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**The Rise of Turkey and the  
New Mediterranean  
Challenges and Opportunities for  
Energy Cooperation in a Region  
in Transition**

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### The Rise of Turkey and the New Mediterranean Challenges and Opportunities for Energy Cooperation in a Region in Transition

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#### Summary

This paper, presenting a wide range of issues related to the role of Turkey in the Mediterranean energy context, aims to provide a comprehensive framework of understanding of the growing strategic relevance of Turkey for both the European Union and the overall Euro-Mediterranean region. In particular, the paper focuses on the EU-Turkey energy relations and outlines the crucial role of natural gas in enhancing energy cooperation between the two players. In 2010 about 80% of EU gas imports derived from only three suppliers: Russian Federation, Norway and Algeria. This heavy dependence on such a few suppliers stimulated the European Commission to make the concept of diversification a cornerstone of its energy policy and to launch the concept of the Southern Gas Corridor, an initiative aimed to develop a natural gas transit corridor from Caspian and Middle Eastern gas-rich regions to Europe, in order to ease the dependency on the natural gas imported from the Russian Federation. An initiative that could shift the "centre of gravity" of the regional gas transit from the north to the south of the Black Sea, allowing Turkey to become a key transit country in the future European gas market; a pivotal element in the European gas security of supply architecture. Furthermore, the paper also considers the enormous renewable energy potential of Southern and Eastern Mediterranean Countries, to which Turkey could greatly contribute in terms of technology transfer and manufacturing know-how. Turkey's involvement in the Union for the Mediterranean offers a great opportunity for energy cooperation both between the EU and Turkey and within the overall Euro-Mediterranean region. Such large-scale renewable energy projects could greatly contribute to the economic development of the overall Mediterranean region, and also to its social and political stability. Considering the lack of a wide and comprehensive EU-Turkey energy cooperation scheme, the paper proposes a series of policy priorities pointed to enhance this bilateral relationship and also the wider Euro-Mediterranean integration process.

**Keywords:** Turkey, Mediterranean, EU Security of Supply, Energy geopolitics

**JEL Classification:** Q40, Q42, Q48

*This paper represents the first outcome of FEEM research on this specific issue that analyses how energy could represent a major tool to strengthen the economic, political and social integration in the Euro-Mediterranean region. The study focuses particularly on Turkey, a crucial country both for the EU energy security and for the regional balance of power in the aftermath of the Arab spring.*

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## **The rise of Turkey and the new Mediterranean**

*Challenges and opportunities for energy cooperation in a region in transition*

Simone Tagliapietra

(Fondazione Eni Enrico Mattei)

## **ABSTRACT**

This paper, presenting a wide range of issues related to the role of Turkey in the Mediterranean energy context, aims to provide a comprehensive framework of understanding of the growing strategic relevance of Turkey for both the European Union and the overall Euro-Mediterranean region. In particular, the paper focuses on the EU-Turkey energy relations and outlines the crucial role of natural gas in enhancing energy cooperation between the two players. In 2010 about 80% of EU gas imports derived from only three suppliers: Russian Federation, Norway and Algeria. This heavy dependence on such a few suppliers stimulated the European Commission to make the concept of diversification a cornerstone of its energy policy and to launch the concept of the Southern Gas Corridor, an initiative aimed to develop a natural gas transit corridor from Caspian and Middle Eastern gas-rich regions to Europe, in order to ease the dependency on the natural gas imported from the Russian Federation. An initiative that could shift of the "center of gravity" of the regional gas transit from the north to the south of the Black Sea, allowing Turkey to become a key transit country in the future European gas market; a pivotal element in the European gas security of supply architecture. Furthermore, the paper also considers the enormous renewable energy potential of Southern and Eastern Mediterranean Countries, to which Turkey could greatly contribute in terms of technology transfer and manufacturing know-how. Turkey's involvement in the Union for the Mediterranean offers a great opportunity for energy cooperation both between the EU and Turkey and within the overall Euro-Mediterranean region. Such large-scale renewable energy projects could greatly contribute to the economic development of the overall Mediterranean region, and also to its social and political stability. Considering the lack of a wide and comprehensive EU-Turkey energy cooperation scheme, the paper proposes a series of policy priorities pointed to enhance this bilateral relationship and also the wider Euro-Mediterranean integration process.



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## *Introduction*

"The Mediterranean is not a tool, but a fate", the French historian Ferdinand Braudel once wrote. It is from this statement, from the belief that the Mediterranean represents the common future of the peoples living along its shores, which originated the idea of this paper. Adopting the Functionalist theory to International Relations, which aims at integrating individual sectors in hopes of achieving spillover effects to further increase a process of regional integration, this paper argues that energy could be the best tool to strengthen the economic, political and social integration of the Mediterranean region.

A number of geopolitical and macroeconomic factors indicate that, in addition to the European Union, another player will be crucial for the strengthening of the Mediterranean integration process: The Republic of Turkey. This country, which has always been the major economy among Southern and Eastern Mediterranean countries (SEMCs), has further strengthened its regional economic preeminence during the 2000s and it is set to represent almost half of the entire SEMCs' economic outlook by 2016. Furthermore, with the Arab Spring the established geopolitical equilibrium of SEMCs has expired, generating in the area a situation of great uncertainty that opens new opportunities for Turkey to (re)emerge as the leading regional power. The Arab spring has come at a time when Turkey was already in the process of establishing its position in the regional chessboard. Over the last decade the country has articulated a vision for improving relations with all its neighbors, renewing its aspirations in the Caucasus, Central Asia, Iraq, Iran and in the Eastern Mediterranean.

The major role of Turkey among SEMCs is not only due to the size of its economy and the weight of its foreign policy, but also to its unique position in terms of energy. The country is placed at the centre of 68% of world's oil reserves and 75% of world's natural gas reserves; a feature that opens a number of opportunities for Turkey in terms of energy transit. The most important opportunity for the country seems to be related to natural gas. Both the prospects for European gas demand and for gas production in countries surrounding Turkey allow a bright future for Turkey as a natural gas hub at the Mediterranean energy crossroads.

The European Union should be attentive to this prospect, as natural gas will continue to play an important and increasing role in the European energy mix for coming decades. The European Commission has recently stated in its Energy Roadmap 2050 that natural gas will be critical for the transformation of the energy system, foreseeing that medium-term European gas demand will stay high, especially in the power generation sector. In 2010, about 80% of EU gas imports derived from only three suppliers: Russian Federation, Norway and Algeria. This heavy dependence on such a few suppliers stimulated the European Commission to make the concept of diversification a cornerstone of its energy policy. This concept has been interpreted on its broader definition, including both diversification of suppliers and diversification of transit countries, because of the strong geopolitical issues related to gas infrastructure. In particular, the European Commission has formally launched in 2008 the concept of the Southern Gas Corridor, an initiative aimed to develop a natural gas transit from Caspian and Middle Eastern gas-rich regions to Europe, in order to ease the dependency on the

natural gas imported from the Russian Federation. This natural gas corridor is currently being designed, as there are a number of different infrastructure projects on the table. However, even if these various pipeline projects differ on their path, transit throughout Turkey will be necessary. Whoever the winning-project of the race for a Southern gas corridor, it is certain that it will contribute to the shift of the "center of gravity" of the regional gas transit from the north to the south of the Black Sea. It will allow Turkey to become a key transit country in the future European gas market: a pivotal element in the architecture for security of supply of European gas.

The potential role of Turkey as the regional natural gas hub is more relevant when considering that an important geological reassessment of the hydrocarbon reserves of the Eastern Mediterranean area is presently ongoing. The area is set to become a world-class hydrocarbon province, consequently changing the geopolitical scenario of an area on which Turkey, also because of the still open question of Cyprus, is active and influential. Moreover, Turkey is the country better placed to deal with Iran and Iraq. Also if the political situation of these countries remains unclear, it is probable that over the next two decades Europe will be forced to turn to these countries to meet its natural gas import needs. If Brussels often seems to be focused almost exclusively on the issue of diversification from Russian gas supplies, there is another profound force that could potentially weaken the EU security of gas supply: Norway. The second gas supplier of the EU has always been reliable, but some concerns are emerging about its capability to deliver its gas supply in the long-term. According to different institutions, Norwegian gas production will peak in 2015-2020 and could then fall dramatically. In this scenario it would be necessary for the EU to look at the Caspian region, Iran and Iraq to meet its natural gas requirements. After years of under-exploitation, gas reserves of these countries would represent an enormous and unprecedented opportunity for European energy companies and for Turkey itself. It would see a further increase of its geostrategic importance as a regional natural gas hub. Considering the composition of Turkey's natural gas imports and the aforementioned prospects related to the development of the Southern Gas Corridor, it is clear that Turkey's relations with gas producing countries such as Azerbaijan, Turkmenistan, Iran and Iraq will be critical for the future energy security of the country and the future of the EU energy security. It is necessary to underline the enormous renewable energy potential (particularly solar) of SEMCs, to which Turkey could greatly contribute technology transfer and manufacturing know-how. Turkey's involvement in the Union for the Mediterranean, an institutional framework that strongly supports the Mediterranean Solar Plan and the Desertec concept, offers another opportunity for energy cooperation within the Mediterranean region. In this sense, the European strategy for a Mediterranean energy ring linking Europe with the Southern Mediterranean through electricity and gas interconnections provides Turkey with a crucial role. A renewed cooperation scheme on natural gas and renewable energy between Turkey and the European Union could trigger a process of economic, political and social integration throughout the overall Mediterranean region.



## ***1. Turkey in the new Mediterranean: a model or a political laboratory?***

“How do you expect me to make a living?” It is with this cry of despair that the young Tunisian street fruit vendor Mohamed Bouazizi set himself on fire in the late morning of December 17, 2010, triggering a process that in one year would have spread and disrupted the entire Arab world. The so-called Arab Spring has provoked the overthrow of decade-old dictators (Zine El-Abidine Ben Ali in Tunisia, Hosni Mubarak in Egypt, Ali Abdullah Saleh in Yemen, Muammar al-Qaddafi in Libya) and has led to major protests and governmental changes in other several countries (Algeria, Jordan, Oman, Bahrain, Kuwait, Morocco and Syria)<sup>1</sup>.

With the Arab Spring the established geopolitical equilibrium in the Southern Mediterranean area has expired, generating a situation of great uncertainty due to the unprecedented willingness of the Arab people for empowerment and freedom. The exceptional complexity of this situation makes it difficult to envisage when and how the Mediterranean region will find a new balance of power. It raises a number of questions on what season follows the Arab Spring. For instance, fears about the rise of Islamic fundamentalism in the Arab world have re-opened the discussion on whether or not there is an incompatibility of democracy and Islam. Additional questions have risen on the issue of which development model Southern and Eastern Mediterranean countries<sup>2</sup> (hereafter SEMCs) should follow to ensure a sustainable well being for their population. Voices from the Western world and the Arab world have claimed the so-called Turkish model as the best benchmark for the regional transition<sup>3</sup>, vaguely recalling what happened in Central Asia and in the Caucasus after the collapse of the Soviet Union<sup>4</sup>. However, the possibility to entirely apply the Turkish model to the Arab world still remains an open question. Not only because, as Ülgen (2011) highlighted, this model

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<sup>1</sup> Literature on the Arab Spring is rapidly expanding. For a wide political analysis refer to: Cordesman A. (2011), *“Rethinking the Arab Spring. Stability and security in Egypt, Libya, Tunisia and the rest of the MENA region”*, Centre for Strategic & International Studies (CSIS), Washington D.C. For an economic analysis refer to: Malik A., Awadallah B. (2011), *“The economics of the Arab Spring”*, Center for the Study of African Economies WP S/2011 n. 23, University of Oxford. For an energy analysis refer to: Darbouche H., Fattouh B. (2011), *“The implications of the Arab uprisings for oil and gas markets”*, MEP 2, Oxford Institute for Energy Studies.

