

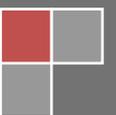
2015



BAŞKENT UNIVERSITY

ENERGY WARS AND SYRIA

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1. Introduction

The clashes, which have been ongoing in Syria since 2011 and turned into a civil war between FSA and regime forces as well as within the various radical groups such as ISIS and Jabhat al-Nusra, were initially conceived as a democratization movement called the Arab Spring and the struggle for the freedom of the Syrian people. Nevertheless after the events and developments encountered, the prevailing opinion is such that it has been in fact a Syria-based conflict and proxy wars of interests among some local countries, some global powers and some non-state actors.

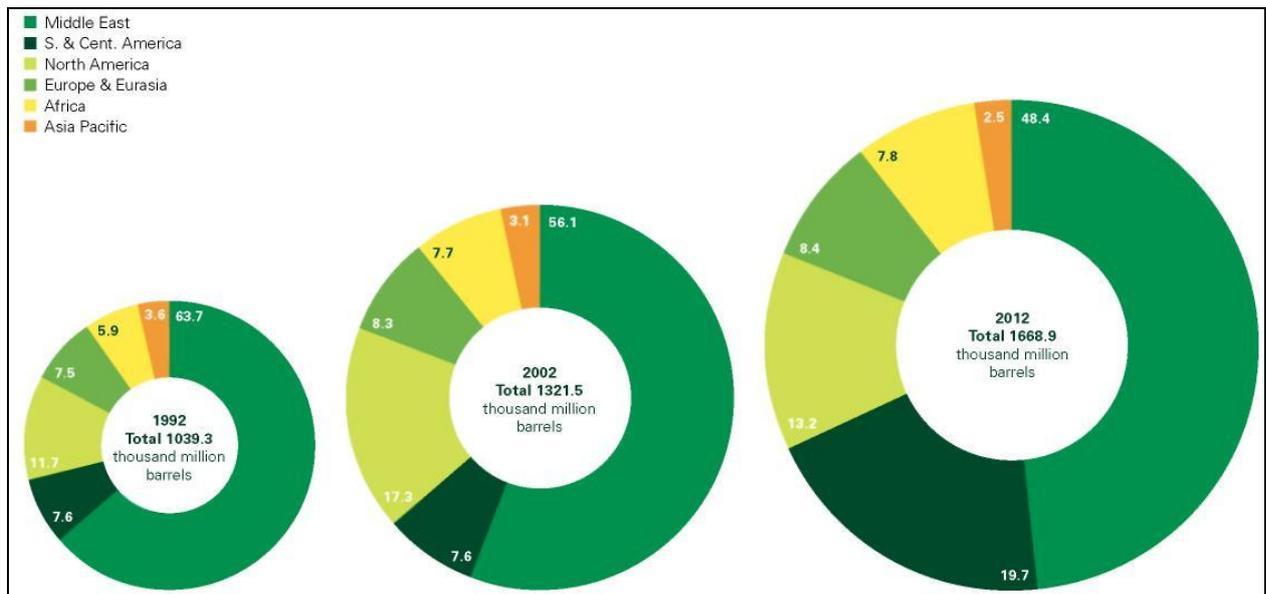
In this context, different assessments have been made as the time passed regarding the process. Those assessments have been in short; invalidation of the Shia Crescent; ensuring the security of the oil and natural gas reserves in the region, which are the richest reserves of the world, as well as defining by passing through which route these reserves were going to be transported to the West and how would they be brought into the western economies. Actually, when all those scenarios are examined in depth, another different scenario shows up, which includes all the other scenarios.

In order to be able to better explain this scenario, first we will explain the current situation and importance of the primary sources of energy, i.e. oil and natural gas, in the world and the Middle East will be explained. Then we will try to address the events that Syria has been going through over four years with a different point of view.

2. Situation of Oil in the World and in the Middle East

The globally proved oil reserves increased by 27% from where it stood in 1992 (1.039,3 billion barrels) to 1.321,5 billion barrels in 2002. In 2012, with new proved findings, this figure increased by 26% to reach 1.668,9 billion barrels. It is clearly seen that nearly half of the global oil reserves lie in the Middle East (respectively 63,7%, 56,1% and 48,4% in 1992, 2002 and 2012). In line with these data, although there was a decline of 15,3% in 2012 compared to 1992 because of increased production as a result of the consumers demands, it stands before us as an undeniable fact that the Middle East will, in terms of oil, remain for a very long time as the most important region of the world.

Chart-1: World Oil Reserves



Source: BP Statistical Review of World Energy, June 2013

When we look at the oil reserves in the Middle East on a country- by-country basis, their respective reserves and their shares in total oil reserves, are given below in Table 1.

Table-1: Oil Reserves of Middle East Countries

Countries	at end 1992 thousand million barrels	at end 2002 thousand million barrels	at end 2011 thousand million barrels	at end 2012 thousand million barrels	Share of total
Iran	92,9	130,7	154,6	157,0	9,4%
Iraq	100,0	115,0	143,1	150,0	9,0%
Kuwait	96,5	96,5	101,5	101,5	6,1%
Oman	4,7	5,7	5,5	5,5	0,3%
Qatar	3,1	27,6	23,9	23,9	1,4%
Saudi Arabia	261,2	262,8	265,4	265,9	15,9%
Syria	3,0	2,3	2,5	2,5	0,1%
United Arab Emirates	98,1	97,8	97,8	97,8	5,9%
Yemen	2,0	2,9	3,0	3,0	0,2%
Other Middle East	0,1	0,1	0,7	0,6	
Total Middle East	661,6	741,3	797,9	807,7	48,4%

Source: BP Statistical Review of World Energy, June 2013

As the table shows, Saudi Arabia has the largest reserves among the countries of the region, with 265,9 billion barrels, or 15,9% of the global reserves. After Saudi Arabia comes Iran, with 157 billion barrels or 9,4% of the

global reserves. Right after Iran comes Iraq, with 150 billion barrels or 9% of the total oil reserves in the world.

Further, when we have a look at the change in the proved oil reserves on a yearly basis, it can be seen that the greatest increases in the reserves are as follows:

1. Iran, from 92,9 billion barrels in 1992 to 157 billion barrels in 2012, meaning an increase of 69%
2. Iraq, from 100 billion barrels in 1992 to 150 billion barrels in 2012, meaning an increase of 50%
3. Qatar, from 3,1 billion barrels in 1992 to 23,9 billion barrels in 2012, meaning an increase of 670%

As commonly known, due to the wars on the Iranian and Iraqi territories (Iran-Iraq War, the invasion of Kuwait by Iraq, and the US intervention in Iraq), along with the resulting tense and multi-component dynamics, new oil exploration works did not reach the desired levels. Consequently, it seems possible that especially in those countries, there may be new oil reserves that have not been detected yet, or not declared though detected. It is expected that, in parallel with the stabilization of those countries although it is rather difficult because of the rapidly changing and crucial geopolitic structure of the region, there will possibly be new oil fields or remarkable increases in their reserves.

