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Implications of the Russia-Ukraine war on agrifood systems in Ghana and policy responses for building a resilient food system

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HIGHLIGHTS



In 2022, about 850,000 Ghanaians were pushed into poverty and were food insecure due to increasing food prices and loss in purchasing power as a result of the Russia-Ukraine war and the lingering effects of the COVID-19 pandemic.



The Russia-Ukraine war had the greatest negative impact on the agricultural and oil sectors of the economy. Limited access to fertilizer supply, reduced area under crop cultivation, and high transportation costs due to rising fuel prices led to an increase in food prices.



Ghana has strengthened its existing partnerships with development partners and strengthened policies to mitigate the effects of the war on the economy. These include a partnership to establish a fertilizer

plant to produce fertilizer locally, fiscal management and widening of the tax revenue, and support to the agricultural sector from development partners. The new policy “gold-for-oil policy” is expected to reduce the country’s need for foreign currency and stabilize fuel and food prices.



Careful consideration should be given to the Planting for Food and Jobs (PFJ) program which seeks to create employment opportunities through food crops for export, rural development, greenhouse technology villages, agricultural mechanization services, and supporting food and jobs. In addition, Ghana’s safety net program – the Livelihood Empowerment Against poverty (LEAP) – should be expanded and increased to improve the livelihoods of the poorest.

Introduction

The Russia-Ukraine war has had a negative impact on countries around the world, including Ghana. The two main channels of economic disruption to Ghana's economy are the agricultural and oil sectors. Although Ghana is a net exporter of crude oil, its dependence on petrol and diesel imports increases the country's vulnerability to international price shocks which is reflected in pump prices and escalating inflation. The imports of agricultural inputs in Ghana were highly affected since Russia and Belarus accounted for 41% of global trade in potash (Hebebrand Glauber, 2023). At the start of the war, wheat exports from Russia into Ghana were predicted to be affected since 50% of domestic wheat demand in Ghana is supplied by Russia, France, and the US (Acheampong and Menyeh, 2022). Between June 2021 and April 2022, palm oil and wheat prices increased by 56% and 100% in

real terms, respectively, and the weighted average price of fertilizer has doubled partly due to the war (Arndt et al., 2022). Food markets in Ghana are well integrated with international markets, so international price shocks are easily transmitted to local markets (Martey et al., 2020). This had led to high food inflation in Ghana.

This brief examines consequences of the Russia-Ukraine war on fertilizer and food commodities in Ghana and the policy actions related to agriculture and food systems Ghana enacted in response to the war. Content analysis of articles, published papers, and reports were utilized. Data on fertilizer and food prices are from AfricaFertilizer.org, Ghana's Ministry of Food and Agriculture, and the World Food Programme (WFP).

Consequences of the Russia-Ukraine war on the agricultural sector

Ghana is an agrarian and import-dependent economy. The country depends highly on imported fertilizer given that over half of its farm plots are fertilized (Arndt et al., 2022). In 2020, Ghana was the largest importer of fertilizer in West Africa. The main fertilizers are nitrogen, phosphorus, potassium (NPK), urea, sulfate of ammonia and organic compost (Agbai, 2022). The main crops in Ghana that require fertilizer are maize, cassava, rice, millet, rice, yams, and sorghum (Agbai, 2022).

Figures 1 and 2 show Ghana's inorganic and organic fertilizer imports from December 2019 to December 2022. Fertilizer imports have declined in the past two

years due to varying factors, such as payment delays of importers by the Government of Ghana and high cost of importation. The restriction in movement due to the COVID-19 pandemic can also be attributed to this declining trend. For example, the value of Ghana's fertilizer imports declined from \$173 million in 2019 to \$79 million in 2021 due to reduction in fertilizer import (Agbai, 2022). The quantity of fertilizer imports has further declined after the war due to high price of fertilizers. The high exchange rate and reduction in the supply of fertilizer from Russia may have contributed to this trend given that Russia ranked third in terms of countries that import fertilizer to Ghana in 2020 (Fertilizer, 2020). Ghana imports about 4% of NPK, 22% of



