

Grace Turza
Bridgehampton High School
Bridgehampton, New York
Ukraine, Factor 11: Malnutrition

Ukraine: Ending Malnutrition Through Various Means

Introduction

The nation of Ukraine has been a topic of interest to the rest of the world for over half a year now. Most people know the basics of and understand what is happening in terms of the war. Today, Ukraine faces insurmountable difficulties trying to keep their sovereignty, since their neighboring nation, Russia, invaded them on February 24th, 2022. Ukraine has to not only fight for their independence, but to end the violations of human rights that are becoming more prevalent in their time of war. It is clear that when the Russo-Ukrainian war ends, Ukraine will have a lot to rebuild internally. It is vital that after the war ends, the nation sees a decrease in the levels of malnutrition in children, to ensure that the next generation of Ukrainians, who have already suffered through a war of horrific proportions, can fulfill their right to a healthy and prosperous life. I have proposed solutions to important problems that are preventing this from happening. My solutions include both short term and long term solutions to ending malnutrition and curbing Russian aggression.

Country Facts

Ukraine is the second largest nation in Europe by area with 233,062 square miles. Located in Eastern Europe, Ukraine is bordered by Russia to the east and north, Belarus to the north, Hungary, Poland, and Slovakia to the west, Moldova and Romania to the south, and the Black Sea and Sea of Azov to the south [13]. As of 2020, Ukraine boasts a population of over 44 million people. That same year it was estimated that 69.61% of the population lives in urban settings while 30.39% live rurally [14]. Ukraine's population growth has been negative since 2015, and as of 2020, it is at -0.6%, which is actually on par with other countries that were once a part of the Soviet Union such as Belarus and Romania [15]. Ukraine's major exports are raw materials, chemical products, and machinery. Its top export countries are the Russian Federation, Poland, Italy, Turkey, and Germany. Almost all of Ukraine is flat plains. The exception is the Eastern Carpathian Mountains in the west and Crimean Mountains located in the southern region of the Crimean Peninsula. The climate in Ukraine is continental. The country experiences severe freezing winters and warm summers [19].

Agriculture

It is estimated that Ukraine has 42 million hectares of agricultural land, which cover over 70% of the country [16]. In 2018, 56.8 percent of Ukraine's land was considered arable [17]. Ukraine is one of the largest agricultural producers and exporters in the world and is referred to as the "breadbasket" of Europe. In 2020, the agricultural sector accounted for 9.3% of Ukraine's GDP. Ukraine has 25% of the world's highly fertile chernozem soil which is rich in humus, a dark nutritious and organic material. The major crops produced in Ukraine include wheat, corn, barley, rye, sunflower oil, rapeseed oil, and soybeans. Ukraine is the largest producer of sunflowers, 6th largest of barley and corn, and 9th in soybean and wheat production. In 2022, Ukraine was expected to account for 12% of wheat exports globally, 16% for corn, and 18% for barley but the current war with Russia has led to export numbers decreasing significantly [18].

Education

Since 2019, Ukraine has spent over 5% of their GDP on education annually [10]. This is a large decrease from the 7.2% spent annually between 2013 and 2017 and the 6% spent between 2017 and 2019. This decline is attributed to the devaluation of Ukrainian currency. The Ukrainian Constitution declares the right of each citizen to a free education, but this is not always the case, as the Ukrainian education system is just as corrupt as its government. It is not uncommon for more affluent parents to offer bribes in exchange for their child getting higher marks or private tutoring. Schools in rural regions of Ukraine are quite disadvantaged, lacking proper classroom materials and having outdated textbooks. In Ukraine teachers have a low social status and are paid very poorly, resulting in a lack of motivation. Ukraine has one of the highest teacher to student ratios in the world with one teacher for every nine students [11]. The Ukrainian education system is split into three sections. Primary begins when students are in grade 1 (age 6/7) and ends with grade 4 (age 9/10). Secondary Base spans from grade 5 (age 10/11) to grade 9 (age 14/15). Secondary Last is the final stage of secondary education and runs from grade 10 (age 15/16) to grade 12 (age 17/18). Secondary education is compulsory in Ukraine. Higher education is available in Ukraine at different levels, ranging from vocational school to colleges and universities. Depending on the institution, a student can receive a vocational certificate, a Junior Bachelor's, a Bachelor's, a Master's, or a Doctorate degree [12].

Wages and Common Jobs

The employment rate in Ukraine was reported at being 66.6% in September of 2021. At that time, the unemployment rate was 9.2 [6]. In October, 2021, the monthly minimum wage was reported to be 6,700 Ukrainian hryvnia (UAH), equating to \$238.30 USD [7] while the average monthly wage was 17,453 UAH, or \$620.77 USD [8]. The median monthly salary in Ukraine is 21,100 UAH, or \$775 USD. A quarter of Ukrainian employees work in factories, making factory worker the most common job in the country. Workers in Ukraine's factories typically work 40 hours per week (the limit placed by the labor code of Ukraine) and make slightly more than minimum wage. 14% of the population works in the agriculture industry. Workers in the fields of banking, business, law, medicine, and software, tend to make more than other professions [9].

