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The Ukraine War and its Food Security Implications in Nepal

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Introduction

Though declining in importance as Nepal undergoes structural transformation, agriculture still accounts for 23.9 percent of GDP and one in five people was employed in the sector with a larger share of women (33 percent) employed in agriculture than men (14.7 percent) (Labor survey of 2017-18). While not directly employed in agriculture, approximately 60 percent of the population has some engagement with the sector.

Nepal has made progress on reducing poverty and food insecurity, though challenges remain. According to the 2021 Multidimensional Poverty Index (MPI), Nepal has made substantial progress in reducing MPI from 30.1 percent to 17.4 percent between 2014 and 2019. However, according to the Nepal Demographic and Health Survey 2016, 22 percent of the households in Nepal are mildly food insecure, 20 percent are moderately food insecure and 10 percent are severely food insecure. Rural households (61 percent) are more food insecure than urban households (46 percent) and the highest proportion of food insecure households are located in Karnali province. Food insecurity has led to high rates of undernourishment in Nepal. Overall, 36 percent children under the age of five are stunted, 10 percent are wasted, and 27 percent are underweight.

As this brief will show, the Ukraine conflict is manifesting itself in Nepal through higher prices. Since poor households spend a significant proportion of their income on food, higher food prices are likely to impact food security and push more people into poverty reducing gains made in the decades prior to COVID-19. Many households will also be unable to afford basic nutrition leading to adverse long-term effects on the physical and mental health of individuals. Reduced incomes also are likely to limit access to quality education, as households may not be able to afford sending their children to school or pulling children out of school to assist in household chores or income-generating activities. This can also impact gender inequality because in Nepal male children are prioritized over females in cases where households can only afford to send one child to school (Khanal, 2018). The IMF expects global prices

to rise by 8.7 percent in developing economies. In June 2022, Nepal recorded the highest inflation rate in the last five years at 8.56 percent.

Risks of the Ukraine conflict

Rice is the main staple of Nepal and contributes more than 50 percent of total cereal production (Table 1). Paddy is grown on an average of 1.47 million ha with an average productivity of 3.8 t/ha with annual production around 5.4 million tons. The per capita consumption of rice in Nepal is 138 kg, and it contributes 16 percent to agriculture GDP (Yadav and Chaudhary, 2017)

Table 1: Production of Key Agricultural Products in Nepal (Average 2017/18- 2019/20)

Products	Average Area (ha)	Average Production (metric tonnes)
Paddy	1,473,401	5,437,605
Maize	956,085	2,701,719
Wheat	706,113	2,046,652
Millet	263,102	316,388
Buckwheat	10,325	11,553
Barley	24,487	30,736

Source: MoALD, Statistical Information on Nepalese Agriculture 2076-77 (2019-20)

Nepal imported rice worth NRs 46 billion (approx. USD 383 million[1]) in fiscal year 2020/21. In terms of value, it is the fourth largest import of Nepal behind diesel, steel, and crude soybean oil. The 1.2 million metric tonnes of rice imports was almost a fifth (22 percent) of domestic production in FY 2020/21. A little over 50 percent of imports are paddy and the rest is semi or wholly milled rice. Almost all rice imports are sourced from India.

Besides rice, crude soybean, palm and sunflower oil are significant import commodities. However, this number is driven by the South Asian Free Trade Area (SAFTA) agreement that allows traders to import crude oil with minimum tariffs and then process and re-export it to India with zero tariffs. Most of the imported crude oil is not destined for the domestic market and it is estimated that Nepal consumes less than 20 percent of total edible oil imports (Prasain, 2022). Thus, although crude oil is an import commodity, the oil export ban adopted by various countries following the Russia-Ukraine war does not directly threaten Nepal's food security. It will however, exert upward pressure on prices and indirectly contribute to higher food inflation.

