

Food Insecurity in the Middle East, the Black Sea Grain Initiative, and Türkiye

Ortadoğu’da Gıda Güvensizliği, Karadeniz Tahıl Koridoru Girişimi ve Türkiye

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Abstract

Almost all Middle Eastern nations now struggle with malnutrition and allocate a significant portion of their oil earnings to food. In addition to already challenging and changing climate and water pressure, ongoing conflict and the war atmosphere, poverty, a lack of purchasing power, and pandemic diseases in the region all seem to play a role. However, the deepening of Russia’s conflicts with Ukraine in recent years has made matters worse for the hungry in this fragile region and placed even self-sufficient nations in a precarious position. This paper addresses the Black Sea Grain Corridor Initiative, which was implemented through diplomatic measures hosted by Türkiye and guaranteed the secure transportation of Ukrainian grain to international markets. The study begins with a thorough discussion of the origins and effects of food insecurity in Middle Eastern countries. The second part examines the impact of this initiative on regional politics. To address the current issue, an integrated approach built on comprehension of cause-and-effect interactions has been implemented. The findings were gathered using a data collection technique.

Keywords: Food security, Middle East, Black Sea Grain Initiative

Öz

Bugün Ortadoğu ülkelerinin neredeyse tamamı beslenme sorunuyla karşı karşıya olup petrol gelirlerinin önemli bir kısmını gıdaya ayırmaktadır. Hali hazırda değişen ve zorlaşan iklim koşullarının ve su baskısının yanı sıra bölgede süregelen çatışma ve savaş ortamının, yoksulluğun, satın alma gücünün yetersizliğinin ve salgın hastalıkların bunda etken olduğu görülmektedir. Ancak son yıllarda Rusya’nın Ukrayna ile yaşadığı sorunların tırmanması, bu kırılgan bölgedeki açlık seviyesini daha da şiddetlendirmiş ve kendi kendine yetebilen ülkeleri bile zor durumda bırakmıştır. Bu çalışmada Türkiye’nin ev sahipliğinde diplomatik girişimlerle yaşama geçirilen ve Ukrayna tahılının güvenli bir şekilde uluslararası pazarlarına aktarılmasını sağlayan Karadeniz Tahıl Koridoru Girişimi ele alınmaktadır. Çalışma, Ortadoğu ülkelerindeki gıda güvensizliğinin kökenlerini ve etkilerini kapsamlı bir biçimde tartışarak başlamaktadır. Bunu takiben, bu Girişim’in bölge siyasetindeki etkileri incelenmektedir. Mevcut sorunun çözümü için neden-sonuç etkileşimlerinin anlaşılmasını esas alan bütünlük bir yaklaşım uygulanmaktadır. Elde edilen veriler ise, tarama tekniğiyle toplanmıştır.

Anahtar Kelimeler: Gıda Güvenliği, Ortadoğu, Karadeniz Tahıl Koridoru Girişimi

Introduction

The issue of global food security, as well as the struggle to achieve it, is critical. Natural disasters intensify and become more frequent as climatic conditions change, causing disruptions in the food supply chain, including physical, chemical, biological, microbiological, and other types of damage to food from production to consumption stages, as well as health problems. According to the United Nations (UN), the number of people affected by hunger worldwide increased to 828 million in 2021, with the COVID-19 pandemic exacerbating the situation. Undernourishment has become more common since 2015. Rising from 8.0% to 9.3% in 2019 and 2020, then slowly to 9.8% in 2021. 278 million people in Africa, 425 million in Asia, and 56.5 million in Latin America and the Caribbean –20.2, 9.1 and 8.6% of the population, respectively– suffered from hunger in 2021. Africa has the highest frequency of undernutrition worldwide, despite Asia housing most of the world’s undernourished population. The reason for this is that in this period of rising food prices, fragilities in agri-food systems, such as production, transportation, processing, packaging, storage, retail sale, consumption, loss, and waste, and societal inequalities have seriously exacerbated hunger and food insecurity¹ around the world. Despite global progress, trends in child malnutrition –including being dwarf, thin, overweight, and obese and having deficiencies in essential micronutrients– are cause for concern, as are maternal anaemia and obesity in adults. Without a doubt, this situation impacts the societies of underdeveloped and developing countries, which are often involved in conflict² and internal unrest.³

Besides, hunger, food insecurity, and malnutrition of all kinds continue to rise. It is argued that countries will not be able to meet the goal of ending hunger, food insecurity, and all forms of malnutrition, a goal adopted as part of the 2030 Agenda for Sustainable Development.⁴ The issue, which resulted from famine in certain areas in the past, is now a result of insufficient production and/or income due to economic integration. On the one hand, those who work in agriculture in rural areas –which are now very few– cannot produce enough products; on the other hand, the income level of those living in cities is insufficient to purchase food. Hunger, which was previously observed only in certain regions, is now spreading across much larger geographical areas in the form of bad and malnutrition due to the lack of purchasing power. Authorities also claim that such a situation exists in the United States (US), one of the leading countries. According to the US Department of Agriculture,⁵

1 “A person is food insecure when they lack regular access to enough safe and nutritious food for normal growth and development and an active and healthy life. This may be due to unavailability of food and/or lack of resources to obtain food.”; “Hunger and food insecurity”, <https://www.fao.org/hunger/en/>, accessed 11.04.2024.

2 Within the scope of this study, the concept of conflict is employed differently than the concept of war, even if it is sometimes used in place of it. Here, conflict refers to a state of effort and struggle toward a certain objective, such as conflict between social classes in a society. In this sense, there is no violence involved in the parties’ struggle for what they want or possess. Conversely, a dispute may become a form of war or have the potential to develop into one. This process can proceed in many ways, including official diplomacy, commercial actions, propaganda, political and economic warfare, the threat of war, and eventually, actual warfare. This definition of conflict is the temporary use of force by a state or group of people in response to a disagreement, either unilaterally or multilaterally. The armed forces of the parties or states must be engaged in the conflict and military techniques and procedures must be applied in battles for a change to occur from a state of conflict to a state of war.; Orhan Hançerlioğlu, *Felsefe Ansiklopedisi (Kavramlar ve Akımlar-6)*, Remzi Kitabevi, İstanbul, 2000, p. 44-45; Ahmet Emin Dağ, *Uluslararası İlişkiler ve Diplomasi Sözlüğü*, Anka Yayınları, İstanbul, 2005, p. 471; Haldun Yalçınkaya, *Savaş: Uluslararası İlişkilerde Güç Kullanımı*, İmge Kitabevi Yayınları, Ankara, 2008, pp. 21-25.

3 FAO, IFAD, UNICEF, WFP and WHO, *The State of Food Security and Nutrition in the World 2022. Repurposing food and agricultural policies to make healthy diets more affordable*, 2022.

