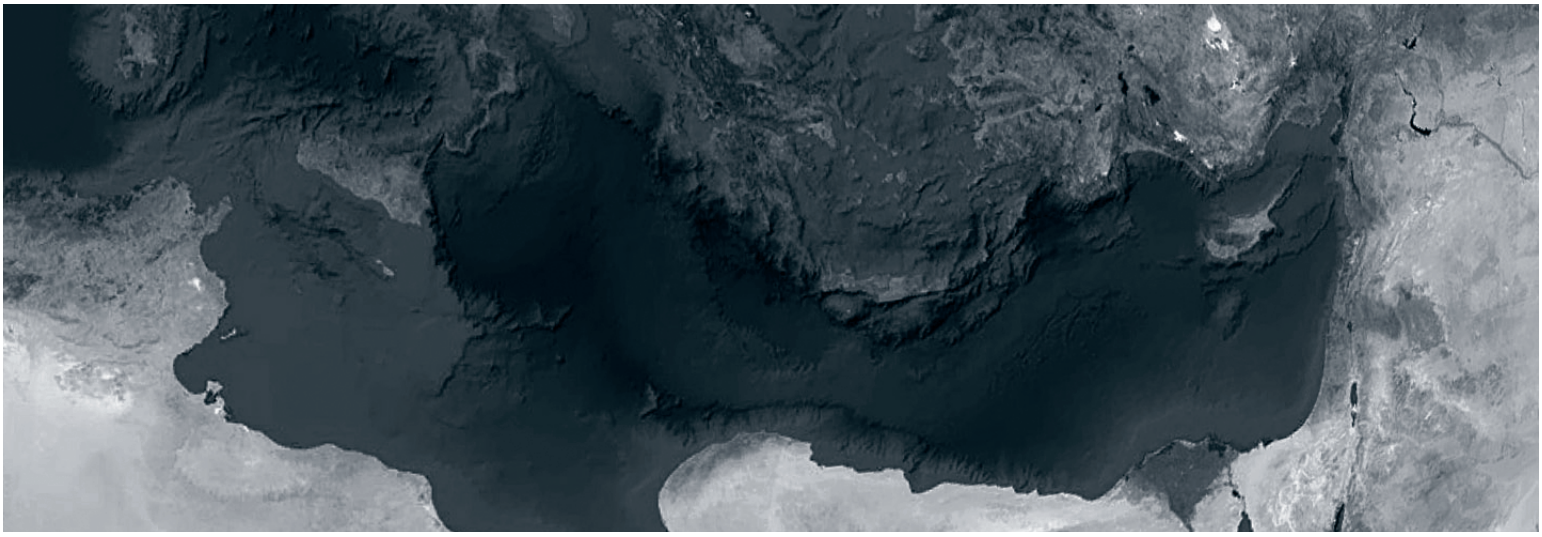

FOREIGN AND SECURITY POLICY PAPER

2016 | NO. 20

# TOWARD AN EASTERN MEDITERRANEAN INTEGRATED GAS INFRASTRUCTURE?

SHAUL ZEMACH

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STRENGTHENING TRANSATLANTIC COOPERATION

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On the cover: Satellite image of Mediterranean Sea.

# Toward an Eastern Mediterranean Integrated Gas Infrastructure?

April 2016 | No. 20

Shaul Zemach[1]
Preface by Sir Michael Leigh



[1] Shaul Zemach is a former director general of Israel's Ministry of Energy and Water Resources. He thanks Sir Michael Leigh for his editorial suggestions and insights and Charlotte Brandsma for her support and assistance.

# 1 Preface

*Sir Michael Leigh*

During my last visit to the Eastern Mediterranean, a leading statesman threw down the following challenge: imagine the region without its current political conflicts and try to map out what rational cooperation on energy infrastructure would look like. This question matched perfectly a concept that Shaul Zemach, former director general of Israel's Ministry of Energy and Water Resources, had mentioned to me when interviewing him for the German Marshall Fund's Eastern Mediterranean Energy project. Zemach has devoted considerable attention both at the ministry and subsequently to working out possible arrangements for energy cooperation with other countries in the region, with the active support of the United States and the European Union.

In this paper, he develops these ideas further and puts forward the outline of a proposal for an Eastern Mediterranean Integrated Gas Infrastructure. This proposal, while seemingly idealistic, is in fact pragmatic, taking as its point of departure existing pipelines and LNG plants. The proposal is scalable, setting out what could be accomplished now and what could be developed in the medium to long term if conditions permit. He identifies an important role for the United States and the European Union in bringing the project to fruition. Zemach's willingness to think creatively puts current conflicts into perspective and will encourage regional leaders, the industry, and public opinion to reflect on the concrete benefits that a collaborative approach to developing the region's natural gas resources could bring.

