Over the past few decades, the southern Mediterranean (SM) has become increasingly dependent on food imports. Volatile food prices and political changes have exacerbated the problems related to food import dependence, threatening food security. Furthermore, high levels of population growth, climate change, scarce and fragile resources have contributed to enhancing the fragility of the region. Structural problems, like high unemployment among youth and women, inequality and low participation in global value chains have been at the core of the most important crises in recent decades in the SM region. In 2019, around 821 million people (10% of the world population) were already suffering from hunger, and another 690 million were undernourished (8.9 percent) adding up to 60 million since 2014 (GHI, 2020). Hence, the status of food security was already experiencing a relapse before the onset of the pandemic in 2020 and the war in Ukraine in 2022. By the end of 2020 food supply had been restricted for an additional 260 million people. Several countries in the SM region have been highly vulnerable and their food security status has been worsening over time, as in Yemen, Syria, Iraq, Libya and Palestine.

These pre-existing conditions, which are reflective of the fragility of the social contract in many SM countries, have amplified the negative multidimensional effects of the Covid-19 pandemic and the more recent war in Ukraine, bringing about significant socio-economic impact. Lockdowns and workplace closures have shrunk economic activity and widened inequalities, with a consequential reduction in output and employment, in particular in agricultural activities dominated by small-scale agricultural producers and informal sectors. The more recent Russian invasion of Ukraine on 24 February 2022 has provoked a wave of shocks on the international energy and agriculture markets, due to the weight of these two countries in these strategic sectors, worsening the already weak position of several countries in the SM region, in particular the ones with a high food and agriculture import dependency and political instability. The Ukrainian conflict and the pandemic also go hand in hand with pronounced climatic changes, which impact farmers around the world. While populations continue to grow and food remains the basis of human security, resilient agriculture is being challenged. In the Mediterranean, where all these instabilities have been concentrated for a very long time, food problems are on the rise, at risk of once again taking on geopolitical dimensions.

**MENA Region: The Already Existing Difficulties and Tensions before the War in Ukraine**

**Food Security and Geopolitical Factors**

The southern Mediterranean region has been a major food producing region during the first and second centuries, but it has never been a region of abundance. A combination of climatic and environmental changes, population growth and changes in the political and economic environment have transformed the region into one highly dependent on im-
ports to satisfy its basic food needs, particularly in cereals. The agriculture sector plays an essential role for the equilibrium of SM. Most of the rural population in the region is engaged in agriculture and farming, directly or indirectly, employing more than a quarter of the population, with a high concentration of women.

Water resources are constantly and rapidly declining due to population and economic growth. This lack is compounded not only by recurrent droughts that severely affect the region, but also by the pressure on water resources coming from large-scale industries of agricultural and animal products.

In SM, water scarcity, lack of land, heterogeneous demography, internal and external conflicts, and, most of all, climate change and geopolitical instability are the most destabilizing factors to food security. In agricultural terms, only 14% of regional land is suitable for crop production, with averages of 34.4% for the northern EU Mediterranean region (EUMed) and only 5% for countries on the southern and eastern shores (Middle East and North Africa, MENA) where water availability represents a major limiting factor. This North-South asymmetry has been historically reinforced by different development patterns, including economic growth, population dynamics and sociocultural structures. Demographic trends present diverging patterns, between an ageing population in the Euro-Mediterranean, and fast-growing population rates on the African and Asian shores. Furthermore, economic, and political crises have also triggered in-migration to the region from other areas of the globe. Intense climate change contributes to amplifying the vulnerability of rural livelihoods and the differentiation amongst communities with diverse natural resource endowment.

It is important to note that the Mediterranean is considered the world’s second most highly exposed to climate change impact. Following a phenomenon that originated on its southern shores, the region is becoming hotter and drier, with relevant implications on the health of ecosystems, animals and people alike (IPCC, 2014). The increase in temperature is predicted to negatively affect agricultural yields and food supply regardless of other factors. Average reduction of rainfall is projected at 4% in northern shore countries, and 27% in southern ones. Drought events are also becoming regular on EU shores, where every second year is predicted to be potentially dry by 2050. Because of the arid climate, irrigation is an essential factor in productivity, but despite numerous projects the share of irrigated agricultural land does not exceed 5%. The Maghreb countries enjoy a variable climate with higher altitudes and rainfall and rely on dryland agriculture to a large extent. Water resources are constantly and rapidly declining due to population and economic growth, and the subregion suffers from severe water stress. This lack is compounded not only by recurrent droughts that severely affect the region, but also by the pressure on water resources coming from large-scale industries of agricultural and animal products. The continuous increase of the world population (a growth of about one third is expected by 2050), together with an even larger increase in food demand (especially in emerging countries), will lead in the next 30 years to a need to produce 70% more food. To keep pace with food demand, global cereal production would need to increase by 40% overall, or by some 900 million tonnes between now and 2050. In this context, the demographic growth recorded in the last century has inevitably accentuated the region’s food vulnerability. The population has increased from 140 million to 180 million in the last five decades: 50 million inhabitants in 1950, 250 million in 2020 and 320 million in 2050 according to the latest United Nations projections. Single countries can either increase production or increase net imports or a combination of both, to ensure food security.