<sup>2</sup> Southern and Eastern Mediterranean Countries (SEMCs): Algeria, Egypt, Israel, Lebanon, Libya, Jordan, Morocco, Palestinian Territories, Syria, Tunisia and Turkey.

<sup>3</sup> In February 2011 Rashid al-Ghannushi, the head of Tunisia's strongest opposition movement Ennahda, said the Tunisian people consider the Turkish experience in democracy a model and an example for Tunisia's post-revolution period. In March 2011 Mohamed Hussein Tantawi, acting president and chairman of Egypt's Supreme Council of the Armed Forces, declared: “The Turkish experience is the closest experience to the Egyptian people. Turkey is the model to inspire from”. In September 2011, during the visit of Turkish Prime Minister Erdoğan in Egypt, Mohammed Badie -the general guide of Egypt's Muslim Brotherhood- stated: “Turkey is a model for the other countries in the region”. In July 2011 U.S. Secretary of State Hillary Clinton declared: “I think across the region, people the Middle East and North Africa particularly, are seeking to draw lessons from Turkey's experience. It is vital that they learn the lessons that Turkey has learned and is putting into practice every day”.

<sup>4</sup> At the time the United States and Europe were euphoric about the potential role of Turkey as outpost of the Western world in the region. For a detailed analysis of the transition of the area after the collapse of the Soviet Union refer to: Khazanov A.M. (1995), *“After the USSR: ethnicity, nationalism and politics in the Commonwealth of Independent States”*, University of Wisconsin Press, Madison.

seems “to represent different things to different people”<sup>5</sup>, but mainly because the success of this model is based on a series of characteristics that belong to the *sui generis* nature of Turkey. These features concern the historical, political and religious background of Turkey, as well as its economic structure.

Considering the political aspects, it should be remarked that the democratic and secular character of the Republic of Turkey<sup>6</sup> is the result of a long and complex historical path originated in the turbulent period that followed the end of the First World War. After the humiliation of the armistice of Mudros<sup>7</sup> and the following partitioning of the Ottoman Empire among the Allies nations, Mustafa Kemal conducted an epic war of independence, which led to the establishment of a modern and secular state founded on the principles of democracy, progress and modernity. As underlined by Fiorani Piacentini (2005), Mustafa Kemal considered the process of secularization as the only possible way to legitimize the newborn Republic of Turkey abroad and to control the potentially explosive religious factor in such a complex moment of the national transition<sup>8</sup>.

The process of secularization -and the subsequent coexistence of a secular state and a Muslim population- has also been possible because of the unique character of Islam in Turkey, which represents a syncretism between the Islamic Law and a series of pre-existing traditions derived from ancient Central Asian populations<sup>9</sup>. The vast majority of Muslims in Turkey are Sunni that follows the Hanafi School of jurisprudence, considered as the more liberal among the four Sunni Schools of legal thought. This School -which puts great emphasis on the role of reason- accepted the integration of official Islam with the pre-existing traditions, also allowing Turkey’s Muslims to be more receptive to Western values (such as democracy) with respect to other forms of Islam. The strong complementarity between modernity and tradition, typical of Turkey, could be seen as a direct result of this unique religious and cultural heritage.

Concerning the economic structure of Turkey, it is necessary to highlight how the country’s strong economic growth is based on highly productive and dynamic small and

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<sup>5</sup> Ülgen S. (2011), “*From inspiration to aspiration. Turkey in the new Middle East*”, The Carnegie Papers, Carnegie Endowment for International Peace, Washington D.C., p. 4.

<sup>6</sup> These two fundamental principles are expressed in Article 2 of *The Constitution of the Republic of Turkey*. The official English version of the document is available in the website of the Constitutional Court of the Republic of Turkey: <http://www.anayasa.gov.tr/>.

<sup>7</sup> Concluded on 30 October 1918, the armistice ended the hostilities between the Ottoman Empire and the Allies of World War I.

<sup>8</sup> Fiorani Piacentini (ed.) (2005), “*Turchia e Mediterraneo allargato. Democrazia e democrazie*”, Franco Angeli, Milano, p. 102: “Fu tra Sevrès (1920) e Losanna (1923) che la secolarizzazione delle istituzioni apparve ad Atatürk l’unico sentiero percorribile per ottenere legittimazione internazionale al neo-stato “turco” da un lato, e dall’altro conseguire quella coesione interna necessaria a strutturare un apparato che fosse impermeabile alle emotività di un “religioso” (islamico e non) in piena effervescenza e rinascita nazionalistica”.

<sup>9</sup> See: Smith T.W. (2005), “*Between Allah and Atatürk: Liberal Islam in Turkey*”, in *The International Journal of Human Rights*, Vol. 9, No. 3., pp. 307-325. Karalas C. (2007), “*Turkey: Islam and laicism between the interests of state, politics, and society*”, PRIF Reports n. 78, Peace Research Institute, Frankfurt.

medium enterprises (SMEs)<sup>10</sup>. This generates important consequences both for Turkey's domestic policy and its foreign policy. As Taşpınar (2011) underlined, "Anatolian bourgeoisie regularly votes for conservative parties and has a vested interest in political stability. Turkey's Muslim entrepreneurs dream about maximizing their sales and profits in the global marketplace instead of an Islamic revolution that will bring about Sharia"<sup>11</sup>. Considering that an important part of the Justice and Development Party (AKP) electorate is represented by the new middle-class composed by provincial artisans, traders and small and mid-range entrepreneurs<sup>12</sup>, it is possible to understand the incentive for the AKP to implement moderate domestic policies (to meet the need of internal stability) and a dynamic foreign policy (to meet the need of create new market opportunities)<sup>13</sup>.

This brief *excursus* through the main political, cultural and economic factors that define the Turkish model should suggest the impossibility of applying this model in its entirety to the new realities emerged in the Southern and Eastern Mediterranean after the Arab Spring. For this reason -after the most tumultuous geopolitical storm that the Mediterranean has ever witnessed in its recent history- Turkey should be considered as the main political laboratory of the region, rather than a monolithic model. Turkey is a political laboratory that could offer a wide range of ideas and suggestions to the new Southern Mediterranean. This dynamic opens a number of opportunities for Turkey and also discloses a "sea of opportunities" between the two shores of the Mediterranean, notably starting in the field of energy. For this reason, Turkey should be placed at the centre of any reflection about the future of the Southern Mediterranean and the prospects for an enhanced Euro-Mediterranean cooperation.

## ***2. Macroeconomic profile of SEMCs and the place of Turkey***

Over the last decade SEMCs have experienced a rapid economic expansion, growing with an average growth rate of 4,5% from a overall GDP level of 557 US\$ billions in 2000 to 1.573 US\$ billions in 2010<sup>14</sup>. Turkey has always been the major economy of the region and during the 2000s it has further strengthened its regional economic preeminence. According to the latest IMF official forecasts over the next years Turkey will remain among the most dynamic economies in the region, increasing its GDP from 691 US\$ billions in 2010 to 1.200 US\$ billions in 2017.

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<sup>10</sup> Turkey's industrial sector is well developed. Main areas of specialization include textiles and clothing, ceramics and glass, steel, chemicals, and light consumer goods. The production of automobiles is a leading growth sector. Turkey's vibrant manufacturing sectors complement well the energy-rich, new markets to its northeast around the Caspian Sea, as well as established markets in the Middle East and Europe, to which it is uniquely positioned.

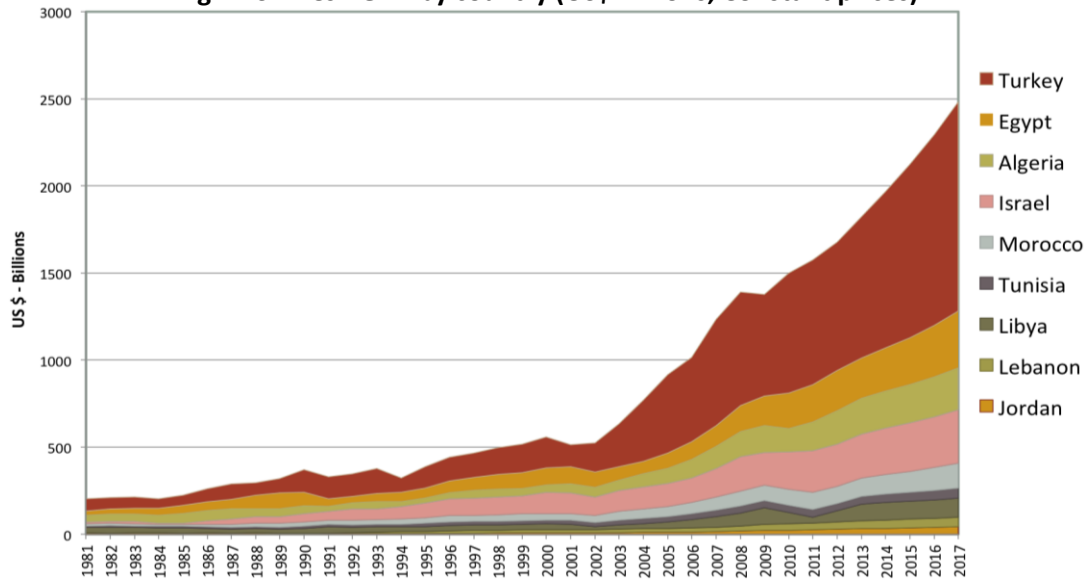
<sup>11</sup> Taşpınar Ö. (2011), "*The Turkish model and its applicability*", in Tocci N. (ed.), *Turkey and the Arab Spring: Implications for Turkish Foreign Policy from a Transatlantic Perspective*, German Marshall Fund (Mediterranean Paper Series), Washington, p. 12.

<sup>12</sup> Özbudun E., Hale W. (2009), "*Islamism, democracy and liberalism in Turkey: the case of the AKP*", *Studies in Middle Eastern Politics*, Routledge, London, pp. 30-43.

<sup>13</sup> Öniş Z. (2006), "*The Political Economy of Turkey's AKP*", in Yavuz M. H. (ed.), *The Emergence of a New Turkey: Democracy and the AK Parti*, University of Utah Press, Salt Lake City, p. 212.

<sup>14</sup> Unless otherwise stated, all statistics refer to the IMF World Economic Outlook Database.

