MALAWI
IFPRI

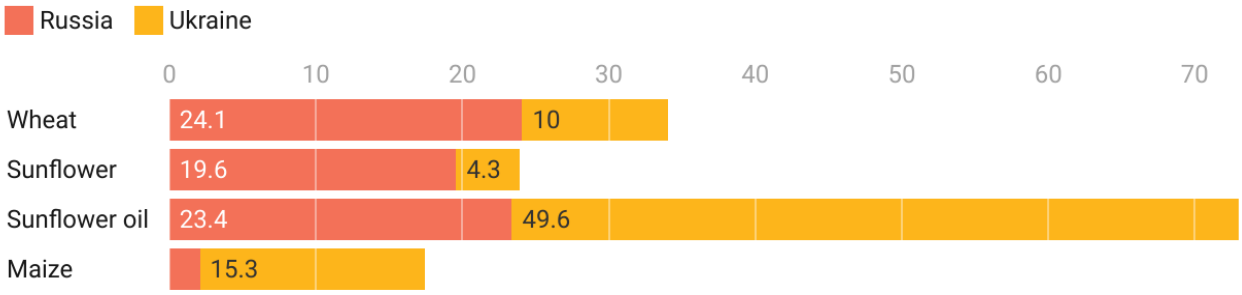
STRATEGY SUPPORT PROGRAM | POLICY NOTE 44 APRIL 2022

Impacts of the War in Ukraine on Malawi

Joachim De Weerdt and Jan Duchoslav

Although geographically distant, there are multiple channels through which Russia's invasion of Ukraine can affect the lives of Malawians. Before the invasion, Russia's and Ukraine's exports accounted for about 12% of total calories traded in the world (Glauber and Laborde, 2022), and the two countries were among the top five global exporters for many important crops including wheat, sunflower and maize (Figure 1). These exports have now largely seized as a result of war-related disruptions to production and logistics as well as economic sanctions on Russia and Belarus, its ally. This shock reduction of supply is driving up food commodity prices worldwide and will continue to do so while the current situation persists. The ongoing fighting has already disrupted the planting of barley and will soon disrupt the planting of maize, wheat, and oilseeds. The choke on global supply will thus continue for months (if not years) to come.

