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## The “energy security question” in the Eastern Mediterranean: Understanding the recent tensions (Part 1)

Vasileios P. Karakasis, Project Lead, Cyprus Issue Project @BridgingEurope

Cyprus Issue Project Working Paper, No. 7



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#### **The “energy security question” in the Eastern Mediterranean: Understanding the recent tensions (Part 1)**

**Vasileios P. Karakasis**

#### **Introduction**

On 11.2.2014 a Joint Declaration was signed by Nikos Anastasiades, the President of the Republic of Cyprus and Dervis Eroglu, the Turkish-Cypriot leader. This document was laying certain “ground-rules” upon which the stalled peace talks aiming at the island’s reunification could be revived. This event was warmly welcomed by certain international actors, long involved (even to a different extent) in the conflict. The EU, the US and the UN claimed that they were foreseeing in this declaration the open avenues for a final settlement. The discovery of new energy sources in the Eastern Mediterranean, and especially offshore the RoC, was believed to provide sufficient incentives to overcome the Cyprus intractable conflict. Gas was presented as the big game-changer and as a potential catalyst for a restart of the peace process, and possibly for its successful conclusion.

Eight (8) months later this optimistic picture does not seem evident in the short-term horizon. Two weeks ago, a Turkish NAVTEX (navigational warning) notified mariners that Turkey would soon perform its seismic surveys in sea areas that encroach on Cyprus’s EEZ. Nicos Anastasiades asked UN Secretary-General, Ban Ki-Moon, to dissuade Turkey from violating Cyprus’s EEZ. Furthermore, he announced that he would not participate in further talks with the Turkish Cypriot leader DerviŞ Eroğlu, as

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long as Turkish activities, which he deemed unlawful and threatening, continued offshore<sup>1</sup>.

The above mentioned incidents have not emerged unexpectedly. To comprehend that these events have not appeared out of the blue, readers should be provided with a detailed background—an insight on how the flow between energy and power politics displays in the Eastern Mediterranean, a region riven by long-standing conflicts.

To this effect, it is necessary first to give an overall picture and to explain the importance of ‘energy security’ in the contemporary public policy agenda. It is imperative to understand why energy is political by its very nature and why the exploitation of natural gas reserves exerts a significant influence on international relations in general<sup>2</sup>. Bearing this in mind and reading into the recently enriched literature and policy briefs, the paper conveys that energy security is a concept whose meaning is subject to various interpretations. For the sake of this analysis and for the “operationalization” of this concept, it adopts two indicators: availability and accessibility. Availability of gas reserves will be analyzed in this paper while the accessibility, which is a much more complicated indicator, entailing different variables, will be presented in the forthcoming paper.

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<sup>1</sup> Leigh M. (10.10.2014) “Why is Turkey increasing tensions in the Eastern Mediterranean?” *German Marshal Fund*, Washington DC <http://blog.gmfus.org/2014/10/10/why-is-turkey-increasing-tensions-in-the-eastern-mediterranean/>

<sup>2</sup> Leigh M. (2014) “Energy- A Geopolitical Game Changer?” in *The International Spectator: Italian Journal of International Affairs*, Vol. 49(2), pp. 1-10

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The first indicator, which this paper will cast light on, contains information on the amount of natural gas reserves estimated and discovered in the Levant Basin and more specifically offshore Israel and the RoC. The upcoming paper will focus on the second indicator that highlights the interplay of legal, political and geopolitical factors that have contributed to the current developments in the region.

#### **Why does energy security matter? Defining the concept of energy security in the modern realities**

Energy security has continuously been framed as one of the main goals of public policy. Rooted in the industrialization of the society, this notion has traditionally been identified as the “safety and source diversification of energy fuels and services”<sup>3</sup>. Nevertheless, the meaning of energy fuels and services has been context and perspective dependent. Over the past decades, public security concerns were almost exclusively concentrated on oil supply. World War I and World War II had starkly manifested the significance of oil and coal in high politics<sup>4</sup>. Some decades later, concerns over oil security had reached their peak during the 1970s when the world economy struggled to overcome the economically disastrous implications of the 1973-74 and 1979-80 oil crises. With the nationalization of much of the Middle East’s oil industries, the oil embargoes triggered inflation in many OECD countries and ultimately resulted into economic recessions,

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<sup>3</sup> Sovacool, B.K and Brown M.A (2009) “Competing dimensions of energy security: an international perspective” *Working Paper #45*, Georgia Tech, p. 7

<sup>4</sup> Yergin D. (3<sup>rd</sup> ed. 2009) *The Prize. The Epic Quest for Oil, Money& Power*, New York: Free Press, p. 773

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substantial losses of GDP and high unemployment<sup>5</sup>. The shortages and spiking prices that resulted from the embargo functioned as a critical juncture for many European countries to alter their energy path dependence diversifying their resources away from Middle East oil.

