# The New Geopolitics of the Eastern Mediterranean:
## Trilateral Partnerships and Regional Security

Edited by:
Zenonas Tziarras

RE-IMAGINING THE EASTERN MEDITERRANEAN SERIES: PCC REPORT 3/2019

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PRIO Cyprus Centre

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## TRILATERAL PARTNERSHIPS AND REGIONAL SECURITY

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**Report 3/2019**

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*CHAPTER 2:*

# GEOPOLITICS AND ENERGY SECURITY IN THE EASTERN MEDITERRANEAN: THE FORMATION OF NEW 'ENERGY ALLIANCES'

***Andreas Stergiou***

**Introduction**

The discovery of gas reserves in the Eastern Mediterranean has been met with enthusiastic response owing to their potential impact on the economic, geopolitical and political balances in the region. It is widely accepted that the new reserves could have a major, positive effect on Europe's gas-diversification strategy, enabling European Union (EU) countries to realize a long-pursued goal, namely, to significantly reduce their dependence on Russian gas imports. In mid-January 2019, the Energy Ministers of Egypt, Cyprus, Greece, Israel, Italy, Jordan, and the Palestinian Authority met in Cairo to discuss the establishment of the Eastern Mediterranean Gas Forum, which will serve as the umbrella for cooperation and dialogue regarding the development of gas resources in the region. While the subject of energy is the basis for the forum, there are also broader geostrategic processes that led to its establishment, and they reflect the regional states' shared perceptions regarding the importance of the Eastern Mediterranean to their national security (Winter and Lindenstrauss 2019).

With this move the regional actors did demonstrate political resolve to transform the issue of gas resources into additional partnerships in the Eastern Mediterranean. However, this political will runs counter serious geopolitical and economic calamities. It is argued that these (positive) perceptions emanate from politically motivated rather than fact-based estimations, and that they overlook certain geo-economic realities.

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**The role of natural gas in EU energy policy**

Natural gas is an intrinsic part of the European Commission's 'Clean Energy for all Europeans' strategy. Specifically, natural gas is considered a bridge fuel that can aid in the transition to renewable energy; unlike other types of plants, gas plants can be easily fired up and down and emit 50 percent less carbon dioxide than coal when burned (European Commission 2016). Europe's overall annual gas consumption is still satisfied primarily by Russia (over one-third of its natural gas supply), secondly by Norway and other countries including Algeria, although gas production in Norway is gradually declining as its fields mature (Coote 2016). In the lowest of demand projections, import needs could be slightly lower (by some 10 bcm) in 2020, but would then be about 20 bcm higher than 2015 levels by 2025. As such, EU gas imports will continue to play a significant role in the future EU gas market in the context of the EU diversification-policy of gas supplies. It is estimated that Russia will remain the biggest source of supply through 2025 and Russia's share of EU gas consumption will rise to 40 percent (Pisca 2016, 7, 25-27).

Furthermore, the EU imports more than half of the energy it consumes, while several member states are heavily reliant on a single supplier for key energy sources. This is mainly true for gas, but to a lesser extent it is also true for oil and coal. As a result, the EU remains vulnerable to supply disruptions, whether caused by geopolitical conflicts, political or commercial disputes, infrastructure failure or other reasons. This heavy dependence on so few suppliers has been recognized since the 1990s, and the European Commission has made various attempts to reduce its reliance on imports and make the concept of energy supply diversification a cornerstone of EU energy policy (Grätz 2011, 61-86).

The prospect of a new gas export hub opening up in the Eastern Mediterranean is particularly attractive for Europe, which, as explained above, is worried about declining production in the North Sea and its growing dependence on Russia. The new resources could provide an additional energy supply for the energy-suffocated European markets and increase the diversification opportunities for countries dependent on a single supplier (EU Commission, 2017). Currently, the Eastern Mediterranean is a significant route for the EU's natural gas and oil imports, as approximately 35% of its natural gas and 50% of its oil consumption are trafficked through the region (Szoke 2016).

In fact, in March 2010 the U.S. Geological Survey (USGS), using a geology-based assessment methodology, estimated that the entire Levantine basin— a geological formation encompassing the offshore sections of Israel, Gaza, Lebanon, Syria and Cyprus— could hold as much as 120 trillion cubic feet or 3.4 billion cubic metres (bcm) of recoverable gas and 1.7 billion barrels of recoverable oil (USGS 2010). The USGS also estimated that the Mediterranean area, including its existing and assumed oil and gas reserves (the Aegean Sea, for example), could contain more than 340 trillion cubic feet of gas – more than the U.S. proven reserve, which is the fourth largest in the world after Russia, Iran and Qatar (USGS 2010; BP Statistical Review of World Energy 2018, 27-28).

**The current state of play in the East Med offshore exploration and development of gas**

Gas exploration in the Eastern Mediterranean gained momentum in 2009, when a consortium headed by U.S.-based Noble Energy discovered huge gas resources in the Tamar field off Israel's coast, transforming Israel's economy and international stature overnight.[1] It was the biggest natural gas field ever found in the area at the time, containing roughly 9 to 11 trillion cubic feet (280 bcm) (there are different estimations) of proven and probable reserves. In 2010, the American company discovered an even bigger reservoir (Leviathan) that contains roughly 16 trillion cubic feet or 620 bcm (Hafner 2016, 50-51). In January 2014, the *Oil & Gas Journal* estimated Israel's proven oil reserves at 11.5 million barrels, and in July 2017 an independent reviewer, Netherland, Sewell & Associates, Inc., estimated the volume of natural gas in the Tamar field at 11.2 trillion cubic feet, with an additional 14.6 million barrels of condensate (an ultra-light mixture of hydrocarbon liquids), a 13 percent increase from the previous estimate (Graeber 2017).

