

**IMPACT OF RUSSIA UKRAINE WAR ON GLOBAL FOOD SECURITY****Dr. Anuradha Sahu<sup>1</sup>, Dr. Sapna Dadwal<sup>2</sup>, Dr. Prabha Arya<sup>3</sup>, Dr. Deepti Tanwar<sup>4</sup>**

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**Abstract**

*War between two countries has always created food crises for the regions where these wars have been fought. There was shortage of food during and after the two world Wars, because agriculture and food production as well as distribution got affected by these wars This is happening with war between Russia & Ukraine. This paper describes the impact of Russia Ukraine War on global food security as both of these countries are exporter of essentials like gas, cooking oil and food grains to many countries. The analysis of the UN reports on impact of war clearly shows that war has disrupted trade of gas, oil and food grains resulting into inflation in the prices of all essentials items.*

**Key Words:** Food Security, War, United Nations, Food Crisis, World Trade Organization

**Introduction**

The definition given the United Nations' Committee on World Food Security –“ Food security means when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life.” This definition has four dimensions-availability of the food to all people, access to sufficient & safe food by all, utilization & stability to food by all. If any of these dimensions are not fulfilled then the situation will lead to food insecurity in the world.

Ongoing War between Russia and Ukraine is now leading to a global hunger with food shortages especially in developing and underdeveloped countries due to which food is becoming more expensive in all countries, threatening to worsen this situation of hunger and food crisis , and political instability in many parts of the world. Ukraine and Russia mainly export staples to developing countries that are most susceptible to cost hikes and shortages.

Countries such as Somalia, Libya, Lebanon, Egypt and Sudan are heavily dependent on Russia and Ukraine for wheat, corn and sunflower oil.

The International Food Policy Research Institute says food shortages will grow more acute as the war drags on, which could lead to more export restrictions ultimately resulting in further rise in prices. Another threat is fertilizer which is scarce and costly, due to which the fields could be less productive in comparison to the earlier production level.

Crops are the basis of our food system, whether we talk of feeding us or animals, without adequate supply in terms of quantity and quality, the food system is becoming bankrupt. “Conflict and hunger are closely connected when one proliferates, the other usually follows. It is estimated that up to 181 million people in 41 countries could face a food crisis or starvation this year. Russia supplies 52.32 million tons (7.8%) and Ukraine 69.82 million tons (11.3%) of cereals all over the world.

UN agencies estimated that more than 2,00,000 people residing in Somalia will face calamitous hunger and starvation, approximately 18 million Sudanese could experience acute hunger by September and 19 million Yemenis will also face food shortage this year. In some of the countries, Wheat prices have risen by as much as 750%. Huge amount of grain is stuck in silos or farms in Ukraine. Ukraine's harvest of wheat is getting underway this winter; also some fields are likely to go unharnessed due to the war.

Ukraine is continuously accusing that Russia is shelling agriculture infrastructure, burning agriculture fields, stealing food grains and trying to sell these grains to other countries like Syria. The images taken by satellites also showing Russian Flagged ships are docked up in Syria. Ukrainian President is accusing Russia for provoking global food crisis. Western countries are also accusing Russia for weaponizing food in war. Russia accuses Ukraine installing mines in Black sea and saying that once Ukraine will remove mines it will allow ships after checking for weapons.

As at the time of crisis, the poorest and most vulnerable is one who got the hardest hit, and in our globalised world, the impact of war between Russia and Ukraine will reverberate across continents.”

### **Present Scenario**

**Destruction of factors of production:** Several multinational firms that operate in Ukraine had taken an immediate action in response to the current situation. There are various firms like Carlsberg, Japan Tobacco and Coca-Cola bottler which shut factories in Ukraine on 24 February, following the onset of the war, whereas UPS and FedEx suspended their services throughout the country. Several other producers have followed suit.

**Reduction in supply of labor:** The war in Ukraine has caused the greatest humanitarian crisis in Europe since the Second World War. In the first five weeks, more than 4.5 million refugees have been forced to flee Ukraine, and an additional 6.5 million people were displaced internally within the country. Over 12.6 million people have been affected in the areas hardest hit by the war within Ukraine. At the time of running the simulations, production in a significant area of Ukraine stopped following the closure of important multinational firms and experienced a massive flow of people leaving the country. Hence, a reduction of factors supply of 25 percent can be assumed.