These events expanded also the nation-state laden and traditional concept of energy security to cover energy sources other than oil in general. The reason is that new natural gas discoveries and rising demand have shifted gas from a cluster of regional markets into a global marketplace<sup>6</sup>. Natural gas is currently the third most important energy source, after oil and coal, and is rapidly gaining prominence in global energy markets. Attributed to its relatively clean and efficient combustion, gas is emerging as the fuel of choice for a wide array of uses, like the generation of electric power<sup>7</sup>. According to the International Energy Agency's estimates, illustrated in Figure 1, gas, in the following years, will surpass coal to become the world's second most important energy source<sup>8</sup>. By 2050 gas is expected to surpass oil to "occupy the number one slot"<sup>9</sup>. While oil was the

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<sup>5</sup> Yergin D. (1988) "Energy Security in the 1990s", in *Foreign Affairs* 6, pp. 110-132 and Bielecki J. (2002) "Energy Security: is the wolf at the door?" in *The Quarterly Review of Economics and Finance*, Vol. 42, p. 236

<sup>6</sup> Gloystein H. (21.11.2012) "Natural gas trading to become more like coal, not oil" *Reuters* <http://www.reuters.com/article/2012/11/21/energy-gas-coal-idUSL5E8M969T20121121>

<sup>7</sup> Barnes J., Hayes M., Jaffe A. M. and Victor D. (2006) "Introduction to the Study" in Victor D., Jaffe A. and Hayes M. (eds. 2006) *Natural Gas and Geopolitics. From 1970 to 2040*, New York: Cambridge University Press, p. 1

<sup>8</sup> International Energy Agency IEA(2003). *World Energy Investment Outlook* (WEIO). Paris: International Energy Agency

<sup>9</sup> (IEA 2011) *Are we entering a golden age of natural gas?* Paris: International Energy Agency

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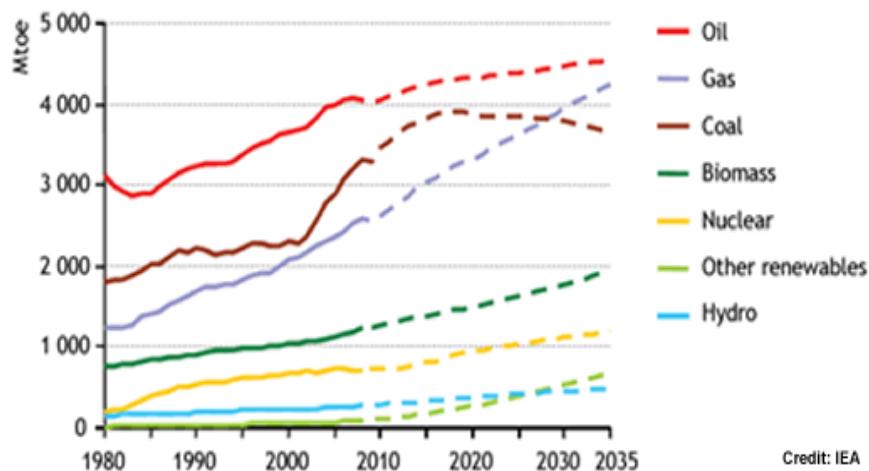
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primary fuel source of the 20<sup>th</sup> century, natural gas might become the major fuel source for much of the 21<sup>st</sup> century.

**Figure 1.1 ▷ World primary energy demand by fuel in the GAS Scenario**



Credit: IEA

Gas has “historically been pegged to the oil market through long-term contracts”<sup>10</sup>, since both fuels were being produced largely by the same exporters and were often utilized in the same industries. Nonetheless, a rising disconnect between gas and oil suppliers and new bilateral contracts between exporters and their customers based on regional gas exchanges implied that gas is more likely to take its cue from specific regional prices rather than global benchmarks<sup>11</sup>.

Although state-owned companies control most of the world's oil reserves, petroleum is traded primarily on international markets as part of short-term deals and through

<sup>10</sup> Gloystein (21.11.2012)

<sup>11</sup> Ibid.