Encouraged by the Tamar and Leviathan discoveries, the Republic of Cyprus sped up its exploration efforts along the southeastern boundaries of its Exclusive Economic Zone (EEZ), which runs close to the location of these Israeli fields. The Cypriot gas bonanza dates back to 2007, when the country announced the first offshore licensing round in its Exclusive Economic Zone, enabling the same foreign energy company operating in Israel waters, Texas-based Noble Energy, to look for gas in Cypriot waters. Four years later, Noble Energy announced a breakthrough: the discovery of the Aphrodite gas field in Cyprus's southern Exclusive Economic Zone, containing an estimated relatively small natural gas find of 4.5 trillion cubic feet (140 bcm) (Oikonomopoulos and Stambolis 2012; Tagliapetra 2013).

This gave Cypriot authorities the necessary confidence to grant licenses to other energy companies, which rushed into the region hoping to profit from the looming gas bonanza. As a result, all of Cyprus's 13 offshore blocks in its EEZ have been allocated to heavyweight oil and gas companies from the Netherlands, France, Italy, the United States and Israel, all of which have made major investments based on the promise of existing resources beneath the water.

In December 2016 Cyprus successfully completed an international bidding process and awarded the rights to explore Blocks 6, 8, and 10 to four international firms: Eni and Total; Eni; and ExxonMobil and Qatar Petroleum International, respectively. After a series of repeated disappointments, in February 2018, Eni finally announced the discovery of a gas-bearing structure in the Calypso 1 well it had drilled in Block 6. The promising reserve lies just to the north of the maritime border with Egypt, within the Egyptian EEZ, where in 2015 the same company had discovered a giant gas field. Calypso is expected to hold somewhere between 6 to 8 trillion cubic feet of natural gas— in other words, much more than the Aphrodite's 4.5 tcf found in 2011 (Republic of Cyprus 2018).

1 Notably, Arab countries' oil resources affected Israel's international standing since its birth. In 1947, the American oil industry lobbied against the partition of Palestine out of fear of alienating Saudi Arabia and in 1973, after the Yom Kippur War followed by the OPEC embargo, many Western countries demanded the full and unconditional Israeli withdrawal from all the territories conquered in 1967 in order to appease the Arabs.

The Cyprus Republic also granted license to Exxon Mobil and state-owned Qatar Petroleum to drill in Block 10 (Delfini area) in close proximity to the Egyptian field Zohr and Cypriot field Calypso, indicating similar reservoirs and raising hopes for making Vassilikos through a potential LNG terminal the spot centre for processing and exporting its natural gas in the Eastern Mediterranean.[2] At the end of February 2019, Exxon Mobil announced the first exploration results that need to be confirmed by a second drilling most likely within 2020. According to a preliminary interpretation of the well data, the discovery could represent a natural gas resource of approximately 5 to 8 trillion cubic feet (142 to 227 billion cubic meters) (ExxonMobil 2019). Despite its giant significance for the East Med gas collection, the new discovery does not seem to be as big as to justify the construction of an LNG plant in Cyprus. Thus, exportation to Egypt still remains the most realistic scenario for the monetisation of the Cypriot gas.

**Challenges and obstacles to the exploitation of the East Med natural gas reserves**

Taking into account that neither Cyprus nor Israel has a large enough domestic gas market to accelerate the development of gas fields, and that they both rely on export markets, the monetisation of their gas has become a very thorny issue: the existing energy resources need to attract several billion dollars of new investment in order to be commercialized (a process in the energy sector called monetisation). Israel and Cyprus have no pipelines to large consumers, nor the facilities to liquefy gas in order to export it by ship (Thrassou et al. 2016, 115-141).

As these gas fields are located in close proximity to each other, cooperation on their monetisation is almost mandatory and, in fact, several monetisation options have already been considered for delivering gas from the Israeli and Cypriot gas fields to developed European markets. The most well-known projects that have been proposed involve the construction, individually or combined, of pipelines— from Israel and Cyprus to Greece and then to Europe; from Israel to Turkey and then to Europe; from Israel to Egypt or to Jordan. These pipelines would supply gas to those countries or, using current or future facilities, liquefied natural gas (LNG), to export gas to more distant markets both east and westward. Each option carries its own economic and geopolitical advantages and constraints.

Natural gas markets based on pipeline transportation are not the same as markets based on oil and LNG. Natural gas is an inherently protean material that throughout its circulation will undergo a series of dramatic alterations. Depending on the location and the time, it can become denser or less dense, expand or contract. It can also wildly fluctuate in temperature and change state from gas to liquid, and liquid to gas. Therefore, pipeline transportation is preferred over shorter, albeit increasingly longer, distances, which makes most natural gas markets regional in nature. LNG affords trading over much longer distances. For pipelines,

2 Remarks by Dr. Charles Ellinas at the 3rd symposium on hydrocarbons development organized by the Institute for Energy in Southeast Europe. Athens 30-31/10/2018.

operating costs are relatively low as compared to capital costs. The more expensive the infrastructure, the larger the initial contracts must be to cover costs; as a result, solid and long-term business-to-business, business-to-government and government-to-government contracts and agreements are necessary (Forman 2017, 225-230; IGEM 1993, 1995; Thomas 2006).

A report released by the Massachusetts Institute of Technology and the Cyprus Technological Institute judged a plant in Cyprus (Vasilikos), where there are already some energy facilities, the best option for Cyprus. Although it would be more expensive than a pipeline, it would offer greater flexibility in adjusting production to changing natural gas prices and market supplies. Nevertheless, that proposition faces some very serious challenges. First, the combined cost for the liquefaction plant and the offshore pipeline varies between 8 and 10 billion US dollars, of which the Republic Cyprus should finance at least 51 percent. Second, the proven gas reserves south of Cyprus are probably insufficient to justify construction of a single onshore liquefaction terminal, and the project would require large amounts of Israeli gas before it can be considered economically viable. Such an option, however, seems not to have been taken into account by the Israelis for several reasons (Indeo 2016), which will be explained below.