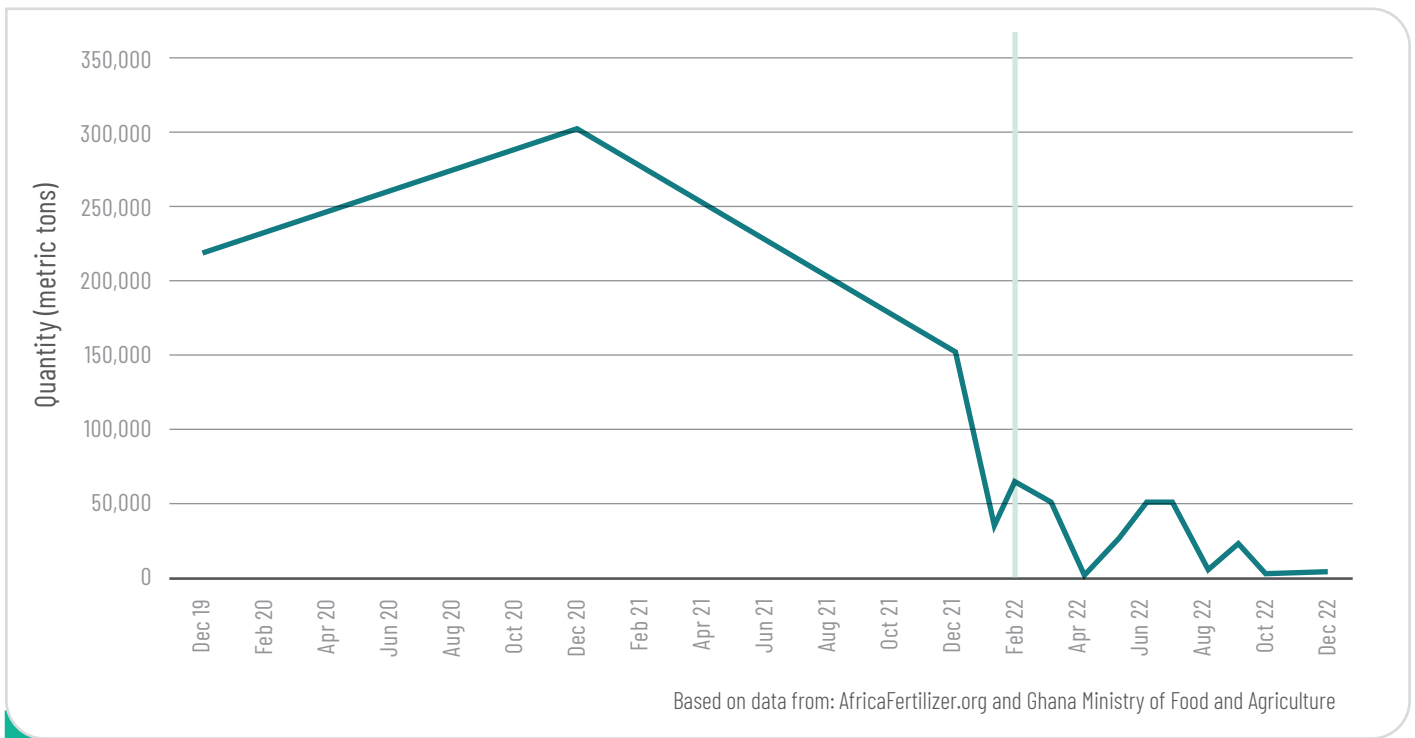


Figure 1.

Inorganic fertilizer (nitrogen, phosphorus, and potassium) imported to Ghana (2019-2022)