Moreover, when we look at the total share of Iran and Iraq in the global oil reserves (% 18.4), the clashes and tensions experienced both in the recent past and at present, gain another significance.

This situation will be seen more clearly when we have a look at the oil production figures of the Middle Eastern countries given in the next table. It is seen that the countries such as Saudi Arabia, United Arab Emirates (UAE) and

Qatar that are less problematic compared to the other oil producing countries of the region, do produce much more than the problematic countries such as Iraq and Iran in proportion to their respective reserves.

Table-2: Oil Production in Middle East Countries (in thousand million barrels)

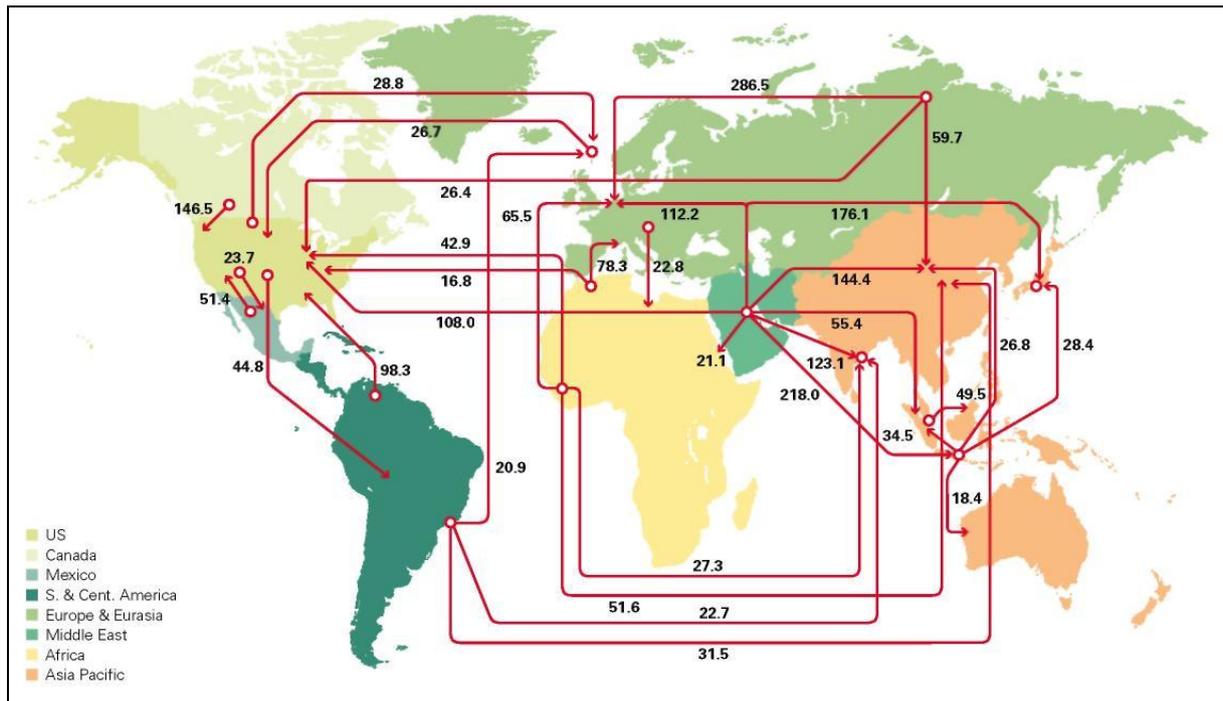
Countries	2009	2010	2011	2012	Change2012 over2011	2012shareof total
Iran	4249	4356	4358	3680	-16,2%	4,2%
Iraq	2452	2490	2801	3115	11,2%	3,7%
Kuwait	2511	2536	2880	3127	8,9%	3,7%
Oman	815	867	891	922	3,5%	1,1%
Qatar	1416	1676	1836	1966	6,3%	2,0%
Saudi Arabia	9663	10075	11144	11530	3,7%	13,3%
Syria	401	385	327	164	-49,9%	0,2%
United Arab Emirates	2723	2895	3319	3380	1,6%	3,7%
Yemen	306	291	228	180	-21,4%	0,2%
Other Middle East	192	192	203	206	1,3%	0,2%
Total Middle East	24728	25763	27988	28270	0,9%	32,5%

Source: BP Statistical Review of World Energy, June 2013

As of the end of 2012, the life span of oil reserves are: for Saudi Arabia 23 years (the result found although it has the largest reserves in correlation to its actual production rate), for UAE 29 years, Kuwait 32 years, Iran 43 and Iraq 48 years. These evaluations make it inevitable that in the near future, especially in

Iraq and Iran, important investments and technical co-operations as well as the joint ventures will have to be made both for increasing the oil production and for ensuring the transfer of oil from these two countries to those who need it.

Map-1: World Oil Trade



Source: BP Statistical Review of World Energy, June 2013

When we look at the greatest oil exporting regions of the world, it can be seen that the Middle East comes on top of the list (35,6% of worldwide exportation with 19.699 million barrels/day in 2012). The second region is the Community of States, known as the Former Soviet Union, which gained their independence in 1991, adjacent to the Middle East (15,5% of worldwide exportation with 8.597 million barrels/day in 2012).

Table-3: Top Five Oil Exporting Regions of the World (thousand barrels/day)(2008-2012)

Countries	2008	2009	2010	2011	2012	Change 2012 over 2011	2012 share of total
S.& Central America	3616	3748	3568	3764	3834	1,8%	6,9%
Former Soviet Union	8184	7972	8544	8791	8597	-2,2%	15,5%
Middle East	20128	18409	18883	19753	19699	-0,3%	35,6%
Africa	7.847	7.302	7.472	6.603	7.168	8,6%	13,0%
Asia Pacific	5392	5631	6226	6217	6419	3,2%	11,6%

Source: BP Statistical Review of World Energy, June 2013

As for the oil importing regions, the first three are the European countries, USA, Japan and China. And in the projections made for the year 2030, it is assumed that China and Europe will become the greatest importers of oil.¹

Table-4: World Oil Imports (thousand barrels/day)(2008-2012)

Countries	2008	2009	2010	2011	2012	Change 2012 over 2011	2012 share of total
US	12872	11453	11689	11338	10587	-6,6%	19,1%
Europe	13751	12486	12094	12208	12488	2,3%	22,6%
Japan	4925	4263	4567	4494	4743	5,5%	8,6%
Rest of World	23078	24132	25160	26570	27496	3,5%	49,7%
Total World	54626	52333	53510	54610	55314	1,3%	100,0%

Source: BP Statistical Review of World Energy, June 2013

¹ BP Energy Outlook 2030, January 2013

When we examine the countries to which the Middle Eastern countries exported oil in 2012, we see Japan (3.534 barrels/day), China (2.900 million barrels/day), India (2.474 million barrels/day), the European countries (2.281 million barrels/day) and the USA (2.163 million barrels/day). When it comes to transport, we see that oil is shipped to Japan and the USA (by tankers). For Europe, a small part of transportation is realized through oil pipelines (due to the insufficiency of the existing pipelines), and mostly by maritime transportation.

