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The Eastern Mediterranean as a Focus for the EU's Energy Transition

Deep-Rooted Enmities and New Opportunities for Cooperation between Greece, Turkey and Cyprus

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The EU and Germany have set themselves ambitious climate and energy policy targets. Taking into account the need to reduce emissions from all sectors of the economy, they now have a different perspective on the energy situation in the Eastern Mediterranean than a few years ago.

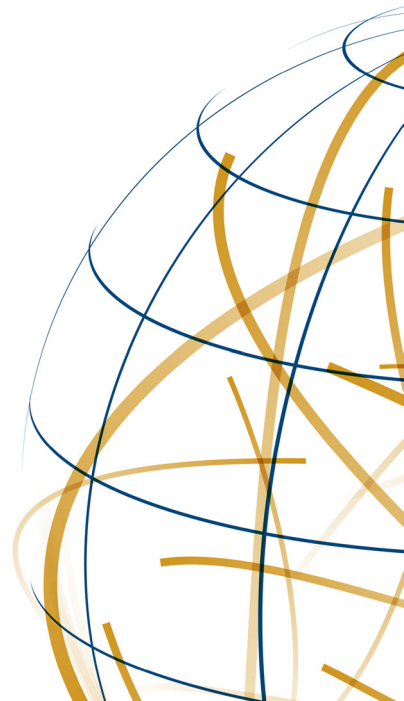
Offshore natural gas imports from the Eastern Mediterranean are losing relevance in favour of the region's prospects for contributing to the EU's emerging green energy economy. In view of Europe's rising demand for renewable electricity, transcontinental electricity interconnections between the European, African and Middle Eastern power grids could become a new normal via the Eastern Mediterranean. There is also regional potential for playing a role in the EU's hydrogen strategy.

Advancing the energy transition in the East Mediterranean brings new economic perspectives and incentives for political cooperation both on regional and international levels. Conflicts and tensions over the delimitation of maritime boundaries between the two communities in Cyprus and between Greece and Turkey would lose a great deal of their politically explosive nature. However, mistrust and deep rooted enmities could still obstruct constructive and inclusive approaches towards the expansion of renewable energies and electricity interconnection all over the Eastern Mediterranean.

The EU has set itself ambitious climate and energy policy targets. By 2030 it aims to reduce its greenhouse gas emissions to at least 55 percent below 1990 levels; its climate neutrality deadline is 2050. These milestones were jointly agreed by all member states in the Green Deal that Commission President Ursula von der Leyen presented to the European Council on 11

December 2019, and were then anchored in the European Climate Law. On their way to climate neutrality, EU member states will undergo a fundamental transformation towards the most carbon-free economy possible in the years ahead.

According to Eurostat (2020 data), fossil fuels still play a key role in Europe's energy mix (34.5% petroleum products, 23.7%



natural gas, 17.4% renewables, 12.7% nuclear energy, 10.2% solid fossil fuels). In July and December 2021 the European Commission suggested measures (“Fit for 55”) to implement its 2030 climate targets. The proposals contain stricter prescriptions and emissions standards for the industry; higher carbon pricing; a tightening and expanding of the EU emissions trading system; and massive investments in renewable technologies and energy efficiency, as well as decarbonisation of the natural gas sector. A key element of the EU’s climate policy and energy transition framework is the expansion of renewable energies. The Commission proposes updating the Renewable Energies Directive (RED II) and to raising its current 2030 target of reaching a 32 percent share of renewables in the EU’s overall energy mix to 40 percent. In light of the envisaged electrification of the heating, traffic and industrial sectors, demand for electricity will rise dramatically. It is highly uncertain, however, whether the higher demand for green energy can be supplied from within the EU. Hence, importing renewable produced electricity could contribute to stabilising power grids and reaching climate targets. Here the interconnectivity of the European electricity area with neighbouring countries and regions gains importance. The focus is especially on countries rich in solar and wind energy. Europe’s future demand for green hydrogen – without which the decarbonisation of cement and steel production and the chemicals sector is hard to imagine – will at least partially necessitate imports from non-European countries. This is why the EU and Germany not only plan to expand domestic production capacities but also to establish and foster international climate and energy partnerships. In this context, the Eastern Mediterranean deserves greater attention.

