NATO Foundation
Defense College

ENERGY STRATEGIES 2023

THE MEDITERRANEAN: NEW RESOURCES AND INTEGRATION

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NEW RESOURCES AND INTEGRATION

High-Level Conference organised by

the NATO Defense College Foundation

in co-operation with

Eni S.p.A. (Corporate Partner),
Fondazione Compagnia di San Paolo,
the Institute for National Security Studies (Tel Aviv),
the Policy Center for the New South (Rabat)
and the NATO Defense College

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Energy Strategies 2023. The Mediterranean: new resources and integration

Edito da Ledizioni srl
Via A. Boselli 10, 20136 Milano (MI)
tel +39 0245071824
www.ledizioni.it
info@ledizioni.it

ISBN: 979-12-5600-004-3
Finito di stampare nel mese di agosto 2023 da BD Print, The Factory srl - Roma

Realizzazione editoriale e progetto grafico: Ledizioni srl
Copertina: Windrose mit Haupthimmelsrichtungen via Wikimedia Commons

Gruppo di Lavoro
Alessandro Minuto-Rizzo
Alessandro Politi (editor)
Sofia Mastrostefano
Alice Bugli
Domitilla Franceschi

NATO Defense College Foundation
Via Alessandro Serpieri, 8
Roma 00197
web: www.natofoundation.org
email: info@natofoundation.org
twitter: @NATOFoundation
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NATO Defense College Foundation

The NDCF is a unique think-tank: international by design and based in Rome, due to its association with the NATO Defense College. Its added value lies in the objectives stated by its charter and in its international network, which make the Foundation a body with considerable freedom of action, transnational reach and cultural openness. The charter specifies that the NDCF works with the Member States of the Atlantic Alliance, its partners and the countries that have some form of co-operation with NATO. Through the Foundation the involvement of USA and Canada is more fluid than in other settings. The Foundation was born twelve years ago and is rapidly expanding its highly specific and customer-tailored activities, achieving an increasingly higher profile, also through activities dedicated to decision makers and their staffs. Currently, the Foundation is active in three areas: high-level events, strategic trends research and specialised decision makers' training and education.

Energy Strategies 2023. The Mediterranean: new resources and integration,
Rome, 29 March 2023.

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ALESSANDRO MINUTO-RIZZO

President,
NATO Defense College Foundation

FOREWORD

We will discuss important issues concerning Europe and especially the Eastern Mediterranean, looking at a multi-faceted reality from different angles. Addressing those issues, we wish to offer an attractive and interesting conversation.

Our main interest is on global security and energy is very relevant in this context. What kind of scenario is taking shape with its problems and possible solutions? We live in a moment requiring special answers. We know that the Russian Federation wished to blackmail us, using the weapon of energy to stop the flow of gas that was directed traditionally to Western Europe.

We also know that this action has failed and cannot be repeated because of an unprecedented stance of the European Governments in a common effort.

In this evolving scenario the Mediterranean can play a central role, at the junction of three continents: Europe, Asia and Africa, and Rome, where we speak, is at its centre.

A relevant development is that new important gas resources have been discovered in the waters before Egypt, Israel and Lebanon. At the same time, we know that Libya has a strong potential, and the Gulf is a friendly region where developments are taking place in a good direction.

Another good news is the establishment of the Gas Forum in Cairo, where partners converge to further their cooperation; Italy and Eni are part of this effort.

We look also at the perspective of the gradual formation of a Euro-Mediterranean energy market. It goes in parallel with the vision of peaceful cooperation and cooperative security in a crucial region. Other elements have to come into play: infrastructures, their security, regulations, and a connection between the south and the European market in an orderly way.

We are facing interconnected realities, if we think about economic development, security, regional cooperation, green economy, and migrations. But let's keep in mind that shared interests and sustainable development are a valid basis to promote security. Last, but not least, we have to take into consideration the development of renewables and the challenge of climate change.

Ladies and gentlemen, we are presenting an intense programme and we are happy to have the best existing expertise with a number of speakers and moderators presenting their views from many different angles.

The Foundation in 12 years of activity has produced 34 high-level conferences and books. We wish to shape security horizons on strategic issues that are high on the international agenda, in a spirit of mutual respect at a scientific level. We are happy to be twinned with the NATO Defense College.

I do not think that I have to delve further into the programme. As I said, the focus is on strategies in the Mediterranean. The goal is to achieve energy security, security of supplies, regional cooperation, and possibly a Euro-Mediterranean integration, with all the enormous potential involved and its challenges.

I wish to thank speakers and moderators, the public for your interest and I thank very warmly the entire staff of the Foundation for their excellent work and their enduring enthusiasm.

Special thanks go to those who have supported us, helping to make the event possible. First of all, to ENI, our corporate partner, la Compagnia Fondazione di Sanpaolo, our friends at the Institute for National Security Studies, the Policy Center for the New South and the NATO Defense College. Thanks also to Formiche and Airpress, our traditional media partners.

After having served at the Italian Embassy in Washington DC and as Commercial Counsellor at the Embassy of Italy in Prague, Ambassador **Alessandro Minuto-Rizzo** worked as Head of the External Relations Office of the EEC from 1981 to 1986. In the following years, his career focused on Europe and Space Policy. In 1997 he was appointed Diplomatic Counsellor of the Minister of Defence Beniamino Andreatta, then of his successors Carlo Scognamiglio and Sergio Mattarella. In 2000, Minuto-Rizzo held the position of Italian Ambassador to the Western European Union and to the Political and Security Committee of the EU, of which he was among the founding members. He was Deputy Secretary General of the Atlantic Alliance between 2001 and 2007. His mandate was mostly carried out in the strategic-political industrial area and in the relations with sensitive countries such as those in the Gulf and the Southern Mediterranean. He is the author of the books: *The road to Kabul* (Il Mulino-Arel, 2009); *A political journey without maps. Diversity and future in the Greater Middle East* (Rubbettino, 2013); and *NATO and the Middle East: The Making of a Partnership* (New Academia Publishing, 2018).

CHRISTOPHER SCHNAUBELT
Dean, NATO Defense College, Rome

WELCOME REMARKS

Many policy analysts and pundits argue that the world is on a cusp of a technological revolution in energy. If so, this would not be historically unique. Some of you might be familiar with the American novel *Moby Dick*. It is a story about a white whale published in 1851. It is typically described as a tale of obsession and the desire of revenge. However, more relevant for this conference is the novel's depiction of the whaling industry. During the mid-1800s, the primary source of oil for the lamps that were providing light in businesses and people's homes was whale oil. Whaling became a multi-million dollar industry, with fleets around the globe. A large part of the economy in the Eastern seaboard of the United States was based on whaling. According to one researcher, in the 1850s whaling was the fifth largest industry in the United States, which operated 735 out of the 900 whalers around the world. However, this industry was soon disrupted by improved means to access petroleum and development of methods to produce and transport mass quantities of kerosene. From its peak around 1855, by 1905 the whaling fleet was reduced to a handful of ships because cheaper and better methods of creating light and homes had been found, and of course in the early 1900s electric lighting began to replace kerosene even while hydrocarbons became an important source of energy to produce electricity. So, we might be on a big change right now and there are reasons to hope for it in terms of environment improving access to energy around the world, but I think there are reasons to be sceptical that the need for petroleum products will disappear within our lifetimes despite government policies to enforce a transition to so-called 'green' sources of energy.

As Mark P. Mills[1] of the Manhattan Institute recently wrote: "[…] policymakers are beginning to grasp the enormous difficulty of replacing even a mere 10% share

[1] Mark P. Mills. The "Energy Transition" Delusion: A Reality Reset. Manhattan Institute, 2022, https://manhattan.institute/article/the-energy-transition-delusion.

of global hydrocarbons - the share supplied by Russia - never mind the impossibility of trying to replace all of society's use of hydrocarbons with solar, wind and battery (SWB) technologies. Two decades of aspirational policies and trillions of dollars in spending, most of it on SWB tech, have not yielded an 'energy transition' that eliminates hydrocarbons. Regardless of climate-inspired motivations, it is a dangerous delusion to believe that spending yet more, and more quickly, will do so. The lessons of the recent decade make it clear that SWB technologies cannot be surged in times of need, and are neither inherently 'clean' nor even independent of hydrocarbons, and are not cheap". Therefore, traditional energy will remain important for the foreseeable future and the world economy will depend upon reliable and affordable sources of hydrocarbons. I look forward to hearing how efforts within the Mediterranean can help contributing to fulfilling this need.

Dr **Christopher M. Schnaubelt** is Dean of the NATO Defense College. He earned a Ph.D. in Political Science from the University of California, Santa Barbara and a M.S.S. in Strategic Studies from the U.S. Army War College. His publications include more than thirty articles and book chapters on security and defence-related topics. As a US Government civilian, he was assigned to US Embassy in Baghdad, Iraq, as the Deputy Director for National Security Affairs with duties that included helping to write the joint campaign plan to implement "the surge" of coalition forces. During a later civilian posting, he served in Kabul as the Senior Advisor to the Afghan Deputy Minister of Interior for Strategy and Policy. His military service included tank battalion commander, command of a training regiment, and deployments as Chief of the Policy Division, Combined Joint Task Force-Seven in Iraq and as Director of Logistics for Area Support Team-Balkans at Camp Bondsteel, Kosovo, and Camp Butmir, Bosnia and Herzegovina.

Nicolò Russo Perez

Head, International Affairs,
Compagnia di San Paolo, Turin

WELCOME REMARKS

I am Nicolò Russo Perez and I have the pleasure of representing the Fondazione Compagnia di San Paolo. First of all, I would like to stress the importance of this cooperation between public and private entities, think tanks and private companies since it is very timely: as we all know, NATO recently went through an important phase of 'self-reflection' with the so-called NATO 2030 process and therefore the Organisation had a huge opportunity to hear and possibly embed contributions from think-tanks and experts from the scientific/academic community and from the private sector, which were all engaged in the fascinating and, at the same time, challenging task of contributing to designing a future NATO.

The energy security context is rapidly changing. Climate change is, as a matter of fact, affecting more and more different areas, with deep effect on our economies and our daily life. Climate change and the unfolding energy revolution will increasingly have also a profound impact on geopolitics – thus going far beyond issues of solar panels, lighting our homes or batteries powering our vehicles.

Traditionally, the geopolitics of energy have been closely related to security. This goes back to the early 20th century with the concept of 'motorisation of war', and for most of the century the focus of energy security has been 'uninterrupted supply of energy' on the one hand, and 'oil at affordable prices' on the other.

The security of supply agenda has started to widen already in the late 1990s, including rare earth metals, which are required, for example, for wind turbines or for essential parts of solar panels and, most importantly from a security perspective, for Information and Communication Technologies (ICT). The electricity infrastructure today can be considered the backbone of the modern economies and defence structures.

Energy security has also become more and more influenced by the implications of global climate change and associated policies. Strong linkages to food security, water scarcity and traditional hard security issues also exist. Furthermore, we should not forget about the digital dimension because, of course, a 'digital driven' economy will be using only a fraction of fuels compared to an 'analogue' energy system, because it will replace its energy with technology. Yet at the same time, from a security perspective it would be far more vulnerable to cyber-attacks, for instance.

It is still unclear and uncertain how these long-term trends will play out, but the simple days where security of supply mainly related to 'physical availability' of energy and 'prices' are gone, being replaced by a much more complex and uncertain world in constant flux.

In the NATO context, energy security plays a very important role. The disruption of energy supply could affect security within societies of NATO members and in partner countries, and thus have an impact on NATO's military operations as well.

In conclusion, energy security is a vital element of resilience and has become more important since it qualifies as a key emerging security challenge, together with cyber and other potential forms of hybrid threats, particularly to infrastructures. We all have seen several examples of this dynamic, particularly in relation to Russia's actions, including its attack on Ukraine.

In conclusion, this is an event that we as the Fondazione Compagnia di San Paolo, a private sector player, consider timely and interesting to foster a better understanding of the geopolitical challenges in which all our societies are deeply involved.

Nicolò Russo Perez is the Head of the International Affairs Programme at the Compagnia di San Paolo Foundation, based in Turin (Italy). In this capacity, he is in charge of several grant-making and operational activities promoted by the Foundation in the field of international relations, covering transatlantic and European studies, as well as Mediterranean and emerging countries affairs. Previously, he worked at the European Commission, at the International Labour Organization and was a Senior Associate Fellow at the EUISS in Paris. A council member of the European Council on Foreign Relations and Visiting Senior Fellow with The German Marshall Fund of the United States, Dr Russo Perez is currently also part of the Scientific Board of the NATO Foundation in Rome. He is a member of the Strategic Reflection Group on European affairs set up by the Italian Presidency of the Council of Ministers.

ALESSANDRO POLITI

Director,
NATO Defense College Foundation

POLITICAL SUMMARY

The high-level conference seized the issue of energy security at an opportune moment, set in the Mediterranean, a strategic space of primary interest to Italy, NATO and Europe, along with other allies both within the basin and outside it, by anyhow affected by the need for diversification.

The first panel (New maps of energy diversification) tackled the issue of the link between fossil and renewable energies in a scientific and concrete manner. According to estimates by IRENA (International Renewable Energy Agency), the gap to the 1,5° target is still very wide and increasing year by year. While for renewables, plans are reasonably on track, all other sectors (energy efficiency, electrification, hydrogen, CCS and bioenergy with carbon capture and storage) are lagging far behind. In 2022, 85% of global investments in renewable energy will benefit less than 50% of the world's population, and Africa will only account for 1% of the additional capacity in 2022, in a situation where the cost of renewables is starting to become competitive with fossil fuels. The MENA region has the world's second largest potential (after sub-Saharan Africa) for affordable hydrogen production by 2050. However, prices are still high at the moment and there is little activity on green hydrogen.

The fossil energy sector also has critical issues that cannot be underestimated. The discovery of new gas fields has only created a regional market in situations of pre-existing cold peace (Egypt, Israel, Jordan), otherwise gas diplomacy is not enough to end a conflict. The EastMed gas pipeline project also created a group of related partners with mainly regional value, with reduced export potential. In fact, these upstream activities take place in the Eastern Mediterranean against the backdrop of a regional arms race and an increasing challenge of non-state actors to the security of infrastructure. Nevertheless, normalisation has given an initial impetus to new relations and reconciliations between adversaries, which improve part of the situation, pending further positive developments.