Infrastructure

Ukraine's infrastructure is extensive. Many of Ukraine's roads were established during the 1960s and 1970s, and now the nation boasts 273,700 kilometers of highways and roads, of which 86% are paved. The country also has the thirteenth largest railway system in the world, with an estimated 23,350 kilometers of railways which connect the nation to its neighbors [54]. The entire population of Ukraine, rural and urban, have access to electricity. In 2020 about 75% of the population used the internet [55]. Public restrooms across the country are typically not well maintained, but in urban settings are usually slightly better kept [57]. Ukraine's clean water access for 2020 was 89.02% [53]. With the ongoing war, much infrastructure has been damaged or destroyed, leaving most parts of the nation in ruins.

Traditional Diet

Most Ukrainian dishes are based on the grains and vegetables grown in the country. The primary crops grown in Ukraine such as beets, potatoes, grapes, and cabbage, are key ingredients in their most popular dishes. Ukrainians typically eat a light breakfast in the morning that can consist of grains such as boiled buckwheat, rice, oats, or porridge. Grain based breakfast dishes are often accompanied by pork fat [3]. Buttered bread, blintz, and cereal are other common breakfast foods [4]. Popular non-alcoholic beverages that Ukrainians drink are tea, particularly black for its strong flavor, coffee, or kompot, a sweet fruity juice. Ukrainians consider lunch to be the main meal and it is eaten in mid-afternoon. Lunch usually consists of a soup and a dish containing either meat or poultry. A smaller meal is eaten around 6 or 7 p.m.

when the entire family is together. To cook their food Ukrainians use a stove called a Pich [56]. While restaurants are common in urban areas of Ukraine, to most, it is considered a luxury to eat in a restaurant. Ukrainians who do not grow their own food, can obtain food at farmers markets or small grocery stores which are usually open 24/7 [5].

Birth and Fertility Rates

Since 2016, the average household size in Ukraine has remained at 2.58 people [1]. Of the homes that have children, 75.4% have only one child, 21.9% have two children, and only 2.7% of households have three or more children. Overall, 19.1% of Ukrainian households consist of one person, 32% consist of two people, 27.3% consist of three people, and 20.8% consist of four or more people. In a 2007 Ukraine Demographic and Health survey, both men and women had an average desired family size of 2 children. While rates vary by region, Ukraine has an overall average birth rate of 1.2 children per woman. In the same UDHS survey, the birth rate for women in urban areas was reported at 1.0 children born, while it was reported at 1.5 for women in rural regions of Ukraine. The western and southern regions of Ukraine boast a fertility rate of 1.4, the highest in the nation. The north and south regions have lower fertility at 1.1 and 1.2 respectively. Eastern Ukraine has the lowest fertility in the nation with a fertility rate of 0.9. There are other factors that influence fertility rates in Ukraine. Women who have obtained a higher education have more children than women with less education. There is also a correlation between the economic status of women and their birth rates. Poorer women have an average of 1.7 children compared to the birthrate of wealthier women at 1.0 [2]. The abortion rate in Ukraine as of 2007 is 25%, a slight decrease from 27.5% in 2004 [35]. Only 68% of pregnancies result in a live birth [2].

Gender Roles

Despite women in Ukraine having the same constitutional rights as men, gender inequality, which is acknowledged as a form of discrimination, is quite widespread in the nation. Theories to explain the gender inequality in Ukraine often relate to the stereotypes of women in traditional Ukrainian culture. In a 2016 survey on gender roles and stereotypes in Ukraine 58% of male respondents claim to be the head of their family, and 80% of all respondents believe this is proper for their role in society. In terms of rearing children, only 3% of respondents claim that the men perform the task while 70% of respondents say that women take on the responsibility. 80% of respondents say that women primarily perform the meal preparation while only 3% claim that the men do so [51]. There is also an economic aspect to the gender inequality in Ukraine; a study from Global People Strategist found that women make an estimated 32% less than men, obviously this number fluctuates between regions and industries, but the data is still startling [50]. Gender based violence is also a problem relating to gender inequality in Ukraine. A representative from the United Nations Population Fund in Ukraine attributes the prevalence of gender based violence to two things: The extreme amount of alcohol consumption by men in Ukraine and the loopholes in anti-domestic violence legislation [47]. A study that focused on the use of alcohol in Ukraine claims that “[the] prevalence of alcohol dependence may be explained by the incomplete restructuring of healthcare, coupled with financial and social instability” [48]. Since the dissolution of the Soviet Union, legislation to combat domestic violence has been introduced, but because of the aforementioned loopholes, have ultimately proved insufficient. In a report from the United Nations it is estimated that around 45 percent of Ukraine’s population suffers violence – physical, sexual or mental [47] – and 90% of them are women, according to the report [49]. Since the war in Ukraine broke out, the prevalence of gender based violence has been heightened significantly. The conflict has already taken a toll on the Ukrainian people, but reports of sexual violence towards women and girls are rising fast. As of early June, there were reports of 124 acts of conflict-related sexual violence, according to the Office of the United Nations High Commissioner for Human Rights [52].