The Regional Hyper Dependence on International Trade

Together, the climatic, financial and political crises have meant that the countries of the SM were extremely dependent on the international market. This strong dependence is partly due to the difficulty of
producing, on a national scale, a quantity of products suitable for satisfying the food needs of the population. Due to culinary traditions and the low incomes of a part of the consumers, wheat, along with bread, is the staple food of Mediterranean societies. The region consumes the largest quantities of bread in the world. Different climate agendas and considerable inequalities regarding natural resources and food security among the Mediterranean’s regions hinder effective cooperation for the common good, where one in every three inhabitants suffers from food insecurity.

The MENA region represents only 4% of the world’s population, but it accounts for 30% of world wheat purchases, half of which comes from Russia and Ukraine. Import dependency ratios are high compared to the rest of the Mediterranean countries, ranging from 93% in Libya to 40% in Egypt. The demand for agricultural products has multiplied by six since 1960. Currently, about 40% of the region’s consumption of these products comes from international markets. The regional average hides the large disparities at the national level, as one of every two calories is now imported in countries such as those in the Maghreb and Egypt, particularly regarding cereal imports. In Algeria and Jordan, two thirds of the grain consumed comes from the international market. In Lebanon and Yemen, 90% of wheat needs are covered by imports.

Because of their extreme dependence on food imports, the agricultural and food trade balance of SM countries is heavily in deficit. Libya and Algeria are most concerning, although they face less of a fiscal constraint compared to other countries. The North African countries are price takers and therefore exposed to substantial risks in terms of prices and quantities, arising from strongly fluctuating imports. Despite the difficulties in satisfying the national cereal demand, improvements in agricultural production in recent decades have been very slight, if not completely absent, using the international market to fill the internal deficit (out of 110 Mt of grain that the region consumes, 65 Mt are imported). At the beginning of this century, Russia grasped the strategic nature of wheat and took the opportunity to establish its influence in North African and Middle Eastern countries, aware that these countries were no longer dependent on the United States and Europe. This deployment has led to the acceleration of its wheat production, but also to the financing and construction of storage silos and infrastructure ports, making Russia a necessary actor for the food security of the SM region.

The War in Ukraine: Repercussions across the MENA Region

24 February 2022: A Tsunami on Agricultural and Food Markets

800 million tonnes of wheat is produced in the world but only 200 million is traded. Few countries can produce enough wheat to meet their internal needs and be exported. Russia and Ukraine are among the privileged ones: the two countries together represent 30% of world wheat exports, 75% of sunflower oil and 20% of corn for feed exports. The supply on these markets varies according to quality and price, so the establishment of diplomatic and commercial relations is necessary.

Given the agricultural weight of Russia and Ukraine, world markets, already nervous and bullish for two years, reacted strongly. The price of agricultural raw materials reached unprecedented levels during the first days after the Russian invasion. At the beginning of March 2022, soft wheat exceeded 400 euros per tonne, after having already surpassed the previous record of 300 euros per tonne. The reaction of the international agricultural market is due to several factors. First, the invasion of Russia, through fighting, bombing and mines, is affecting the cultivation and harvesting of grain in Ukraine. The closure of Ukrainian Black Sea ports, under Russian blockade, stopped all grain exports while Ukraine still had 15 million tonnes of corn, 7 million tonnes of wheat and 1.5 million tonnes of oilseeds to export. The grains were excepting on world markets. In addition to that, the problems of logistics and transport, the increase in insurance premiums due to the hampered maritime traffic in the Black Sea, the reluctance of traders to buy in this context and the difficulties in paying Russian exporters following the exclusion of Moscow from the Swift system, have caused commodity prices to skyrocket. We must put these logistical issues into perspective to understand the complexity of the situation. This price increase was accentuated in mid-May when Indian
Prime Minister Narendra Modi decreed an embargo on wheat exports, due to the decline in harvests and no sign of a temperature rise in the spring. This decision panicked the markets and the per-tonne wheat price rose to its historic high of 450 euros.

