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Article

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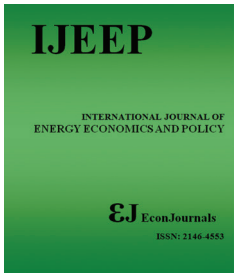

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The Place of Gulf Basin Energy Resources in EU Energy Security

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ABSTRACT

The article discusses the importance of Gulf Basin energy resources in ensuring energy security for the European Union (EU). The Gulf region is a major source of oil and gas for the EU, which is heavily dependent on imports to meet its energy needs. The article highlights the various challenges faced by the EU in securing its energy supply from the Gulf region, including geopolitical tensions, price volatility, and the need to diversify its energy mix. It also discusses the role of renewable energy sources in reducing the EU's dependence on Gulf energy resources. Overall, the article argues that the Gulf Basin will continue to play a critical role in meeting the EU's energy needs, and that efforts must be made to ensure the security and stability of this energy supply. However, the article also suggests that the EU should explore alternative sources of energy and reduce its reliance on Gulf energy resources. It notes that the EU has made significant progress in promoting renewable energy and energy efficiency, and that these efforts should be continued and expanded. Another important point raised in the article is the need for cooperation between the EU and Gulf countries to ensure energy security. The EU must engage in dialogue with these countries to address common challenges and promote mutual interests. In conclusion, the article provides a comprehensive overview of the role of Gulf Basin energy resources in EU energy security. While acknowledging the importance of these resources, it also emphasizes the need for diversification and cooperation to ensure a stable and sustainable energy supply.

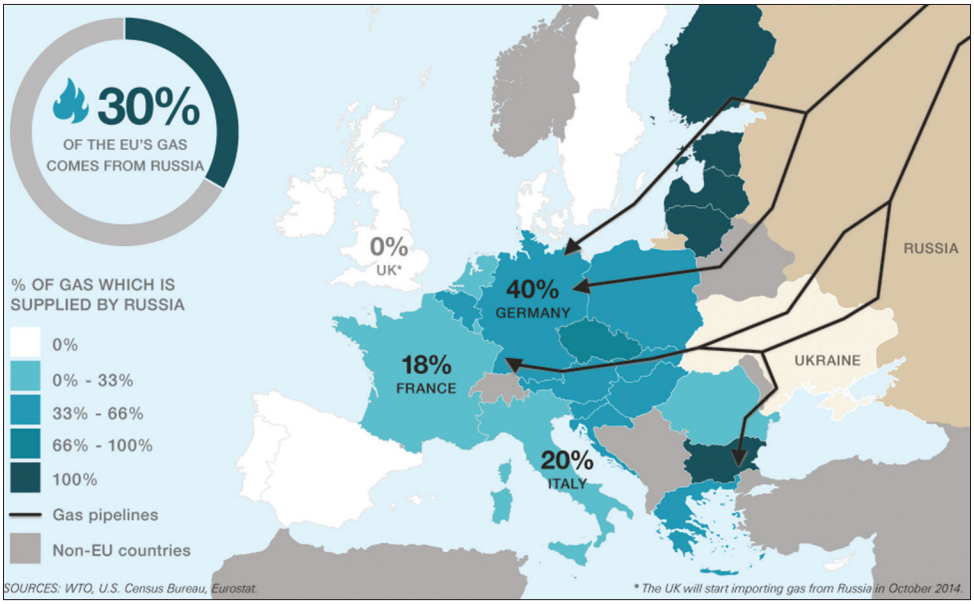
Keywords: Basra Basin, Energy Resources, EU Energy Security
JEL Classifications: P28, P48, K32

1. INTRODUCTION

One of the most important elements for the vital functions and economic dynamics of a country is the use of energy. Energy use is required for one unit of economic growth. The use of energy ensures the sustainability of the economy and economic growth (Kansu, 2019). The European Union (EU) constitutes one of the geographies with the highest energy consumption worldwide and is home to one of the most developed energy markets globally. At the same time, it is a very poor geography in terms of fossil energy resources such as oil and natural gas. Apart from Norway, the Netherlands and the UK, there is no country in Europe with considerable energy resources, especially in terms of natural gas reserves. For this reason, the EU's dependence on energy resources imports is constantly increasing. Natural gas is one of the energy types in which import dependency is felt the most. The EU meets approximately 24% of its total energy consumption with natural gas, among all energy types, and natural gas is the most consumed energy source after oil (BP, 2018; Kakışım, 2019).