[1] 1 USD = NRs 120

Table 2: Import of Agricultural Goods in FY 2020/2021

Description	Unit	Quantity	Import Value (Rs. Thousands)
Crude soybean oil	Ltr	452,626,489	53,387,881
Semi-milled or wholly milled rice	Kg	546,876,996	27,620,576
Other paddy	Kg	652,777,117	18,376,128
Crude sunflower oil	LTR	127,412,892	16,248,681
Maize (excl seed)	Kg	578,404,416	15,168,816
Oil-cake and other solid residues, of soybean	Kg	225,678,659	14,629,734
Low erucic acid rape or colza seeds	Kg	152,713,749	10,467,346
Other wheat	Kg	335,932,248	10,398,740
Other sugar	Kg	170,598,662	8,389,123
Other potatoes, fresh or chilled	Kg	284,125,070	7,307,018

Based on Annual data of FY 2077/78 (Mid July 2020 to Mid July 2021), Department of Customs

Nepal imported agricultural goods worth NRs 17.2 billion from Ukraine between mid-July 2020 and mid-July 2021 of which NRs 15.2 billion was crude sunflower oil. The import of crude sunflower oil from Ukraine accounts for one percent of Nepal's total imports in FY2020/21 in terms of value. The total agricultural imports from Russia in FY2020/21 stood at NRs 2.4 billion (0.2 percent of total imports of Nepal), half of which was allocated to importing dried peas. Russia was the second largest supplier of dried peas to Nepal equaling approximately NRs 1 million in value in FY2020/21. Nepal imported twice as many dried peas from Canada in FY2020/21 and the USA and India can be alternative suppliers of dried peas to Nepal.

Table 3: Top Agricultural Imports from Ukraine

Description	Unit	Quantity	Import Value (Rs. Thousands)
Crude sunflower oil	LTR	118,430,414	15,181,957
Crude soybean oil	LTR	10,221,534	1,258,622
Crude sunflower oil	Kg	3,981,960	406,955
Low erucic acid rape or colza seeds	Kg	1,739,220	120,992
Sunflower-seed and safflower oil (excl. crude)	LTR	426,535	52,558
Dried peas	Kg	679,060	40,501
Crude palm oil	LTR	272,628	31,914

Source: Based on Annual data of FY 2077/78 (Mid July 2020 to Mid July 2021), Department of Customs

Table 4: Top Agricultural Imports from Russia Federation

Description	Unit	Quantity	Import Value (Rs. Thousands)
Dried peas	Kg	18,771,730	1,038,052
Crude sunflower oil	LTR	3,281,768	463,509
Mustards seeds	Kg	1,950,360	135,775
Crude soybean oil	LTR	1,081,666	128,379

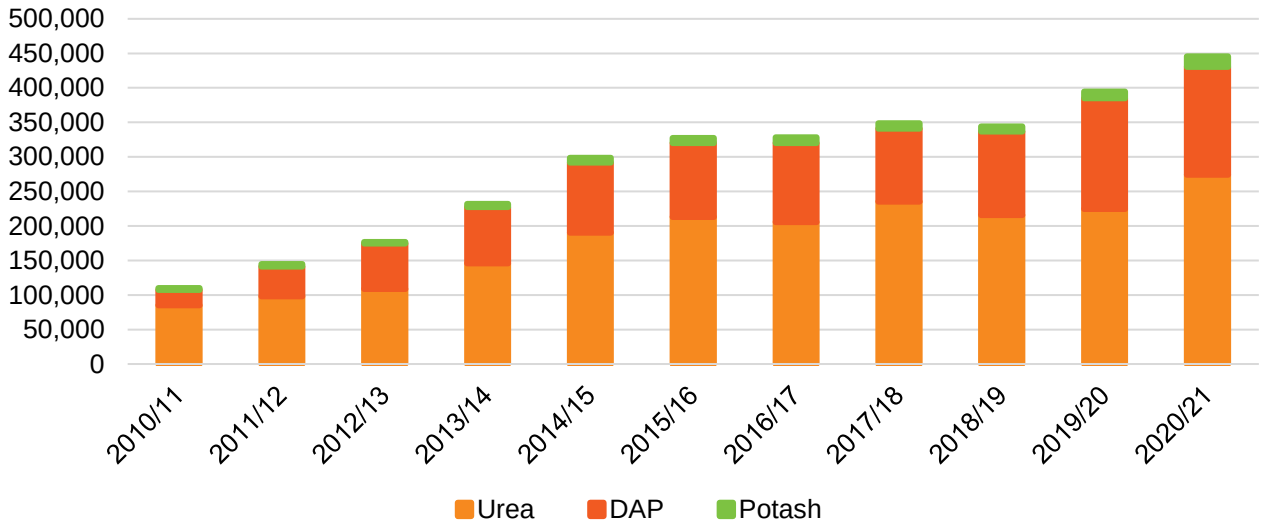
Source: Based on Annual data of FY 2077/78 (Mid July 2020 to Mid July 2021), Department of Customs