Food Security

In 2020 an estimated 3.5% of Ukraine's population was food insecure [20]. Since 2014 when only 2.5% of the population was food insecure, Ukraine has faced many difficulties. In 2014 alone, Ukraine's Capital, Kyiv, was home to the Maiden Revolution, Russia annexed Ukraine's Crimean Peninsula, and the war in the Donbas region began. In 2017 the Borgen Project estimated that 1.5 million Ukrainians were food insecure due to the conflict in the Donbas and Luhansk regions [21]. In addition to the Donbas War, the COVID-19 pandemic has caused food prices to rise and limited access to food stores and markets. Ukrainians in the eastern war torn regions of Donbas and Luhansk are scared of being left without jobs and rely heavily on humanitarian aid [22].

Ukraine's Early History to the Bolshevik Revolution

Ukraine has a history almost as rich as its soil. There is archeological evidence that the present day region of Ukraine was inhabited by neanderthals as early as 45,000 B.C. The region played host to various groups of peoples throughout time including the Cimmerians, Goths, and Scythians. Along the coast of the Black Sea were colonies of Ancient Greece, Ancient Rome, and the Byzantine empire. From the 10th to 12th centuries, Kievan Rus was a powerful city state based in the modern city of Kyiv [40]. In the 16th century Poland brought Ukraine under its administration but Russia took over rule of the territory in the early eighteenth century. In the mid eighteenth century Ukraine emerged as an independent nation. Under Catherine the Great, Ukraine again became part of the Russian Empire. During the Russian Revolution of 1917, Ukraine once more broke free from Russian rule, and in 1921 declared itself the Free Territory of Ukraine [42].

Early Soviet Period of Ukraine's History

Ukraine's independence did not last long; in 1922 Ukraine was absorbed into the newly formed Soviet Union and from 1922 to 1991 Ukraine was known as the Ukrainian Soviet Socialist Republic (SSR) and was a part of the Soviet Union under the rule of Vladimir Lenin [42]. After its inauguration into the Soviet Union, Ukraine was immediately affected by the Russian famine of 1921, which was brought on by crop failure and drought in Russia. Ukraine, being an agricultural powerhouse, should have, in theory, been unaffected by the famine, but the Soviet Government exported excessive amounts of grain from Ukraine to Russia. By late 1922 over 7 million Ukrainians were without food. The Soviet Government refused to acknowledge that Ukraine was affected by the famine and focused its relief efforts on Russia [43]. From this period to the early 1930's, Ukraine experienced Soviet industrialism and a Russification of the culture.

Ukraine Under Stalin

The 1930s marked the beginning of agricultural collectivism under Joseph Stalin's first five-year plan. Stalin, who was, at the time, the General Secretary of the Communist Party would go on to be the leader of the Soviet Union from 1941 to 1953. Collectivism caused Ukraine's agricultural productions to reach an all time low, while its industrial production exponentially increased. In 1932 the crop was just over half what it was in 1931. The implementation of collectivism also led to a series of revolts across Ukraine. Stalin, worried about the repercussions of the uprisings on his leadership, took drastic action. Entire towns in Ukraine were blacklisted from receiving food. It was often the case that the farmers and their families were unable to receive any grain until the farm had contributed an unrealistic amount to the collective crop. Ignoring the growing crisis, the Soviet Government increased its crop demand and refused to aid Ukraine. By mid 1933 residents all over Ukraine were facing starvation. The death rate spiked between 1931 and 1934 leaving an estimated 3.9 million Ukrainians dead from starvation. The man-made famine became known as Holodomor. During the height of the famine many resorted to cannibalism as bodies

piled up. Holodomor was accompanied by a new and radical Russification program that led to the death of Mykola Skrypnyk, a leader of the Ukrainian Communist Party, by suicide. The question of whether Holodomor should be considered a genocide has led to many scholarly debates [44]. In June of 1941, the Soviet Union was invaded by German forces which led to a four year war fought on the Eastern Front. In German occupied regions of Ukraine, the Nazi's were heralded as liberators who had come to decommission Stalin's collectivism initiative, but the Nazi's embraced the farming system, and began a depopulation effort against Ukrainians by blocking food deliveries from entering the regions. During World War II, Ukraine fought alongside the Red Army against the Axis. It is estimated that 8 million Ukrainians died from the fighting [45]. Not all was set right following the war, infrastructure in Ukraine was destroyed and a famine, brought on by the destruction of fields and an ongoing drought, killed an estimated one million civilians [42].