Despite the above concerns, in October 2018, Cyprus's natural gas public company (DEFA) published tender documents for the design, construction, and operation of a Liquefied Natural Gas (LNG) import terminal that will be located at Vasilikos. The LNG Terminal is expected to be completed in 2020 and 40% of its cost will be funded by the EU.[3] This option has some advantages and energy experts believe that it can provide infrastructure and important export outlet for the markets for the entire area and the overall East Med field development and natural gas production.

Regarding Israeli plans for their gas reserves, for some time both the Israeli government and energy companies operating in the East Med waters were considering construction of an undersea pipeline to Turkey and from there to European markets. This seemed to be the most economical route for several reasons. This project was given some impetus in the wake of a short-lived Israeli-Turkish rapprochement after a reconciliation agreement was struck in 2016 to resume the countries' ruptured relations since the Mavi Marmara incident in 2010.[4] This scenario, once also backed by the U.S., provided for undersea oil and gas pipelines connecting Israel with Turkey. From there Israeli gas would feed into Turkey's national grid, reaching the giant domestic Turkish market, and join the Trans-Anatolia Natural Gas Pipeline (TANAP). Despite serious considerations about whether Erdoğan's Islamist regime should be a linchpin in Israel's natural gas export strategy (Solomon 2016), this option looked very appealing.

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3 Republic of Cyprus, Treasury, Public Procurement Directorate: https://www.eprocurement.gov.cy/epps/cft/prepareViewCfTWS.do?resourceId=3370883

4 In 2010, Israeli soldiers killed nine activists aboard the Turkish vessel Mavi Marmara who were trying to break the Israeli blockade to Gaza and deliver aid to the Palestinians. Turkey broke ties with Israel, while demanding reparations for the victims' families and a formal apology. Political relations between the two countries remained cold for years. Although Israel conceded to Turkish demands for the most part, relations never fully normalised, as Erdogan has repeatedly blasted Israeli policy in Gaza and Middle East.

Ankara's continued support for Hamas, however, led to a breakdown in those negotiations. The relocation of the U.S. embassy to Jerusalem in May 2018, and the killing of 62 demonstrators by Israeli soldiers in Gaza, heavily condemned by Turkey, multiplied tensions in Turkish-Israeli relations. In a sector with a long return period on investments, long-term stability is a high priority, and at the moment there is no political dialogue on high levels, nor any bilateral meetings even at international fora. This tension has also spread to the public arena. The opposition parties in Turkey have often described Erdogan's rhetoric against Israel as "theatre," alleging that the President's sons benefit directly from strong economic ties between the two countries (since he is involved in shipping businesses that trade with Israel), and that Erdogan harshly criticised AKP's decision in 2018 to vote down a bill in Parliament that proposed to cancel all previous agreements with the Jewish state and severing economic ties (Lerner 2018).

On the other side, Erdogan is, as some experienced insiders estimate,[5] perhaps the most hated politician in Israel today. Also, in Turkey there is a deep-seated hatred for Israel, as well as suspicion; the only cooperation between the two countries is related to homeland security, while there are some commercial ties because 20,000 Jews live and are active in business in Turkey. There is little chance that Israel would export gas to Turkey: the Israeli government will not allow it and the public will not support it, even if it is the most economic option.

The second problem with this option is the political ramifications for Cypriot-Israeli bilateral relations. Any undersea gas pipeline from Israel's Leviathan natural gas field to Turkey would have to cross Cyprus's EEZ at a point where the 'TRNC' has de-facto control. According to international law, the Republic Cyprus cannot forbid Israel to lay a pipeline in its own Exclusive Economic Zone, as the United Nations Convention on the Law of the Sea (UNCLOS) states that the EEZ is subject to a specific legal regime. An EEZ is not an inherited marine area like the territorial sea, but effectively an ambivalent area in which other States benefit from certain freedoms applicable to the high sea. Article 58 defining the rights and duties of other States in the Exclusive Economic Zone states (United Nations Convention on the Law of the Sea, article 58):

> …all States, whether coastal or land-locked, enjoy, subject to the relevant provisions of this Convention, the freedoms referred to in article 87 of navigation and overflight and of the laying of submarine cables and pipelines, and other internationally lawful uses of the sea related to these freedoms, such as those associated with the operation of ships, aircraft and submarine cables and pipelines, and compatible with the other provisions of this Convention…

5 Interview with Aaron Liel.

However, Article 56 – defining the rights, jurisdiction and duties of the coastal State in the Exclusive Economic Zone – gives the coastal State (among others) jurisdiction over the protection and preservation of the marine environment (United Nations Convention on the Law of the Sea, article 56). This clause gives coastal States the right to prohibit construction of pipelines on the ground of ecological concerns. It is evident that the Republic Cyprus will utilise all available legal means to prevent such an option. Besides the legal arguments, politically such a move by the Israeli government would mean the end of the Israel-Cyprus relationship.