Food Supply Post-Ukraine Invasion: MENA Region on Alert

Grain shipments from anywhere else would have taken much longer and cost much more. As a result, Turkey, Egypt and Lebanon received about 80% of their wheat from Russia and Ukraine combined. Some countries in North Africa and the Middle East received, on average, more than 30% of their wheat imports from Russia and Ukraine between 2016 and 2021. The largest wheat importer in the world and the most dependent on the Black Sea region, is Egypt. It has imported a cumulative 210 million tonnes of wheat since the beginning of this century, 80% of which comes from the Black Sea region. Since the end of February 2022, tensions on the availability and prices of energy, fertilizers and food have been intense. It is possible to classify the countries into several categories, according to their level of consumption, the share of imports from Russia and Ukraine and according to the weight and influence that they have in terms of gas and petroleum sales and prices. If the Arab countries of the Gulf or even Algeria can count on their immense gas and oil resources to offset the rise in prices, diversify their suppliers and make investments in the agricultural sector, this is not the case for Tunisia or Egypt for example, two countries facing an increasingly acute financial and drought crisis. Syria, Yemen and Palestine, already heavily impacted by inflation and humanitarian crises, are the most fragile. The Syrian population, impoverished by 11 years of war, cannot bear the price increases. For its part, Lebanon has been hit by an economic and financial crisis for more than three years and the population has already had to drastically reduce its consumption of red meat and fruits and vegetables. Since the explosion of the port of Beirut in 2020 destroyed the large silos of the capital, Lebanon has only a month and a half of wheat reserves and operates in lean management. In February 2023, the IMF sounded the alarm for Lebanon, whose annual inflation reached almost 190% in February, with food inflation almost at 261%.

Algeria and Morocco, countries not very dependent on Ukraine or Russia for wheat imports, are seeing food prices rise, due to a spike in fuel prices and a reduction in fertilizer supply. On the one hand, the price of fuel has skyrocketed since international sanctions restrict Russian exports of crude oil and natural gas. On the other hand, Russia is the first exporter of urea fertilizer, the second of potash and ammonia, necessary to produce nitrogen fertilizer. World fertilizer prices were already rising since the end of 2021 and have experienced an unprecedented peak with the war in Ukraine. This peak is explained by the rise in gas prices and by a fall in supply on the markets. Urea, for example, reached 1,040 euros per tonne, whereas it cost 900 euros at the end of 2021 and 260 euros in 2020. With food production and transport costs on the rise, it is the entire MENA region which is now suffering from rising food prices.

Since the end of February 2022, tensions on the availability and prices of energy, fertilizers and food have been intense

The war in Ukraine has highlighted the MENA region’s food dependence, but also another form of vulnerability. For example, Egypt, the world’s largest wheat importer, needs foreign exchange to continue importing. However, the decline in foreign purchases of Egyptian public debt securities worsened following the war, as investors sought to stay away from emerging markets deemed unstable. The conflict has also led to a drop in the windfall of tourism, an important source of foreign currency. Egypt thus illustrates the complexity of issues surrounding food insecurity in the MENA region. It is not just about production and trade. In addition, 55 to 65% of the 11 million tonnes of wheat imported each year by Egypt is purchased by the public authority in charge of cereals, the General Authority for Supply of Commodities (GASC). This wheat is intended for the public subsidized bread sector, consumed by nearly 60 million Egyptians, at the rate of five Baladi loaves per person per day. This food subsidy system, which
amounted to $5-6 billion a year before the Russian invasion, is an important component of the social contract between the Egyptian government and its people. With galloping inflation, the fall of the Egyptian pound and the lack of foreign currencies, wheat purchases weigh on the Egyptian economy and it is the whole socio-political stability that is threatened. In the region, by interacting with specific local dynamics and already existing pressure factors, the food tensions reinforced by the war in Ukraine may become the trigger for social unrest.

**A Year after the Beginning of the War: What's Next for the MENA Region?**

*An Increase in Precariousness and Social Inequalities, Despite the Return of Pre-war Wheat Prices*

Despite the return of wheat prices to pre-war levels, food inflation in the MENA region continues to be conspicuous. Budget deficits, high levels of public debt and currency devaluation are the key factors in this trend. The vulnerability to trade disruptions remains a constant concern in the import-dependent region, especially in terms of agriculture and food products, determining the need for diversifying supplies, storage solutions and food diplomacy.

With galloping inflation, the fall of the Egyptian pound and the lack of foreign currencies, wheat purchases weigh on the Egyptian economy and it is the whole socio-political stability that is threatened.

Food tensions, already present with the pandemic, are exacerbated by the war in Ukraine, but at the same time, conflict and the worsening climate crisis have limited food production across the region. In Iraq and Syria, prolonged drought and the effects of conflict have reduced crop areas and food production. The inflation has resulted, especially for import-dependent states energy, an increase in spending to maintain subsidy programmes. This is the case in Tunisia where the government has been forced to allocate more resources to food subsidies, leading to an expansion of the country’s deficit which, according to forecasts for 2022, stands at around 9.1% of GDP, around two percentage points more than in the pre-war period.