Table-5: Oil Exportation of Middle East Countries in 2012
(Thousand barrels/day)

Countries	2012 thousand barrels/day
US	2.163
Europe	2.261
China	2.900
India	2.474
Japan	3.543
Singapore	1.119
Other Asia Pacific	4.385
Rest of World	855
Total	19.699

Source: BP Statistical Review of World Energy, June 2013

According to 2012 data, in terms of world exportations, although the Middle Eastern countries exported twice as much as the Former Soviet Union countries (respectively 35,6% to 15,5%), when we examine the exportations made to the European countries, we see that this situation has turned vice-versa,

this time in favor of the Former Soviet Union countries with 5.792 thousand barrels/day, whereas the Middle East countries have exported 2.261 thousand barrels/day to Europe.

Table-6: Oil Importation of the European Countries in 2012(thousand barrels/day)

Countries	2012 thousand barrels/day
US	601
S. & Central America	424
Former Soviet Union	5.792
Middle East	2.261
Africa	2.890
Rest of World	522
Total	12.490

Source: BP Statistical Review of World Energy, June 2013

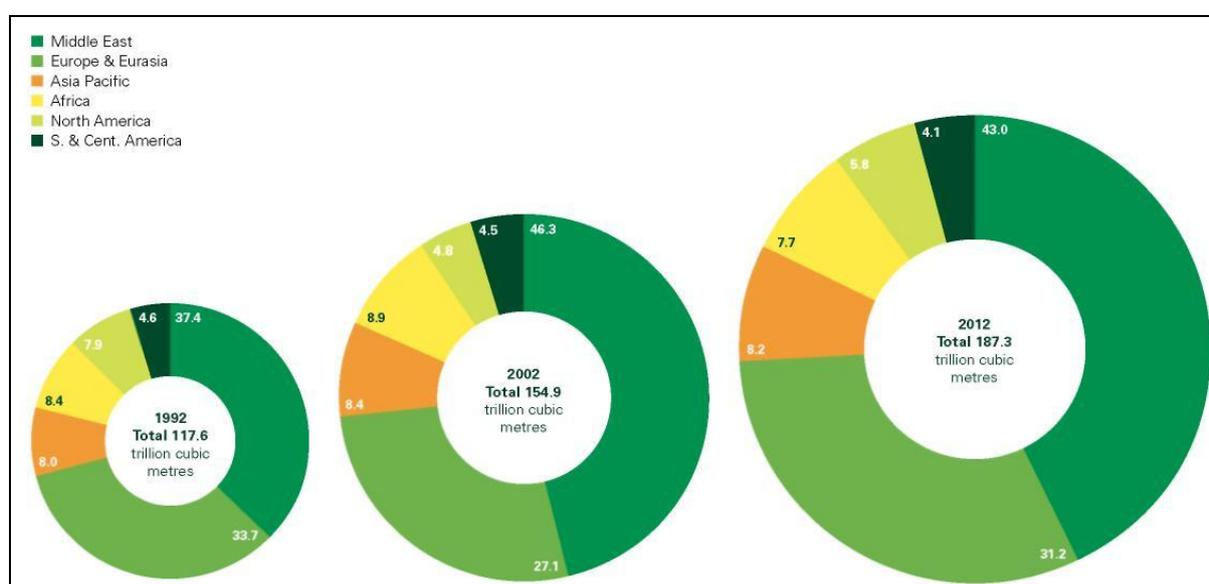
The most important reason for this significant difference is the considerable supremacy, in terms both of quantity and of capacity of the oil pipelines that reach out from the Former Soviet Union countries to the European countries.

This brief assessment of the current status highlights a serious need for new oil pipelines that would stretch out from the Middle Eastern countries to the European countries that are expected to be carried out in the upcoming period. Once the stability and security of transport are ensured in the region, it is expected that the said projects will possibly start. As important financial resources, strategic power and advantages will be achieved over the routes of the oil pipelines that would lie between the Middle East and Europe, there is a substantial competition as regards those routes between the countries in the region and the dominant powers.

3. Situation of Natural Gas in the World and in the Middle East

When we analyze the proved natural gas reserves in the world, we see an increase of 32% in 2002 to reach 154,9 trillion m³, compared to where it stood in 1992 (117,6 trillion m³). And in 2012, a further increase of 21% made it reach 187,3 trillion m³.

Chart-2: World Natural Gas Reserves



Source: BP Statistical Review of World Energy, June 2013

When we have a regional look at the proved global natural gas reserves, we see that just like the case for oil, the Middle East has almost half of the global reserves with 43%. After the Middle East comes Europe and the Eurasia with 31,2%.

A detailed analysis of the Middle East, possessing the richest natural gas reserves in the world, shows us that Iran comes first as of 2012 with 33.6 trillion m³ (share in total reserves: 18%), followed by Qatar with 25.1 trillion m³ (share: 13.4%) and Saudi Arabia with 8.2 trillion m³ (share: 4.4%), as shown in Table 7 below.

Table-7: Natural Gas Reserves of Middle East Countries

Countries	at end 1992 Trillion cubic meters	at end 2002 Trillion cubic meters	at end 2011 Trillion cubic meters	at end 2012 Trillion cubic meters	Share of total
Iran	20,7	26,7	33,6	33,6	18,0%
Iraq	3,1	3,2	3,6	3,6	1,9%
Kuwait	1,5	1,6	1,8	1,8	1,0%
Oman	0,2	0,9	0,9	0,9	0,5%
Qatar	6,7	25,8	25,0	25,1	13,4%
Saudi Arabia	5,2	6,6	8,2	8,2	4,4%
Syria	0,2	0,3	0,3	0,3	0,2%
United Arab Emirates	5,8	6,1	6,1	6,1	3,3%
Yemen	0,4	0,5	0,5	0,5	0,3%
Other Middle East	0,0	0,1	0,2	0,2	0,1%
Total Middle East	44,0	71,8	80,4	80,5	43,0%

Source: BP Statistical Review of World Energy, June 2013

When we analyze the production rates of natural gas in the world, we see that the list we have for the reserves remains the same, with Iran in the first place (160,5 billion m³), followed by Qatar (157 billion m³) and Saudi Arabia (102,8 billion m³). When we make an evaluation on the basis of both the reserves and the current production rates, life spans of natural gas reserves as of 2012 are; for Iran 209 years, for Qatar 160 years and for Saudi Arabia 80 years.