There is also, theoretically, the option of laying a pipeline from Israel to Turkey by constructing a route through Lebanese waters and bypassing Cyprus. Considering relations between Israel and Lebanon (the two states are officially at war), however, this possibility also appears extremely unrealistic. Against this background, Israel began to change its hitherto theoretical interest in a pipeline that would run through Greece and Cyprus circumventing Turkey to a strategic goal, proving the fact that political and security consideration outweigh economic imperatives. An international gas pipeline project involves enormous risk, as it presupposes an expensive and long-term commitment for both buyer and seller, who have to spend billions on building the pipeline infrastructure. Furthermore, they have to maintain working relations for at least 20 years. Cyprus and Greece, however, are politically more reliable than Turkey, and without the guarantee of long-term contracts, the energy companies collaborating with the Israeli government would find it difficult to invest the 2 billion US dollars (this is of course much less that other monetisation options) required to construct a pipeline to deliver the gas to Turkey from Israel's Leviathan field.[6] Moreover, as member states of the European Union, Cyprus and Greece are particularly fond of this option, which could increase their influence and bargaining leverage in EU decision-making bodies, while Israel has a long tradition of bilateral or multilateral relations with the EU and its member states.[7]

In that respect, the fact that the new Eastern Mediterranean hydrocarbon resources could be an alternative energy provider for the ever-increasing EU energy needs has rendered very attractive the option of constructing a pipeline that, if ever realised, would be the world's longest undersea pipeline. The approximately 1900 km-long pipeline (700 km on-shore, 1200 off-shore) to Greece, with a capacity to deliver up to 20 bcm/y (initially 10 bcm/y), comprises compressor stations located in Cyprus and Crete and three main sections: 1) a pipeline from the Eastern Mediterranean gas fields to Cyprus; 2) a pipeline connecting Cyprus to Crete; 3) a pipeline from Crete crossing mainland Greece up to the Ionian coast (Thesprotia region). From there the East Med is to link up with the offshore Poseidon pipeline[8] that is designed to deliver additional diversified sources from other places.

6 Interview with Bakhtiyar Aslanbayli.

7 Interview with Dr. Aaron Liel and Colonel Eran Lerman.

8 Since the end of July 2014, the Project has been developed by Greece's state-run DEPA's subsidiary company IGI Poseidon S.A in which the Italian Company Edison holds a 50% share.

Theoretically, the pipeline scheme could be extended to connect with the Trans-Adriatic pipeline—designed to deliver Azeri gas to Western markets within Greek Territory—and ultimately reach European markets through Albania and Italy. As many have argued, the entire project could sufficiently elevate the EU's status as a reliable buyer to encourage the development of resources that would otherwise remain stranded. If the EU were to sign a long-term gas sales agreement, it could instil confidence in the project and facilitate securing the initial capital investment needed for the pipeline to become operational (Baconi 2017, 9-10). However, given the fact that the Poseidon pipeline has been designed to bring Russian gas to Europe, some see this option as contrary to the EU energy diversification policy.

***The East Med Pipeline***

In December 2017, Cyprus, Israel, Italy and Greece signed a memorandum of understanding "to explore the possibility of the construction of a natural gas pipeline linking Leviathan to European markets." In the same year, the European Commission (EC) labelled the project technically feasible and economically viable. The Commission stated that it "strongly supports" the project and that it is an "important option among other existing and possible future evacuation routes for the export of gas from the region to the EU" (European Parliament, 2017). Therefore, the East Med pipeline has been designated as a project of common interest (PCI) between the EU and the region, meaning that the project can receive a host of benefits, including "accelerated planning and permit granting" and "lower administrative costs."[9]

In December 2018, at a meeting in Be'er Sheva (Israel), the leaders of Greece, Cyprus and Israel officially stated that they were ready to sign an intergovernmental agreement on the East Med pipeline project. The materialisation of the agreement will be contingent on a EU-funded (100 US dollar million) a feasibility study (the EU does not finance construction of pipelines). The presence of the U.S. ambassador to Israel David Friedman at the meeting expressing unambiguous support for the pipeline, labelling it as a project "*of great importance for the stability and prosperity of the Middle East and Europe*" and urging all countries in the region to ensure its success (Stamouli 2018), confirmed what analysts have suspected in the previous years: the United States have been attaching great importance to the region and are a driving force behind the project.

However, while opinions differ, some question the practicality of the proposed sub-sea pipeline connecting Israel's Leviathan and Aphrodite gas fields to Europe via Greece, as there appear to be both technical difficulties as well as unfavourable financial and topographic realities. An East Med pipeline is a very expensive export option, as its construction would necessitate what is considered a very high selling price of 8 US dollars/ British Thermal Unit (BTU) now and for the foreseeable future. The need for several compression stations significantly

9 "Projects of common interest", *European Commission*, available at https://ec.europa.eu/energy/en/topics/infrastructure/projects-common-interest.

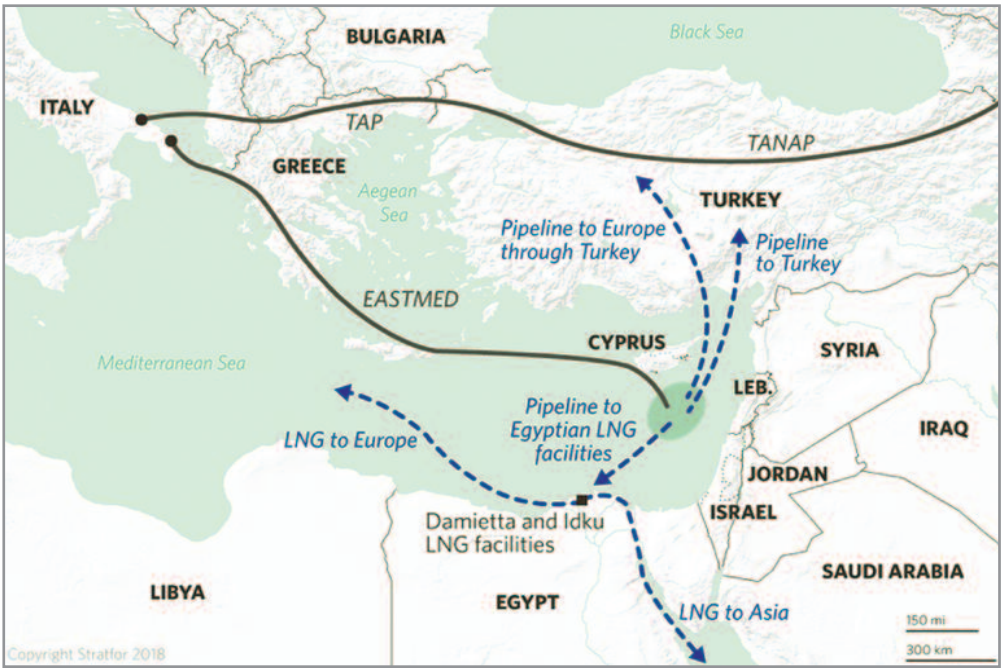
raises construction costs, and it is estimated that it would take at least 10 years to recover the cost of the pipeline. Furthermore, Israel and Cyprus would need to sign purchase contracts with each buying company in Europe, a complex and difficult process. The engineering technology required for such a pipeline would be tested first in real-life conditions, and the seismic and volcanic activity in Greek waters presents major construction and transportation risks—as its undersea route reaches a depth of 3.3 kilometres between Cyprus and Greece and any damage to the pipeline would be very difficult to repair.