Despite its high consumption, the fact that the member countries do not have sufficient natural gas reserves causes an increase in import dependency on the countries where natural gas is supplied. Russia is the country with the highest import dependency of the EU among the supplier countries. According to statistics published by the European Statistical Office (Eurostat), 37% of EU's natural gas imports and 30% of oil imports were supplied from Russia in 2017 (Eurostat, 2018). These rates, which are valid for the EU in general, are higher for some member states. Especially Central

Figure 1: Dependence of EU countries on natural gas imports to Russia



Source: (Kottasova, 2014)

Europe, South East Europe and Baltic countries meet almost all of their natural gas imports from Russia (Dickel et al., 2014; Kakışım, 2019). Figure 1 shows the dependence of EU countries on Russia's natural gas imports.

Significant dependence of EU countries on Russia in natural gas imports, the political crisis between Russia and Ukraine turning into an energy crisis, affecting the EU countries negatively, and the interruption of the natural gas flow from Russia to EU countries, the energy supply security is the most important factor in the EU's energy field. made it an important agenda. Energy supply security has become one of the top issues in the agenda of the EU to create a common energy policy covering all member states. The recent energy crises in the natural gas field have played an important role in determining these policies. The EU has developed policies that will reduce the impact of energy crises and prevent new energy crises from threatening EU countries (Kakışım, 2019).

European Union (EU) countries are highly dependent on Russian natural gas. These countries have been importing large volumes of natural gas from Gazprom, the Russian natural gas company, for many years. In recent years, it has been observed that especially Russia has closed the valves in the context of the crisis with Ukraine, cutting off the gas flow and causing significant crises in Europe. Thus, the flow of Russian natural gas, which is transported to the European mainland by pipelines through Ukraine, to Europe stops (Kansu, 2019) (Tutar et al., 2022). After the cuts, the European Commission came to the conclusion that it is necessary to diversify energy sources and started to implement the "Energy Diversification Policy." Among the alternatives, the EU evaluates the energy resources of the Eastern Mediterranean, Caspian Sea basin and Gulf basin to meet its own energy needs.

In this study, it is aimed to examine what role the Gulf basin can play in the energy security of the European Union.

2. BACKGROUND AND RELATED RESEARCH

2.1. EU Energy Security and Energy Needs

2.1.1. Energy security

Significant dependence of EU countries on Russia in natural gas imports, the political crisis between Russia and Ukraine turning into an energy crisis, affecting the EU countries negatively, and the interruption of the natural gas flow from Russia to EU countries, the energy supply security is the most important factor in the EU's energy field. made it an important agenda. Energy supply security has become one of the top issues in the agenda of the EU to create a common energy policy covering all member states. The recent energy crises in the natural gas field have played an important role in determining these policies. The EU has developed policies that will reduce the impact of energy crises and prevent new energy crises from threatening EU countries (Kakışım, 2019).

There are various definitions of energy supply security. energy security; reliable energy supply is obtained from affordable and accessible sources. In this context, ensuring price and supply diversity increases energy security. Sustainability of supply is also very important for energy security. "Reasonability" in energy supply security is the acquisition of energy resources with affordable cost and free market dynamics. It is very important for developing countries that energy resources are affordable. From an economic point of view, the marginal benefit must exceed the marginal cost. This determines the preference of one source over another (Çelikpala, 2014; Kansu, 2019). According to the IEA, the supply of energy from reliable sources, uninterruptedly and at affordable prices means "Energy Security." Energy security, according to the definition of IEA, is the supply of affordable, reliable and environmentally friendly energy (Muller-Kraenner, 2015; Kansu, 2019).

European Commission's definition of energy supply security; all consumers have uninterrupted, affordable and affordable

access to energy products on the market. The US Department of Energy defines energy supply security as "the reliable, clean and affordable supply of America's energy supply security." World Bank, energy supply security, competitive market conditions; It defines it as efficient energy supplied through safe access to fossil fuels, uninterrupted and safe energy flow, and safe transit points (Sovacool, 2011; Kansu, 2019).