Ukraine from Khrushchev to the Twenty-First Century

Following the death of Stalin, Nikita Khrushchev became the new head of the Soviet Union and transferred Crimea to the Ukrainian SSR. Under Khrushchev, Ukraine became a leader in industrial production and was the leading producer of arms for the Soviet Union. Leonid Brezhnev, who ousted Khrushchev in 1964 to become the next leader of the Soviet Union, was Ukrainian; Brezhnev remained in office until 1982. Throughout the 1980's Ukraine's economy deteriorated and the growth rate began to decline. In 1986 a reactor in Chernobyl exploded causing the worst nuclear reactor accident ever. The explosion caused dozens of deaths and an estimated 5 million people were exposed to dangerous radiation. Following this incident, Ukraine experienced a surge in nationalism due to the Soviet Union leader Mikhail Gorbachev launching a campaign for economic reconstruction and anti-corruption. In 1990 a Declaration of State Sovereignty of Ukraine was adopted which declared Ukrainian law above Soviet law. After a failed coup d'état on Gorbachev in 1991, Ukraine's parliament declared full independence. Following independence Ukraine struggled to deal with their failing economy and between 1991 and 1999 Ukraine lost 60% of its GDP. By the late 1990's the economy had stabilized and a new constitution had been adopted, turning Ukraine into a semi-presidential republic. The results of the presidential election of 2004 caused great distress for Ukraine. Viktor Yanukovich won the election, which was later ruled by the Supreme Court of Ukraine to be rigged. In 2013 Yanukovich began strengthening Ukrainian ties with Russia while going back on his promises to enter the European Union. This led to protests across the nation which prompted the parliament to remove the president and announce a new election. At this point, Russian President Vladimir V. Putin began initiating an annexation of the Crimean Peninsula. In March of 2014, after Russian troops had entered the region, Crimea signed a treaty of accession with Russia [46]. Since the annexation, Ukraine has been fighting for total sovereignty in the midst of being entangled in tensions between Russia and the west.

Government and Leadership

The government in Ukraine is split into three branches, the executive, legislative, and judicial. The executive branch is composed of the Ukrainian President, currently Volodymyr Zelenskyy, who is the Chief of State and the Prime Minister, currently Denys Shmyhal, who is the head of government and the executive cabinet. The president is elected by popular vote for a five year term. They have the power to propose and veto legislation, oversee executive ministries, and initiate treaties. The Prime Minister is appointed by the president with the approval of the legislative branch. The Prime Minister is the head of the cabinet as well, which handles day to day administration and may propose legislation. The president, with the approval of the Prime Minister, can appoint cabinet members. The legislative branch of the government is a unicameral parliament called the Verkhovna Rada. 450 legislators are apart of the Verkhovna Rada, half of the legislators are directly elected by a majority vote and the other half are elected by a closed party-list representation vote; A speaker presides over parliament. The term limit is five years in the legislature. The legislative branch is in charge of introducing constitutional amendments,

adopting laws, approving the state budget, declaring war and peace, as well as impeaching the president. The judicial branch comprises the four levels of Ukraine's courts, local courts, appeals courts, high administrative courts, and the supreme court. Judicial members are appointed by parliament and have no term limit. In principle, judicial independence exists but in practice the system is highly corrupt as judges are often subject to political and personal pressures [34].

Problem

In Ukraine 22.9% of children under the age of five are chronically malnourished and 8.2% are acutely malnourished. A paper titled "Dietary Habits and Nutritional Status of Children from Ukraine During the First Three Years of Life" from the Lviv National Medical University was published in 2014. The research conducted into the nutrient levels gave the conclusion that the diet of a majority of the children in the study didn't provide the recommended vitamin A intake [24]. The paper stated, "The nutritional deficit of zinc, iron, calcium and vitamins A, D, E, B6, B12, B1 was most significant." Children 1 to 3 years of age are recommended to get no more than 600 mcg of vitamin A per day, while children less than a year old are recommended to have up to 500 mcg [23]; According to the paper, the children involved in the study received less than 200 mcg. To combat vitamin A deficiency in Ukrainian children I propose the following two solutions:

Solution 1. Breastfeeding

The National Institute of Health attributes vitamin A deficiency in children to not receive adequate supplies of colostrum or breast milk during infancy. In Ukraine only 66% percent of mothers initially breastfeed, and only 20% do it exclusively for the first five months, this number is significantly lower than that of the United States (83%) and Canada (91%). Since 96% of new mothers receive postnatal care within two days of giving birth [25], I propose that women be strongly encouraged by their doctors to breastfeed. If possible, I also recommend that doctors attempt to schedule an appointment, either in person or virtually, with the new mothers within the first two months of postpartum to answer any questions they may have. Not only does breastfeeding provide the infant with the proper levels of nutrients, there is evidence that babies who receive breast milk exclusively for the first six months have lower chances of developing respiratory illnesses [26]. 5.6% of Ukrainian infants have a low weight [27] and children who are breastfed are "more likely to gain the right amount of weight as they grow" according to the NIH. In light of the war against Russia affecting infrastructure such as clean water, breastfeeding may pose a safer alternative than formula, since formula can become contaminated when prepared with unclean water. Many families have become displaced by the war, either internally or externally, so not only does breastfeeding provide a child the nutrients it needs to develop in a healthy manner, it can be done virtually anywhere and, as such, can be a life-saver for mothers living in uncertain conditions. It has been documented that when under extreme stress, such as living in a warzone, mothers have difficulty producing milk, but even if this is the case, it is extremely rare for mothers to stop producing milk all together. It's important that new mothers see the benefits of breastfeeding in times of war, since during the 2015 annexation of Crimea 46% of mothers who breastfed their children stopped due to the conflict. It is not uncommon during times of war for there to be civilians living in unsafe conditions that may expose them to disease. Some components in breastmilk can give children antibodies to help them fight off infections and other illnesses [58]. I also propose that the La Leche League, an organization that advocates for new mothers to breastfeed, introduces Ukrainian as a language option on their website, so that new mothers in Ukraine have access to their resources in addition to their doctor's recommendation. Currently their website offers Russian as a language option, but only 26.3% of the population listed Russian as a first language according to a 2001 census. Ukrainian is the predominant language in Ukraine with 71.7% of the population having it as a first language [41]. The La Leche League website provides valuable information on breastfeeding and answers common questions on a number of various topics regarding breastfeeding [36]. In terms of what has already been done to promote

