

GORDIAN KNOTS OF THE MEDITERRANEAN FOOD SECURITY Akdeniz'in Gıda Güvenliğinin Gordion Düğümleri

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Abstract

In this study, major challenges in the Mediterranean basin are defined as Gordian knots implying their intricate position which need unorthodox ways for a solid solution. In this regard, food security in the region is chosen as an anchor. Given that the climate change is expected to exert a profound impact on the region and ecological degradation coupled with deeply unsettling demographic shifts, food security in the region emerges as a critical concern. For this purpose, Gordian knots in the region are first identified. These are respectively escalating ecological degradation issue exacerbated by climate change, presumed energy sources such as oil or natural gas in the Mediterranean Sea which have triggered a new geopolitical race among both regional actors and external big powers, and highly unsettling social circumstances and demographic transformations driven by either war/conflicts or economic hardship. These Gordian knots are all examined through the lens of food security issue. Finally, the study concludes that there is an urgent need for a responsible approach which is not a myopic one; otherwise, it would be harsh for all region to have a bright future.

Keywords: Food security, Gordian knots, Climate change, Demographic changes, Ecological degradation.

Öz

Bu çalışmada, Akdeniz havzasındaki ana sorunlar karmaşıklıklarına ithafen geleneksel olmayan çözüm yollarına ihtiyaç duyan Gordion düğümleri olarak adlandırılmıştır. Bu kapsamda, bölgenin gıda güvenliği bir çapa misali ana unsur olarak belirlenmiştir. İklim değişikliğinin en çok etki gösterdiği bölgelerden biri olması beklenen Akdeniz havzasındaki ekolojik bozulma ile hayli tedirgin edici demografik değişiklikler birlikte ele alındığında, bölgenin gıda güvenliği son derece önemlidir. Bu nedenle, öncelikle bölgenin Gordion düğümleri olarak değerlendirilen ana hususlar ortaya konmuştur. Bunlar sırasıyla iklim değişikliği ile birleşerek artan ekolojik bozulma, Akdeniz'de bulunduğu varsayılan doğalgaz ve petrol gibi enerji kaynaklarının tetiklediği, yeni jeopolitik yarışın hem bölge ülkelerini hem de büyük güçleri içine alması, ilave olarak savaş/çatışma ya da ekonomik zorluklar gibi nedenlerle meydana gelen sosyal koşullar ve yüksek orandaki demografik değişikliklerin yaratmış olduğu tedirginliktir. Bahsedilen bu Gordion düğümleri, Akdeniz'deki gıda güvenliği açısından ele alınmıştır. Sonuç olarak, miyop bir bakış açısına sahip olmayan sorumlu bir yaklaşımın bölge için güçlü bir ihtiyaç olduğu kanısına varılmıştır.

Anahtar Kelimeler: Gıda güvenliği, Gordion düğümleri, İklim değişikliği, Demografik değişiklikler, Ekolojik Bozulma.

Introduction

As children, we were taught in school that Anatolia was the cradle of all civilizations. In one sense, this holds true that many civilizations have emerged and declined through centuries such as Byzantine or Ottoman Empires which left their significant blueprints on world history in many ways. Today, though things are quite different, one thing remains the same; the geography upon which Anatolia rests, namely the Mediterranean basin, still retains its status of being cradle.

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The cradle designation of the Mediterranean is often associated with its remarkable geography, shining like a pearl. This landscape gives many charming characteristics to the region and has played a formative role in shaping the Mediterranean basin; the Mediterranean civilizations have paved the way for many cultural heritages starting from the very early ages, the famously healthy Mediterranean diet and impressive array of ecological zones must also not be overlooked. Nevertheless, the Mediterranean basin faces a series of uncertainties. Global climate change, ecological degradation, the discovery of potential energy resources which intensify geopolitical competition among states, demographic shifts driven by armed conflict or economic hardship put the basin itself in a precarious position. Therefore, the Mediterranean basin states are now in a difficult position that they can easily find themselves trying to cut their Gordian knots² which requires a bold action to solve long standing issues.

In this study, the major challenges in the Mediterranean basin are conceptualized as Gordian knots of the region. For this reason, first, the Mediterranean basin must be defined. Though it has various definitions, this study adopts the basic one; the basin comprises states surrounded by the Mediterranean Sea such as Malta, or partially bordered by it, such as Italy or Syria (Head 2017). Then, the basin metaphorically resembles an outstretched hand³ filled with Gordian knots. To analyze these complexities, food security is chosen as the analytical anchor.

First, the historical background of the region has been outlined particularly through the lens of food security. Second, Gordian knots are woven into the analysis. In this context, ecological degradation of the basin exacerbated by climate change has been linked to the study. A new geopolitical race and its connection with food security constitute the second strand of this section since potential energy sources such as oil or natural gas in the Mediterranean Sea have raised concerns not only about environmental sustainability but have also accelerated a geopolitical race involving both regional and external actors. The final strand focuses on the people in the region. The region dynamics are vulnerable to social instability and demographic shifts, fueled by wars/conflicts or economic flames. This situation puts region states in a difficult position to make hard choices and sometimes leads to unfortunate myopic choices. Migration and its disorienting results, increasing flees from wars/conflicts or economic constraints through developed countries represent both a cause and a consequence of regional instability. The dynamics of this flee carry significant implications for food security in the region which are examined in the final. Ultimately, the article concludes addressing these complex challenges requires a responsible approach which is not a myopic one since solutions cannot be achieved through isolated efforts but rather a collective action is needed to cut the Gordian knots confronting the Mediterranean.

In this context, this study utilizes both academic and grey literature to analyze the subject matter and the primary challenge has been the extensive scope of literature on both the Mediterranean basin and food security which required careful synthesis to keep them within the limits of this article a task that, it is hoped, has been achieved.