In economic terms, it is doubtful that the respective gas deliveries would be competitive with existing supplies from Russia and various LNG producers around the world, given that they come from offshore fields that regularly produce more expensive gas than onshore fields. It is estimated that transporting gas over such distances would increase the price by 3-4 US dollars per heat unit. The average price of natural gas in Europe in recent years was around 5.40-6 US dollars per BTU, and not much less than that in Israel – 5.30 US dollars per BTU. It can become commercially viable if the price of gas in Europe exceeds 8 US dollars/ BTU and stays high for the longer term, or if it receives a huge EU grant. Even though average gas prices in Europe were high in 2018, they are not expected to stay high for long, a prediction the biggest energy companies have emphasized in their annual outlooks. The political support is not enough. Even 'politically desired' US LNG, at prices just above the EU market price range, is struggling to make inroads in Europe, as importers make decisions based on price, not on what may be politically desirable.[10]

The East Med pipeline's impact on EU's energy security is also questionable. The proposed pipeline's annual gas deliveries would constitute about 4% of the overall European market demand. The annual natural gas demand in the EU reached 548 bcm in 2017 and there is an upward trend predicted for short-term needs (Honoré 2018).

10 Remarks by Gina Cohen, 3rd symposium on hydrocarbons research and development, organized by Institute for Energy for South East Europe, Athens 30-31.10.2018. Interview with Amit Mor and Charles Ellinas.

**Table I: Potential Export Routes for Eastern Mediterranean Gas**




*Source: Stratfor*

Furthermore, the exploration costs in the Eastern Mediterranean are quite high, the competition with other international companies (mainly Gazprom) is big and the export and transportation costs are also very high. Although it is very difficult for Gazprom to dump or to lower international gas prices in order compete with East Med gas or to halt LNG exports or imports from the USA, it is not impossible. This is due to the world gas delivery structure. There are more short-term gas contracts indexed in the spot market and less contracts indexed in long term contracts with take-or-pay clauses. Gazprom's policy, however, is based on long term contracts with take-or-pay clauses.[11]

The rapid increase, however, of US LNG exports[12] (along with the increased capacities in Qatar, Australia, Russia, Canada and other countries) have the potential to disrupt global gas trade patterns and dramatically transform the European market over the next two decades. They could also reduce Europe's dependence on Russian gas, even as Moscow increases subsidies for gas exports to Europe. The slash in Russia's gas export revenues has already forced its gas companies to renegotiate contracts with much shorter and more flexible terms. Energy experts estimate that, if the US increases exports to Europe, Russia might be forced to raise subsidies and lower prices even further (Umbach 2019). Thus gas prices in Europe could come under downward pressure.

11 Personal communication with Dr. Amit Mor.

12 Due to the shale gas revolution the US is poised to become the largest LNG exporter by 2025.

**The Triangular Gas Export Strategy**

There is another monetising option that Nicosia and Tel Aviv have been exploring in recent years, the so-called triangular gas export strategy, which involves sending Israeli/Cypriot gas to Egypt though offshore or onshore gas-pipelines. This scenario takes advantage of the new opportunities that opened up in the region with the discovery in August 2015 of Egypt's huge Zohr gas field.[13] Zohr's deposits are estimated at 30 trillion cubic feet (850 bcm) and have been heralded as the solution to the country's energy problems (ENI 2015). Combining the gas resources of Israel, Cyprus and Egypt would theoretically create a much bigger pool, which could be more attractive to Europe.

Additionally, Egypt's natural gas infrastructure is the most developed in the Eastern Mediterranean, and the Suez Canal offers one of the easiest, if not the cheapest, trade routes for oil and gas. Furthermore, the partially state-owned Egyptian company Sumed is building a new large-scale LNG wharf on the Gulf of Suez. However, Egypt, which had previously supplied natural gas to Israel via pipeline, in 2015 went from a net gas exporter to a gas importer (Karbuz 2017, 187-212). In the previous decade the low regulated gas prices in Egypt had made new developments unviable, while after the 2011 revolution investment dried up and production plummeted. The pipelines through Sinai to Israel and Jordan were repeatedly bombed by insurgents and the lack of gas ultimately forced Egypt to suspend deliveries, while the two liquefied natural gas facilities, built by Shell at Idku near Alexandria, and by Eni at Damietta in the eastern Delta, also had to suspend exports (Karbuz 2017).

In the new environment, and despite the fast-track development of Zohr, a private Egyptian company, Dolphinus Holdings, agreed in February 2018 to buy gas from Noble Energy and its partners from Israel's two largest offshore fields, Leviathan and Tamar. The deal serves multiple purposes. Foremost, it aims to cover future demand, as growing population, rising household incomes and a growing economy as well as improved living standards and human development indicators have driven energy demand in Egypt higher over the past decades (Ghafar 2016, 53-54). Israel's Energy Ministry's strategic plan for the country's economy through 2030 is essentially dependent on the deal (Coren 2018b).