At a time of increased tension and violence in Syria and other countries in the broader Middle East, it may appear unrealistic to propose an initiative designed to promote regional cooperation on energy infrastructure in the Eastern Mediterranean. Energy cooperation requires a modicum of trust and cannot replace political moves to resolve international conflict. Yet even the most tenacious conflicts eventually end or, at least, subside. Israel maintains diplomatic relations and various forms of cooperation with Egypt and Jordan, and may be on the path to eventual normalization with Turkey. Renewed efforts are underway to achieve a lasting cessation of hostilities in Syria and to reach a comprehensive solution to the problem of the division of Cyprus.

Whether or not such moves succeed, it is timely to consider how regional cooperation could help to optimize the potential benefits of offshore gas discoveries for the peoples in countries bordering the Eastern Mediterranean Sea. This paper considers what regional cooperation on infrastructure and related matters might look like, assuming, however improbable at present, that long-standing political conflicts are overcome or, at least, stabilized.

Functional cooperation on energy could be a stimulus for innovative policies in the Eastern Mediterranean. It could, for example, make desalinization more widely available, easing the problem of water supply, which, according to new analysis, is deteriorating rapidly in several countries, threatening the economic growth, national security, and the region's stability. In turn, this would make increased food production possible where, today, it is too costly. The U.S. Department of State is actively promoting such cooperation.

Access to a stable and affordable energy supply can have a major impact on the region and beyond, because of the energy-water-food nexus. A collaborative approach could help meet human needs in a sustainable manner, with positive side effects for global issues such as migration and climate change, influencing the situation far beyond the borders of the Eastern Mediterranean region.

*Zemach's willingness to think creatively puts current conflicts into perspective and will encourage regional leaders, the industry, and public opinion to reflect on the concrete benefits that a collaborative approach to developing the region's natural gas resources could bring.*

This paper is an invitation to authorities in neighboring states, as well as the European Union (EU) and the United States, to reflect on an innovative collaborative approach. The region's hydrocarbon resources are small by global standards but potentially highly significant for the countries directly concerned. There have been significant delays in realizing potential benefits because of political, regulatory, judicial, and financial constraints and because of the high cost of infrastructure development, particularly if it involves inefficient parallel facilities.

This approach is pragmatic rather than naïve. A scalable strategy, building on existing infrastructure, is a realistic approach. A collaborative initiative to develop physical infrastructure in the region is a win-win proposition for neighboring states, the companies involved, and hydrocarbon consumers in the Eastern Mediterranean and other potential markets.

# 2 Toward an Eastern Mediterranean Integrated Gas Infrastructure?

## The Levant Basin

The Eastern Mediterranean region includes eight significant basins (Cyprus Basin, Eratosthenes High, Latakia Basin, Levant Basin, Judea Basin, Nile Delta Basin, Western Arabian Province, and Zagros Province), with most historical hydrocarbon production occurring in the Nile Delta Basin, the Western Arabian Province, and the Zagros Province (see Figure 1).

The Levant Basin Province comprises approximately 83,000 square kilometers ($km^2$) of the Eastern Mediterranean Sea. The area is bounded to the east by the Levant Transform Zone, to the north by the Tartus Fault, to the northwest by the Eratosthenes Seamount, to the west and southwest by the Nile Delta Cone Province boundary, and to the south by the limit of compressional structures in the Sinai. In terms of geopolitics, the Levant Basin Province is the subsea area that runs from Egypt north to Turkey, including, notably, Israel, Cyprus, Lebanon, and Syria.

## Potential Natural Gas Resources[1]

Israel has estimated gas resources of almost 1,000 billion cubic meters (bcm)[2], and an additional potential of 400 bcm.[3] Lebanon has a potential of up to 750 bcm. Syria has estimated resources of 230 bcm[4] and an additional potential of 170 bcm.

Cyprus has estimated gas resources of 120 bcm[5] and additional potential of almost 1,000 bcm. These latter estimates should be re-evaluated in light of recent surveys by Total in Block 10 and 11 in the Cyprus exclusive economic zone (EEZ), which had failed to find tangible evidence of reserves by early 2016. By contrast, ENI's recent discovery of gas in Egypt's Zohr reservoir might lead to an upward revision of estimates of the potential of Block 11, which is directly adjoining.

These indications of potential resources should be interpreted with care. There is no certainty that the Levant Basin will be explored and developed to its full extent. There are numerous political, technical, and financial obstacles that would need to be overcome. Discoveries are moderate in terms of international production and trade levels but highly significant in terms of regional consumption. Total world production in 2014 was 3,524 bcm, of which 730 bcm was in the United States, 160 bcm in Qatar, and 113 bcm in Norway, to cite several major producers.[6]

## Long-Run Supply-Demand Imbalance

Stable flows of natural gas can significantly improve the quality of life through a steady supply of electricity and, potentially, desalinated water, to a region that is perhaps the least water-secure in the world. Eastern Mediterranean countries draw heavily on groundwater and desalinated sea water, the production of which is highly energy intensive. The region faces tremendous water-related challenges for the foreseeable future.[7]

*Stable flows of natural gas can significantly improve the quality of life through a steady supply of electricity and, potentially, desalinated water, to a region that is perhaps the least water-secure in the world.*

[1] Based on interpretation of U.S. Geological Survey: Assessment of Undiscovered Oil and Gas Resources of the Levant Basin Province, Eastern Mediterranean, Fact Sheet 2010–3014, March 2010.