A New Perspective on Energy Affairs in the Eastern Mediterranean

Over the last decade offshore natural gas discoveries in the Eastern Mediterranean have attracted much attention by the EU. The European Energy Security Strategy announced by the European Commission in 2014 promoted natural gas imports from the region as a means to diversify third country supplies, reduce political dependence on Russia and thus increase Europe’s energy security. However, the decarbonisation of member states’ economies sought by the EU will now cause European demand for natural gas to drop in the medium to long term. That is why, natural gas imports from the Eastern Mediterranean are no longer considered particularly relevant.

Brussels and Berlin are instead looking with heightened interest at the region’s enormous potential for solar and wind energy and at prospects for cooperation on renewable electricity trading and hydrogen imports. In March 2021, the Greek, Israeli and Cypriot energy ministers signed a memorandum of understanding on the construction of the EuroAsia Interconnector, which is intended for entry into service in 2025. The interconnector is an undersea power cable that will link the European and Middle Eastern electricity grids in two sections, from Israel (Hadera) to Cyprus (Kofinou) and from there to Heraklion (Crete). In October 2021, the Greek, Cypriot and Egyptian energy ministers agreed on a declaration of intent to build the EuroAfrica Interconnector to connect the African and European power grids via an undersea cable from Damietta (Egypt) to Kofinou (Cyprus) and from there to Heraklion (Crete). The EuroAsia and EuroAfrica interconnectors are intended to stabilise the regional power supply. According to data by the International Renewable Energy Agency (IRENA), Egypt aims to produce 42 percent of its electricity from renewables by 2035; Greece plans to cover 60 percent of its power needs with green electricity from domestic production by 2030. Israel, Turkey and

Cyprus are also expected to increase the level of renewable energies in their electricity mix in the coming years. Since renewable energy production volumes vary according to the season, time of the day and weather conditions, a growing level of renewables in power supply also augments the volatility of production capacities. Therefore, storage solutions, cross-border interconnections and market integration are becoming more important. The planned EuroAsia and EuroAfrica Interconnectors open up the option of transferring excess electricity and balancing the supply during bottlenecks – and thus preventing power outages.

A variety of investments will be required to lay the technically challenging undersea power cables. The European Commission considers the EuroAsia interconnector one of the Projects of Common Interest (PCI) and hence assigns it to have great strategic importance for the interconnection of national energy markets, energy trading, competitiveness and the security of supplies, as well as for the expansion of renewable energies. Based on this assessment the project is eligible for part-financing through the Connecting Europe Facility (CEF), a specific EU funding instrument, for which a total of €5.84 billion have been budgeted for the period 2021 to 2027. Via the Recovery Fund, which was adopted in summer 2020 to address the economic ramifications of the Covid-19 crisis, the EU also provides €100 million to the Republic of Cyprus to build the section of the EuroAsia Interconnector that links Crete with Cyprus. On January 26 2022, the European Commission committed to providing additional €657 million from the CEF. The European Investment Bank and the European Bank for Reconstruction and Development are further potential sources of financing. From the EU perspective, linking the Greek and Cypriot power grids is of particular interest, since it connects the island of Cyprus to the European power grid and thus reduces Cyprus's dependence on oil imports. Cyprus is currently the only EU country whose power grid is not connected to the grids of other EU members. In contrast to the

Cyprus-Greece interconnection, the prospects for the sections connecting Israel and Egypt to Cyprus are rather uncertain and require additional means of funding.

The Eastern Mediterranean also has promising potential for supporting EU's hydrogen strategy. Renewable hydrogen is produced by electrolysis, in other words the splitting of water into hydrogen and oxygen using electricity from renewable sources. The production of offshore renewable hydrogen takes place at offshore wind farms that are connected to electrolyzers. Offshore renewable hydrogen can be transported via pipelines or via ships (either liquefied or as a derivative (e.g. ammoniac or methanol)). Ongoing pilot projects in the North Sea suggest that offshore green hydrogen production has enormous growth potential. Experts are discussing how renewable hydrogen production in the Aegean or the Eastern Mediterranean can become a lucrative business model. The European Commission has great interest in expanding the region's offshore wind power capacities. It therefore commissioned a study to estimate the potential of offshore wind energy sources in the Mediterranean. In particular, the Greek islands in the Aegean are projected to have a huge production capacity. Yet no offshore wind energy has so far been produced off the coasts of Greece, Turkey or Cyprus. Both Greece and Turkey are currently working on a legal and regulatory framework for investment firms and market operators, who aim to install offshore wind power facilities. A rapid expansion of the technology is likely. As part of broader trends in the emerging renewable hydrogen economy, the Eastern Mediterranean could also gain in significance as a transit route for renewable hydrogen from the Arab world. There are already discussions within policy circles in the EU about the extent to which projects such as the EastMed pipeline, a project originally intended for natural gas transports, can be reinterpreted and used for conveying green hydrogen instead.