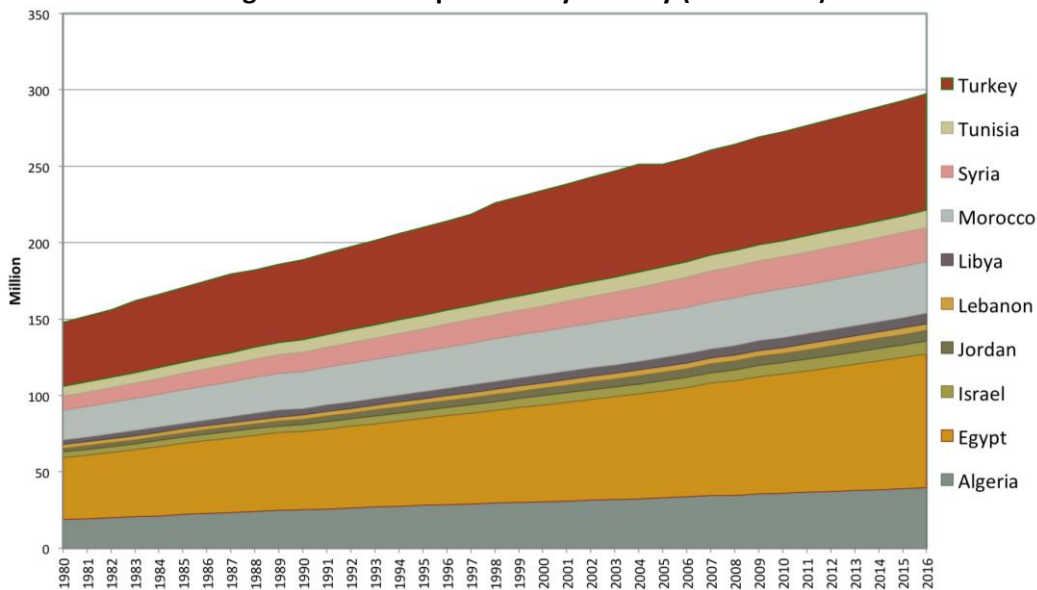
**Fig. 1: SEMCs - GDP by country (US\$ Billions, Constant prices)**



Data source: IMF World Economic Outlook Database, accessed June 2012.

During the last decade, SEMCs have grown not just in terms of GDP but also in terms of population. In fact, the population of the region has grown from 234 million people in 2000 to 277 million people in 2011<sup>15</sup>.

**Fig. 2: SEMCs - Population by country (1980-2016)**

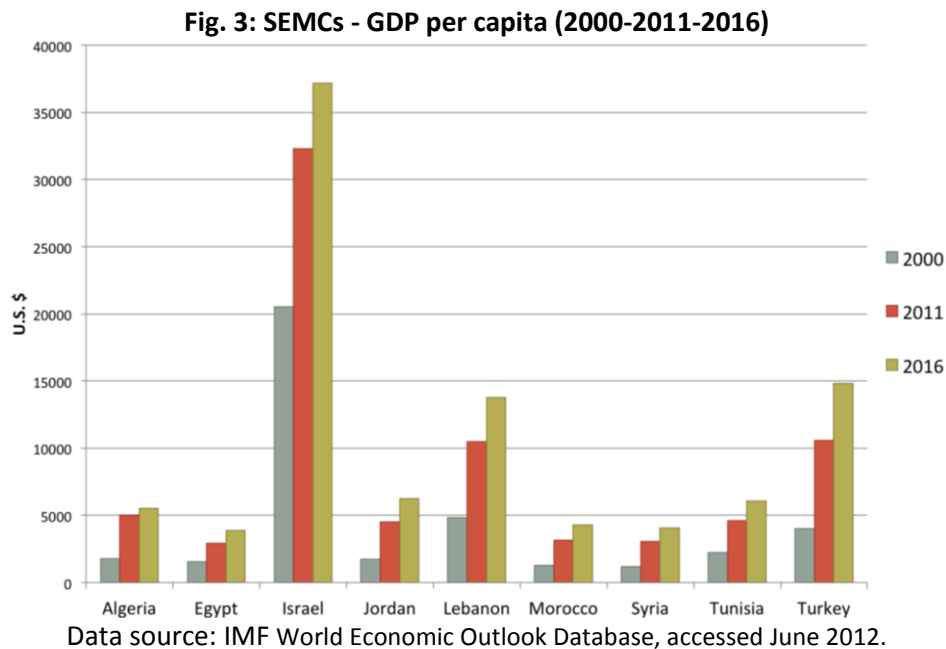


Data source: IMF World Economic Outlook Database, accessed June 2012.

Egypt and Turkey are the two most populous countries in the region and together they account for more than a half of the overall regional population. According to IMF forecasts, SEMCs overall population will continue to grow also in the near future, to reach 297 million people in 2016.

<sup>15</sup> *Ibidem*

Considering the various levels of GDP per capita among SEMCs it is possible to denote how Israel, Turkey and Lebanon present higher levels (in the case of Israel much higher) with respect to other countries in the region. According to IMF forecasts, over the period 2011-2016 Turkey's GDP per capita will grow with a CAGR of 7%, well above the regional average of 5%.



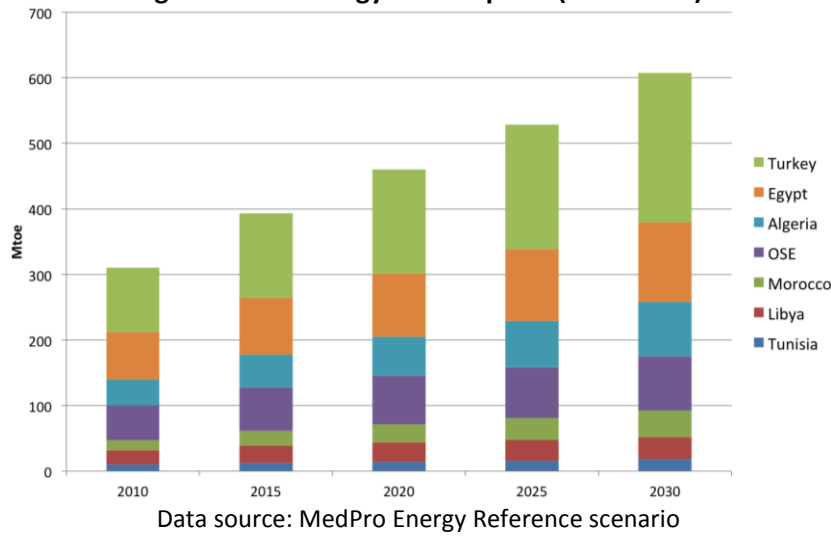
These three fundamental macroeconomic indicators -GDP, population and GDP per capita- exemplify the key position of Turkey in the regional economic landscape and represent an important element in order to understand the crucial role that the country plays -and will continue to play- in the Mediterranean region.

### ***3. Turkey: an energy hub in the Mediterranean energy crossroads?***

The rapid economic and demographic expansion forecasted for SEMCs will certainly have a substantial effect on the regional energy outlook. According to the MedPro Energy Reference scenario<sup>16</sup> SEMCs energy consumption will almost double over the next two decades, growing from 311 Mtoe in 2010 to about 600 Mtoe in 2030.

<sup>16</sup> The MedPro Energy Reference scenario has been developed by the Fondazione Eni Enrico Mattei in the framework of MedPro (Mediterranean Prospects), a project involving a consortium of 17 highly reputed institutions from throughout the Mediterranean region, funded under the EU's 7th Framework Programme and coordinated by the Centre for European Policy Studies, based in Brussels. The Reference scenario is based on a "bottom-up" approach and uses a disaggregation by sub-sector and source of energy. The data come mainly from national sources (Government and Ministries, energy utilities, other energy agencies) and international organizations such as the Plan Bleu with which the MedPro team has closely cooperated in developing this Reference scenario.

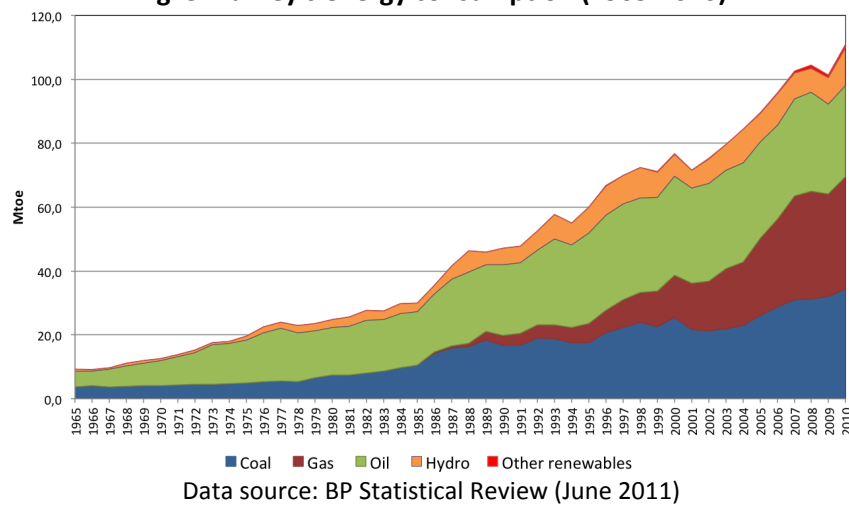
**Fig. 4: SEMCs energy consumption (2010-2030)**



Turkey has more than doubled its energy consumption between 1990 (47 Mtoe) and 2010 (110 Mtoe), becoming the first energy consumer country of the Southern Mediterranean (in 2010 Turkey represented the 31% of the overall regional energy consumption). As the country will likely see the fastest medium- to long-term economic expansion in the region, this share is set to increase steadily over the next two decades, to reach a level of 38% in 2030.

In 2010 Turkey's primary energy mix was: natural gas (35 Mtoe), coal (34 Mtoe), oil (29 Mtoe), hydro (12 Mtoe) and other renewables (1 Mtoe)<sup>17</sup>. The country does not own significant oil and gas reserves<sup>18</sup>, and it consequently imports 90% of its oil and 98% of its natural gas requirements. Because of this high level of energy dependency, security of supply is the government's main energy policy objective and for this reason Turkey has developed over the last years a broad framework of energy diplomacy with oil and gas producing countries in the region.

**Fig. 5: Turkey's energy consumption (1965-2010)**

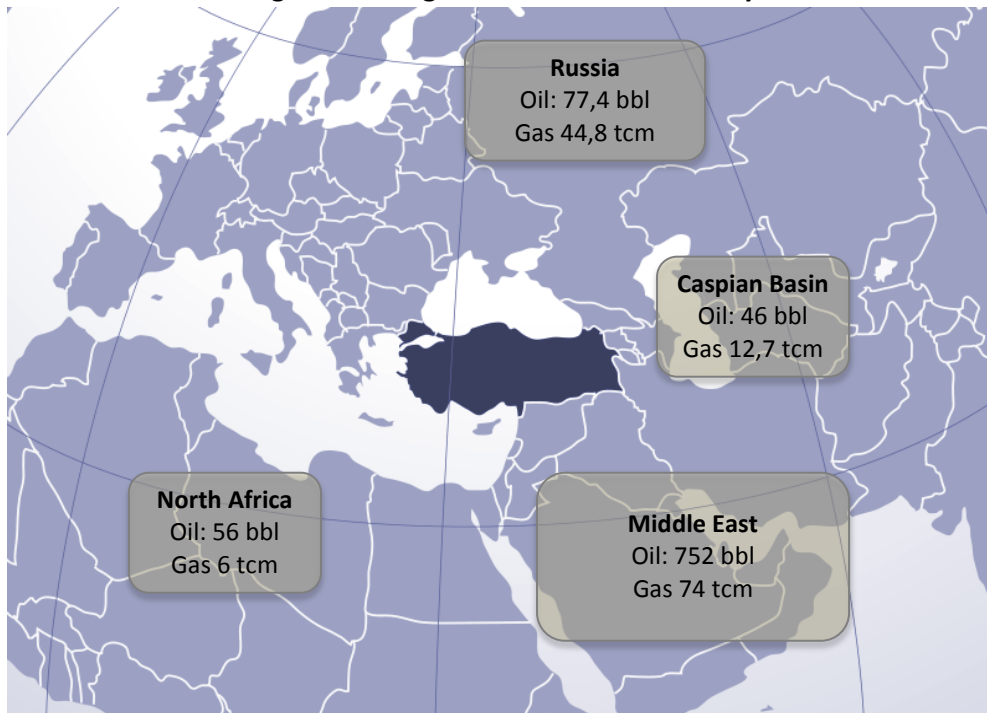


<sup>17</sup> BP Statistical Review, June 2011

<sup>18</sup> By contrast, Turkey is endowed with large reserves of lignite and high hydroelectric resources.