4 FAO et al.

5 “Decline in Ukraine Wheat Imports Drives Egypt to Diversify its Suppliers (Jun 22, 2022)”, https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?Cairo_Egypt_EG2022-0015.pdf, accessed 19.03.2023.

more than 34 million people in the US are food insecure, including nine million children. The COVID-19 pandemic has been linked to increased food insecurity in families with children, as well as in non-white communities, specifically African-American, Latino, and Native-American ones, as a result of systemic racial injustice, unemployment, and poverty. Thus, 53 million people applied to food banks and other community programs in 2021 alone. According to 2023 data, it accounts for 12% of the country's population (approximately 41 million out of 330 million).⁶ In short, food insecurity in developed countries is now emerging as a problem that affects specific segments rather than the entire society, depending on the current production and consumption patterns. The situation worsens when political instability and internal unrest are added to the problems caused by underdevelopment in developing countries. In fact, it also results in population displacement within or between countries. For example, it is estimated that more than 90% of Afghanistan's population is poor because of the country's economic situation and approximately 23 million people are suffering from hunger.⁷ This hunger is not only due to purchasing power and political instability but also because of climate change. Drought cycles that have occurred repeatedly in the country since the 1990s have resulted in the loss of crops, livestock, and livelihoods of people who make a living out of agriculture, thereby reducing their purchasing power. These consequences, which worsen climate change vulnerabilities and make it difficult for Afghans to stay in their areas, have resulted in massive population mobility, with the majority fleeing to neighbouring countries and beyond. Approximately six million immigrants have left the country so far.⁸ While Ethiopia, Yemen, South Sudan, Somalia, Nigeria, and Afghanistan have the most severe hunger,⁹ 45 countries¹⁰ await assistance to ensure global food security.

It is clear that there is a greater need for global food production than in the past, even if the level of severity varies depending on whether the country is developed or developing. In addition to basic environmental security issues, such as water scarcity or pressure, soil deterioration, near-environmental pollution, changing climate conditions, and the current crisis atmosphere, the growing population emerges as the primary cause of food insecurity. According to estimates, the world population has surpassed eight billion and will surpass nine billion in 15 years –by 2037– up from around 2.5 billion in 1950.¹¹ The increased number of people who need to be fed requires an increase in the amount of water used in agriculture. The Middle East is one of the most affected geographies by food insecurity through climate crises

6 "Hunger in America", <https://www.feedingamerica.org/hunger-in-america>, accessed 08.03.2023; "Hunger in America Statistics (Updated March 2023)", <https://thebarbecuelab.com/hunger-in-america/>, accessed 08.03.2023; "Hunger & Poverty in America", <https://frac.org/hunger-poverty-america>, accessed 08.03.2023.

7 James Belgrave, "Half of Afghanistan's population face acute hunger as humanitarian needs grow to record levels", <https://www.wfp.org/news/half-afghanistans-population-face-acute-hunger-humanitarian-needs-grow-record-levels>, accessed 08.03.2023.

8 "Displacement, humanitarian needs surging inside Afghanistan and across region", <https://news.un.org/en/story/2022/02/1111532>, accessed 09.03.2023.

9 "The World's Hungriest Countries", <https://www.actionagainsthunger.org/the-hunger-crisis/world-hunger-facts/the-worlds-hungriest-countries/>, accessed 08.03.2023.

10 33 of these countries are in Africa (Central African Republic, Kenya, Somalia, Burundi, Chad, Democratic Republic of the Congo, Djibouti, Eritrea, Ethiopia, Malawi, Mauritania, Niger, Nigeria, South Sudan, Zimbabwe, Burkina Faso, Cameroon, Congo, Eswatini, Guinea, Lesotho, Liberia, Libya, Madagascar, Mali, Mozambique, Namibia, Senegal, Sierra Leone, Sudan, Uganda, United Republic of Tanzania, Zambia), nine of them are in Asia (the Syrian Arab Republic, People's Democratic Republic of Korea, Lebanon, Sri Lanka, Yemen, Afghanistan, Bangladesh, Myanmar, Pakistan), and two of them are in Latin America and the Caribbean (Haiti and Venezuela). Only one out of 45 countries, is in North America, Europe and Oceania (Ukraine).; "Countries requiring external assistance for food (March 2023)", <https://www.fao.org/giews/country-analysis/external-assistance/en/>, accessed 09.03.2023.

11 "Global Issues: Population", <https://www.un.org/en/global-issues/population>, accessed 09.03.2023.

manifested in the annual average temperatures and sudden temperature changes, increasing floods and droughts, inequitable water distribution systems, poverty, and lack of purchasing power. The Middle East, which is in Western Asia and extends to Egypt, comprises 17 countries in total. The countries cover many ethnic groups and the region's population is expected to exceed 483 million by 2023.¹² Regarding the current problems, the Republic of Türkiye (hereafter Türkiye), located in this region with semi-arid and arid climatic conditions, is one of the countries directly affected by food insecurity. Given that it is the region's second most crowded country after Egypt, with over 85 million inhabitants,¹³ it is clear that this issue will become more serious in the coming years.

Actually, the issue of food insecurity in the Middle East has been an issue of many studies in the literature.¹⁴ However, the study examines the problem of food insecurity in the Middle East from the perspective of environmental security by using political science data. This perspective draws attention to the study by highlighting the importance of environmental conditions as high policy areas that may be addressed through resource conflict and human security strategies. This study tackles water insecurity issues in addition to altering climate events, and it comprehends the political instability and conflicts ongoing in the Middle East, including food insecurity. It also examines the Black Sea Grain Initiative and food insecurity in the region, focusing on import-dependent nations.

1. Water Shortages and Stress as the Main triggers of Food Insecurity in the Middle East

Since ancient times, Middle Eastern countries located in a geography dominated by semi-arid and arid climatic conditions have struggled with food insecurity due to water pressure or scarcity. Therefore, having freshwater resources in the region and controlling these natural resources is vitally critical. Along with a few states, like Israel, attempting to maintain their presence in the region through agricultural and water technology innovations, there are also countries, such as Saudi Arabia, Bahrain, and Qatar, that have failed in freshwater issues despite their technologies and economic power. Of course, the role of internal unrest and conflicts caused by religious hostilities, ideological divisions, border disputes, and economic competition on food insecurity, as well as drought, is well known.

In the region, Gulf countries such as Saudi Arabia, Bahrain, Qatar, and Kuwait are perceived to be water-stressed, while Jordan and Palestine are perceived to be artificially water-stressed. For example, despite hosting fewer immigrants than Türkiye, Jordan, having the least amount of water in the region, experienced strain on its water resources in 2011 due to the Syrian refugees it received.¹⁵ As a result, Jordan needed to buy water from Israel

12 "The Middle East Population 2023", <https://worldpopulationreview.com/continents/the-middle-east-population>, accessed 09.03.2023.

13 "Adrese Dayalı Nüfus Kayıt Sistemi Sonuçları, 2022 (06 Şubat 2023)", <https://data.tuik.gov.tr/Bulten/Index?p=Adrese-Dayali-Nufus-Kayit-Sistemi-SonucLari-2022-49685>, accessed 09.03.2023.

14 See for example; Maysoun Hameed, Hamid Moradkhani, Ali Ahmadalipour, Hamed Moftakhari, Peyman Abbaszadeh and Atieh Alipour, "A Review of the 21st Century Challenges in the Food-Energy-Water Security in the Middle East", *Water*, 11:4, 2019, p. 682; Brian Davern Wright and Carlo Cafiero, "Grain reserves and food security in the Middle East and North Africa". *Food Security*, 3:Suppl 1, 2011, p. 61–76; Hussein Amery, "Food Security in the Middle East", Andres Jägerskog, Michael Schulz and Ashok Swain (eds.). *Routledge Handbook on Middle East Security*, Routledge, London, 2012; Alan Richards (2003). "Food security, poverty, and economic policy in the Middle East and North Africa", *Food, Agriculture, and Economic Policy in the Middle East and North Africa*, Emerald Group Publishing Limited, Leeds, 2003, pp. 1-31.