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flexible means of transport<sup>12</sup>. Given these prevailing conditions in the international oil market, oil supply can rarely be treated now as a state's foreign policy tool. In contrast, the political dynamics attached to natural gas trade are different from those of oil trade. As a traded good, natural gas is supplied with permanent infrastructure and long-term supply arrangements, like pipelines and LNG<sup>13</sup> infrastructures. These infrastructures are extremely costly to build and require long-run horizons as well as a predictable economic context for investors to "sink their capital and knowledge"<sup>14</sup>.

This led to a paradigm shift with respect to states' understanding of energy security. In contrast to oil trade, the required long-term supply relationships and the permanent infrastructure involved offer a window of much greater opportunity for (geo)politics to come into play<sup>15</sup>. Due to the regulated sphere, within which the gas market is operating<sup>16</sup>, governments are urged to play a larger role in natural gas trade than in oil trade. Investments in natural gas production and export need about 10 to 15 years to pay off. As a result, investors need guarantees involving actors (companies and states) that will uphold contracts for the life of a project. This perspective makes investors ask the accredited governments to back up international supply projects with government-to-government agreements<sup>17</sup>. Adding to this, since natural gas supply includes building permanent infrastructure in fixed locations, states have to approve the installations and

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<sup>12</sup> Shaffer B. (2013) "Natural Gas supply stability and foreign policy" in *Energy Policy*, Vol. 56, pp. 114

<sup>13</sup> Liquefied Natural Gas

<sup>14</sup> Barnes et al. (2006);

<sup>15</sup> Shaffer (2013); 114-115

<sup>16</sup> Ibid.

<sup>17</sup> Ibid. 116

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routes while providing security of the infrastructure and facilities.

Reading into the relevant literature<sup>18</sup> and drawing upon the structure of PRIO (Peace Research Institute of Oslo)'s relevant report,<sup>19</sup> this research project aims to sketch out the picture of the contemporary energy security that has been formulated in the Eastern Mediterranean region and more specifically in the Levant Basin which has suffered from protracted conflicts. However, and since our goal consists in examining the implications of the gas discoveries on the course of the Cyprus conflict, attention could not be paid to all countries surrounding the Levant Basin, but mainly to these ones that are expected to play a more direct role in the evolution of the Cyprus question. Henceforth, the notion of energy security will be built upon two interrelated pillars:

a. the *availability* of gas reserves in the region, which in general pertains to the classical notion of geological or physical availability of energy resources<sup>20</sup>. More precisely, the paper will describe the regional exploration context. In this part, is to be explained how this region has suddenly attracted the attention of the international community. As a consequence, we will concentrate on the reported amount of gas reserves that have been estimated and discovered offshore Israel and the RoC. As stated above, although other

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<sup>18</sup> For a more detailed analysis on the indicators that analysts use to "measure" energy security read: APERC (2007) *A Quest for energy security in the 21<sup>st</sup> century, Resources and constraints*, Tokyo: Asia Pacific Research Centre, Fischhendler It.& Nathan D. (2014) "In the name of energy security: the struggle over the exportation of Israeli natural gas" in *Energy Policy*, Vol. 70, p. 153 and Kruyt B., van Vuuren D. P, de Vries H.J.M and Groenengen H. (2009) "Indicators for Energy Security" in *Energy Policy* Vol. 37, pp. 2167

<sup>19</sup> Gurel A., Mullen F., Tzimitras H. (2013) "The Cyprus Hydrocarbons Issue: Context, Positions and Future Scenarios", in *PRIO Cyprus Center Report 1/2013*

<sup>20</sup> It should be underlined that large uncertainties surround the amounts of hydrocarbon resources and their extraction potentials. Few studies provide estimates of fossil resources and the most significant one is that of the US Geological Survey.

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countries surround this region, the project, self-consciously, restricts its focus on these ones that are considered key (or potential key) players in the Cyprus jigsaw puzzle.

b. the *accessibility* that signifies the political and economic “barriers” to ensure that energy supplies remain accessible<sup>21</sup>. Clearly, access to energy resources is a major determinant of certain international developments. Energy security largely pertains to this indicator, since a depletion of energy reserves has seen the countries struggle to maintain steady and accessible energy services. The struggle for energy is thus subsumed under the ‘normal’ competition for power, survival, land, valuable materials or markets.<sup>22</sup> Energy interests, especially under tight international market conditions, as described above, exert a significant influence on the mapping of geostrategic interests”<sup>23</sup>. Factors that influence accessibility incorporate the geopolitical relations among the surrounding states.