The major role of Turkey in the Southern and Eastern Mediterranean energy landscape is not only due to its market size but also to its unique geographic position. In fact, Turkey is placed at the centre of 68% of world's oil reserves and 75% of world's natural gas reserves<sup>19</sup>. This unique feature opens a number of opportunities to Turkey in terms of energy transit. In particular, the most important opportunity for the country seems to be related to natural gas. Both the prospects for the European gas demand and for gas production in supplier countries surrounding Turkey allow a bright future to be foreseen for Turkey as the regional natural gas hub.

**Fig. 6: Oil and gas reserves around Turkey**

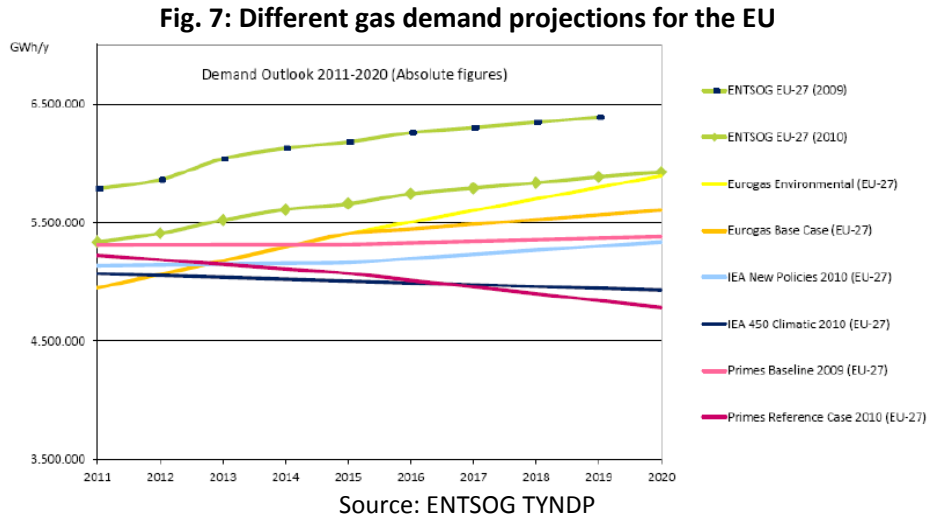


Data source: BP Statistical Review (June 2011)

#### ***4. Turkey: a key transit country in the future European gas market***

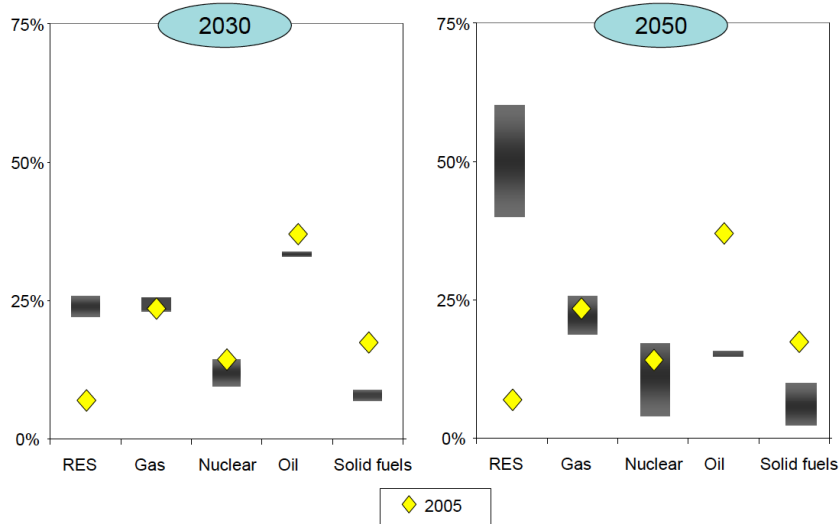
The long-term outlook for EU gas demand is characterized by two elements of uncertainty. The first is linked to the role of natural gas in the long-term European energy mix, and the second is related to the ambiguities about the EU gas production prospects (i.e. depletion of gas reserves in the UK, shale gas developments in Poland).

<sup>19</sup> See Annex - Oil and gas reserves around Turkey.



Notwithstanding this general long-term uncertainty, natural gas could well continue to play an important -and increasing- role in the European energy mix for some decades. The European Commission has recently stated on its Energy Roadmap 2050<sup>20</sup> that natural gas will be critical for the transformation of the energy system, foreseeing that medium-term European gas demand will stay high, especially in the power generation sector. Compared to other fossil fuels, natural gas is set to perform much better and it is expected to keep its 2005 share in primary energy consumption up to 2050 approximately constant in all decarbonisation scenarios.

**Fig. 8: EU Decarbonisation scenarios - 2030 and 2050 range of fuel shares in primary energy consumption compared with 2005 outcome (in %)**



While natural gas was the “fuel of choice” over the last two decades, it could become the “fuel of consequence” during the next two decades. With other alternatives all facing problems of their own (i.e. the nuclear renaissance, a very strong penetration of intermittent renewable energy sources, coal with carbon capture and storage (CCS)), it

<sup>20</sup> European Commission (2011), “Energy Roadmap 2050”, COM (2011) 885/2.



could well be that gas turns out to be the winner for some time to come, thus realizing the “golden age of gas”<sup>21</sup> recently predicted by the International Energy Agency<sup>22</sup>.

In 2010 about 80% of EU gas imports (330 bcm) derived from only three suppliers: Russian Federation (110 bcm), Norway (99 bcm) and Algeria (50 bcm)<sup>23</sup>. This heavy dependence on a few suppliers stimulated the European Commission to make the concept of diversification a cornerstone of its energy policy. This concept has been interpreted on its broader definition, including both diversification of suppliers and (because of the strong geopolitical issues related to gas infrastructure) diversification of transit countries. In particular, the European Commission has formally launched in 2008<sup>24</sup> the concept of the Southern Gas Corridor<sup>25</sup>, an initiative aimed to develop a natural gas transit from Caspian and Middle Eastern gas-rich regions to Europe, in order to ease the dependency on the natural gas imported from the Russian Federation.

The Caspian region is endowed with a considerable amount of proven gas reserves. In 2010 Turkmenistan held 8 tcm of proven gas reserves, followed by Kazakhstan (1.8 tcm), Uzbekistan (1.6 tcm) and Azerbaijan (1.3 tcm)<sup>26</sup>. However, the export potential of these countries is hindered by their landlocked geographical situation and by the fact that their gas system had been created under the Soviet era to supply Russia. As a result, being dependent on the Russian Federation for their gas exports to Europe, these countries would need either to have access to the Russian gas system under fair Third Parties Access (TPA) conditions, or to develop alternative routes such as a pipeline across the Caspian Sea. However, any pipeline under the Caspian is a delicate operation and considering its many technical and legal problems, to date it has not been possible to reach a full consensus on its feasibility<sup>27</sup>.

Both Turkmenistan and Azerbaijan have expressed several times in the recent past the availability of substantial gas volumes and a clear willingness to sell it to Europe. Over the last months, the EU has engaged in a regular dialogue with Azerbaijan and Turkmenistan, which figure among the key potential gas suppliers of the “Southern Energy Corridor”<sup>28</sup>. In this sense, the mandate accorded on September 12, 2011, by all

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<sup>21</sup> IEA (2011), *“Are we entering a golden age of gas?”*, Special report, Paris.

<sup>22</sup> According to the International Energy Agency, European natural gas demand will increase by 24% between 2009 and 2035, largely because of the power generation sector, the industry sector and the housing sector. The share of natural gas in the EU primary energy mix will thus increase from 25% in 2009 to 30% in 2035. However, in the case of the EU the fulfillment of the “golden age of gas” prophecy will mainly depend on the availability of Carbon Capture and Storage (CCS) technologies at large scale and to the signals that the EU will provide on future gas demand. For a broad discussion on the prospects of EU gas demand refer to: Tagliapietra S., Hafner M., Glachant J.M, De Jong J., Ahner N. (2012), *“A new EU gas security of supply architecture”*, Claeys & Casteels Publishing, Brussels.

<sup>23</sup> BP Statistical Review, June 2011.

<sup>24</sup> The idea of the “Southern Energy Corridor” was first officially proposed in the document *“Second Strategic Energy Review – An EU Energy Security and Solidarity Action Plan”* (COM/2008/781).

<sup>25</sup> See: Sartori N. (2011), *“The Southern gas corridor: needs, opportunities and constraints”*, Istituto Affari Internazionali, Roma.

<sup>26</sup> BP Statistical Review, June 2011

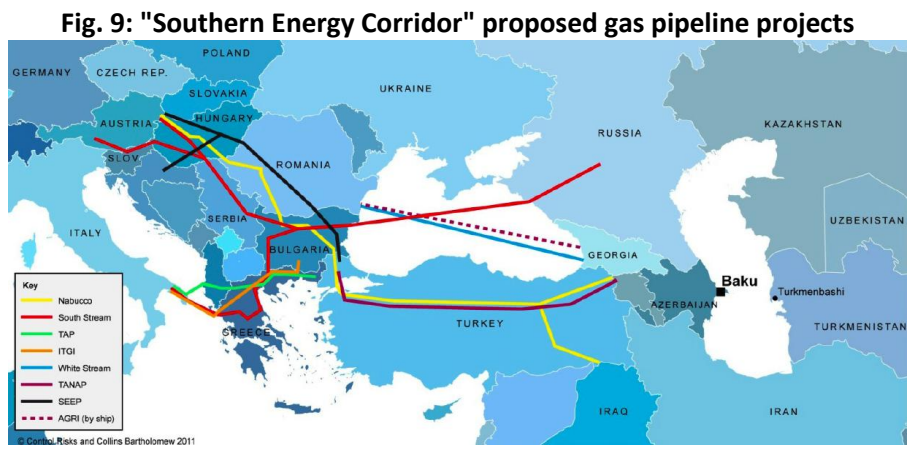
<sup>27</sup> There are two major views on this point among the Caspian Sea countries: (i) from Kazakhstan’s, Turkmenistan’s and Azerbaijan’s point of view, a trans-Caspian pipeline is a matter for the countries themselves who have contiguous subsea boundaries; (ii) from Russia’s and Iran’s point of view, such a pipeline cannot be built as it does not comply with the legal status of the Caspian Sea.