15 David R. Westhead, "Syria crisis: Demand is high for scarce water supplies at Zaatari refugee camp in Jordan", https://www.thestar.com/news/world/2012/08/13/syria_crisis_demand_is_high_for_scarce_water_supplies_at_zaatari_refugee_camp_in_jordan.html, accessed 10.03.2023.

regularly and form new partnerships¹⁶ in the freshwater sector.¹⁷ Israel now provides Jordan with 15 to 20 million cubic meters of water annually. Palestine also purchases water from Israel annually for 150 million Shekels (about 42 million USD), deducting the cost from the country's tax.¹⁸ Despite the high cost of water for Palestinians, water supply continues to fall short of demand, according to UN Conference on Trade and Development (UNCTAD).¹⁹ Given that the average Palestinian consumes 87.3 litres of water per day,²⁰ water scarcity is becoming more acute.

The Nile, Jordan, Tigris, and Euphrates rivers are the region's major rivers in the Middle East. Although the effects of climate change are common, water shortages are not severely felt in the areas where these rivers flow. In fact, this situation occasionally causes tensions and even conflicts between countries with and without water resources. However, the claims that these tensions will lead to wars are not true since the countries in question have mostly resolved their water-related disagreements through bilateral or multilateral cooperation.

For example, the Pacific Institute's Water Conflict Chronology, updated annually, provides data from the past to the present regarding conflicts over water resources occurring, whether locally or internationally. Around the world, 1051 conflicts over water resources, in which triggers or weapons were used, resulted in death between 2000 and 2021, according to the study, but 40.5% (426 of them) occurred in this region. When these conflicts are thoroughly examined, it is evident that they are primarily conflicts aiming to damage the water infrastructure as a critical infrastructure system rather than conflicts arising from the need for access to a water source and that these water resources were damaged in a conflict or war between parties for other reasons. In short, these conflicts are not the result of the allocation or sharing problem of water resources based on the needs of the parties. While some argue that conflicts between Israel and its neighbours in the region primarily result from this issue, this is not a widely accepted belief. The study by Wolf *et al.*²¹ explains this in detail. However, generalizing it to all countries in this region is incorrect. Conflicts of this nature have occurred in other countries (including Iraq, Pakistan, Afghanistan, and Sudan) between local interest groups or because of occupation or terrorist attacks. For example, this kind of conflict is the root cause of Yemen's food crisis. Yemen has been the site of the majority (more than 42%) of the conflicts in the region for the past ten years.²²

16 See for example; Rod Sweet, "Our sun for your water: Israel, Jordan renew ambitious solar-for-desalination plan (Nov 10, 2022)", <https://www.globalconstructionreview.com/our-sun-for-your-water-israel-jordan-renew-ambitious-solar-for-desalination-plan/>, accessed 10.03.2023.

17 Rois Kais, "Jordan, Israel in advanced talks on water deal (Aug 22, 2013)", <https://www.ynetnews.com/articles/0,7340,L-4420873,00.html>, accessed 10.03.2023; Jane Arraf, "Will Syrian refugees transform or threaten Jordan's economy? (Oct 12, 2013)", <https://www.csmonitor.com/World/2013/1012/Will-Syrian-refugees-transform-or-threaten-Jordan-s-economy>, accessed 10.03.2023; Nikita Malik, "The Cost of Syrian Refugees (Sep 19, 2013)", <https://carnegieendowment.org/sada/53049>, accessed 10.03.2023.

18 Avi Bar-Eli, "Jordan, Palestinians Seek to Buy Israel's Excess Desalinated Water (Jan 9, 2014)", <https://www.haaretz.com/israel-news/business/2014-01-09/ty-article/.premium/jordan-wants-more-water-from-israel/0000017f-de5f-d856-a37f-fddf13420000>, accessed 10.03.2023.

19 UNCTAD, *Report on UNCTAD assistance to the Palestinian people: Developments in the economy of the Occupied Palestinian Territory*, Trade and Development Board Seventy-second executive session Geneva, 17–21 October 2022 Item 7 of the provisional agenda Report on UNCTAD assistance to the Palestinian people, 2022, p. 5.

20 "Average Palestinian consumes 87 litres of water per day (Mar 21, 2020)", <https://www.middleeastmonitor.com/20200321-average-palestinian-consumes-87-litres-of-water-per-day/>, accessed 10.03.2023.

21 Aaron T. Wolf, Shira B. Yoffe and Mark Giordano, "International waters: identifying basins at risk", *Water Policy*, 5:1, 29-60, 2003, p. 39.

22 "Water Conflict Chronology", <https://www.worldwater.org/water-conflict/>, accessed 23.03.2023.

Briefly, beyond factors such as drought and water scarcity or pressure, the region's unstable order, embargoes, attacks on critical infrastructures, the activities of terrorist organizations which are linked to foreign resources and used as a tool for foreign intervention in the region, are among the factors leading to food insecurity and the problems are increased artificially in the region. Some governments, unable to adequately explain the situation to their citizens through domestic affairs, attempt to justify their failures in the water management process by citing other factors as an escape factor. As an example, we can explain the water problem in Iraq, Iran, and Syria, which all have been dealing with issues such as occupation, sectarian strife, and ethnic conflicts in their countries for many years. These countries, which are aware that the Tigris and Euphrates River basins provide an advantage to their neighbour, Türkiye, contend that Türkiye does not provide them with enough water and causes the water quantity problem they face and that it is the source of many problems including food insecurity. However, as a gesture of goodwill, Türkiye has proposed several projects, including the Peace Water Project, the Manavgat Project, and the Three-Stage Plan, all of which are based on the principles of fair and just use (to the extent that they take into account the negative consequences of today's climate change). Furthermore, it is well known that Türkiye provides more water to its neighbours than they require. The water issue that Türkiye has with its neighbours is not about providing more water but about these countries' inability to use the water within their borders wisely and their poor water management; thus, it is a matter of their own internal security.²³ As a result, water insecurity in these countries is not caused by Türkiye, either directly or indirectly; that is, it is a result of the allocation of the waters left in the Tigris and Euphrates basins.

In conclusion, food insecurity in the region is not so simple that it can be explained solely by droughts, water scarcity, or the pressure of changing climatic conditions. From the perspective of countries, it is necessary to reduce foreign interventions in the region and to provide a relatively peaceful environment if food security is to be ensured. The current global economic structure makes national economies eclectically dependent on one another and prevents nation-states from acting independently within their own borders. As a result, they attempt to directly influence agricultural policies and ensure food security through their assigned roles.

2. The Middle East, Foreign Reliance, and Food Diplomacy

Hunger, famine, and malnutrition are among the major environmental security issues, such as climate change, water scarcity, biodiversity loss, etc., that humanity confronts today as the population grows. Particularly in Middle Eastern countries, in which conflicts and internal unrest are intense, such issues are frequently encountered, and measures and strategies for food insecurity are developed following the necessity of their current geography. Even though its groundwater is salty and unsuitable for agriculture, Israel is one of the most prosperous countries in the world. Furthermore, Israel's arable land area, like that of other countries in the region, is extremely limited. On the other hand, Israel meets 66% of its exports; beyond being self-sufficient with the fruits and vegetables grown on agricultural farms, it has established on an area of 30 thousand acres in the Arava desert, where there is no water 150 meters below sea level, stretching along the Jordanian border to the Gulf of Aqaba in the south of the Dead Sea, and generates annual income of more than two billion USD. Behind their success in this area is the importance they place on agricultural technology and

23 For more information, see; Elif Çolakoğlu, "Güncel Gelişmeler Işığında Ortadoğu'da Su ve Gıda Güvencesi İlişkisi", *Türk İdare Dergisi*, 484, 2017, p. 95-96.