The way energy security is displayed depends on how competing states’ interests discursively promote their agenda and for what purpose. From this aspect, energy security becomes the derivative of patterns of international politics, captured under the label of ‘geopolitics’ that lend their perennial attributes to the domain of energy.<sup>24</sup> Geopolitical approaches<sup>25</sup>, therefore, can be useful in illustrating the logic of interaction

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<sup>21</sup> APERC 2007: 19

<sup>22</sup> Leverett F.& Noel P. (2006) “Ahead of the Curve: The New Axis of Oil” in *National Interest*

<sup>23</sup> Shaffer B. (2009) *Energy Politics*, Philadelphia: University of Pennsylvania Press, p. 30

<sup>24</sup> Ciuta F. (2010) “Conceptual Notes on Energy Security: Total or Banal Security?” in *Security Dialogue*, Vol. 41, pp. 123-144

<sup>25</sup> Ibid; 126

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that shapes the behavior of some actors. To this end, the legal context is to be initially outlined, in particular the application of the United Nations Convention on the Law of the Sea (UNCLOS) in the Eastern Mediterranean, with special reference to the delimitation issues. Setting out the legal framework is instrumental in comprehending the second part of this pillar, which will elaborate on the positions taken by the actors with respect to hydrocarbons exploration in the sea in the region: Greek Cypriots, Turkish Cypriots, Turkey, Israel and other relevant players of the international community.

#### **The Availability Pillar**

Until the past decade, much of the hydrocarbons in the Eastern Mediterranean went undiscovered because the resources lie in very deep waters (known in the industry as “ultra-deepwater”), with depths of more than 2 klm (1,24 miles) in some locations<sup>26</sup>. This made it technically difficult, risky and expensive to carry out exploration in the area. However, technological advances, combined with high international oil prices, which tend to encourage oil and gas companies to invest, prompted new exploration at the beginning of the 21<sup>st</sup> century. Based on a geology assessment methodology, the U.S Geological Survey in March 2010 estimated a mean of 122 trillion cubic feet of recoverable gas in the Levant Basin Province<sup>27</sup>. The Levant Basin is located along and

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<sup>26</sup> Gurel A. et al. (2013) p. 1

<sup>27</sup> It should be noted that in the oil and gas industry, the USGS reports are considered merely indicative and are not taken as a reliable indicator of expected volumes. The outcomes of further exploration efforts are a prerequisite to estimate with greater accuracy the extent of oil and gas volumes in the region. See Shaffer B. (June 2012) “Energy Resources and Markets in the Eastern Mediterranean Region” GMF Policy

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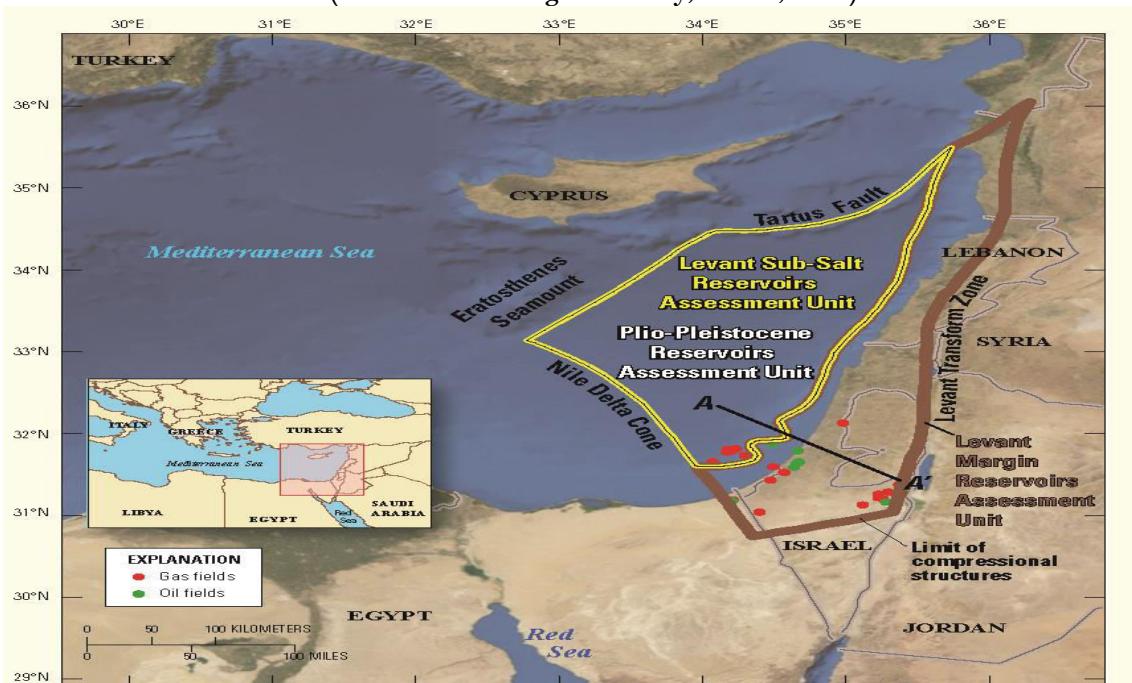
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off the coast of Syria, Lebanon and Israel, and the Gaza Strip, extending westward into Cypriot waters (see Picture 1). The basin comprises a total sea and land area of 32.000 square miles, most of which is offshore and bounded by three distinct subsea features:

