

EUCERS Newsletter

Newsletter of the European Centre for Energy and Resource Security (EUCERS) Issue 73, March 2018

Introduction

Dear readers and friends of EUCERS,

It is my great pleasure to welcome you to this edition of the EUCERS newsletter, in which we present you with two articles.

In the first article, Clémence Pèlerin, a Master's student at the French Petroleum Institute sheds light on the difficult situation that Israel and Lebanon face regarding their respective claims to Mediterranean oil and gas fields.

The second article, written by Angelo Costa Gurgel, a professor at the São Paulo School of Economics, outlines a way to decarbonise Brazil's agriculture, a significant contribution to decarbonising the energy sector in a country where a large share of vehicles is powered with biofuels.

As always, please feel free to keep us informed about your research projects and findings as we look to remain at the forefront of new knowledge and innovative ideas.

Thank you for your interest in EUCERS and for being part of our community.

Yours faithfully,
Thomas Fröhlich
EUCERS Newsletter Editor

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ARTICLES

The offshore oil and gas dispute between Israel and Lebanon

By Clémence Pèlerin

The case of the offshore oil and gas dispute between Israel and Lebanon can help understand the close linkage between legal, diplomatic and economic issues stressed by natural resources. The tensions and wars between the two countries have existed long before the possibility and the discovery of gas fields in the Eastern Mediterranean. Neither the 2006 Israel-Lebanon war nor the constant mutual threats expressed by Hizbollah and the Israeli government and its allies was based on a battle for energy. But the discovery of the Leviathan field in 2009 then gave an unexpected aspect to the conflict: economic opportunity and energy security justified the awakening of a legal and industrial battle in a region already threatened by instability. This essay will propose a political analysis of the roots of the dispute as well as analyse the legal issues addressed by this case.

Introduction

Tensions about sovereignty claims over gas resources in the Mediterranean Sea have risen between Israel and Lebanon since the discovery of major gas fields in 2009 and. According to the 2010 United States Geological Survey (USGS) the Levantine basin is thought to withhold up to 1,7 billion barrels of oil and about 3450 trillion cubic meters of gas¹. Gas fields Tamar (10 trillion cubic feet estimated reserves) and Leviathan (31,6 trillion cubic feet), both located about 70 miles west of the city of Haifa, hold an estimated 240 billion cubic meters and 450 billion cubic meters of natural gas, respectively. Two smaller fields, Tanin and Karish, have an estimated total of 136 billion cubic meters of gas².

Lebanon and Israel have been arguing over a 870 square kilometers triangular area that may contain possible hydrocarbon resources of 865 million barrels of oil and 96

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trillion cubic feet of gas³ on Lebanon's asserted Exclusive Economic Zones (EEZ). Both Israeli and Lebanese political leaders have claimed they would not accept theft and spoliation of their natural resources. While Hizbollah affirmed it was able to target Israel's offshore platforms⁴, Israeli Ministry of Defense reacted by announcing that the State would purchase antimissile-equipped ships to protect the platforms to complement the 24-hour drone surveillance system in place.

Many legal problems can be mentioned regarding the resolution of this international conflict, that stresses highly strategic concerns in both countries. This case is particularly relevant to understand the issues related to maritime international law and transboundary natural resources. The international legal and institutional tools in place do not prevent nor systematically solve all disputes. On a political level, this case also shows the difficulties that Lebanon has been facing to create and maintain stable institutions to keep up with Israel's will and means to explore and exploit the disputed natural resources.

The Gas Discovery

Between 2002 and 2006 seismic studies were conducted in Lebanon's territorial waters to confirm the presence of offshore gas and oil resources. In order to accompany the development of these resources, the government introduced the «Offshore petroleum resources law» 2010/132 («OPR Law») in August 2010 and adopted several decrees allowing activities of exploration in the area. This law and Decree 7968/2012 led to the creation of the Lebanese Petroleum Administration («LPA»), an ad hoc institution in charge of the surveillance and management of bidding and licensing processes.

¹ « Assessment of Undiscovered Oil and Gas Resources of the Levant Basin Province, Eastern Mediterranean », U.S. Geological Survey (2010), <http://pubs.usgs.gov/fs/2010/3014/pdf/FS10-3014.pdf>

² « Energean doubles estimates for Karish, Tanin gas reserves », Globes, 02/11/2017, <http://www.globes.co.il/en/article-energean-doubles-estimates-for-karish-tanin-gas-reserves-1001210170>

³ « Lebanon to restart oil, gas licensing round after three-year delay », Reuters, 06/01/2017, <https://www.reuters.com/article/us-lebanon-economy-oil/lebanon-to-restart-oil-gas-licensing-round-after-three-year-delay-idUSKBN14Q049>

⁴ « Israel assesses Hezbollah can now strike its offshore gas platforms », Haaretz, 04/01.2018, <https://www.haaretz.com/israel-news/israel-assesses-hezbollah-can-now-strike-its-offshore-gas-platforms-1.5630202>

Nevertheless, this institution is not independent but falls under the authority of the Ministry of Energy and Water Resources, and thus depends on political decisions. This is a problematic factor for Lebanon's ability to pursue the development of the national energy sector, as shown by the difficulty in appointing the six members of the LPA in December 2012, six months after the decree was published.