The Political Framework of Energy Cooperation in the Eastern Mediterranean

An energy-transition-based remapping of the Eastern Mediterranean would not only have a lasting economic and ecological impact on the region but would also positively affect its political stability.

Dashing original hopes, offshore natural gas discoveries in the Eastern Mediterranean have not increased political willingness to engage in regional cooperation between the two communities in Cyprus and between Greece and Turkey in recent years. Quite the contrary: competition over offshore natural gas has further complicated already existing disputes over the delimitation of maritime boundaries. Here three conflicts overlapped: conflicts over the distribution of rights to access, extract and transport the natural gas reserves offshore of Cyprus; tensions between Greece and Turkey over maritime boundaries in the Aegean; and the international civil war in Libya. Turkey's gas explorations inside the EEZ of the Republic of Cyprus and in close proximity to the Greek islands of Kastellorizo and Crete particularly escalated the situation. In Cyprus the dispute over offshore gas resources turned into another obstacle to any progress in the UN-led peace process. Following Turkey's research activities off the coast of the Greek island Kastellorizo in summer 2020, Greece and Turkey came close to a military confrontation. EU-Turkey relations have also been negatively affected. The European Council recurrently condemned Turkey's confrontational policies in the Eastern Mediterranean and threatened Ankara with economic sanctions in case of further unauthorised drilling activities.

Throughout 2021, regional affairs were considerably deescalated. The main reason for the relatively restrained atmosphere was Turkey's decision to halt offshore gas explorations from December 2020 onwards, shortly after the EU threatened economic sanctions and Joe Biden was elected US president. Since then, Ankara has made efforts to revive bilateral relationships in the region.

Turkey has started talks with Israel and Egypt on resuming diplomatic relations. With the United Arab Emirates (UAE), one of the drivers of the anti-Turkish front in the Eastern Mediterranean in recent years, Ankara signed a series of agreements on economic cooperation in the first week of December 2021. Turkey and Greece also restarted exploratory talks to discuss maritime related problems within the framework of regular consultations for the first time since 2016. However, the prospects of finding a solution for the conflicts in the Aegean remain rather poor. Greece insists on applying international law and wants to focus the deliberations only on the unresolved maritime boundary dispute in the Aegean. It is also prepared in principle to call on international arbitration. Turkey, however, is pursuing a strategy of negotiating all the conflicts between the two countries, in other words of finding a political solution in which it can bring its economic and military might to bear. For example, Ankara wants to restrict the territorial waters of Greek islands in the Aegean to six nautical miles, and negotiate both the military status of the islands located there and how to divide the military airspace over the Sea — all items on the agenda that relativise the application of international maritime law. As a consequence, Turkey is not willing to call on the International Court of Justice.

Moreover, Ankara's more recent approach to normalise its bilateral ties in the region does not extend to Cyprus. Instead Turkey has further intensified its confrontational stance vis-à-vis the Republic of Cyprus in recent months. Since Ersin Tatar took over the Turkish Cypriot Presidency in October 2020, Ankara has been advocating the so-called two-state solution for Cyprus and is thus walking away from the jointly agreed parameters of the UN peace process in Cyprus, which foresee the reunification of the divided island on the basis of a bi-communal and bi-zonal federation with political equality. Ankara and the Turkish-Cypriot administration have also started to unilaterally reopen parts of the fenced-off city of Varosha. This contradicts UN Secu-

rity Council Resolutions 789 and 550 that call for the area to be given back to its original inhabitants, who are majority Greek-Cypriot. The fenced-off city of Varosha, a former tourism heartland of the island, has been under the control of Turkish military since the Turkish invasion in 1974; however, Turkey had not previously challenged the existing ownership status there.