- a) the Tartus Fault to the north
- b) the Erosthenes Mount to the West
- c) the Nile Delta to the south

**Picture 1: The Levant Basin (Source: US Geological Survey, March, 2010).**



By global standards, the Levant Basin's gas resources are significant but not predominant. Russia for example, holds the world's largest natural gas reserves at 1,680 Tcf, accounting for about 25% of global gas reserves. By Mediterranean standards, the

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Brief

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Levant Basin's offshore natural gas reserves are sizeable, but they are less than the gas resources held by key North African producers (Algeria)<sup>28</sup>.

#### **i) Israel**

An old joke, according to which Moses directed his people to the only place in the Middle East without oil, might become subject to questioning nowadays. For most of its history, Israel has been an energy-poor state, relying almost completely on imported fossil-fuels to satisfy its energy needs. Since its birth as a state in 1948, Israel has continuously encouraged exploration for oil and natural gas in its territory<sup>29</sup>. Albeit the initiatives and the very attractive commercial conditions offered to prospective explorers by successive governments of Israel these efforts had not been fruitful. Being concerned with turbulent Arab-Israeli relations, important oil and gas companies were hesitant to manifest their interest to explore reserves in Israel. The convention wisdom was that, if any international company would go for explorations in Israel, it would have run the risk of being precluded from lucrative projects in Arab-oil producing states, which formally boycott companies, ships and equipment that have been operating in Israel<sup>30</sup>.

The first, initially small, discoveries were made in the Noah offshore field in June 1999 and the Mari-B field in February 2000<sup>31</sup>. A joint venture between Delek Energy and

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<sup>28</sup> Paraschos P. (2013) "Offshore Energy in the Levant Basin: Leaders, Laggards, and Spoilers" in *Mediterranean Quarterly*, Vol. 24(1), pp. 38-56

<sup>29</sup> Shaffer B. (2011) "Israel-New Natural Gas Producer in the Mediterranean" in *Energy Policy*, Vo. 39, pp. 5379-5387

<sup>30</sup> Bahgat G. (2005) "Energy partnership: Israel and the Persian Gulf" in *Energy Policy*, Vol. 33, pp. 671-677 cited in Shaffer (2011); 5380

<sup>31</sup> Shaffer (2012) *Energy Resources in the Eastern Mediterranean Region*, Washington DC: German Marshall Fund of the United States

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Noble Energy owns the production license at Yam Tethys, which contained 32bn cubic meters (BCM) of natural gas when it was discovered (see picture 2).

In January 2009, the offshore Tamar natural gas field was discovered near the city of Haifa. According to estimations, this field contains approximately 240 BCM of natural gas<sup>32</sup>. The next major find was in December 2010 when Noble Energy, Delek Drilling, Avner Oil and Ratio Oil discovered a truly massive gas find at the aptly named deep-water Leviathan field located eight miles west of Haifa<sup>33</sup>. As of 2014, Leviathan was estimated to hold 22 tcf of natural gas reserves<sup>34</sup>. Leviathan field is the largest deep water gas discovery in the Levant Basin, and one of the world's largest offshore gas finds over the past decade<sup>35</sup>. Other smaller discoveries include Dolphin and Tanin.