To supply European Markets or other international markets through Egypt's LNG terminals in Idku and Damietta (with huge LNG facilities, able to accept natural gas from different sources and Egypt itself) seems profitable for all parties.[14] Adding Cyprus's and Israel's new finds to the mix could keep these plants running even as Egypt's own demand rises. Sharing costs for infrastructure could also create an 'economies of scale' effect that would benefit all the parties

13 The first gas from the Zohr field came online in December 2017. For the years 2019- 2020, gas production is expected to reach the levels of 80.6 bcm/y, meaning that there will be +10.3 bcm/y surplus available for exports. Remarks by Dr. Charles Ellinas at the 3rd symposium on hydrocarbons development organized by Institute for Energy in the Southeast Europe. Athens 30-31.10.2018.

14 Remarks by Gina Cohen at the 3rd symposium on hydrocarbons development organized by Institute for Energy in the Southeast Europe. Athens 30-31.10.2018.

involved. However, because the end-buyer will have to pay for the processed gas coming from the pipelines that have to be constructed, the end price might be higher than the current gas price in Europe.[15]

Therefore, Egypt has been pursuing cooperative energy diplomacy towards an optimum utilization of the overall East Med energy resources. These efforts have been fruitful and have led to close ties with Cyprus and Greece as reflected in various tripartite summits, official visits at the highest level, and many cooperation agreements. The cooperation has been facilitated by the fact that Shell is both the operator of the Idku facility and co-owner of the Aphrodite field (Eiran and Mitchell 2018, 36-37).

In November 2017 Cyprus President Nicos Anastasiades, Egypt's President Abdel-Fattah el-Sissi and Greek Prime Minister Alexis Tsipras officially endorsed the option, and in September 2018 the press announced that Cairo and Nicosia had signed a deal for the construction of an underwater pipeline to export natural gas to Egypt with the terms of the commercial agreement to be discussed at later stage between the companies involved in the project (the Noble Energy consortium and the operators of the liquefaction plant at Idku). The agreement will necessarily have to secure approval from the European Union. This deal is very clearly part of a tripartite strategy, as, at the same time, the U.S.-Israeli consortium heading the development of Israel's offshore gas reserves announced a deal that would enable the export of natural gas to Egypt. Noble Energy and its Israeli partner Delek, along with Egyptian East Gas Company, bought 39 percent of a disused pipeline connecting the Israeli coastal city of Ashkelon with north Sinai. The consortium will pay 518 million US dollars for their interest in the East Mediterranean Gas Company pipeline (Haaretz 2018).

The partners can count on a 10-year and 15 billion US dollar-deal to sell gas to the Egyptian company Dolphinus Holdings for use by big Egyptian users, such as factories, while hoping to win more contracts from foreign companies that operate now-idle liquefied natural gas plants in Egypt (Coren 2018a). Delivering Israeli gas to Egypt through a new or an old pipeline (the pan-Arab pipeline)[16] is, however, a risky business from the security point of view, due to potential terrorist attacks. The Egyptian Army has a stronghold in the area, but the security risk is still quite high for such an investment.[17] Actually, if this ever materializes, it will mark both a reversal of the former equilibrium in the energy supply market, in which Israel imported gas from its Arab neighbour, and a historical and fundamental change in relations between Israel and its Arab neighbours. Egypt will be the second Arab country, following Jordan in 2016, to import gas from Israel, breaking a tradition dating back to the birth of the Israeli state.

15 Interview with Charles Ellinas.

16 The Arab Gas Pipeline originating near Arish in the Sinai Peninsula was built to export Egyptian natural gas to Jordan, Syria, and Lebanon, with an underwater pipeline to Israel and a total length of 1,200 kilometers. It has been out of order for years due to sabotage to its feeder pipeline in Sinai.

17 Interview with Amit Mor.

For Egypt, this tripartite strategy serves the strategic goal to transform the country into a 'gas hub'—a concept that allows a country to import, produce, consume and export gas, thereby benefiting from shifting between multiple suppliers and customers depending on the best price. Ideally located between western and eastern markets, Egypt is a key country in the Eastern Mediterranean Basin. It has attracted, on a solid basis, major investments from the biggest European energy companies, ENI, Shell and BP, which announced plans to expand their existing investments in various parts of the Egyptian territory (Red Sea, etc.). With the support of the global energy companies and the financing programs of the World Bank, the Egyptian economy is growing fast. Egypt has already succeeded in becoming a net exporter of natural gas, securely leaving behind its status of net importer of natural gas. In 2025, the gas surplus is expected to reach 20-25 bcm/y, thus offering the option to export significant amounts of natural gas in liquid form through the existing LNG infrastructure in Idku and Damietta. These two LNG terminals have the ability to reach full utilization by 2020.[18]

The scenario of exporting gas to Egypt through a pipeline is, however, also a complicated issue. The formation of a regional gas hub in Egypt would have to face the price barrier. Current shifts in global energy production and consumption indicate low prices for energy commodities in the coming years. 'Lower for longer' is the new mantra. Egypt, Israel and Cyprus will have to compete with these low gas prices, on the order of 6-7 US dollars per mm BTU, at least to the end of this decade, but very likely beyond 2020, if the various export projects currently being considered are to become commercially viable (Ellinas 2016, 51-52).