breastfeeding to mothers during the war, UNICEF has proposed a refugee response plan to protect children and their families during the conflict. The plan, which allocates \$956 to an estimated 2.8 million Ukrainian children will help these children get access to clean water, nutrition, education, psychological services, social support, protection, and health services [59]. By promoting the concept of breastfeeding to new mothers, more children can be provided with the proper nutrients to ensure they have the best chance at a long and healthy life.

Solution 2. Introduce a Genetically Modified Vegetable

My second solution is much less viable in the face of war but can still be implemented at a later time. In 2017 the Italian Agency for New Technologies, Energy and Sustainable Development (ENEA) introduced a genetically modified “golden potato” with the intention of improving nutrition in developing nations. Researchers at Ohio State University co-lead a study with ENEA and the Italian Council for Agricultural Research and Economics on the golden potato titled “Potential of Golden Potatoes to Improve vitamin A and vitamin E Status in Developing Countries [29].” The golden potato underwent metabolic engineering where researchers added carotenoids to the potato’s tuber, making the tubers “golden.” The paper concluded that the potato could “provide up to 42 percent of a child’s recommended daily intake of vitamin A [28].” Mark Failla, professor emeritus of human nutrition at Ohio State, who co-wrote the paper, said, “These golden tubers have far more vitamin A and vitamin E than white potatoes, and that could make a significant difference in certain populations where deficiencies—and related diseases—are common.” I recommend that, after the golden potato has been approved by the appropriate agencies, the United Nations’ Food and Agriculture Organization (FAO) makes the potato commercially available and sends amounts of the potato to Ukrainian farms to be used as seed potatoes. Ukraine is no stranger to potatoes, and is in fact the fifth largest potato producer in the world [30]. 136 kg of potatoes are consumed per capita every year. With Ukraine’s notoriously fertile soil, hopefully the potato will grow and produce a high crop yield. The potato can also be grown the same way a non-genetically modified potato would be. Babies can begin eating solids at around six months of age, which is where the potato comes in. Integrating potatoes, either boiled or steamed, into the diet of the baby will help keep them from developing a vitamin A deficiency. Even children out of infancy can include the golden potato into their diet as a way to combat pre-existing vitamin deficiency.

Secondary Problem

Malnutrition, or hidden hunger, is extremely prevalent in Ukraine and I fear that to truly address the issue, the global community must first acknowledge and try to rectify the political situation in Ukraine. Possibly the biggest threat to ensuring peace and therefore food security in Ukraine is Russia. In 2014 Russia illegally annexed the Crimean Peninsula. The global community has condemned Russia for its actions, but have largely ignored the issue. Threatening sanctions and working to find a quick solution has proved to be severely ineffective. In early 2022 it was reported that an estimated 130,000 Russian troops were stationed along the Ukrainian border and could begin an invasion at a moment's notice [38]. Since then, a full-blown war has broken out between the neighboring nations that has left more than ten thousand Ukrainians dead [60] and almost 10 million have been forced to flee the country [61]. Before any headway can be made on ending malnutrition in Ukraine, the global community has to work together to help make Ukraine suitable for such a change.

Solution 3. Diplomacy

This solution may be the most difficult one to accomplish, as it relies heavily on the cooperation of other nations and international organizations. What has happened in Ukraine in terms of the Russian crisis has affected the world since Ukraine is one of the largest agricultural producers and exporters in the world.