The second panel (Energy and normalisation: progress ahead) showed that while there are major obstacles (global and regional geopolitical tensions, decreasing gas flows to the EU and increasing gas flows to Asia with the Russian Power Siberia pipeline), there are also realistic opportunities. Regional alliances for energy security are still unlikely because: a regional structure is lacking; Iran is still a problem; a shared security vision is lacking. Here NATO can play a positive role in the Gulf Cooperation Council to help members develop understandings and capabilities (and the first signs were clearly seen in mid-May at a NATO-GCC Political Advisory Group).

The Union for the Mediterranean offered an interesting short-to-medium view on energy dynamics. On the one hand, fossil energy serves the producing countries to hold together development logics, human rights, decarbonisation and the market in view of a transition to EU-funded renewable production. Without European funds, countries in the south will not be able to develop a renewables market, without the renewables potential of the south, Europe will not be able to seriously decarbonise by 2050. Market integration will have the function of resolving causes of conflict and respective energy problems.

In this sense, the business analysis of the Mediterranean Energy Observatory offers elements of convergence. While hydrocarbon production will remain mainly dedicated to local consumption (due to a population increase of 135 million over the next 30 years), consumption efficiency and the transformation of the energy portfolio are two pillars for achieving ecological and economic goals. The EU has already managed to achieve -20% consumption without major consequences. If the Mediterranean region succeeds in reducing consumption by 25%, a 40% reduction in renewables will be sufficient to achieve this goal.

In the combination of renewables, besides photovoltaics, there is an important space for wind power, especially offshore with less impact on the population and tourism. All these programmes, again, require dialogue and cooperation: we need to share technologies for affordable energy, coordinate for the protection of cables and submarine pipelines and critical minerals, and cover risks that cannot be covered by our own efforts.

The third and last panel (The challenge of market integration) further clarified the boundaries of feasibility and negotiating opportunities. According to a Turkish scholar, the EastMed platform could strengthen regional cooperation by attempting to include Turkey (if there is consensus in Ankara) and by managing regional consumption in a more sustainable way (more gas and less coal) in the transition to hydrogen production, which can be transported by the EastMed pipeline set up for this purpose.

According to a Moroccan analyst, South-South collaboration is almost non-existent and Africa as a whole is among the least integrated continents in the world, looking at its political, legal, fiscal and institutional fragmentation; by the way it revealed across the decades growing social gaps within individual states. The EU's need to access new sources can stimulate regional cooperation that, by reducing costs and risks, would attract needed investments.

The last speech by an Italian specialist summarised the open issues for Rome. The country cannot chose its neighbours and Libya is a priority, while good relations with Ankara are still desirable. In the short term, Russian gas is ineliminable, importing from other countries poses similar dependency problems influenced by external political tensions, while EastMed can only be financed if gas prices remain high.

In short, the conference revealed that the line of regional normalisation and cooperation, strongly advocated by the Italian government, with which Eni is closely associated, is the one that best suits allied and national interests, keeping in mind the obstacles and fragmentation in the region and developing the necessary activities to protect infrastructure and project towards cooperative security.

Alessandro Politi is Director of the NATO Defense College Foundation. A specialist in political and strategic affairs, he has worked with different top decision makers in Italy and abroad both in public institutions and private companies. He teaches geopolitics, geo-economics and intelligence at the Italian MFA-affiliated SIOI School.

Oded Eran

Senior Research Fellow, Institute for National Security Studies, Tel Aviv

A VIEW FROM THE REGION

Traditional fossil sources for energy have been always been viewed as sources for fierce competition between concessions' seekers, sanctions' imposers and opposing rights claimers. These sources and actors are still there and remain active. But in recent years we have also witnessed the positive aspects of the energy sector on regional developments, which should be studied and leveraged beyond the energy domain.

Three examples to consider:

- Europe's reaction to the Russian invasion of Ukraine;
- the strategic decision of Europe to reduce its dependence on Russian energy resources shows political and economic resolve by citizens and leaders. It does not solve all the problems slowing down the process of Europe's unification but it strengthens the resilience and determination to push on;
- natural gas as a pacifying factor in the East Mediterranean.

Conflicts in the Middle East and specifically in the eastern part of the Mediterranean could have turned natural gas discoveries in the area from a source of economic rejuvenation into a cause for war (*casus belli*). Instead, and in spite of political hurdles, Egypt, Jordan, the Palestinian Authority and Israel teamed up with Cyprus, France, Greece and Italy to create the East Mediterranean Gas Forum. The EMGF enables discussions on energy regional cooperation, including the sales of natural gas from Israel to the PA, Jordan and Egypt.

The drastic reduction of European procurement of Russian natural gas opens up the option of increased quantities imported from the East Mediterranean. This can be done in stages, starting with an increased liquification of Israeli and Egyptian gas in Egypt's installations and later by shipping liquefied natural gas. Other technical alternatives for the delivery of gas exist and they can be carefully considered in due time.

Another positive development in this respect was the agreement reached between Lebanon and Israel (27th of October 2022) in the dispute over their relative Exclusive Economic Zones. This should unplug the development of the maritime natural gas resources in Lebanon and, in due course, allow exports to Europe and help reduce Lebanon's huge economic problems.

On the 8th of November 2022, Israel, Jordan and the United Arab Emirates signed a Memorandum of Understanding at the heart of which is the supply of desalinated Mediterranean water from Israel to Jordan and the supply of solar energy from Jordan to Israel. This is a good example of interdependency creating a win-win situation between a country lacking fresh water resources with long distances from the sea and urban centres and another with unlimited sea water at close range to its neighbours (the PA and Jordan), but with limited space for solar farms. The project can be eventually expanded and include other regional participants.

To summarise, the European Union has in recent years slowed down its East Mediterranean activity mostly due to developments beyond its control. The situation described above calls, however, for an enhanced role of the EU in promoting greater economic cooperation, that will also serve the interests of the member states.

This can be done with:

- the expansion of the EMGF by adding new members (the EU is already an observer);
- by tasking professional entities like the World Bank (also an observer) and the European Investment Bank with proposing the best technical and financial options for conveying gas, oil and possibly solar electricity from the Middle East to Europe and, above all, for preparing the transition to the era of clean/green energy.

Ambassador **Oded Eran** is currently Senior Research Fellow at the Institute for National Security Studies (INSS) in Tel Aviv, where he served as Director from July 2008 to November 2011, following a long career in Israel's Ministry of Foreign Affairs and other government positions. Before joining the INSS, Ambassador Eran served as Secretary General of the Israel branch of the World Jewish Congress. From 2002 to 2007, he was Israel's Ambassador to the European Union, covering NATO as well. Prior to that, he was also Ambassador to Jordan, and Head of Israel's negotiations team with the Palestinians. Among his previous positions: Deputy Director General of the Ministry of Foreign Affairs and Deputy Chief of the Israeli Embassy in Washington DC. Between 2007 and 2013, Ambassador Eran served as an advisor to the Knesset subcommittee on Foreign Affairs. He holds a Ph.D. from the London School of Economics.

Mauro Primavera
Researcher, OASIS International Foundation, Milan

BACKGROUND PAPER

In the last decade, Eastern Mediterranean has become a relevant region, leading to a general reshuffle of geopolitical and geo-economic trends and, at the same time, to the establishment of new partnerships. While the European Union is completely rethinking its political energy after the Russian invasion of Ukraine, the Levantine countries are trying to go beyond a post-Arab Spring scenario by improving their national security and poor economic performance, worsened by the ongoing global crisis and cyclic social unrest. On the other hand, the 2022 NATO Strategic Concept has clearly in mind energy security of supply as a desirable goal.

This complexity is clearly exemplified by the case of Egypt. Since the rise to power of President ʻAbd al-Fattah al-Sisi, the country has portrayed itself as a crucial energetic hub that is capable of meeting and matching needs and demands of Europe, connecting it to Africa and the Middle East. This ambitious project takes root in the 2015 discovery of Zohr, a 100 km^2 offshore gas field located 200 km north of Port Said, the entrance of Suez Canal. Since then, Egypt has become a net gas exporter and has signed a remarkable partnership with Eni for the exploration and drilling of the seafloor, that eventually led to the discovery of the Nargis-1 depot well in January 2023.

The emergence of energy sector brought positive outcomes, first of all the partnership between Egypt and Israel. Cairo can count on huge hydrocarbon reserves; however, it needs a broader import-reexport strategy in order to increase its revenues. This scheme comprises firstly Israeli gas supply via Arab Gas Pipeline and secondly the use of strategic terminal facilities (Damietta and Beheira), where the gas is liquefied and finally shipped to Europe. Consequently, the Egyptian-Israeli agreement paved the way to the 2022 Memorandum of Understanding with the European Union, further integrating energy market.

The fact that such agreement affects directly core NATO issues is proven by the successful mediation led by American diplomats in resolving after more than ten years the maritime border dispute between Israel and Lebanon, where mutual economic benefits are expected to overcome long-lasting confrontation. Even Jordan is part of this project, since the Kingdom has doubled its capacity of electrical interconnection with Egypt and in January 2022 it agreed, through a US-brokered deal, to bring electricity in Lebanon in order to contain shortages and ameliorate inhabitants' life conditions.

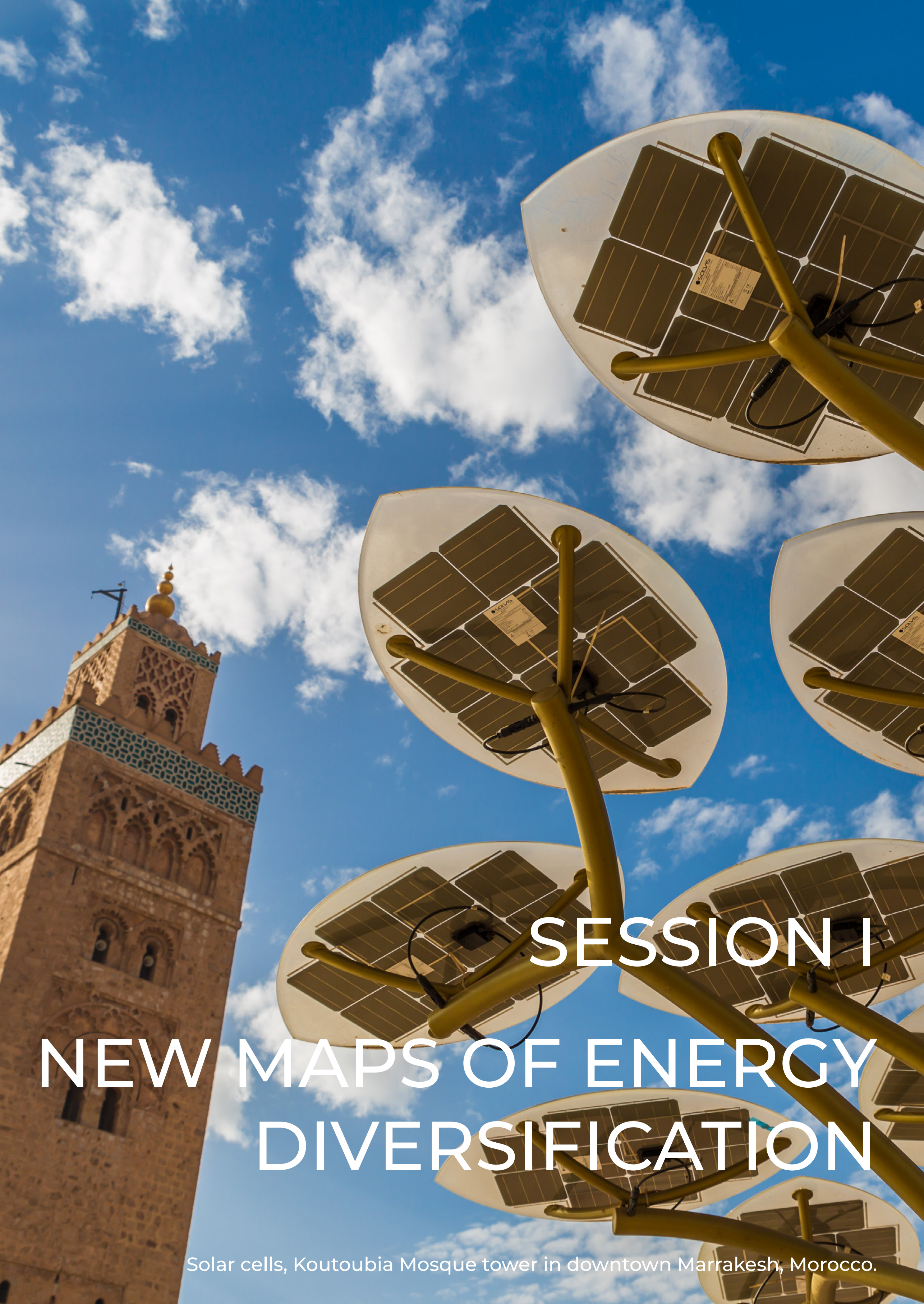
Despite this encouraging facts, one can notice the growing challenges of the region: e.g., Egypt's economic structure, heavily controlled by the military apparatus, is rapidly deteriorating and the huge availability of hydrocarbon hardly copes with the increasing domestic demand and huge demographic pressure. As mentioned, Lebanon is struggling with a devastating and enduring socio-economic crisis, while Jordan remains in a precarious standing, though its visible stability.

In this sense, a more structured and target-oriented response of NATO would bolster security framework and replicate new energy agreements and partnership.

Dr **Mauro Primavera** is researcher at OASIS International Foundation and Teaching Assistant in Geopolitics, History of Islamic Asia, History of Civilization and Political Culture at the Catholic University of Milan. His research areas include Arab and Mediterranean geopolitics, history of the MENA region, Arab secular and religious movements. He holds a Ph.D. in Institutions and Policies.

What role for the Mediterranean in the context of energy diversification?

How to weave in renewables and green hydrogen?



SESSION I

NEW MAPS OF ENERGY DIVERSIFICATION

Solar cells, Koutoubia Mosque tower in downtown Marrakesh, Morocco.