Table-8: Natural Gas Production Rates of the Middle East Countries (billion m³)

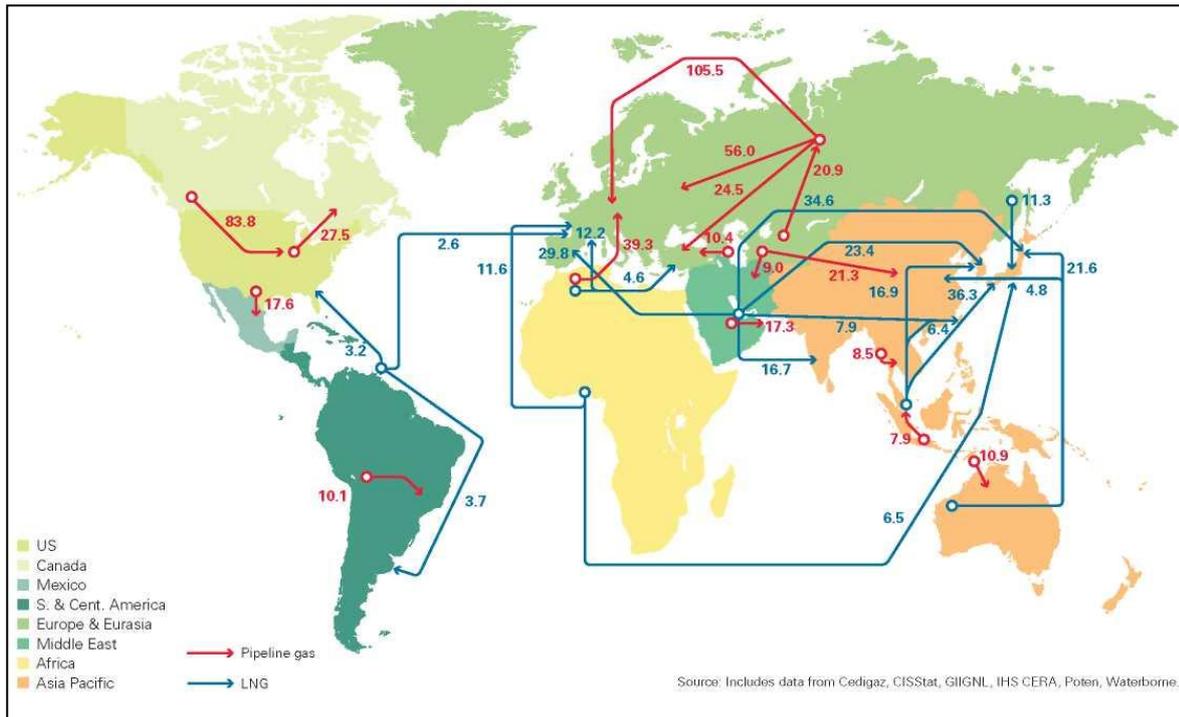
Countries	2009	2010	2011	2012	Change 2012 over 2011	2012 share of total
Iran	131,2	146,2	151,8	160,5	5,4%	4,8%
Iraq	1,2	1,3	0,9	0,8	-9,3%	w
Kuwait	11,5	11,7	13,5	14,5	7,2%	0,4%
Oman	24,8	27,1	26,5	29,0	8,9%	0,9%
Qatar	89,3	116,7	145,3	157,0	7,8%	4,7%
Saudi Arabia	78,5	87,7	92,3	102,8	11,1%	3,0%
Syria	5,6	8,0	8,7	7,6	-13,4%	0,2%
United Arab Emirates	48,8	51,3	52,3	51,7	-1,5%	1,5%
Yemen	0,8	6,2	9,6	7,6	-21,3%	0,2%
Other Middle East	3,0	3,4	4,4	2,7	-40,1%	0,1%
Total Middle East	407,3	472,7	518,7	548,4	5,4%	16,3%

Source: BP Statistical Review of World Energy, June 2013

The natural gas trade worldwide is carried out, just as the case for oil trade, either via maritime transportation or by pipelines in the form of LNG (liquefied natural gas). Particularly Qatar and Saudi Arabia ship the LNG they have and they produce by passing through the Strait of Hormuz² (17 million barrels/day of oil) to the Far East and Europe.

²**Strait of Hormuz:** It is located between the Gulf of Oman and the Persian Gulf. On the north coast there is Iran, and on the south coast, there is an exclave of Oman. It is approximately 38.90 km wide. Nearly 40% of the oil coming from the Middle East (i.e. half the oil exported to USA, Western Europe and China) is transported by transit ships that take the Strait. Besides, important amounts of liquefied natural gas are transported through the Strait. For these reasons, the Strait of Hormuz is one of the

Map-2: World Natural Gas Trade



Source: BP Statistical Review of World Energy, June 2013

Table 9 below shows the data relating to the oil and natural gas in the form of LNG transported by ships in 2011 and 2012. As it is seen on the table, due to their geographic locations, some countries such as Germany have met their need for natural gas only through pipelines, and some others in the form of LNG, such as Japan and South Korea. The greatest increase in imports in 2012 compared to 2011 was seen in China (compared to 30,9 million m³ in 2011, an increase of 34% in 2012 to reach 41,4 billion m³).

most strategic passages of the world not only for big importers of oil and natural gas (i.e. USA, European countries, Japan, China, India, South Korea, etc.) but also for the Gulf countries having large reserves of oil and natural gas (i.e. Saudi Arabia, Iran, Iraq, Qatar, Kuwait and UAE).
Source: Leyla Melike Koçgündüz, “Enerjinin Dar Boğazı: Hürmüz”, March 05, 2012

Table-9: World Natural Gas Imports

Countries	2011 billion m3		2012 billion m 3	
	Pipeline	LNG	Pipeline	LNG
US	88,3	10,0	83,8	4,9
Canada	26,6	3,3	27,5	1,8
France	32,3	15,5	35,0	10,3
Germany	84,0	-	86,8	-
Italy	60,8	8,7	59,7	7,1
Netherlands	15,6	0,8	14,5	0,8
Spain	12,5	24,2	13,3	21,4
Turkey	35,6	6,2	34,9	7,7
United Kingdom	28,0	24,8	35,4	13,7
Other Europe	100,8	10,9	97,6	8,2
Russian Federation	30,1	-	29,8	-
Ukraine	40,5	-	29,8	-
Other Former Soviet Union	35,3	-	32,3	-
Other Middle East	32,1	4,6	29,2	4,6
China	14,3	16,6	21,44	20,0
Japan	-	107,00	-	118,79
South Korea	-	50,6	-	49,7
Total World	700,0	329,8	705,5	327,9

Source: BP Statistical Review of World Energy, June 2013

European countries imported as of end 2012 a total of 377,2 billion m³ natural gas through pipelines, and 69,2 billion m³ LNG via maritime transportation. These figures show that European countries realized most of their natural gas importation through pipelines by passing through Russia. This situation not only has enabled Russia to become a considerably important strategic and economic power, but also has made European countries unilaterally dependent on Moscow in terms of energy resources. For this reason, European countries want to create new pipeline routes that would meet their need for energy from other resources and liberate them from their dependence on Moscow in terms of energy. In this scope, the most important new route comes forward as the Turkish territory.