Nations such as Poland, Italy, Turkey and Germany have borne the brunt of damage since they are some of Ukraine's top export countries and some of its closest neighbors. I propose that Ukraine be allowed to enter the European Union effective immediately. In 2012 Ukraine was set to enter the EU, but pro-Russian Ukrainian President Viktor Yanukovich refused to sign the association agreement. The EU is already a strong ally of Ukraine's. The EU remains committed to Ukraine sovereignty and condemns the illegal annexation of the Crimean Peninsula by Russia [31]. In 2013 Deutsche Welle conducted a public survey on the possibility of Ukraine joining the EU; the results revealed that "nearly two-thirds of Ukrainians supported the notion of their country joining the EU [39]." In early 2022 Ukraine had plans to apply for membership to the EU in 2024, which is one of the factors that sparked the conflict. By being admitted to the EU, Ukraine's GDP will grow, more jobs will become available, as well as higher wages and pensions [32]. In regards to the 2022 Russian Invasion of Ukraine and subsequent war, the EU has been split on how to proceed, some nations believe that sending troops into Eastern Europe will help ease tensions, while others plead for a diplomatic solution. I believe that both military force and diplomacy are needed to end the fight for Ukrainian sovereignty. Merely threatening sanctions against Russia and its President have done nothing to help Ukraine, which becomes more embroiled in the war every day. Leading global powers must join together and follow through on their plans to implement more economic sanctions against Russia and Vladimir Putin. Sanctions that would stop Russia from delving further into the European gas and oil industry would be most beneficial, as they would affect Russia in the long term. A possible solution that has been posed by the Times is to economically sanction those closest to Putin with the Magnitsky Act in an attempt to force him into withdrawing Russian troops from Ukraine [37]. The Magnitsky Act gives the United States government the power to freeze the assets of anyone involved in grand corruption and human rights abuses. These assets can be liquidated and distributed into various Ukrainian relief efforts. The U.S. government will also have the ability to ban those individuals from traveling. According to BBC, all of Europe is the closest to war it has been in decades [33]. To help stop the current conflict and prevent what seems like an inevitable world war, global powers such as the United States and Great Britain must not meet Putin's demands, which are very reminiscent of Hitler's demands at the Munich conference. I suggest that, after Russia and some of its powerful citizens are sanctioned, a peace agreement be brokered by various nations to return the Crimean Peninsula to Ukraine, and for Russian troops to withdraw from their positions on the Ukraine border. This peace agreement should resemble the Conventional Forces in Europe Treaty of 1990 that would regulate military operations in nonthreatening manners in border areas. If this is met with further resistance from Russia, military from various EU and UN member nations will help the transition. In addition, I recommend that to ensure that Russian military operations along the Ukraine border are curbed, a committee be established by the United Nations to oversee the Russian military action east of the 45°E longitude line. Once the threat of war with Russia has dissipated, the subject of food security and malnutrition in Ukraine can be the focus of discussions.

Conclusion

Through the promotion of breastfeeding and the integration of a new "golden" potato into the diet of Ukrainian children, the levels of malnutrition through vitamin A deficiency in Ukraine can decrease significantly. By encouraging a fairly diplomatic solution to the conflict in Ukraine, I hope to foster an environment where food security and malnutrition are the biggest problems Ukraine has to face. Ukraine has the potential to be a leading world power, and by allowing them to join the European Union and giving them the power to fight malnutrition themselves, we are incentivizing Ukraine to take charge and be a trailblazer in the geo-political realm.

Works Cited

1. *Ukraine average size of household 1999-2017*. CEIC. (n.d.).
<https://www.ceicdata.com/en/ukraine/household-composition/average-size-of-household>
2. Ukrainian Center for Social Reforms (UCSR), State Statistical Committee of Ukraine and Macro International. 2008. *Ukraine Demographic and Health Survey 2007: Key Findings*. Calverton, Maryland, USA: UCSR and Macro International.
<https://dhsprogram.com/pubs/pdf/SR147/SR147.pdf>
3. *Ukrainian cuisine*. Young Pioneer Tours. (2020, August 10)
<https://www.youngpioneertours.com/ukrainian-cuisine/>
4. *Ukraine*. Food in Every Country. (n.d.).
<http://www.foodbycountry.com/Spain-to-Zimbabwe-Cumulative-Index/Ukraine.html>
5. *Eating in Ukraine. A brief tourist food guide to Ukraine*. LVIV ECOTOUR. (2021, February 12).
<https://lvivcotour.com/hire-driver-ukraine/travel-info-food-ukraine/>
6. *Ukraine Indicators* . Ukraine indicators. (n.d.).
<https://tradingeconomics.com/ukraine/indicators>
7. Elagina, D. (2021, November 11). *Monthly minimum wage Ukraine 2022*. Statista.
<https://www.statista.com/statistics/1270663/monthly-minimum-wage-ukraine/>
8. Trading Economics . (n.d.). *Ukraine average monthly Wages January 2022 data - 1996-2021 historical*. Ukraine Average Monthly Wages - January 2022 Data - 1996-2021 Historical.
<https://tradingeconomics.com/ukraine/wages>
9. Lauren Soucy for Time Doctor. (2022, January 10). *The average salary in Ukraine: Comparison, outsourcing (2022)*.
<https://biz30.timedoctor.com/average-salary-in-ukraine/>
10. Trading Economics . (n.d.). *Ukraine - public spending on education, total (% of GDP)2022 data 2023 forecast 1970-2019 historical*. Ukraine - Public Spending On Education, Total (% Of GDP) - 2022 Data 2023 Forecast 1970-2019 Historical.
<https://tradingeconomics.com/ukraine/public-spending-on-education-total-percent-of-gdp-wb-data.html>
11. Satu Kahkonen, W. B. C. D. for B. (2018, September 12). *Why Ukraine's education system is not sustainable*. World Bank.
<https://www.worldbank.org/en/news/opinion/2018/09/12/why-ukraines-education-system-is-not-sustainable>
12. Study in Ukraine Universities. (2020, May 26). *Education in Ukraine*. Study in Ukraine Universities.
<https://studyinukraineuniversities.com/education-in-ukraine/>
13. Nationsonline.org, K. K.-. (n.d.). *Map of Ukraine*. Nations Online Project.
<https://www.nationsonline.org/oneworld/map/ukraine-political-map.htm>