1. Historical Background of the Mediterranean Basin: The Cradle of the Humanity

The Mediterranean Sea takes its name from the combination of two Latin words, *medius* (meaning middle) and *terra* (meaning land). Therefore, it is the sea in the middle of the earth and has a single natural opening at the Strait of Gibraltar, which connects it to the Atlantic Ocean (Clement, 2012). Although the term dates to as early as the mid third century BC, it has only gained its universal acceptance as a term in the nineteenth century and is about “geopolitical ambitions in a period of imperialistic rivalry” (Seirinidou, 2023)⁴.

The Mediterranean is preeminently noted as the cradle of Western civilization (Seirinidou, 2023) and its geographic position makes it quite possible since it is an enclosed sea which is surrounded by numerous people and states. However, this feature also introduces ambiguity about being a Mediterranean. For example, Whittow (2001) highlights this ambiguity in his review about the lengthy book, *The Corrupting Sea* (Horden & Purdell, 2000). According to Whittow (2001), the central thesis of this book posits that being Mediterranean is just about being micro regions. It is characterized by a fragmented environment full of uncertainties; frequent natural disasters such as forest fires, earthquakes, drought, or floods never ends

² The Gordian knot term is now used as a proverb to indicate that a grift solution to be solved by unthinkable and brave actions. The proverb is about Alexander the Great who marched through Anatolia and reached the capital of Phrygia, namely Gordium. In Gordium, he was shown an intricate knot that only destined to be untied by the future conqueror of Asia. Alexander the Great instead of trying to solve the knot, he made a short work and cut it at one blow (Britannica, n.d).

³ The resemblance to an outstretched hand belongs to the author of this article.

⁴ This imperialistic rivalry has even inspired to make a board game like monopoly. Simulating Braudel's Mediterranean depiction, there are four powers represented by players: the Spanish, Turks, Genovese, and Venetians. The aim is to extend the respective empires and gain wealth and prosperity (Gordon, 2003).

and, in such conditions, people need to exchange goods and services with other micro regions. The diversity of micro regions ensures that when one suffers, others may compensate. For example, if one micro region is under effect of a severe drought, it can compensate its loss from other part of the basin or adapt internally by using the advantages of being a micro region such as planting drought-resistant millet instead of failed wheat. Thus, environmental fragmentation also fosters resilient connectivity (Whittow, 2001).

As previously noted, environmental fragmentation and climatic unpredictability are some characteristics of the Mediterranean (Whittow 2001). However, identifying any common denominators in the term “Mediterranean” is still a complex question. For this reason, the question has been defined “as haunting as well as embarrassing one” largely because it lacks a singular or definitive answer. The term is inherently flexible by everchanging circumstances, demographic or geopolitical, frequently marked by contradictions. Therefore, these contradictions, rooted in diverse cultural backgrounds necessitate adaptability and that is why “Mediterranean is a cultural construct” (Driessen, 2001)⁵.

Considering this, the physical boundaries of Mediterranean, either broader like Braudel’s definition which includes places sometimes regarded as beyond the Mediterranean itself or narrower like Abulafia (2011) who only sees the sea, the shores, and islands highlight the fragility of Mediterranean identity as described by Driessen (2001). Therefore, “any rigid boundary drawing” should be taken as a mistake (Driessen, 2001). In this perspective, this analysis is based on the definition of Mediterranean basin including states either entirely enclosed by the Mediterranean Sea or partially bordered it refraining from adopting rigid definitions (Head 2017)⁶.

In sum, the Mediterranean can simply be taken as flexibility in all terms. While this kind of flexibility sometimes carries positive connotations it can also reflect negative aspects as well. For example, although there is a common reference to the Mediterranean as the cradle of Western civilization, the Mediterranean is also referenced as an anomaly within Europe. This alleged inability of Mediterranean societies to fully internalize norms or their recurring financial fragility observed in the region countries such as Greece, Portugal, Italy, or Spain appear as common signs of this supposed anomaly (Seirinidou, 2023).

Describing the Mediterranean in such negative terms such as anomaly or inability, is likely inconsistent with Braudel’s perspective. He asserts that “it is my belief that all the problems posed by the Mediterranean are of exceptional human richness, and that they must therefore interest all” (Braudel, 1995, p.19)⁷. While some may challenge the first part of the statement, the second part appears undeniably valid. For one reason, the Mediterranean basin has historically served as a theater for imperial rivalries. Later, it has evolved into a precious commodity for mass tourism. That is why it is argued that the Mediterranean as a term has not always been shaped by high politics but sometimes has been shaped by popular culture and the market terms as well (Seirinidou, 2023). Moreover, it has become a prominent reference in the culinary world and the Mediterranean diet has gained a global legitimacy within gastronomic discourse (Gordon, 2003). In one culinary publication, for instance, the Mediterranean food is described as “more than a breath of fresh air and as window to a more colorful future” set within a blessed geography of sun, sea, and olive trees (Lloyd, 2024)⁸.

Despite this cheerful and romanticized image, a historical examination of the region reveals a reality marked by famines, food shortages and severe food price inflation. For example, during the Italian agricultural production crisis between 1548-1564, the shortage was only alleviated by Turkish wheat until a food crisis on the Turkish side led to the imposition of export bans. Poor harvests, adverse weather conditions or overpopulation were typical causes for such circumstances (Braudel, 1995, pp. 591-593), indicating that the Mediterranean was not always as idyllic as it might seem. Food price inflation, for example, was a particularly persistent issue. In 17th century accounts, the rapid growth of the demographic overburden led to insufficient agricultural production and had become more serious with the farmers shifting to more profitable products which ultimately triggered widespread food shortages. This inflationist

⁵ Driessen (2001) regards the definition of “the Mediterranean as the cradle of Western civilization” as an academic stereotyping like every day clichés of “warm sociability” or “social coldness” attributed to different regions in the world. Though Driessen (2001) takes the definition of “the Mediterranean as the cradle of Western civilization” as a stereotype, it is not a complete fallacy. For example, according to Braudel, the Mediterranean as a zone was balanced between the west (Spanish Empire) and the east (Ottoman Empire) and was the main force in Western civilization until it had lost its muscles (Gordon, 2003). Besides, the Mediterranean was where Greek and Rome civilizations originated and the Italian Renaissance reconceptualized by using their heritage (Clement, 2012).

