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## **Challenges and Opportunities in the Eastern Mediterranean**

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### **Resolving Disputes Critical to Exploiting Resources**

The past few years have seen the global energy community paying increasingly close attention to the Eastern Mediterranean. Scientific evidence of extensive undersea oil and gas deposits could have broad economic and geostrategic implications that promise to be both far-reaching and long-lasting. Recent gas discoveries in various regional locations indicate that the quantities involved exceed the usual standard of commercial viability. It now seems likely that several countries possess reserves whose size and recoverability make them “game-changers” in terms of their potential to generate economic and other benefits for generations to come. For a region—and its peoples—long plagued by poverty, weak governance, armed conflict, and other drivers of instability, the advent of massive energy revenues would mean a rare opportunity to start catching up after more than a century’s worth of lost time.

Unfortunately, however, there are no guarantees that efforts to fully exploit the geology of the Eastern Mediterranean Basin can be insulated against the effects of various potential pitfalls emanating from both within and without. Already, tensions and rivalries over this precious resource are creating, sustaining, and exacerbating disputes, both directly and indirectly, among some of the region’s seven coastal states (Cyprus, Egypt, Greece, Israel, Lebanon, Syria, and Turkey). Given the longstanding animosities between, for instance, Lebanon and Israel, or Turkey and Cyprus, there is ample reason to fear that ill-considered rhetoric could drown out wiser approaches. If that were to happen, the consequences could include not just delayed development of a lucrative resource, but also increased frictions and perhaps even one or more shooting wars. In addition to the usual, indeed, virtually inevitable—disagreements among neighbors over ownership of

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resources, it will require deft management because the Eastern Mediterranean's energy potential is on such a colossal scale. Development of these resources could also run afoul of exogenous obstacles ranging from commercial competition from much stronger rivals to geostrategic maneuvering by much larger powers.

### Importance of Getting Investment from Other Countries

Consider the options available to Qatar, the world's leading exporter of liquefied natural gas (LNG), and an increasingly significant investor in energy assets around the world.<sup>1</sup> Qatar Petroleum holds a 40% stake (with ExxonMobil holding the rest) of Block 10 offshore Cyprus, which in the summer of 2018 yielded the world's third-biggest gas find of the past two years.<sup>2</sup> In a perfect world, Cyprus would profit not only from its gas but because of its central location as a regional energy hub for processing and transportation of other countries' gas as well. If and when Cyprus establishes that it has the diplomatic wherewithal and managerial competence to go forward, Qatar would be a natural source of additional investment, providing crucial capital that would help get the region's gas to other markets in a timely fashion.

Cyprus would reap unprecedented revenues, restoring financial strength to both public and private entities, and allowing historic investments in its people's future. Other regional countries would also benefit, whether by getting their gas to market via Cyprus or by receiving pipeline transit fees. Conversely, imagine the same story turned on its head. In this scenario, Cyprus fails to resolve its maritime boundary dispute with Turkey, or the energy sector is mismanaged, causing the Qataris and other qualified investors to avoid further exposure because of the risks involved. If that happens, and if no other investor steps in, the pipeline(s) and liquefaction plant never get built, or capacity only comes online after Qatar and other major exporters have already locked up most of Europe's LNG purchases for the next 20 years by taking out long-term leases on the continent's crucial offloading facilities. If that happens, everyone in the region loses, including Turkey, which would have lost opportunities to secure its legitimate claims in the Eastern Mediterranean, as well as to collect pipeline transit fees.

The rate of extraction has to be determined by the size of the deposit involved and how long it will last. If it costs \$100 billion in development and production spending, for instance, to extract \$200 billion worth of gas from a given area over ten years, it makes no sense to spend an extra \$100 billion to deplete the same field in half the time. The enormous increase in up-front investment required, with zero resulting increase in overall revenue, would be equivalent to economic self-harm by any producer tak-

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1. See, for example, Kamrava (2013).

2. See Tilliros (2017).

ing part. Cooperation with other countries is key, including Russia. In Lebanon, for instance, Novatek is part of a consortium that owns exploration rights for one of the most promising blocks. The region needs a shared interest in peace and stability that reduces the scope for tensions and conflict, encourages cross-border cooperation and investment, and opens the way for lucrative revenues at the earliest opportunity. Given the costs and lengthy delays likely to result from Russian and other opposition, Eastern Mediterranean oil and gas resources should be viewed as a complement or supplement to those from other suppliers. This would include Turkey through existing pipelines such as Blue Stream, Turk Stream, and the currently dormant Iran-Turkey link. Attaching this kind of non-threatening profile offers multiple significant advantages.