The discovery of oil and gas resources in Lebanese territorial waters is a particularly interesting announcement for a country that is 90%-dependent on imports. A partial energy independence as well as private and public investment in energy infrastructure could represent a unique opportunity for Lebanon to boost its economy.

The first pre-qualification round was launched in 2013, with early signs of success: almost 50 international oil companies, including super majors such as Total, Chevron and Shell, expressed interest in the projects. 46 of them were qualified for the first round of bidding. Only one candidate however, composed of a tripartite consortium (Total, Eni and Novatek), submitted their offer for the exploration and production of two blocks in Lebanon's territorial waters.

On the other hand, Israel has thoroughly developed its energy sector for decades and more intensively since the production of Tam Thetis field in 2004. The discovery of Leviathan in 2010 really changed the game for Israel with its estimated 500 billion cubic meters of gas reserves, along with Tamar gas field, which provides around 65% of Israel's power generation needs today. Leviathan production should start by 2019 with an annual flow of 12 billion cubic meters of gas, and with most of the capital expenditure required already invested. Israel substantially changed its energy mix from 0% gas-based power generation in 2004 to 40% in 2010⁵. Israel could also become a net gas exporter to Jordan, Egypt or Turkey via several pipeline projects under discussion.

Israel adopted its Petroleum law in 1952 and amended it in 1965. The law enabled the creation of an administrative authority, headed by a Petroleum Commissioner, and a

Petroleum Council acting as a consulting entity for the granting of licences and exploration permits. Israel has thus been trying to attract investors in the energy sector since shortly after its independence in 1948, whereas Lebanon has only very recently created the institutional and legal tools to achieve similar development.

Competition and Asymmetry in the Quest for Gas

The zone disputed by Lebanon and Israel represents about 3% of Lebanon's claimed EEZ. It is assumed that the area, located next to the Israeli-exploited Karish field, could contain up to 340 billion cubic meters of gas, which Lebanese authorities consider as an important source of revenue for the State and a new perspective for the country's economic development. Until 2010 Lebanon was one of only a few Middle Eastern countries without fossil resources.

The discovery of gas resources in the Levantine basin has been at the source of new tensions between the two countries, to the point where some Lebanese officials have compared Israel's claims over Lebanon's declared EEZ to the territorial conflict over the Shebaa farms area since their annexation by Israel in 1981.

Israel seems to have the upper hand in the gas struggle, both because of higher amounts of resources in Israel's EEZ but also because of Israel's industrial and economic maturity and reactivity. Tel Aviv is thought to own up to 950 billion cubic meters of gas in its EEZ. Since the discovery of the Leviathan gas field by Israel in 2010, the country has delivered exploration permits to a consortium where Texas based Noble Energy holds 39.7% and Israeli Delek Drilling and Avner Oil Exploration each hold 22.7% of the project. Considerable investments of almost 5 billion USD have been approved by the government. When production starts, the field will provide Israel's power plants with 12 billion cubic meters of gas per year⁶. A gas pipeline project has also been evoked between Turkey and Israel, raising perspectives of business opportunities and growth on a regional scale.

⁵ « Israel's Energy Potential: Securing the future », Middle East Institute, Policy Focus Series, Washington, 2016, https://www.mei.edu/sites/default/files/publications/PF20_Hochberg_IsraelGas_web.pdf

⁶ « Leviathan gas field developers approve \$3,75 billion investment », Reuters, 23/02/2017, <https://www.reuters.com/article/us-israel-natgas-leviathan/leviathan-gas-field-developers-approve-3-75-billion-investment-idUSKBN16200S>

On the other hand, Lebanon faces many political and economic challenges in the valorisation of its recent discoveries. The country has been suffering from weak State administration, unstable political power and poor business attractiveness. Nevertheless, in October 2017 Lebanese Minister for Energy announced that a consortium composed of two operators, France's Total and Italy's ENI along with Russia's Novatek had submitted two offers to the Lebanese Petroleum Agency, for blocks 4 (centre part of EEZ) and 9 (southern part close to Israeli EEZ). Although the consortium was the only bidding candidate, Lebanese authorities have expressed satisfaction with the offer, which tends to prove that the proximity of block 9 with the area disputed with Israel has not discouraged investors and oil companies.