2.1.2. EU energy needs

The EU currently imports about 55% of the energy it consumes. This rate causes the EU to spend at least 266 billion euros annually. In addition, the rate of energy in the total imported products of the EU is 15%. EU imports 87% of oil, 70% of natural gas, 40% of solid fossil fuels and 40% of nuclear fuels in energy use (T.C. ABB, 2022).

The European Union heavily relies on energy imports, with a dependency rate of 58.2% in 2018, according to Eurostat (2020) data. Italy, France, Germany, and Spain are among the largest countries in Europe that depend on foreign energy, with rates ranging from 46.6% to 76.3%. This dependence on foreign energy sources, especially Russia, poses a significant threat to the energy security of the European Union (Table 1).

Russia is the primary supplier of hard coal, crude oil, and natural gas imports to the European Union. In 2018, 42.4% of the European Union's hard coal imports were from Russia, while the United States and Colombia supplied 18.6% and 13.4%, respectively. The share of crude oil imports from Russia was 32.1% in 2008, and it remained a significant supplier until 2018. However, the relative share of Iraqi crude oil imports increased rapidly between 2008 and 2018, reaching 8.7%. Saudi Arabia accounted for 7.4% of the European Union's oil imports in 2018 (Table 1).

The share of natural gas imports from Russia increased from 39.4% to 40.4% between 2008 and 2018, while Norway remained the second-largest supplier with a share of 18.1% in 2018. Algeria's share decreased, while Qatar's share nearly doubled during the same period. The concentration of imports among a few partners threatens the security of the European Union's primary energy supplies, with almost three-quarters (70.3%) of natural gas imports and three-quarters (74.3%) of hard coal imports coming from Russia, Norway, the United States, and Colombia (Table 1).

In conclusion, the European Union's energy security is at risk due to its high dependence on foreign energy sources, especially Russia. The concentration of imports among a few partners further exacerbates this threat. The European Union needs to diversify its energy sources to improve its energy security in the long term.

3. METHODS

3.1. Research Model

This study aimed to uncover the role of Gulf basin energy resources in EU energy security, and the preferred research method was quantitative. Descriptive statistics were the preferred approach among quantitative research methods, as they help transform quantitative data into descriptive indices (Padem et al., 2012). Descriptive statistics were used to summarize the basic features of the data, including measures such as mean, median, and mode. They provided simple summaries about the sample data and formed the basis of virtually every quantitative analysis of data. In combination with simple graphical analysis, descriptive statistics offered a comprehensive view of the data. Descriptive statistics differ from inferential statistics. While descriptive statistics focus on describing the data and its features, inferential statistics aim to draw conclusions that extend beyond the immediate data alone (Trochim, 2020). In summary, descriptive statistics are a crucial statistical tool for compiling, collecting, summarizing, and analyzing numerical data (Spiegel and Stephens, 2013). They are used simply to describe what is going on in the data, and are essential for any quantitative research study.

3.2. Data Collection Tool and Process

This study utilizes the literature review technique, one of the most widely used quantitative data collection methods. Literature reviews are commonly used in examination studies, statistical estimations, and to direct the work of businesses. The scanning method can be divided into three categories: historical data browsing, archive review, and electronic data browsing over the web (Padem et al., 2012). For this particular study, electronic data scanning was used to collect data from books, journals, and the web. The primary objective of this study was to determine the energy needs of the EU. To achieve this, the literature review method was used to collect data on the Basra basin's resources. In conclusion, the methodology used in this study is highly effective in collecting quantitative data for analysis. The literature review technique is not only useful in determining energy needs and resource availability but can also be applied to various fields of research.