Fertilizer imports

The most important crop of Nepal, rice, is planted in the pre-monsoon/ monsoon season around June and harvested in November. Farmers sow the major winter cash crops such as wheat, mustard, and pulses in October. These two key planting seasons are crucial periods for farmers to have access to fertilizers. Nepal primarily imports Urea, Diammonium Phosphate (DAP), and Potash for distribution to farmers. Since Nepal does not manufacture chemical fertilizer domestically, sales of chemical fertilizers primarily reflect imports.

According to the Ministry of Agriculture, Nepal's annual requirement of chemical fertilizer is more than 700,000 metric tonnes. However, official import data states that Nepal imported 394,595 metric tonnes of fertilizer in 2019/20 highlighting gaps in fertilizer availability (Figure 1). It is likely that import numbers do not reflect actual fertilizer import amounts as those near the Nepal-India border often rely on informal imports of fertilizer from India that is purchased at the subsidized Indian price, but the gap remains nevertheless.

Figure 1: Annual Sales of Chemical Fertilizers (in MT)



Source: MoALD, Statistical Information on Nepalese Agriculture 2076-77 (2019-20)

Note: 2020/21 data runs from Mid July 2020 to Mid July 2021, Department of Customs as MoALD. Data is not updated to reflect 2022

Although the price of chemical fertilizers was already on the rise, the Ukraine-Russia crisis has further increased international prices to nearly three times higher compared to a year ago (The World Bank 2022). To address increasing fertilizer prices, the government of Nepal has reintroduced a fertilizer subsidy scheme from 2009. Subsidized fertilizers are available for up to 0.75 ha in lowland areas and 4 ha in the hills and terai for three crops a year.

The Krishi Samagri Company Limited, also known as Agricultural Input Company Limited (AICL), and the Salt Trading Corporation (STCL) are assigned by the government to procure and distribute subsidized fertilizers across the country. AICL imports about 70 percent of the chemical fertilizers and the remainder is imported by STCL. These enterprises invite sealed tenders for the supply of fertilizer by publishing a global tender notice. Fertilizers are imported from the international market and sold at subsidized rates in large quantities to retailers or large farmers who in turn sell fertilizers to small and medium farmers.