MODERATOR

NICOLA GRAZIANI

Vatican Reporter
Agenzia Giornalistica Italia
Rome

Nicola Graziani is a journalist at the Italian News Agency - Agenzia Giornalistica Italia (AGI), specialised Vatican affairs. Additionally, he is the Dean of the accredited journalists at the Quirinale and in this vest, he has dealt with five Presidents of the Italian Republic: Francesco Cossiga, Oscar Luigi Scalfaro, Carlo Azeglio Ciampi, Giorgio Napolitano and Sergio Mattarella. Mr Graziani also headed AGI's foreign editorial staff and boasts a long activity as a columnist for Rai News and Radio1. For 12 years a member of the National Council of the Order of Journalists, he also taught Analysis and Practice of Communication at Santa Croce University in Rome in 2020/2021.

"After the invasion of Ukraine energy has become much more central and the same is for the Mediterranean region: has the UE a role to play in such a crucial area?

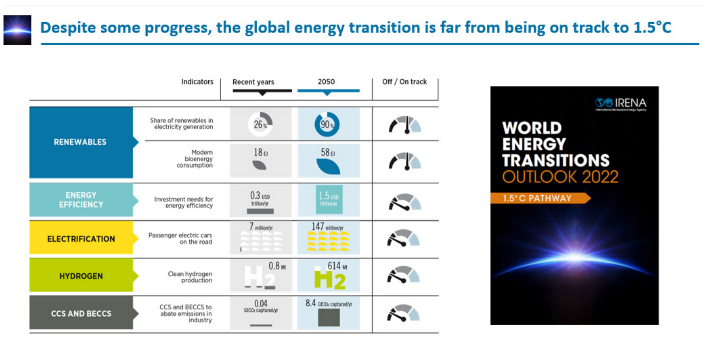
Ahmed Badr

Director, Project Facilitation and Support Division,
International Renewable Energy Agency,
Abu Dhabi

THE ROLE OF THE MEDITERRANEAN IN THE GLOBAL ARENA

During the discussion I will refer to a specific region, MENA (Middle East and North Africa) which is basically similar in terms of geographical boundaries to the Southern Mediterranean.

My speech was built on the facts of World Energy Transition Outlook 2022 report issued every year in a series to put the pathway to 1,5 degrees Celsius, reducing the global warming by 2050.[1] On the 28th of March our director General, Francesco La Camera, presented in Berlin the preview of the World Energy Transition Outlook 2023, which basically is the same, except for a difference: the gap between what needs to be done and what has been achieved is now increasing, showed by the fact that there is a need for investment amounting at least to $35 trillion dollars by 2050.



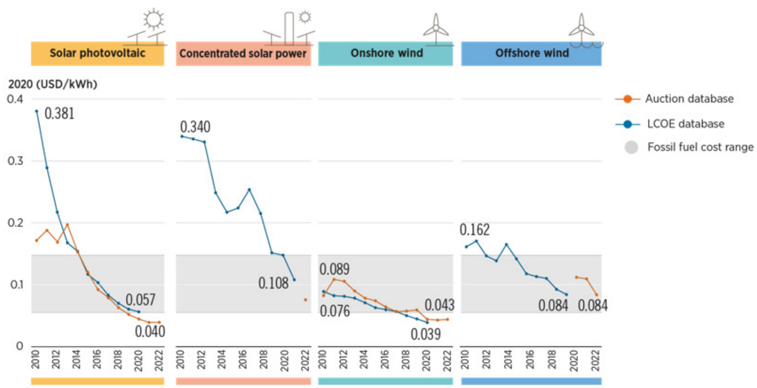
Source: Irena, World Energy Transitions, Outlook 2022

[1] https://www.irena.org//media/files/irena/agency/publication/2022/mar/irena_weto_summary_2022.pdf?la=en&hash=1da99d3c3334c84668f5caae029bd9a076c10079.

The components of the energy transition, which are renewables, energy efficiency, electrification, hydrogen, carbon capture and storage (CCS) and bioenergy with carbon capture and storage (BECCS), are actually lagging behind. Yes, there is a progress but the energy transition globally is not following that plan. Germany is now reaching 41.9% of energy transition, while the target is 80% by 2030, which is basically dependent on the pathways for 2050. There is a very big gap, which in the new report is widened even more.

Moreover, renewable-based electricity is really becoming the cheapest power option in most regions. The global weighted average levelized cost of electricity from utility-scale solar photovoltaic (PV) projects fell by 85% compared to the level in 2010-2020, concentrated solar power (CSP) by 68%; on-shore wind by 56%, and off-shore wind by 48%. Actually, there are some countries that do not follow such kind of costing profile and the price per kilowatt for a simple reason: the materials are becoming more expensive, due to the supply chain crisis.

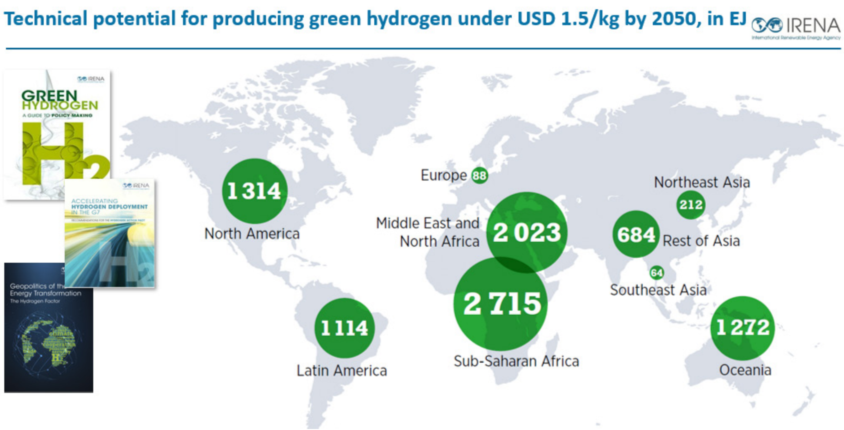
Renewables-based electricity is already the cheapest power option in most regions



Source: idem.

Focusing more on the Middle East, hydropower is the major decisive component for renewable energy and still constitutes more than half of the volume installed, although there has not been any growth in the past 10 years. Most of the growth has been focused on solar energy, mainly driven by large projects in the UAE, Israel, Egypt and Jordan, while wind is mainly driven by Egypt with more than 4.000 megawatts and in Jordan was 500 megawatts.

As for investments, in terms of numbers we can see that, although renewable energy investment in the region is on an upward trend, the region saw its highest ever investment in 2019 of $7,5 billion with the majority of funds coming from European partners through main public sector investment and very little from private sector. So far, investment in green hydrogen is almost null. It is all about talks, because the pricing is not helping the private sector to come in. There are costs to be added, like transportation and trading, for example.



Source: IRENA (2022), Geopolitics of the Energy Transformation: The Hydrogen Factor.

The main green hydrogen exporting potential comes from Africa and the Middle East, however some countries have declared their ambition to become net exporter. Focusing on the Middle East, it is mainly Morocco, but some countries are starting to be already gas exporters, such as Egypt and the Suez Canal is playing an important strategic role. That is why you have in the Middle East the investments inflow coming from Saudi Arabia and UAE to Egypt reaching more than 44 billion dollars, most of which have been signed and announced in during COP27 (06-18 November 2022).[2]

Finally, in partnership with five banks for COP28, we launched an already secured $1 billion fund.[3] IRENA is the facility manager and we are adding one billion dollar by the end of this year, by including new funding partners. We started to receive projects and we hope by COP28 to come to realise financial closure of at least 2.000 megawatts through private sector in the Middle East and also the Mediterranean.

[2] https://unfccc.int/event/cop-27.

[3] https://www.cop28.com/en/.

Ahmed Badr is the Director of the International Renewable Energy Agency's (IRENA) Project Facilitation and Support division (PFS). The division offers member countries dedicated project implementation support. Mr Badr joined the Agency in April 2020 and brings more than 30 years of international experience in the field of banking and finance. In his role, Mr Badr is tasked with leading the development of the division, while spearheading the Agency's implementation of the Climate Investment Platform. It is a multi-stakeholder platform established in partnership with Sustainable Energy for All (SE4All), the UNDP, and in coordination with the Green Climate Fund, to streamline access to climate funding for developing countries and advance renewables deployment. Prior to joining IRENA, he held several senior operational positions in the field of climate change, renewable energy, energy efficiency, water and infrastructure projects in a number of multinational financial institutions, including the World Bank; the European Bank for Reconstruction and Development; the European Commission (EuropeAid), and the Japan Bank for International Cooperation.

Claudia Gazzini
Senior Libya Analyst, International Crisis Group, Tripoli

THE LIMITS OF ENERGY DIPLOMACY IN THE EAST MED

When we talk about gas in the Eastern Mediterranean it is generally associated with sort of a positive pitch, as if this was a success story of the last decade. I will try to pose some questions and posit that, while we have some success stories that have come out of the Eastern Mediterranean gas deals and the so-called gas diplomacy, there is much that still needs to be done. Essentially, after the discovery of Israel's Tamar and Leviathan fields, Aphrodite Gas Field in Cyprus and Zohr in Egypt, there was a moment of optimism that gas could spur regional integration, lower conflict among regional actors and the USA; this was touted already in "the Obama days", but it was picked up again silently under the Biden's presidency, spearheading the idea of gas diplomacy, whereby you can use as a catalyst the discovery of these fields to create a more integrated region to diminish the conflicts and settle long-standing disputes. This concept of gas diplomacy in the Eastern Mediterranean was also driven by the supposition that this gas could be used for the European market very much in need for it, and therefore foster linkages between the EU and the Eastern Mediterranean; unfortunately, the track record is mixed so far.

At first glance, there is no doubt that the deals that Israel signed with Jordan and Egypt helped consolidate the commercial ties between the three countries and created an export market that was not there before, but, on the other hand, these three countries were already in a cold peace and not in conflict, so gas discoveries and commercialisation essentially just reinforced a state of cold peace.

When we look at other gas discoveries in the region, the situation is less promising. Going back to the discovery of Gaza Marine, in 1999, that was supposed to be used to help provide Gaza Palestine with the gas to fuel its energy needs. Well, that has not gone anywhere yet.

Let's turn to Cyprus and the discoveries of Aphrodite. Initially, there was the hope that deals around the commercialisation of the gas from this hub of the coast of

Cyprus could promote a political deal on a resolution of the conflict over Cyprus, divided into two parts between the Republic of Cyprus in the South (sort of the Greek area of Cyprus) and the Turkish area of Cyprus in the North. Talks started again in 2015 for the settlement and then completely derailed by 2017, which meant that not only there was no political settlement over the conflict in Cyprus, but also that energy deals around the gas of the coast of Cyprus became a sparking point for increased tensions with Turkey, Greece, Cyprus, and the European countries involved in the drilling, including companies like Eni and Total. Until now the discovery of Aphrodite has prompted a greater confrontation between Turkey and its rival countries in the region that has not been settled at all.

Another case is Lebanon: last October 2022 the signing of the maritime demarcation deal between Israel and Lebanon was quite something, we did not expect it to happen in such a rapid manner. Just a month before there was Hezbollah threatening to bomb if there was no agreement, but it happened. However, we are not seeing that breakthrough translating into any major or significant political improvement at all, including bilateral ties between the two countries. We wonder the extent to which the demarcation deal, which various political actors, be it in Israel or even in Lebanon, were using to capitalise for their own domestic political reasons, will translate into an actual deal that will ease tensions.

Another highlight of the Eastern Mediterranean gas diplomacy was the East Med Gas Forum, based in Egypt, which helped and is still helping very much to get the deals through, to build the infrastructures and coordinate work. Sadly, it has also become something different from what it was originally intended to be: a sort of forum to promote gas sharing, discovery and commercialisation, excluding Turkey and Lebanon. It has become more a club of like-minded countries, a situation that must be redressed.

Essentially, I am trying to say that the Eastern Mediterranean gas discoveries have been an important breakthrough, but to really make any significant change in terms of security, peace, and landscape of the region, much more needs to be done. We need to recognise that the EU is not the buyer of this gas. The market of the Eastern Mediterranean is the Eastern Mediterranean itself, and there needs to be more regional recognition of that and more efforts in that effect for it to actually make a substantial difference. Moreover, these conflicts of the region that still exist will not disappear just through gas diplomacy, because there still needs to be concerted efforts to resolve them.

Dr **Claudia Gazzini** is the International Crisis Group's Senior Analyst for Libya since 2012. Between October 2017 and March 2018, she also served as policy advisor to Ghassan Salamé, Special Representative and Head of the UN Support Mission in Libya (UNSMIL). Dr Gazzini travels regularly throughout Libya, and researches and produces reports on security, politics and economic governance of the country, including its oil sector. Prior to joining the International Crisis Group, Dr Gazzini worked for the Associated Press in Rome and for Reuters in Jakarta. She was Max Weber fellow at the European University Institute in Fiesole (Florence) and Visiting Fellow at the Program of African Studies at Northwestern University (IL). Dr Gazzini did her post-graduate studies in Middle Eastern History at Princeton University and Oxford University.

Rémi Daniel

*Mediterranean Dialogue Fellow,
NATO Defense College, Rome (INSS, Tel Aviv)*

NEW GAS DEPOSITS: AN EXAMPLE OF COOPERATIVE SECURITY

I will mainly focus on security which is, of course, strongly linked to diplomacy, but it is still a different perspective. If I want to start talking about security in the Eastern Mediterranean, even before looking at gas and its impact, I would say that there are a lot of difficulties, because of the multiple threats and challenges: states of the region trapped in the Eastern Mediterranean among strong military actors, shifting alliances, foreign powers like Russia and China, although this latter has not a military presence here, and the existence of non-state actors. There are militias in Libya, in Syria and part of them are terrorist groups like in Lebanon or in the Gaza Strip. There are thus a lot of actors with different agendas who are possible threats to their neighbours. So, in this context and from a security point of view, the arrival of gas was not only positive news.