The Eastern Mediterranean is a famously crowded and complex place and most of its international maritime boundaries remain unsettled. It will take time to muster the political will and popular support necessary for talks and other interactions to proceed. But that only highlights the necessity of starting work on solutions today, not tomorrow. UNCLOS provides most of the necessary tools—legal foundations, proved mechanisms, and a continuously updated LOS Atlas—so it constitutes a logical starting point from which effective energy diplomacy can be used. UNCLOS can promote multilateral dialogue, resolve or successfully manage competing claims, and give all concerned a chance to share in the proceeds.

One of the doors to shared prosperity can only be unlocked by unshackling Cyprus from its troubled past. Given its central geographical location in the region, its relatively low land prices, and its friendly relations with most neighboring countries, Cyprus is clearly the most logical spot to host a major new hub for the gathering, processing, and distribution of Eastern Mediterranean gas. Pipelines from the island to Greece, Italy, and Turkey would give current and future regional producers seamless access to the southern littoral of the Eurasian mainland. LNG carriers would enjoy minimal sailing times to Egypt's Suez Canal, and therefore to growing markets in East Africa and South Asia. Cyprus also is closer to the Mediterranean's western exit at Gibraltar than Syria, Lebanon, Israel, or Egypt.

## **The Stakes**

In addition to the world-class formations already discovered, exploration of the Eastern Mediterranean seabed is expected to yield more finds in the coming years. This has led to heated disputes, including overlapping claims between Greece and Turkey, Cyprus and Turkey, Syria and Turkey, Lebanon, and Israel. Given these dangerous realities, it only makes sense for anyone interested in the region's stability to familiarize themselves with the principles and mechanisms by which such disputes are resolved and with the likely outcomes if and when conflicting claims are put to a legal test. This book proposes a fair,

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unbiased, and equitable solution for each of the Eastern Mediterranean's seven coastal countries. It attempts to set out the likely extent of its eventual maritime boundaries vis-à-vis those of its neighbors, taking into account the usual legal/diplomatic methods by which competing claims are resolved. For each of the boundaries at issue, there is a "way forward" scenario by which the interlocutors can accomplish this peacefully, arriving at neutral and equitable solutions by following the same by-the-book methodology relied upon by UNCLOS, as well as by international courts and tribunals, whether for adjudication or arbitration.

It would be difficult to overstate the stakes. In addition to the special case of Gaza, the Eastern Mediterranean is rimmed by seven coastal states—Cyprus, Egypt, Greece, Israel, Lebanon, Syria, and Turkey—with an overall Maritime Frontier Area of 464,637 square kilometers, relative to 21 states and 2.5 million km<sup>2</sup> for the Mediterranean as a whole. The latest and most reliable estimates suggest that the Eastern Mediterranean contains more than USD 50 trillion worth of oil and gas, primarily the latter. Despite the promise of so much lucre, only two genuinely major discoveries have been made in recent years, both now on track to the development stage. These are Leviathan, discovered off Israel in December 2010 and reported to hold over 22 trillion cubic feet in gas reserves, and Zohr, discovered off Egypt in August 2015 and reported to be even larger at 30 TCF. To put matters in perspective, Zohr's proven reserves alone are estimated to be worth USD 150 billion.

Under UNCLOS' Guidelines and Rules of Procedure, the Eastern Mediterranean region currently has 12 main maritime boundaries to define in order to delineate the offshore spaces among the seven coastal states fully. Of these, only two (Cyprus-Egypt and Cyprus-Israel) have bilateral treaties, leaving 10 (or 83%) of the region's maritime boundaries unresolved and in dispute. As of June 2019, all seven coastal states in the Eastern Mediterranean had some active offshore hydrocarbon industries totaling 231 defined oil and gas blocks covering a maritime area of 238,135 km<sup>2</sup>, representing about 51% of the region's total offshore waters. Of the present-day blocks expected to be put on offer, up to 36% can be classified as "contentious" due to the uncertainties regarding the precise locations of the relevant maritime boundaries.