Table 10 below regarding the world natural gas exports in 2011 and 2012 clearly displays the situation mentioned above. In 2012, European countries bought 49,2% (185,5 billion m³) of their total purchase by pipelines (377,2 billion m³) just from the Russia Federation. Add to this the natural gas exporting Former Soviet Union countries, (185,5 + 68,8) and it can be seen that 67,4% of the total purchase (i.e. 254,3 billion m³) was purchased from the Russia Federation + members of the Former Soviet Union. This figure proves how serious has become the direct or indirect dependence of Europe to Russia Federation in terms of energy resources needs.

Table-10: World Natural Gas Exports

Countries	2011 billion m3		2012 billion m3	
	Pipeline	LNG	Pipeline	LNG
US	40,7	1,7	45,1	0,8
Canada	88,2	-	83,8	-
Trinidad & Tobago	-	18,5	-	19,1
Other S. & Cent. America	14,8	5,2	16,9	5,8
Germany	11,7	-	12,5	-
Netherlands	50,4	-	54,5	-
Norway	95,0	4,46	106,6	4,7
United Kingdom	16,0	0,08	12,0	-
Other Europe	10,1	0,6	9,3	1,7
Russian Federation	207,0	14,2	185,9	14,8
Other Former Soviet Union	63,0	-	68,8	-
Qatar	19,2	100,4	19,2	105,4
Other Middle East	9,1	28,2	8,4	25,9
Algeria	34,4	17,8	34,8	15,3
Other Africa	8,3	40,0	11,0	38,8
Indonesia	9,32	29,29	10,22	25,04
Other Asia Pacific	16,3	68,7	21,0	69,0
Total World	700,0	329,8	705,5	327,9

Source: BP Statistical Review of World Energy, June 2013

Having the world's third largest natural gas reserves, Qatar realized 19,2 billion m³ of its gas exportation by pipelines and 105,4 billion m³ via maritime transportation in the form of LNG. Experts are of the opinion that Qatar needs new pipelines to increase its production rates in order to transport its natural gas especially to the European market.

In the light of this information, it seems highly possible that works will commence soon to implement new pipeline projects that would stretch out from Qatar to Europe, thinking the need of Europe for new pipelines that would ensure its natural gas purchase as well as the energy transmission lines Qatar needs to sell its natural gas.

Naturally, the question from what countries the new pipelines will pass through is a vital question that paves the way, along with its answer, for all that great rivalry, clashes and cooperations that are currently being experienced in the region, including also Syria.

4. International Pipeline Projects

4.1. Oil Pipelines

4.1.1. Iraq-Turkey Oil Pipeline



Source: http://tr.wikipedia.org/wiki/Kerk%C3%BCK-Yumurtal%C4%B1k_Petrol_Boru_Hatt%C4%B1

The Iraq-Turkey Oil Pipeline consists of two pipes that are parallel to one another. It carries the crude oil, which is extracted from Kirkuk and other oil fields in Iraq, to Ceyhan (Yumurtalık) Marine Terminal. Offering a capacity of 35 million tonnes/year, the pipeline was first put into service in 1976, and the first loading to tanker was realized on May 25, 1977.

Annual transportation capacity reached 70,9 million tons in 1987 with the commissioning of the second pipeline, which lies parallel to the first one.³

4.1.2. Baku-Tbilisi-Ceyhan Oil Pipeline



Source: <http://enerjitime.com/index.php/btcden-6-ayda-1-6-milyon-ton-turkmen-petrolu-pompalandi.html>

The aim of the Baku-Tbilisi-Ceyhan Oil Pipeline is to transmit the Azarbaijan crude oil via Georgia to the Ceyhan Marine Terminal and to the global markets after being loaded onto tankers. With a capacity of 50 million tonnes per year, it is 1.776 km long.⁴

³Official website of the Ministry of Energy and Natural Resources of the Republic of Turkey, www.enerji.gov.tr

⁴Official website of the Ministry of Energy and Natural Resources of the Republic of Turkey, www.enerji.gov.tr

4.2. Natural Gas Pipelines

4.2.1. Interconnector Turkey-Greece-Italy (ITGI) Project



Source: http://www.yapi.com.tr/haberler/edisonun-itgi-boru-hatti-projesi-ilerliyor_70641.html

Inaugurated in 2007, the Turkey-Greece Natural Gas Pipeline constitutes the first step of the South European Gas Ring. With the completion in 2018 of the Greece-Italy connection, the Italian market will also be accessible. Within the framework of the Project, it is planned to provide natural gas from the Caspian resources to be transported via Turkey. The annual transmission rates are 3,6 billion m³/year to Greece and 8 billion m³/year to Italy, with a total of 11,6 billionsm³/year. The on-shore part of the Project is 592 km long from Komotini to the Adriatic coast, whereas the offshore part is 212 km long, with a maximum depth of 1.450 m.

In 2007, an Intergovernmental Agreement (IGA) was signed in Rome by the ministries of energy of the related countries. It is one of the important projects to supply gas to Europe.⁵

⁵ www.botas.gov.tr/icerik/tur/projeler/yurtdisi.asp

4.2.2. NABUCCO Natural Gas Pipeline Project



Source: http://www.turktakvim.com/5/arka_yaprak/12/Temmuz/2010/7/

With the Turkey–Bulgaria–Romania–Hungary–Austria Natural Gas Pipeline Project (NABUCCO) that, by taking advantage of the importance of Austria in Europe as a natural gas distribution point, envisages to link the Middle Eastern and Caspian natural gas reserves to European markets, the objective was to reach Western Europe, depending on the gas demand of the local countries.

It is projected to carry the natural gas to be provided from Azerbaijan (Shah Deniz), Iraq, Turkmenistan and other Caspian resources. In the long term, it is also planned to carry the natural gas from the Arab Gas Pipeline and the other peripheral countries, particularly Egypt and Iran.

Preliminary work on the Project got started in February 2002, and the Cooperation Agreement was signed on October 11, 2002. Its capacity per year will be 31 billion m³/year, fuel gas excluded. According to the results of the feasibility studies of the line, the length of the pipeline, including the feeder lines, is predicted to be 3.825 km in total, with 2.512 km passing through Turkey.

In order to remain as the primary energy provider of Europe (i.e. oil and natural gas), and protect, relatedly, its power it has obtained, Russia signed natural gas purchase agreements of significant quantities with Turkmenistan and Azerbaijan, the greatest suppliers of the Project, in an attempt to bypass the Nabucco. However, the Nabucco was replaced by Trans-Adriatic Pipeline (TAP), which would transport the gas through a new and a shorter route to Italy, and by Trans-Anatolian Gas Pipeline (TANAP) projects. So it became impossible to realize the Project and has been cancelled.⁶

4.2.3. Trans-Anatolian Gas Pipeline (TANAP) Project



Source: <http://www.hisse.net/forum/showthread.php?t=51038&page=335>

Studies have been carried out in order to transport the 10 billion m³ natural gas to be produced by the Shah Deniz Consortium out of the Phase II Project, from the Greek or Bulgarian border to the points of consumption in Europe.