First of all, in a very direct way gas infrastructures represent potential targets for enemies which are difficult to secure, and in the Eastern Mediterranean this is not only a hypothesis. We have examples: in 2011 the bombing of a pipeline between Egypt and Israel; in 2018, an Eni drillship was stopped by a Turkish military vessel and, recently, in the context of the negotiations between Lebanon and Israel, Hezbollah (the terrorist group in Lebanon) has tried to launch a drone attack on an Israeli gas field. Therefore, gas drilling means also securing the drilling and the infrastructures.

The other interesting phenomenon is that in the context of these tensions, several countries actually discovered the strategic importance of the sea. If we look at the military development of the Eastern Mediterranean countries in the last 10-15 years, we can see the growing importance of military navies. I will take an example: I come from Israel and when I did my military service, no one wanted to enter the Navy, being considered the least prestigious armed service. It is normal, because Israel wars have been mostly on land and in the air. A few months ago, I met with a very high ranked officer of the Israeli Navy and he affirmed that the Navy in Israel has the feeling of becoming important and finally receiving an increased budget because the Israeli government understands today that security is also at sea. This is not only an Israeli thing, you can see that in Egypt or in Turkey, with the "Blue Homeland theory", for example, adopted by the Turkish government since 2015, which states that the sea is part of the Turkish national sovereign territory and that the government has to invest on it.

We are thus in a region that is discovering new security challenges and areas of potential frictions. One of the consequences of this new situation has been a rather intense arms race in the Eastern Mediterranean: security budgets, military expenditures, arms imports are higher in this region compared to global average. Turkey, Israel, Greece and Egypt have developed new capacities. So, we are in the middle of a tense region with our own arms race, but we have also seen more positive developments and cooperation. It is not exactly the same as the known diplomatic efforts, and we see new countries emerge as relevant players, as Greece for instance, which has been very strong in creating new alliances with Israel, Egypt and the Gulf countries.

Actually, countries have understood that they have common interests and sometimes common enemies, with a very complicated intertwining of players in the Eastern Mediterranean: state, public bodies, gas companies. Officially, in Cyprus are present Korean, French, Italian and Qatari drilling companies. All that creates a lot of interest for cooperation between countries and between actors. We have for example seen common military drills between Israel, Egypt and the UAE. What we sketched above relates also to the development of the East Mediterranean Gas Forum (EMGF) and the Abraham Accords.

Therefore, we have witnessed the beginning of something that was not a given: the Eastern Mediterranean was a competitive space but there has been more and more cooperation. Gulf countries have understood that the Eastern Mediterranean was not a big threat for their own markets, so they could cooperate with these countries, creating a more positive atmosphere, allowing in 2022 and 2023 further possibilities for integration and cooperation also in the field of security.

A lot of the Integration of the region was made basically against Turkey, but we are not there anymore. Turkey has changed its foreign policy at the end of 2020 as part of a general move of regional détente, including new relations between Qatar and its neighbours. We have new relations between Turkey and Israel, the UAE and Saudi Arabia. So, the atmosphere in the region is quieter than it was two years ago.

Actually, after not very positive years and, I would say quite negative ones in terms of security, we have entered a new phase of regional integration and regional relations that could eventually make possible the idea of a cooperative security with the involvement of the European and also of the Gulf countries.

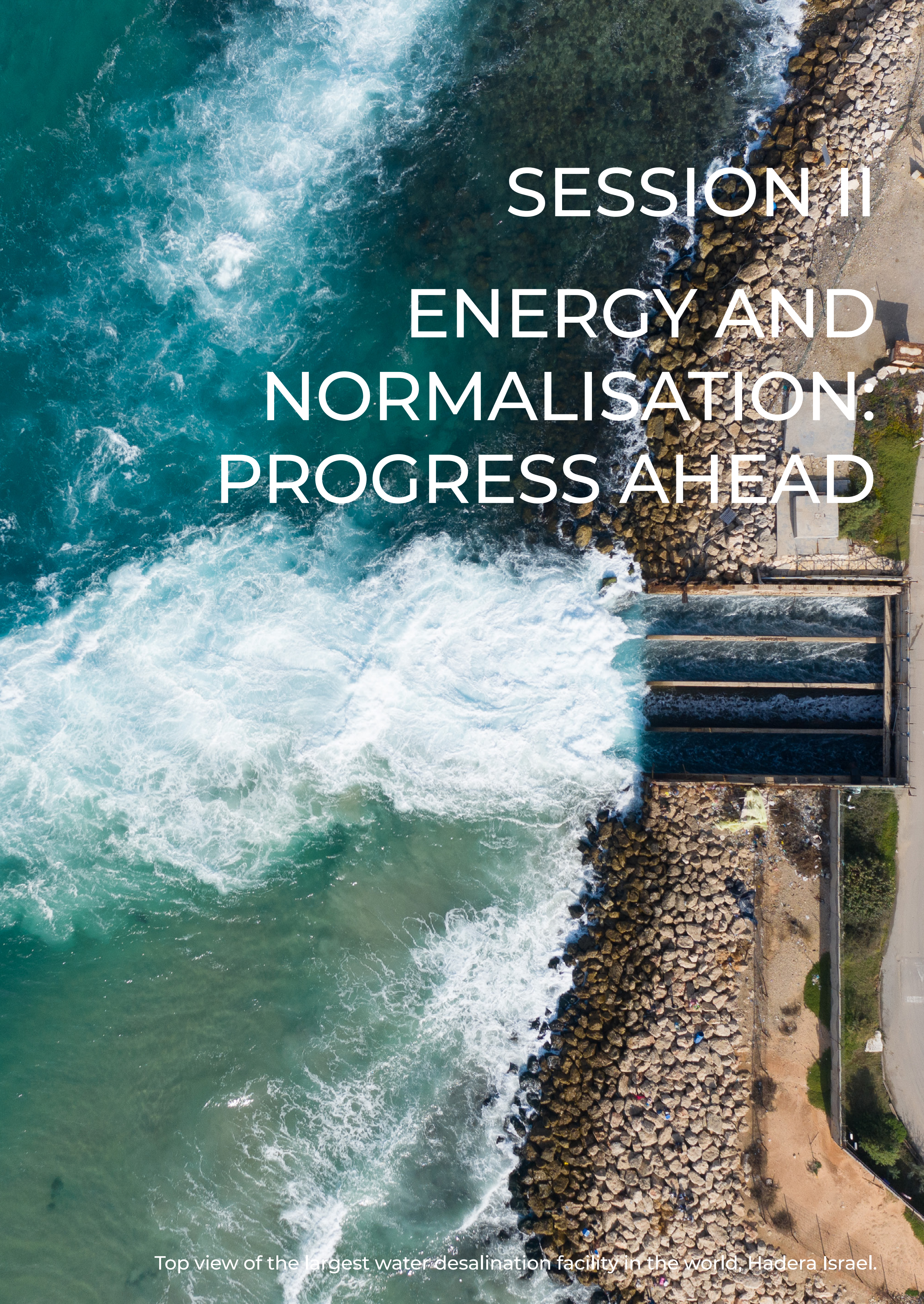
Rémi Daniel is a Mediterranean Dialogue Fellow at the NATO Defense College. In 2023 he completed his PhD at the Department of International Relations at the Hebrew University of Jerusalem. Dr Daniel has also conducted research for the Institute for National Security Studies (INSS) and the Elrom Center for Air and Space Studies (Tel Aviv University). For these research institutes, he has written analyses on Turkey's foreign policy, the country's domestic developments and events in the Eastern Mediterranean and the Middle East. He has made regular appearance in Israeli and international media on these issues. His publications also include texts on European politics and nationalist ideologies.

What possible
paths for the
normalisation
of the politics
of energy?

How to stimulate
hi-tech cooperation
in the area?

SESSION II

ENERGY AND NORMALISATION: PROGRESS AHEAD



Top view of the largest water desalination facility in the world, Hadera Israel.

MODERATOR

MEHMET ÖĞÜTÇÜ

Chairman
London Energy Club
London

Mehmet Öğütçü is currently the Chair of Global Resources Partnership, a UK strategic advisory group, and serves as well as Special Envoy of The International Energy Charter for the MENA Region, Chair of The Bosphorus Energy Club, and The London Energy Club. Earlier in his career, Mr Öğütçü was a Turkish diplomat, having worked on critical economic and energy diplomacy dossiers in Ankara, Beijing, Brussels and Paris. Later on, between 1986 and 1994, he also was an advisor to the late Turkish Prime Minister, Turgut Ozal. After leaving the Foreign Service, Mr Öğütçü joined the International Energy Agency (IEA) as a senior staffer, heading the Eurasia and Asia-Pacific programme, and the Organisation for Economic Co-operation and Development (OECD).

"Energy and normalisation do not go hand in hand. The energy industry is very dynamic, but it is not only investment or efficiency: there are always geopolitical tensions, unexpected events and technological breakthroughs to be taken into account.

Ashraf Mohammed Keshk

Research Fellow and Head of Strategic & International Studies, Derasat, Manama

NORMALISATION AGREEMENTS AND THEIR FUTURE DEVELOPMENTS

The issue of energy security was – and still is – one of the most important and pivotal issues for the Arab Gulf countries, the Middle East and the world. This issue was strongly present during the crises in the Arab Gulf region, but the regional and global developments, especially during the past three years, have created new frameworks for cooperation in the energy field, along with the continuation of competition and conflict over energy at the same time. When talking about energy security we have two aspects to take into account:

1. *Cooperative security* and there are three examples of this:
    a. The agreement between the UAE, Jordan and Israel to establish solar power plants in Jordan with Emirati technology, with Jordan exporting this energy to Israel, which in return will export water to Jordan. This is considered to be a significant development of multilateral cooperation in energy security.
    b. The establishment of the Forum of Friendship and Cooperation between the Gulf countries and the Eastern Mediterranean "Philia" in 2021.
    c. The establishment of the Negev Forum in 2022 (Egypt, the United States, Bahrain, the UAE, Morocco and Israel), forming six groups of multilateral cooperation in the fields of clean energy, education and coexistence, food and water security, health, regional security and tourism.
2. When it comes to military security and energy security, normalisation will *not lead to the emergence of military alliances* to confront energy security threats, according to my point of view. This for five reasons:
    a. it is too early to talk about a regional security structure that includes countries to confront energy security threats because alliances lead to counter alliances. Our region witnessed 13 security alliances and initiatives from 1948 to 2019, including alliances to tackle energy security threats. However, when oil tankers were attacked in 2019 and 2021 in the Gulf,

there was no decisive reaction from the USA. Furthermore, the USA established the International Alliance for Protection of Maritime Navigation that includes only six countries so far, and only three Gulf countries.

b. Bahrain and the UAE support multilateral cooperation in the energy field. There were joint exercises in the Red Sea in November 2021. The Iranian response was: Israel can start the war, but the end will be in Iran's hands. The priority for Bahrain and the Gulf countries is to face the threats to energy security coming from armed militias, especially drones, because energy security threats now include infrastructures as well as important waterways. The number of Iranian incidents threatening maritime security in the Gulf during the last two years reached an amount of 44.
c. Alliances require a unified military doctrine or at least a system of military action similar to NATO, which is difficult to achieve at the moment. We must think why the USA proposal to establish the Middle East Strategic Alliance (MESA) did not succeed.
d. The absence of an agreement between the Arab Gulf countries towards Iranian threats, and the difference in views will increase after the signing of the Saudi-Iran agreement. Despite the existence of the Gulf Cooperation Council as a regional organisation for the six countries, it must be taken into consideration that it includes small, medium and major countries and this has an impact on the security policies of those countries.
e. There are three options for small states to achieve security:
    - self-security, since the six Gulf countries have 398 naval units, while Iran has 375;
    - not taking sides. Historically, the Gulf countries could not exercise that option because their ships were targeted during the Iran-Iraq war and one of their countries was invaded in 1990;
    - alliances. Before the Ukrainian invasion, we were talking about the United States as one of the main strategic partners of the Arab Gulf states. However, now we cannot ignore the international competition *vis-à-vis* this area (especially China and Russia) and its impact on any future alliances.

To conclude, energy is still the focus of global and regional attention, and it has led to the existence of new regions, including the Eastern Mediterranean but, to achieve integration between the different parties, a multilateral regional framework must be established under an international organisation such as NATO, through the Mediterranean Dialogue and the Istanbul Cooperation Initiative.

Ashraf Mohammed Keshk is a Research Fellow and Head of Strategic & International Studies with Derasat and was previously Director of the Diplomatic Center for Strategic Studies in Egypt (Cairo branch). Dr Keshk has held the post of Fellow at the NATO Defense College in Rome specialising on Iran, Iraq and regional security and was also a researcher for the Egyptian Parliament and later worked for the Gulf Center for Strategic Studies in Cairo, specialising in regional and Gulf security. He regularly contributes studies and articles to the Al Ahram Center for Political and Strategic Studies, Egypt and has supervised and authored many studies on strategic and security issues. He obtained his Bachelors in Political Science and his Doctorate, which focused on Gulf Security, from Cairo University.

Grammenos Mastrojeni

Deputy Secretary General for Energy and Climate Action, Union for the Mediterranean, Barcelona

THE POLITICAL DRIVERS FOR INCREASED ENERGY CO-OPERATION

We are at a turning point and we are under the influence of two very bad events: the first one is that the Covid-19 pandemic has, if possible, worsened the already dramatic asymmetry that exists in the Mediterranean; the second one is that we are the second fastest warming region in the world, and that the waters of the Mediterranean are the fastest warming in the world.

Combined with this, there is something that is happening and is quite promising. Energy is a commodity and it has its own market, but at the same time, it also serves other purposes. It is an enabler of development, human rights and sovereignty. In the old outlook all these different functions were considered competing: you could achieve one to the detriment of the other, but now it is the private sector that has realised that this is not true. Actually, you have a better market if energy also serves these purposes that are not specifically market driven, and this is fundamental in the scenario that I touched upon.

Let me just make it a little bit clearer. The Mediterranean is the second fastest warming region in the world, and this measurement comes with some predicted impacts. It would take me a whole day to list them, so let me just mention two: 250 million people in water scarcity within 10-15 years, or a very steep sea level rise, up to one meter until the end of the century (20 centimetres in just 10-15 years). Maybe you think about the fragility of some coastal cities like our precious Venice, but the problem is not water covering the land, it is salty water entering coastal plains.