<sup>28</sup> However, it is also important to take into consideration that because of its historical background and its

27 EU Member States to the European Commission to negotiate a legally binding treaty between the EU, Azerbaijan and Turkmenistan to build a Trans Caspian Pipeline System, could represent a new and important step to strengthen relations between Turkmenistan and the EU and thus to reinforce the concept of the Southern Energy Corridor<sup>29</sup>.

While gas supplies from Turkmenistan, Kazakhstan (and eventually Iran and Iraq) could be considered as a long-term prospect for the Southern Gas Corridor, gas supplies from Azerbaijan are much more realistic and feasible in the medium-term. The core gas reserves of the country are located in Shah Deniz, a massive natural gas field situated in the Southern part of the Caspian Sea. The field covers approximately 860 sq. kms and has proven gas reserves estimated to 1000 bcm<sup>30</sup>. The project of Shah Deniz 2 will include an additional offshore gas platform, sub sea wells and expansion to the gas plant at Sangachal Terminal. This project will add 16 bcm to the current gas production, to be exported mainly to Turkey (10 bcm) and to the EU (6 bcm). The political decision of linking Azerbaijan to Europe represents a constant position of the Azeri government but if the EU will not be able to seize this opportunity, the country will start considering alternative routes for its natural gas<sup>31</sup>.

With regards to the gas exports from the region to Europe, there are several projects on the table: (i) TAP; (ii) TANAP; (iii) Nabucco West; (iv) SEEP; (v) AGRI; (vi) White Stream. With the exception of White Stream (a submarine pipeline across the Black Sea linking Georgia-Romania-Ukraine) and AGRI (a concept of Azerbaijan, Georgia and Romania to build an LNG chain across the Black Sea) all these projects share a common feature: direct or indirect transit through Turkey.



Source: Control Risks (2011)

relation with Russia, Turkmenistan is not used to dealing with markets but with states. For this reason Iran, China and India are partners with which the country could feel more at ease unlike an EU that, speaking with many voices, does not always represent a clear and unambiguous counterpart.

<sup>29</sup> European Commission (2011), "Press release. EU starts negotiations on Caspian pipeline to bring gas to Europe", IP/11/1023, 12/09/2011.

<sup>30</sup> See: <http://new.socar.az/socar/en/activities/production/shah-deniz>.

<sup>31</sup> As mentioned above, the European Commission's recent mandate to directly negotiate a treaty to build a Trans Caspian Pipeline System represents a major step forward for the relations between the EU and Azerbaijan.

(i) The Trans Adriatic Pipeline (TAP) is an 800 km-long gas pipeline designed to provide the missing link for gas transportation from Greece to Italy through Albania and the Adriatic Sea<sup>32</sup>. TAP would bring natural gas from the Shah Deniz field to the European market with an initial capacity of 10 bcm/year, expandable to 20 bcm/year. TAP is owned and actively supported by EGL of Switzerland with 42.5%, Statoil of Norway with 42.5% and E.ON Ruhrgas of Germany with 15%.

(ii) In December 2011, the governments of Turkey and Azerbaijan signed a Memorandum of Understanding to progress the construction of a new Trans Anatolian Pipeline (TANAP), which would carry gas up from the eastern border of Turkey to the western border, likely Bulgaria or Greece with a capacity of 16 bcm/year. The project is currently shared by the State Oil Company of Azerbaijan (SOCAR) -which holds an 80% stake in the project- and the Turkish state company BOTAS<sup>33</sup>. Further companies could farm into the TANAP project during 2012, although SOCAR will retain operatorship. In fact, this pipeline would be important for the Azeri company, as it would have a role in the delivery of gas from its Shah Deniz field further down the supply chain to Europe, rather than selling at its border. Initial cost estimates for the pipeline are US\$5 billion. Work has begun on the preparation of a feasibility study of the TANAP project. According to SOCAR, TANAP work is expected to begin by the autumn of 2012<sup>34</sup>.

(iii) Nabucco West is a proposed pipeline designed to bring Caspian gas from the Bulgarian-Turkish border to Baumgarten and beyond. Nabucco West is a modified concept of the Nabucco project. The concept foresees the construction of a 1.300 km pipeline that will run from the Bulgarian/Turkish border to the Central European gas hub<sup>35</sup>. The pipeline is designed to transport gas initially from Azerbaijan and is fully scalable to meet future gas transport demand from the Caspian Region and Middle-East to the European markets. Nabucco West has the advantage to benefit from the existing legal framework, namely the Intergovernmental Agreement, Project Support Agreements and third party access exemptions as the Nabucco base case and will follow exactly the same route on European Union territory<sup>36</sup>. The companies involved in the project are BOTAS (Turkey), Bulgargaz (Bulgaria), Transgaz (Romania), MOL (Hungary), RWE Dea (Germany) and OMV (Austria).

(iv) British Petroleum proposed in September 2011 the South East Europe Pipeline (SEEP), a 3,800 km-long infrastructure from eastern Turkey to Austria that would use existing pipelines, but would also need 1.000 km of new pipeline to be laid in different countries<sup>37</sup>. Through this pipeline Azerbaijan would be able to supply Europe with 10 bcm/year of natural gas, mainly from Shah Deniz Phase II. As pointed out by Soltanov (2012) "the combined advantages of its size, scalability, usage of existing gas infrastructure in Europe and direction, promises a more reasonable economic and

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<sup>32</sup> See: <http://www.trans-adriatic-pipeline.com/>

<sup>33</sup> Socor V. (2012), "The Trans-Anatolia Gas Pipeline and Its Continuation Options to Europe", Eurasia Daily Monitor, Vol. 9 Issue 70.

<sup>34</sup> Natural Gas Europe (2012), "TANAP work to begin by autumn", April 9.

<sup>35</sup> <http://www.nabucco-pipeline.com/>

<sup>36</sup> See: Petroleum Economist (2012), "Smaller Nabucco has a fighting chance", 28 March.

<sup>37</sup> Socor V. (2012), "South-East Europe Pipeline: a downsized Nabucco proposed by BP", Eurasia Daily Monitor Vol. 8 Issue 202.

political value for the Shah Deniz consortium, Azerbaijan, Turkey and Europe, while posing a bearable challenge to Russia. The SEEP seems to offer a greater value to a greater number of actors"<sup>38</sup>.

The development of one pipeline project rather than another will primarily depend on the Shah Deniz Consortium's decision, expected for mid-2013<sup>39</sup>. However, even if these various pipeline projects differ on their path, the transit throughout Turkey will be necessary in any case. Whatever will be the winning-project of the Southern Gas Corridor race, it is thus certain that it will contribute to the shift of the "center of gravity" of the regional gas transit from the north to the south of the Black Sea, allowing Turkey to become a key transit country in the future European gas market: a pivotal element in the architecture of supply for European gas security.

The potential role of Turkey as regional natural gas hub seems to be even more relevant if considering that an important geological reassessment of the hydrocarbon reserves of the Eastern Mediterranean area is ongoing (from the Egyptian Mediterranean offshore to the Israeli Levantine basin). If expectations are confirmed the area could become a world-class hydrocarbon province, consequently changing the geopolitical scenario of a region on which Turkey, also because of the still open-question of Cyprus, is active and influential. Moreover, Turkey is the country better placed, both in terms of geography and politics, to deal with Iran and Iraq. Also if the geopolitical situation in these countries remains unclear, it is probable that over the next two decades Europe will be forced to turn to these countries to meet its natural gas import needs. Even if Brussels often seems to be focused only on the issue of diversification from Russian gas supplies, there is another profound force that could potentially weaken the EU security of gas supply: Norway.

The second gas supplier of the EU (99 bcm in 2010<sup>40</sup>) has always been reliable, but some concerns are emerging about its capability to deliver its gas supply in the long-term. The country has not made a significant gas discovery since the discovery of the Ormen Langen field in 1997. According to different institutions, Norwegian gas production will peak in 2015-2020 and will then fall dramatically<sup>41</sup>. In this scenario it would be necessary for the EU to look at Iran (which owns the second largest gas reserves in the world) and Iraq (i.e. Iraqi Kurdistan) to meet its natural gas requirements. After years of under-exploitation, gas reserves of these countries would represent an enormous and unprecedented opportunity for European energy companies and for Turkey itself, given that it would see a further increase of its geostrategic importance as regional natural gas hub. Considering this perspective it is thus crucially important to analyze what are the relationships between Caspian and Middle Eastern gas producing countries and Turkey.

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<sup>38</sup> Soltanov E. (2012), *"The South East Europe Pipeline: Greater Benefit for a Greater Number of Actors"*, IAI Working Paper 12/02, Rome.

<sup>39</sup> Petroleum Economist (2012), "Smaller Nabucco has a fighting chance", 28 March.

<sup>40</sup> BP Statistical Review, June 2011.

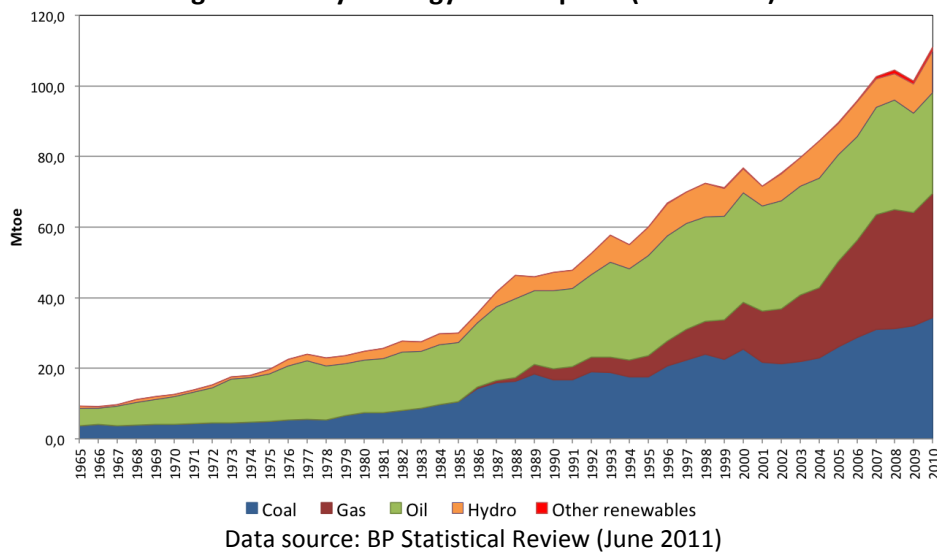
<sup>41</sup> According to the Global Energy Systems Center of the University of Uppsala, Norwegian gas production will peak at a range of 124-135 bcm a year in 2015-2020 and will then fall dramatically. According to the Norwegian Petroleum Directorate, Norwegian gas production will peak around 2020. At that time, annual gas production is estimated at between 105 and 130 bcm a year, while the production level after 2020 will largely be determined by new discoveries.

## 5. Turkish relationships with gas producing countries

Turkey's natural gas consumption began in the 1980s, gradually grew in the 1990s and boomed during the 2000s. Throughout this last decade the country's natural gas consumption increased by 130%<sup>42</sup>, making Turkey one of the fastest growing natural gas markets in Europe. In 2010, natural gas was the main component of Turkey's energy mix, followed by coal, oil, hydro and other renewables<sup>43</sup>.