Furthermore, in late June 2018 Egyptian and European media sources indicated—substantiated by Egypt's former Minister of Petroleum Osama Kamal but obviously solely based on seismic surveys— that Italian oil and gas company ENI will be developing the offshore Noor gas field from August onwards. This field is supposed to hold possible reserves of around 90 tcf, which is three times the size of the Zohr field. Should the Egyptian announcements materialize, the commercial viability of several projects in the East Mediterranean will need to be reassessed. With the new, not yet announced offshore Noor discovery, there may no longer be a need for Cairo to cooperate with Israel and Greece, as enough reserves will be in place for Egypt to develop its own viable and commercially attractive LNG export strategy (Widdershoven 2018; Gorodeisky 2018).

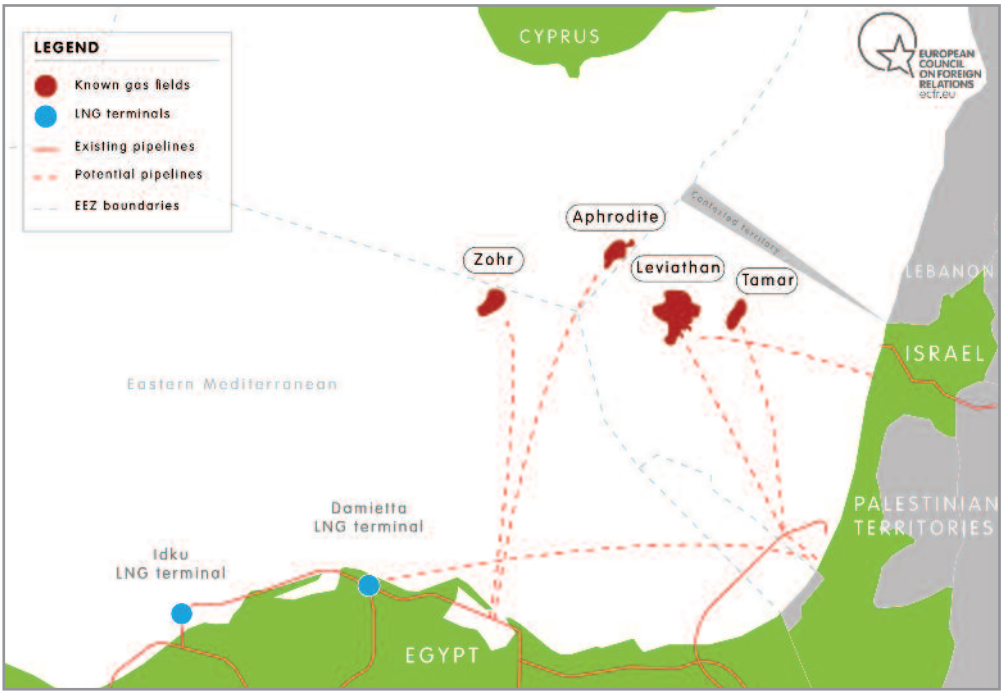
Experts believe that, lacking exploratory drilling, these estimations of the Noor capacity are still premature. Drilling is expected to begin in 2019, at which time it will become possible to assess the size of the field. Given the current circumstances, probably in the next decades, the two LNG terminals in Idku and Damietta will be able to process gas either from Israel or Cyprus in order to cover Egypt's entire domestic consumption and then will be able to export gas as well.[19] However, economic viability is not the only problem in the trilateral energy

18 Remarks by Dr. Charles Ellinas at the Conference at the 3rd symposium on hydrocarbons development organized by Institute for Energy in the Southeast Europe. Athens 30-31.10.2018.

19 Interview with Amit Mor.

cooperation: it is well known that the general public in Egypt is not very supportive of the deal with Israel. Opponents of the project are unhappy about buying gas from Israel when their country is supposed to have achieved self-sufficiency.

**Table II: Gas Fields and (Potential) Export Routes in the Eastern Mediterranean**




*Source: European Council on Foreign Relations*

**Obstacles in the Greece-Cyprus-Israel energy cooperation**

In spring 2018, the latent Israel-Cyprus disagreement over a part of the Aphrodite gas field at the edge of Cyprus's territorial economic waters escalated into serious dispute. The Aphrodite reservoir, discovered in Block 12 of Cyprus's EEZ, extends partially into Israeli territorial waters. At stake there are perhaps 10 billion cubic meters of gas, that is, less than 10% of Aphrodite's total reserves and a just a small fraction of the overall Israeli gas. This, however, was reason enough to delay the signing of a unitization agreement between the two countries, which since 2010 have been disputing the quantity of gas in Israeli territory and Israel's level of involvement in the reservoir's development. In March 2018 the owners of the rights for the Ishai license,[20] a continuation of the Cypriot Aphrodite gas reservoir on the Israeli side of the boundary between the two countries' economic zones, complained to the Israeli government

20 The current partners in the Ishai license are Israel Opportunity Energy Resources LP, Nammax Oil and Gas Ltd., Eden Energy Discoveries Ltd., and AGR Petroleum Services Holdings AS.

that the extraction of gas on the Cypriot side would necessarily lead to the extraction of gas from Ishai as well. Ishai is one of five maritime drillings known as the 'Pelagic Licenses', which extend about 170 kilometres west of Haifa bordering the Gal and Ratio Sea licenses, in which the Leviathan structure and the Noble Energy Block 12 structure in Cyprus are situated (Gorodeisky 2018).

Cyprus and Israel are currently engaged in a "transparent and productive dialogue" regarding the division of the Aphrodite reservoir, but the issue is not expected to be easily solved. It has leaked into the press that if Israel and Cyprus do not reach an understanding within a few months they will go to international arbitration, i.e., hire an international expert to propose a solution based on the two reservoirs' estimated reserves. In the absence of a distribution agreement, Israel is refusing to allow Cyprus to develop Aphrodite, because pumping gas from it will also cause a reduction in the gas to be pumped from the Ishai prospect. Israeli experts estimate that this is not a serious but solely a technical problem, and that it is only a matter of time before it is solved.[21] Commenting on the new gas discovery in Cyprus announced in February 2019, in the Globes business arena, Israel Opportunity Energy Resources and Nammax Oil and Gas, called on the Israeli government to insist that it receives its rights, and to prevent the development of the Aphrodite reservoir (that will now be developed faster) without a commitment by the Cypriot government and its partners guaranteeing that Israel will receive its share of the jointly owned reservoir (Simon 2019).