International initiatives for dispute settlement

Countries finding themselves in a territorial dispute have several legal options available: bilateral negotiations as well as international arbitration or recourse to the ICJ. They all seem insufficient in the case of Lebanon and Israel: bilateral negotiations seem unlikely to take place given their difficult relationship. On the other hand, Lebanon does not recognize the State of Israel and thus makes international arbitration a formally inapplicable option. Finally, Israel is not a party to UNCLOS and cannot be presented to the ICJ. The absence of bilateral agreement and the decision from one country to unilaterally exploit the contested resources represent a high risk of conflict.

Diplomatic solutions have arisen in the last few years: the Obama administration came up with a proposal that has been since rejected by Lebanon. The US suggested allocating more than half of the disputed area to Lebanon in order to reduce the contested area, in the perspective of a later resolution. Nevertheless, none of the suggested solutions have come to an official agreement.



Source: *IEMed Mediterranean Yearbook* 2012 (www.iemed.org/medyearbook)

Legal Options

UN Convention on the Law of the Sea - According to the UN Convention on the Law of the Sea, the EEZ is a maritime area over which the coastal State has sovereign rights «to explore and exploit, conserve and manage the natural resources». The area extends to a maximum of 200 nautical miles from the coastal baseline, according to article 57. Opposite or adjacent States must declare their respective EEZs via «equitable» solutions and by respecting norms of international law according to article 59⁷. The problem is that only Lebanon has yet ratified UNCLOS, in 1995; Israel is not a party to the Convention, although its rules have generally been considered customary and thus binding. In absence of an agreement between the two parties, the rule calls for the drawing of a median line equidistant from the two countries' baselines. This principle is considered of customary value⁸.

2007 Lebanon and Cyprus border delimitation agreement - The issues surrounding Israel and Lebanon's maritime borders takes place in a broader perspective of bilateral negotiations between regional neighbours such as Cyprus and Syria. In 2007 Lebanon and Cyprus reached an agreement on the southernmost of Cyprus's maritime borders but Lebanon did not ratify it. According to

⁷ « In cases where this Convention does not attribute rights or jurisdiction to the coastal State or to other States within the exclusive economic zone, and a conflict arises between the interests of the coastal State and any other State or States, the conflict should be resolved on the basis of equity and in the light of all the relevant circumstances, taking into account the

respective importance of the interests involved to the parties as well as to the international community as a whole. »

⁸ "Israel-Lebanon Offshore Oil & Gas Dispute – Rules of International Maritime Law", Wählisch Martin, Insights, Vol.15, Issue 31, 2011.

principles of international law this agreement is not binding for Lebanon in absence of ratification.

2011 Israel and Cyprus border delimitation agreement - Short after the discoveries of Leviathan and Tamar gas fields, Israel and Cyprus reached an agreement on their mutual maritime boundary, which was ratified in early 2011. Lebanon protested this agreement in June 2011 to the United Nations, claiming loss of maritime territory over part of their delimited EEZs⁹.

2011 Israel proposal of maritime boundary to the UN - In July 2011 the Israeli government submitted a proposal of maritime boundary to the UN based on its 2010 agreement with Cyprus. Israel placed its northernmost point 17 km north on Lebanon's claimed EEZ. Overall, none Lebanon's and Israel's unilateral attempts to delimitate their maritime borders can be considered binding and definitive international norms, in absence of mutual recognition and agreement¹⁰. Indeed, according to UNCLOS article 74 «the States concerned shall make every effort to enter into provisional agreements of a practical nature». Nevertheless, bilateral agreements are unlikely to happen in the near future considering the two countries' diplomatic relations. Lebanon still doesn't recognize the State of Israel and some strong political resentment remains after the 2006 war, in spite of UN Resolution 1701.

Although the UN appears as a potential mediator in the conflict, it has shown little will in intervening between Israel and Lebanon to suggest a solution. Lebanon asked the UN for protection of its maritime boundaries and associated natural resources under the United Nations Interim Force in Lebanon (UNIFIL) mission, to which the UN ad hoc force replied that it would offer support and mediation. It also affirmed that it needed an agreement between Lebanon and Israel to do so¹¹. As a result, both formal and informal ways out of the diplomatic dispute are suspended to conditions that are - to this day - impossible to meet.

Conclusion

The dispute that between Lebanon and Israel about their claimed offshore oil and gas resources has a long history of diplomatic and geopolitical tensions and offers a case study for international law of natural resources. The legal tools at hand do not seem to offer a solution to the dispute, which has a significant impact on the two countries' energy sectors and more generally their respective development. Neither the international judiciary nor the informal diplomatic initiatives have yet managed to settle the matter, in spite of the customary character of several principles by which this case can be studied and defined. The dispute clearly demands a political solution at the highest level. Given the current tensions in the Middle East, however, a timely solution seems unlikely.