⁶ www.botas.gov.tr/icerik/tur/projeler/yurtdisi.asp

On December 24, 2011 an Intergovernmental Memorandum of Understanding was signed in Ankara between the ministers of energy of Azerbaijan and Turkey.⁷

4.2.4. Trans-Adriatic Gas Pipeline (TAP) Project



Source:http://enerjigunlugu.net/tapin-insasinda-on-yeterlilik-sureci-devam-ediyor_8860.html

The point of origin of the Project is the Thessaloniki (Greece). Until this point, it is envisaged to use the existing infrastructure of Turkey and Greece. Then the line will pass across Albania and the Adriatic Sea to reach Italy. The basic engineering study of the Project was completed in March 2007. Detailed engineering studies and works to get the required authorizations are currently underway.

It is emphasized that the TAP Project does not compete with, but rather completes, the Interconnector Turkey-Greece-Italy (ITGI) Project. It is stated that the TAP/IAP projects will supply gas to the West Balkan/Adriatic countries, especially to Albania, Kosovo, Macedonia and Bosnia-Herzegovina.

In 2009 within the framework of TAP, a Memorandum of Understanding on Energy Cooperation was signed between the ministries of energy of Turkey and Switzerland, treating also the subject of gas transit. The Project was

⁷ www.botas.gov.tr/icerik/tur/projeler/yurtdisi.asp

announced by the Shah Deniz Consortium as a potential route for the transport of natural gas to Southern Europe.

Following the completion of the Project, Shah Deniz Consortium will produce 16 billion m³ gas per year from the Phase II project. Out of this gas produced, 6 billion cubic meters will be sold to Turkey, and the rest will be exported to the European market through the Trans-Adriatic Gas Pipeline.⁸

4.2.5. Iraq–Turkey Gas Pipeline Project



Source: <http://www.finanscaddesi.com/Enerji-Madencilik/20021/trans-anadolu-gaz-hatti%E2%80%99na-3-yeni-ortak.html>

An integrated Project that included land improvement, production and treatment of gas as well as the construction of a pipeline for the natural gas fields in northern Iraq first came to the fore in 1996 with the agreements signed with Iraq. Yet, due to the political events in Iraq in 2003 it was decided to suspend the Project. Then, in 2008, a new Memorandum of Understanding was signed with Iraq that predicted the exportation of natural gas from Iraq to Turkey. From this time on, the Project has been renamed the Iraq – Turkey Gas Exportation Project (ITGEP). It was stated that the Memorandum of Understanding would set forth the framework for the appreciation of the natural

⁸ www.botas.gov.tr/icerik/tur/projeler/yurtdisi.asp

gas infrastructure of Turkey in a way that would include also opportunities to search for and produce natural gas as well as possible relations with contiguous countries. It was also envisaged that this Memorandum would provide the countries like Iraq with the possibility of exporting the excessive gas, left over after meeting their domestic demand, to Turkey and Europe.

If the existing political situation, tendering process and field issues evolve in favor of Turkey, it is targeted to transport 10 to 12 billion m³/year gas to Turkey within the framework of ITGEP in the middle term, and to Europe within the framework of transit projects.⁹

4.2.6. Egypt – Turkey Gas Pipeline Project



Source: http://tr.wikipedia.org/wiki/Arap_Boru_Hatt%C4%B1

In order to diversify natural gas resources and provide a party of the gas supply from Egypt as well, the Egypt-Turkey Gas Pipeline Project has been developed. Transporting the Egyptian gas to Lebanon, Syria, Jordan, Turkey and

⁹ www.botas.gov.tr/icerik/tur/projeler/yurtdisi.asp

Europe, it is estimated that the construction of the pipeline will cost US\$1 billion. Within the framework of the Project, two pipelines will be constructed, with the first one, an underwater section, beginning from Sheikh Zoueid to the east of Al Arish on the Sinai Peninsula of Egypt until the Tripoli port to the North of Lebanon, which will be 240 miles (400 km) long, followed by the second one, an overland section, from Tripoli to Jordan and then to northern Syria, to reach finally to Turkey and Europe, which will be another 400 km. It is planned that in the first step Lebanon shall purchase 12 million m³ natural gas per year, and Syria 3 to 9 million m³.

However, upon the subsequent events, it was considered to transport the Egyptian gas to Turkey via the “Arab Gas Pipeline”. It is still a mystery how much natural gas can Egypt provide to the Arab Gas Pipeline. The construction of the Turkoglu-Kilis Pipeline that will connect the aforementioned line to the Turkish gas distribution system is currently ongoing.¹⁰

¹⁰ www.botas.gov.tr/icerik/tur/projeler/yurtdisi.asp

4.2.7. Turkmenistan – Turkey – Europe Gas Pipeline Project (with Caspian Sea passage)



Source: <http://politikaakademisi.org/abdinin-avasya-enerji-politikasi-baglaminda-azerbaycan-ve-orta-asya-ulkeleriyle-iliskileri/>

The object of the Turkmenistan – Turkey – Europe Gas Pipeline Project is to transport the natural gas produced in the gas fields in southern Turkmenistan to Turkey, and from Turkey to Europe, through a trans-Caspian pipeline. According to the agreement, out of the 30 billion m³ Turkmen gas, 16 billion m³ will be transported to Turkey, whereas 14 billion m³ will be transported to Europe. In 1999, an agreement was signed between Turkmenistan and Turkey with a validity period of 30 years regarding the 16 billion m³ –per- year natural gas trade.¹¹

The pipeline projects summarized above and planned for the near future are all intended for the transport of natural gas. There lie two reasons behind this. Environmental pollution, which has been increasing since the second half of the 20th century especially due to rapid industrialization, has increased the demand for natural gas, which is, in comparison with oil, a cleaner fuel. According to the primary energy projection 2030 prepared by International Energy Agency, important increases are expected in the demand for natural gas.

¹¹ www.botas.gov.tr/icerik/tur/projeler/yurtdisi.asp

It is foreseen that the annual increase rate of 2,5% during the last decade in worldwide energy demand will decrease to the level of 1,6% by 2030, and that the fastest growth will be in renewable energy with 7,6%. As for fossil fuels, the greatest increase is expected in natural gas with 2%, followed by coal (1,2%) and crude oil (0,8%).¹² The second reason is the longer lifespan of natural gas compared to oil, taking into consideration the quantities of the existing reserves and the production rates, which we already treated in the first section of this paper.