Inflation and rising prices have contributed to exacerbating social tensions already present in the most fragile contexts of the area and fuelling popular discontent. Manifestations of various natures have occurred in most of the countries of the region, except for the 13 Gulf monarchies, where the redistribution of oil revenues is the basis of the social pact. The recent drop in inflation and the slowdown in economic growth should lead the central banks of emerging countries to move towards interest rate cuts during the year, despite the upward policy of the ECB and the FED. However, their message remains cautious, awaiting confirmation on the decline in inflation in the coming months, in an environment of still rising rates in developed markets. The decline in energy inflation has so far been the driving factor, as the effects of the soaring oil prices following the Russian invasion of Ukraine have worn off. The clear risk is that increased demand from China as its economy reopens could drive up oil prices and drive-up energy inflation as 2024 approaches.

**Food Security: A Valuable Tool for Cooperation**

During the crisis, some countries are implementing measures to develop their local production. The Tunisian government is multiplying initiatives to encourage its farmers to produce more and to achieve wheat self-sufficiency, while the UAE is betting on partnerships with foreign companies and investment in agritech start-ups. Diplomatic alliances are also a policy response to the food crisis. The crisis was partly appeased following a quadripartite agreement concluded in Istanbul on 22 July 2022, negotiated by the UN and Turkey, with Ukraine and Russia. The grain deal, called a “victory for diplomacy” by UN Secretary-General Antonio Guterres, facilitates exports from three Ukrainian ports, fueling the global food market while freeing up silos across the country to accommodate the next harvest. On 1 March 2023, more than 23 million tonnes
of grain and other foodstuffs have been exported under this initiative. However, this corridor remains fragile because it is only deployed for renewable periods of 120 days if the stakeholders accept it. The EU has also developed an initiative to get grain out of Ukraine by setting land solidarity corridors. These rail, road and river routes will have enabled Ukraine to export as much via these new routes as via the UN maritime corridor.

It is important to remember that at the time of the invasion, Russia continued to export its cereals to its allies, such as Turkey, Saudi Arabia, Syria and Algeria. Furthermore, Russia has resumed the Iraq wheat supply, after a ten-year break. Aware of its position of strength, these exports are favoured by the Kremlin through a series of devices allowing these countries to have easier access to Russian wheat (granting of targeted loans in rubles, reduction of export duties, etc.). The conflict revealed the strategic links between Russia and regimes dependent on grain imports, the latter adopting the principle of non-alignment to guarantee their food security. During the vote at the UN General Assembly on 2 March 2022, the countries of the SM region condemned Russian aggression, except for Syria, Algeria, Iraq, Iran and Morocco. On 7 April, Libya was the only Arab state to vote in favour of the Russia exclusion from the UN Human Rights Council. The visit to four African countries in July 2022 by Russian Affairs Minister Sergei Lavrov, with Egypt as its first stop, confirms the seduction operation led by Russia. With its food and fossil resources, Russia wants to prove that it is a more reliable ally than Europe and the United States. Since the start of the war in Ukraine, the United States has also used food diplomacy to strengthen its influence in the region. During his first tour of the Middle East in July 2022, President Biden announced at a summit with several Arab countries in Jeddah, Saudi Arabia, $1 billion in aid to support food security in the Middle East and North Africa. The United States thereby provided nearly $11 billion in humanitarian food aid to the African continent in 2022.

The war in Ukraine is turning the cards of international alliances upside down, but it is also reconfiguring the regional diplomatic game. For example, the Egyptian head of state Al-Sisi has multiplied meetings with his Gulf allies, and in particular his Emirati and Saudi counterparts, since the start of the war in Ukraine. As mentioned before, Egypt is heavily affected by the war in Ukraine and has a significant funding shortfall. Oil revenues in the Gulf countries become essential for their financial support and influence in the region.

The conflict revealed the strategic links between Russia and regimes dependent on grain imports, the latter adopting the principle of non-alignment to guarantee their food security

Conclusion

The consequences of the war in Ukraine are still not very clear yet. Even if the war ends tomorrow, there will still be many unknowns about the 2023 world supply of cereals and mineral fertilizers. The supply depends on different variables, like climate change, the production capacities of the major exporting countries, the possibilities of Ukrainian and Russian harvests or the functioning of the UN corridor. In the short term, the risks are real. In the long term, it is certain that this war will have repercussions on the world economy, which will have an indirect impact on the countries of the MENA region. Economic crises resulting from major geopolitical events reveal existing weaknesses, and the MENA region is no exception. It is, therefore, interesting to resume the perspectives already defined a few years ago on agricultural and food issues: cooperation, solidarity and complementarity can constitute solutions to reduce vulnerabilities in the Mediterranean. The Mediterranean countries cannot fight these battles unilaterally, considering the complexity of the challenges.

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