**Picture 2: Israeli Gas Fields (Source: Noble Energy)**



In April 2012, Israel's government committee on the gas market, the Tzemach

<sup>32</sup> Shaffer (2011); 5380

<sup>33</sup> Gurel et al (2013); 2

<sup>34</sup> Noble Energy, Operations, Eastern Mediterranean

<http://www.nobleenergyinc.com/operations/eastern-mediterranean-128.html>

<sup>35</sup> Paraschos (2013); 41

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Committee, proposed Israel to maintain half of its gas resources as a strategic reserve to supply domestic needs through 2040, while committing the remainder for export<sup>36</sup>. When brought to market this amount is expected to satisfy a large portion of Israel's consumption needs. More importantly, due to these discoveries, Israel has been projected into a leading developer of offshore energy in the Levant Basin. As of August 2012, Noble and its drilling partners were reportedly making progress in negotiations to sell a stake in the Leviathan project to a major international energy company. According to some sources, Total (France) and Gazprom (Russia) were the leading candidates. Each company demonstrated its interest in becoming a "strategic partner of the project".<sup>37</sup>

#### **ii) The Republic of Cyprus**

In the early 2000s, the government of the Republic of Cyprus hired the Norwegian company PGS to make preliminary assessment of Cyprus's hydrocarbons potential through seismic surveys. This kind of surveys would contribute to determine whether it would be worth to perform much more costly exploratory drilling.<sup>38</sup> PGS's research outcomes proved favorable to this direction. In 2006 the Republic of Cyprus began prospecting for hydrocarbons in an exploration area of 51,000 sq km offshore the island<sup>39</sup>. The exploration area, divided into 13 blocks, as illustrated in Map 1, constitutes part of the total Exclusive Economic Zone (EEZ) proclaimed by the Republic of

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<sup>36</sup> Ibid; 43

<sup>37</sup> Neuman N. & Koren H. (19.8.2012) "Leviathan Partners in Talks with Foreign Gas Giants"

<http://www.globes.co.il/en/article-1000775156>

<sup>38</sup> Giamourides A. (2013) "Natural Gas in Cyprus", *Mediterranean Paper Series 2013*, Washington DC: The German Marshall Fund of the United States

<sup>39</sup> Gurel et al (2013); 3

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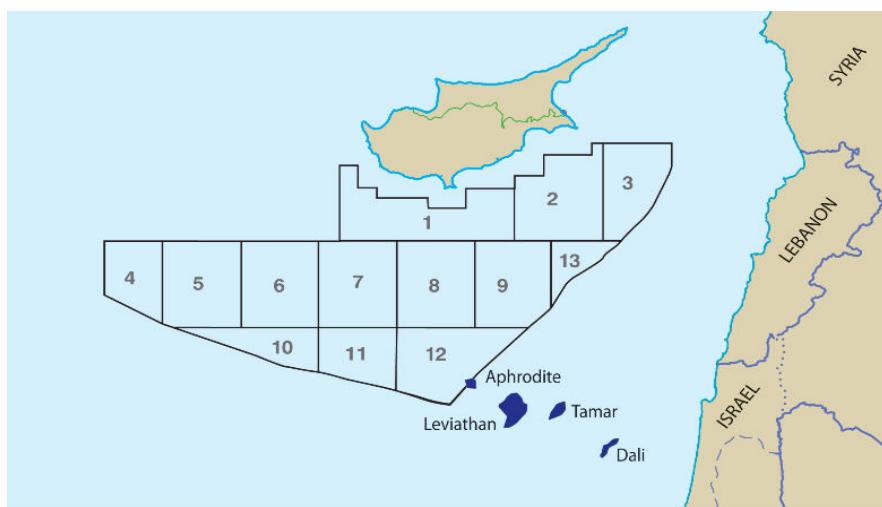
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Cyprus<sup>40</sup>.

**Map 1: The RoC's present offshore exploration are along with its proximity in the south-east to the gas fields discovered by Israel (Gurel et al. (2013; 53).**



In February 2007 and relying on the available seismic data, the RoC initiated its first international tender for three-year gas exploration licenses offering 11 out of 13 blocks (3 and 13 were excluded). Nevertheless, only three small to medium-sized companies made bid. Larger international companies, due to their access to more attractive, established opportunities around the world did not show interest for Cypriot hydrocarbons. As a result, the government of Cyprus awarded only one license in October 2008 to Noble Energy which was already operating offshore Israel. After further seismic surveys, and an EEZ agreement signed with Israel in December 2010,

<sup>40</sup> This aspect will be analyzed in the following part.