⁶ The Mediterranean basin map in the Library of Congress by United States Central Intelligence Agency is also useful in this regard (United States Central Intelligence Agency, 1998).

⁷ The author of this article admits that this sentence has come to her attention first with a quotation in Clement’s article (Clement, 2012).

⁸ The worth mentioning book about Mediterranean cuisine here is namely “A Book of Mediterranean Food,” written by Elizabeth David. In the 1950s which the book first published, rationing food was still in force in Britain and the book including collection of recipes from different Mediterranean countries such as France, Italy, the Greek Islands and Egypt induced a great interest in the Mediterranean diet. The book has recently re-published in 2024 and reviewed by Lloyd (Seirinidou, 2023; Gordon 2003; Lloyd, 2024).

tendency was pervasive and culminated in financial crises. Under these circumstances, the basin states were financially squeezed and they perforce had to gauge the financial talents of their bureaucracies (Tabak, 2021, pp.126-127). Evidently, the Mediterranean region has never been an uninterrupted heaven of prosperity. Quite on the contrary, it has been long entangled in profound Gordian knots awaiting either to be untied or decisively severed.

2. The Gordian Knots

In this second part, the Gordian knots of the Mediterranean have been explored through the lens of food security. Inspired by the Gordian knot legend which gives the title to this article, each part has been linked to symbolic references such as an iconic painting or a quotation but before that it is essential to define the concept of food security as it forms the central thread connecting the Gordian knots of the article.

Like the term “Mediterranean,” the concept of food security, is inherently flexible. Even in the 1990s, the number of published definitions of the concept were up to two hundred. Although its origin can be traced back to the mid-1970s, a period marked by a severe global food crisis, the concept has gradually evolved to reflect its multi-dimensional nature. The definition of the food security concept has usually been shaped within the documents of either World Food Summits, Food and Agriculture Organization (FAO) or World Bank. The initial step was in 1974 World Food Summit defining the concept as: “availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices”. Over time, its attire has been garnished with new dimensions such as “access to the basic food,” “enough food for an active and healthy life,” “safe and nutritious food,” and “food preferences.” (Clay, 2002). One of the most widely accepted definitions which frequently cited in academic literature comes from the FAO: “Food security [is] a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (FAO, 2001).

In this context, the Mediterranean basin faces potential food security challenges primarily driven by ecological degradation which are likely to be further exacerbated by the negative effects of climate change. The deterioration of environmental conditions is compounded by a new geopolitical race which considers the eastern part of the Mediterranean Sea as a freshly baked cake to taste due to its presumed natural gas and oil reserves. The final issue examined in this part relates to social and demographic dynamics which pose additional pressures on food security and present challenges for all states in the region.

2.1. Ecological Degradation and Climate Change: Last Supper in Mediterranean

Leonardo da Vinci’s Last Supper portrays one of the most emotionally charged scenes for Christianity and is regarded as “a complex study of varied human emotion.” In the painting, Jesus is depicted sharing his last supper with his disciples, during which he foretells the impending betrayal by one of them. His gesture towards a glass of wine and a piece of bread is interpreted as the institution of the Holy Communion rite (Zelasko, 2025). In a symbolic parallel, the deteriorating ecological conditions of the Mediterranean Sea evoke a similarly unsettling emotional response and resembles a sense of betrayal against the region’s natural heritage.

One of the earliest alarming signs of ecological degradation in the Mediterranean Sea is the loss or “waning”⁹ of bio-diversity. The waning of bio-diversity in the Mediterranean means that ranging from water purification to carbon storage or food supply, a wide array of ecosystem services is about to be lost. To elaborate this waning, it must be noted that the Mediterranean Sea is a host to over seventeen thousand marine species, and about a quarter of these species are endemic which is the highest rate in the world. Still, studies and projections about this ecosystem are not very optimistic. Though there are Marine Protected Areas (MPAs) and some area-based conservation initiatives, forecasts suggest that more than thirty endemic species will become extinct by the year 2100. In addition to this, the Mediterranean has already lost almost half of its top predators including mammals between the years of 1950 and 2011. Coralligenous ecosystems which are crucial for climate resilience and fisheries as well are also under threat a from multiple stressors such as pollution, invasive species¹⁰ or destructive fishing. Finally, the loss of Posidonia

⁹ One who studies the Mediterranean frequently come across the word “waning.” For example, Braudel describes the Mediterranean using such words: “greatness” or “waning.” The greatness of the Mediterranean refers to the age of Columbus and Vasco da Gama and the waning starts in the seventeenth century (Braudel, 1995). Similarly, the name of Tabak’s book is “The Waning of Mediterranean” (Tabak, 2021). Thus, the phrase of “waning of bio-diversity” seems as a convenient choice here.

¹⁰ Invasive species in the Mediterranean are also called as non-indigenous species which normally do not exist in the Mediterranean. These non-indigenous species are lately a source of concern since their invasiveness do not allow others to survive. Global warming and the Suez Canal are among main vectors in this sense (Deval et al., 2010); with global warming, numerous invasive species such as

oceanica¹¹ habitat is particularly concerning since it is expected to be lost up to 70 % until 2050 (UNEP, 2021).