3.3. Data Analysis

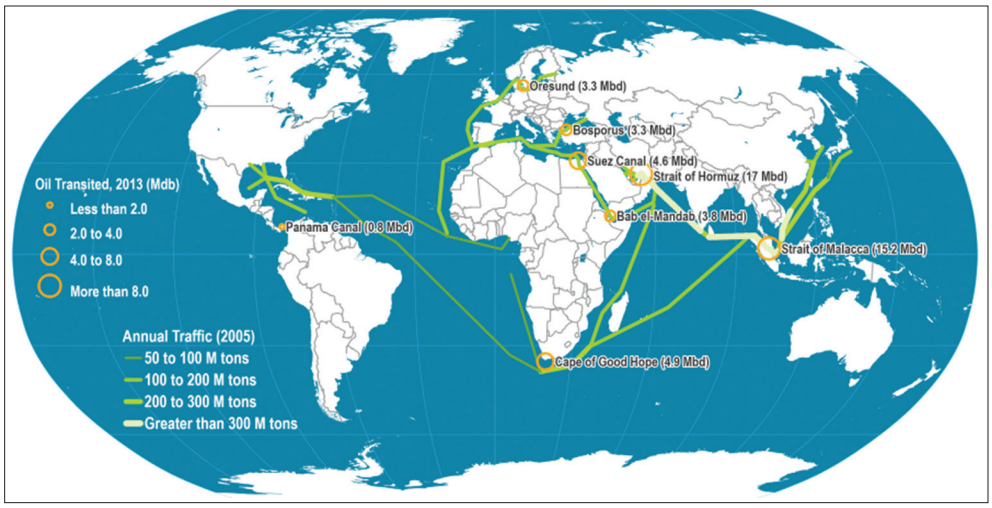
In order to reach the conclusion of the research, the collected data needs to be analyzed. Data analysis is the process of drawing meaningful conclusions to answer the basic question of the research by processing the data collected with appropriate techniques with appropriate statistical techniques. Data analysis is an ongoing process with the classification and appropriate analysis of the collected data (Tutar et al., 2022). Due to the suitability of the approach of this study, descriptive statistical technique was used in the analysis of the data. This technique is a method of classifying, analysing, and interpreting in a systematic way according to research purposes. Descriptive statistics transform the numbers and the quantitative data obtained as a result of observation into descriptive indices. In the data analysed with the descriptive statistical technique, the question is focused on «*what?*" (Spiegel and Stephens, 2013).

4. RESULTS

4.1. Gulf Basin Energy Resources

The Gulf Basin is a region located in the Middle East and is known for its abundant energy resources. It is home to some of the world's largest oil and gas reserves, making it a critical player in the global energy market. One of the major countries in the region is Saudi Arabia, which has the largest oil reserves in the world. It

Figure 2: Major oil flows and chokepoints



Source: (Notteboom et al., 2022)

Table 1: European Union's primary energy imports and suppliers (European Union 27-2008-2018)