This increase in natural gas consumption, together with the fact that Turkey does not have a significant domestic natural gas production<sup>44</sup>, explains how much important natural gas is not only for the country's energy security but also for the safety and the sustainability of its economic development.

**Fig. 10: Turkey's energy consumption (1965-2010)**



This importance is likely to increase in the future, as the government has planned to greatly develop electricity production from natural gas. According to Wood Mackenzie (2011) 11 GW of new gas-fired power generation capacity will come online between 2011 and 2030 in the country<sup>45</sup>. Coming to the geographical distribution of Turkey's gas supplies, in 2010 the country imported major volumes of natural gas from the Russian

<sup>42</sup> This impressive growth is due to the soar in electricity demand between 2000 and 2010. In particular, according to Enerdata gas-based power capacity increase from 7.5 GW in 2000 to 17 GW in 2010. In 2010 the power sector covered a share of 55% of Turkey's total gas demand.

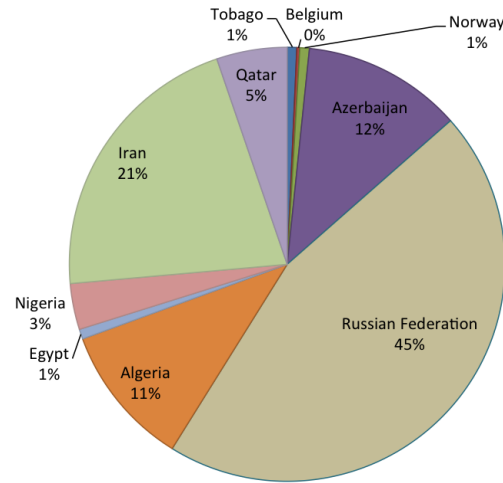
<sup>43</sup> According to the BP Statistical Review, in 2010 Turkey's energy mix was shared as follow: Natural gas (35 Mtoe); Coal (34 Mtoe); Oil (29 Mtoe); Hydro (12 Mtoe); Other renewables (1 Mtoe).

<sup>44</sup> According to Enerdata, Turkey's natural gas production in 2010 was 0,7 bcm. However, Turkey has a considerable shale gas potential, mainly located in the South-eastern area of the country. Shale exploration is at an early stage in Turkey, but it has increased significantly in the last year. In April 2010, TPAO and TransAtlantic Petroleum signed a Memorandum of Understanding (MOU) to undertake joint exploration activities across two licences; one in Southeast Turkey and one in the Thrace Basin. Later that year, TransAtlantic brought its own hydraulic fracturing (fracking) equipment into Turkey and started an extensive fracking programme covering wells in both the Thrace Basin and Southeast Turkey.

<sup>45</sup> Always according to Wood Mackenzie, such potential for strong gas-fired investment is indicated by the significant number of gas-fired generation licence applications received by the Turkish government in the past two years.

Federation (16,6 bcm), Iran (7,8 bcm), Azerbaijan (4,3 bcm), Algeria (3,9 bcm), Qatar (1,9 bcm) and minor volumes from Nigeria, Egypt, Tobago, Norway and Belgium<sup>46</sup>.

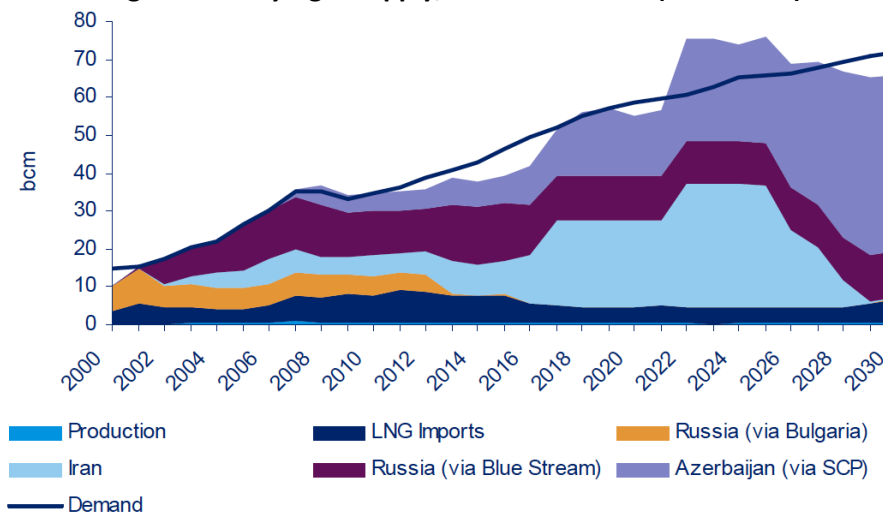
**Fig. 11: Turkey natural gas imports (2010)**



Data source: BP Statistical Review (June 2011)

According to Wood Mackenzie (2011), over the next decades Turkey will increasingly rely on gas supplies from Iran and Azerbaijan, consequently decreasing its high dependence on Russian gas supplies.

**Fig. 12: Turkey's gas supply/demand balance (2000-2030)**



Source: Wood Mackenzie (2011)

Considering the composition of Turkey's natural gas imports outlook and the aforementioned prospects related to the development of the Southern Gas Corridor, it is clear that Turkey's relations with gas producing countries such as Azerbaijan, Turkmenistan, Iran and Iraq will be critical not only for the future energy security of the country itself but also for the future of the EU security of gas supply.

<sup>46</sup> BP Statistical Review, June 2011.

### (i) Turkish relationship with the Caucasus and Central Asia

After the collapse of the Soviet Union a great wave of enthusiasm flooded the Western world with regard to the potential of Turkey to serve as a model for the new independent republics emerged in the Caucasus and Central Asia (the so-called "Turkic world"). Turkey was among the first countries to recognize the independence of these newborn states, establishing diplomatic relations and providing economic support. However, Turkey failed to play the role of "model-country" and the vacuum in the region was thus mainly filled by the Russian Federation. This failure was mainly due to the economic and political problems that plagued Turkey in the early 1990s<sup>47</sup> and to the Turkish mistaken conviction that relations with the area could be maintained without much effort because of the historical and ethnic ties. In fact, it is unquestionable that Turkey has deep-rooted historical and cultural ties with Caucasus and Central Asian republics but as Kumova and Albavrak (2011) pointed out, "the first (Turkish) initiatives towards the region were mainly based on emotions. Turkey emerged as a protective elder brother, which caused drawbacks over the long-run when the role was too much to deliver"<sup>48</sup>. Nevertheless, over the last decade Turkey's role in the region is rapidly changed, embarking the country in a process of renewed centrality in the area. As Aras and Akpınar (2011) pointed out: "The pivotal points in this process point to the rise of the AK Party, the beginning of the EU membership process, the restructuring of civil-military relations, democratic reforms overcoming the focus on security and the search for new markets for rising foreign trade and economic growth"<sup>49</sup>. In particular, Turkey pioneered the process of "The Summits of Turkic Speaking Countries' Heads of States", which has been held since 1992 in order to increase solidarity between the Turkic Speaking Countries and create new cooperation opportunities among them. This process has acquired an institutional structure in 2009 with the establishment of the Cooperation Council of Turkic Speaking States (CCTS)<sup>50</sup>. This organization seeks to consolidate mutual trust and confidence among its members, reinforcing political solidarity, improving economic cooperation and keeping a record of the history and cultural accumulation of the Turkic world. In particular, the organization seeks to

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<sup>47</sup> Until the 1980s Turkey was a closed economy with a strong interventionist economic model and starting with the 1990s Turkey experienced a boom-bust growth model which suffered from chronic macroeconomic instability. The liberalisation begun in the 1980s was not accompanied by sound macroeconomic policies or an adequate strengthening of the institutional and regulatory framework, in particular of the banking sector. As a result, the 1990s were marked by volatility which culminated in the 2000/2001 economic crisis. That crisis at last induced Turkey to revamp its political and democratic institutions and economic structures. For a more detailed discussion of this point refer to: Macovei M. (2009), "Growth and economic crises in Turkey: leaving behind a turbulent past?", Economic Papers 386, European Commission, Brussels.

<sup>48</sup> Kumova C., Albavrak A. (2011), "Turkey seeks to institutionalize relations with Turkic republics", Today's Zaman, 9 October.

<sup>49</sup> Aras B., Akpınar P. (2011), "The relations between Turkey and the Caucasus", Perceptions, SAM (Centre for Strategic Research), Volume XVI, Number 3, Ankara, p. 65.

<sup>50</sup> The two main Cooperation Council of Turkic Speaking States (CCTS) documents are the Nakhcivan Agreement of 3 October 2009 and the Istanbul Declaration of 16 September 2010. The Preamble of the Nakhcivan Agreement reaffirms the common will of its member States to adhere to the purposes and principles enshrined in the United Nations Charter and encapsulates the objective of CCTS as further deepening the comprehensive cooperation among Turkic speaking states, as well as making joint contributions to peace and stability in its region and the world. Cooperation under CCTS is based on the particular solidarity stemming from the unity of common history, culture, identity and language of Turkic speaking peoples.

promote common positions on foreign policy issues and to create favorable conditions for trade and investment<sup>51</sup>. To date the CCTS has four members (Turkey, Azerbaijan, Kazakhstan and Kyrgyzstan) as Turkmenistan and Uzbekistan have not yet joined the organization<sup>52</sup>. The CCTS has established the Turkic Business Council<sup>53</sup>, an initiative aimed at improving the investment climate and economic relations among its members. A number of other initiatives are also being implemented: the Transportation Corridors Administration Agency of Turkic Speaking States, the Turkic Scientific Research Fund, the Development Fund of Turkic Speaking States, the Joint Arbitration Court of Turkic Speaking States and the Turkic Inter-university Union. This wide range of initiatives demonstrate how Turkey has left an emotive approach to the region in favor of a more pragmatic approach based on economic and technical cooperation issues<sup>54</sup>.

In particular, the bilateral relations between Turkey and Azerbaijan remains the strongest in the area, despite a short-term cooling caused by an Armenian-Turkish effort to normalize their bilateral relations, an idea strongly opposed by Azerbaijan<sup>55</sup>. Economic relations between Turkey and Azerbaijan are steadily growing, as regular mutual high-level visits continue<sup>56</sup>. In 2010 the total trade volume between the two countries reached US\$ 2.4 billion, as Turkey exported to Azerbaijan US\$ 1.5 billion of industrial goods and imported US\$ 865 million of mining products, including oil and natural gas<sup>57</sup>. According to the Turkish Ministry of Foreign Affairs, over 800 Turkish companies operate in Azerbaijan, mainly in the building sector. The two economies present complementary features and for this reason it is possible to consider economic relations between Turkey and Azerbaijan as mutually beneficial and based on a win-win situation<sup>58</sup>. With regard to the field of energy, in mid 2001 BOTAS and Azerbaijan's state oil company SOCAR signed a deal for the supply of gas from the Shah Deniz field to Turkey. The contract was delayed to 2007 because of over-supply concerns. Gas flow to Turkey commenced through Georgia along the 670 km South Caucasus Pipeline (a

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<sup>51</sup> See the institutional website: <http://www.turkkon.org/eng/>

<sup>52</sup> According to Kanbolat (2011), "Uzbekistan seems determined not to join in any organization where Turkic identity is emphasized. This attitude of non-participation is consistent with Uzbekistan's policy of isolation and alienation under President Islam Karimov".