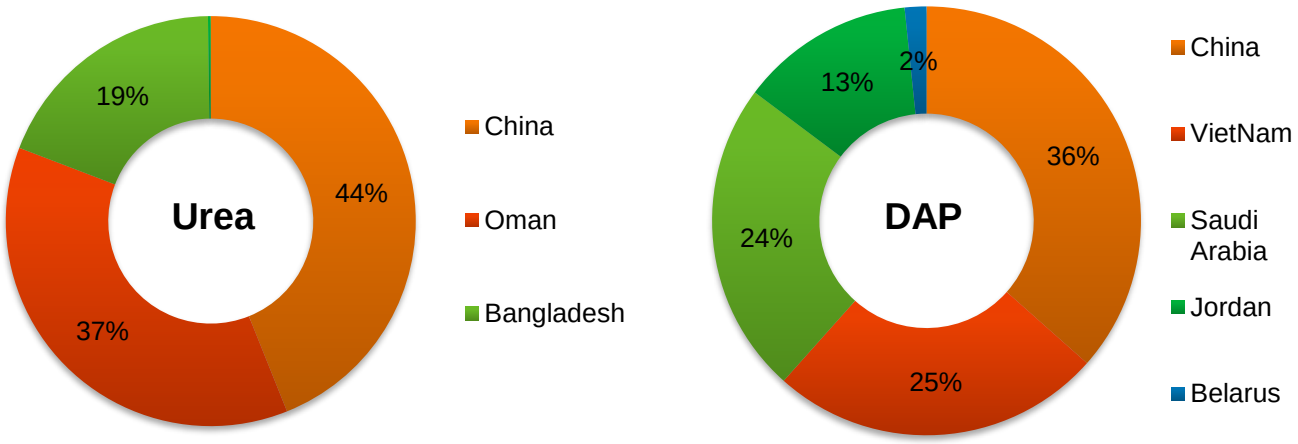
However, in Nepal, the procurement process is rather lengthy creating a delay in timely access to fertilizers. It takes a minimum of four to five months to import fertilizer through global tender, but tenders are often invited late into the crop season due to slow government decision-making on subsidy rates. In recent years, there have been instances of contractors declaring force majeure due to a sharp rise in fertilizer prices further delaying procurement. Such delays can increase informal trade from India as farmers become increasingly desperate. This can also lead to soaring prices in the black market.

Based on data from the Department of Customs, China is Nepal's primary supplier of urea and DAP fertilizer imports. Vietnam and Saudi Arabia supplied a quarter of the DAP imported in FY2020/21, while Jordan supplied 13 percent. According to official data, imports from the Black Sea region are minimal. However, Bangladesh, one of Nepal's primary suppliers, imports 80 percent of its chemical fertilizers from Russia and Belarus. Thus, the Russia-Ukraine war could result in higher domestic fertilizer prices in Bangladesh, which could also impact the supply and price in Nepal.

Strangely, almost 60 percent of Nepal's total imports are sourced from India but official records show that imports of fertilizers from India is negligible. Trade sanctions and export bans from trading partners such as China which suspended exports of phosphate-rich fertilizers until June 2022 to ensure domestic availability, will likely create supply side challenges.

The record current account deficit combined with increased inflation and currency devaluation make it particularly difficult for Nepal to import. The current account deficit increased to 12.8 percent of GDP in FY2022, up from 7.8 percent of GDP in FY2021. This was mainly due to a decline in remittances and the large increase in imports relative to exports. As Nepal is already struggling with a trade imbalance, the rising cost of fertilizers puts further pressure on the export sector and poses a threat to the economic stability of the country.

Figure 2: Source of Urea and DAP Imports in 2020/21



Based on Annual data of FY 2077/78 (Mid July 2020 to Mid July 2021), Department of Customs

Shortages of fertilizers have become a recurring problem for the past several years and the situation looks worse in 2022. There are limited stocks of diammonium phosphate (DAP) and urea available for this paddy season across Nepal (Bhandari & Rajbanshi, 2022). In order to address these issues, the Government of Nepal signed a Memorandum of Understanding (MoU) with the Government of India in March 2022 for the long-term supply of urea and DAP fertilizer for the next five years. Through this government-to-government agreement, 150,000 to 210,000 metric tonnes of fertilizers are expected annually, allowing the government to bypass the tender process.

The fiscal budget of 2022/23 has earmarked NRs 15 billion to import chemical fertilizers to Nepal. However, per the import data from the Department of Customs, Nepal imported nearly NRs 21 billion worth of fertilizers in FY2020/21. Considering the price of fertilizers have more than doubled in the last year, the allocation of NRs 15 billion in the current fiscal year will be insufficient to import necessary amounts of fertilizers (Table 5). This price calculation doesn't include a rise in sea freight, port clearance, and the cost of transportation that have all risen after the Ukraine crisis owing to fuel/energy shortages. Private traders reported that the cost of transporting fertilizer from the port in Kolkata to Nepal could account for as much as 20 percent of the cost of delivered fertilizer. On the other hand, the Nepalese currency has devalued steadily against the US dollar. All of this has added to the rise of fertilizer price in Nepal.