Unless the ambiguities surrounding the vast majority of these boundaries are satisfactorily resolved, future economic development stemming from seabed hydrocarbon discoveries and exploitation will be negatively affected, inevitably reducing overall revenue for the entire region. And it is not just finding and extracting the resources that will be hampered, the continuing absence of officially delineated maritime boundaries also would impair the construction and operation of underwater pipelines. In this context, the recently proposed pipeline that would carry Israeli gas 2,000 kilometers from Cyprus to Italy (via Crete and the Greek mainland) may be a nonstarter. Feasibility mapping shows that the route crosses un-treated boundaries, including one contested between

Greece and Turkey, rendering it unworkable unless and until the multiple parties reach resolution.

The urgency attaching to boundary delineation cannot be fully appreciated unless one understands the long-term social and economic potential for offshore hydrocarbon resources in the Eastern Mediterranean. Notwithstanding the partial exceptions of Cyprus and Israel (already tapping some of its undersea resources on a considerable scale), the economies of all seven coastal states suffer from various degrees of under-development, inadequate transport and infrastructure problems. For all of these countries—but especially the smaller ones with modest populations—the emergence of thriving hydrocarbon sectors could have impacts that are nothing less than historic, on multiple levels. The mere prospect of the resulting revenues makes any country more attractive to investors, the auctioning of oil and gas blocks strengthens government coffers, and even the earliest stages of exploration start spinning off new opportunities for companies engaged in support activities, creating new jobs for local applicants.

Once extraction begins, the country in question can often realize substantial savings on its energy bills because its import needs would be reduced or eliminated. Once that happens, the entire economy can benefit from lower electricity rates, lower production costs, and lower transport bills, leading to lower input costs across virtually every sector. By its very nature, this kind of broad savings increases the competitiveness of the economy, typically leading to more exports and therefore more growth, itself serving to provide momentum toward self-sustainability. And this is just the beginning because once the country starts to sell its oil and gas abroad, the resulting revenues open up whole new possibilities for its people. In a region long stymied by low development levels that reinforce poverty and inequality, and by persistent tensions that contribute to higher defense and security costs, well-managed hydrocarbon revenues would be a genuine game-changer. In the big picture, such revenues give governments more options to effectively match their priorities with their capabilities without having to sacrifice long-term interests in order to deal with short-term crises. With good governance, these kinds of effects can significantly improve even the tightest of fiscal situations.

It is on the spending side that wise leadership can make the most of a hydrocarbon windfall. Having such resources allows governments to shift the national economy into a permanently higher gear by investing in the platforms that make any society healthier, wealthier, better-educated, and more productive. These kinds of investments also generate greater efficiency, more predictability, and enhanced competitiveness. Best of all, they create conditions in which poverty can be sharply reduced or even eliminated, allowing a society to work for all of its members rather than a select few.

There is, however, no time to waste, as evidenced by mounting tensions across the area that have led to the increasing presence of outside naval forces in the region over the past few years. The potential for mounting tensions to spin out of control has been demon-