the correct agricultural policies they implement.²⁴ Iran and Türkiye are also to be mentioned here. With approximately 17.5 million hectares of agricultural cultivated area, Iran has the region's largest agricultural cultivated area. Türkiye contributes 2.26% of total world wheat production, with a production volume of 17.5 million tons in the 2022/2023 period.²⁵ Despite this increase in agricultural production, grain production per hectare in the region remains below the global average and this production is insufficient even for the region's countries. Except for Israel, the countries in the region cannot ensure production stability and growth; thus, they have to import expensive foods and continue to exist as countries dependent on developed ones; also, they cannot utilize fertile agricultural lands adequately because they generally do not have easy access to water resources to be used in the agricultural sector and they have limited technologies.²⁶ Middle Eastern countries are heavily reliant on global agricultural imports and devote a large portion of their oil revenues to food imports. So much so that countries with high incomes can import more grains.²⁷ Furthermore, based on differences in income levels and purchasing power in societies, an imbalance in distribution and consumption can lead to nutritional problems and even hunger. In other words, even if food production may be adequate, its delivery to and distribution among consumers becomes increasingly important. If this distribution is not adequate and consistent, it is unavoidable that hungry people will be among the poor sections of society.²⁸ Even when food security is positive in the region, this may be due to factors such as a favourable course in international markets or favourable seasonal climate conditions rather than local regulations or structural measures.²⁹ However, the region is experiencing generally unfavourable conditions.

Hunger caused by famine in certain geographical regions results from insufficient production and income due to economic integration. On the one hand, those living in rural areas cannot grow enough food; on the other hand, city dwellers' earnings are insufficient to purchase food.³⁰ Food consumption in Middle Eastern countries has reached enormous amounts for many years due to the rising population. This paved the way for the countries in the region to import food. In 2022, the US agricultural exports to the region were estimated to be 6.62 billion USD.³¹ However, in recent years, a decrease in the development of agricultural policies and preference for industry have resulted in the failure of economic growth in underdeveloped and developing countries. Saudi Arabia's subsidized agricultural programs, for example, have transformed the country into a wheat exporter since the early 1990s, leaving an average of more than 5 million Sudanese in need of food aid.³² Finally, as

24 Handan Çakan, "Tarımın Kazandığı Ülke: İsrail", <https://apelasyon.com/yazi/43/tarimin-kazandigi-ulke-israil#:~:text=Biliyor%20muydunuz%3F,ihracat%C4%B1n%C4%B1n%20y%C3%BCzde%2066's%C4%B1n%C4%B1%20ger%C3%A7le%C5%9Ftiriyor.,> accessed 11.03.2023.

25 Amna Puri-Mirza, "Agriculture in the Middle East - statistics & facts (Feb 13, 2023)", <https://www.statista.com/topics/10525/agriculture-in-the-middle-east/#topicOverview>, accessed 11.03.2023.

26 Levent Özel, Ortadoğu Ülkelerinin Gıda Güvenliği ve Gıda Politikaları, *Yüksek Lisans Tezi*, Hacettepe Üniversitesi, Ankara, 2003, p. 82-83.

27 Elif Çolakoğlu, "Güncel Gelişmeler Işığında Ortadoğu'da Su ve Gıda Güvencesi İlişkisi", *Türk İdare Dergisi*, 484, 2017, p. 95-96.

28 Atıla Artam, Sosyo-Ekonomik Açından Ortadoğu Bölgesinde Gıda Güvenliği, *Doktora Tezi*, T.C. İstanbul Üniversitesi, İstanbul, 1991, p. 21-22.

29 Elif Çolakoğlu, "Güncel Gelişmeler Işığında Ortadoğu'da Su ve Gıda Güvencesi İlişkisi", *Türk İdare Dergisi*, 484, 2017, p. 95-96.

30 Sandra Postel, *Son Yaha: Su Sıkıntısıyla Karşı Karşıya* (Çev. F. Şebnem Sözer), TÜBİTAK-TEMA Vakfı Yayınları, Ankara, 2000, p. 3.

31 Masha Shahbandeh, "Value of U.S. Agricultural Exports to the Middle East from 2000 to 2022 (in billion U.S. dollars) (Mar 6, 2023)", <https://www.statista.com/statistics/220780/value-of-us-agricultural-exports-to-the-middle-east-since-2000/>, accessed 11.03.2023.

32 Eckart Woertz, "Gulf food security needs delicate diplomacy (Mar 4, 2009)", <https://www.ft.com/content/>

previously stated, the conflicts inherent in the region's geography, such as sectarian conflicts, ethnic conflicts, foreign interventions, and occupations, and the constant displacement of the region's people as immigrants are the other factors contributing to the region's food insecurity. Hunger, which was previously visible in the region but only in a few areas, is now spreading and worsening across much larger areas in forms of poor or insufficient nutrition due to the Arab Spring, the Covid-19 pandemic, fluctuations in the international economy, and developments following Russia's war with Ukraine, as well as lack of production and purchasing power.³³

2.1. Climate Change, Drought, and Events in the Region Following the Arab Spring of 2010

The role of changing climatic conditions on food imports by Middle Eastern countries is significant. In this regard, the region's drought between 2006 and 2011 is particularly noteworthy. When rising oil prices were added on, wheat-exporting countries on a global scale faced challenges regarding production, as did the importing countries in the region in terms of the high inflation caused by food prices. The daily income of 44 million people around the world fell below the poverty line (1.25 USD) in 2011 due to food prices. Food prices rose significantly in some countries during this time; for example, Egypt's food price index increased 19%, Syria's 13%, and Iran's 26%.³⁴ Countries such as China, Ukraine, Russia, Canada, Kazakhstan, and Australia contributed to global wheat supply pressure during this period. Russia, one of the region's leading suppliers, has also imposed restrictions on grain, barley, and rye exports due to its concerns about disruption in the domestic market. The reason for these concerns was that wheat production was 97 million tons in 2008 in Russia, but it fell to 60 million tons in 2009. The decrease in precipitation rates reduced yield by one-quarter in Canada, the world's second-largest wheat exporter after America.³⁵ In this context, the rapid rise in food prices was viewed as one of the primary causes of these popular movements known as the Arab Spring.³⁶

Syria's ongoing unrest has also resulted in food insecurity. As a result of the damage to the state's basic structures and services, per capita income in the country fell by nearly half compared to pre-civil war levels, while food prices doubled. Syrians, who are struggling to make ends meet daily, are said to spend more than half of their household income on average. Families cannot find fuel to power generators that power their homes, transportation, and water systems. Many Syrians in the country have less than four hours of public electricity daily. Furthermore, high fuel prices increased the cost of transportation and daily labour. As a result, while farmers have less money to plant their fields, they have difficulty irrigating their crops and transporting their produce to market, increasing the cost. In addition, the country's food production has decreased. For example, before the civil war, an average of 3.4 million tons of wheat was produced each year between 2007 and 2011, but this production fell to 2.4 million tons in the following years.³⁷ However, due to the country's lowest rainfall and the drought, wheat production fell to approximately 1.045 million tons in 2021. As a result, while 12.4 million Syrians (roughly 60% of the population) face starvation, 4.5 million people were

d916f8e2-08d8-11de-b8b0-0000779fd2ac, accessed 12.03.2023.

33 Türkiye Çevre Vakfı, *Ortak Geleceğimiz* (Çev. Belkıs Çorakçı), Ankara, 1989, p. 36.

34 "Food Price Watch (April 2011)", http://www.worldbank.org/foodcrisis/foodpricewatch/april_2011.html, accessed 26.09.2016.