**Boycott by western companies:** The list of global brands disappearing from Russian outlets keeps growing as some of the world's biggest businesses, from energy to consumer goods, suspend operations in the country. Brands include McDonald's, Coca-Cola.

**All regions (except for Russia and Ukraine): Global macroeconomic repercussions:** The interlink age of the economies in Russia and Ukraine with the rest of the world in general, and Europe in particular, for gas, oil, wheat, other grains and commodities About 70 percent of EU imports from Russia comprised oil and gas, with agriculture and raw materials, chemicals, iron and steel accounting for much of the rest leads to significant uncertainties among producers and consumers. About 70 per cent of EU imports from Russia comprised oil and gas, with agriculture and raw materials, chemicals, iron and steel accounting for much of the rest. High energy prices contribute to increased costs of virtually all goods and services, further fuelling inflation expectations and slowing growth.

**Food export restrictions and release of food stockpiles:** Ukraine has banned exports of some agricultural commodities (rye, barley, millet, sugar) and has introduced export licenses for its key export goods such as wheat, corn and sunflower oil. Russia has already imposed regulation on the export of food products. With the exception of sugar, this export ban also includes members 18 of the Eurasian Economic Union, with which Russia shares free customs zones. However, the Russian deputy prime minister for agriculture and industry declared that grain exports within the quota under individual licenses would continue to be allowed. After the break of war some countries have announced restrictions on export of food grains to meet their domestic food crisis. For example, Argentina, Hungary, Indonesia, the Republic of Moldova, Serbia and Turkey announced export restrictions on products such as wheat, maize, sunflower oil, margarine, flour and soybean oil to all trade partners. Egypt has implemented a production licence scheme for wheat producers, which implies that farmers will have to sell a quota of their wheat to the government.

## **Unforeseen Contingencies**

### **Full Invasion**

This envisages an invasion of the entire geographic territory of Ukraine. However, it is beyond belief that this will be feasible considering the given size of the country and Ukraine's defense

potentiality. At the same time it is to be kept in mind that, Ukraine surrendered its nuclear weapons in 1994 in exchange for security guarantees from the signatories countries of the Budapest Memorandum (including Russia, the United States and Germany). Although full invasion is unlikely but the world economy will have to pay a “hefty price” for the war in Ukraine including slower growth, high inflation and probably long-lasting damage to supply chains.

### **Regional Invasion**

While a full invasion by Russian is unlikely, a more realistic scenario is that Russia will try to effect previous plans to connect eastern Ukraine, which it already controls, with the Crimea or possibly Transnistria. Especially, the Southern regions of Ukraine would be under threat. The Antonivskiy Bridge is the main supply route for Russian troops and if it damaged, Moscow’s forces would potentially be trapped in Kherson with little ammunition and little supplies - part of Ukraine’s plan to re-take the city.

Ukraine wants to capture Kherson again which was captured in early March by Russian army ,its defenders are also making limited gains in the countryside between Mykolaiv city since April. This city is accessed by four key bridges and Ukranian army wants save these bridges as food supplies are still needed the city but at some point would like to damage them to the point where the Russians cannot transport heavy equipment across them.

### **Literature Review**

**Simon Maxwell (1996)** draws on the wider debate to recommend food security policy which eschews meta-narratives in favor of recognizing diversity, providing households and individuals with choices which contribute to self-determination and autonomy.

**Edward A, Frogillo (2022)** has reviewed the evidence based on cross-context equivalence of experienced- measures of food insecurity for estimating and monitoring prevalence of countries globally. These measures assess uncertainty, compromised dietary quality, eating less, and going hungry. **Alexander Y. Proskov, Svetlana A, Ivanova (2018)** ensuring food security is an integrated task of agriculture & political will. A change in the policy of the government affects the food security of that country and of world as well. **Burchi, F., de Muro, P. (2016)** food insecurity can be the result of a lack of education, health or other basic capabilities that constitute people’s wellbeing.