Country	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Hard coal (based on tonnes)											
Russia	19.9	25.8	25.5	24.2	22.1	26.6	27.7	28.5	30.8	38.1	42.4
United States	15.9	14.7	17.5	18.3	22.5	20.6	18.7	13.5	13.0	16.0	18.6
Colombia	11.7	17.0	17.7	20.5	20.9	18.2	13.8	21.1	20.4	17.2	13.4
Australia	13.3	7.9	10.9	9.1	8.7	9.8	8.3	12.1	16.7	11.8	11.8
Indonesia	7.8	8.0	6.3	6.1	5.9	4.4	4.7	4.6	3.5	3.5	3.8
South Africa	18.5	17.5	10.9	9.5	8.1	7.8	10.0	8.3	5.5	5.1	2.8
Canada	2.7	1.8	2.2	2.6	2.1	2.3	3.5	1.8	2.5	2.6	2.6
Mozambique	0.0	0.0	0.0	0.1	0.0	0.2	0.3	0.5	0.7	1.3	1.8
Kazakhstan	0.4	0.2	0.2	0.4	0.4	0.4	0.7	0.6	0.6	0.7	1.0
Others	9.8	7.2	8.7	9.3	9.4	9.8	7.2	8.9	6.3	3.7	2.0
Crude oil (based on tonnes)											
Russia	32.1	34.2	35.2	35.6	34.3	35	31.7	30	32.7	31	29.8
Iraq	3.4	3.9	3.4	3.7	4.3	3.9	4.8	7.9	8.6	8.5	8.7
Saudi Arabia	7.1	5.9	6.1	8.4	9.2	8.8	9	8	7.8	6.6	7.4
Norway	9.6	9.6	7.8	7.3	6.9	8.2	9.3	8.4	8	7.8	7.2
Kazakhstan	5	5.5	5.7	6	5.4	6.1	6.7	6.8	7	7.7	7.2
Nigeria	3.7	4.2	3.9	5.7	7.3	7.3	8.4	7.8	5.2	5.8	7.1
Libya	9.9	9	9.9	2.8	8	5.5	3.4	2.5	2.2	4.9	6.1
Azerbaijan	3.3	4.2	4.5	5.1	4	5	4.7	5.4	4.7	4.7	4.6
Iran	5.5	4.3	5.9	6.1	1.3	0	0.1	0	3	5.5	3.9
United Kingdom	5.2	5	5.6	4.6	4.5	4.2	4.3	4	4.1	4.1	3.9
Others	15.1	13.7	12	14.7	14.7	15.9	17.6	19.1	16.7	13.5	14.1
Natural gas based on terajoule (GCV)											
Russia	39.4	35.6	35.2	38.3	38.6	45.3	41.2	41.6	43.7	41.8	40.4
Norway	22.0	23.9	22.2	23.0	25.5	23.5	26.0	25.7	18.0	17.9	13.1
Algeria	15.5	14.8	15.0	14.4	14.7	13.7	13.0	11.8	13.5	11.4	11.8
Qatar	2.5	4.1	6.2	6.0	4.7	4.2	3.7	4.1	3.3	4.1	4.6
Nigeria	4.2	2.6	4.4	4.5	3.5	1.9	1.6	2.2	2.2	2.7	3.0
United Kingdom	2.8	3.4	3.8	4.3	3.6	3.1	3.3	4.2	2.8	3.0	2.4
Libya	3.1	3.1	3.0	0.8	2.1	1.9	2.3	2.3	1.4	1.2	1.2
Trinidad and Tobago	1.6	1.8	1.1	1.2	1.0	0.8	0.9	0.5	0.2	0.2	0.8
United States	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.5
Peru	0.0	0.0	0.0	0.0	0.8	0.5	0.5	0.4	0.6	1.0	5.0
Others	8.9	10.6	9.1	7.5	5.5	5.2	7.4	7.3	14.2	16.2	16.6

Source: Eurostat, 2020. GCV: Gross calorific value

is also a member of the Organization of the Petroleum Exporting Countries (OPEC), which controls a significant portion of the world's oil production. Other countries in the Gulf Basin that are major players in the energy market include Iran, Iraq, Kuwait, Qatar, and the United Arab Emirates. Iran has the fourth-largest oil reserves in the world and is also a member of OPEC. Iraq has the fifth-largest oil reserves in the world and is one of the largest oil producers in OPEC. In addition to oil, the Gulf Basin is also rich in natural gas reserves. Qatar has the third-largest natural gas reserves in the world and is a major exporter of liquified natural

gas (LNG). Iran also has significant natural gas reserves and is investing in new infrastructure to export its gas to neighboring countries (EIA, 2022; IEA, 2020; OPEC, 2022).

The energy resources in the Gulf Basin have played a crucial role in the economic development of the region. They have also had a significant impact on the global energy market, with fluctuations in supply and demand affecting prices worldwide. In recent years, there has been a growing interest in renewable energy sources in the region, with countries such as the UAE investing heavily in solar power. However, oil and gas are likely to remain the dominant sources of energy in the Gulf Basin for the foreseeable future. Overall, the Gulf Basin is a critical player in the global energy market, and its energy resources are likely to continue to shape the economic and political landscape of the region and the world. It's worth noting that the Gulf Basin is not only a major player in the global energy market but also home to some of the world's busiest shipping lanes. The Strait of Hormuz, located at the mouth of the Gulf, is a critical chokepoint for global oil supply, through which approximately one-fifth of the world's oil passes (Sevim, 2012; Harunoğulları, 2017).