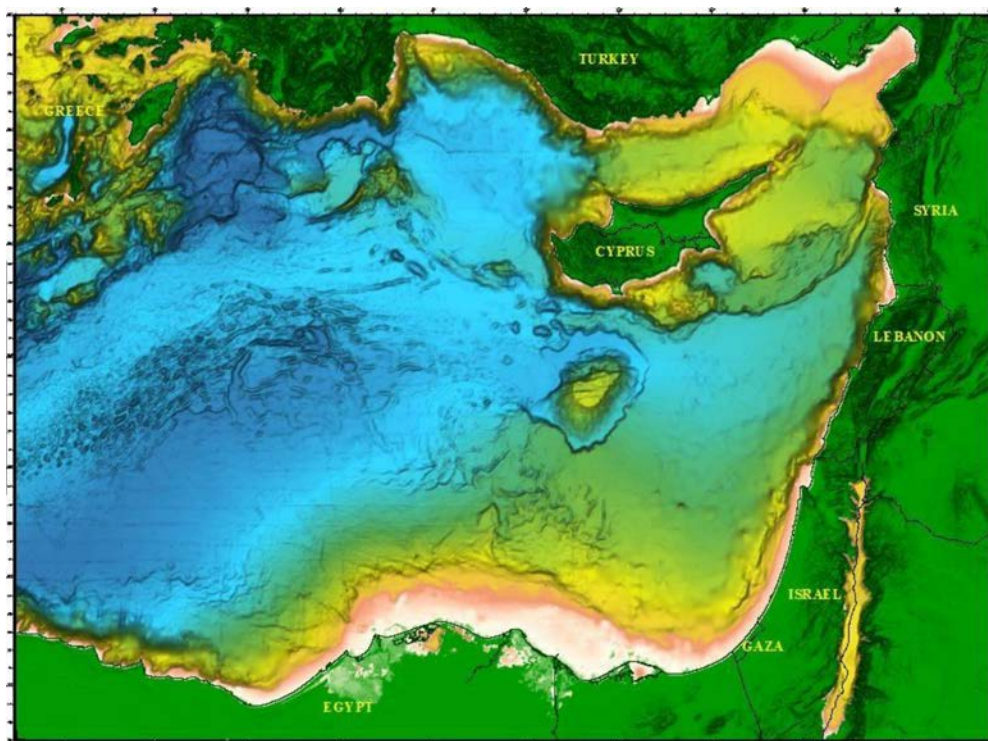
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strated with increasing regularity. In June 2019, for example, Cyprus announced that it had issued arrest warrants for any crewmembers working on a Turkish drilling ship operating in Cypriot-claimed waters off the island's southwest coast. Turkey responded by dismissing the warrants as "null and void," but it also sent an ominous warning that if any crewmembers were arrested, there would be a "necessary response."

### Figures

All of the referenced figures are provided using science-based suggested locations for all of the seven coastal states' maritime boundaries. All of these locations have been computed by calculating the "suggested starting positions" (based on hypothetical Strict Lines of Equidistance) favored by international courts and tribunals, as well as by consulting the latest precision mapping of the relevant countries' Territorial Sea Baseline Models. This highly accurate data will also show how and where the oil and gas blocks defined by individual states overlap with one another based on computations of suggested locations for maritime boundaries.

**Figure 1. The Regional Study Area**



Source: R. Baroudi/DTS1-2018

When it comes to suggesting boundaries, every observation and suggestion in this work is firmly rooted in science and law, the same factors that apply to any process under UNCLOS standards. The Law of the Sea is governed by a special treaty regime consisting, for those states having signed and ratified, of the Geneva Conventions concluded in 1958 and the UNCLOS document itself, which was signed in 1982 and entered into force in 1994.

UNCLOS includes basic rules and principles for the fair and accurate delimitation of the various zones of control described in the convention, i.e., the territorial sea, the contiguous zone, the Exclusive Economic Zone (EEZ), and the continental shelf (including the extended continental shelf). As we shall see below, LOS applications have been used so successfully, and in so many different types of situations, that there can be no doubt: when and if the countries of the Eastern Mediterranean resolve to adhere to the UN Charter and settle their maritime disputes peacefully under UNCLOS principles, they will have the tools to do so without the need for violence or threats.

**Figure 2. Eastern Mediterranean Showing Seven Coastal States: Greece, Turkey, Cyprus, Syria, Lebanon, and Israel**



Source: R. Baroudi/DTS3 - Aug 2019

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Figure 1 details the extent of geographic coverage for the entirety of Eastern Mediterranean waters (464,000 km<sup>2</sup>). The image details both land (solid green image colors, with darker green indicating increased topography) and marine areas (lighter whites to light orange for shallower waters [depths up to 60 meters], contrasting with increasingly darker blues down to 4,470 meters). The offshore continental shelf has been specifically enhanced to show the seabed morphology (light to medium greens), with deeper waters also indicated (light to darker blues). A subsided plateau is well defined offshore south of Cyprus, plus a deep trough (in northwest offshore), along with many interesting shallow geological structures, which are of interest for hydrocarbon possibilities. Inter alia, this study will include:

- A general analysis of relevant coastlines (Greece, Turkey, Syria, Cyprus, Lebanon, Israel, and Egypt);
- An examination of all land terminus points (LTPs);
- Survey, analysis, and review of all relevant trijunction points;
- Study and review of the present-day (2019) status of all the region's maritime boundaries, plus, where required, suggestions for equitable possible/probable neutral outcomes based on "best law" and "best science"—i.e. a "by-the-book" approach under UNCLOS principles and practices; and
- A table of available mechanisms for resolving maritime boundary disputes.