Pollution is one of the primary drivers responsible for this degradation. The Mediterranean Sea is considered the most polluted sea in Europe, particularly regarding plastic waste (Atvur 2020). For example, the half of the pollution in the Mediterranean Sea consists of plastic waste. According to World Wide Fund for Nature (WWF) Report in 2018, littoral states are mostly responsible for this plastic pollution¹² (WWF, 2018). The Mediterranean suffers from wide variety of pollution (earth, water, or marine pollution) (Planbleu, 2020) and the situation underscores that there needs to be an extraordinarily effective management to safeguard ecological, cultural, or scientific values, bearing in mind that only 0.04% of the Mediterranean's surface is no-go, no-take, or no-fishing character (UNEP, 2021).

In response to the pressing need for such an effective management, preservation efforts in the Mediterranean have been ongoing for over three decades. For an early start, the Mediterranean Action Plan (MAP) launched by the United Nations Environment Programme (UNEP) was established in 1975 as the first regional framework aiming at combatting marine pollution and promoting the sustainable use of marine resources. One year later in 1976, The Convention for the Protection of the Mediterranean Sea against Pollution, commonly known as the Barcelona Convention, was signed and gradually complemented by protocols addressing different concerns (Atvur, 2020; UNEP n.d.). Although the Barcelona Convention and its protocols remains as the most comprehensive legal arrangements, there are numerous other international agreements also include specific provisions for Mediterranean protection. Despite these extensive efforts such as setting up the legal protection frameworks and organizational structures, and holding regular meetings among parties, environmental problems in the Mediterranean continue to intensify (Atvur, 2020). As such, one might conclude that the problems in the Mediterranean are as deep as the Sea itself.

From a food security perspective, it must be noted that the ecological degradation of the Mediterranean Sea has significant adverse implications. These impacts are twofold; one is closely related to pollution and the other is about waning bio-diversity. For one thing, sectors such as fisheries and agriculture are in the lead and particularly vulnerable to the effects of pollution. At that point, one should add that this ecological degradation is not only limited to the Mediterranean Sea but it also affects the surrounding terrestrial environment. Türkiye and Italy respectively serve as notable examples. In Türkiye, The Büyük Menderes River (The Great Meander) named for its winding course, has been severely polluted by chemical wastes from textile industries, causing the river's color turn into red or pink hues which illustrates that the black is not always the color symbolizing death. Another disturbing sign of pollution is that nearby trees appear to grow their roots away from the river, as if in retreat. This pollution has also contributed to the loss of bio-diversity in the region. A resident and environmental foundation member has lamented the disappearance of pigeons that once frequently filled the skies in the area and watched by a great feast. In addition to this, snakefish populations seem to have shared a similar fate (Şık, 2024). Similarly, Italy's Po Valley, a huge geographical area including Piedmont, Lombardy, Veneto, and Emilia-Romagna which is also known for its rich agricultural history, is also under a pollution threat, risking lives of more than sixteen million people (Giuffrida, 2023; Harper, 2024). The Po, often referred to as a "wounded giant," is a polluted and overexploited area though it still plays a crucial role in Italian agriculture accounting for 35% of the nation's agricultural production (Liberti, 2023).

Both The Po River in Italy and Büyük Menderes River (The Great Meander) in Türkiye serve as symbols of the adverse effects of climate change in the region. Thus, it is not surprising to see that the Po River in Italy has been labeled as "a litmus test for increasingly marked effects of the climate crisis in Italy," due to its extreme conditions ranging from record low water¹³ to overflowing tributaries. (Liberti, 2023).

balloon fish or lion fish have come to the Mediterranean through the Suez Canal from tropical waters. This may be the sign of tropicalizing of the region which may have devastating effects for the region. Not only global warming but also additional human made factors such as dam constructions on Nile River or the deepening of the Suez Canal by Egypt are noted as contributing factors for tropical fish species influx. As an example, the first balloon fish appeared in Türkiye nineteen years ago but there are currently seven different kinds of balloon fish in Türkiye (Milliyet, 2021; Atvur, 2020).

¹¹ The Posidonia Oceanica which is also known as Neptune grass is an extremely important seagrass which is endemic to the Mediterranean Sea. Its carbon absorption capacity is fifteen times more than a similar sized Amazon rainforest. This endemic functions by forming large underwater meadows. It is widely known as the olive of the sea due to its fruit resembling olive (Atlas, 2021; Elginöz et al., 2011).

¹² These littoral states are respectively Türkiye (144 tons in a day), Spain (126 tons in a day), Italy (90 tons in a day), Egypt (77 tons in a day), and France (66 tons) (WWF, 2018).

¹³ International Agency for the Po River (Aipo) working on hydrographic survey states that the Po River is under great strain due to lack of rain (Liberti, 2023).

The consequences of climate change are equally evident in Türkiye. Regarding the average temperature rising, there are several academic studies in Türkiye covering the period between 1973 and 2013 which found that temperature changes' negative effects on agriculture prevails the positive effects of rainfall amount which eventually led to the overall impact of climate change to be negative (Dumrul & Kılıçarslan, 2017). For example, in an Aegean province of Türkiye, Aydın, the city governor announced that half of the region's agricultural lands would not be irrigated in the summer of 2025 due to insufficient water flow in the Büyük Menderes River. Consequently, farmers have been advised to consider adopting dry farming methods (Yıldırım, 2025).