Given the strategic importance of the Gulf Basin and its energy resources, it's no surprise that there have been geopolitical tensions in the region. The Iran-Iraq War in the 1980s and the Gulf War in the 1990s had a significant impact on the region's energy production and export capabilities. In recent years, tensions between Iran and the United States have also raised concerns about the stability of the energy market in the Gulf Basin. The United States' withdrawal from the Iran nuclear deal and the subsequent imposition of sanctions on Iran have led to disruptions in the country's oil exports, which have contributed to higher oil prices. Despite these challenges, the Gulf Basin remains a critical source of energy for the world, and its energy resources are likely to continue to play a significant role in shaping the global energy market and the political landscape of the region (Sovacool, 2011; Çelikpala, 2014; OPEC, 2022).

The Gulf Basin is a major oil and gas-producing region. The following Table 2 shows the estimated oil and gas reserves, oil production, and natural gas production in the Gulf Basin by country as of 2021:

Table 2 shows the natural gas and crude oil reserves of the Gulf countries. 50.21% of the world's total crude oil reserves and 39.45% of natural gas reserves fall to the Gulf countries (BP, 2021). Saudi Arabia has the highest crude oil reserves among the Gulf countries. Iran comes in second place. When we look at natural gas reserves, the country with the highest share is Iran. Especially Iran and Qatar come first in natural gas reserves, and they have a significant difference with other gulf countries.

Iran, Qatar and Saudi Arabia produce the most natural gas among the Gulf countries. Thus, in 2021, Iran produced 235.2 bcm, Qatar 178 bcm, and Saudi Arabia 116.4 bcm natural gas (Table 2). In 2021, the share of the Gulf countries is 16.1% of the total natural gas production in the world, which was 16.3 in the previous year. In addition, 0.4% Bahrain, 6.3% Iran, 0.2% Iraq, 0.4% Kuwait, 4.3% Qatar, 2.9% Saudi Arabia, 1.4% United Arab Emirates share in this share (BP, 2022).

Among the Gulf countries, the most oil production is realized by Saudi Arabia, Iraq and the United Arab Emirates. Thus, in 2021, Saudi Arabia produced 10.4 million bpd, Iraq 4.5 million bpd, and the United Arab Emirates 2.9 million bpd (Table 2). In 2021, 29.9% of the total crude oil production in the world falls in the share of gulf countries. Within this share, 0.1% Bahrain, 4% Iran, 4.6% Iraq, 3% Kuwait, 1.9% Qatar, 12.2% Saudi Arabia, 4.1% United Arab Emirates share (BP, 2022).

4.2. Transport Route of Gulf Energy Resources

The Gulf is a vital region that contributes significantly to the world's energy supply. It is home to some of the world's largest oil and gas reserves, making it a crucial hub for the transportation of energy resources. The transport of these resources from the Gulf to various parts of the world is a complex and challenging process that involves multiple stakeholders and intricate logistics. The transport route of Gulf energy resources typically involves several stages, including extraction, refining, storage, transportation, and distribution. The oil and gas are extracted from offshore platforms and transported to onshore refineries for processing. The refined products are then stored in massive tanks before being loaded onto tankers for transportation to their final destination. The transportation of Gulf energy resources primarily takes place via two routes: the Strait of Hormuz and the Suez Canal. The Strait of Hormuz is a narrow waterway that connects the Gulf to the Gulf of Oman and the Arabian Sea. It is one of the world's most critical chokepoints, accounting for nearly one-third of all seaborne oil trade. Tankers carrying Gulf oil and gas must pass through this narrow strait to reach their destination (Stern, 2001; Özey, 2012; Demir, 2014, Harunoğulları, 2017).

Table 2: Gulf Basin oil and gas reserves, oil production, natural gas production by country (2021)[2]

Country	Oil reserves (billion barrels)[1]	Gas reserves (trillion cubic feet)[1]	Oil production in million barrels per day (bpd)[2]	Natural gas production (bcm)[3]
Saudi Arabia	266	325	10.4	116.4
Iran	157	1201	2.4	235.2
Iraq	145	136	4.5	16.7
Kuwait	102	63	2.7	18.6
United Arab Emirates	98	214	2.9	64.4
Qatar	25	880	1.5	178.5
Oman	5.4	30	0.7	47.3
Bahrain	0.125	0.63	0.1	17.9