Table 5: Price rise of Chemical Fertilizers (NRs/Kg)

Fertilizers	2020/21	2021/22	percent Increase in price
Urea	43	105	244 percent
DAP	52	81	156 percent
MoP	37	105	284 percent

Source: Based on Annual data of FY 2077/78 (Mid July 2020 to Mid July 2021) and 10 months of data for FY2078/79 (mid July 2021 to mid, May), Department of Customs

Table 6: Current price of fertilizer (Recent procurement by STCL, April 2022)

Fertilizers	USD / MT	MT	NRs/kg
Urea	1100	30,000	132
DAP	1300	25,000	156
MoP	1250	21,500	150

1 USD = NRS 120

Passing the burden of increased fertilizer costs on to farmers is unlikely as fertilizer is a political commodity and after completing a local election in May, Nepal is set to conduct province and federal level elections in November 2022. Even with the increase in the subsidy budget to NRs 15 billion for FY2022/23, it is still not commensurate with the price rise of fertilizers and is likely to fall short from the onset. Whether the government can continue to subsidize fertilizers remains a question. The government could alternatively try to support farmers by increasing the minimum support prices for various crops such as rice, wheat, and sugarcane in line with previous policy but finding the fiscal space to do so will remain a challenge.

Increasing input costs will also hamper progress on the Prime Minister's Agriculture Modernization Project (PMAMP) that was introduced in 2016 to make the country self-sufficient in key agricultural products by 2026 and promote linkages between agriculture and other sectors of the economy. Funds made available through this program as well as the micro-finance fund of NRs 500 billion promoting easier access of credit for farmers may help to ease the financial stress associated with increasing input costs. However, given the focus on self-sufficiency and import substitution and the ambitious announcement that imports of paddy, maize, wheat, vegetables and fruits would be reduced by at least 30 percent, both farmers and consumers are at risk of incurring even greater challenges in accessing affordable foods should production not meet targets.

Conclusions

Nepal's increasing dependence on imports for food, petroleum, and chemical fertilizers makes the country susceptible to high international prices. In the past, Nepal has largely been self-sufficient in basic foods like cereals but increasing agricultural import trends including for key staples such as rice, highlight ongoing challenges in meeting the country's dietary needs. Further, rising prices of chemical fertilizer will likely have an adverse impact on this year's production, exacerbating an already precarious situation for the rural poor. Fertilizer delivery delays and shortfalls are expected considering the official import of chemical fertilizers is already substantially short of total demand.

Unfortunately, many families are already struggling with the impacts of the COVID-19 crisis. Unlike many other countries in the South Asia region, remittances make up about a quarter of the GDP of Nepal, almost the same as the share of agriculture. The loss of overseas jobs due to economic contraction in many host countries was estimated to have decreased remittance income in Nepal by 14 percent in 2020 but coronavirus-related global slowdown and travel restrictions continued to impact migratory movements in 2021 thus keeping remittances subdued (The World Bank, 2022). Many households are likely to struggle to cope with higher prices given remittances play an important role in subsidizing incomes.

Nepal has several avenues that it can pursue to help stem threats of future crises while helping citizens cope with present challenges. First, narrowly focused self-sufficiency policy that restricts imports will likely only hurt consumers. Increasing domestic production is vitally important and the PMAMP will likely help set the country on the right path in the medium-term, but in the short-term the country will only feel the pain of higher prices. It will also be critical to review the budgetary allocation to fertilizer imports in view of rising global input prices as shortages and delays in fertilizer application will have a large negative impact on productivity and increase the reliance on agricultural imports. Diversifying fertilizer import partners as well as boosting domestic organic fertilizer industries may also be long-term sectoral goals.

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