[2] http://www.nobleenergyinc.com/operations/eastern-mediterranean-128.html.

[3] Alexander Varshavsky: Current Status of Offshore Oil and Gas Exploration in Israel, July 2012 http://www.sviva.gov.il/subjectsEnv/Documents/EIGOA/AlexVarshavsky_workshop.pdf.

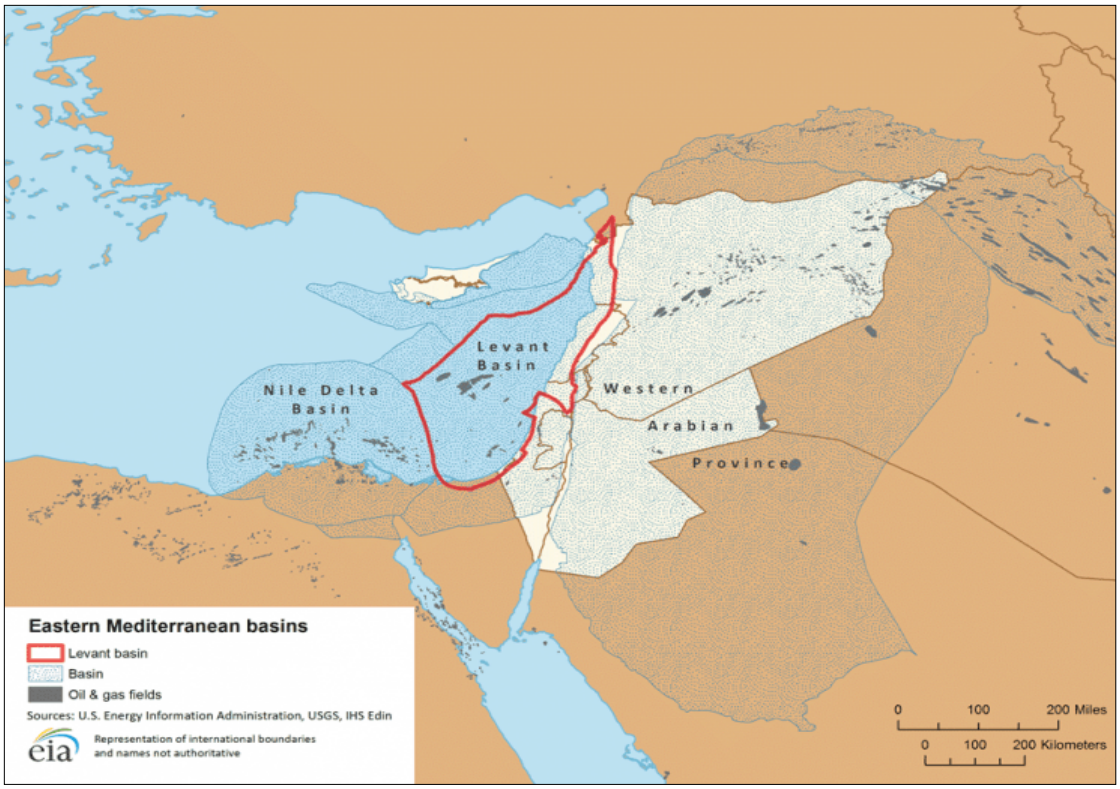
[4] https://www.eia.gov/beta/international/analysis.cfm?iso=SYR.

[5] https://www.iea.org/media/weowebsite/ebc/meetings/ieaenergybusinesscouncil21march2014/DelekDrillingIEAPresentation2132014.pdf.

[6] International Energy Agency, Key world energy statistics, 2015. http://www.iea.org/publications/freepublications/publication/KeyWorld_Statistics_2015.pdf.

[7] Andrew Maddocks, Robert Samuel Young, and Paul Reig: Ranking the World's Most Water-Stressed Countries in 2040, August 26, 2015.

Figure 1: Eastern Mediterranean Basins




Source: U.S. Energy Information Administration

Steady flows of natural gas can also bring down the current high consumer cost of energy, which persists despite low oil prices. This is particularly urgent in Jordan and Lebanon because of the additional demands on energy supply from refugees. Lower cost energy will make economies more resilient and less vulnerable to external shocks. Secure flows of energy at affordable price are needed to provide a solid foundation for sustainable long-term growth.

According to the U.S. Energy Information Administration (EIA), the region's reserves are enough to meet projected demand levels for more than 40 years, even without additional exploration, discoveries, or development.[8] But the availability of gas varies considerably among different neighboring states. In a rational arrangement, offshore production zones would be connected to onshore consumption areas on the basis of demand and supply, irrespective of the gas's national origins. Nonetheless supply and demand cannot be brought into balance within the region itself as the cumulative potential long-term demand there is well below the region's potential production.