Climate crisis in the Mediterranean has often been marked by such drought or flood news which adversely affect agricultural productivity. The reason behind that is the atmosphere circulation patterns. When atmosphere circulation patterns disrupted, they lead to either rising average temperatures or extreme weather fluctuations (Liberti, 2023)¹⁴. As a result, destructive consequences of these sudden shifts are becoming increasingly severe. For example, it is surprising that Çukurova (known as Cilician plain in English), renowned for its fertile land and sunny climate, unexpectedly encountered with severe frost event that devastated citrus production. In a similar manner, following an extremely dry season¹⁵ in the Aegean Turkish town, Salihli, graperies were struck by a harsh overnight frost causing substantial crop losses (Yıldırım, 2025). These cases illustrate how climate change through increased weather volatility poses a significant threat to food production and overall food security. Given that the adverse effects of climate change on agricultural production are more frequent and common than any potential benefits, countries which are particularly vulnerable (Türkiye) to those shifts must prioritize research on agricultural production systems and crop yield resilience (Türkeş, 2020)¹⁶.

To conclude this section, the Mediterranean is facing serious threats from both pollution and climate change. The negative effects of these factors serve as amplifiers of food insecurity in the region. Severe drought, flooding, and various forms of pollution are key factors that hinder sustainable food security across the basin. To avoid a figurative "Last Supper" in the Mediterranean, a region symbolically betrayed, as illustrated in Leonardo da Vinci's iconic painting, it is imperative to preserve its environmental integrity. Failure to do so may not only jeopardize food security but also represents a deeper betrayal of the region's ecological and cultural soul. As Turkish writer Aziz Nesin once noted in a foreword that wherever there is an environmental pollution, there is also a profound corruption of the human spirit (Kışlalioğlu & Berkes, 1997).

2.2. Supposed New Energy Resources and a New Geopolitical Race: Let Them Eat Cake

The phrase "Let Them Eat Cake," attributed to the Queen of France as an oblivious rich reply to the suffering of poor and almost starving peasants. Her supposed original saying, though, may have referred to not to a cake but "brioche," a kind of luxurious bread made with eggs and butter (Cunningham, 2023). In this context, the newly discovered energy resources in the eastern Mediterranean are viewed as the modern day "brioche," attracting not only regional states but also major global powers and big energy corporations as well.

The Mediterranean basin, particularly its eastern part, has become again a focal point of geopolitical interest (Atvur, 2020; Sezek& Sanzon-Maya, 2025; Özkan, 2025) due to "this new brioche". However, it seems that no single actor possesses all the necessary ingredients; some states have access to raw resources, while others possess capital or infrastructure. This imbalance has a dual effect: while it encourages regional agreements in certain cases, it also holds the potential to ignite significant conflict. A closer look at the Eastern Mediterranean reveals this strategic fact. First, the Eastern Mediterranean functions as a gateway to the Middle East which holds over half of the world's oil reserves and has seabed rich in terms of natural gas and petroleum. Furthermore, the region features one of the busiest maritime corridors responsible for

¹⁴ Atmospheric physicist Antonello Pasini explains this situation with a comparison. Italy once protected from weather disturbances in Northern Europe or African heat by Azores anticyclone acting like as a buffer zone is now vulnerable to African anticyclones entering the Mediterranean and eventually reaching Italy. Anthropogenic global warming is responsible for this northward expand. When those African anticyclones move back, humid, and warm air meets with cold currents. This means a huge thermal contrast, in other words extreme weather events (Liberti, 2023).

¹⁵ Similar extremely dry season in Italy noted as such: "It is April 2023. Not a single drop has fallen for two-and-a-half months." (Liberti, 2023); Turkish State Meteorological Service (TSMS) has also published a dryness map covering the three-month period (January 2025-March 2025), which is prepared by standardized precipitation index method. In this map, particularly the Mediterranean and Aegean regions of Türkiye are colored as exceptionally dry, extremely dry, and severely dry. Thus, the map is not promising under any scenario (TSMS, 2025).

¹⁶ Türkiye has programs and projects to mitigate the effects of climate change such as strategic plan or national rural development strategy (Bozoglu et.al., 2019).

30% of the world's total maritime traffic (Özkan, 2025). In this light, it is not only resource-rich but also it qualifies as a Gordian knot in international affairs.

In this context, the most critical issue appears as the delimitation of the marine boundaries, particularly the unilaterally declared Exclusive Economic Zones (EEZ)¹⁷ which are essential for regulating energy exploration and exploitation. The resource-rich Eastern Mediterranean has prompted states to seek advantageous arrangements to secure their best interests, a dynamic that risks finally turning the region into a geopolitical powder keg¹⁸. This new geopolitical race, fueled by the strategic military presence of major powers and the intense appetite of big energy corporations carries both destabilizing and unpredictable results for the region.

Growing ecological pressures have also come to the fore. In this sense, several concerns have been raised; seismic waves used in offshore oil exploration can harm marine mammals; drilling and pipeline installations may cause irreversible damage to the seabed; any probable accident during these operations could result in catastrophic ecological disasters; offshore drilling contributes to greenhouse gas emissions; and migratory species routes have been disrupted in addition to increased air and noise pollution (Atvur, 2020). While these concerns are scientifically sound and acknowledged they must be understood within the air of real politic which offers a framework where ecological risks are often subordinated to strategic and economic interests. First and foremost, intense competition over vital resources such as energy, water, and food (and undeniably other resources as well) continues to serve as main pillars in the geopolitical strategies of related states (Öğütçü, 2017). It is argued that the primary drivers of most contemporary conflicts are rooted in struggles over access to critical resources and has nothing particular in cultural or civilizational clashes. Thus, global competition is bound to intensify for an interrupted supply chain (Klare, 2002; Klare 2005). Moreover, oil drilling has evolved into one of the economically dominant and a highly professionalized business area by the twenty first century (Chavis, 2022)¹⁹. Considering these factors, it is unsurprising that both regional actors and global powers are eager to secure control over resource-rich zones disregarding ecological concerns and even accepting the possibility of conflict including military confrontation.