Energy has been a significant, but not the primary, factor in improving bilateral relations between Israel and Greece as well, though the latter has no proven gas reserves as yet. Nonetheless, Greece has been seeking to upgrade its energy profile as a transit state for gas coming from Israel and Cyprus to the European market, primarily through the East Med pipeline. Furthermore, the country is a significant consumer of natural gas, and its demand is expected to reach approximately 6–7 BCM (billion cubic meters) by 2020. Gas imports from Israel and Cyprus would allow Greece to either completely replace its more expensive Algerian liquefied natural gas imports or decrease its dependence on gas imports from Russia (Stergiou, 2015, 423).

However, as it has been already discussed, the East Med pipeline is still a pipe dream, still in the prospective stage, and not likely to materialize before the 2030s. There are no big geopolitical concerns here but obstacles of a more technical nature. It is feasible, albeit very difficult and expensive, and there is no market or consumer commitment yet or enough gas to justify construction.[22]

Therefore, as it has been argued, the geopolitical benefits of Greece's energy strategy have been overplayed and overstated. Historical experience has shown that transit countries can expect some economic gains (transit fees, support services, etc.) but no political ones, and this is linked to reliability. That means that if the transit countries are unreliable, and if they try to

21 Interview with Amit Mor and Eran Lehrman.

22 Interview with Amit Mor.

abuse their position, their partners will look for alternatives. Greece has been importing gas from Turkey since 2007, and while this trade relationship is important, it has made no real impact on the bilateral political relationship more broadly (Tsafos 2017, 155).

On the same trajectory, the Eastern Mediterranean Gas Forum launched in 2019 in Cairo should be seen as a development of political rather economic importance. In mid-January 2019, the Energy Ministers of Egypt, Cyprus, Greece, Israel, Italy, Jordan, and the Palestinian Authority met in Cairo to discuss the establishment of the Eastern Mediterranean Gas Forum, which should serve as the umbrella for cooperation and dialogue regarding the development of gas resources in the region. While energy lies at the heart of the forum, there are also broader geostrategic procedures that led to its establishment, reflecting the common perceptions of the countries involved regarding the importance of the Eastern Mediterranean to their national security. Although officially the Gas Forum is open to other countries, the meeting in Cairo did not include delegates from Turkey, Lebanon, or Syria.

The same applies to the 6th trilateral summit between Israel, Greece, and Cyprus that took place in March 2019 hosting as special guest the US Secretary of State Mike Pompeo aiming, among other things, to promote the East Med pipeline. In our opinion, this project is more of a political enterprise than a realistic export option. For the project to become a reality it needs to both commercially and technically feasible. Italy appears to be having second thoughts. The EU, currently investigating the feasibility of the project, is supportive but does not have the capacity to construct the pipeline by itself. And as of today, there is no international oil company or investor that has expressed interest in the task.

These meetings could indeed facilitate the exploitation of the resources. Eventually, however, it is up to the markets and the companies to decide if they will engage a country, and they do that primarily on the basis of commercial assessments, resulting from extractive and marketing processes. If the companies, after the completion of such a process, decide not to invest in the exploration and development of natural resources in a country, no political alliance, directive or axis can force them to do so. Commercial viability and bankability of a project is what really matters for a foreign investing company. At a second stage, and provided that this condition is met, they then seek the political acquiescence of all the actors involved.[23] In other words, the key to regional energy cooperation does not lie outside the Eastern Mediterranean. Efforts should be made to craft a more localized and sustainable energy policy, one that understands the limitations of the energy market and the capabilities of the involved parties.

## Conclusions

The paper critically discusses the recent developments in the energy architecture of the Eastern Mediterranean. Though, the gas discoveries have entailed a quasi-institutionalisation of the energy partnership between Greece-Cyprus-Israel-Egypt with the extension of Italy, Jordan,

23 Personal Communication with Amit Mor and Bakhtiyar Aslanbayli, Vice President of BP Azerbaijan (Baku, 8 August 2017).

and the Palestinian Authority, the expected economic and geopolitical profit might be rather limited in the short to medium term. The gas of the eastern Mediterranean remains for the most part so far undeveloped and further exploration remains largely frozen because there is no available export route for the large volumes of gas that could be produced — volumes that far exceed domestic need in any of the countries involved. Until today the attempts to find a viable route have been confronted with strong competitors in a world full of gas supplies. It is argued that despite the enthusiastic reception of the new gas discovery off the coast of Cyprus by the media, the gas-bearing reservoir will not radically change the existing power equilibrium in the Eastern Mediterranean and will have a rather limited impact on the EU-energy diversification strategy.

**Interviews**

*Amit Mor:* Energy expert and professor of energy economics and geopolitics (September 2018, Hertzliya-Israel).

*Arion Liel:* Former Israeli diplomat, lecturer at Tel Aviv University (Jerusalem, September 2018)

*Bakhtiyar Aslanbayli:* Vice President of BP Azerbaijan (Baku, August 2017)

*Charles Ellinas:* former CEO of Cyprus National Hydrocarbons Company (Nicosia, July 2018).

*Eran Lerman:* Netanyahu's former deputy national security adviser for foreign policy and international affairs in Israel's National Security Council, and current vice-director of Jerusalem's institute for strategy and security (Jerusalem, September 2018)

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