14. O'Neill, A. (2022, February 2). *Ukraine - Urbanization 2020*. Statista.
<https://www.statista.com/statistics/455947/urbanization-in-ukraine/>
15. *Population growth (annual %) - ukraine*. Data. (n.d.).
<https://data.worldbank.org/indicator/SP.POP.GROW?end=2020&locations=UA&start=1992>
16. Schafer , S. (2022, January 26). *Ukraine-Russia tensions: What it could mean for agriculture*. AG Web Farm Journal
<https://www.agweb.com/markets/world-markets/ukraine-russia-tensions-what-it-could-mean-agriculture>
17. *Ukraine geography*. CountryReports. (n.d.).
<https://www.countryreports.org/country/Ukraine/geography.htm>
18. (n.d.). *Ukraine - agricultural machinery*. International Trade Administration | Trade.gov.
<https://www.trade.gov/country-commercial-guides/ukraine-agricultural-machinery>
19. Weatheronline.co.uk. (n.d.). *Ukraine*. WeatherOnline.
<https://www.weatheronline.co.uk/reports/climate/Ukraine.htm>
20. *Ukraine Hunger Statistics 2001-2022*. MacroTrends. (n.d.).
<https://www.macrotrends.net/countries/UKR/ukraine/hunger-statistics>
21. Project, B. (2019, November 21). *Hunger in Ukraine*. The Borgen Project.
<https://borgenproject.org/tag/hunger-in-ukraine/>
22. *Improving Food Security for families in Eastern Ukraine - Ukraine*. ReliefWeb. (n.d.).
<https://reliefweb.int/report/ukraine/improving-food-security-families-eastern-ukraine>
23. U.S. Department of Health and Human Services. (n.d.). *Office of dietary supplements - vitamin A*. NIH Office of Dietary Supplements.
<https://ods.od.nih.gov/factsheets/VitaminA-HealthProfessional/#h7>
24. Nyankovskyy , S. (2014, August). *Dietary habits and nutritional status of children from Ukraine during the first 3 years of life*.
https://www.researchgate.net/publication/265338822_Dietary_habits_and_nutritional_status_of_children_from_Ukraine_during_the_first_3_years_of_life/fulltext/57da6cc808ae5292a37509eb/Dietary-habits-and-nutritional-status-of-children-from-Ukraine-during-the-first-3-years-of-life.pdf
25. *Ukraine (UKR) - demographics, Health & Infant Mortality*. UNICEF DATA. (2020, February 6).
<https://data.unicef.org/country/ukr/>
26. Taylor, R. B. (n.d.). *The benefits of breastfeeding for both mother and baby*. WebMD.
<https://www.webmd.com/parenting/baby/nursing-basics>
27. *Country Nutrition Profiles*. Global Nutrition Report | Country Nutrition Profiles - Global Nutrition Report. (n.d.).
<https://globalnutritionreport.org/resources/nutrition-profiles/europe/eastern-europe/ukraine/>
28. Jordan, L. (2017, December 1). *This nutritive Golden Potato is the latest GMO superfood*. Seeker.
<https://www.seeker.com/health/this-nutritive-golden-potato-is-the-latest-gmo-superfood>
29. Chitchumroonchokchai, C., Diretto, G., Parisi, B., Giuliano, G., & Failla, M. L. (2017, November 8). *Potential of golden potatoes to improve vitamin A and vitamin E status in developing*

- countries*. PLOS ONE.
<https://journals.plos.org/plosone/article?id=10.1371%2Fjournal.pone.0187102#sec012>
30. *Information on the potato industry in any region*. PotatoPro. (n.d.).
<https://www.potatopro.com/ukraine/potato-statistics>
 31. EaP Eastern European Partnership . (n.d.). The European Union and Ukraine.
https://eeas.europa.eu/sites/default/files/ukraine_factograph.pdf
 32. *Benefits of EU Membership* . Benefits of EU membership. (n.d.).
<https://mkik.hu/en/benefits-of-eu-membership>
 33. Adler, K. (2022, January 17). *Russia-ukraine crisis: Why Brussels fears Europe is 'closest to war' in decades*. BBC News.
<https://www.bbc.com/news/world-europe-60030615>
 34. Encyclopædia Britannica, inc. (n.d.). *Government and society*. Encyclopædia Britannica.
<https://www.britannica.com/place/Ukraine/Government-and-society>
 35. *Abortion Rates by Country 2022*. (n.d.).
<https://worldpopulationreview.com/country-rankings/abortion-rates-by-country>
 36. *Breastfeeding info*. La Leche League International. (2022, February 6).
<https://www.llli.org/breastfeeding-info/>
 37. Browder, B. (2022, January 31). *The best way to stop Putin's invasion of Ukraine*. Time.
<https://time.com/6143645/how-to-stop-putin-invasion-ukraine/>
 38. Schwirtz, M. (2022, February 4). *Russian troops in final stages of readiness add to worries for Ukraine*. The New York Times.
<https://www.nytimes.com/2022/02/04/world/europe/russian-troops-ukraine-crimean-peninsula.html>
 39. (www.dw.com), D. W. (2013, March 7). *Ukraine: EU support up again: DW: 03.07.2013*.
<https://www.dw.com/en/ukraine-eu-support-up-again/a-16924061>
 40. *Ukraine*. Ducksters. (n.d.).
<https://www.ducksters.com/geography/country.php?country=Ukraine>
 41. *Languages of ukraine: Interactive (EN)*. Translators without Borders. (n.d.).
<https://translatorswithoutborders.org/languages-of-ukraine-interactive-en>
 42. Encyclopædia Britannica, inc. (n.d.). *History of Ukraine*. Encyclopædia Britannica.
<https://www.britannica.com/place/Ukraine/History>
 43. *Famine of 1921–3*. (n.d.).
<http://www.encyclopediaofukraine.com/display.asp?linkpath=pages%5CF%5CA%5CFamineof1921hD73.htm>
 44. Encyclopædia Britannica, inc. (n.d.). *Holodomor*. Encyclopædia Britannica.
<https://www.britannica.com/event/Holodomor>
 45. Kitsoft. (2014, May 13). *Embassy of Ukraine in the Kingdom of Thailand - Ukraine's contribution to victory in World War II is unsurpassed*. Головна.