35 Tuğba Evrim Maden, "Arap Baharı ve Gıda Güvenliği", *Ortadoğu Analiz*, 6:62, 2014, p. 62.

36 Elif Çolakoğlu, "Güncel Gelişmeler Işığında Ortadoğu'da Su ve Gıda Güvencesi İlişkisi", *Türk İdare Dergisi*, 484, 2017, p. 100.

37 FAO/WFP. Special Report: FAO/WFP Crop and Food Security Assessment Mission to the Syrian Arab Republic, 14 November 2016, Rome, 2016, p. 38.

added to this number in the last year alone.³⁸ The fact that the terrorist organization YPG/PKK has occupied large and fertile agricultural lands is perhaps the most important factor in the disruption of wheat production. Likewise, wheat production has decreased significantly in the Haseke region, known as a granary and now occupied by the terrorist organization. Even so, before the civil war, the country exported four million tons of surplus wheat. Today, however, that figure has dropped to nearly a quarter.³⁹

Furthermore, as is well known, more than seven million people have been displaced within the country as a result of the civil war since 2011, in addition to 5.6 million people seeking refuge in other countries (Türkiye, Jordan, Lebanon, Iraq, and Egypt).⁴⁰ However, those who have immigrated to Lebanon have been facing food insecurity. Approximately 88% of Syrian refugees (1.3 million people) in Lebanon have been food insecure, poor, and in need of assistance, particularly since 2014.⁴¹ Even during this tense period, the Syrian government implements programs aimed at ensuring short-term stability through economic reforms, but it is estimated that more than half of the population remains insecure.⁴²

Other countries experiencing difficulties in financing food imports include Egypt and Yemen. Egypt was one of the countries in the region that directly impacted international wheat demand and was one of the world's largest wheat importers. Even today, the situation may be slightly better than that of other countries in the region. However, 32.5% of the country's citizens are poor now and the country has faced a hunger crisis due to the problems in the region, as well as the impact of global financial crises, food shortages, and COVID-19.⁴³ According to the 2022 Global Hunger Index, Egypt ranks 57th out of 121 countries and requires food aid worth seven million USD.⁴⁴ Food subsidies account for 1.2 to 1.8% of the gross domestic product in regional countries such as Egypt.⁴⁵ Yemen has more severe conditions. It is another country in the region where there is civil war and death news almost every day. In Yemen, where the humanitarian situation is dire, more than half of the population suffers from food insecurity and malnutrition, meaning that 17.1 million people in the country are hungry. It is estimated that 7.3 million people require immediate assistance, with approximately two million children suffering from malnutrition.

As a general overview, Syria's civil war resulted in a 40% decrease in food production, while the country's agriculture deteriorated day by day. Because Lebanon depends on the outside world for 90% of its food imports, 70% of refugees in the country live below the

38 "Twelve million Syrians now in the grip of hunger, worn down by conflict and soaring food prices (Feb, 17 2021)", <https://www.wfp.org/news/twelve-million-syrians-now-grip-hunger-worn-down-conflict-and-soaring-food-prices>, accessed 12.03.2023; "11 Years of Conflict in Syria: Threat of Hunger Has Never Been Higher (Mar 15, 2022)". <https://www.actionagainsthunger.org/story/11-years-conflict-syria-threat-hunger-has-never-been-higher/>, accessed 12.03.2023.

39 "Suriye'de buğday kitliği tehlikesi (23 Ağustos 2022)", <https://www.trthaber.com/haber/dunya/suriyede-bugday-kitligi-tehlikesi-703194.html>, accessed 12.03.2023.

40 "European Civil Protection and Humanitarian Aid Operations (Feb 09, 2023)", https://civil-protection-humanitarian-aid.ec.europa.eu/where/middle-east/syria_en, accessed 12.03.2023.

41 WFP, *Lebanon: Annual Country Report 2021, Country Strategic Plan 2018 – 2022*, 2021, p. 8.

42 Elif Çolakoğlu, "Güncel Gelişmeler Işığında Ortadoğu'da Su ve Gıda Güvencesi İlişkisi", *Türk İdare Dergisi*, 484, 2017, p. 100-101.

43 Maya Sulkin, "Understanding Hunger in Egypt", <https://borgenproject.org/hunger-in-egypt/>, accessed 13.03.2023.

44 "WFP Egypt, Country Brief, January 2023", https://docs.wfp.org/api/documents/WFP-0000147101/download/?_ga=2.107059522.1931407839.1678646182-553981118.1678343825, accessed 13.03.2023.

45 Tuğba Evrim Maden, "Arap Baharı ve Gıda Güvenliği", *Ortadoğu Analiz*, 6:62, 2014, p. 60, 62.

poverty line and cannot afford basic food. In 2014, the western part of Iraq also experienced a food crisis.⁴⁶

2.2. Global Covid-19 Outbreak and Food Supply Chain Disruptions

The COVID-19 pandemic has increased the number of undernourished people, in addition to internal conflicts, unrest, water stress/scarcity, and climate change. The pandemic, which hit the world ten years after the Arab Spring in 2010, also hit Middle Eastern countries, which are among the world's largest food importers. This import-based trust and commitment has rendered the region's countries vulnerable to these situations. During the pandemic, for example, Vietnam, one of the world's largest rice producers, temporarily halted the new shipments. Grain exporters like Russia and Kazakhstan have also halted exports to feed their populations. States stockpiling agricultural products caused an increase in price volatility. The pandemic has exacerbated food insecurity in Middle Eastern countries, which are heavily reliant on food imports. Because of their high import rate, these countries are vulnerable to any change in global food prices, currency fluctuations, and food availability shocks. Consequently, relying on exports of highly perishable food puts these states at greater risk of supply chain and logistics disruptions. With current political conflicts and macroeconomic instability during the pandemic, the Middle East has become one of the world's most vulnerable regions, suffering from acute hunger.⁴⁷ The pandemic began in Iran and quickly spread to other countries. The number of cases per capita in Qatar and Bahrain appeared to be higher than in the rest of the region, but this is partly because the two countries have done far more testing than most other countries. Infection control measures have been severely limited, particularly in countries experiencing conflict and internal unrest, because the measures rely on testing capability.⁴⁸

However, the COVID-19 pandemic has had similar effects on human health and on the economies of all countries, disrupting the supply-demand balance. Due to the uncertainty in the process, countries placed significant restrictions on agricultural and food product exports during this period, prioritizing the sustainability of their own food systems. Restrictions on crossing between countries, even on a local level between cities, caused logistical issues. Although food logistics were given some flexibility, the delays caused by the restrictions could result in food deterioration and waste, as well as increases in prices. Production was also disrupted in the later stages of the crisis.⁴⁹ Thus, by the end of 2020, the global food supply of 260 million people had been further restricted, global trade had shrunk by 32%, and the food supply chain had been severely disrupted.⁵⁰ In addition to a decrease in regional trading volume, oil prices fell. According to reports, the average crude oil price dropped from 64 USD per barrel in 2019 to 37 USD the following year.⁵¹ The economies of the countries in

46 Irfan Ashraf, "Food insecurity threatens the Middle East (Oct 14, 2022)", <https://www.dailysabah.com/opinion/op-ed/food-insecurity-threatens-the-middle-east>, accessed 12.03.2023.

47 Dina Atef MANDOUR, *COVID-19 and Food Security Challenges in the Mena Region*, Working Paper No. 1506, The Economic Research Forum, 2021.