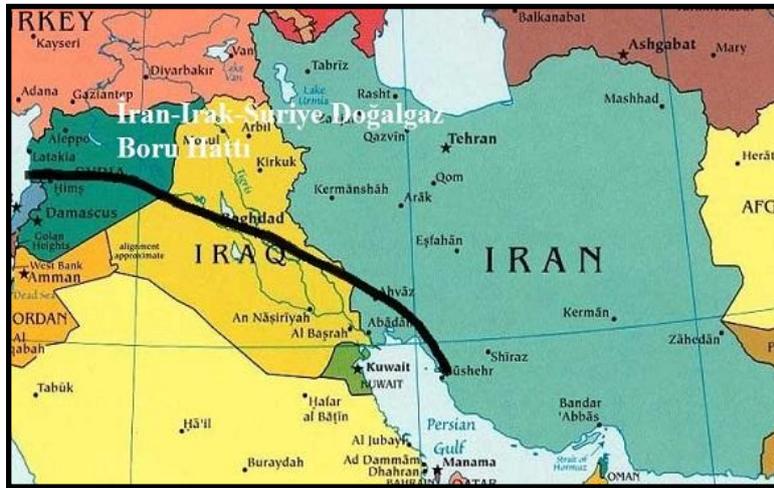
On the other hand, it is not yet known for sure if these projects will be able to carry the additional natural gas resources that the European market is in need of. The successful accomplishment of the projects is directly related to the finalization of the cooperation between Turkey and Qatar. This cooperation is identified by connecting to the TANAP line and then to the TAP line to reach Europe. It was estimated that the gas needed for the pipelines treated in this paper was to be provided from the natural gas reserves of Qatar via Saudi Arabia and Syria. Yet, Damascus, on the grounds that this would conflict with the interests of Russia, its strategic partner, and probably upon a request came from the Russia Federation, refused the Project in 2009. There are two reasons why this Project bothers Russia. Firstly, the Project puts in risk Russia's position as the primary gas supplier of the European markets; secondly, the Project may lead to decreases in gas prices as it will create supply saturation in the market. However, by leaving aside its initial position, Syria now supports a competing pipeline project that would connect Iran and Lebanon via Iraq.

¹²Turkish Petroleum Co. General Directorate, Crude Oil and Natural Gas Sector Report - 2012, May 2013

5. Syria in the Energy Gridlock

In this section of the paper we will try to set forth the current situation by sharing some information about two competing projects that constitute the problem regarding the routes of energy transmission lines (especially those of natural gas pipelines), considered to be one of the undeclared reasons of the events in Syria, and about which much talk has been going on lately.

5.1. Iran – Iraq – Syria Gas Pipeline



Source: <http://www.21yyte.org/tr/arastirma/enerji-ve-enerji-guvenligi-arastirmalari-merkezi/2013/08/02/7139/iran-irak-suriye-dogalgaz-boru-hatti-dengeleri-degistirir-mi>

It is the natural gas pipeline that has come up with the agreement signed in July 2011 between Iran, Iraq and Syria. The name of the pipeline is not yet declared officially, so it is called in three different ways: Friendship, Islamic or Shiite pipeline (the latter being the version adopted by the West)¹³. According to the agreement, the Iran-Iraq line is planned to be completed in a period of three years, which would give Iran a significant strategic supremacy in terms of energy transmission in the region. It is planned to transport the gigantic natural

¹³ Olgu Okumuş, “Some Reasons to Materialize Iran, Iraq and Syria’s Gas Pipeline”, Natural Gas Pipeline, February 11, 2013. <http://www.naturalgaseurope.com/iran-iraq-and-syria-gas-pipeline>

gas reserves in Iran's South Pars fields to the North of the Gulf by a 1.500 km long pipeline of 40 billion m³/year capacity beginning from Asaluyeh, the Iranian city in the Gulf, to reach in the first place to the Tartus port of Syria via the Iraqi region of Diyala, to be then transmitted to the European markets. This Project aroused much controversy among many Arab countries, particularly Qatar. One of the leading reasons of these reactions is that, the countries that belong to the Sunni sect, i.e. the Gulf Countries, Saudi Arabia particularly, see it as a threat in that the countries belonging to the Shiite sect, of which Tehran, Baghdad and Damascus do constitute the corner stones of the Shia Crescent, get stronger from an economic point of view. Another reason is that, the South Pars gas fields are located within the territorial waters of Iran and Qatar. Therefore, the realization of this Project means that Iran would use and achieve economic benefit from the Qatari gas. Yet, as the Project is not under its control and supervision, Qatar does not opt, within the framework of this project to Europe, for the marketing of its share of gas in the South Pars field, allegedly the greatest natural gas field of the world. Therefore the Project will remain under the control of three powers with Shiite majorities. There are two other important reasons why Qatar objects to the realization of this Project. As is known, Iran is one of the major commercial competitors of Qatar in the production and marketing of natural gas. And the second reason is the possibility that Syria becomes a considerable competitor of Qatar in terms of natural gas with the discovery in August 2011 of rich gas fields in the Syrian city of Qara, close to the Tartus port and to the Lebanese border. Moreover, the marketing of the South Pars gas to the Mediterranean via Iran-Iraq-Syria, would risk creating a remarkable competitor for the arguable exclusive economic zones of Southern Cyprus (Afrodite parcel) and Israel (Leviathan, Tamar) in European markets.

5.2. Qatar-Saudi Arabia-Syria Gas Pipeline



Source: http://www.sabah.com.tr/Ekonomi/2009/08/19/erdogan_boru_hatti_kokten_cozum

Today there is no pipeline linking Qatar to Europe, and the Qatari gas is being carried on tankers in the form of LNG to the European ports. When it is taken into consideration the interests of both Qatar, as the source country, and Europe, as the consumer, the realization of a gas pipeline between Europe and Qatar comes up as a vital need for both parties. This line was originally predicted and planned as the Qatar-Turkey Gas Pipeline. According to the plan, the pipeline was to start from RasLaffan in Qatar to arrive at the Iraqi territorial waters via Bahrain, Saudi Arabia and Kuwait territorial waters. The length of the underwater section of the pipeline was estimated to be some 550 km, with an average depth of 30 to 40 m. Entering in Iraqi city of Fao/Basrah, the pipeline is planned to reach first Haditha, then to Ceyhan by following the Iraq-Turkey Pipeline. From Ceyhan, it will continue, according to the predictions, towards Ankara, following a route parallel to that of Ceyhan-Kırıkkale oil pipeline. The onshore length of the pipeline is estimated to be some 1.200 km in Iraq, another 650 km on the route of the Iraq-Turkey Crude Oil Pipeline and another 500 km between Ceyhan and Ankara and, with the underwater section, the pipeline's length would be 2.900 km in total.