[8] http://www.eia.gov/countries/analysisbriefs/Eastern_Mediterranean/eastern-mediterranean.pdf.

### Short-Term Supply-Demand Imbalance

Countries in the region, except for Israel and Syria, have a long way to go until they are able to consume their first domestically produced gas. Rising domestic demand, coupled with high electricity prices that limit economic growth and increase budget deficits, have led Jordan to procure natural gas in the form of LNG on international markets as an interim supply solution. Lebanon has been unable to develop its offshore resources because of political obstacles and faces high energy import bills, placing a heavy burden on already strained public finances.

Syria's capacity to exploit its own resources has deteriorated sharply because of violent conflict in the country. In 2010, the last year under normal operating conditions, Syria produced 9 bcm of dry natural gas. By 2012, that figure had dropped by 28 percent to about 6.4 bcm, and the EIA estimates that production was 5.3 bcm in 2013. In 2012, 25 percent of Syrian natural gas production was reinjected into the country's oil fields to aid in oil recovery. In 2013, more than 90 percent of the country's natural gas production was used to generate electricity, according to Syrian government officials.[9] This left very little for domestic or commercial consumption.

Syria has considerable potential for oil and gas production, both on-shore and offshore, but production is now seriously hampered by the conflict. Production in areas under control of the self-proclaimed Islamic State group is sold directly to independent traders for cash and is a major source of the group's revenue.

In the short term, the Eastern Mediterranean region faces a number of imbalances. Insufficient domestic demand in Israel, coupled with regulatory and commercial issues, has held back the further development of the countries' discoveries. Israel's gas capacity exceeds its current demand but cannot meet unsatisfied demand in Cyprus, Egypt, and Jordan (or Lebanon – with which Israel is in a state of war) in the absence of inter-connectors. Cyprus has not yet been able to develop its Aphrodite field because domestic demand alone is insufficient to justify the necessary investment.

This regional disequilibrium is not inevitable or eternal. The demand/supply imbalance within the Levant Basin could be overcome through a collaborative approach designed to ensure the efficient utilization of the region's hydrocarbon potential. An innovative approach should be designed to:

- maintain short term security of supply;
- balance supply and demand regionally in the medium term;
- build inter-connectors between neighboring states;
- increase energy efficiency; and
- reduce expenditure on energy and hence pressure on national budgets and balance of payments.

### The Levant Basin's Puzzle

Levant Basin countries have different market structures, sources of supply, and levels of dependence on imports as well as different geographical, political, economic, and social profiles. Potential additional resources may be smaller than existing discoveries and more expensive to explore and exploit. Hence higher investment will be required and a relatively high price per unit will need to be charged. Spreading that cost across the relatively low volume of domestic demand in any one market may increase

*Regional disequilibrium is not inevitable or eternal.*

[9] https://www.eia.gov/beta/international/analysis.cfm?iso=SYR.

*There is a major shared interest in the Eastern Mediterranean in creating the conditions for a regional gas market to function.*

the risks and make the development financially non-viable.

There is a major shared interest in the Eastern Mediterranean in creating the conditions for a regional gas market to function. This interest has not yet been widely recognized because of political circumstances. In its absence, the resource will not be developed optimally. The basin will not be utilized to its full potential, development will be inefficient, gas prices will remain high, and regional economies will not harvest maximum gains from the resource. There is a risk that gas in certain reservoirs may become stranded.

In order to rebalance long-run supply-demand divergences and to justify the vast development-related investments required, additional export markets must be found, regionally or globally. They are needed to obtain finance and to access the technologies required for ultra-deep water drilling and production. The situation is further complicated by an unstable investment climate and global trends toward lower hydrocarbon prices.

Conditions in the Levant Basin are particularly challenging. The physical characteristics of the gas, especially its low energy density, limit delivery options. High capital expenditure will be required for whichever type of transmission infrastructure is chosen. Pipelines, rather than LNG, appear the logical choice, considering the relatively short distances involved.

To be sure, LNG is more flexible and gives access to global markets. But it involves much higher capital expenditure, long-term commercial contracts and higher prices to ensure financial viability. Hence it is not a realistic option in the region, especially at a time of low commodity prices. A possible exception may be the LNG plants in the Egyptian port towns of Idku and Damietta, which are at present unused because of reduced production and increased consumption in Egypt. They could possibly be used in the medium term to export natural gas from the Eastern Mediterranean.

Worldwide, over 20 bcm of new LNG supply capacity has been approved annually in recent years.[10] The abundance of LNG at a time of reduced levels of economic growth globally makes it harder to find investors to develop infrastructure for reservoirs in the Eastern Mediterranean, especially given the lack of inter-connectors within the region's own potential market.

Low domestic demand, the dispersion of national markets, the heavy investment required, and weak economies point to the need for cooperation. This will bring gains in efficiency and create more favorable conditions for further exploration and production. The development of an efficient network of export infrastructure in the Eastern Mediterranean would reduce the risk of stranded gas and enable producing countries and their neighbors to benefit from the region's own resources.