<sup>53</sup> See: "Agreement on the establishment of the Joint Business Council of Turkic Speaking States", available online: <http://www.turkkon.org/uploads/>

<sup>54</sup> With regard to the Turkish-Turkic republics relations, Bulent Aras (Chairman of Center for Strategic Research - SAM) recently stated: "We have developed a fresh perspective in our relations; more cooperation is sure to come in the future".

<sup>55</sup> In particular, the most controversial foreign policy issue for Azerbaijan is represented by the Nagorno Karabakh conflict. See: Mikhelidze N. (2010), "The Azerbaijan-Russia-Turkey Energy Triangle and its Impact on the Future of Nagorno-Karabakh", Documenti IAI 10/18, Rome.

<sup>56</sup> On the occasion of the visit of the President of Turkey Abdullah Gül to Azerbaijan in August 2010, the "Agreement on Strategic Partnership and Mutual Assistance" was concluded between the two countries. On the margins of 10th Summit of the Heads of State of Turkic-Speaking Countries held in Istanbul in September 2010, a "Joint Statement on the establishment of High Level Strategic Cooperation Council" was signed by the President of Azerbaijan Ilham Aliyev and the Prime Minister of Turkey Recep Tayyip Erdoğan. These documents have consolidated the legal basis for bilateral relations to further develop and deepen. See: <http://www.mfa.gov.tr/relations-between-turkey-and-azerbaijan.en.mfa>

<sup>57</sup> Data source: Turkish Ministry of Foreign Affairs. See: <http://www.mfa.gov.tr/relations-between-turkey-and-azerbaijan.en.mfa>

<sup>58</sup> See: Gasimli V. (2012), "Azerbaijan-Turkish economic cooperation: win-win situation", Center for Strategic Studies under the President of the Republic of Azerbaijan, 27 February.



similar route to its oil counterpart, Baku-Tbilisi-Ceyhan)<sup>59</sup> and in 2010 Azerbaijan supplied Turkey with 4.3 bcm of natural gas<sup>60</sup>. In June 2010 the energy ministers of the two countries<sup>61</sup> signed three natural gas supply deals with which Turkey will import a volume of gas up to 12 bcm/year from the Shah Deniz field. The deal also set the terms for the transit of Azerbaijani gas to Europe and addressed price adjustments for the gas for Turkey<sup>62</sup>.

This deal with Azerbaijan put on hold the MoU signed in May 1999 between Turkey and Turkmenistan for the supply of 16 bcm/year to the Turkish domestic market and another 14 bcm/year to be transported to Europe. In the future, gas from Turkmenistan will likely flow through the South Caucasus Pipeline to the Turkish border, after which it would connect with other pipeline into Europe. Turkish companies are also very active in Turkmenistan. According to the Turkish Ministry of Foreign Affairs about 600 Turkish companies are registered in Turkmenistan<sup>63</sup>.

#### (ii) Turkish relationship with Iran and Iraq

The Turkish relationship with Iran has historically been volatile and characterized by alternative phases of rivalry and cooperation. Over the last decades the dialectic between Iranian Islamism and Turkish secularism, the Kurdish question and the Turkish ties with the United States and Israel have had a negative impact on the relationship between the two countries. However, this relationship has undergone a considerable change with the new foreign policy embraced by Turkey since 2002. Over the last years the two countries have progressively put aside deep-rooted ideological differences, focusing on much more pragmatic economic and trade issues. On one side Turkey has a strong economic interest in Iran as it is its second supplier of natural gas and it represents a vast market for the export of Turkish manufactured goods<sup>64</sup>. On the other side, Iran has a strong economic interest on Turkey, as the country represents a huge market for its hydrocarbon exports and also because Iran is using the Turkish banking and finance industry to complete financial transactions for trade deals. When strong Western sanctions kick in against Iran's central bank, Iran wants to count on Turkish financial institutions in transactions with Iranian trading partners. In fact, according to the Turkish Union of Chambers and Commodity Exchanges (TOBB), only in 2011 about 590 Iranian companies were established in Turkey. Moreover, sanction-hit Iranian banks line up to enter the Turkish financial market<sup>65</sup>. Over the last years the two countries have established a solid legal framework for their economic and trade relations, signing an agreement on reciprocal promotion and protection of investments, an agreement on avoidance of double taxation and an agreement on cooperation and

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<sup>59</sup> WoodMackenzie (2011), "Energy Market Service. Country report for Turkey", Report created on January 2011, p. 19.

<sup>60</sup> BP Statistical Review, June 2011.

<sup>61</sup> The signing ceremony was also attended by Turkish Prime Minister Recep Tayyip Erdoğan and Azerbaijani President Ilham Aliyev, along with executives of the state-owned Turkish Pipeline Corporation (BOTAS) and the State Oil Company of the Azerbaijan Republic (SOCAR).

<sup>62</sup> See: "Turkey, Azerbaijan pen three strategic deals on Caspian gas", Today's Zaman, 8 June 2010.

<sup>63</sup> Turkish private engagement in the country is concentrated in the building and textile sectors.

<sup>64</sup> As machinery, motor vehicles, iron and steel products, boilers, electric devices, tobacco products.

<sup>65</sup> See: Baysal E. (2012), "Sanction-hit Iranian banks line up to enter Turkish financial market", in Today's Zaman, April 25.

mutual assistance in customs matters. The overall Turkey-Iran trade volume reached a level of US\$ 10,7 billion in 2010<sup>66</sup>.

Energy is the cornerstone of this relationship. Iranian natural gas and oil exports to Turkey amounted to US\$ 7,6 billion in 2010. Iran, the second largest gas reserve holder in the world with 30 tcm of proven reserves<sup>67</sup>, signed a 22-year supply deal with Turkey in 1996, with first deliveries of 3 bcm/year from 1999 before reaching a plateau volume of 10 bcm/year in 2005<sup>68</sup>. Due to delays in constructing the required infrastructure in Turkey and the lack of distribution infrastructure in the east of the country, BOTAS was not ready to receive the gas before December 2001, when the 2.377 km-long pipeline from Tabriz in Iran to Ankara was completed. The pipeline has a capacity of 13 bcm, which the Iranian Government intends to increase to 22.6 bcm in 2016 and to 32.5 bcm by 2021<sup>69</sup>. However, gas import from Iran has not been reliable, as PKK militants have blown up the pipeline on several occasions<sup>70</sup>. Iran agreed to revise the contract to 3.5 bcm deliveries in 2001 rising to 10 bcm by 2007. The contract has been extended to cover 25 years and total volumes to be delivered under the contract have increased from 192 bcm to 228 bcm<sup>71</sup>. The supply agreement between Iran and Turkey is currently being blocked by ongoing negotiations over gas pricing<sup>72</sup>. However, as Kinnander (2010) pointed out: "Even though developing the gas relationship between Turkey and Iran faces many obstacles, Turkey seems very keen to pursue and finalise this contract. This can to a large extent be explained by the new Turkish zero-problem policy towards its neighbours and its desire to develop stronger relations with them"<sup>73</sup>. Furthermore, the United States continues to put pressure on the Turkish government to avoid dealing with Iran, as they believe it will undermine diplomatic efforts to halt Iran's nuclear program. In fact, Turkey does not oppose the Iranian nuclear program, as it considers - paraphrasing Turkish Prime Minister Erdoğan- that "no one has the right to impose anything on anyone with regards to nuclear energy, provided that it is for peaceful purposes"<sup>74</sup>. This controversial point, together with the wider issue of US influence over the Turkish energy policy, remains an important element to take into consideration in the analysis of Turkish-Iranian gas relationship.

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<sup>66</sup> Data source: Turkish Ministry of Foreign Affairs. See: [http://www.mfa.gov.tr/turkey\\_s-commercial-and-economic-relations-with-iran.en.mfa](http://www.mfa.gov.tr/turkey_s-commercial-and-economic-relations-with-iran.en.mfa)

<sup>67</sup> BP Statistical Review, June 2011

<sup>68</sup> For a wider discussion of Turkish-Iranian gas trade refer to: Kinnander E. (2010), "The Turkish-Iranian gas relationship", Natural Gas Paper Series n. 38, Oxford Institute for Energy Studies, Oxford.

<sup>69</sup> WoodMackenzie (2011), "Energy Market Service. Country report for Turkey", Report created on January 2011, p. 37.

<sup>70</sup> Reuters (2007), "Iran-Turkey pipeline blast cuts gas flow -source", September 10.

<sup>71</sup> *Ibidem*, p. 40.

<sup>72</sup> Today's Zaman (2012), "Price of 1000 cubic meters of Iranian gas exceeds \$500", April, 2.

<sup>73</sup> Kinnander E. (2010), "The Turkish-Iranian gas relationship", Natural Gas Paper Series n. 38, Oxford Institute for Energy Studies, Oxford, p. 19.

<sup>74</sup> Today's Zaman (2012), "Turkey offers help with Iranian nuke talks, refutes imposition", March, 28. In another occasion Erdoğan stated: "Iran's religious leader, Ayatollah Ali Khamenei, says openly and clearly that weapons of mass destruction are not acceptable according to 'fiqh' and shariah. If he says that, I cannot then claim that Iran is developing nuclear weapons. Don't they have the right to a nuclear program for peaceful purposes?", see: Hurriyet Daily News (2012), "Turkey switches from Iranian to Lybian oil", March, 31.

The Turkish relationship with Iraq is also increasing, as growing trade and energy ties are enhancing the interdependence between the two countries. Turkey is the largest commercial investor in Iraq, with more than 120 companies working in the country<sup>75</sup>. The trade volume between Turkey and Iraq reached a level of US\$ 6 billion in 2010, up from US\$ 940 million in 2003<sup>76</sup>. In particular, the flourishing Iraqi construction sector accounts for the lion's share of Turkey-Iraq trade volumes<sup>77</sup>. This sector is set to further grow in the future, as the reconstruction of Iraq will continue. Natural gas will likely play a key-role in the future relations between the two countries. On one hand, Iraqi gas is particularly important for Turkey, as it could be connected to the Turkish national network through a pipeline to be constructed parallel to the Kirkuk-Ceyhan oil pipeline, consequently further diversifying Turkish natural gas suppliers. On the other hand, Turkey is crucial for Iraq, as any natural gas export from Iraq to Europe will necessarily transit via Turkey. In 1996 the first agreement was signed for the construction of an Iraq-Turkey natural gas pipeline, a project currently on hold. Moreover, in August 2007 Turkey and Iraq signed a Memorandum of Understanding in order to supply Iraqi natural gas to Turkey and via Turkey to Europe. Turkey's Energy Minister Taner Yildiz recently declared that "Turkey plans to build a power plant on the Iraqi border to sell electricity to Iraq in return of natural gas, and it is making important steps to import natural gas from Iraq"<sup>78</sup>.