From a food security perspective, however, competition over natural resources introduces its own set of risks. The well-established nexus between energy, water and food security has become increasingly evident, as future of states will largely depend on access to these vital resources (Öğütçü, 2017). Within this context, any ignition of conflict in the East Mediterranean basin could have substantial repercussions for regional food security. Notably, even conflicts occurring outside the basin such as the Russian-Ukrainian confrontation over Crimea have demonstrated the far-reaching impacts on regional food security.

Another contributing factor is the vulnerability of Eastern Mediterranean countries to fluctuations in food prices. Socio-economic conditions across the region often undermine price stability. Furthermore, many of these countries rely heavily on food imports which makes Ukraine important in this sense. Ukraine is recognized for its black soil which is exceptionally fertile and rich in humus. This fertile black soil is known as "chernozem" which covers over half of the landmass of the country and offers exceptional production circumstances (World Bank Group, 2014). Ukraine's agricultural exports, particularly cereals, are essential for feeding populations from Africa to Asia. Consequently, any disruption in Ukrainian grain exports due to Russian interference, may trigger severe spikes in food prices and even sociopolitical unrest may be inevitable (Smith, 2022).

At that point, it must be noted that the Russian-Ukrainian war has underscored that Russia is not solely an energy superpower, it also plays a pivotal role in global food security. In addition to the systemic risks posed by industrial agriculture across the Mediterranean region, the conflict has heightened concerns about regional food insecurity (Ünal, 2022). Although European Union countries are among the most food

¹⁷ EEZ are important from the point of international law. Maritime areas fall into two categories which are subject to national jurisdiction or not. The high seas, the ocean floor and the sea bed are considered as the common heritage of humanity and are out of national jurisdiction but there are some areas which states have exclusive rights arising from their sovereignty. EEZ are as in which states retain their exclusive rights to the exploration of natural resources (Özkan, 2025).

¹⁸ The term "powder keg" is in fact used for Balkans which in most part of the European history, has been acknowledged by either ethnic conflicts, political instability, or economic underdevelopment (Munter & Ruzicka, 2025).

¹⁹ To illustrate this boom in oil industry, it may be useful to recall history. The method that allows for deeper exploration has been created by Edwin Drake. His aim was to refine the oil into kerosene and sell it instead of expensive whale oil. Though his last financial supporter was at the edge of his rope, he had successfully drilled the oil in 1864. This small place called Pithole in Pennsylvania with no more than fifty residents had turned into a place which had at least ten thousand inhabitants with many hotels, post offices and telegraph stations. What makes this performance staggering was that all took place just within a year. Although this boom did not survive for long, it indicated that "our thirst for the fuel grew and the modern economy is drenched in oil" (Harford, 2019); it should be noted here that Pamiir (2015) urges that quite long before Edwin Drake in America, Azerbaijan was the first in this rodeo and progressed a lot in this area (Pamiir, 2015.).

secure countries in the world (Caprile & Pichon, 2022)²⁰, this is not case for much of the broader Mediterranean since Russia and Ukraine together account for more than half of the cereal imports in the region (Ünal, 2022). The disruption of trade flows caused by the war has thus threatened one of the world's major food exporting regions. Countries such as Lebanon or Egypt are particularly reliant on grain exports from Russia and Ukraine (Abay et.al, 2022; Gibon, 2022; Ünal 2022)²¹. Türkiye also relies heavily on grain and sunflower oil from Ukraine and Russia (Reidy, 2022; Ünal 2022). When combined with other factors such as high energy dependency on Russian sources, rising wheat imports must be a concern for Turkish side which certainly lead to an increasingly asymmetrical relationship with Russia (Ersoy, 2022)²².

To conclude this section, although Ukrainian grain exports were successfully facilitated through the Turkish Straits²³ under the Black Sea Grain Initiative jointly coordinated by the United Nations and Türkiye (UNCTAD, 2023; Ünal 2022), such instances underscore that food issue is not only a humanitarian issue but also a strategic tool in world politics. Indeed, food insecurity is increasingly being used as a component of hybrid warfare²⁴, where the fear of food shortages is weaponized for political leverage (Caprile & Pichon, 2022; Ersoy, 2022). Given these dynamics, it would not be surprising if future resource conflicts in the Eastern Mediterranean further exacerbate food insecurity in the basin bringing the focus inevitably back to people.

2.3. People in the Region and Unsettling Demographic Changes: Let them Eat Bread/Bread Riots

Bread riots have been a recurring phenomenon throughout history and the Mediterranean region is no exception. In the 16th century, for example, Europe experienced widespread food inflation. Authorities sought to stabilize grain prices to ensure affordability, but their efforts were not always successful. In 1585, during a crisis in Naples, the city council announced a reduction in loaf sizes while maintaining the same price. The decision was not considered as a wise one and triggered public outrage, culminating in the lynching of a council member accused of price manipulation. Thus, the demand for purchasing bread at lower price was the stubborn fact (Weisner-Hanks, 2009).

Rapid spikes in bread prices, even tripling or quadrupling due to poor harvest, were also quite common in Europe between the late 17th and early 18th centuries (Davis, 2017; Nelson, 2022). Similarly, in the Ottoman Empire, bread price-related protests emerged led by Turkish women. A notable example occurred in 1828 in İzmir, where Turkish women organized protest due to rising bread prices. It lasted for three days, ultimately leading the city governor, Hasan Pasha, to reverse the decision (İzmir Büyükşehir Belediyesi, 2011)²⁵. These historical episodes suggest that people across the Mediterranean basin have long been familiar with the struggle for affordable bread.