### Egypt's Singular Position

Egypt plays a major role in the energy economy of the Eastern Mediterranean region. Its oil and gas reserves place it 21st in the world, and its gas reserves are greater than Norway's or Canada's.[11] Nonetheless, in recent years, Egypt has changed from being an exporter of oil and gas into a net importer.

The change in Egypt's energy position is most evident in the case of natural gas, which provides half of the country's total energy. In July 2003,

[10] BG GROUP, Global LNG Market Outlook 2014-15, http://www.bg-group.com/480/about-us/lng/global-lng-market-outlook-2014-15/.

[11] Nikos Tsafos, "Egypt: A Market for Natural Gas from Cyprus and Israel?", October 2015, http://www.gmfus.org/publications/egypt-market-natural-gas-cyprus-and-israel.

Egypt began to export gas to Jordan by pipeline and it soon began to export gas through its two liquefied natural gas (LNG) facilities to other markets. It also sent gas to Israel and Syria and planned to export to Lebanon and Turkey. Egypt was, at the time, the world's eighth largest LNG exporter.[12]

Egypt currently cannot meet rising domestic demand for energy. At present, production is falling, despite sizeable discoveries that will take several years to come on-stream. Substantial gas discoveries offshore in the Nile Delta are not all commercially viable and, in any event, will also take several years to develop. The country may require LNG imports until the mid-2020s to satisfy domestic demand.[13]

Egypt, historically, played an important role as a nearby source of natural gas, exporting it to Jordan, Lebanon, and Syria via the Arab Pipeline and to Israel via the El-Arish-Ashqelon Pipeline.

Falling Egyptian gas production has raised the possibility that Egypt might import Israeli or Cypriot gas, possibly for re-export from its two idle LNG plants, as noted above. However, such ambitious projects involving heavy infrastructure investment are highly uncertain. Nevertheless, it is likely that Egypt will play a key role in any future regional gas scheme.

### Integrated Infrastructures

Building additional pipeline capacity is one of the leading challenges in reaching a better balance between supply and demand in the Eastern Mediterranean. With better infrastructure capacity, more natural gas could be transported to where it can be marketed effectively. Transport costs constitute a significant part of the final cost of natural gas, unlike oil. Long-term contracts are necessary to underwrite the cost of infrastructure development and to ensure a market especially because of the very high initial capital costs.[14]

The first move toward a cooperative approach would be a feasibility study of potential common infrastructure facilities. It should take into account durability, scale, flexibility, and expenditure as well as the economic stimulus and multiplier benefits such investments would generate.

In economies such as Cyprus and Lebanon, the market is too small to justify the investment cost of developing the fields and the associated facilities, including transmission systems. Increased use of gas in power generation, agriculture, and transport require major capital investment and still would not be sufficient to absorb potential national gas resources or to mobilize finance for the necessary infrastructure.

Adequate infrastructure is a prerequisite for establishing a functioning oil and gas province from scratch. Private investment is necessary but is unlikely to prove sufficient in light of geopolitical risk and economic uncertainties in the region. The public sector will, therefore, also need to play a role.

Integrated development planning and design would help optimize infrastructure development, avoiding inefficient investments (unnecessary duplication) and securing the most efficient use of existing infrastructure. Infrastructure developed on the territory of one state could be used in part to meet the requirements of neighboring states.[15]

*Integrated development planning and design would help optimize infrastructure development, avoiding inefficient investments and securing the most efficient use of existing infrastructure.*

[12] Ibid.

[13] http://www.eia.gov/countries/country-data.cfm?fips=eg.

[14] https://mitei.mit.edu/system/files/NaturalGas_Chapter7_Markets.pdf.

[15] "Integrated Infrastructure Planning," Miroslav Kukobat, Regional Cooperation Council Secretariat, http://www.rcc.int/articles/27/integrated-infrastructure-planning-by-miroslav-kukobat-head-of-infrastructure-and-energy-unit-regional-cooperation-council-secretariat.

*The design should provide interim solutions to short-term regional demand-supply gaps and longer-term export options beyond the region's borders.*

In the sensitive marine environment of the Mediterranean, collaborative planning could reduce environmental impact from the construction and maintenance of infrastructure. Proper planning could also decrease habitat fragmentation, increase biodiversity, restore functioning ecosystems, and sustain living resources. A coordinated approach might also involve common rules and procedures for ensuring the safety of infrastructure, preventing marine pollution and ensuring rapid intervention, regardless of boundaries, in the event of an accident.

### The Eastern Mediterranean Integrated Gas Infrastructure

An integrated regional infrastructure requires simple, efficient design and cost effective implementation. It also needs to pass the test of economic feasibility, although public sources of finance may defray part of the initial costs.

The Eastern Mediterranean Integrated Gas Infrastructure (EMIGI) should reflect the current supply and demand profile of countries in the region, existing infrastructure and export destinations, and likely future developments. It will need to be flexible and scalable to meet different scenarios. It should comprise a South-North or Egypt-Turkey axis and an East-West axis to support interconnectivity and the flexible flow of gas from its production sources to markets. Inter-connectors may be offshore, onshore, or a combination of both. Each alternative path will require the cooperation of several countries in the region (see Figure 2).