48 Rabah Arezki, Blanca Moreno-Dodson, Rachel Yuting Fan, Romeo Gansey, Ha Nguyen, Minh Cong Nguyen, Lili Mottaghi, Constantin Tsakas and Christina A. Wood (2020). *Trading Together: Reviving Middle East and North Africa Regional Integration in the Post-Covid Era, Middle East and North Africa Economic Update (October)*, Washington, DC, World Bank, 2020, p. 4-5.

49 Özgür Duygu Durgun, "Covid-19, tedarik zincirinde arz-talep dengesini bozdu (30 Nisan 2020)", <https://haberler.boun.edu.tr/tr/haber/covid-19-tedarik-zincirinde-arz-talep-dengesini-bozdu>, accessed 15.03.2023.

50 "Trade set to plunge as COVID-19 pandemic upends global economy (Apr 08, 2020)", https://www.wto.org/english/news_e/pres20_e/pr855_e.htm, accessed 17.03.2023.

51 FAO, *The impact of COVID-19 in the Near East and North Africa Region and FAO's Response Plan*, FAO Regional Conference for The Near East, Thirty-fifth Session, 21-22 September 2020, 2020, p. 3.

the region where poverty has increased contracted by 5.2% in 2020. The pandemic-imposed restrictions on workers, altered consumer needs, and added numerous challenges to the supply chain, affecting wheat imports and exports to Middle Eastern countries.⁵² Conflict in Syria and Yemen, financial crises and political unrest in Lebanon, and other factors such as instability in Iraq heightened the risk of food insecurity and conflict-related humanitarian emergencies during this period. Egypt, Algeria, Jordan, and Palestine are all included.⁵³ The food crisis affected 29.4 million people in the region. Yemen had 13.5 million (45%), Afghanistan had 13.2 million (42%), Syria had 12.4 million (60%) and Sudan had 9.6 million (21%).⁵⁴

2.3. Russia-Ukraine War, Factors Limiting Exports, and Food Import Crisis

One more problem added to the issues affecting the food security of Middle Eastern countries in February 2014. Tens of thousands of people died, and millions were displaced as a result of Russia's occupation of Ukraine with "a special military operation". European countries faced the worst refugee crisis since World War II.⁵⁵ It has been determined that more than eight million Ukrainians immigrated to countries, particularly European ones, after the occupation.⁵⁶ Immediately following the invasion, Russia also experienced the largest emigration in its history, with between 500,000 and 1 million immigrants leaving the country since the October Revolution of 1917 and the fall of the Soviet Union in 1991. Some of these people went to neighbouring countries, such as Armenia and Kazakhstan, crossing Russian-only borders. Some fled to Finland, the Baltic states or other parts of Europe on visas. Others went further to the United Arab Emirates (UAE), Israel, Thailand, and Argentina.⁵⁷ However one may call it, the occupation or war caused this humanitarian crisis and exacerbated the issue of food insecurity in the Middle East, where there are countries that rely on food imports. This war came at a time when the Middle East was already struggling to feed its growing population while dealing with the effects of the pandemic and other issues.

For example, Israel imports nearly half of its food supply, and when animal feed imports, which are required for local production of meat, milk, and eggs, are included, Israel imports far more than half of its food supply. Only in 2021, approximately 265,000 Israeli families (or approximately 8% of the population), only about 11,000 of which received monthly financial assistance, faced severe food insecurity.⁵⁸ A National Food Security Initiative pilot program was allocated approximately 43 million USD (about 72% of the total annual budget) in 2022.⁵⁹ This effect can be seen even in Egypt, which protected itself from the 2010 Arab Spring crisis and pandemic with the measures it implemented and achieved a balance. There are claims

52 Irfan Ashraf, "Food insecurity threatens the Middle East (Oct 14, 2022)", <https://www.dailysabah.com/opinion/op-ed/food-insecurity-threatens-the-middle-east>, accessed 12.03.2023.

53 Dina Atef MANDOUR, *COVID-19 and Food Security Challenges in the Mena Region*, Working Paper No. 1506, The Economic Research Forum, 2021.

54 "2021 Global Report on Food Crises: Joint Analysis for Better Decisions", https://docs.wfp.org/api/documents/WFP-0000127343/download/?_ga=2.226642266.618387596.1620222706-174980704.1620222706, accessed 17.03.2023, p. 17

55 Antonio Pitarau and Raul Sánchez Costa, "Ukrainian exodus could be Europe's biggest refugee crisis since World War II (Mar 03, 2022)", <https://english.elpais.com/international/2022-03-03/ukrainian-exodus-could-be-europes-biggest-refugee-crisis-since-world-war-ii.html>, accessed 18.03.2022.

56 "Ukraine Refugee Situation (Mar 14, 2023)", <https://data.unhcr.org/en/situations/ukraine>, accessed 18.03.2022.

57 Franceska Ebel and Mary Ilyushina, "Russians abandon wartime Russia in historic exodus (Feb 13, 2023)", <https://www.washingtonpost.com/world/2023/02/13/russia-diaspora-war-ukraine/>, accessed 18.03.2023.

58 Ayal Kimhi, "Food Security In Israel Challenges And Policies", *Shoresh Research Paper* <https://Shoresh.Institute/Archive.Php?Src=Pr221118&F=Research-Paper-Eng-Kimhi-Foodsecurity.Pdf>, Accessed 20.03.2023.

59 Zachy Hennessey, "A food security pilot program has been added to Israel's national budget (Jun 20, 2022)", <https://www.jpost.com/israel-news/article-709895>, accessed 20.03.2023.

that the price of wheat increased by 85% and sunflower oil by 32% in Egypt in only one day.⁶⁰ However, Egypt tried a new method. Despite higher prices, exploring new markets for wheat purchases remained a viable option for both public and private purchases. On June 5, 2022, Egypt received its first shipment of Indian wheat purchased by the private sector.⁶¹ Along with Egypt, the world's largest wheat importer, Türkiye, Bangladesh, and Iran provided 60% or more of their wheat imports from Ukraine and Russia annually between 2016 and 2020. Based on 2021/22 import forecasts and actual imports for the first half of the marketing year, Egypt, Türkiye, Bangladesh, and Iran had outstanding imports of approximately 6.6, 4.0, 3.7, and 1.7 million tons, respectively, from these countries. Lebanon, Tunisia, Yemen, Libya, and Pakistan rely heavily on wheat from Ukraine and Russia, purchasing roughly half of their wheat from these sources on average between 2016/17 and 2020/21. However, while the sudden and sharp drop in shipments from both countries may increase exports from alternative origins, such as the European Union and India, it will not fully compensate for the low shipments from Ukrainian and Russian exporters. Global wheat trade volume fell by eight million tons, while corn trade volume fell by seven million tons.⁶²

To summarize, this war clearly adds to the pressure on global markets. As a result of the conflict between Ukraine and Russia, countries standing out in global food exports, ports were closed, and the food supply chain was disrupted. Ukraine's grain and oilseed exports have largely halted due to Russia's embargo. Ukrainian ports, which imported 4.5 million tons of agricultural products each month before the war, have to stop their operations.⁶³ Russia's own food exports have also slowed down. These two countries supplied 28% of wheat, 29% of barley, 15% of corn, and 75% of sunflower oil, with a total export share of 12% of products in this category globally before the war. Wheat prices increased by 53% immediately following the Russian occupation of Ukraine. Due to the rising cost of basic foods, 1.6 billion people worldwide have been identified as having insufficient purchasing power. It has been reported that 250 million people are on the verge of going hungry.⁶⁴ In short, low supply and high prices have jeopardised food-insecure countries and caused global food shortages. This situation has significantly impacted all Middle Eastern countries that rely heavily on imported food. The number of famine victims in the region rose to 141 million. Given that 81% of Lebanon's, 64% of Qatar's, and 49.3% of Tunisia's population rely on wheat imports,

60 Michaël TANCHUM, "Rusya-Ukrayna Savaşı, Mısır'daki Gıda Krizini Ekonomi İçin Varoluşsal Bir Tehdide Dönüştürdü (03 Mart 2022)", <https://www.mei.edu/sites/default/files/2022-03/The%20Russia-Ukraine>, accessed 18.03.2023, p. 1.