Figure 1: Ukraine and Russia's share of global trade (% kg), 2018-2020

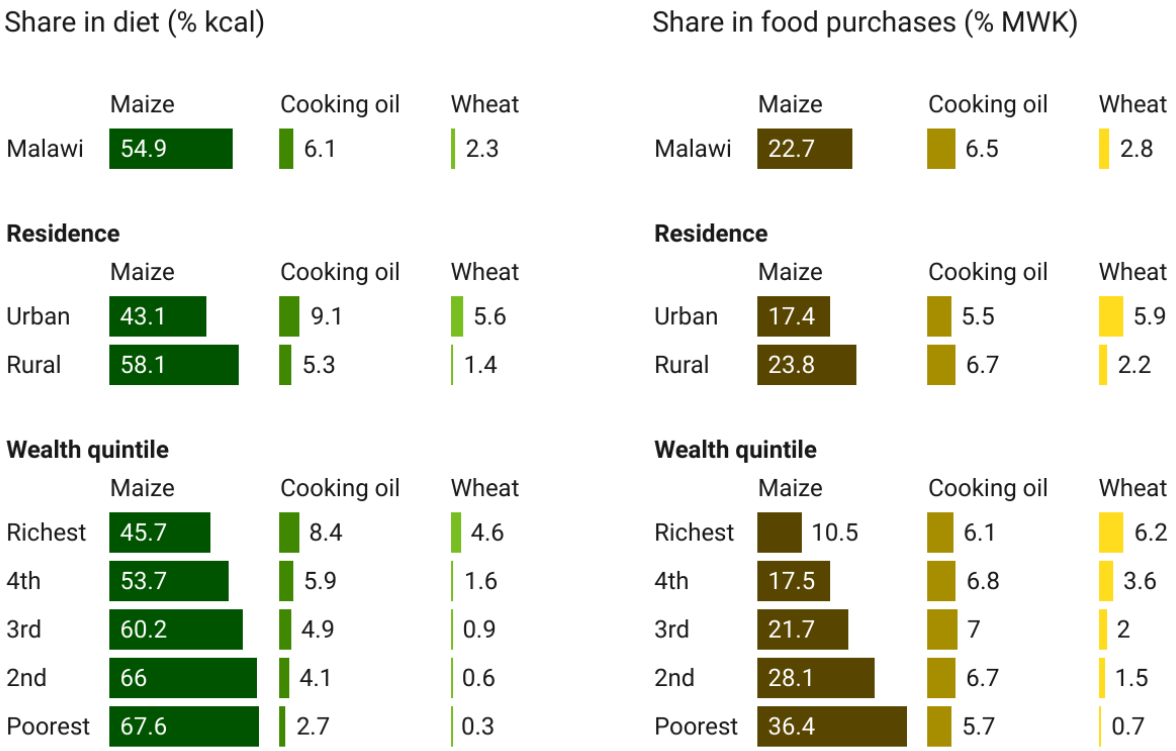


Note: Intra-EU trade excluded from calculations. **Source**: Glauber and Laborde, 2022.

Wheat

Rising wheat prices have been making global headlines and will affect many countries severely. People in northern Africa, for example, rely for between 20% (Sudan) and 39% (Egypt) of their caloric intake on wheat, the bulk of which is imported (Abay et al., 2022; Breisinger et al., 2022). Malawians, by contrast, rely on wheat for only 2.3% of their energy intake spend only 2.8% of their total food budget on wheat or wheat products like bread and pasta. Moreover, these products are mostly consumed by relatively richer and urban households (Figure 2), so the rising prices of bread will have only moderate direct effects on the country's food security. That said, imports from Russia and Ukraine made up nearly two thirds of Malawi's wheat consumption in recent years (Laborde and Pineiro, 2022) and the country may face a shortage until alternative suppliers are contracted.

Figure 2: Maize, cooking oil and wheat in Malawian diets and food purchases



Notes: Figures for wheat include products with important wheat content, like bread and pasta. Figures for cooking oil do not include oil content in processed food. **Source:** Own calculations based on IHS5.

Maize

Ukraine and Russia jointly accounted for 17.4% of world trade in maize before the war (Figure 1). Much of this maize now does not reach world markets, which pushes global maize prices up. Malawi is roughly self-sufficient in maize production in years with favorable rainfall, but is often a net-importer. On average, the country imports less than 1% of its consumption, but at the extremes net imports have risen to 10% of domestic consumption, as happened in 2016 when harvests were particularly poor; and net exports have gone up to 10% of domestic production after a good harvest, as in 2011.

This year, a late onset of the rains and floods in the Southern region are likely to cause production shortfalls in parts of the country, although it is too early to tell how much this will impact total national production. One indication of rising maize prices is that the government's recently announced minimum farmgate price for maize is 47% higher than last year's. Maize imports and exports are heavily regulated, but the country is not at all immune to international price trends.

Malawian households produce as well as consume maize. In contrast to wheat, maize prices will have a strong impact on the poor, who derive 68% of their calories from this source and for whom it makes up 36% of total purchased food.

Because high food prices benefit those who sell and harm those who buy it is important to understand who produces and who consumes. While nearly all Malawian farmers grow maize, most of that is for own consumption. This insulates households somewhat from a global maize price shock. It is important to note tough, that not all Malawians are self-sufficient with respect to maize. Averaged across a year 53.9% of consumed maize comes from purchases (Table 1). This is much higher in urban areas, where over three quarters of maize consumption comes from purchases. But