The design should provide interim solutions to short-term regional demand-supply gaps and longer-term export options beyond the region's borders. EMIGI would be implemented in several "stand alone" phases to reduce financial risks and to allocate financial resources efficiently. EMIGI would significantly reduce political risk and so should attract world-class financial and strategic investment.

There are precedents for common projects on a regional or sub-regional scale, albeit modest and fraught with political and economic difficulties. These include the "Arab Gas Pipeline," the "El-Arish-Ashqelon Pipeline" and the "Trans Arab Pipeline." EMIGI can draw on this experience, avoiding past mistakes and promoting a common vision of the region's development. Existing regional infrastructure projects should be an anchor for the EMIGI project.

Initially, the El-Arish-Ashqelon pipeline was established by Egypt to provide gas through El-Arish in Sinai to the Palestinian Authority, Turkey, Syria, and Lebanon. Later, the Egyptian government bypassed Israel by establishing the Arab Gas Pipeline, including Jordan, Syria, and Lebanon.

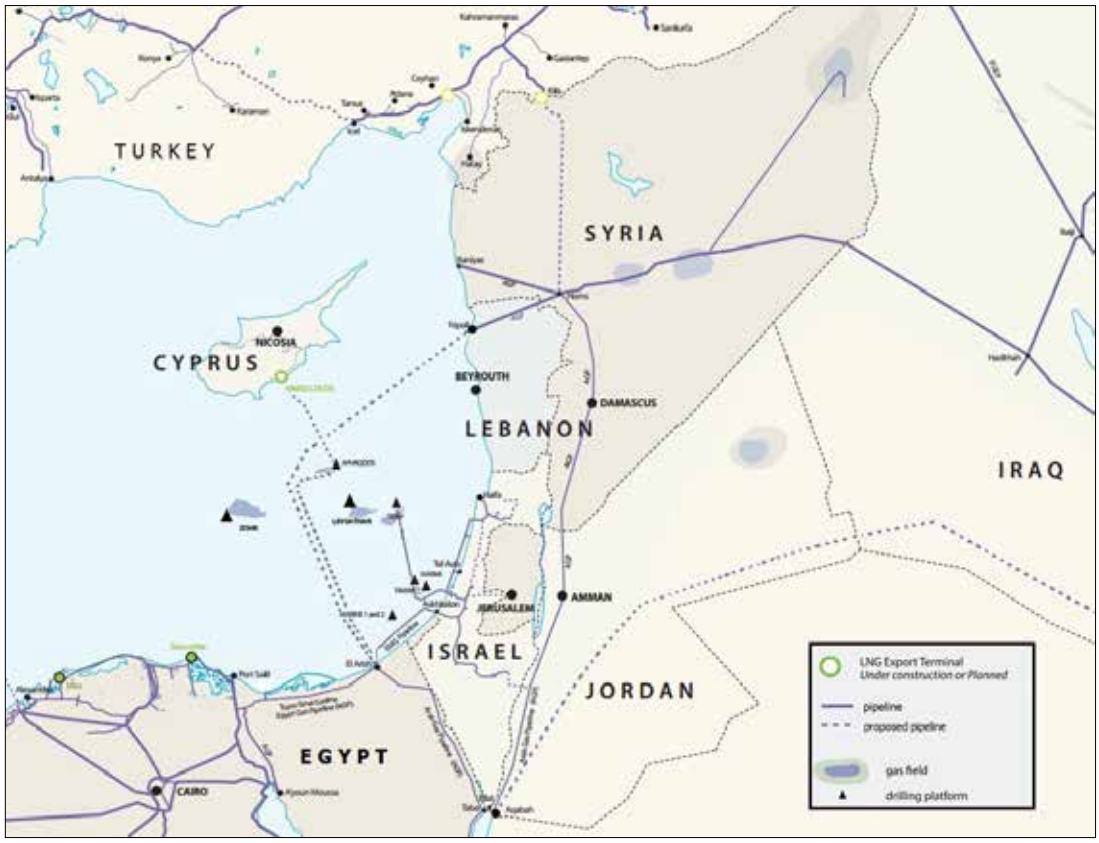
The Arab Gas Pipeline Project had a strategic objective in establishing an integrated Arab Gas Market with transfers of knowledge and expertise. It was meant to transcend geographical and political barriers with a view to achieving a degree of economic integration.[16] With Jordan included in the Arab Gas Pipeline scheme and Israel excluded, Egyptian gas exports fragmented into two arms: an onshore arm via Jordan to Syria and Lebanon, and an offshore arm, via the Mediterranean subsea pipeline to Ashkelon, Israel.

Egypt also planned initially to build a natural gas pipeline beneath the Mediterranean Sea to the Lebanese port of Tripoli. The 400 km pipeline would begin at El-Arish and avoid Israel's Exclusive Economic Zone.[17] These planned corridors remain

[16] http://www.fajr.com.jo/en/home.aspx.