Source: [1](EIA, 2022); [2](OPEC, 2022); [3](BP, 2021)

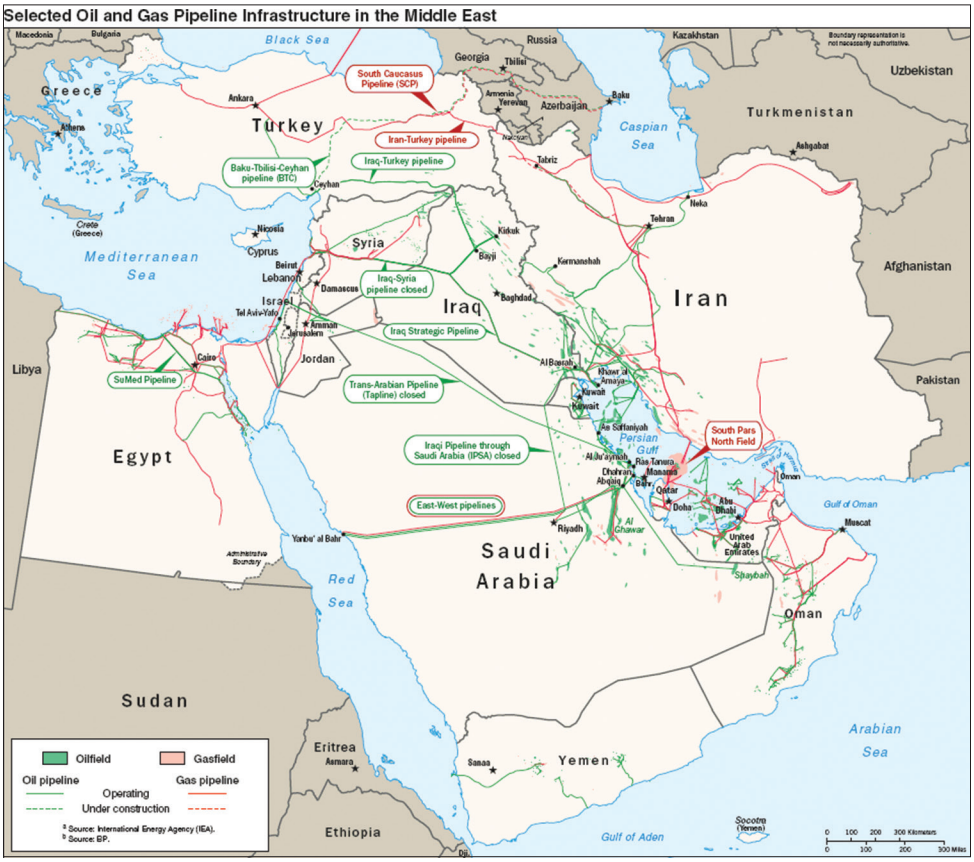
Maritime transportation accounts for the majority (62%) of oil transportation, with specific routes and chokepoints that limit shipping. The Gulf is a significant source of oil transported by sea, with routes reaching Europe through the Suez Canal, China, Japan, and South Korea via the Strait of Malacca, and North America through the Cape of Good Hope. Russian oil exports mainly go through the Strait of Oresund to reach European markets. Limited oil trade occurs across the Pacific due to the small number of significant producers. Mexico's oil exports mainly go to the United States, while Indonesia is no longer a significant oil exporter. On a continental level, Russian and former Soviet Republic petroleum is primarily shipped to Europe through pipelines, while Alaskan and Canadian petroleum is mainly shipped to the United States by pipeline. Other notable oil shipments include those from Africa to North America and Europe, from the North Sea to Europe, and from South America to North America (Notteboom et al., 2022) (Figure 2).