As per **Smyth, S.J., Phillips, P.W.B., Kerr, W.A. (2015)** Achieving global food security over the next 40 years will require sustained increases in agricultural productivity. This will require increased investment in agricultural R&D. As per **Leventon, J., Laudan, J.(2017)** there must be localist approach to meet food security. Countries should follow their own approach as per the geography and environmental changes of the country.

As per Teja **Tscharntke, Yann Clough, Thomas C. Wanger, Louise Jackson, Iris Motzke, Ivette Perfecto, John Vandermeer, Anthony Whitbread,(2012)** agriculture intensification must be linked with biodiversity conservation and if countries want to reduce the hunger then they must have well informed regional & targeted solutions. **Philip Mchichael (2009)** says that Global food system is in the control of Agro Food Corporations.

### **Objective of the study**

1. To study the impact of the Russia- Ukraine war on global food security.

### **Research methodology**

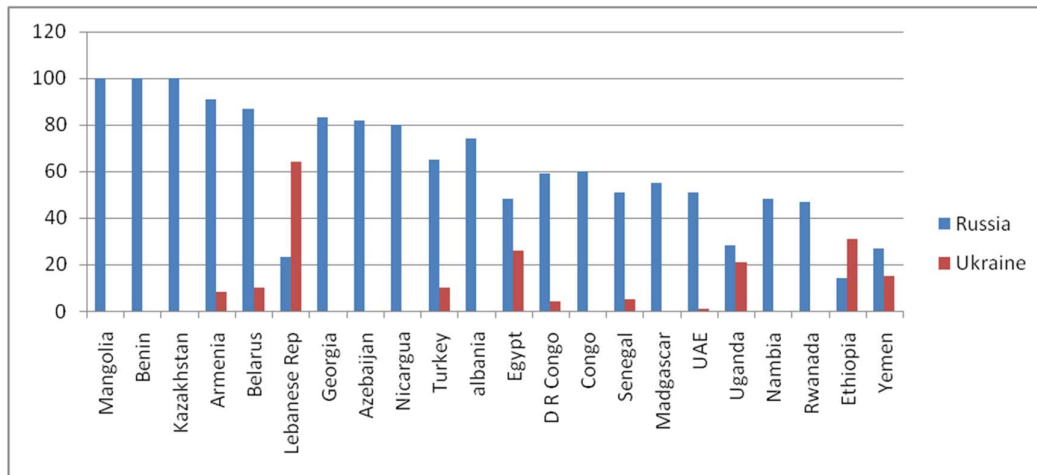
Research is a systematic inquiry aimed at providing information to solve problems (Cooper and Schindler, 2002:14). Different requirements of information, availability of time and need patterns have given way to the developments of various types of research methods however the need of any research method remains the same –to get information. The reason behind the use of any method of research is to generate optimum results. This is an exploratory study based on secondary data analysis and discussion. The secondary data has been collected from annual reports, websites and other published reports.

### **Analysis and Discussion**

Russia and Ukraine both are major exporters of agricultural products, especially of grains (wheat, maize, barley) and sunflower products (see Figures). Exports from Black Sea ports have been severely disrupted. For around 50 percent of cereal needs, Africa and the Middle East depend on the import from Ukraine and/or Russia. So these countries are in the most vulnerable situation.