Originally, the annual capacity of the pipeline was predicted to be around 20 billion cubic meters. However, it seems possible that the capacity will be designed alternatively as 30 billion m³. In case where the capacity is set to be 20 billion m³, it is calculated that the realization of the off-shore section would cost US\$6,3 billion, and the onshore section US\$1,6 billion, to give a total of US\$8 billion. Alternatively, if the 30-billion-m³ option is selected, the pipeline would cost, according to the calculations, US\$8 billion for the off-shore section and US\$2,1 billion for the on-shore section, resulting in a total cost of US\$10,1 billion.

The results obtained from the preliminary route studies have shown that the implementation of the Project is possible from an economic point of view. However, as it is a trans-boundary Project, along with the economic evaluation, it was also taken into consideration that there were political risks.

For these reasons, it was decided to reach Eastern Mediterranean by taking the Qatar-Saudi Arabia-Syria route. Russia Federation has long been objecting to the transport of the Qatari gas to the Mediterranean by using this route via Syria, and has been conflicting with USA, Qatar, Turkey and Saudi Arabia regarding this plan, which could create important price decreases in its disadvantage. USA, on the other hand, deliberately supports the Project, for the sake of its European allies, as it would decrease their dependence on Russian and Syrian gas and as it would weaken Russia Federation's hand in using the leverage of energy in order to apply political pressure and obtain achievements of sorts.

6. Conclusion

In the first section of the paper, we tried to explain the current situation of oil and natural gas, primary sources of energy, on the basis of 2012 data. When we summarize these data, it is seen once more that Middle East countries do make up the most important region of the World in terms of both oil and gas reserves.

In addition to this fact Middle East countries are the leading exporters of European countries as well as such countries as USA, China, India, Japan and South Korea, which all have a great need for energy.

Today, European countries meet a portion of their need for oil and gas via maritime transportation and the rest through pipelines transported via the member countries of the Former Soviet Union, particularly from the energy fields in the Caspian Sea and Caucasus regions. And the Middle East countries transport their resources to the countries in need of them mainly via maritime transportation by passing through the Strait of Hormuz. For instance, it would be useful to mention that nearly 85% of the need for energy of the Far East countries (especially South Korea, Japan, China and India) is supplied by the Middle East countries via maritime transportation. Therefore, it should not be ignored that the Strait of Hormuz does have a key strategic importance. Recently (during the last 5 to 10 years) there have been new pipeline projects, in parallel to the existing pipelines that reach Europe via Russia, which were considered and planned and even started effectively with signed contracts. Nevertheless, a great majority of the funders of those pipeline projects were again from the Caspian axis. So, the Middle East countries such as Qatar, Saudi Arabia and Kuwait, still need new pipelines that would stretch out particularly to Europe as an alternative to tanker transportation. Along with the Middle East countries, European countries as well reach energy sources via the pipelines that pass through Russia, leaving them unilaterally dependent on Russia, which lead to

both serious security concerns with political reflections and discomfort among the European countries. For this reason the need of European countries for new pipelines that would pass through regions that are not under the control of Russia becomes an obligation.

In the second section of the paper we addressed two competing projects that came to the fore recently.

At this point we will proceed with our evaluations of Syria, which constitutes the main subject of the paper.

We can say that Syria's location on the outlet to Mediterranean had an important but covered role in the two pipeline projects, subject to much debate recently, which was not stated at all in the origins of the events that have been ongoing since the last four years.

As is known, these two pipeline projects are the Iran-Iraq-Syria-Eastern Mediterranean Pipeline, and the Qatar-Saudi Arabia-Syria-Eastern Mediterranean pipeline projects.

Being the last gate to the Mediterranean in both of the said projects, Syria does have a very significant strategic location. Therefore, the answer to the question that reads under what kind of a regime and by which political actors will Syria be ruled is of vital importance in terms of future projections. If Syria continues to be ruled under the existing regime, backed by Russia, China and Iran, it seems possible that the Iran-Iraq-Syria-Eastern Mediterranean Project will be implemented. If, for the reasons mentioned above, an administration other than Assad/Ba'ath, supported by Qatar and Saudi Arabia, comes in force, then it would not be wrong to think that the Qatar-Saudi Arabia-Syria-Eastern Mediterranean Pipeline Project will be implemented.

One of the major reasons why USA and European countries support opposition forces against Assad seems to be the desire in Europe, which currently is dependent on Russia for energy supply, to meet its energy demand from other resources through an alternative pipeline route. In the case of the establishment of a new regime, coherent and moderate and well-integrated with the Western world, the realization of the Qatar-Saudi Arabia-Syria Pipeline Project will be put in the agenda. Thus Europe will have the chance to supply the oil and gas it needs from a second alternative route instead of just the route that passes through Russia. It can be argued that Europe's dependency on Russia in terms of energy resources will come to an end, or will be minimized, thus its perception of risks will change, and it will have the chance of following more realistic policies. Relatedly, from an economic point of view, as there will be an increase in the supply, the prices will go down, and this decrease could have negative effects on the hawkish politics of the Putin Administration. Therefore, among the reasons why Russia supports the Assad administration, it seems us possible to claim that this factor, which is not stressed that much, does play a role. If Assad and Ba'ath regime continues to rule Syria, this would help implement the Iran-Iraq-Syria-Eastern Mediterranean pipeline Project, so this would be tantamount to creating a new pipeline under Russia's control. Consequently, the route of the alternative pipeline, which is of vital importance for Europe, will again be under the control of Russia.

When we analyze the situation from Turkey's perspective, as Turkey had close relations with Syria during the times when the Iran-Iraq-Syria-Eastern Mediterranean Pipeline Project was first spoken of, it was foreseen that the said pipeline was to reach Europe via Turkey. Yet, due to the tension that arose recently between the two countries, it is projected, upon the insistent pressures of the Assad administration, to bypass Turkey and to reach Europe via Greece through the pipes to be laid under the Mediterranean starting from the Greek

Cypriot Administration of Southern Cyprus after it arrives at the Eastern Mediterranean.

If this is to come true, Turkey will no longer be a part of the route. As is known, in accordance with the exclusive economic zone agreements concluded between Egypt, Israel and the Greek Cypriot Administration of Southern Cyprus, oil and gas exploration works have been conducting since 2011 in the Eastern Mediterranean. Recently, it was announced by experts that natural gas reserves of serious quantities were discovered in the Eastern Mediterranean. According to the latest analysis, quests for connecting the oil and gas extracted here to the Qatar-Saudi Arabia-Syria-Eastern Mediterranean pipeline to be then transported to Europe via Greece, gained weight.

All in all, Turkey has a risk of being left out of these two projects in terms of their respective routes. In order for Turkey not to stay out of these projects, it has to pursue a policy that would serve to repair and normalize its relations with the other countries of the region, and make sure, whichever Project is to be implemented, it passes through Anatolian territories to reach Europe after the Mediterranean. When Turkey manages to do this, the Country will have both uninterrupted energy supply that it needs, and the chance of decreasing its energy costs with the revenue to be gained from the energy transmission lines that pass through its territories.

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