61 "Decline in Ukraine Wheat Imports Drives Egypt to Diversify its Suppliers (Jun 22, 2022)", https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?Cairo_Egypt_EG2022-0015.pdf, accessed 19.03.2023.

62 "Information Note: The importance of Ukraine and the Russian Federation for global agricultural markets and the risks associated with the current conflict, 25 March 2022 Update, Executive Summary", <https://www.fao.org/3/cb9236en/cb9236en.pdf>, accessed 18.03.2022.

63 Martin Farrer, "Ukraine war has stoked global food crisis that could last years, says UN (May 19, 2022)", <https://www.theguardian.com/world/2022/may/19/ukraine-war-has-stoked-global-food-crisis-that-could-last-years-says-un>, accessed 18.03.2022. "...Ukraine accounts for 10% of the world wheat market, 15% of the corn market, and 13% of the barley market. It is also the most important country in the sunflower oil market, accounting for more than 50% of the global sunflower trade. According to 2019 data, Ukraine has a total share of 7% in global wheat exports with 3.1 billion USD and ranks 10th in the world ranking. According to 2021 data, Russia's share in global wheat exports is 18%, with 8.8 billion USD. Ukraine and Russia provide 40% of Africa's wheat needs. Before the war, Ukraine exported 95% of its grain through the Black Sea ports. More than 20 million tonnes of grain stocks in Ukrainian warehouses could not be offered to the global food trade due to the war. To eliminate the food supply imbalance caused by the war, the food corridor planned to be built in partnership with Turkey-Russia-Ukraine aims to deliver the grain in the warehouses to the world markets..."; Hakkı M. Ay and Adnan Söylemez, "Grain Corridor Agreement and Turkey's Role in the Russia-Ukraine War", *Journal of Islamic World and Politics*, 7:1, 2023, pp. 1–10.

64 "The coming food catastrophe (May 19, 2022)", <https://www.economist.com/leaders/2022/05/19/the-coming-food-catastrophe>, accessed 18.03.2023.

the outcome is not difficult to predict. Food prices have risen in Lebanon, where 46% of the population is food insecure.⁶⁵ Syria has begun rationing basic foods such as bread and flour to address the growing bread crisis.⁶⁶ In this regard, the International Monetary Fund (IMF) even established a borrowing loan within the scope of the emergency financing instrument to aid the region suffering from food shortages, while the World Bank approved a 13 billion USD budget for the food crisis.⁶⁷

3. Diplomacy Surrounding the Black Sea Grain Initiative and Türkiye's Role in Ensuring Regional Food Security

As can be seen, the issue of food self-sufficiency is critical for Middle Eastern countries struggling with nutrition. The countries of the region, which are in a semi-arid climate zone, allocate their oil revenues to food imports and rely on powerful and developed countries to survive. Even when food security is positive in the region, it is not due to local regulations or structural measures in these countries, but it is because of the favourable course in international markets or favourable seasonal climate conditions.⁶⁸ Furthermore, water scarcity or pressure, the effects of which have increased in the region over the last two decades, the consequences of changing climate, large population movements caused by internal conflicts and the pressure it has created on neighbouring countries' natural resources, the reluctance of countries outside the region with activities directly related to the region to accept responsibility, the COVID-19 outbreak, and finally the food import crisis have all contributed to the nutritional crisis. The Middle East is a fragile geographical region. Even though Türkiye is a self-sufficient country, it is clear that these developments directly impact on the national economy.

While the industry has been a priority in Türkiye's development strategy for the last 70 years, the agricultural sector has been widely regarded as a complement and supporter of this policy. Agricultural policies aimed at providing cheap and sufficient food products and raw materials for industry were implemented for this purpose, and the domestic food market was largely preserved for many years.⁶⁹ By diversifying its products, Türkiye has expanded its agricultural sector to other countries' markets, such as Middle Eastern countries, in recent years. Fruit and vegetables account for a significant portion of the country's agricultural exports.⁷⁰ Although Türkiye does not have a serious problem with self-sufficiency, the issue of foreign dependency on grain and grain products has caused Türkiye to be affected by food insecurity, as the issues mentioned earlier increase the fragility level of the Middle Eastern countries. Food insecurity today is largely the result of long-term savings by powerful countries in the region.

As previously stated, following Russia's attacks on Ukraine, which was one of the world's largest grain producers and exporters, many of the Ukrainian cargo ships -around 80 ships- were unable to leave Black Sea ports. Türkiye's initiative helped to end the global food crisis by signing the "Safe Shipment of Grain and Foodstuffs from Ukrainian Ports Initiative

65 WFP, *Lebanon: Annual Country Report 2021, Country Strategic Plan 2018 – 2022*, 2021, p. 8.

66 "11 Years of Conflict in Syria: Threat of Hunger Has Never Been Higher (Mar 15, 2022)". <https://www.actionagainsthunger.org/story/11-years-conflict-syria-threat-hunger-has-never-been-higher/>, accessed 12.03.2023.

67 Irfan Ashraf, "Food insecurity threatens the Middle East (Oct 14, 2022)", <https://www.dailysabah.com/opinion/op-ed/food-insecurity-threatens-the-middle-east>, accessed 12.03.2023.

68 Elif Çolakoğlu, "Güncel Gelişmeler Işığında Ortadoğu'da Su ve Gıda Güvencesi İlişkisi", *Türk İdare Dergisi*, 484, 2017, p. 107.

69 Levent Özel, Ortadoğu Ülkelerinin Gıda Güvenliği ve Gıda Politikaları, *Yüksek Lisans Tezi*, Hacettepe Üniversitesi, Ankara, 2003, p. 53, 57.

70 Elif Çolakoğlu, "Güncel Gelişmeler Işığında Ortadoğu'da Su ve Gıda Güvencesi İlişkisi", *Türk İdare Dergisi*, 484, 2017, p. 102.