⁹ «Israel-Lebanon Offshore Oil & Gas Dispute – Rules of International Maritime Law», Wählisch Martin, Insights, Vol.15, Issue 31, 2011

¹⁰ « International law and the maritime hydrocarbon resources », International Gas Union, 2012-2015 Triennium Work Reports, 2015, http://www.clingendaelenergy.com/inc/upload/files/IGU-2015_Law_of_the_Sea_TF3_IGU_Final_May_2015.pdf

¹¹ « Asarta Proposed UNIFIL Mediatory Role in Demarcating Maritime Border between Lebanon and Israel », Naharnet, 21/07/2011, <http://www.naharnet.com/stories/en/10847-asarta-proposed-unifil-mediatory-role-in-demarcating-maritime-border-between-lebanon-and-israel>

Transition to Low Carbon Emissions Practices in the Brazilian Agriculture

By Angelo Costa Gurgel

Brazil is one of the largest agriculture and food producers in the world. In 2015, FAO data named the country the 4th largest agricultural producer, while WTO statistics place the country in the same position in terms of agriculture exports. At same time, Brazil has the largest area of tropical forests and still more than 60% of the native vegetation preserved¹. The OECD-FAO Outlook 2017-2026² projects the country to keep increasing its production of several agricultural commodities at a faster rate than the rest of the world. The Brazilian leadership in agricultural production and the prospects of an even greater role on global food security in the upcoming years pose several challenges on sustainable development and environmental protection.

Aware of such challenges, the Brazilian government has structured a rich legal and institutional framework towards sustainability, including policies and actions to fight illegal deforestation, protect native and indigenous lands, require protection of pristine and natural vegetation at private farms, reduce greenhouse gas (GHG) emissions and improve agricultural yields. Among those, there are specific policies to climate change mitigation and adaptation in agriculture.

The Sectorial Plan for Mitigation and Adaptation to Climate Change Aiming to Consolidate a Low Carbon Emission Economy in Agriculture, known as the ABC Plan, is part of the National Climate Change Policy and is one of the commitments assumed by Brazil at the 15th Conference of the Parties (COP-15) of the Climate Convention.

The ABC Plan promotes several agricultural techniques and practices to reduce greenhouse gas emissions and increase the efficiency of agriculture. It includes a rural credit program with low-interest loans to farmers, named ABC Program, to incentivise farmers to implement the ABC smart agriculture practices. These include the restoration of degraded pasture, integration of crop,

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livestock and forest (iLPF), no-tillage agriculture, the planting of commercial forests, biological nitrogen fixation and the treatment of animal wastes. From 2010 to 2020 the ABC Plan aims to recover 15 million hectares of degraded pastures, expand iLPF integrated systems on 4 million hectares, increase the no-tillage areas by 8 million hectares. It is expected that these goals can reduce GHG emissions between 134 and 160 million tonnes of CO₂ equivalent annually.

The main goal of the ABC Plan is to bring about the transition of conventional agriculture to a production model that minimizes the GHG emissions in Brazil. For this purpose, the ABC Program aims at providing conditions for farmers to carry through the necessary investments for incorporating technological alternatives of low carbon emission in the productive process.

Investigating and Monitoring the Low Carbon Practices in Agriculture

Since 2013, researchers at Fundação Getúlio Vargas – Brazil, have investigated the ABC Plan and Program in an initiative named ABC Observatory. The ABC Observatory has: a) investigated the benefits and costs of the ABC Plan and Program; b) identified the main hindrances and obstacles to expansion of low carbon emissions in agriculture and to adoption of these practices by farmers; c) monitored the actions of the ABC Plan and Program, the disbursements and use of agricultural credit of the ABC Program at the national and state levels, and; d) disseminated and debated the results found with the different stakeholders and sectors of Brazilian society so

¹<http://pure.iiasa.ac.at/12115/1/Modeling%20Land%20Use%20Changes%20in%20Brazil.pdf>

² http://www.oecd-ilibrary.org/agriculture-and-food/oecd-fao-agricultural-outlook-2017-2026_agr_outlook-2017-en

as to engage them in the transition to a culture of low carbon emissions.

One of the main results of the ABC Observatory indicates that the ABC Plan, if adopted in full, would be able to surpass its projected emission reduction target. The potential for mitigation of greenhouse gas emissions between 2012 and 2023, if the Brazilian agriculture expands its production mostly recovering degraded pastures and implementing iLPF integrated systems, could reach 1.8 billion metric tons of CO₂ equivalent, which is 10 times greater than the target of the ABC Plan set for the period from 2010 to 2020 (Figure 1).