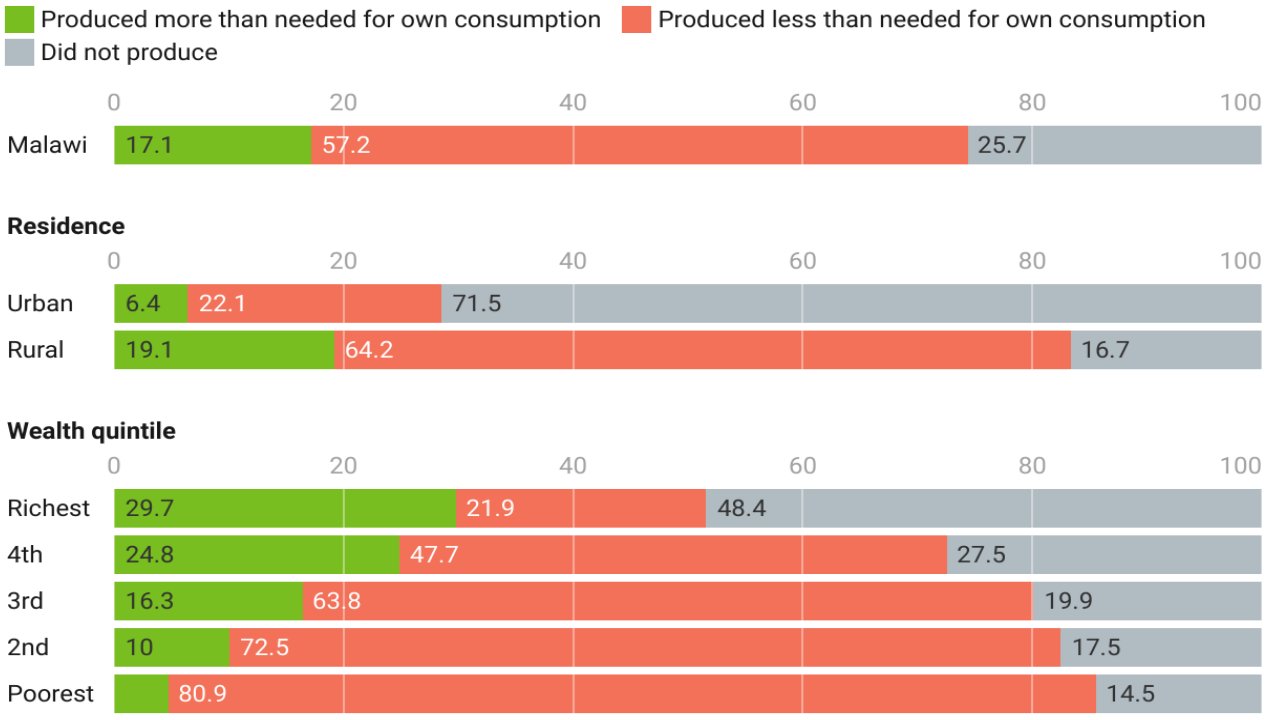
even in rural areas the share coming from purchases is close to 50%. The poorest wealth quintile depends most on purchased maize, while the middle quintile gets the largest share from own production.

Table 1: Maize consumption

Characteristic	All	Urban	Rural	Wealth quintile				
				Poorest	2nd	3rd	4th	Richest
Consumed maize in past week (% HHs)	97.6	98.8	97.4	96.8	97.5	97.4	98.1	98.2
For households reporting consuming maize:								
Weekly per capita consumption (kg)	2.8	2.4	2.9	2.0	2.4	2.8	3.1	3.6
Purchased (% consumption)	53.9	76.1	49.5	59.5	55.5	49.4	51.2	53.7
Own-produced (% consumption)	40.0	17.8	44.4	32.3	39.2	45.4	42.9	40.1
Gift (% consumption)	6.1	6.1	6.1	8.1	5.3	5.2	5.9	6.2

Source: Benson and Jolex, 2022.

Figure 3: Households by maize production



Note: Own consumption need fixed at 2.8 kg per person per week, which is the average per capita consumption reported by households.
Source: own calculations based on IHS5

What about self-sufficiency with respect to maize? If we assume an average consumption of 2.8 kg of maize per person per week (the most recent survey average, shown in Table 1) and compare that to total production reported by the household, then we find that only 17.1% of all Malawian households produce enough maize to maintain that consumption level from own stocks for a whole year (Figure 3). Richer households are less likely to grow maize, but when they do, they are more likely to produce more than needed at home. These households could, if they chose to, be self-sufficient with respect to maize consumption, and perhaps even benefit from rising maize prices. Most of

the poor, by contrast, grow some maize, but only 5% of the poor produce enough for their own needs.

While widespread maize production in Malawi will insulate households somewhat from a global maize price shock, most households will turn to the market at some point in time to purchase maize for consumption. Poor and urban households are most dependent on purchases of maize and will be hurt most by rising maize prices.

Cooking oil

Even before the war global weather events had affected soyabean and palm oil production, putting upward pressure on the price of vegetable oil, and rising prices of cooking oil have been subject to fierce political discussions in Malawi for months. The removal of VAT on oil will help to some extent, but prices are likely to remain high and possibly grow further because Russia and Ukraine account for nearly three quarters of the world's sunflower oil trade.