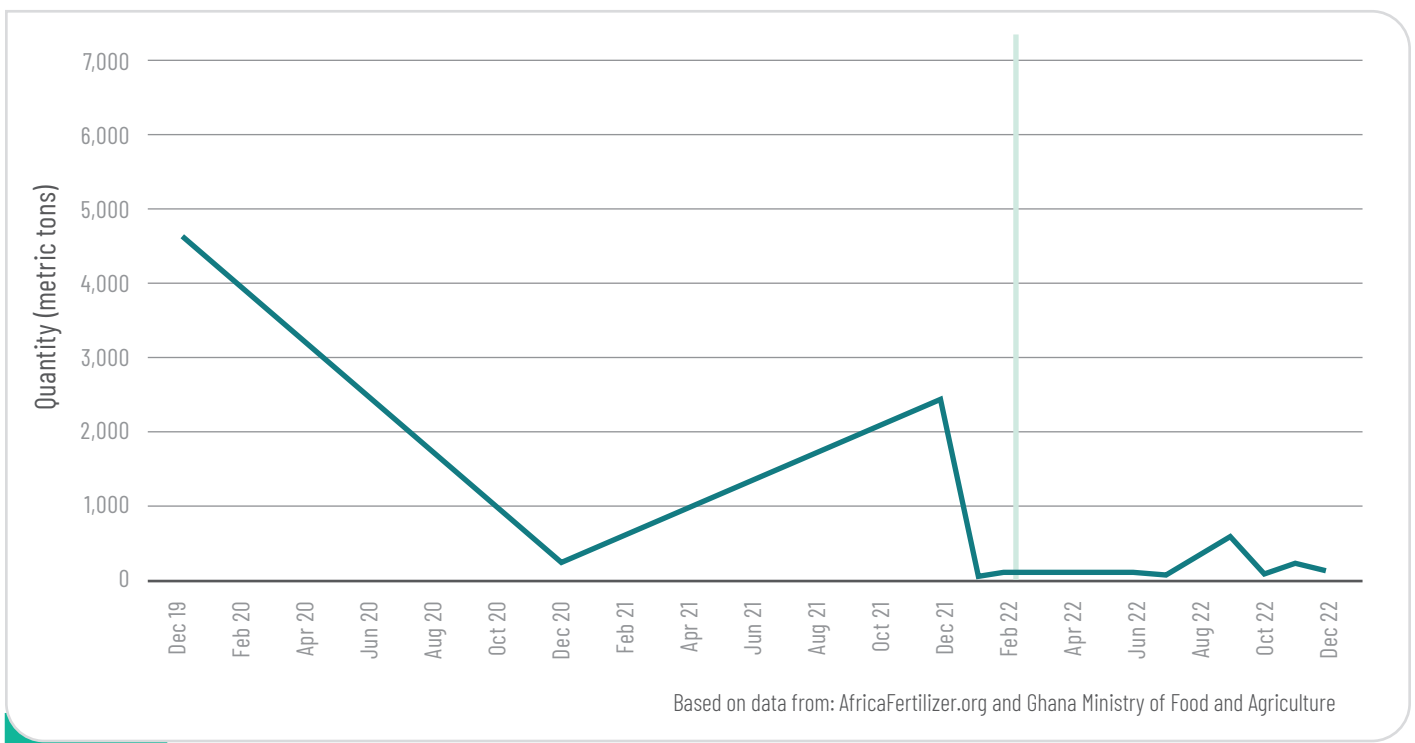


Figure 2.

Organic fertilizer imported to Ghana (2019-2022)

urea, 42% of muriate of potash, 11% of ammonium sulphate, and 11% of other fertilizers from Russia. Importers of fertilizers have struggled to get foreign exchange to import fertilizer to Ghana. The high indebtedness on the part of the government of Ghana to pay importers due to budget constraints and significant reduction in fertilizer subsidies contributed to the decline in importation and supply of fertilizers (Pauw, 2022). Despite the ease in

supply concerns in the fertilizer market as of September 2022, most farmers were unable to buy fertilizer due to depreciation in the exchange rate (Agbai, 2022). Farmers in remote areas had challenges with fertilizer access, leading to a decline in the area under cultivation, use of less recommended fertilizer, and a shift in cultivation from high input crops (maize) to less fertilizer dependent crops (soybean).

Figure 3 shows the consumer price index (CPI) for food. The highest decline in CPI for food occurred between July and September 2019 and has been rising after the start of the Russia-Ukraine war though there are periods with small declines. Based on year-to-year comparison, the CPI

for food in February 2021 was 124.82 relative to 146.5 in February 2022, which is a 17% increase. The effect of food inflation on the economy cannot be underestimated. Most of the rural households in Ghana are net buyers of food and may be adversely affected relative to net sellers.