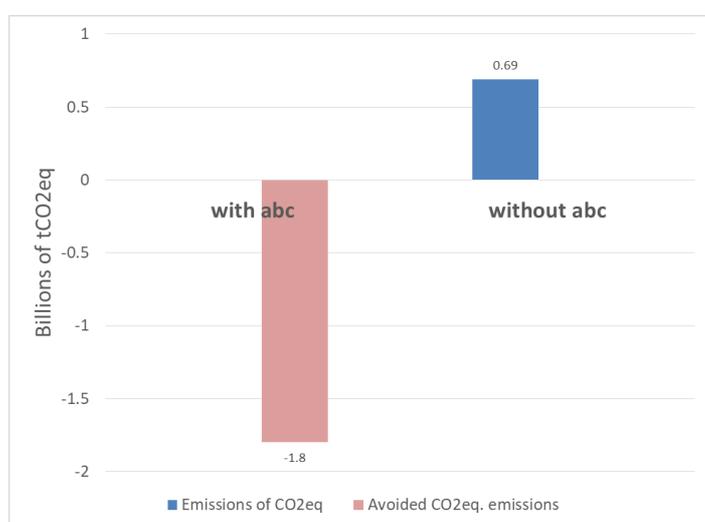


Figure 1. Projected and avoided GHG emissions with and without the adoption of the ABC Plan in Brazil (billion tons of CO₂eq.)

However, the pace of contracting and adoption of credit from the ABC Program, to foster low carbon emission practices, has been far short of what is necessary to attain the targets of the ABC Plan as part of the National Climate Change Policy. The amount of credit made available for farmers has been shorter than proposed in the ABC Plan. Worse than that, from 2010 to 2017, only about 67% of the credit made available was used by the farmers (Figure 2).

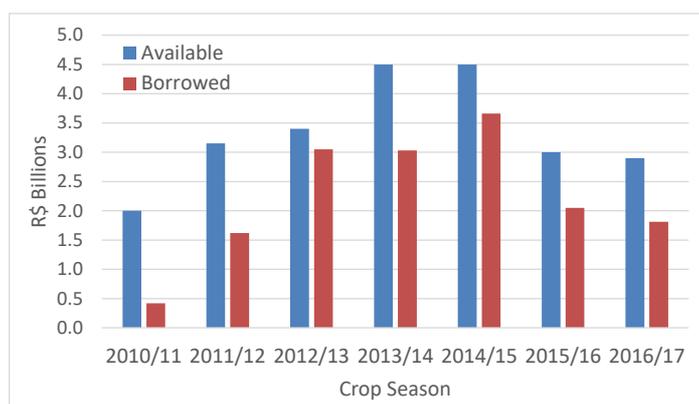


Figure 2

The low adoption is due to various problems and bottlenecks, such as: a) low disclosure and dissemination of the ABC Plan and Program to farmers, financial agents and technicians responsible for supplying technical assistance to producers; b) competition with other available programs of rural credit that have similar financial costs to that of the ABC Program, but are less complicated to access; and c) lack of clear definition of responsibilities and mechanisms for control in the governance chain of the Plan and Program.

Another sticking point is the absence of transparency in monitoring the financial and environmental results of these policies, as well as the mismatch in terms of monitoring and control mechanisms between the ABC Plan and its main financing vehicle, the ABC Program.

The practices most commonly implemented consisted of recuperation of degraded pastures and no-till farming. The analyses also indicate that the adoption of low carbon emission practices is concentrated more in regions that already have a high technological level and more positive history of good practices, such as the Southeast and Midwest, instead of regions with high level of degraded pastures. The stimulus for practices of the ABC Plan with family farmers has been almost nil so far.

Conclusions and Policy Recommendations

In 2010, the agriculture sector produced 32% of Brazilian GHG emissions.³ Although agriculture has been one of the largest anthropogenic sources of GHG emissions,

³ Brazil, Ministry of Science, Technology and Innovation. Third National Communication of Brazil to the United Nations Framework Convention on Climate Change. 2016.

there are few proposals and initiatives designed to develop low carbon programs on this sector around the world.

The transformation of Brazilian agriculture toward greater productivity and sustainability is possible through a set of technologies and practices adapted for the tropical areas, known as low carbon emission practices. Such transformation is necessary in face of growing pressures from society worldwide, and from representatives of the agricultural sector, which will suffer with aggravation of the climate change problem. However, various improvements are necessary in the ABC Plan and its financial arm, the ABC Program, to assure this trajectory toward agricultural practices to mitigate emissions in Brazil. Aspects related to disclosure, training, governance, financing rules and monitoring, among others, reveal various challenges, but at the same time various opportunities for progress in low carbon emission agriculture in Brazil.