Figure 2 gives us a glimpse on how this translates to household budgets and calorie sources. Cooking oil makes up a larger share of calories for urban and richer households, but there is no discernable pattern when it comes to share of purchases. Whereas wheat takes up a much larger share of total food purchases for the rich, and maize a much larger share of food purchases for the poor, there is no such gradient present for cooking oil: across all wealth quintiles and also irrespective of urban or rural location, cooking oil makes up a stable 5.4 to 7.0 percent of total food purchases. This means that while cooking oil prices are likely to be felt across all segments of the population, the impact will fall harder on the poor, who already consume little oil and therefore have less scope to further reduce consumption.

On the other hand, survey data show that 16% of crop-producing households in Malawi grew soybean in 2019/20, a number which has likely increased since then because of favorable prices in the 2020/21 growing season (Baulch and Jolex, 2021; Benson and Jolex, 2022). This group of households stands to benefit from the higher soybean prices, which are likely to grow further as cooking oil manufacturers seek substitutes for Ukrainian and Russian sunflower seed.

Fertilizer

Similar supply shocks will reduce the availability and drive up prices of chemical fertilizer. Before the war, Russia and Belarus jointly accounted for 20% of global production of natural gas (used in the production of nitrogenous fertilizers), 15% of global trade in nitrogenous fertilizers (which are a major component of both NPK and urea) and 33% of potash (a component of NPK). High food prices may put further upward pressure on fertilizer prices through increased demand. Different from maize, Malawi imports all of its fertilizer, so price increases hurt all Malawian households.

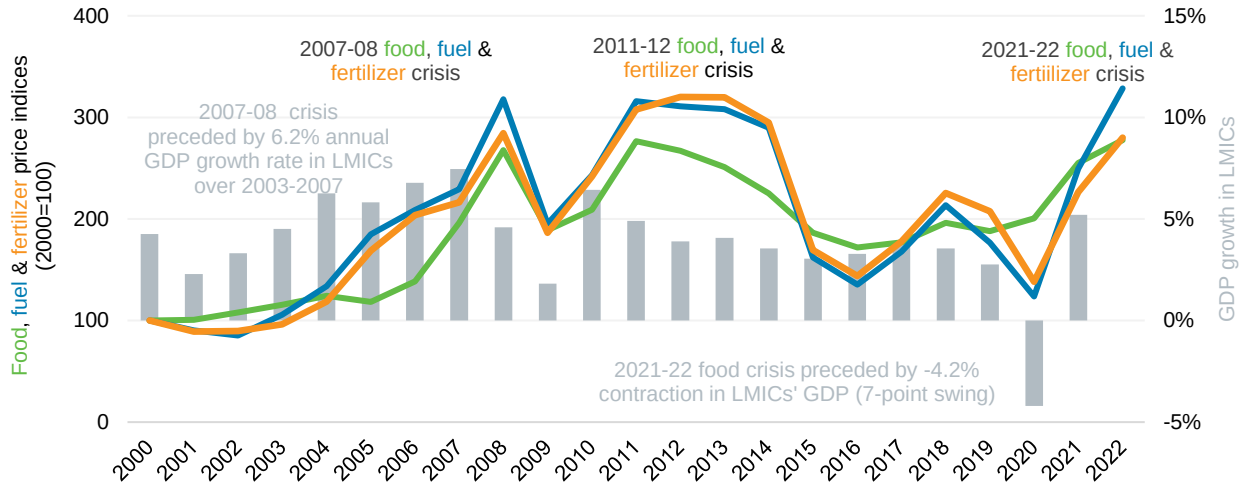
When global fertilizer prices nearly doubled in the year to August 2021, it derailed the implementation of last year's Affordable Inputs Programme (AIP), which provides eligible farmers with fertilizer and hybrid seed at reduced prices. Since then, prices have nearly doubled again (World Bank, 2022), and are likely to continue rising further. This does not bode well for the AIP, whose budget for 2022 has been reduced by a third in real terms compared to 2021. If the current prices persist and if the Government wants to retain current subsidy levels, the number of beneficiaries will have to be reduced by roughly two thirds. If the Government wants to maintain the number of beneficiaries, their co-payment will have to increase. Either way, less fertilizer is likely to be applied in 2022, meaning reduced agricultural production, putting still more upward pressure on food prices. Moreover, high energy prices (Russia accounts not only for 20% of global gas production but also for 11%

of global oil production) will make the transport of goods more expensive, further adding to the cost of food – and pretty much everything else.