Document” on July 22, 2022, under the auspices of the UN. This initiative took steps to transport approximately 25 million tons of grain stored in silos to world markets via the Black Sea. In this context, one of the most important aspects of the bargain was the security guarantees to be received from Moscow, which would ensure that the ships involved in the operation could leave the mined areas without incident and would not be subjected to Russian attacks. In Istanbul, a coordination centre -the Joint Coordination Centre- was established to carry out and monitor exports to global markets. Ships departing from Ukraine’s Odessa, Chernomorsk, and Yuzni ports with grain cargo anchored in the area allotted to them in the Turkish Straits were subject to inspection by the Joint Coordination Centre, which monitored merchant ship movements to ensure compliance with the procedures communicated to the ships and provided publicly available reports on ship shipments and movements. The ships set sail for their respective ports after receiving the control. This centre had five representatives each from Russia, Ukraine, and the UN, as well as military and civilian Turkish personnel, but no military element was present on the field. The centre carried out its activities in cooperation with the parties and with the UN, which served as the secretariat in this case. It was also stated that the parties’ signatures on this document were valid for 120 days and would continue until the parties requested termination.⁷¹ Through the Initiative, which was extended twice,⁷² a total of 11,241,663 tons of grain and food products were exported, including 325,300 tons of wheat shipped by Food and Agriculture Organization (FAO) to support humanitarian operations worldwide. The Centre handled a total of 948 voyages to and from Ukrainian ports.⁷³ 25 million tons of grains and foodstuffs⁷⁴ were transported to 45 countries over four periods, helping to lower global food prices and stabilize markets.⁷⁵ As of July 2023, over two million metric tons of food⁷⁶ were sent directly to nations including Kenya, Afghanistan, Bangladesh, Yemen, Ethiopia, and Somalia, which are most at risk of extreme famine. Almost 15 million metric tons of grain were received regionally by the Asia Pacific region, accounting for most of the food goods provided there. Over 13 million metric tons of grain were shipped to other regions, including Western Europe. Africa received almost four million metric tons of grain, most of which went to Egypt (1.6 million), Tunisia (710,000 tons), and Libya (560,000 tons). Wheat and grain made up most of the goods shipped to African countries, where 35 million people suffer from hunger.⁷⁷ During this time, Türkiye purchased over a million tons of grain products, more than half of which (566,771 tons) was wheat.⁷⁸

The Black Sea Grain Initiative was renewed four times, with renewals planned every four months. The last 60-day extension of this program took place in May 2023, but on

71 “Türkiye’nin tarihi başarısı: Tahıl koridoru açıldı (Aug 16, 2022)”, <http://www.turktarim.gov.tr/Haber/822/turkiyenin-tarihi-basarisini-tahil-koridoru-acildi> accessed 19.03.2023; “İstanbul’daki Müşterek Koordinasyon Merkezi açıldı (27 Temmuz 2022)”, <https://www.trthaber.com/haber/gundem/istanbuldaki-musterek-koordinasyon-merkezi-acildi-697553.html>, accessed 19.03.2023.

72 “Cumhurbaşkanı Erdoğan: Tahıl koridoru anlaşmasının süresinin uzatılmasını sağladık (18 Mart 2023)”, <https://www.trthaber.com/haber/gundem/cumhurbaşkanı-erdogan-tahil-koridoru-anlasmasının-suresinin-uzatılmasını-sagladik-754102.html>, accessed 19.03.2023.

73 “Procedures (Feb 22, 2023)”, <https://www.un.org/en/black-sea-grain-initiative/procedures>, accessed 19.03.2023.

74 25,037,238 tons of food; 50% corn, 27% wheat, 6% sunflower meal, 4.9% sunflower oil, and 13% other foods.; “Update from the Office of the UN Coordinator for the Black Sea Grain Initiative (15 July 2023)”, <https://www.un.org/en/black-sea-grain-initiative/update-15-july-2023>, accessed 11.04.2024.

75 “Note to Correspondents - on the extension of the Black Sea Grain Initiative (Mar, 18, 2023)”, <https://www.un.org/en/black-sea-grain-initiative/procedures>, accessed 19.03.2023.

76 “Black Sea Grain Initiative Vessel Movements”, <https://data.humdata.org/dataset/black-sea-grain-initiative-vessel-movements>, accessed 31.03.2023.

77 FAO *et al.*, 2022, p. 14; “The Black Sea Grain Initiative: What was achieved? Why was it important? (Feb 22, 2023)”, <https://www.un.org/en/black-sea-grain-initiative/procedures>, accessed 31.03.2024.

78 “Vessel Movements”, <https://www.un.org/en/black-sea-grain-initiative/vessel-movements>, accessed 19.03.2023.

July 18, 2023, Russia withdrew unilaterally, bringing a stop to the Initiative. Russia asserted that limitations on insurance and transportation hampered its agricultural commerce since a comparable deal, which had been supposed to ease barriers to its food and fertilizer exports, had not been implemented.⁷⁹ Moreover, Russia stepped up its use of force to stop Ukraine from exporting grain and targeted its ports along the Danube River.⁸⁰ According to the World Bank, the withdrawal of Russia from the Initiative caused concerns in the global markets.⁸¹ As of June 5, 2023, 27 countries placed restrictions on food exports, and ten countries implemented export-limiting measures on Russia. Countries relying heavily on food imports have been impacted by this situation, which in turn has raised food costs internationally.

Conclusion

The Middle East is one of the world's regions with the most severe nutrition problems. Almost all the countries in the region are experiencing food insecurity because of similar issues. The leading causes of the region's nutrition crises are the increase in the number of people needing to be fed, the inequality of water distribution systems, poverty, lack of purchasing power, floods, droughts, increases in annual average temperatures, and climate crises manifesting themselves as sudden temperature changes. Additionally, the COVID-19 pandemic in the last two years and Russia's conflict with Ukraine have exacerbated and deepened hunger in this fragile region. Even self-sufficient countries like Egypt, Israel, and Türkiye have been negatively impacted due to their reliance on food imports in recent years. In a global economic system where countries depend on one another, the positive trend in international markets becomes significant.

Middle Eastern countries have implemented policies in line with their strategies to combat water pressure or scarcity for many years. Türkiye, for example, is expanding its agricultural sector towards this region by diversifying agricultural products (particularly in the field of fruits and vegetables) to meet the region's export demand. However, the region's countries are in a difficult position due to their reliance on food imports for cereals and grain products, which are considered the primary energy source for the human body and the foundation for nutrition. Exports to the region will be facilitated by integrating and improving existing trade networks and critical infrastructure with the region and by developing new ones.

The Black Sea Grain Corridor Initiative was implemented for a year as a result of the four-way talks hosted by Türkiye. At the very least, the region's chronic food insecurity has been resolved diplomatically for the time being, preventing the region from becoming vulnerable to famine and starvation. Grain and other food products were transported to many countries, greatly relieving the food market. However, if long-term food security in the region is to be ensured, the region's fragility must be eliminated. This is a difficult situation to describe for Middle East geography, at least for the time being. Each country in the region must develop its agricultural policies and strategies to reduce food imports.

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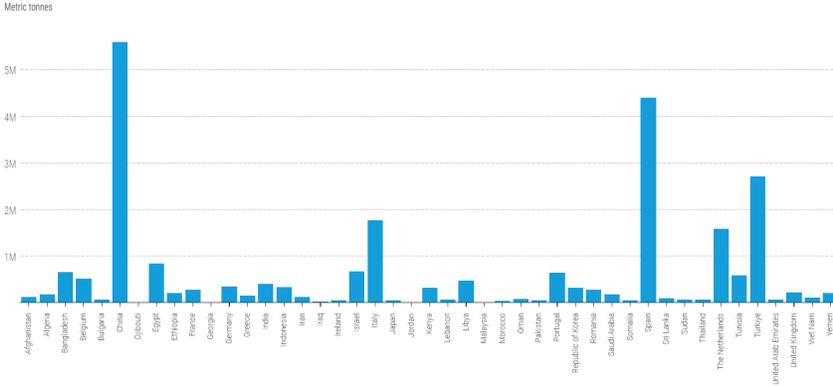
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Annex 1: Black Sea Grain Initiative Shipping Route
(valid as of August 25, 2022)



Source: “Additional Resources”, <https://www.un.org/en/black-sea-grain-initiative/resources>, accessed 19.03.2023.

Annex 2: Cargo destinations



Source: “Vessel Movements”, <https://www.un.org/en/black-sea-grain-initiative/vessel-movements>, accessed 19.03.2023.