The Suez Canal is another vital transportation route that connects the Mediterranean Sea to the Red Sea. It is a crucial gateway for the transportation of Gulf energy resources to Europe and North America. The canal is an essential alternative to the Strait of Hormuz, providing a shorter and safer route for tankers traveling to the west. Several factors influence the transport route of Gulf energy resources, including geopolitical tensions, piracy, and environmental concerns. The region has been marred by political instability and conflicts, making it a volatile area for transportation. Piracy is also a significant concern, particularly in the Gulf of Aden and the Red Sea. Additionally, environmental factors, such as oil spills and marine pollution, can have a significant impact on the transport of Gulf energy resources. The transport route of Gulf energy resources is a complex and challenging process that involves multiple stages and stakeholders. The Strait of Hormuz and the Suez Canal are the two primary transportation routes that connect the Gulf to the rest of the world. However, several factors, including geopolitical tensions, piracy, and environmental concerns, can have a significant impact on the transport of these resources. Efforts have been made to reduce the dependence on these two routes and diversify the transport routes of Gulf energy resources. One of the alternatives is the East-West pipeline that connects the Gulf to the Red Sea. The pipeline carries crude oil from the Gulf to the Red Sea port of Yanbu in Saudi Arabia, reducing the need for tankers to pass through the Strait of Hormuz (Kalichi and Goldwyn, 2005; Altunışık, 2009; Sevim, 2012; Briney, 2020; Cunningham, 2018).

The Gulf basin is home to several major energy pipelines that transport oil and gas from the region to various parts of the world. These pipelines are a crucial component of the global energy infrastructure and have significant economic and geopolitical implications (Figure 3). Table 3 below contains some information about the major energy pipelines in the Gulf basin (IEA, 2020; EIA, 2020, Briney, 2020).

In result, the transport of Gulf energy resources is a complex and challenging process that requires careful consideration of multiple factors. The Strait of Hormuz and the Suez Canal remain

Figure 3: Oil and gas pipelines in the Middle-East



Source: (EIA, 2020)

Table 3: Major energy pipelines in the Gulf Basin

Energy Pipelines	Explanation
Strait of Hormuz	The Strait of Hormuz is a narrow waterway that connects the Gulf to the Gulf of Oman and the Arabian Sea. It is a critical chokepoint for global oil shipments, with an estimated 21 million barrels of oil passing through it each day
Trans-Arabian pipeline (Tapline)	The Tapline is an oil pipeline that runs from eastern Saudi Arabia to the Mediterranean port of Sidon in Lebanon. It was built in the 1950s and was a major route for Saudi Arabian oil exports until it was shut down in 1990 due to political instability in Lebanon
East-west pipeline (petroline)	The petroline is an oil pipeline that runs from eastern Saudi Arabia to the Red Sea port of Yanbu. It was built in the 1980s and is a key route for transporting Saudi Arabian crude oil to markets in Europe and North America
Dolphin gas pipeline	The dolphin gas pipeline is a natural gas pipeline that runs from Qatar to the UAE and Oman. It was built in the early 2000s and is a major source of natural gas for the UAE and Oman
South Pars/North Dome gas-condensate field	The South Pars/North Dome gas-condensate field is a massive natural gas field located in the Gulf, shared by Iran and Qatar. It is the largest gas field in the world and supplies natural gas to several pipelines, including the dolphin gas pipeline and the Iran gas trunkline

UAE: United Arab Emirates. *The table was created by the authors.

the primary transport routes, but alternatives such as pipelines and LNG tankers are being developed to reduce dependence and diversify transport routes. As the global demand for energy continues to grow, the transport of Gulf energy resources will remain a vital component of the global energy supply chain.

5. CONCLUSION

In conclusion, the Gulf Basin remains a vital source of energy for the European Union (EU) despite efforts to diversify its energy sources. The EU's high demand for energy and its limited domestic resources make it heavily reliant on imports from the Gulf Basin. However, this dependence comes with challenges and risks, including geopolitical tensions, price volatility, and supply disruptions. To mitigate these risks, the EU has been pursuing a multifaceted strategy that includes diversification of sources and suppliers, investment in renewable energy, and improvement of energy efficiency. Additionally, the EU has been engaging in dialogue with Gulf Basin countries to enhance cooperation and address energy security concerns.

Overall, the EU's energy security is closely linked to the Gulf Basin's energy resources. While efforts to diversify and reduce dependence on the region continue, it is clear that the EU will continue to rely on this important source of energy in the foreseeable future. Therefore, strengthening cooperation and addressing common concerns will be essential for ensuring a stable and secure energy supply for both the EU and the Gulf Basin countries.

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