Tensions in and around Cyprus could further rise, if new rounds of drilling activities were to restart inside Cyprus's EEZ. At the start of the pandemic in February 2020, international energy companies suspended their gas explorations. Yet, *Exxon Mobile* resumed explorations inside the EEZ of the Republic of Cyprus in late 2021. *Eni* and *Total* are also expected to recommence natural gas explorations in spring 2022. On 15 September 2021, officials from the Republic of Cyprus joined Egyptian counterparts in a technical committee to discuss the construction of a pipeline to connect Cyprus's Aphrodite gas field to the Damietta Segas LNG terminal, and thus to sell Cypriot gas via Egypt to international markets. In response, Turkey declared that it would resume offshore gas exploration off the coast of Cyprus. Ankara does not recognise the Republic of Cyprus — and thus not Cyprus's EEZ either, which Nicosia partly established in bilateral treaties with Israel and Egypt. It remains likely that tensions off the coast of Cyprus will rise again and that the situation in the Eastern Mediterranean will once again become more strained in the near future.

The Energy Transformation and Opportunities for Cooperation in the Eastern Mediterranean

Will the intended energy transformation, the expansion of renewable energies, and increased interconnection, both within the region and between the region and Europe, bring new opportunities for regional cooperation? Might this also provide a chance to deescalate the conflicts?

Recent dynamics already indicate that the evolving new climate and energy framework and hence the decreasing economic relevance of the region's natural gas deposits are slowing down exploration activities, which is also making the conflicts subside.

Moreover Greece, Turkey and Cyprus are subject to enormous ecological and economic pressure, which is likely to grow in the years ahead. The sixth assessment report by the International Panel on Climate Change (IPCC), published in August 2021, points to the Eastern Mediterranean as a hotspot of global climate change. Coastal states are impacted by hot spells, droughts, forest fires and heavy rainfall. The entire region is faced with acute environmental challenges that require joint reactions. There are also economic reasons why Greece, Turkey and Cyprus need to advance the region's energy transition. If they do not, the instruments of European climate policy, such as tightened emissions trading and the probable introduction of the EU's carbon border adjustment mechanism, will place exceptionally heavy burdens on these countries. They risk higher energy and petrol prices for their populations and negative impacts on balance sheets for companies, which are faced with additional costs due to rising carbon prices.

Climate change and the energy transition should, therefore, be expected to play a greater role than before in the election campaigns for the Greek Cypriot and Turkish presidential elections, both scheduled for 2023. There will be growing pressure on actors from all parties and all states to accelerate the expansion of renewable energies and simultaneously reduce the use of fossil fuels. This also increases the likelihood that the actors will be more open-minded to the regional expansion of integrated power grids — including Turkey's — so as to ensure the grids' flexibility and reliability. The extension of regional electricity markets would create interdependencies, which would in turn encourage new forms of future cooperation on energy projects and which, for instance, could be

complemented by cooperation on producing and transporting renewable hydrogen.

Unresolved Conflicts and Persistent Obstacles

Due to their deep-rooted political enmities, however, it is doubtful whether the region's policy and decision-makers will constructively engage with new forms of cooperation on advancing the energy transition. Unresolved disputes over the delimitation of Exclusive Economic Zones between Cyprus, Greece and Turkey may also impede the expansion of offshore renewable energies and cross-border electricity interconnection. Here the electricity grid between Cyprus and Crete requires further attention. In response to the memorandum of understanding on the construction of the EuroAsia Interconnector, signed by Greece, Israel and the Republic of Cyprus on 8 March 2021, Ankara sent a protest note to the signatories. Turkey opposes its exclusion from the planning since the projected route of the undersea cable partly traverses the area that it claims as its continental shelf. Currently, we can only speculate as to whether Ankara will take further measures to prevent the construction of the EuroAsia Interconnector. Its recent manoeuvres to interfere with the planning for the EastMed-Pipeline, which is intended to transport natural gas along a similar route from Israel via Cyprus to Greece, suggests it might. In September 2021 the Turkish navy prevented a research ship from exploring the seabed for the planned pipeline routing. Since discussions about constructing the EastMed-Pipeline first began in the early 2010s, Ankara has repeatedly stated its willingness to pre-empt the project militarily as well. Turkey's position on the EuroAsia and the EuroAfrica Interconnectors should therefore be closely monitored.