In a country where a large share of light vehicles is powered with biofuels and the share of domestically grown biomass for energy is increasing, these insights can further de-carbonise bio-energy and thereby take pressure off other industry sectors.

The research efforts of the ABC Observatory have been able to identify the potentials and challenges related to sustainable agriculture, as well as reporting and influencing important actions and decisions about the ABC Plan and Program. Among these are: the official publication of the ABC Plan; reduction of the interest rate of the ABC Program; training of financing agents by public and private agents; transparency and disclosure of data on disbursements under the ABC Program; and growing interest of private banks in the ABC Program. It allows us to assure that the agriculture low-carbon emission technologies in Brazil are just starting to ride their learning curve and should transform the Brazilian agriculture in the next years toward a sustainable and important position in the global food security.

This article is a summary of the findings of the Research Project “Observatório de Agricultura de Baixo Carbono”.

DISCLAIMER

The views expressed in this Newsletter are strictly those of the authors and do not necessarily reflect those of the European Centre for Energy and Resource Security (EUCERS), its affiliates or King’s College London.

ANNOUNCEMENTS

Report of the 1st EUCERS/KAS Energy Talk 2018 The Current State of Global Climate Policy: Security Challenges

7 March 2018

The panel was chaired by Professor Dr Friedbert Pflüger, Director, EUCERS, King's College London and Hans-Hartwig Blomeier, Director London Office, Konrad-Adenauer-Foundation (KAS), and its members were:

Sharon Turner, Executive Consultant Director for Governance and Law, European Climate Foundation

Peter Mather, Group Regional President, Europe & Head of Country, UK, BP plc

Nick Mabey, Chief Executive and Founder Director, E3G – Third Generation Environmentalism

Frank Umbach, Research Director, EUCERS, King's College London

Simon Chin-Yee, KAS Fellow at EUCERS, King's College London

The first EUCERS/KAS Energy Talk of 2018 took place in the War Studies meeting room at King's College London on 7 March. This talk looked at global governance of climate change policies with a focus on the security challenges. The panel approached the subject from different perspectives and backgrounds, including academia, civil society, consultancy and industry. The event, chaired by EUCERS Director Professor Dr Friedbert Pflüger, encompassed the political, economic and social challenges of climate change. With the proliferation of extreme weather events, prolonged droughts and record-breaking temperatures, decision-makers, industry and the public have become increasingly aware of the importance of tackling the global climate challenge. This first Energy Talk was an overview of current and future national and global climate strategies.

In his opening remarks Professor Pflüger introduced the importance of understanding the link between climate change and security. He stated that the objective of this year's talk series and today's introductory panel encourages us to think about the destabilizing affects that issues surrounding water, refugees, wars have on nations. He posed the question, what does this mean for oil producing

countries like Saudi Arabia or Qatar? What affect will the switch from oil, gas and coal to electric have on industry? Additionally, Professor Pflüger explained that it is important to understand these issues in relation to global climate policy today.

Following Professor Pflüger's welcome, Hans-Hartwig Blomeier, Director of the Konrad-Adenauer-Foundation London Office gave his remarks. He stated that this year's talk series is a natural progression of from when they started this talk series six years ago. Traditionally, these talks examine energy security. The 2017 series transitioned to climate change and environmental issues. This year links issues of climate change with security.

Sharon Turner – The Whole Economy Approach

The first intervention came from Sharon Turner, Consultant Director for Governance and Law, European Climate Foundation (ECF), Visiting Professor University College London and Sussex University and former Professor of environmental law at Queen's University in Belfast. The European Climate Foundation's main objective is to win EU leadership in implementing the Paris Climate Agreement and a timely commitment to delivering carbon neutrality in Europe by 2050 at the latest. They are a strategic re-grantor and work with think tanks and other civil society organizations to bring about the conditions to enable meaningful climate action. ECF's CEO is Laurence Tubiana, who was key to bringing about the Paris Agreement. She was France's Climate Change Ambassador and Special Representative for COP21. Implementing this Agreement is a critical objective for ECF today, and their primary objective is to win over European leadership on this question. Professor Tubiana's calculation is that in the period after the US withdrawal from the Paris Agreement, leadership on climate action will now become more distributed and that the world will look to Europe in particular to provide credible leadership towards implementing Paris.