Policy options

There has been a huge amount of volatility in the fuel, food and fertilizer prices in the past two decades and Figure 4 makes it clear that price volatility is the norm, rather than the exception. Complicating the situation is that, as is also obvious from Figure 4, food, fuel and fertilizer prices tend to move in lockstep: when one price is high the others are too, creating the conditions for a perfect storm. How can Malawian policy makers help steer the country through this crisis unscathed, and prepare for the inevitable future storms? We lay out a number of complementary policies below.

Figure 4: Food, fuel and fertilizer prices move in lockstep

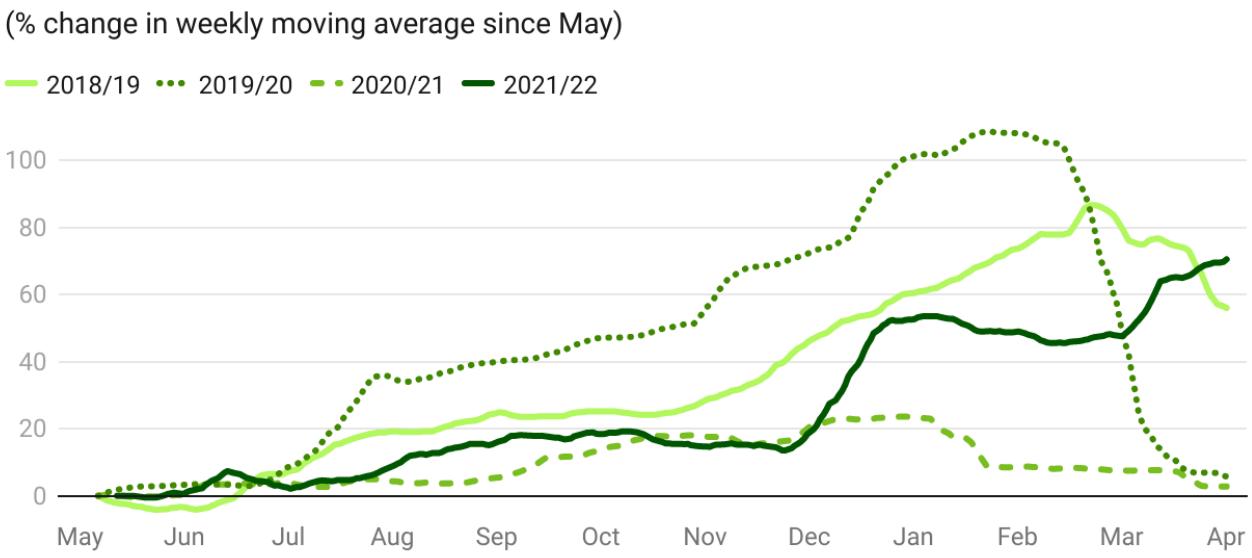


Source: Heady and Hirvonen (2022)

First, rising food prices are compounded by seasonal fluctuations in maize prices. The government cannot do much to alter global market prices, making it more important than ever to stabilize seasonal fluctuations in maize prices. Figure 5 shows how volatile maize prices have been over the past 4 years, rising between 25 and 105 percent towards the lean season, compared to the price in May right after harvest. Yet, many Malawian farmers, cash-strapped after the lean season and lacking safe storage facilities, sell much of their produce shortly after harvest, only to buy it back at a loss later in the year. These fluctuations can be moderated via better management of the Strategic Grain Reserve (SGR).

In recent years, the Strategic Grain Reserve (SGR) would typically not begin its replenishment until after the start of the fiscal year in July, putting upward pressure on already rising maize prices. Now that the start of the fiscal year has been shifted from July to April, the National Food Reserve Agency (NFRA) and the Agricultural Development and Marketing Corporation (ADMARC) should have their budgets available in time to make the procurement on behalf of the SGR early enough to prop up prices when they are at their lowest, thus reducing the disparity between the buying and selling prices that Malawian farmers face. This would primarily benefit the poorest farmers, who are most likely to sell their harvest early, and who are also most vulnerable to growing price levels in the country.