Turkey is increasingly attracted by the natural gas reserves of Iraqi Kurdistan, as recent explorations have confirmed that between 2,8 and 5,6 tcm of natural gas reserves are located in the region. Once established, Kurdistan's gas reserves would first be exploited to fuel new power plants in the region. In fact, the Kurdistan Regional Government (KRG) has already more than tripled its 2015 target for installed gas-fired generating capacity. However, the region's gas potential seems to be so large that the only way to fully monetize it will be to develop export capacity. Turkey will consequently be the natural direction for gas exports from the region to Europe. In this sense, KRG Natural Resources Minister Ashti Hawrami declared in November 2011 that "If Nabucco or another Southern Corridor route does not materialize in time, we will consider an LNG plant in Ceyhan. We have the gas and we cannot wait for another five, 10 years to come up with plans"<sup>79</sup>. However, the relationship between Iraq's federal government in Baghdad and the KRG in Erbil, at odds over oil rights and export payments and the broader question of power-sharing, will complicate export efforts. Turkey's Energy Market Regulatory Authority (EPDK) estimates that gas imports from Iraq would start at 700 mcm/year in 2014, plateau at 3 bcm/year from 2017-31 and peak at 3.2 bcm/year in 2033<sup>80</sup>. Considering the importance of this relation, over the last years Turkey has worked to strengthen its alliance with the KRG<sup>81</sup>, embarking on a cooperation path that could be greatly beneficial for both parties.

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<sup>75</sup> Source: Turkish Ministry of Foreign Affairs

<sup>76</sup> See: Turunc H. (2011), "Turkey and Iraq", in LSE Ideas, "Turkey's global strategy", London, p. 40.

<sup>77</sup> *Ibidem*, p. 42.

<sup>78</sup> Hurriyet Daily News (2012), "Turkey to swap electricity for gas", April 14.

<sup>79</sup> World Gas Intelligence (2011), "Iraqi Kurdish gas sector springs to life", November, 16.

<sup>80</sup> World Gas Intelligence (2012), "Turkey eyes Iraqi gas", April, 4.

<sup>81</sup> Today's Zaman (2012), "KRG leader Barzani visits Turkey as alliance with Iraqi Kurds deepens", April, 18.

(iii) Turkey in the new Eastern Mediterranean

The Eastern Mediterranean area is rapidly changing both in terms of energy and geopolitics. A recent exploratory activity in the offshore area between Israel and Cyprus has confirmed major natural gas finds that could radically change the energy outlook of the region. Israel's Natural Gas Authority estimates that these offshore gas resources could reach 1.3 tcm within the next few years<sup>82</sup>. A large natural gas field with estimated reserves at 453 bcm -the so-called "Leviathan field"- has been discovered in offshore Israel in late 2010. Successively in September 2011 another natural gas field with 140-226 bcm of estimated reserves<sup>83</sup> -the so-called "Aphrodite field"- has been discovered in offshore Cyprus. Turkey, which has constantly opposed the exploration for hydrocarbons in Cyprus until reunification talks between the Republic of Cyprus and the Turkish Republic of Northern Cyprus (TRNC) have been concluded, reacted to this drilling activity in offshore Cyprus by sending its own exploration vessel to the area and warning its navy and air force would keep constant watch<sup>84</sup>. Shortly after offshore drilling started, Turkey started geological surveys in offshore northern Cyprus. In November 2011, the Turkish Petroleum Company (TPAO) signed a Petroleum Services and Production Sharing Contract with TRNC to progress exploration around Cyprus<sup>85</sup> and in April 2012 the exploratory drilling started<sup>86</sup>, further boosting the dispute over who is entitled to the Mediterranean island's potential hydrocarbon resources<sup>87</sup>. Turkey doesn't recognize Greek Cyprus as a sovereign country and insists that the Greek Cypriot search flouts the rights of Turkish Cypriots to any gas generated wealth while undermining negotiations to reunify the island<sup>88</sup>. Moreover, these natural gas discoveries come in the worst moment for Turkey-Israel relations, further complicating the geopolitical equilibrium of the area. Given the economic and strategic relevance of these issues, a period of turbulence is foreseeable in the area. However, among a number of uncertainties one thing is certain: the key-role that Turkey will play in either resolving or worsening the situation.

***Conclusion: the urgency of a new EU-Turkey energy cooperation***

This paper, presenting a wide range of issues related to the role of Turkey in the new Mediterranean, has tried to provide a comprehensive framework of understanding of the growing strategic relevance of Turkey for both the European Union and the overall Mediterranean region. In particular, after a necessary preliminary discussion of the role of Turkey in North Africa after the Arab Spring and its place among SEMCs in macroeconomic terms, the paper has focused on Turkey's future prospects as the regional natural gas hub. This should trigger a process of economic and social cooperation between the EU and Turkey and consequently within the overall Mediterranean region. The series of data elaborated in the paper has confirmed this assumption.

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<sup>82</sup> Enerjienergy (2012), "Energy fights anew", March, 23.

<sup>83</sup> Source: Noble Energy Inc.

<sup>84</sup> Euronews (2011), "Cyprus, Turkey and Israel wresle over gas", November, 23.

<sup>85</sup> Wood Mackenzie

<sup>86</sup> International Oil Daily (2012), "Turkey drills in North Cyprus", April, 27.

<sup>87</sup> Today's Zaman (2012), "Turkey's TPAO starts oil, natural gas search in northern Cyprus", April, 26.

<sup>88</sup> *Ibidem*

In 2010 about 80% of EU gas imports derived from only three suppliers: Russian Federation, Norway and Algeria. This heavy dependence on such a few suppliers stimulated the European Commission to make the concept of diversification a cornerstone of its energy policy. In particular, the European Commission has formally launched in 2008 the concept of the Southern Gas Corridor, an initiative aimed to develop a natural gas transit corridor from Caspian and Middle Eastern gas-rich regions to Europe, in order to ease the dependency on the natural gas imported from the Russian Federation. This natural gas corridor is currently being designed, as there are a number of different infrastructure projects on the table. However, even if these various pipeline projects differ on their path, the transit throughout Turkey will be necessary in any case. Whatever will be the winning-project of the Southern gas corridor race, it is thus certain that it will contribute to the shift of the "center of gravity" of the regional gas transit from the north to the south of the Black Sea, allowing Turkey to become a key transit country in the future European gas market: a pivotal element in the European gas security of supply architecture.

Since 2002 Turkey has undertaken a new foreign policy that has progressively put aside deep-rooted ideological differences with its neighbours focusing on much more pragmatic economic and trade issues. In particular, natural gas has been the cornerstone of these new pragmatic relations between Turkey and Central Asian and Middle Eastern countries such as Azerbaijan, Turkmenistan, Iran and Iraq. Moreover, Turkey has a role of crucial importance in the Eastern Mediterranean, an area rapidly changing both in terms of energy and geopolitics that has the potential to become a world-class natural gas province.

Considering all these factors, it becomes evident that over the next years Turkey will progressively become a crucial element both for the EU energy security and for the Mediterranean integration process. For this reason, the EU should develop a new energy cooperation scheme with Turkey. The first priority of such a scheme should be market integration, both for natural gas and electricity. The EU, through various initiatives such as INOGATE<sup>89</sup>, MEDREG<sup>90</sup> and Energy Community, has already undertaken some steps in this direction but without significant results. In particular, Turkey still maintain the status of "Observer country" within Energy Community, the institution established in 2005 with the objective of extending the *acquis communautaire* on electricity, gas,

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<sup>89</sup> INOGATE is a programme created by the EU in the 1990s in order to support energy infrastructure and development in the following countries: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Turkey, Turkmenistan, Ukraine and Uzbekistan. Although initially mainly concerned with oil and gas pipelines, all the participating countries agreed that a closer cooperation on wider energy issues would be in their mutual interests. This dialogue was embodied in 2004 with the 'Baku Initiative', which identified four priority areas for energy policy cooperation: energy market convergence, enhancing energy security, sustainable energy development and investment attraction. See: <http://www.inogate.org/>.

<sup>90</sup> MEDREG is the association of energy regulators for electricity and gas of the Mediterranean countries. The association is supported by the EU and is aimed at promoting clear, stable and harmonized legal and regulatory frameworks in the Mediterranean area. The main objectives of MEDREG are to facilitate the development of investments, infrastructures and interconnections, in order to support greater efficiency and integration of energy markets based on secure, safe, cost-effective and environmentally sustainable energy systems in the Mediterranean basin. MEDREG action will result in consolidation of the network of EuroMed energy regulators and implementation of minimum competences and organisational structure of Euro-Mediterranean Regulatory Authorities.

renewables, environment and security of supply to South East Europe and beyond<sup>91</sup>. The EU-Turkey cooperation on this point is still not adequate, and for this reason on February 9, 2012 the European Commission announced that EU and Turkish officials are to develop a joint roadmap by May 2012 for increasing cooperation in the energy sector. According to the Commission “both sides underlined the importance of opening the energy chapter (of the accession negotiation process). The closer cooperation on energy forms part of the comprehensive positive agenda, complementing and building on the accession process and not replacing it”. This high-level political commitment, if positively translated into facts, could change the course of EU-Turkey energy cooperation and -consequently- serve as a stimulus for the overall EU-Turkey relations.

The second priority of a new EU-Turkey energy cooperation scheme should point to the development of renewable energy. There is an enormous renewable energy potential (particularly solar) among SEMCs, to which Turkey could greatly contribute in terms of technology transfer and manufacturing know-how. Turkey’s involvement in the Union for the Mediterranean, an institutional framework that strongly supports large-scale renewable energy projects such as the Mediterranean Solar Plan and Desertec, offers a great opportunity for energy cooperation both between the EU and Turkey and within the overall Mediterranean region. Such large-scale renewable energy projects could greatly contribute to the economic development of the overall Mediterranean region, and also to its social and political stability.

In fact, as Turkish Minister of Foreign Affairs Ahmet Davutoğlu once wrote: “There is always an intimate relationship between large-scale economic interaction and a stable political order”<sup>92</sup>.

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<sup>91</sup> See: Energy Community (2011), "Energy Community Regulatory Board. Annual report 2010", ECRB Section Energy Community Secretariat, Vienna.

<sup>92</sup> Ahmet Davutoğlu (2012), “*Global governance*”, Vision papers series n. 2, Republic of Turkey Ministry of Foreign Affairs Center for Strategic Research, Ankara.

*Annex - Oil and gas reserves around Turkey*

<b>Oil and gas reserves around Turkey</b>		
	<b>Oil</b> <i>Thousand million barrels</i>	<b>Gas</b> <i>Trillion cubic meters</i>
<b>North Africa</b>		
Algeria	12,2	4,5
Tunisia	0,4	-
Libya	46,4	1,5
Egypt	4,5	2,2
Syria	-	0,2
<i>Subtotal</i>	<i>59</i>	<i>6</i>
<b>Middle East</b>		
Saudi Arabia	264,5	8
Yemen	2,7	0,5
Oman	5,5	0,7
UAE	97,8	6
Qatar	25,9	25,3
Kuwait	101,5	1,8
Iraq	115	1,8
Iran	137	29,6
Syria	2,5	0,3
<i>Subtotal</i>	<i>752,4</i>	<i>74</i>
<b>Caspian Region</b>		
Azerbaijan	7	1,3
Kazakhstan	39,8	1,8
Turkmenistan	0,6	8
Uzbekistan	0,6	1,6
<i>Subtotal</i>	<i>48</i>	<i>12,7</i>
<b>Northern Eurasia</b>		
Russian Federation	77,4	44,8
<b>Total</b>	<b>936,8</b>	<b>139,9</b>
World	1383,2	187,1
Ratio total/world	68%	75%

Data source: BP Statistical Review (June 2011)

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