### **Figure-1**

#### **Share of Russian and Ukrainian imports in total imports of Wheat, 2019**

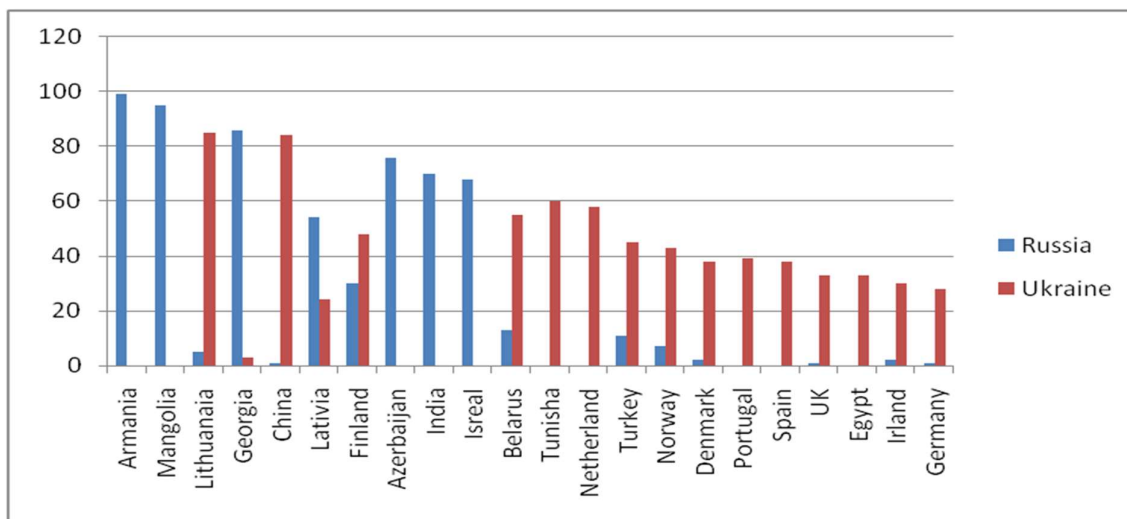


Source: WTO Secretariat calculations based on UN Comtrade data for 2019.

Figure 1 Explain dependency of various countries on Russia and Ukraine for wheat. Due to war, Ukraine’s ports are closed to protect the available grain supplies from being exported, and in the absence of an expeditious armistice that permits farmers to return to their fields, the future production will also be affected badly.

**Figure-2**

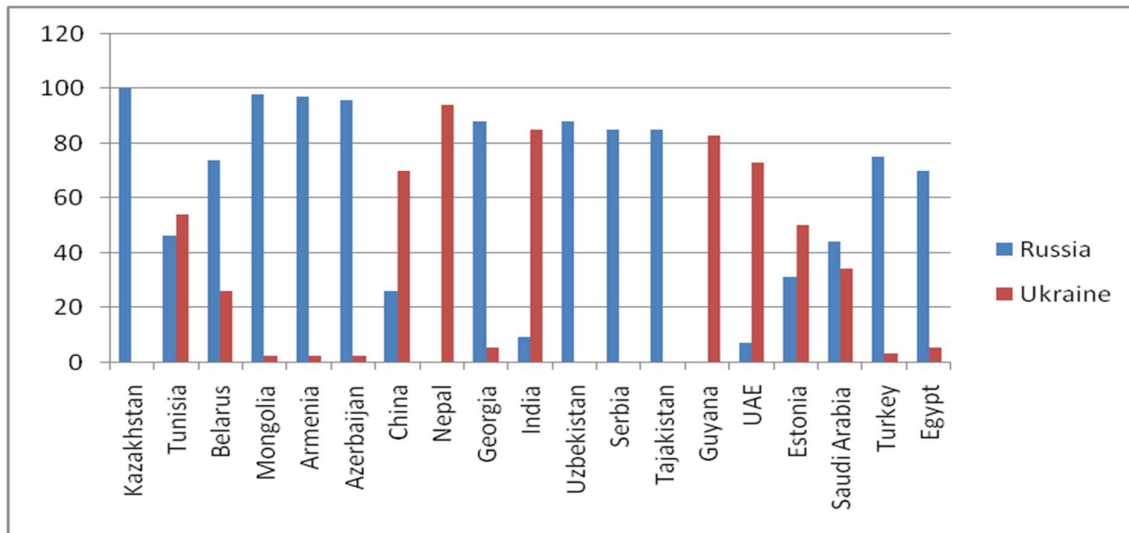
**Share of Russian and Ukrainian imports in total imports of Maize, 2019**



Source: WTO Secretariat calculations based on UN Comtrade data for 2019.

Above figure shows the import of Maize by different countries from Russia and Ukraine. It is clear from the above chart that countries like Armenia, Mongolia, Lithuania, Georgia, China depend more than 80 percent of their imports on these two warring nations.