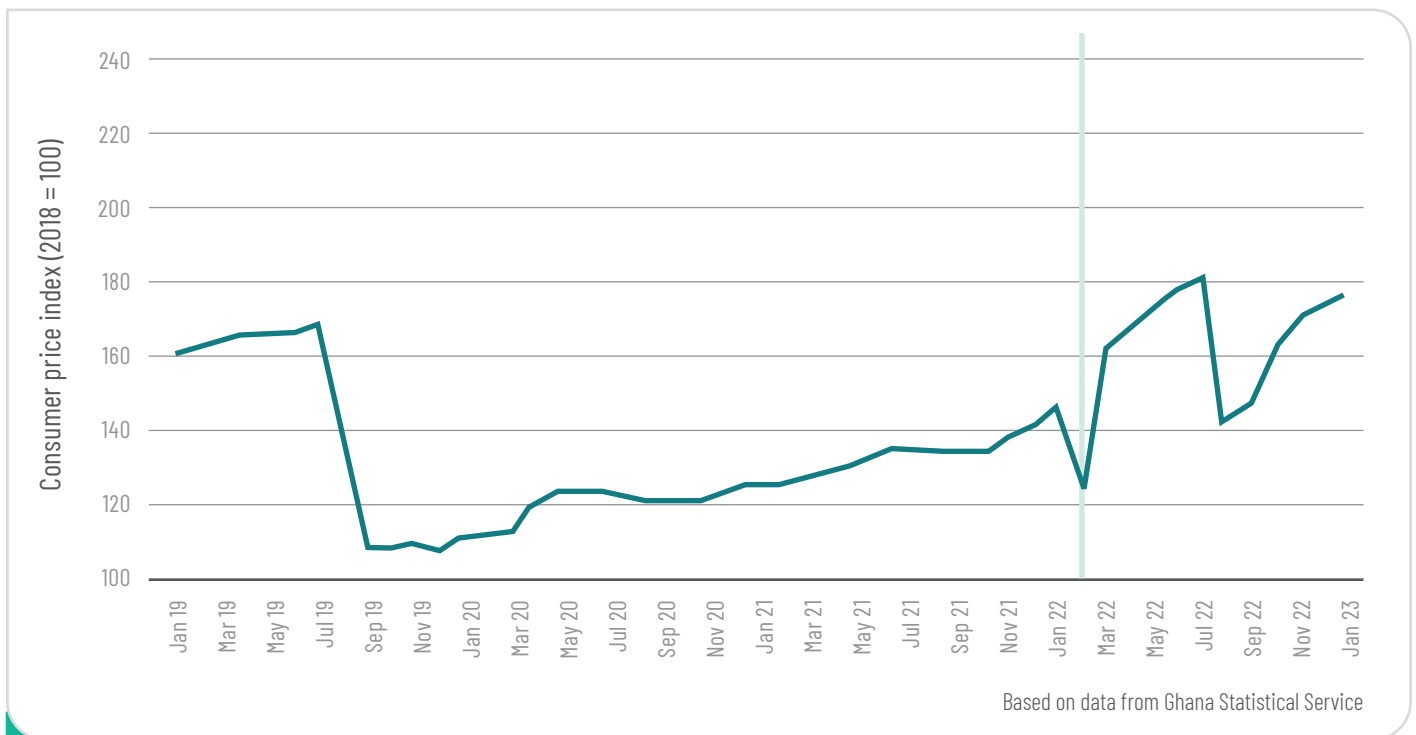


Figure 3. Ghana's consumer price index for food (2019–2022)

The high cost of fertilizer, reduction in land under cultivation, and depreciation of the exchange rate has negatively impacted food production, which has in turn increased food prices. Figure 4 shows the prices of imported rice, maize, sorghum, and local rice from 2019 to 2023. Rice and maize are major staples in the diet of Ghanaians: annual per capita rice consumption is 38 kg



and is projected to increase (Ouédraogo et al., 2021). About 66% of rice consumption is based on imports from Thailand, Vietnam, and India. Annual per capita consumption of maize is estimated at about 62 kg (Bua et al., 2020). Rice and maize are both included in the Ghana School Feeding Program (GSFP), so further increases in their prices have implications on Ghana's budget and food availability for children. Given that the domestic markets are well-integrated with international markets, any price shocks in international markets are transmitted to domestic markets. Inflation in food prices in exporting countries are transmitted to local markets in Ghana.

Imported rice recorded the highest price increase over the study period followed by local rice, sorghum and maize. The prices of the crops increased sharply beyond the reference period (February 2022). The high exchange rate¹ may be contributing to the increase in the imported price of rice since the exchange rate imposes a restriction

¹ Ghana is unable to generate enough foreign exchange through exports and is unable to borrow from the international capital market but rather borrow by issuing a dollar-denominated domestic bonds. This tends to deplete the country's foreign exchange reserves and depreciate the Ghanaian currency against major foreign currencies (Sarkodie, 2022).

on the quantity of rice imports that can be supplied to Ghana. A high exchange rate coupled with the high cost of fuel are likely to increase food prices through import and transport mechanisms. Importers and producers are likely to transfer the higher cost of food imports and transportation to consumers, which would negatively impact household food security.