²⁰ For example, Spain appeared more vulnerable to Russian-Ukrainian conflict since its industry was already trapped in high input costs and a lengthy drought. Its status of being net importer of cereals which is highly reliant on Ukraine did not help much. Specifically animal feed supply was under adverse effects because grain and corn as animal feed supplied from Ukraine. Thus, this war severely harmed Spanish livestock farmers' profitability which also doubled with inflation (Rabbi et al., 2023). But still one must admit that there was no harm comparable to other Mediterranean countries such as Egypt or Lebanon. The European Union (EU) links this resilience to EU's common agricultural policy (CAP) since 1962 which develops capacity to ensure a high degree of food security over years (Caprile & Pichon, 2022).

²¹ One must note that like the game of dominoes, one countries' stumble affects the other. For example, Egypt's export ban due to Russian-Ukraine war also shifts the burden to a neighboring country with poor crisis management capacity like Yemen. Limiting food exports to that country means drastic humanitarian problems (Abay et.al, 2022).

²² It has been narrated that the Romans were extensively exposed to lead. The city's water supply flowed through lead pipes, wine was stored in lead containers, and Romans even applied lead powder to their faces for cosmetic reasons. Consequently, lead poisoning impaired their sense of taste. To compensate this, they used excessive amounts of spices in their meals to enhance flavor (Gürsoy, 2012). Türkiye's wheat imports from Russia can be interpreted as a modern parallel example to this phenomenon. As domestic production falls short but wheat still needed -analogous to the effects of lead poisoning- there arises a growing need to compensate domestic production by increasing spice usage, in this case through heightened levels of Russian wheat importation (Ersoy, 2022).

²³ Ironically, Turkish Straits are not always safe for transportation. If one must recall, The Independenta maritime accident in 1979 was one of the most dreadful accidents in the world. The accident was the result of a collusion between a Romanian tanker, Independenta, carrying tons of crude oil (94,600 tons) and the Greek freighter at the entrance of the Bosphorus. The explosion after the collusion did crash all nearby building windows. The accident did not only cost lives of crew but the heavy marine pollution caused by the spread of oil lasted for many years; marine species were dead and fishery was almost impossible (Kara Balci, 2020; Ögütcü, 2017).

²⁴ Hybrid war entails a wide range of methods instead of conventional military action.

²⁵ This era was marked by extravagancies too. There were bread riots on one hand and lavish architectural structures built were on the other. During this symbiosis between poor and rich, the Potato Eaters painted by Vincent van Gogh, completed in 1885, was depicting the harsh life of peasants in coarse faces and bony hands with limited food and drink (Buchholz et. al., 2012; Van Gogh Museum, n.d.)

In the Mediterranean context, political legitimacy has long been intertwined with state subsidies²⁶. Especially in the Middle East and North Africa (MENA) countries, domestic subsidies are instrumental to maintain and preserve the governmental power because even slight increases in food prices have the potential to incite social unrests and political upheavals as seen during the Arab Spring (Woertz, 2017; Ersoy, 2023). Although rising food prices were not the sole cause of Arab uprisings in 2011, MENA states' vulnerability to price shocks significantly contributed to the unrest (Engelke, 2017). Consequently, the phrase "let them eat bread" became emblematic of political imperative to provide subsidized food as a means of preventing riots and preserving regime stability (Ciezahl, 2011).

In Egypt, for example, wheat has historically been a staple commodity prompting the development of subsidy programs. During Nasser's era, Arab nationalism was at its peak and the state implemented subsidies on essential goods such as food and gasoline to promote a more equitable distribution of national resources. These subsidies ensured artificially low prices through direct government support. Any attempt to reform these subsidy programs were pushed back by public resistance. Just as Anwar Sadat's attempt to restructure Nasser's subsidy system, Mubarak's administration also faced protests from 2008 onwards due to rising food prices. This underscores the notion that food prices played a critical and undeniable role in sparking the Nile Revolution in 2011 (Diriöz, 2012).

Egypt's agricultural system is highly vulnerable to global price shocks for several reasons. First, it is heavily reliant on wheat imports, with over sixty percent of its wheat sourced externally. This dependency significantly limits a resilient stance on food related issues given that country's population is huge (up to 105 million). Second, Egypt suffers from a lack of diversification in import resources, partly due to the timing of harvests but mostly due to higher shipping costs. For that reason, Russia and Ukraine are more viable importers rather than distant producers such as Canada or Argentina. Third, food price fluctuations have severe implications for the national budget. Any rise in global food prices poses threat to both fiscal stability and consumer purchasing power. This is especially critical considering Egypt's major subsidy programs. Its bread subsidy program, "Baladi," provides subsidized bread to millions per month at an annual cost of \$3.24 billion and nine million tons of wheat, and "Tamween" which offers ration cards for various basic foodstuff. These figures demonstrate how sensitive the supply chain is to external disruptions (Abay et al., 2022)²⁷.

Food security challenges have also manifested in rising human mobility pressures in the region. It seems that the Mediterranean future is to be marked by "massive illicit flows." (Engelke, 2017). While the Mediterranean basin has historically been densely populated and highly mobile (Atvur, 2020), current trends suggest more alarming case. First, the scale of the flow (millions) is staggering. It is stated that only 3,770 people in 2015 alone were dead in their attempts to cross the sea (Engelke, 2017). It is hard to forget the haunting photograph that a Turkish Gendarmerie carrying the lifeless body of three-year-old Syrian boy who drowned in a failed attempt to cross the sea (Alarabiya News, 2015). Second, countries such as Türkiye, Lebanon, Jordan, and Egypt have been significantly impacted by these flows (Engelke, 2017). The demographic pressures exerted on these states strain their social systems and carry further instability risks.