Professor Turner stated that, when looking at the future of global climate policy and the security dimension, ECF's calculation is that a 'long term whole economy approach to climate governance is going to be critically important and that those frameworks will have a critical relevance in managing security risks arising from climate change.' She noted that Paris has moved the world into a different era of

thinking on what climate governance requires. Although Paris is far from being perfect, one of its major benefits is that it highlights the importance of governance as an issue and crystallizes certain realities around the enabling conditions that need to be present in order to have effective transitional governance. Prior to Paris, the core approach to governance was short term, approaches designed to achieve incremental change that were highly sectoral in design and strongly market focused. Climate governance has been silent on the human experience of societies undergoing the transition. Instead, governance has been highly technocratic, deals being done behind closed doors, where the public is not involved in policy making and therefore society itself does not feel engaged by or involved in the transition, or indeed in deciding what kind of transitional approach is being taken by countries, cities or regions.

Professor Turner explained that Paris has clarified once and for all that climate action requires, first and foremost deep de-carbonization, which effectively means structural change. This is change at a deep societal level that will require a new type of governance – a stable, long term, binding framework for policy making oriented to deliver the transition to carbon neutrality by 2050 at the latest. A ‘whole-economy approach’ that goes beyond an energy focus. It requires scientifically informed carbon budgets as a means of driving ambition cycling. It also requires public participation, independent expert advice, a strong emphasis on adaptation management, and a means of aligning financial flows, both public and private to the low carbon transition. She stressed that this is not going to completely replace sectoral action, but what the ECF are seeing more and more in high ambition countries is that there is a stronger emphasis on long-term whole economy frameworks. There needs to be a long-term vision for how countries, cities and regions are going to achieve net zero, and then processes to ensure that policy making across the whole economy is consistent with this vision. Specific models for this form of governance have been pioneered in several European and international contexts – for example, the UK (with the Climate Act), France, Sweden, Finland, Norway, Mexico, Kenya while other countries are now actively considering adopting this approach – Spain, the Netherlands and the EU itself.

Finally, Professor Turner stated that this new model of climate governance speaks very loudly to the question of

climate security. What they are seeing is that in countries that have pioneered the long-term, whole-economy approach to governance, the transition itself is better rooted in stable political consensus. It also helps to mitigate the shocks of disrupted assets, both financial and infrastructural. It has enabled climate policy to be better linked to wider social and economic agendas, that include fuel poverty, food security and potentially disruptions affecting the future or work. By taking this whole economy approach governance shines a light across major sectors such as agriculture and food production, which climate governance has traditionally ignored or only very tangentially covered – thus avoiding ‘free riding’ in the transition, sharing the burden of de-carbonisation across the whole economy and better managing the risk of policy failure in individual sectors. The EU is now at an important turning point in terms of its own climate governance, and the question is: Will the European Council and the European Commission seize the opportunity to ensure that the NDC (Nationally Determined Contribution) coming from Europe is credible and embrace a model of long-term whole economy climate governance linked explicitly to carbon neutrality by 2050 at the latest – as is supported by the European Parliament.

Peter Mather – BP needs to part of the solution

Peter Mather, BP Group Regional President, Europe and Head of Country, UK, began his intervention by affirming that BP has never been in denial about the challenges of climate change. In fact, Mr Mather stated that BP was probably the first of the oil and gas companies to recognize that back in the late 90s there could be a causal link between the burning of fossil fuels and climate change. Although he recognised that this was ‘shock horror’ to some in the industry at the time, now almost all companies in the sector are embracing the 2°C target as set out in the Paris Agreement.

The challenge is that the world needs secure and affordable energy but with low or zero carbon emissions. Security, for BP, is about being able to supply secure energy. This became abundantly clear last week during the cold snap in the UK. Before this you could be forgiven for thinking that we burned hardly any fossil fuels, it was all renewables. All of sudden the debates were centred on gas storage. Are we dependent on Russia? Why did we shut down the storage

plant? In terms of energy security – keeping people warm, lit and mobile – hydrocarbons play a big role.

That being said, Mr Mather stated that we are now going through ‘the most significant period of change’ during his time in the industry. He mentioned that there have been several false starts, the first being in the early 2000s. During this time companies, particularly BP, started investing heavily in renewables, however, the 2008-2009 financial crash occurred, and climate change slipped down the policy makers’ list of priorities. However, it is now back on the agenda.

Mr Mather explained that, if you extrapolate from current policies today you would still see a major role for oil, gas and coal. BP, in its 2018 Energy Outlook, has calculated that by 2040 the world’s primary energy sources will be very approximately 25% oil, 25% gas, 25% coal, and 25% renewables. He pointed out that this was neither a forecast nor what BP desires, but simply an extrapolation of the current policies. He also recognized that if this is the case, it would not hold global warming to 2 degrees Celsius. If we are to achieve this goal, we will need a faster transition than we are currently seeing.