[17] http://www.gasandoil.com/news/middle_east/03c08cb0d4f21d9fbc903f28373038d7.

Figure 2: Energy Infrastructure in the Eastern Mediterranean




Source: adapted from ENTSOG/GIE System Development Map, http://www.entsog.eu/maps/system-development-map

potential export routes for natural gas to markets both within the region and beyond.

At the end of 2015, the Egyptian, Jordanian, and Iraqi energy ministers signed a memorandum of understanding in Amman, Jordan, to promote cooperation on oil and gas. Such cooperation would cover imports of surplus oil and gas production from Iraq as well as the use of existing inter-connectors and natural gas resources and processing facilities in Jordan and Egypt.

The King of Jordan, Abdullah II, received the three ministers and discussed the possibility of building oil and gas pipelines between Iraq and Jordan, benefiting from the expertise of Egyptian companies.[18] Iraq is also considering the possibility of building parallel oil and gas pipelines from Basra (Iraq) to Aqaba, on Jordan's Red Sea coast. This would, inter alia, give Jordan and Egypt access to Iraqi oil and gas.[19] Egyptian and Jordanian representatives have also discussed arrangements to receive the expected flow of imported LNG gas

[18] Arab Republic of Egypt, Ministry of Petroleum, November 15, 2015. http://www.petroleum.gov.eg/en/MediaCenter/LocalNews/Pages/mop_15112015_1.aspx.

[19] http://www.platts.com/latest-news/oil/dubai/consortium-bids-for-re-routed-iraq-jordan-oil-26403291.

*Mediation by an external party would be necessary to overcome political, technical, and financial obstacles to regional cooperation on energy infrastructure.*

from Qatar to Jordan through a new jetty in Aqaba using the Arab Gas Pipeline.

Against this background, connecting Israel to the Arab Gas Pipeline with an extension to Turkey or, at least using the same corridor and rights of way, would be a rational strategy. The rights of way of the Trans-Arab Pipeline in the Golan Heights could be used to provide a temporary bypass from Jordan to Lebanon, if conditions on the ground make this possible.

Senior officials from Cyprus and Egypt have discussed the possibility of exporting gas from Cyprus to Egypt via a pipeline. An infrastructure link from the reserve (located 170 kilometers south of Cyprus) to Egypt and to Cyprus itself would be in the interests of both countries. Cyprus could then export gas from the Aphrodite field to Egypt via a new undersea pipeline, which would be connected through Egypt to the Arab Gas Pipeline. Alternatively, Cyprus could be connected to the future regional grid through Israel.

Detailed studies are needed to determine which of these options may be technically and commercially feasible. To be sure, many political constraints would need to be overcome in order to build the inter-connectors under discussion here. The means whereby this could be accomplished requires further analysis. The present purpose is to sketch out the contours of a possible regional infrastructure scheme.

### International Players and Interests in Eastern-Mediterranean

Mediation by an external party would be necessary to overcome political, technical, and financial obstacles to regional cooperation on energy infrastructure. This possibility has been discussed at the ministerial level in the U.S.-EU Energy Council. U.S. and EU authorities view the new Eastern Mediterranean gas discoveries as a possible additional means to enhance energy security in the region.[20]

In December 2012, the Council noted that "the significant current and future Eastern Mediterranean gas discoveries could enhance the energy security of the countries in the region. The United States and EU are ready to assist interested countries in using their energy resources to best serve their national and regional economic interests."[21]

The United States is suited for the role of regional mediator being an ally of several of the parties. Such mediation would help achieve three U.S. goals: 1) to strengthen its allies' economic and physical security, 2) to integrate the region with global markets, and 3) to ensure the safety of U.S. citizens and the success of U.S. companies.[22]

In May 2014, former U.S. Secretary of State Madeleine Albright highlighted Turkey's geopolitical position as enabling it to provide a transit route that would reduce dependence on Russian energy sources. Albright noted the advantages of transporting energy from Cyprus and Israel to Europe through Turkey, adding that relations appeared to be improving between Turkey and those two Mediterranean countries.

"We should remember our shared interests. The U.S., the European Union, Turkey, and others have a strong interest in seeing energy from all these sources reach Turkey, Europe, and global markets. Hopefully as more and more pipelines conduct oil and gas through Turkey's borders and beyond, we

[20] Zemach Shaul, "Narrowing opportunities requires cooperation," *Oil & Gas Journal*, May 4, 2015.

[21] Joint statement on the U.S. – EU Energy Council, Media Note, Office of the Spokesperson, U.S. State Department, Washington DC, December 5, 2012.

[22] "Trouble in the Eastern Mediterranean Sea," *Foreign Affairs*, March 20, 2013, http://www.foreignaffairs.com/articles/139069/yuri-m-zhukov/trouble-in-the-eastern-mediterranean-sea.

can ensure that partnership and trust flow along with them."[23]

Such political expressions of interest need to be complemented by concrete investment decisions based on commercial viability. Nonetheless, they contain a strong indication that the United States administration has the desire to promote regional cooperation on infrastructure among states in the Eastern Mediterranean.