My ancestors, the Romans, had a good wisdom, but also a wicked one: they said that if you want to submit a population you should beat them in the battle, but if you want never to hear about them again you should spread salt on their fields. It entails sterilising the plains, where 40% of our agricultural production goes on with some very soft and delicate spots. Having 20 centimetres in 15 years means that it salinizes the Delta of the Nile, jeopardising food security of a country that has more than 100 million inhabitants.

If we simply take the entire collection of these predicted impacts, we would not get the whole picture. We are entering into a situation of high instability, because the very basis of our balances and identity are being threatened by climate change. Our region has its own identity which is kind of peculiar. If you think about Europe, it should not exist. It is just the westernmost point of Asia. North Africa is kind of weird too. It is Africa, but it is not Africa. What is the shaper of this identity? Already Montesquieu had understood that it is this very special climate that we have, a climate that allowed the Agricultural Revolution to take place here. The stabilising effect of the Mediterranean may be climate predictable and it is in this predictability that you can start thinking about managing the land, shifting from passive users of the territory to managers; in this shaping there is this identity. The stabilising action of the Mediterranean is not here anymore, so there is no more reason to be special as Europe and special as agricultural civilisation. On top of that, the other good thing about that region is that it was governed by the entrance of the Azores anticyclones ushering the good season, the season of productivity; but now Azores anticyclones have been elbowed out by African anticyclones that are actually cutting Europe in half. It means that if you believe that our identity is determined by climate, then there is a new situation where Europe is split in two and Southern Europe becomes closer in interests to the Northern shore of the Mediterranean.

It seems so abstract, but let me give you an example: Europe is a tale of two warmings. On top, there is the fastest warming region with a lot of troubles, but also some potential advantages, for instance, the opening of new Arctic maritime routes, Northwest Passage and Northeast Passage which are evaluated up to $11 billion dollars per year, but if these routes become operational the Suez Canal is worth nothing. The Mediterranean as the sea of passage of more than 22% of global commerce is worth nothing. On the other hand, we have witnessed a spontaneous increase in cooperation in agriculture and forestry between Southern Europe and North Africa. Why? because the species that are vital and tradable now in North Africa are the ones that can save our economies in 10-15 years.

We are in a moment of high incertitude, where everything is reshuffling. At the same time, these severe impacts would not be so dangerous if they fell over a homogeneous area, but this is not a homogeneous area. Just let me quote one thing: regarding international trade in our region, 90% takes place among North Shore States, 9% between the North and the South and only 0,9% among South Shore States. It means that we are in an area where there are the rich and the poor, those who can and those who cannot. What has this got to do with energy? We need to defuse these bombs. Energy can make the game winnable without trade-offs. A more developed, more income generating market will solve also all these problems. How? If we take into consideration that science shows that there is no one around the Mediterranean strong enough to face on its own a challenge of this scale and final severity, we understand that together we have the means.

We need to put everything together, starting from energy. The European Union wants to decarbonise by 2050: it is quantitatively impossible without counting only on the renewable potentials of the South. The South, for its part, wants to develop the renewable market: it is impossible if it is only a local market, because it has not enough financial strength. We could develop this intuition even more, but the idea is that if we go this way integrating energy markets, not only we integrate a market but actually we start solving also the other problem, because energy is an enabler of growth and it will rebalance the asymmetry. Basically, there is some magic. If we do what we have to do, countering climate change and injustice, actually we end up unwillingly solving the root causes of a very real problem we never eliminated in the Mediterranean: a sea of civilisation, but never a peaceful one.

Grammenos Mastrojeni is an Italian diplomat, professor and writer who has focused for the past 25 years on the societal, geo-strategic and economic impacts of environmental degradation. He is currently the Deputy Secretary General for Energy and Climate Action at the Union for the Mediterranean. Till August 2019, he was the Coordinator for the Environment and Head of the Science-Policy Interface at the Italian Development Cooperation. Chair of the UN Mountain Partnership, and Co-Chair of the Global Islands Partnership, he is President of the largest Italian association for sustainable development education "Isola della Sostenibilità" (The Island of Sustainability), and member of the scientific boards of numerous university courses and entities. Author of various articles and official reports on the environment, he published 8 books, including *Greenhouse effect, war effect*, written together with the climatologist Antonello Pasini (Chiarelettere, 2017), and *The Ark of Noah – Saving together our Common Home* that ranked as a best-selling collection of essays. Among his publications there are also *The necessary eco-revolution* (Italian Scientific Editions, 2008); *Now or never. A decade, and not beyond, to save ourselves and the Earth* (Amazon, 2016).

Marco Piredda

Vice Chairman, Energy Transition Committee, Observatoire Méditerranéen de l'Energie, Paris

BUSINESS DRIVERS AND POLITICAL SYNERGIES IN THE REGION

I am not here under my usual capacity with Eni, but to share the views of the OME, the Observatory of the Mediterranean Energy, which is an organisation dedicated to raising awareness of the potential of integration in the energy field and in the Mediterranean area. The OME has the ambition to be the voice of the energy sector in the Mediterranean and has the strength of gathering companies such as Eni, EDF, Edison, Sonelgaz, and companies all around the Mediterranean shores, but also public institutions, think tanks, as well as scientific institutional research centres. Our ambition is to accompany the energy transition with focused and very thoroughly prepared analyses. In particular, every year we publish the Mediterranean Energy Perspectives, providing an in-depth analysis of the current energy context, while addressing solutions for a net-zero carbon future.

Let me spend a few words on the scenarios that we see for the energy in the Mediterranean. Just to share a few numbers and see where we are and where we can go. We can go on a first direction which would be burning our planet, if we just go on implementing the stated policies, as we can miss the Paris Agreement goals. Alternatively, we can reverse action and meet those goals to mitigate climate, which is the right direction. Between these two very different scenarios, there is the possibility that we continue to consume energy as we are doing, with the Mediterranean expecting to increase the energy consumption by 30% in the next 30 years. The other scenario requires that we reduce the energy we consume by more or less 25%. How do we fill this gap? What are the main drivers for this? In any case, the first pillar would be energy efficiency. One of the few positive lessons that we can learn from the current crisis is that there is always space for energy efficiency. For instance, in Europe we have reduced the consumption of gas by about 20% without suffering severe consequences. Of course, there were repercussions, but the industrial base and the GDP were not destroyed. We will have completed about

40% of the necessary effort if we manage to reduce the energy consumption in the Mediterranean by 25% over the next decades.

The Mediterranean is one of the regions most affected by climate change. It is not one of the main emitters and, as a Mediterranean region, we are consuming roughly 7% of the world's energy, while contributing to 6% of global CO_2 emissions. Hence, we are not the biggest emitters if compared with the United States or China, but it is in our best interests to stop this, since we are anyhow contributing to climate change. The primary action to implement, accounting for around 40% of the effort to cut emissions, is to become more energy efficient. The second pillar is improving the energy mix, which will allow us to obtain an additional 40% emission reduction. Naturally, this entails primarily switching to renewable energy sources for the energy system. Talking about renewables in the Mediterranean, in addition to photovoltaic, which is undoubtedly important, OME and Eni both see a great potential for wind, which also evokes a number of implications in terms of potential synergies with other economic sectors, as well as challenges, security concerns, and possible conflicts with other economic courses. In this respect, let me also point out the fact that the majority of offshore wind will be floating offshore platforms, meaning that they will be 20-30 miles of the shore. You hardly can see them and they are not conflicting with tourism. Thus, this would have a reduced impact on the public perception, because this is crucial in a densely populated region.

As the end point, of course, all this is and will be possible if we manage to share the capacity in innovation and in technology transformation. According to the International Energy Agency (IEA), most of such potential is in the northern side of the Mediterranean, and half of the technologies, that need to be implemented in the energy transition, are not there yet. We are not only very focused on discovering new ways of producing, transporting, supplying, and consuming energy, but we need, in parallel, to share this knowledge and technologies in order to have them implemented in Egypt, Morocco and Algeria, while we advance in frontier technologies in Europe. Without it, the European Union will have not adequate surface and capacity for renewable sources. We will have the technology but not the services and the capacity to reach the volumes we need. In conclusion, also under the perspective of the energy transition, the only successful model that we can pursue and implement in the MED region is based on cooperation and resource and knowledge-sharing.

Marco Piredda is a Senior manager at Eni - the Italian global energy company - where he works in the Public Affairs and International Relations Department. Concurrently, he is also the Vice Chairman of the Observatoire Méditerranéen de l'Energie's Energy Transition Committee. He earned a BA degree with honours in Political Science at the LUISS University in Rome and holds a MA degree in Administrative Law, and a Ph.D. in Constitutional Law from the University of Bologna. Previously, he carried out academic and 10 research activities on Public Law and Government at the LUISS University, the University of Bremen and other academic institutions. Dr Piredda worked for six years for the Italian Government, in the Financial and Banking Directorate of the Italian Department of Treasury, as Director of the Unit in charge of Legal International Cooperation. In this assignment, he managed several EU-funded projects on economic regulation, mainly with Eastern European countries. He joined Eni in 2008 to work in the External Relations and Communication Department. Then he worked in the Legal and Regulatory Affairs Department and in the Public Affairs Department. In 2017 he was assigned the position of Head of Analyses and International Relations for the development of Eni's oil and gas businesses. In June 2019 he was appointed Head of Political Scenarios and Institutional Support for Business Development in the MENA, Americas, and the Asia Pacific.

Wind turbines as alternative energy sources in the European Union.

SPECIAL INTERVENTION

Pasquale Ferrara

Director General, Directorate General for Political Affairs and Security, Ministry of Foreign Affairs and International Cooperation, Rome

SPECIAL INTERVENTION

A conflict is raging in the heart of Europe following the Russian aggression against Ukraine. This is not only a European conflict. It is a conflict that is producing shock waves all around the world. It is not a world war, but a global war, from this point of view. The first countries to be hit were not only in Eastern Europe but in the Mediterranean region too, where there is a variety of states, situations and fragile states. We are discussing these days about the possible collapse of Tunisia from the financial point of view [still possible by the end of June 2023, Ed.], but also other strong states like Egypt are facing the consequences of this conflict.

For those of us who thought that globalisation was over, maybe one has to rethink it. Globalisation, as we have known, it is possibly over, but at the same time transnationalisation, the internationalisation of the world as such, including the economy, is still there and the consequences of the war are further evidence. Bottom line: we have to deal with it.

I want to stress something very important. Sometimes, we hear that the sanctions against Russia have negative consequences also in terms of food and energy security, inflation and so on. This is a mystification. The European Union has never introduced any kind of sanction related to food or agricultural products. The causes are elsewhere and have to do with the demand and inflation, that is partially dependent on this disruption of the global economic order, but not related with that. I want to be very clear on this since the beginning, but at the same time we need to take in a way advantage of this crisis in order to understand if there are also opportunities. There are opportunities in terms of raising awareness that there is a still persisting interdependence, that we should strengthen exactly due to this kind of issues we are facing, and that in isolation we are not capable of cope with that.

Egypt is the founder, like Italy and other countries, of the East Mediterranean Gas Forum (EMGF) and hosts its headquarters. This is not only about gas. It also regards increasing energy supply sources, and it has to do with the willingness of the countries that belong to the Forum to explore renewable energies. I think this is an important example of how cooperation can strengthen our resilience, also in terms of energy needs.

I would like to mention the broader political scenario, that shows signs of improvements in different areas. There are good news coming from the normalisation between Israel and some Arab countries: the potential to strengthen economic integration. It is not only important from the political-diplomatic point of view, but also to improve security partnerships in the wider region. The deepening of these regional ties could pave the way for a broader cooperation, promoting joint initiatives in sectors such as energy security, in the wider meaning of the concept, and also climate change. The normalisation agreements present new opportunities for cooperation not only for the region but also beyond it, including the European Union and Italy. We look at that normalisation processes with the utmost interest. In this regard, I would like to bring up the Memorandum of Understanding signed last June by the European Union, Egypt and Israel on the supply of Israeli gas via Egypt to Europe[1] and the Memorandum of Understanding of a strategic partnership on renewable hydrogen between the European Union and Egypt, signed on November 2022 in the margin of the COP27, in Sharm El-Sheikh[2]. It is really a sign that climate change can also be a driver of innovation in terms of fostering cooperation in renewable energies between countries. Even where an official process of normalisation is not in place yet, between Israel and Lebanon, still we need to mention that the agreement on the long maritime border dispute between Tel Aviv and Beirut is a very good news. It shows the countries' true engagement and diplomacy. It demonstrates that even intractable problems can be solved and that a relationship can turn into the beginning of a partnership. I think this is another good news from the region.

Another element, that I think it is worth mentioning, is the fact that the normalisation process that I mentioned before set into motion the Negev Forum. We believe that the topic of energy transition is crucial for these positive regional dynamics and Italy stands ready to explore joint initiative with the members of the group.

Italy's natural inclination plays a relevant role in the larger Mediterranean area, as we call it, and the Gulf, because there is a national style in terms of foreign policy: to always have and always try to have a balanced approach but, above all, and this is

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1 https://energy.ec.europa.eu/system/files/2022-06/MoU%20EU%20Egypt%20Israel.pdf.

2 https://energy.ec.europa.eu/system/files/2022-11/MoU_EU-Egypt_on_renewable_hydrogen_FINAL_SIGNED_by_EU.pdf.

very important for international relations and the perception of Italy in this region, we do not have hidden agendas. There are no second thoughts and I think this is really important because in these days this issue has to do with trust, which is very rare in the international arena. We think that this can be an asset. I do not want to overestimate the possible role of Italy in this region, but at the same time we are very aware of the role that we have and the contribution we can offer. In this spirit, another positive element is the arrangement between Tehran and Riyadh to resume diplomatic ties. It is a long way to go, it is just an announcement, we have to see if this will translate in concrete deeds, but I think that it is really crucial that this development takes place after many years of tensions and confrontation between two key actors in the region.