Figure 5: Seasonal maize price fluctuations 2018-2022



Source: own calculations using IFPRI maize market data

Second, Malawi imports all of its fertilizer on the international fertilizer market and, unlike maize, there are few options to alter or smoothen the price of fertilizer (Duchoslav and Rusike, 2021). Policy responses should therefore focus on improving the efficiency of fertilizer applications. Unfortunately, yield responses to fertilizer have been declining over recent years due to deteriorating soil health. Even before the Ukraine war, some farmers could not make profitable use of fertilizer, in the sense that the total cost of the fertilizer could be higher than the value of the additional yield resulting from its application. Further increases in fertilizer prices will only exacerbate such inefficiencies. Policy options to make more efficient use of fertilizer and fertilizer subsidies have been discussed at length by De Weerdt and Duchoslav (2022), Chadza and Duchoslav (2022), and Nyondo et al. (2022), who have called for increased investments in soil health, in agricultural research and development, and in agricultural extension.

Third, social safety nets should be agile and aware of who is affected by a particular shock. During the COVID-19 pandemic, the urban poor suffered disproportionately from lock-down restrictions. Rising maize prices are likely to impact the same group, because they are completely dependent on food purchases and food makes up a large share of their total budget. Malawi's flagship social safety net, the Social Cash Transfer Programme (SCTP), is rigid, so ad hoc interventions such as the COVID-19 Urban Cash Intervention or the recurrent but ad hoc funded Lean Season Food Insecurity Response Plan have instead been to respond to shocks. Making the SCTP sufficiently flexible both horizontally (i.e., promptly increasing and decreasing the number of beneficiaries as needed) and vertically (i.e., varying transfer sizes) help better protect the most vulnerable households from shocks like the current high food prices.

Finally, despite decades of policies that promote maize self-sufficiency at the household level, despite three quarters of Malawian households growing maize and over 50% of the agricultural budget allocated to subsidizing agricultural inputs primarily geared towards maize production, the vast majority of Malawian households depend on market purchases of maize. Among the poorest 20% of the population 86% grow maize, but only 5% are likely to be producing sufficient quantities to satisfy their own consumption needs (Figure 3). The focus on subsistence is clearly not producing the desired results in terms of resilience to external shocks, while it is simultaneously crowding out investment in other, more productive activities. We have already noted that making strategic use of the

grain reserves will be especially important to bridge this volatile year, but in the longer run, diversifying agricultural production to more lucrative, commercially oriented crops, as well as diversifying beyond agriculture, are crucial goals. A necessary condition for such a shift is that farmers are confident that they will have access to staple food at predictable prices (Benson, 2021). At the national level, this can be achieved by ensuring that government interventions in the maize market are predictable and rules-based, while at the international level, strengthening the regional integration of maize markets can play a key role (Pauw and Edelman, 2015).

ABOUT THE AUTHORS

Dr. Joachim De Weerdt is a Senior Research Fellow with the Development Strategy and Governance Division (DSGD) of the International Food Policy Research Institute (IFPRI), and the leader of IFPRI's Malawi Strategy Support Program, based in Lilongwe.

Dr. Jan Duchoslav is a Research Fellow with the Development Strategy and Governance Division (DSGD) of the International Food Policy Research Institute (IFPRI) based in Lilongwe.

REFERENCES

Abay, K., L. Abdelfattah, C. Breisinger, J. Glauber, and D. Laborde. 2022. The Russia-Ukraine crisis poses a serious food security threat for Egypt. IFPRI Blog post accessed 7 April 2022. Washington, D.C.: International Food Policy Research Institute.

Baulch, B. and A. Jolex. 2021. Mixed fortunes. Prices paid to soybean farmers have improved in 2021...but not those to maize farmers. MaSSP Policy Note no. 41. Lilongwe, Malawi: International Food Policy Research Institute.

Benson, T. 2021. Disentangling food security from subsistence agriculture in Malawi. Washington, D.C.: International Food Policy Research Institute.

Benson, T., and A. Jolex, 2022. IFPRI Key Facts Series: Agricultural commercialization. Lilongwe, Malawi: International Food Policy Research Institute.

Breisinger, C., O. Kirui, P. Dorosh, J. Glauber, and D. Laborde. 2022. The Russia-Ukraine conflict is likely to compound Sudan's existing food security problems. IFPRI Blog post accessed 7 April 2022. Washington, D.C.: International Food Policy Research Institute.