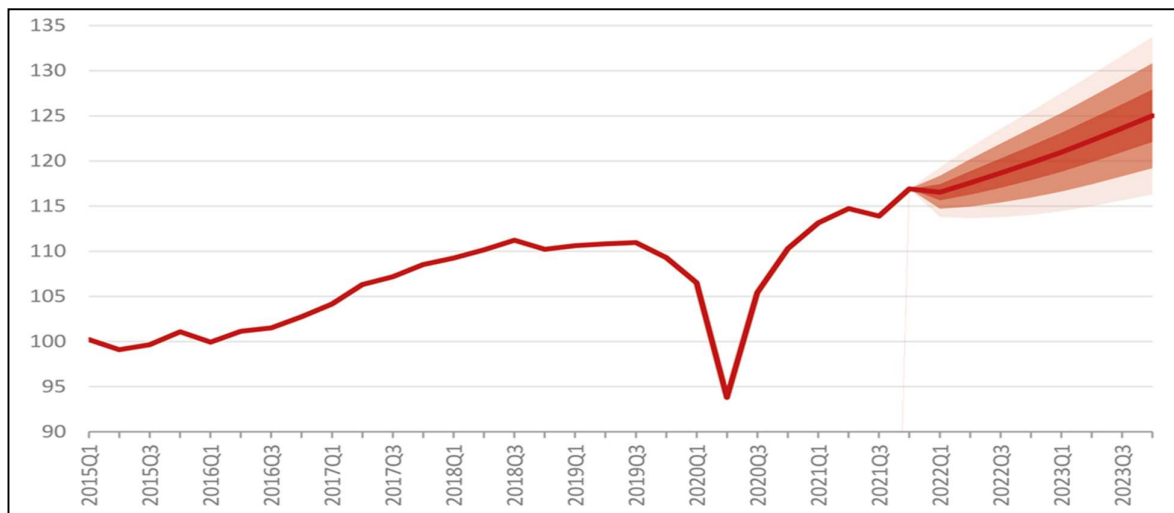
**Figure-3**  
**Share of Russian and Ukrainian imports in total imports of Sunflower Oil, 2019**



Source: WTO Secretariat calculations based on UN Comtrade data for 2019.

It is clear from the above figure that the above-mentioned countries heavily rely on the import of Sunflower oil from Russia and Ukraine.

**Figure-4**  
**Volume of world merchandise trade, 2015Q1-2023Q4**  
**Seasonally-adjusted volume index, 2015=100**



Source: WTO and UNCTAD Secretariat estimates

Note: Each Shaded represent a  $\pm 0.5$  standard error band around the central forecast.

The figure 4 clearly shows that first there was huge fall in the volume of Merchandise trade in the pandemic but there as per this report there will be huge shrink in the volume of merchandise 2022-2023 due to Russia and Ukraine War. This situation will hugely impact the prices of essentials items all over the world.

Other crops which are predominantly used for animal feed like corn and barley, and so have less immediate food security implications. However, hikes in prices for these grains may lead to higher livestock and meat prices in rich countries. There could be further deluge in various other animal and vegetable products. Crops which are not exported by Russia and Ukraine but that can be served as substitutes will also get price hikes, as the countries attempt to overspread cereal imports with alternatives. In sum, food market disruptions are already having a significant impact on global food security, particularly in prices for grains and oilseeds. Increase in food prices can create deeper political instability.

## **Conclusion**

The ongoing crisis between Russia and Ukraine will have negative consequences on Food security, global growth, trade and development. So many countries are dependent on Ukraine and Russia for their Food grain requirements. We have already discussed this above in Figure-1, 2&3 that there so many countries in world which are dependent on either Russia or Ukraine for their main and important food grain requirement. War between both the countries has not only inflated price of food in the world but also created a huge problems for dependent countries. International bodies do not have to play key role in addressing this problem as early as possible nor may world population face crisis of Hunger. The rise in food grains prices has already forced some agro based countries to impose control on the export of the food grains.

This research examines the effects of the crisis in Ukraine on global food security. Emphasis is being put on the importance of the supplies of food, energy and supply chain difficulties. Simulations from the WTO Global Trade Model indicates that the global GDP and trade growth could be reduced by up to 1.3 and 2.2 percentage points, respectively, with effects concentrated in Europe and Africa. This research further shows that if the war were to cause a disintegration of the global economy into separate blocs, the income losses would be severe, especially for emerging and developing economies.

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