When Russia's aggression against Ukraine started, we immediately perceived the risk of being too dependent from Russian oil and gas. A process of diversification of sources started. I think it is one of the cases where there was a strategy and we tried to implement it with concrete steps, by engaging the Mediterranean countries. We are quite confident that we will be able to achieve our goal: to become completely independent from Russian supplies by next year. If we consider some numbers, at the beginning of the war, the dependency from Russia in terms of gas supplies was around 40% and now we are well below that, at around 15%, and going down. Therefore, you may imagine the efforts that we did.

Of course, this implies for us to conceptualise our relation with the Mediterranean not only and all in terms of energy needs, because this would not be sufficient and we would not have any real political added value. We should try to engage with the region in a different way. You have heard in the last weeks to talk about the Enrico Mattei plan. It takes the inspiration from a key figure, one of the driving forces of the Italian post-reconstruction period and the national industrial policy, yet possessing also a style (again), a style for a foreign policy which is far from being just based on energy. It is based on relation built on mutual benefits, mutual trust and equal footing. I think this is something that is really crucial. In this project we need to cooperate and have a political dialogue.

The interconnections are crucial, for instance we welcomed the role played by the European Commission in supporting the ELMED, the electrical interconnection project between Italy and Tunisia[3]. This can go also beyond that. There are new initiatives, I mentioned countries that are in a way helping us to become more independent from Russian gas like Algeria, but also the new agreement signed by ENI with Libya. There is a lot of confidence that this can also bring new sources.

[3] https://www.terna.it/en/projects/projects-common-interest/italy-tunisia-interconnection.

To conclude, I believe that the right way of taking advantage from this international destabilisation created by the Russian aggression against Ukraine is by trying to look at the different regions from a new perspective. As for the Mediterranean, we have to go beyond the traditional divide that suggests that there is a Northern shore and Southern shore. Well, there are no shores in the Mediterranean, but there is a political, economic and environmental context and we have to deal with that in a holistic and comprehensive way. We are also engaged in that and supporting all the initiatives that the European Union is taking towards this direction, for instance REPowerEU[4], but also this new very interesting initiative that is the Global Gateway[5] with some priorities involving not only with infrastructures but also economic and political engagement. We are in a crucial moment and we have to play our role in a constructive way. We are ready to do so, but we do not have to underevaluate the chance of innovation, being crucial in terms of technology, and also in terms of diplomacy and politics.

Since May 2021 Ambassador **Pasquale Ferrara** has been Director General for Political Affairs and Security of the Ministry for Foreign Affairs and International Cooperation. He entered the diplomatic service in 1984, he served in the Directorate-General for Italians Abroad. In 1986 he was in the Minister's Cabinet managing the Relations with Parliament sector. In 1987, he joined the Office of the Diplomatic Advisor to the President of the Republic and one year later he served at the Italian Embassy in Santiago, Chile. In 1992 he was appointed Consul in Athens and six years later (1998) he was appointed Counsellor at the Permanent Representation to the EU in Brussels and in 2002 he was nominated First Counsellor in Washington. After his coming back to Rome, he was Head of the Minister's Press Service and Spokesperson of the Minister in 2006 and he was appointed Head of the Analysis and Planning Unit of the Ministry for Foreign Affairs in 2009.

4 https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/repowereu-affordable-secure-and-sustainable-energy-europe_en.

5 https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/stronger-europe-world/global-gateway_en.

How to ensure
North-South
exchanges and a
regional cooperation
framework?

What implications
for security
in the region?

SESSION III

THE CHALLENGE OF MARKET INTEGRATION

Golden steel pipeline network in crude oil refinery.

MODERATOR

ALON BAR

Ambassador of Israel to Italy
Rome

Alon Bar is the Ambassador of Israel to Italy and San Marino since September 2022. During the years 1989-2000, Ambassador Bar served in headquarters and embassies of Israel abroad. In the period 2000-2006, he was Director of the Arms Control Department in the MFA: in this capacity, he was in charge of Israel's delegations to the UN General Assembly First Committee and was a member of Israeli delegations to the International Atomic Energy Agency (IAEA) General Conference as well as to other multilateral fora in the field of disarmament and arms control. In 2009 he was appointed Deputy Director General in charge for Strategic Affairs, and then, between 2011 and 2015, he served as Ambassador of Israel to Spain. During the years 2016-2020 he was Deputy Director General for the United Nations and International Organisations, then serving as Political Director of the MFA from 2020 to 2022.

> ***"Is it possible to overcome geopolitical and economic difficulties also through technological innovations, thus helping politics to work for positive solutions in the region?***

Ahmet Evin

Founding Dean, Faculty of Arts and Social Sciences, and Professor Emeritus, Sabancı University, Istanbul

AN UPCOMING MARKET: OUTSTANDING ISSUES AND POSSIBLE SOLUTIONS

The past year has witnessed an enormous volatility in the global energy markets because of Russia's occupation of Ukraine and the resulting response from the united West. Weaponising its energy resources to intimidate Europe lay at the heart of Moscow's move to occupy Ukraine with impunity. It played havoc with energy markets, but the Kremlin's calculated gamble seems to have failed in the end. The EU was successful in curbing energy demand over the past winter, aided by a mild winter. Europe's dependence on Russian gas was substantially reduced, while solar and wind energy production sharply increased as did the use of heat pumps. On the other hand, Russia's tax and customs revenues from oil and gas sales declined by some 46%,[1] resulting in a sharply increased budget deficit.

European officials and energy ministers are no longer flying around the world trying to find uncontracted gas to buy as they did last spring. Today Germany's gas storage facilities are 64% full and its first liquefied natural gas (LNG) import facility has been completed in a record time, with others soon to follow. In addition to the mild winter, Europe, particularly Germany, benefitted from lower than expected demand from China as result of which more gas was available in international markets.

However, next winter, warns the IEA, neither the global demand for gas nor the weather may be as accommodating as the past winter. There remains a supply-demand gap of 57 billion cubic metres (bcm) in the current year, of which around 30

1 https://www.reuters.com/business/energy/western-sanctions-push-russias-energy-revenues-lowest-level-since-2020-2023-02-03/.

bcm may be covered by measures already being taken, still leaving a significant gap between projected demand in Europe and available supply of gas.[2] This is the reason why the Mediterranean comes into renewed focus – not only for its potential new resources but also as a bridge for market integration.

The North and South shores of the Mediterranean have long been connected by gas pipelines, bringing significant amounts of Algerian (and somewhat lesser volumes of Libyan) gas to Italy and Spain. Recently these resources became the focus of attention at the highest levels in Europe. Last January Prime Minister Meloni visited Algeria to sign a deal for an additional 9 bcm of gas annually[3]. Similarly, ENI's Chief Executive Claudio Descalzi has called for a new "South-North axis."[4] Moreover, the idea of the trans-Saharan gas pipeline, first proposed in the 1970s, has been revived with the planned trans-African gas pipeline, or NIGAL, which would carry up to 30 bcm of gas from Nigeria to Algeria that could then be exported to Europe. How such a connection might affect Africa's own energy markets, especially in the face of the anticipated increase of demand in the region remains an outstanding question.

Let me hasten to add that Europe's search for new energy resources is not confined to fossil fuels only. Solar energy potential of the Sahara has long attracted the attention, particularly of German industry. For a variety of reasons, the Desertec project was abandoned in 2015. Oddly enough the existing 800-megawatts capacity connection between Spain and Morocco has been used in the recent past to import electricity from Spain into Morocco rather than other way round. This situation could perhaps be better understood in the light of the fact that renewables accounted for only 20% of Morocco's total energy consumption in 2021 while fossil fuels represented 80%.

In the wake of the energy crisis, however, there has been a revival of interest in the Sahara solar energy potential and, correspondingly, in further connections across the Mediterranean. The proposed Xlinks Morocco-UK power project[5] is designed to have a 3,6-gigawatt high-voltage interconnector to transmit solar and wind-generated power from Morocco to the UK. If built, it will be able to provide 7,5% of the UK's electricity demand. Spain is planning another connection to add 700-megawatts capacity to its existing undersea connection to Morocco. As for the erstwhile German solar ambitions, the new idea that has the EU support is to

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2 https://www.iea.org/reports/how-to-avoid-gas-shortages-in-the-european-union-in-2023/executive-summary.

3 https://www.intellinews.com/italian-pm-meloni-travels-to-algeria-to-sign-landmark-gas-deal-267983/.

4 https://www.ft.com/content/8f00aa32-de56-4c8c-b065-2544ba16a460.

5 https://xlinks.co/devon/.

produce green hydrogen with solar power and then export it to Europe via pipelines.

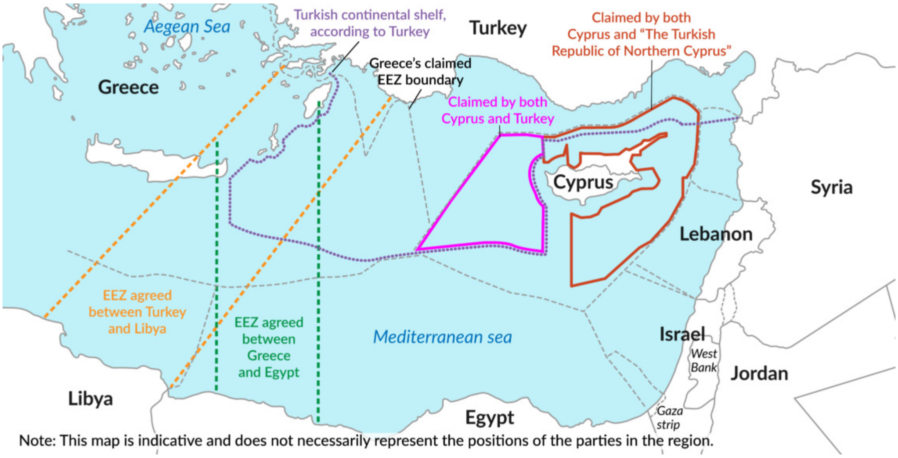
The challenge we are facing in Europe is not merely how to fill the gap left by the absence of Russian gas, but more significantly, how to address the immediate short-term challenges while keeping a steady course toward energy transition, even if we experience reversals due to the current crisis.

I now turn to the Eastern Mediterranean, where market integration remains a serious challenge if not a distant goal. The discovery of gas in the region in 2009-2010 led to great expectations, but the regional actors' hopes of becoming prosperous energy providers to the European market turned out to be difficult to achieve, for a number of reasons several of which may be cited as follows:

- Rising demand in the region reducing its export capacity, notably that of Egypt;
- limits on the volume of Israeli gas that is allowed to be exported[6];
- small volumes of the gas deposits in Cyprus' Exclusive Economic Zone (EEZ) that pose a challenge to the financing of infrastructure for their export; and
- above all, maritime delimitation disputes between Turkey, Greece, Cyprus and eventually the EU that stand in the way of pipeline connections to carry East Med gas to the EU market.

The bilateral disagreements between Greece and Turkey seem to be insurmountable, given that the two neighbours have made no progress in 62 rounds of exploratory talks over the past two decades. Further complicating factors have arisen since the Aegean coastal waters issue flared up in the 1990s. With respect to maritime claims, Greece and Turkey stand wide apart. The divided island of Cyprus poses even a greater problem for all parties involved to find a common ground on which to negotiate. Moreover, the basis on which the EU determines its EEZ is at loggerheads with Turkey's continental shelf claims. The following map illustrates the conflicting claims of the parties.

[6] https://www.reuters.com/article/israel-natgas-idUSL5N0EZ0BQ20130623.



Source: https://www.gisreportsonline.com/r/turkey-and-eu/.

Turkey is not a signatory to the United Nations Convention on the Law of the Sea[7] and prefers to conduct bilateral negotiations with Greece, whereas Greece prefers to have international mediation, which Ankara does not trust. Cyprus poses further challenges. On the one hand, Turkey does not recognise the Republic of Cyprus's sovereignty over the entire island, given that Ankara views the Nicosia government as representing the Greek community only, but not the island's Turkish community. On the other hand, the Turkish Republic of Northern Cyprus is not recognised internationally to be a legitimate negotiating party representing the Turkish community on the island. The situation remains a textbook case of a stalemate.

Under the circumstances a very large chunk of the eastern Mediterranean, not to speak of the Aegean, fall in the category of disputed waters, causing friction, instability in the region and at times flare-ups bringing the two neighbours dangerously close to confrontation. The creation in 2019 of the East Mediterranean Gas Forum, which gained the status of an international organisation in March 2021[8], marked a further split in the region between Turkey, on the one hand, and on the other, members of the Forum: comprising Cyprus, Egypt, France, Greece, Israel, Italy, Jordan, and Palestine, with the EU, USA and the World Bank as permanent observers.

Given the increasing difficulties of building underwater infrastructure for the transport of gas, the costs and uncertainties involved, and especially the EU

7 https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf.
8 https://emgf.org/gva_event/4th-emgf-ministerial-meeting-march-9th-2021/.

commitment to transition away from fossil fuels, it appeared that the building of the East Med pipeline would not be a wise investment, despite the insistence of the European Commission to designate it as a project of common interest.

In the wake of the current crisis, the USA has also withdrawn its support from the East Med gas pipeline[9]. As a consequence, talk about its vital importance subsided, especially in view of the EU's concern with finding gas for immediate delivery, not in the distant future. The East Med gas thus came to be considered in the context of the region's own market, with the possibility of exporting some of it as LNG via Egypt's liquefaction plants.

However, a very recent study by the Center on Global Energy Policy at Columbia University has refocused attention to the importance of the Eastern Mediterranean as a promising new energy source for Europe. This comprehensive report, appropriately titled, "Eastern Mediterranean Deepwater Gas to Europe: Not Too Little, But Perhaps Too Late,"[10] includes an illuminating comparison of the costs of carrying East Med gas to Europe via six different routes; it also claims that the East Med's substantial resources are sufficient to meet Europe's energy needs. On the basis of this report, the East Med route looks economically feasible after all but, ultimately, I return to the key question: how much gas will Europe need by the time it is built (if at all)?

Finally, another ongoing East Med project is as relevant for market integration as it is for energy transition. The EuroAsia Interconnector joining the Greek, Cypriot and Israeli power grids via "the world's longest undersea power cable," as President von der Leyen put it, is an energy highway that connects Asia to Europe. Analyses made by European Network of Transmission System Operators (ENTSO-E) have concluded that the interconnector would contribute somewhere between €580 million and €1.12 billion annually to social and economic welfare. The construction of its Phase 1 (with 1000-megawatts capacity) has begun in October last year.