The planned expansion of cross-border interconnections via the Eastern Mediterranean has so far essentially reflected existing regional blocs. There are Greece, Egypt, Israel and the Republic of Cyprus who see

energy affairs as an opportunity to foster economic and security cooperation. On the other side is Turkey, which has fallen behind regionally due to its hegemony-seeking policy. The EastMed Gas Forum (EMGF) has a decisive role here. As well as Egypt, Israel, Jordan and the Palestinian Administration, it consists of EU members Cyprus, France, Greece and Italy – but not Turkey. The European Commission has had observer status since July 2021. In the founding document of the Forum, established in January 2019, the signatories declare that its key goal is to create and expand a regional natural gas market. The promotion of renewable energies has now moved onto the EMGF's summit agendas as well. The Forum was brought into existence in response to Ankara's confrontational policy towards neighbouring countries. Now the Turkish government complains about its exclusion from it. However, as a regional power, Turkey has the military capabilities to thwart the plans of the other coastal states.

Recommended Courses of Action for the EU and Germany

A closer look at the actors in the Eastern Mediterranean and their positions on energy policy shows just how significant European energy diplomacy will be in the region in the future. The EU's Green Deal policies will both economically and ecologically impact the Eastern Mediterranean's littoral states. Inversely, the region has untapped potential for helping the EU to reach its climate and energy targets. While Brussels no longer ascribes any relevance to the natural gas reserves off the coast of Cyprus for the EU's energy supply, more sustainable forms of energy economy in the region are moving centre-stage: the expansion of renewable energies and the production of green electricity, the expansion of power interconnections and prospects for producing and transporting renewable hydrogen seem very lucrative from a European perspective.

Due to its economic and political weight in the region, Turkey remains an important, but difficult, actor for the energy transition sought by the EU. It would be in the interests of both the EU and Turkey to coordinate the transformation of the energy economy. Failing this, there is a risk of high political costs and obstacles on the path to realising energy targets. In principle, Turkey is dependent on cooperation with the EU as well, since it urgently requires investment aid to build a sustainable energy infrastructure.

These reflections suggest three key recommendations for the EU:

Regarding fossil fuels, the EU should systematically encourage international companies and the Eastern Mediterranean's littoral states to stop natural gas explorations off Cyprus and in the Aegean. The pandemic-related suspension of exploration in the past months has shown that this deescalates the situation and opens up new chances for dialogue. Moreover, given its own climate targets, the European Commission should not make any more investments in new fossil fuel infrastructure, primarily the EastMed pipeline, but instead focus on developing transport routes for renewable hydrogen. This would send a strong message to the region and would further qualify the narrative of a gas bonanza offshore of Cyprus.

Regarding the expansion of renewables, the EU should take advantage of the ecological and economic pressure to act to which Greece, Turkey and Cyprus are already subject, and centre its strategy towards these countries on investing in sustainable energy infrastructure. The priority should be to promote the development of interconnections and offshore wind energy, and the production of renewable hydrogen. This would be an opportunity for the EU to extend its leading role to which it aspires in the areas of sustainable energies and hydrogen. Greece, Turkey and Cyprus, in turn, could improve their climate and environmental record and reduce their fossil fuel import dependency.

Regarding the establishment of Exclusive Economic Zones, arrangements should be made to avoid any negative impact on the region's energy transition by the unresolved conflicts between Greece, Turkey and the two communities in Cyprus over maritime boundaries, territorial sovereignty and political influence. To create politically favourable framework conditions for the construction of the EuroAsia and EuroAfrica Interconnectors, the EU should initiate a constructive exchange with Ankara and make use of the EU-Turkey high-level dialogue on climate to discuss joint concepts for exchanging and trading regional power flows. Since Turkey's power grid is synchronised with continental Europe's, it could potentially be integrated quickly into a larger power network that is supplied with green electricity. Conversely, if Turkey obstructs the realisation of the interconnectors, it could get in both Egypt's and Israel's way and thus foil its own attempts to normalise diplomatic relations with the two countries. The EU should also pursue a clear policy towards Ankara. In the past, Turkey has backed down when it anticipated serious economic consequences in response to its confrontational policies. Based on this experience, the EU should clarify that any disruptive acts aimed at preventing the construction of the interconnector between Greece and Cyprus would likewise be met with economic countermeasures.

Finally, the energy transition in the Eastern Mediterranean will require both regional and international coordination. This calls for an adequate multilateral framework. However, the EastMed Gas Forum (EMGF) is of only limited suitability here. While EMGF summits increasingly put energy transition and the fight against climate change on their agenda, alongside natural gas issues, the relationship between the Forum and non-member Turkey continues to be strained. For this reason, and as part of an energy-transition-driven re-mapping of the Eastern Mediterranean, thought needs to be given to a new inclusive regional format.

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