### The Mechanism for Cooperation and a Possible EU Role

Detailed studies will be required to evaluate the technical and commercial feasibility of an integrated transnational gas pipeline and transmission facilities that would carry natural gas from multiple sources to regional markets. These should cover engineering, market development, gas purchasing, economic, financial, technical, and commercial risk as well as environmental, social, and regulatory issues.

The EU has close relations of partnership, cooperation, candidacy, or membership (in Cyprus's case) with all the countries of the region. It is well placed to help develop an innovative mechanism for coordination and cooperation. The mechanism would be a vehicle to define mutual interests and reduce conflict associated with offshore oil and gas activities in the Eastern Mediterranean.

The benefits for Europe could be substantial: reliable and accessible energy supplies, less dependence on certain countries for hydrocarbon imports, and a more stable periphery. The involvement of Cyprus, after a comprehensive settlement of the problem of the division of the island, could provide a bridge between the region and Europe.[24]

A dedicated forum for gas market integration should be set up to cover professional aspects of regional gas integration. This forum would also provide a framework for coordination among energy ministries, national regulatory authorities and transmission system operators. The forum would also supervise the joint implementation of relevant network codes and other technical requirements.

Like many other large scale infrastructure projects of its kind, the EMIGI venture faces numerous risks:

- Market risks associated with project finance, including issues related to tariffs and supply settings; engineering and technical matters; and environmental risks.
- Risks linked to regulatory uncertainty in the Middle East and the lack of an internationally binding legal framework.
- Political risks linked to the unstable geopolitical climate of the region.

The EU is in a position to palliate financial risks by mobilizing different instruments, including grant assistance for associated countries, the structural funds (in the case of Cyprus), and project finance from the European Investment Bank. The European Bank for Reconstruction and Development, not itself an EU institution, could provide finance under its mandate for the southern

*Political expressions of interest need to be complemented by concrete investment decisions based on commercial viability.*

[23] Fred Dews, "Madeleine Albright Delivers 10th Annual Sakıp Sabancı Lecture," May 1, 2014, Brookings Institution.

[24] Mehmet Öğütçü and Stephen Jones, "Time to transform the Eastern Mediterranean," EurActiv.com, December 1, 2015. http://www.euractiv.com/sections/energy/time-transform-eastern-mediterranean-319993.

and eastern Mediterranean.[25] The United States has also reaffirmed its willingness to help its allies and partners in the region to realize the potential of their hydrocarbon resources.[26] A comprehensive settlement of the problem of the division of Cyprus could well unlock additional investment funds.

*The proposed EMIGI initiative, by taking advantage of existing cross-border infrastructure as a point of departure, could generate considerable benefits for relatively low amounts of new investment.*

## Conclusion

Integrated planning and design could strengthen overall energy infrastructure in the Eastern Mediterranean, avoiding duplication and ensuring the efficient use of existing pipelines. Efforts should be scalable, focusing initially on objectives that can be attained in the short to medium term. As the former U.S. ambassador to Cyprus, John M. Koenig, commented: "Based on my experience in the region, I think it is obvious where to start. It is to leave behind zero-sum thinking. It is to value commitment to cooperate as highly as determination to resist. It is to embrace the notion of enlightened self-interest. It is to value shared well-being more than relative well-being."[27]

In practical terms, this would require states in the region to switch to a pragmatic cooperative approach, notwithstanding underlying political conflicts. The proposed EMIGI initiative, by taking advantage of existing cross-border infrastructure as a point of departure, could generate considerable benefits for relatively low amounts of new investment.

A political framework needs to be set up to create the conditions for a regional initiative to go ahead. The geopolitical interests of the EU and United States should provide them with incentives to promote the collaborative framework and to help develop the necessary regional infrastructure.

Europe's experience in the 1950s, albeit in different circumstances, can serve as an inspiration for countries in the Eastern Mediterranean. Despite the conflagration of World War II and entrenched antagonisms, six European countries decided to manage their coal and steel resources through common institutions. The European Coal and Steel Community provided the nucleus of the future European Union. This does not imply that the economic integration of Eastern Mediterranean countries is a viable project under present conditions. It does suggest, however, that common efforts in highly specialized fields, like energy, can provide economic benefits that may provide incentives for moving beyond conflict to collaboration.

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[25] Anastasios Giamourides and Nikos Tsafos, *Financing Gas Projects in the Eastern Mediterranean*, The German Marshall Fund of the United States, July 2015, http://www.gmfus.org/publications/financing-gas-projects-eastern-mediterranean.

[26] John M. Koenig, "Eastern Mediterranean Hydrocarbons: Geopolitical and Industry Perspectives; Market and Export Routes; and Regional Cooperation," PRIO Workshop - November 14, 2013. http://cyprus.usembassy.gov/sp-amb-prio-nov13.html.

[27] Ibid.

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