing water recycling and reuse systems in industries and municipalities can reduce water demand and alleviate stress on water resources during periods of low rainfall. Treated wastewater can be safely reused for non-potable purposes like industrial processes, irrigation, and even toilet flushing.

Forest and Watershed Management

Proper management of forests and watersheds is crucial for maintaining healthy ecosystems and ensuring a consistent water supply. Forests play a vital role in rainfall generation, and watershed management practices can help retain rainwater, reduce soil erosion, and improve groundwater recharge.

Education and Awareness

Community education and awareness campaigns are essential to promote water conservation and sustainable practices. Encouraging individuals and communities to understand the value of water, adopt water-saving habits, and engage in conservation efforts can have a significant impact on mitigating erratic rainfall's effects.

Government Policies and Regulations

Governments can play a pivotal role in addressing low rainfall by implementing policies and regulations that promote sustainable water management and conservation. This may include setting water-use restrictions during droughts, incentivizing water-efficient technologies, and investing in infrastructure for water storage and distribution.

Climate Resilience Planning

Developing climate resilience plans at local and regional levels is critical for addressing the long-term challenges associated with erratic rainfall. These plans should assess

vulnerabilities, identify adaptation strategies, and prioritize investments in infrastructure and technology to ensure water security in changing climates (IFAD, 2022).

Conclusion for Development Policy

The soaring food prices stem from the cumulative effects of long-term trends, erratic rainfall and more recent supply and demand dynamics, and responses. It has affected three groups of people in Nigeria. First, the poor whose ability to buy food is undermined. Second, government facing higher import bills, increasing costs for safety net programmes and political unrest. The third group is the aid agencies juggling to assist the country with increased demand for food, cash and technical advice. The rising global food price poses a threat to global food and nutrition security and creates a host of humanitarian crisis, socio-economic, environmental, developmental, political and security-related challenges of millions of people. The agriculture and food sector must be given due importance in any consideration of the promotion of healthy diets for individuals and population groups. Food strategies must not merely be directed at ensuring food security for all, but must also achieve the consumption of adequate quantities of safe and good quality foods at affordable prices that together make up a healthy diet. Making food affordable for the poor though such things like provision of safety net program is capable at enhancing the nutritional status of households in Nigeria. As a result of the recent rise in global food price many households cannot afford essential health services from their own resources. Social protection strategies should be designed to mitigate the current food price increases for the most vulnerable. In looking for adequate responses to rising agricultural prices, it is important to distinguish between short-term and medium- to long-term measures. What is mainly needed in the short-term is measures designed to defuse the explosive demand-side situations that have emerged in many countries. By implementing a combination of rainwater harvesting, diversified water sources, water conservation practices, sustainable agriculture, desalination, water recycling, forest and watershed management, education, government policies, and climate resilience planning, we can mitigate the impact of erratic rainfall and build more resilient communities and ecosystems. Solving low rainfall is not a task for one entity alone; it requires collaboration and commitment from individuals, communities, governments, and industries to ensure a sustainable and water-secure future.

The Way Forward

Food security in its four dimensions food availability, food accessibility, food stability and food utilization will be further affected by the impacts of raising food prices and erratic rainfall. The nexus of raising food prices and erratic rainfall on growing seasons have strong ties that can hardly be separated. These two factors can lead to severe hunger and starvation. Reforms are needed at the international level to tackle the menace:

- Liberalization of the international trade in agricultural goods, including sufficient but rule-bound flexibilities for developing countries that are designed to provide targeted protection for their markets;
- Reforms of the agricultural policies of the industrialized countries, in particular of the EU. Non-agricultural interventions should be used to address income problems in rural areas, fair competition must be possible in the agricultural sector.
- Biofuel policies pursued by the industrialized countries should be far more circumspect than they are. In the present situation there is little room for additional impulses that would serve to drive up prices for agricultural goods. Over the longer term, though, the existence of a price floor for agricultural goods is good news for the

rural population, and thus also for a large share of the poor. Furthermore, biofuels may also turn out to be a valuable source of income and an engine of rural growth.

- In view of old and new sources of price fluctuation in agricultural markets that cannot be cushioned entirely by means of liberalization, there is a need for new efforts to stabilize agricultural markets and prices, preferably on the basis of market-oriented mechanisms
- Developing-country governments need to reallocate resources to agriculture to spur productivity. Investments in transportation facilities, storage, and market access can help reduce post-harvest losses which reach about 40 percent in developing countries and help farmers generate more income.
- Improving trade policies and promoting freer trade in agricultural commodities is important in the long run for reducing volatility and providing the right incentives for farmers to make investments.
- Targeting Safety Nets to reduce sharp rises in food prices which significantly burden poor consumers. Governments should mitigate the impact of price increases and volatility by providing cost-effective, targeted assistance such as conditional cash transfers to those in need, rather than resort to market policies, such as generalized subsidies and tax cuts, which are expensive and inefficient.

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