To sum up, let me return to three points that I made in respect to what stands in the way of market integration and how it could be achieved. First of all, the integration of the Eastern Mediterranean energy markets has to begin with a solution to the Cyprus problem. That would be an essential first step towards the process of Turkey's reintegration into the Euro-Mediterranean structures, provided that Turkey itself becomes an active and willing partner. I realise that this is a challenging proposition. Second, the Eastern Mediterranean gas has a far more important potential than being merely an export commodity. It can meet rising

9 https://www.washingtoninstitute.org/pdf/view/17245/en.

10 https://www.energypolicy.columbia.edu/publications/eastern-mediterranean-deepwater-gas-to-europe-not-too-little-but-perhaps-too-late/.

regional demand, support coal-to-gas switching in the region in the near term, and increasingly used for hydrogen production, especially if the carbon capture process is improved. Finally, as EC President von der Leyen has emphasised, any new pipeline ought to be designed for carrying hydrogen and thus support energy transition goals. It seems that market integration, given the challenges in the future, will also have to take into consideration this essential fuel because green energy from wind and solar does not produce fuel. But it is too early to tell how realistic it might be to expect hydrogen to replace a significant proportion of fossil fuels in the foreseeable future.

Dr **Ahmet Evin** is currently Professor Emeritus at the Sabancı University in Istanbul, where he is also Founding Dean of the Faculty of Arts and Social Sciences, a Jean Monnet Chair, as well as a Senior Scholar and a Board Member of the Istanbul Policy Center. With a PhD from the Columbia University, Dr Evin previously taught at: New York University; Harvard University; University of Pennsylvania (where he also served as Director of the Middle East Center); University of Hamburg; Bilkent and Hacettepe Universities in Ankara (being Head of Department of Political Science in the latter). He has authored or edited over 10 volumes on politics, culture, and development, and his research interests include: theories of the State and elites; Turkish political development; democracy and civil society. He currently works on foreign policy issues related to the European enlargement, its significance for Turkey and the region as well as its effect on transatlantic relations.

Rim Berahab

Senior Economist,
Policy Center for the New South, Rabat

HORIZONTAL SOUTH-SOUTH INTEGRATION: NEEDS AND COMPROMISES

I would like to focus a little bit more on South-South integration in the energy sector, mainly from an economic perspective and the needs for it, and solely focusing on North Africa, since it is the area that I cover mostly.

Starting with some economic theory, the divisions between countries created by geography, poor infrastructure and inefficient policies may be an impediment to economic growth. In response, regional integration, always from a theoretical perspective, allows countries to overcome these challenges and these costly divisions by integrating goods, services and markets, thereby facilitating the flow of trade, capital, energy, people and ideas. Regional integration can be fostered both through physical and institutional infrastructure. Specifically. it requires countries to cooperate on:

- trade agreements, investment and domestic regulations;
- transportation, information and communication technologies (ICT) and energy infrastructure;
- macroeconomic and financial policies;
- the provision of other common public goods (e.g., shared natural resources, security, and education.

As Mediterranean countries or North-African countries seek a way forward in the wake of multiple crises that have disrupted their economies in the past years, accelerating regional integration is more important than ever. And while there are multiple entry points for achieving this agenda, few are more important than energy, at this juncture. Despite this, when we look at the region of North Africa, we see that it is among the least integrated regions in the world combined with Sub-Saharan Africa as well.

Currently, intra-Mediterranean trade, for instance, is valued at less than one trillion dollars annually, barely a third of the trade between the Mediterranean countries and the rest of the world. This contrasts with other prosperous regions, where countries' largest trading partners are usually their neighbours. Within this limited framework, energy currently accounts for about one-third of regional trade.

Several factors currently impede regional integration in the energy sector in the North Africa and I will just briefly highlight some of them. First of all, countries may have different priorities for regional integration and it is also very difficult to assess the impacts of this regional integration on trade, investment flows, the allocation of economic activity, growth and income distributions. Another issue is the lack of appropriate complementary policies, regulations, and institutions which can lead to inefficient outcomes. Last but not least, regional integration creates winners and losers, particularly within some groups or regions benefiting more than others, even within the same country.

Despite these obstacles, harnessing the potential for further economic integration between the southern shores of the Mediterranean could be an energy game changer.

Fossil fuels are still the main source of energy produced and traded in the region (Algeria and Egypt), but renewable energy is also on the rise (Morocco, Egypt). We cannot look at South-South cooperation in the region without also looking at some external factors that influence energy policies in the Southern Mediterranean, namely Europe's increased need for oil and gas in the short term but also renewables and hydrogen in the long term, even though this raises the issue of trade-offs between contributing to Europe's energy needs versus meeting domestic demand.

Being more specific on countries: Algeria has demonstrated its willingness and ability to increase gas supplies to Europe, while Egypt is also making progress in positioning itself as a key regional destination for natural gas processing and re-export. I would like to focus on the case of the East Med Gas Forum (EMGF) because it is a compelling case study in regional integration. Basically, the main challenge in the Eastern Mediterranean is to identify markets where natural gas can be competitive. Investment in exploration and development will not take place until the competitiveness of known resources is established. Therefore, regional integration could be the key to unlocking the value of gas in the region, with the aim to reduce costs and risks in attracting investor.

Overall, the role of the EMGF is to increase intergovernmental cooperation with the aim of reducing costs and risks, attracting investors and increasing the market competitiveness of the region's gas. However, there are some aspects that need to be addressed in order to make this regional cooperation project work. The most important is to open the gas market to competitive trade, harmonise pricing regimes and remove trade barriers (energy subsidies). Another element is the establishment of an enabling fiscal framework to reduce the cost of gas supply to regional and international markets, as well as to enable the use of common infrastructure.

On the renewable energy front, some projects are being developed in North Africa, for example in Egypt and Morocco, in terms of solar, wind, but also the development of green hydrogen. But these efforts seem to be country-led and there is no concrete regional South-South Cooperation in this sense, except from some bilateral partnerships, for instance like between Morocco and Israel. There is also an emerging competition within these countries, especially in terms of clean hydrogen developments and export markets, namely the EU. Furthermore, there are many technical, financial and economic barriers to overcome in order to develop a cost-competitive hydrogen industry. One of them is that it is still very costly compared to other sources of energy.

To conclude, ultimately realising the many benefits of increased South-South energy integration depends on the political will to cooperate on regional trade agreements and on the adoption of market-based energy prices throughout the region. It also depends on the development of shared infrastructure, namely pipelines and power grids, that could facilitate the deployment of energy resources among countries in the region. Another thing is that harmonising regulations and policies could also help create a more cohesive regional energy market, that is currently characterised by a patchwork of policies and regulations. Another element is the sharing of technology and expertise among countries in the region. Finally, ensuring a fair distribution of benefits could help mitigate the fact that energy integration could potentially create winners and losers among countries in the region.

Rim Berahab is Senior Economist at the Policy Center for the New South. She is currently working on issues related to international trade and regional integration in Africa. Her areas of research focus also on energy issues, economic growth and gender inequalities. Dr Berahab published several articles related to trade and FDI between Morocco and Sub-Saharan Africa. Recently, she co-authored a book – supervised by Pierre-Richard Agénor – on gender inequalities, public policies and economic growth, and published various articles on the climate change-economic development nexus. She was also a visiting fellow at the International Monetary Fund (IMF) within the Commodity Unit of the Research Department for three months. She holds an engineering degree from the National Institute for Statistics and Applied Economics (INSEA).

Leonardo Bellodi

Adjunct Professor, Luiss Business School, Rome

ENERGY SECURITY OF SUPPLY: GLOBAL ISSUES AND EVOLVING BUSINESS MODELS

I will start with a couple of anecdotes. Speaking about Ambassador Minuto-Rizzo, I remember that in September last year I had a TV interview and that the day after he called me. I was expecting him to congratulate with me, but far from that. He called me to tell me off because I was really pessimistic about the energy landscape, because in my position I thought that we could not get rid of the Russian gas, without which we could have huge problems in Europe, not only for the past winter, which fortunately was a warm one, but also for the next one, despite all the efforts carried out by Eni. So, Ambassador Minuto-Rizzo was right, but only because he was lucky and we had a very warm winter.

The second anecdote is related to the Eastern Mediterranean. A few days ago I had a meeting in Washington with Amos Hochstein, who is now back as a civil servant, being a special envoy for energy under the Biden administration, and speaking about phone calls, we remembered when few years ago, when I used to work at Eni, he called me one day suggesting me to give up on a specific project I was working on in Lebanon at the border with Israel, given the critical situation among the two countries, telling me to wait for some kind of mediation from the USA. Why am I speaking about Amos Hochstein? Well, because a lot has been fixed in Lebanon but we have added the geopolitical problem.

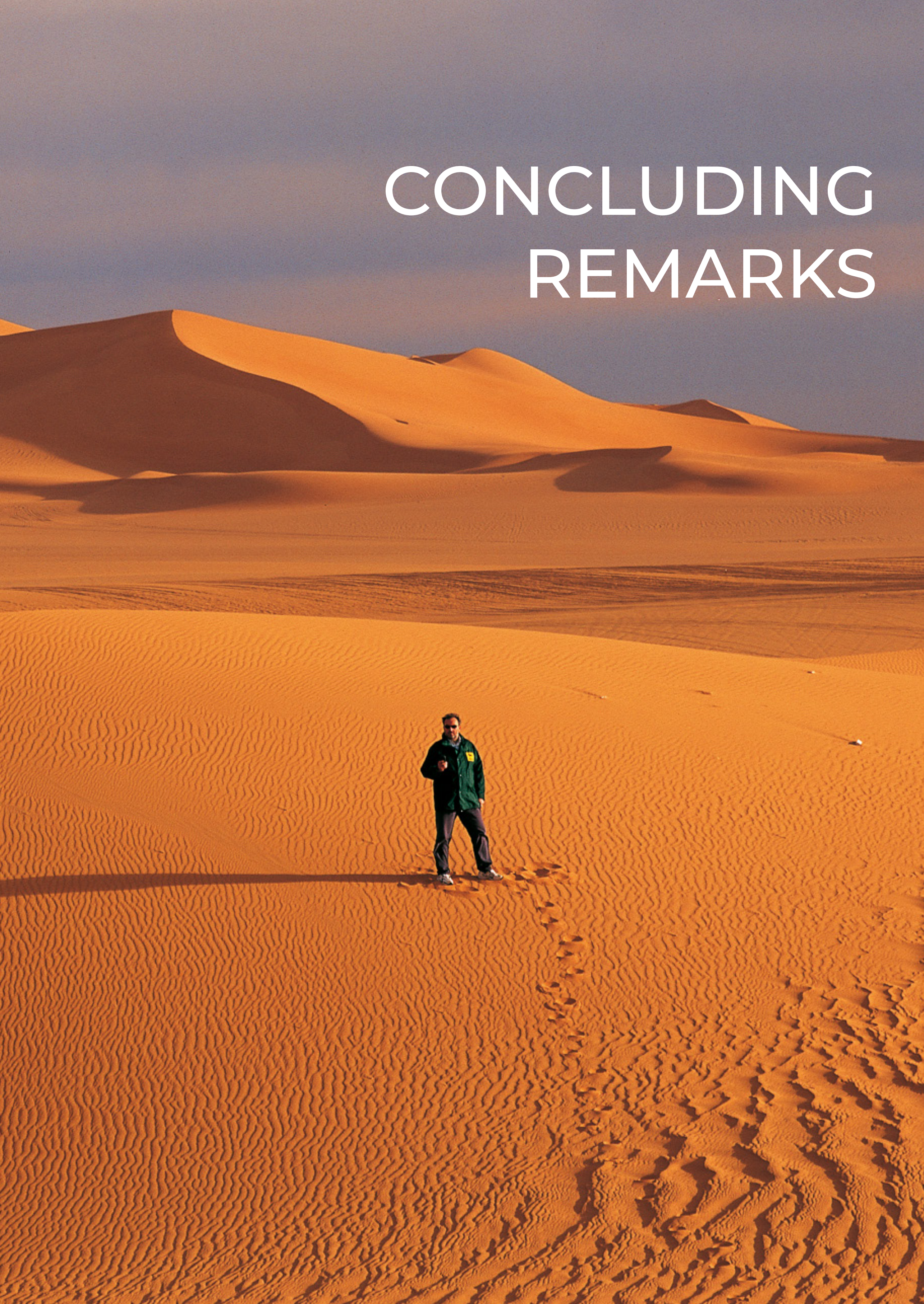
I will not make a reference to the geopolitical problems concerning Cyprus, but what about, for example, the agreement between Tripoli and Ankara which many think is in violation of the basic principle of the International Law? Basically, such an agreement split into two parts the Mediterranean, in a vertical way. So, it will be very difficult to lay any kind of pipeline because the difference between the European Union and Turkey is that the first one sends diplomatic notes, while the second one war ships. It is not difficult to guess who will win between a warship and a diplomatic note. Hence, we should take into consideration that the Eastern Mediterranean is a big economic challenge. Is it sustainable at the last year price? Yes, but will the gas prices would stay the same? Well, it is hard to tell. Gas prices are dropping as we are observing now. So, despite the economic challenges, which are huge, we still have geopolitical ones.

We have for example Cyprus and the not negligible problem of the agreement between Ankara and Tripoli. How can we deal with it? It is difficult even because, as Europe and Italy, we want to have good relationship with Ankara, which is becoming a very important transit hub, but at the same time with Libya for many reasons not only related to energy. As Italian, our first priority has to be and should be Libya for a very simple reason: it is so close to us. That is why we cannot just say that from an international point of view it is illegal. Everybody thinks it is, but we cannot really have a wall-to-wall confrontation with Tripoli or Benghazi. These are the challenges that we face, they are not easy at all: we cannot get rid of the Russian gas for the very next future, the Eastern Mediterranean is really challenging and, of course, we can bring gas from other countries, but we have to accept that even other counties are dealing with political struggles.