Burke, W., S. Snapp, B. Peter, and T. Jayne. 2021. Sustainable intensification in jeopardy: Transdisciplinary evidence from Malawi. Working Paper no. 21/07. Lilongwe, Malawi: MwAPATA Institute.

Chadza, W., and J. Duchoslav. 2022. Policy options for smart subsidies in Malawi. MwAPATA Policy Brief no. 13. Lilongwe, Malawi: MwAPATA Institute.

De Weerdt, J., and J. Duchoslav. 2022. Guiding principles of AIP reform. MaSSP Policy Note no. 43. Lilongwe, Malawi: International Food Policy Research Institute.

Duchoslav, J., and J. Rusike. 2021. Why are fertilizer prices in Malawi high? And what can be done? MaSSP Policy Note no. 42. Lilongwe, Malawi: International Food Policy Research Institute.

Heady, D., and K. Hirvonen. 2022. A food crisis was brewing even before the Ukraine war – but taking these three steps could help the most vulnerable. Blog published on The Conversation, 24 March 2022.

Glauber, J. and D. Laborde. 2022. How will Russia's invasion of Ukraine affect global food security? IFPRI Blog post accessed 6 April 2022. Washington, D.C.: International Food Policy Research Institute.

Laborde, D., and V. Pineiro. 2022. Trade and nutrition: trade pattern of macro-nutrients. Dataset made available by authors on 7 April 2022. Washington, D.C.: International Food Policy Research Institute.

Nyondo, C., W. Burke, M. Muyanga, and W. Chadza. 2022. Redesigning the Affordable Inputs Program to diversify and sustain growth. MwAPATA Policy Brief no. 14. Lilongwe, Malawi: MwAPATA Institute.

Pauw, K. and B. Edelman. 2015. Is Malawi's mix of maize market policies ultimately harming food security? MaSSP Policy Note no. 22. Lilongwe, Malawi: International Food Policy Research Institute.

World Bank 2022. Commodity markets: Latest commodity prices. Washington, D.C.: World Bank. Accessed 7 April 2022.

FURTHER READING

IFPRI is curating a series of blogs on the global and regional food security implications of rising food and fertilizer prices that began with the pandemic and are now exacerbated by Russia's invasion of Ukraine: https://www.ifpri.org/blog/how-will-russias-invasion-ukraine-affect-global-food-security.

IFPRI is also convening a series of policy seminars on these same issues: https://www.ifpri.org/spotlight/food-fertilizers-and-nutrition-rising-prices-and-global-food-security

Chadza, W., W. Burke, T. Jayne, and M. Muyanga. 2022. How Russia's invasion of Ukraine will affect the food security situation in Malawi: Implications for Malawian policy response. MwAPATA Policy Brief no. 18. Lilongwe, Malawi: MwAPATA Institute.

Nhemachena, C., S. Dahiya, I. Gokah, P. Echessah, M. Gichuri, S. Nhlengethwa, A. Djido, and D. Muthini. 2022. Russia-Ukraine conflict: Implications of disruptions in global food supply chains for food trade in Africa. AGRA Policy Brief. Nairobi, Kenya: Alliance for a Green Revolution in Africa.

Nhemachena, C., S. Dahiya, I. Gokah, P. Echessah, M. Gichuri, S. Nhlengethwa, A. Djido, and D. Muthini. 2022. The impacts of the Russia-Ukraine conflict on prices, food and nutrition security in Africa. AGRA Policy Brief. Nairobi, Kenya: Alliance for a Green Revolution in Africa.

The Malawi Strategy Support Program (MaSSP) is managed by the International Food Policy Research Institute (IFPRI) and is financially supported by USAID, FCDO and the Government of Flanders. This publication has not been independently peer reviewed. Any opinions expressed here belong to the authors and are not necessarily representative of or endorsed by IFPRI or its funders.

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

A world free of hunger and malnutrition

IFPRI is a CGIAR Research Center

IFPRI Malawi, Area 14 Office, Plot 14/205, Lilongwe, Malawi | Mailing Address: PO Box 31666, Lilongwe 3, Malawi

T +265-1-771-780 | Email: IFPRI-Lilongwe@cgiar.org | http://massp.ifpri.info