<https://thailand.mfa.gov.ua/en/news/2503-ukraines-contribution-to-victory-in-world-war-ii-is-unsurpassed>

46. Sullivan, B. (2022, February 12). *3 decades of turmoil bring Ukraine to perhaps its greatest crisis*. NPR. <https://www.npr.org/2022/02/12/1080205477/history-ukraine-russia>
47. Forina, A. (2013, February 14). *Kyivans join Global Rally to End Violence Against Women*. Kyiv Post. Retrieved July 8, 2022, from <https://www.kyivpost.com/article/content/ukraine-politics/kyivans-join-global-rally-to-end-violence-against-women-320424.html>
48. Samokhvalov, A. V., Pidkorytov, V. S., Linskiy, I. V., Minko, O. I., Minko, O. O., Rehm, J., & Popova, S. (2009, January 1). *Alcohol use and addiction services in Ukraine*. International psychiatry : bulletin of the Board of International Affairs of the Royal College of Psychiatrists. Retrieved July 8, 2022, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6734863/>
49. *Ukraine*. UN Women – Europe and Central Asia. (n.d.). Retrieved July 8, 2022, from <https://eca.unwomen.org/en/where-we-are/ukraine>
50. The GPS Team in Business, Current Affairs. (2022, February 18). *Gender pay gap in the Ukraine*. Global People Strategist. Retrieved September 7, 2022, from <https://www.globalpeoplestrategist.com/gender-pay-gap-in-the-ukraine/>
51. Sociological Group Survey. (2016, April 3). *Gender Roles and Stereotypes in Ukraine*. Gender roles and stereotypes in Ukraine - researches. Retrieved September 7, 2022, from https://ratingpro.org/en/research/gendernye_rol_i_stereotipy_v_ukraine.html
52. United Nations. (n.d.). *Ukraine War: Un signs framework to assist survivors of sexual violence* | UN news. United Nations. Retrieved July 8, 2022, from <https://news.un.org/en/story/2022/05/1117442>
53. *Ukraine Clean Water Access 2000-2022*. MacroTrends. (n.d.). Retrieved September 7, 2022, from <https://www.macrotrends.net/countries/UKR/ukraine/clean-water-access-statistics>
54. *Ukraine - infrastructure, power, and Communications*. Encyclopedia of the Nations. (n.d.). Retrieved September 7, 2022, from <https://www.nationsencyclopedia.com/economies/Europe/Ukraine-INFRASTRUCTURE-POWER-AND-COMMUNICATIONS.html>
55. *World development indicators*. DataBank. (n.d.). Retrieved September 7, 2022, from <https://databank.worldbank.org/source/world-development-indicators>
56. Dorosh, A. (2019, February 11). *The phenomenon of a Ukrainian pich (stove)*. Dorosh Heritage Tours. Retrieved September 7, 2022, from <https://doroshheritagetours.com/the-phenomenon-of-a-ukrainian-pich-stove/>
57. *Ukraine travel*. Lonely Planet. (2022, April 20). Retrieved September 7, 2022, from <https://www.lonelyplanet.com/ukraine/narratives/practical-information/directory/toilets>

58. Daniel, A. (2022, June 16). *Breastfeeding babies during war: Think global health*. Council on Foreign Relations. Retrieved September 7, 2022, from <https://www.thinkglobalhealth.org/article/breastfeeding-babies-during-war>
59. Author(s) UNICEF, & Unicef. (2022, September 1). *Ukraine and refugee outflow appeal*. UNICEF. Retrieved September 7, 2022, from <https://www.unicef.org/appeals/ukraine>
60. Matthews, A. L., Stiles, M., Nagorski, T., & Rood, J. (2022, August 18). *The Ukraine War in data: Counting Russian casualties - in the 'fog of war'*. Grid News. Retrieved September 7, 2022, from <https://www.grid.news/story/global/2022/08/18/the-ukraine-war-in-data-counting-russian-casualties-in-the-fog-of-war/>
61. Odarchenko , K. (2022, August 19). *Will Ukrainian refugees return home?* Wilson Center. Retrieved September 7, 2022, from <https://www.wilsoncenter.org/blog-post/will-ukrainian-refugees-return-home>