Leonardo Bellodi has more than 30 years of international experience in governmental and international relations, law and advocacy. Qualified in international public law arbitration, Mr Bellodi has worked for the United Nations and then held numerous positions at Eni, most recently as Executive Vice-President Governmental Affairs. He is Senior Advisor at the Libyan Investment Authority and he covered the same position in International Relations for various firms, expert in geopolitics and in the energy sector. Mr Bellodi values sharing knowledge and continuous training, and therefore collaborates as a Visiting Professor and teacher in master classes and University courses (Università Cattolica Milano, University of Padova, Luiss Guido Carli Rome).
He is author of several university manuals and columnist for Italian and international newspapers. His latest book is *The New Sovereignty* published in Italian by Giappichelli in 2020 and in English by Claeys & Casteels in 2021.

Eni worker in the Libyan desert (Eni on Flickr.com).

CONCLUDING REMARKS



Alfio Giuseppe Rapisarda

Head of Global Security, Eni, Rome

CONCLUDING REMARKS

I will start outlining my thoughts on global corporate security by telling you about my experience in protecting people and assets at Eni, which began more than 20 years ago, when I first joined the company's security department. We were a small team, often seen as a private police department. People didn't understand what we did and why we did it, and therefore they kept us at arm's length fearing we would control them. The beginning of the century marked an eventful and difficult decade, with numerous terrorist attacks, kidnappings and criminal activities threatening us, our people and the world, deeply changing the security paradigm we were used to. The approach to corporate security therefore changed accordingly, moving from considering us a private police department to a service provider that offered bodyguards, cameras, fences and all necessary mitigation measures.

Then once again, a paradigm shift took place in the last decade, and after so many years of experience and thanks to the commitment of our top management, today we are seen as a partner. Security is now a business partner. We do not chase business decisions, but act by collaborating effectively and consistently with the strategic goals and company needs.

As it can be expected, corporate security has a primary commitment to protect people, assets and correctly manage risks – both for regulatory obligations and for profound ethical reasons – but at the same time we actively participate in guaranteeing the security of energy supplies. In fact, energy security includes also all the activities aimed at protecting O&G infrastructures such as, for example, pipelines. In these latter activities, being aware that we are not able to act entirely alone, we carry out our tasks through collaboration with the authorities and partners at various levels, including international ones. Corporate security activities therefore increasingly revolve around the good relationships we build through "security diplomacy".

In this context we need to be optimistic and pragmatic to address the complexity of this multipolar, dynamic and interconnected world where, in our understanding, the Mediterranean is a priority considering both company and public interest.

I would like to say that the Mediterranean could be understood as a liquid continent, between three different continental shelves, which has his own subdivisions and where different political actors engage from many different areas. If we look at the history of our sea, we observe and understand that it is defined by various lands and territories and that has been also named differently by each protagonist of its rich history: the Romans called it Mare Nostrum (Our Sea), for example, but even in modern Italy we use this Latin name (although sometimes we say that it belongs to others), Yam Gadol (Great Sea) for the Jews, Akdeniz (White Sea) for the Turks and Great Green for the ancient Egyptians. The Mediterranean is a space that has changed over the centuries and if for the ancient Egyptians it represented equally the sea facing the Nile Delta and the Red Sea itself, on the contrary for the Greeks, the Eastern Mediterranean up to Italy was a source of trade and conflict. Still, for the Romans it was the vital centre of the Empire, which developed along the coastal territories from Europe to North Africa.

The Mediterranean is a space that has changed over the centuries and if for the ancient Egyptians it represented equally the sea facing the Nile Delta and the Red Sea itself, on the contrary for the Greeks, the Eastern Mediterranean up to Italy was a source of trade and conflict. Still, for the Romans it was the vital centre of the Empire, which developed along the coastal territories from Europe to North Africa. This great sea, therefore, has always been, since ancient times, the central space of the world, the connecting area, a bridge between different lands, cultures, religions and languages.

This centrality has now become highly topical again. The Mediterranean seems to have the solution for all the major issues that we face nowadays: energy, commercial, logistics and geopolitics. The attention to energy in its different facets, the developments in the Eastern Mediterranean, the energy supply and the migration emergency from North Africa as well as the increasingly assertive role of various regional and global players confirmed this quadrant as one of high priority for NATO and for the stability of the enlarged Mediterranean.

Energy plays a cardinal role as demonstrated by the most recent offshore discoveries such as Zohr in Egypt, and the Cyprus offshore where Eni has played and continues to play a leading role. These are essential discoveries that can increase the security of the energy supply for Europe and the development of which would also represent a fundamental step in the direction of diversification and energy transition.

In addition to the developments in the energy sector, professionals in the field of new technologies also reconfirm the importance of the Mediterranean as the main junction for the underwater infrastructures of the digital networks, crucial components for the protection of national interests and strategic environments which need to be protected amid the various evolution that happen across the Mediterranean basin. Europe has the possibility of becoming a leading actor among its neighbours, by using the enlarged Mediterranean basin as a multiplier of strategic activities, such as digital connections. Cooperation is crucial also in the field of security, through a joint mechanism, not only among the EU countries but also within a NATO framework supported by the coordination of all the main actors in the Mediterranean, aimed at protecting critical underwater infrastructures, including pipelines threatened by potential sabotages. Among those various issues, one of the most pressing is undoubtedly the one related to the energy market and supply.

We are all aware of the developments associated with the Russian invasion, which have highlighted the lack of a European and Italian integrated energy strategy, exposing the energy security of individual countries to immediate shocks that have proven difficult to solve. In this context, the cooperation between governments and energy companies has been essential to meet the needs of the European population. In Italy, Eni has been a central reference entity to replace Russian gas, with a strong commitment to end the import of Russian gas by 2025, also thanks to its historical relations with countries like Algeria, Angola and Congo among others.

More generally, to respond to these challenges it is essential to think of a renewed strategy that aims at meeting each of the main pillars of the so-called energy trilemma, i.e., achieving environmental sustainability while at the same time ensuring energy security and economic affordability.

We must bear in mind that the challenge for the next years is to replace an entire energy framework through a sustainable transition and we have to take into account that this new paradigm is not risk-free, as some try to suggest sometimes. Regardless of this mutation, one certainty will remain, namely the centrality of the Mediterranean and the need to develop an adaptive security approach.

One of the main challenges for the energy sector in the transition process to a low carbon future is to ensure access to energy in an efficient and sustainable way for all. According to the International Energy Agency projections, in the coming years energy demand will continue to grow particularly in emerging markets and developing economies, due to the convergence of several factors, including population growth, increased urbanisation, and infrastructure development.

The looming threat of climate change and the commitments made by national governments in the Paris Agreement require a strong push forward in the reconversion of industrial processes in specific sectors, such as transport and agriculture, promoting new technologies capable of generating clean energy and creating new job opportunities.

Energy transition must, therefore, be inspired by the principle of the just transition. This could be achieved, for example, through an energy transition that puts people at the centre, thanks to an incisive approach that embraces the available technologies and that is fair, allowing the adoption of various solutions at different speeds, depending on the specifics of the multiple contexts and internal constraints. The success of the energy transition will depend, in fact, not only on innovation and investment, but also on how this will manage to be an opportunity for growth and development for people and territories. This will only be possible with the commitment of companies and institutions to equally distribute costs and implement concrete actions that safeguard the different geographies and multiple actors, considering the complexity of the system. Eni's commitment to transition is related and connected with that of the countries where we are present, with which we are developing innovative initiatives. In some African countries like Kenya and Congo, for example, we are setting up a network of agri-hubs that will enable us to cover 35% of the supply need for our biorefineries by 2025, while creating jobs and development. We are also working with farmers to reclaim marginal lands not in competition with the food chain, for example in deserts areas, by growing plants for energy use. This is an initiative that will have an impact on employment in the region and will contribute both to Eni's energy transition and that of African countries, promoting the integration into the biofuel value chain with the utmost respect for the environment and human rights. In addition, we promote local development programmes with a broad portfolio of community-based initiatives in line with national development plans and the Sustainable Development Goals (SDGs), including supporting the creation of job opportunities and the transfer of know-how and skills to our local partners.

Regarding our approach to the aforementioned topics, the company is pursuing this objective by continuing to develop new natural gas projects, diversifying geographical presence, leveraging on Eni's high performing exploration and fast track development approach, improving returns and reducing emissions, focusing on new technology and their development to create a diversified energy mix for the energy transition and to support the energy security, creating value while also pursuing breakthrough opportunities.

We need to remain agile and innovative, for example, in the development of the so-called "satellite model" which entails dedicated entities capable of independently accessing capital markets to fund their growth and reveal the real value of each business, as we did in the case of Plenitude, Sustainable Mobility, Vår Energi and Azule Energy, companies belonging 100% to Eni together with other partners in the case of last two.

Finally, I would like to emphasise the importance that Eni attaches to the pursuit of sustainable and responsible business, remaining always strongly focused on the protection of people and assets in all contexts, knowing that the best of our defence strategies is encapsulated in our ability to express our values of dialogue, integration, and partnership with all our stakeholders around the world.

It is also a matter of closer integration among public and private sector, to achieve common prosperity and protection from the possible disruption posed by a rapidly changing scenario, now and in the future. The recent geopolitical development demonstrated that a balanced approach, that will look not just at economic benefits, helps to build a stable and prosperous system that will resist also to the upcoming changes pushing towards the decarbonisation goal in which we strongly believe. Talking about these issues is essential; acting with consistency, pragmatism, and determination is a further step towards a sustainable future.

Alfio Giuseppe Rapisarda is Head of Global Security at Eni. He began his career in 1982 as an officer student of the Guardia di Finanza (Financial Police). After have completed training in the Academy, was appointed to command assignments in several departments operating on national territory, mainly engaged in combating economic crime, drug trafficking and organised crime. Later he worked at the Presidency of the Council of Ministers in the field of international intelligence and counter-terrorism. He joined Eni in 2002 as head of security policies and standards by implementing new models of risk management, people and asset protection for all Eni companies worldwide; in 2007 he was appointed Senior security advisor for the Americas, Asia and Oceania, based in Houston (Texas). From 2009 to 2011 he was head of human resources in Africa, to assume later the position of vice-president human resources for the Americas, Asia and Oceania Upstream sector until December 2014. He is also a Lecturer at the Università Internazionale di Roma in geopolitics, intelligence and security management.

NATO Foundation
Defense College

ENERGY STRATEGIES 2023
The Mediterranean: new resources and integration

High-Level Conference organised by the NATO Defense College Foundation
in co-operation with Eni S.p.A. *(Corporate Partner),*
Fondazione Compagnia di San Paolo,
the Institute for National Security Studies *(Tel Aviv),*
the Policy Center for the New South *(Rabat) and the* NATO Defense College

Rome | Wednesday, the 29th of March 2023
Venue: *Rome Cavalieri, A Waldorf Astoria Hotel – Sala delle Belle Arti (Via Alberto Cadlolo 101)*

14,30 – 14,45 *Welcome Remarks*

- **Alessandro Minuto-Rizzo**, President, NATO Defense College Foundation, Rome
- **Christopher Schnaubelt**, Dean, NATO Defense College, Rome
- **Nicolò Russo Perez**, Head, International Affairs, Compagnia di San Paolo, Turin

14,45 – 15,45

Session I
New maps of energy diversification

An energy portfolio diversification between European importers and regional producers is a complex endeavour, also in the context of an ongoing war and, in the medium-term, the EU

Green Deal. The newest potential resources are owned by Egypt and Israel, while Libya has still an important potential, and the Gulf as well. What are the opportunities and the risks? How to protect essential infrastructures? How to weave in renewables and green hydrogen?

Chair: **Nicola Graziani**, Vatican Reporter, Agenzia Giornalistica Italia, Rome

- **Ahmed Bahr**, Director, Project Facilitation and Support Division, International Renewable Energy Agency, Abu Dhabi
- **Claudia Gazzini**, Senior Libya Analyst, International Crisis Group, Tripoli
- **Rémi Daniel**, Mediterranean Dialogue Fellow, NATO Defense College, Rome (INSS, Tel Aviv)

Q&A Session

15,45 – 16,20 *Coffee Break*

16,20 – 17,20

Session II
Energy and normalisation: progress ahead

Normalisation has proved to be an important factor of progress in the region (and potentially also in the Indian subcontinent), but the energy scenario is still uneasy. The politics of energy need to be further normalised: what are the possible paths and positive consequences? The future of the region lies to a large extent in energy development and cooperation. What the best inclusive formats? How to stimulate hi-tech cooperation in the area?

Chair: **Mehmet Öğütçü**, Chairman, London Energy Club, London

- **Ashraf Mohammed Keshk**, Research Fellow and Head of Strategic & International Studies, Derasat, Manama
- **Grammenos Mastrojeni**, Deputy Secretary General for Energy and Climate Action, Union for the Mediterranean, Barcelona
- **Marco Piredda**, Vice Chairman, Energy Transition Committee, Observatoire Méditerranéen de l'Energie, Paris

Q&A Session

17,20 – 17,30 *Special Intervention*

- **Pasquale Ferrara**, Director General, Directorate General for Political Affairs and Security, Ministry of Foreign Affairs and International Cooperation, Rome

17,30 – 17,50 *Coffee Break*

17,50 – 18,50

Session III
The challenge of market integration

A connected energy market in the Eastern Mediterranean on the one hand requires infrastructures, interconnections, grids and well implemented regulations. On the other hand, in order to ensure North-South exchanges, it also needs a cooperative security framework to achieve stability. How do market actors interact among themselves and with (inter)governmental bodies assuring energy security?

Chair: **Alon Bar**, Ambassador of Israel to Italy, Rome

- **Ahmet Evin**, Founding Dean, Faculty of Arts and Social Sciences, and Professor Emeritus, Sabancı University, Istanbul
- **Rim Berahab**, Senior Economist, Policy Center for the New South, Rabat
- **Leonardo Bellodi**, Adjunct Professor, Luiss Business School, Rome

Q&A Session

18,50 – 19,00 *Concluding Remarks*

- **Alfio Giuseppe Rapisarda**, Head of Global Security, Eni, Rome

Gas drilling rig platform in the Mediterranean sea, Ashkelon, Israel.