Ghana currently consumes about 1.5 million metric tonnes of rice annually and mainly achieved through imports due to the limited quantities of local rice production (Ghana Standard Authority, 2023). Reduction in fertilizer supply

may reduce area under crop production and subsequently increase the prices of locally produced food. However, the government is committed to establishing more farms to boost local rice production in partnership with the private sector. On 26 April 2023, the President of Ghana announced a €30 million facility support from the Austria Government to a private firm for the expansion of rice production enterprise in the country. The support is expected to boost local rice production and reduce rice import.

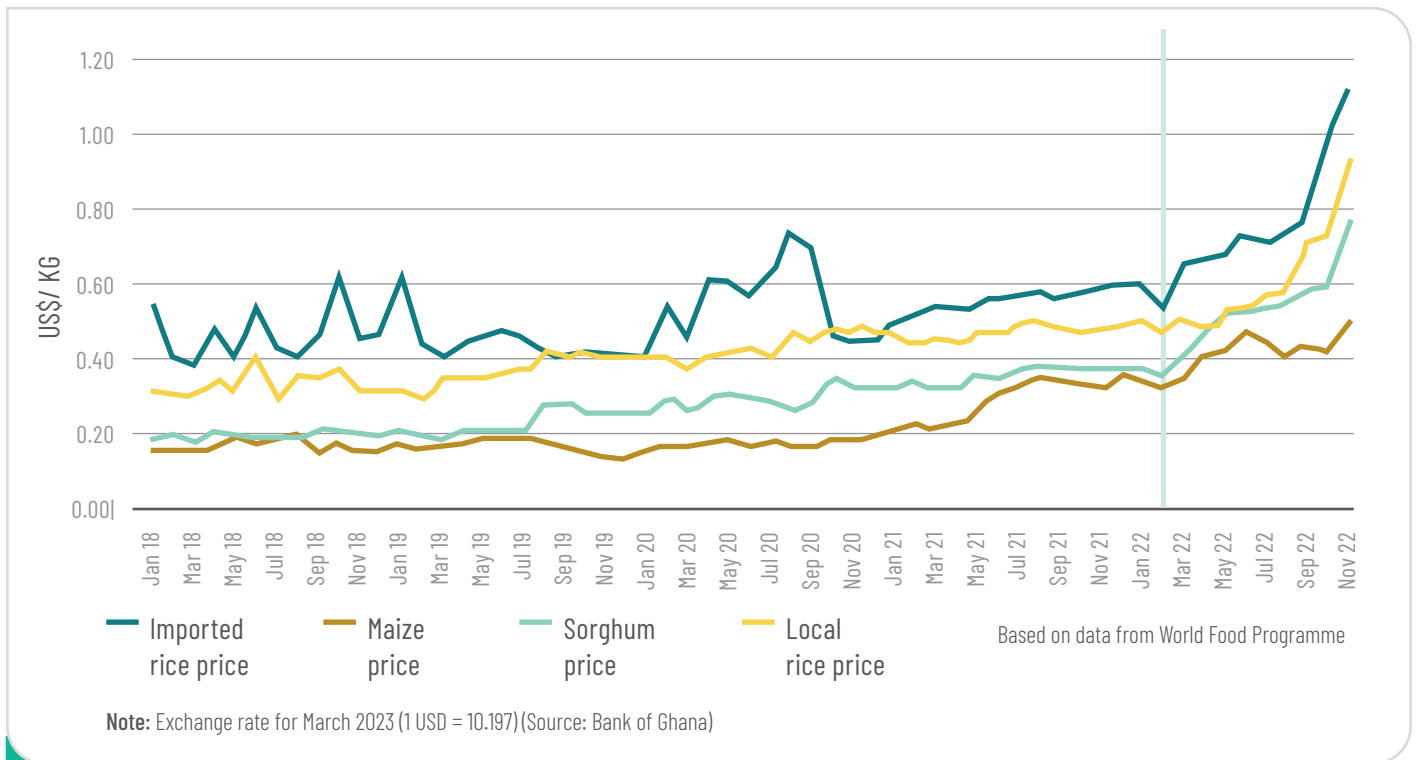


Figure 4. Food prices in Ghana (2019-2022)

Policy responses to build resilient food systems in Ghana

Ghana has not implemented new policies technically targeted to the agricultural sector. The outlined policies were as a result of the pre- and post-COVID-19 pandemic

which has further been strengthened due to the drawback of the war on the economy. Figure 5 shows the policy and interventions pre and post the war.