The escalating pressures in the Mediterranean have compelled states to adopt counter measures regarding the massive flow. Among the most prominent is the reinforcement of border policies. European Union member countries appear to be drawing a geographic and political dividing line between northern and southern shores of the region to contain these flows (Seirinidou, 2023). In practical terms, this "line" terminates at Greece²⁸. As a result, the most distressing part, hosting the large influx, has been left upon disproportionately on the shoulders of countries such as Türkiye, Algeria, or Morocco²⁹. This kind of myopic realism has produced equally narrow policy responses, most notably the use of migrant card as a diplomatic bargaining chip. Several cases demonstrate how stopping (or letting in) the influx is employed as a foreign policy instrument to advance the national goal in question (Sezek & Sanzon Maya, 2025; Dailymmah, 2022; Perspektif, 2021).

²⁶ The roots of subsidies are originally far back in history. Selling out wheat or barley in discounted prices was a state policy called "anona" which expanded later into the distribution of free wheat or bread and other basic foodstuff as well. This was such a policy which covered one out of three Roman people at the time. The distinctive aspect of this "anona" for recipients was its approval as a right of succession from father to son. According to one view, Roman politicians adopted this policy from Hellene s to mitigate extreme poverty in urban area (Kiple, 2010; Ünsal, 2021).

²⁷ One of the adverse effects of those subsidy programs in Egypt is related to health issues. Egyptians has high rates of overweight and obesity due to energy dense foods financed through those subsidized products (Abay et al., 2022).

²⁸ Greece has constructed a 40 -kilometer- long wall along its Turkish border with an electronic surveillance system to stop possible flows (Cumhuriyet, 2021).

²⁹ It suggests that the Barcelona process which aims at EU stability in the Southern Mediterranean has simply fallen apart (Alessandri, 2015).

From a food security standpoint, the influx of people into the Mediterranean region holds significant implications. First, the prevailing approach of curbing the influx is treated as a panacea which is fundamentally flawed. At best, it only offers a temporary fix. Second, many of the proposed solutions fail to constitute genuine win-win strategies but quite the contrary. For example, although Italian Foreign Minister Tajani has acknowledged the importance of food security in an interview, what he proposed was “Mattei Plan” which envisages a development plan in Africa aiming at reducing the human flow and mitigating climate change impacts primarily through raw material extraction³⁰ and energy cooperation agreements, but certainly not predatory ones (Il Messaggero, 2023). Third, demographic asymmetry presents another challenge. While some Mediterranean countries face an aging population, the African Sahel is home to one of the world’s fast growing youth demographics, a disparity likely to fuel the influx under any scenario. In this light, it is no exaggeration to describe the Mediterranean as “a global super highway to host high volume of goods, people and ideas from all over the world” (Engelke, 2017).

To conclude this part, the prevailing perspective must be noted as the Mediterranean region is increasingly destined to be in fragmentation, instability, and persistent conflict (Alessandri, 2015). This brings us full circle to the article’s initial premise; securing a prosperous future for the Mediterranean requires a responsible approach which is certainly not a myopic one.

Conclusion: What Needed to Loosen or Cut Gordian Knots in the Mediterranean

The Mediterranean region is rich in natural beauty, renowned culinary traditions, and abundant natural resources. Yet, it simultaneously faces a complex set of challenges that may fuel instability. This article has framed these challenges as the Mediterranean’s Gordian knots, issues so entangled that resolving them requires exceptional attention particularly through the lens of food security. First, ecological degradation of the Mediterranean Sea has been examined compounded by the waning of bio-diversity and adverse effects of climate change from a food security standpoint. Second, the growing geopolitical interest in the eastern Mediterranean part of the region due to its natural gas and oil reserves has been on the table to analyze, revealing the potential for serious repercussions on regional food security. Third, the article addressed the social and economic vulnerabilities of Mediterranean populations, especially those reshaped by demographic changes and large-scale influx. Given these multi-dimensional vulnerabilities, the words of Harari (2017) resonate strongly recalling his argument that as a biggest fraud in human history, “the essence of agricultural revolution is the ability to keep more people alive under worse conditions.” (Harari, 2017, p.95).

Given the Mediterranean basin’s current and anticipated food security challenges, it is imperative to seek sustainable and effective solutions to loosen the region’s Gordian knots. If the argument that dietary patterns shape social behavior holds true, the Mediterranean may possess a cultural advantage. According to this perspective, what people consumes influences how they perceive and solve problems. For example, in societies where hunger is masked by fast food, solutions tend to be palliative and postponing in nature (Kurtoğlu, 2018). Still, solving structural issues requires more than inspiration from the Mediterranean diet. Drawing from Confucian philosophy, three elements are vital for a stable government, namely weapon, food, and trust. When sacrifices are necessary one should relinquish weapon first, then food but never trust (O’Neill, 2002). In the Mediterranean context, regional countries must find a way of cultivating mutual trust. This mutual trust requires not only abandoning narrow self-interest but also embracing long-term vision. The danger here is that many political actors either lack the time or appetite to think beyond short electoral cycles and develop long-term plans (Öğütçü, 2017). As noted in a United States presidential campaign, foreign policy has succeeded only “when it has combined realism and idealism” (Snyder, 2004)³¹. The same balance of principles should be employed in the future recipe book for the Mediterranean.

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³⁰ This extraction issue of raw materials is unfortunately like a blue note. For example, though their flag is defined by the red maple leaf as a symbol of Canadian identity (Government of Canada, 2023), Canadian mining companies are frequently associated with environmental disasters in Türkiye. Such kind of a disaster ironically happened just two days before the Canadian Flag Day, on 13 February 2024 in Erzincan-İliç. After the collapse of the cyanide pool at the gold mine, mining workers were trapped under a landslide. The disaster did not only end up with fatalities but also with the spill of cyanide waste into the soil. Although Canadian Ambassador to Ankara denied that the gold mining company was Canadian, a Turkish journalist replied him that the company was subject to the Canadian Companies Act according to the company’s own internet site (Bianet, 2024).

³¹ This quote belongs to Senator John Kerry (Snyder, 2004).

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