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the first exploratory drilling unfolded in Block 12 in September 2011. Two months later, the company indicated a 5-8 tcf natural gas deposit in deep water of about 1,700 meters.<sup>41</sup> This range of estimates seems too broad to confirm the commercial viability of the field. According to Giamourides, the lower end of these estimates might not offer the critical mass essential for Cyprus to move forward with the construction of an LNG plant. Proven resources of 6 tcf or more could justify the construction on an LNG export facility with a capacity of 5 million tons per year<sup>42</sup>.

However, the discovery in Block 12, in alignment with the large finds in the Israeli Leviathan block, triggered a significant interest for the second Cyprus offshore licensing round that started in February 2012 with the participation of 15 bidders, including International Oil Companies<sup>43</sup>, upstream independents, natural gas buyers as well as gas and LNG traders. Licenses were awarded for five offshore blocks out of twelve on offer. The main interest was in Block 9, adjacent to Block 12, and Block 2 adjacent to Block 9.

The PRIO report, conducted by Gurel, Mullen and Tzimitras<sup>44</sup>, is stressing two significant points that will guide us to the Accessibility part of this project. The first one the authors have noticed, is that the five blocks which Turkey claims that partly fall within its continental shelf are absent from the list of successful bidders, although bids, according to reports, were also received for some of these blocks. In the accessibility part

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<sup>41</sup> Ashurst (March 2012) *Energy Briefing The oil and gas regime in the Republic of Cyprus* [www.ashurst.com](http://www.ashurst.com)

<sup>42</sup> Giamourides (2013); 4

<sup>43</sup> The most significant ones were: Total of France, ENI of Italy, Gazprombank of Russia, Petronas of Malaysia and Kogas of South Korea, cited in Gurel et al (2013); 4

<sup>44</sup> Gurel et al. (2013); 4-5

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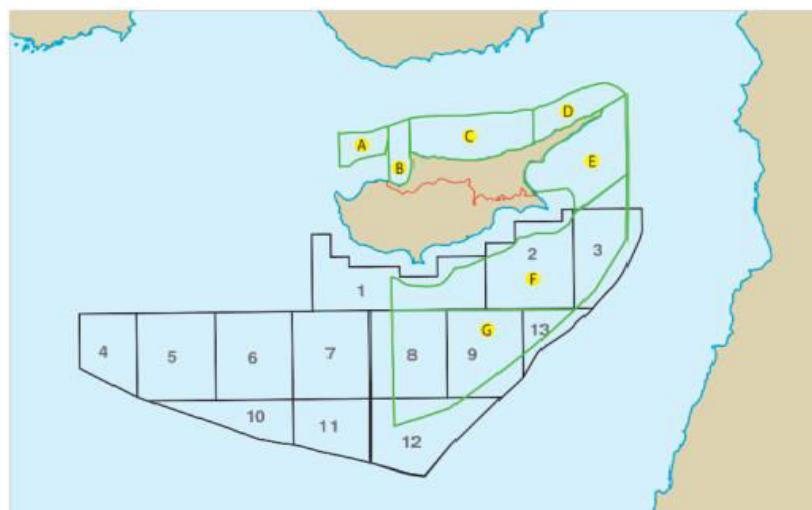
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of this project, will be examined the interplay of legal, political and economic factors that formulate the energy security challenges in the Eastern Mediterranean; more particularly why Turkey hasn't recognized claims of the near entirety of Cyprus' EEZ either directly (Blocks 1, 4, 5, 6, & 7) or on behalf of the Turkish-Cypriots (Blocks 1, 2, 3, 8, 9, 12 & 13- see picture below)<sup>45</sup>. In addition to that, this part will explain why Ankara has repeatedly endeavored to muscle its military strength vis-à-vis RoC, aiming to deter Nicosia and Noble Energy from carrying out the exploratory drilling that discovered Aphrodite gas field.

**Map 2: Delimitation Issues (Sources: Gurel et al (2013); 65)**



The second point is that the companies, which were selected to perform the drilling operations, are from countries that hold significant military strength. The accessibility

<sup>45</sup> Tsakiris Th. (August 2013) "The Hydrocarbon Potential of the Republic of Cyprus and Nicosia's Export Options", in *Journal of Energy Security*

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part will elaborate on the stimulants that have prompted these variables.

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