Figure 5. Timeline of Ghana's policy responses to the Russia-Ukraine war

The main interventions and policies implemented before the war are: (1) partnership with the Office Chérifien des Phosphates to establish a fertilizer plant to produce fertilizer locally, (2) fiscal management and widening of the tax revenue, and (3) development partners support to the agricultural sector. The main policy intervention in 2023 is the gold-for-oil policy. Details of the policies and interventions and their anticipated impact on the agricultural sector are outlined below.

- 1. Domestic fertilizer production** – The government of Ghana in collaboration with the Moroccan phosphate producer, Office Chérifien des Phosphates, plan to produce fertilizer in Ghana by constructing an industrial fertilizer complex. Feasibility studies are complete, but the plant still has to be built (Agbai, 2022). Despite the delay, production of organic fertilizer from waste from the cocoa sector is slowly gaining momentum.
- 2. Fiscal management** – The government of Ghana implemented a 20% expenditure cut in January 2022 as part of its fiscal stabilization and debt sustainability measures after Parliament failed to approve key revenue streams at the appropriate time (done through the quarterly expenditure ceiling allotments to ministries, departments and agencies). Ghana's rising domestic debt was due to the large number of government appointees on the payroll, which was further worsened by the Russia-Ukraine war, leading to an increase in food and fuel prices, increase in general services, demand for salary increase, and the exchange rate. To reduce rising

fuel prices and high cost of transporting agricultural commodities, the Government of Ghana in April 2022 renegotiated the Energy Sector independent power producers (IPPs) capacity charges to further reduce excess capacity payments by 20% to generate a total savings of GHS1.5 billion and reduce margins in the petroleum price build-up by a total of 15 pesewas per litre (Ministry of Finance, 2022).

- 3. Gold-for-Oil policy** – This is an important macro-economic intervention that enables oil importing firms and bulk distribution companies to use gold rather than the US dollars to buy petroleum products. The policy was announced in January 2023. It is expected to reduce the country's need for foreign currency by about USD 4.8 billion annually and result in significant savings on fuel prices. The policy is expected to stabilize fuel prices and thus reduce the cost of transporting food and subsequently stabilize food prices.
- 4. Development partners support** – The European Union and the United States Agency for International Development have made financial commitments towards building a resilient food system in Ghana by committing up to USD 261 million in loans to expand financing to agribusinesses – including women-led small- and medium-sized enterprises (SMEs) in the agricultural sector. The financial support is to enable agricultural enterprises scale up production in areas such as seed acquisition, fertilizer procurement and processing, among others.

Conclusions

Ghana has been impacted by the Russia-Ukraine war as reflected in rising food prices and its exchange rate. In terms of the selected food commodities, imported rice witnessed the highest price increase after the war and followed by the prices of local rice, sorghum, and maize. Ghana's markets are well integrated into the global economy, such that external price shocks are easily transmitted to local markets. The volume of imported organic and inorganic fertilizers declined after the start of the war which has resulted in the reallocation of land among crops (mainly shifting away from maize) and reduction in cultivated area and fertilizer use. However, some policy responses outlined above include fiscal management, gold-for-oil, domestic debt exchange, and domestic fertilizer production.

To create a more resilient food system in Ghana, there is the need to: (a) fast track the construction of the industrial fertilizer complex in Ghana to facilitate domestic production and access to the most vulnerable; (b) strengthen regional

food system risk management, improve the sustainability of the productive base in targeted areas, and develop regional agricultural markets to facilitate trade and diversify export base; (c) prioritize self-sufficiency in local rice production by investing in irrigation and road infrastructure to facilitate all year-round production and market access and subsequently export the surplus; (d) develop agricultural technologies and deploy innovative strategies to catalyze the private-sector led industrialization drive; and (e) allocate more resources to the "Planting for Food and Jobs" Program which aims to modernize the agriculture sector to improve food security and reduce poverty in rural areas. However, there is the need to address bottlenecks (delay in payment to importers, perception of political interference in the subsidy program, lack of effective monitoring of the program, lack of logistical support for the regulatory bodies to effectively monitor fertilizer blends, and poor-quality seed) and improve targeting.

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