What can companies like BP do? Firstly, they can shift to natural gas. Natural gas is half the carbon emissions of coal, relatively cheap and in plentiful supply. One practical response from BP is to shift from oil to gas. At the moment they are 50-50, hoping to be 60-40 in favour of gas by the early 2020’s. However, Mr Mather reiterated that this is not enough. BP is increasingly rebooting their investments in low carbon technologies. They believe that renewable energies can now offer a good business proposition. The projects in their renewables business are now competing for investment with oil and gas activities. BP are also advocating for a global carbon price. For many of their projects they factor in a \$40 per tonne price of CO₂. BP wants to be part of the solution - and oil and gas – particularly gas – is a big part of that solution.

Nicky Mabey – ‘Paris made us safer, but it didn’t make us safe.’

Nick Mabey, Chief Executive and Founder Director of E3G – Third Generation Environmentalism, as well as a former advisor to the UK’s foreign office environment policy department, started by making the point that ‘Paris

made us safer, but it definitely didn’t make us safe.’ The UK’s climate target is keeping 4°C below 5% probability. While this will need to be updated as the science progresses, this is not a bad target. However, if you measure this against the many other pledges, we are still in the range of 2.7-3.5°C, which Mr Mabey explained is still firmly in the ‘extremely dangerous’ space. Mr Mabey stated that ‘the Paris Agreement is not the solution, but a platform for finding a solution. It gives us a chance but is not an automatic piece of law that forces countries to do things.’ However, it is surviving Trump. Both the G6 and G19 – which include Russia and Saudi Arabia – have released statements stating that ‘Paris is irreversible ... we recommit to its goals.’

E3G works on risk management. Mr Mabey, stated that as responsible security managers E3G need to plan for a world that’s nearer to 3-4°C. They do not plan for best-case scenarios, they need to plan for mid to worst-case scenarios. E3G developed this approach with security planners from the US military as well as the EU to develop a strategy that keeps global temperatures well below 2°C.

There have been positive steps forward. With regards to renewables, Mr Mabey said that the clean energy models countries conducted to inform their Paris positions predicted that the efficiency and cost we have today would not happen until the early 2030s. Additionally, the financial community is saying ‘we want a world that we can invest in. We want our money back, so we do not want to invest in things that might not work in the future.’ As a result, they are pulling money out of ‘brown’ and putting it into ‘green’ energies. While acknowledging that clean technologies are good, they are not enough to keep us below 2°C. To achieve this, the world needs to get coal, gas and oil out of the system. This will not be done with the advent of new technologies; political choices need to be made: ‘We need a diplomatic strategy to get below 2°C, and we need to do this by 2023-2025.’

Countries have their set of priority areas. Mr Mabey stated if you are China and Japan, you worry about food instability. If you are the US security system, you worry about water wars in Asia – Indo-Pakistan, China-Mekong. If you are Australia, you worry about the Pacific Islands. ‘If you are in Europe of the UK, what we care about is food-shocks in the Middle East. We saw this in 2008-9, regional destabilization leading to large-scale migration. What if

this existential threat to Europe started happening every five years?’ He added, that when it comes to oil producers, for Europe, the important country to watch is Russia. In order for Europe to meet its climate targets, they will have to cut off the revenues to the Russian government they get for selling gas. Mr Mabey added that ‘the Chinese would not pick up this demand ... so we may meet our climate goals, but how do we deal with a destabilised Russia?’

He concluded with the question, ‘How resilient is our rules-based system to manage the tension that climate change and moving to a low carbon economy bring up?’ We need to prioritise the important over the urgent. Today’s turbulent world means we prioritise the urgent over the important. However, we know what we need to do, the question is, do we have the political will to build the machinery to respond adequately?

Simon Chin-Yee – Inaction will paralyze a global agreement based on consensus

The next intervention was from current KAS fellow Simon Chin-Yee. He began by stating that while it was encouraging to see the Paris Agreement enter into force so swiftly, the reality for many countries – both developed and developing – is that they were not ready to put the Agreement into practice. One important issue was that ambitions set out in the INDCs (Intended Nationally Determined Contributions) did not hold global temperatures below 2°C. Into this mix was the US withdrawal from the Agreement. Although their withdrawal will not take effect before 2019, there are questions surrounding whether the US could convince other delegations to follow suit or try to block action. This latter point would be catastrophic for an agreement where decisions are based on consensus. By blocking negotiations, inaction would be the result, paralyzing the global agreement.

Mr Chin-Yee stated that it is reassuring to see countries pick up the mantle to take the lead at the global level. Additionally, the alternative action being taken within the US is spurring global action on climate change regardless of the Trump administration stance on climate change. At COP23 (Conference of Parties to the UNFCCC) last year, the US essentially had two delegations in attendance. The official delegation continued to play a role in the UNFCCC negotiations, and a second unofficial delegation,

representing the #WeAreStillIn movement. This delegation, comprised of mayors, civil society, industry and academia, was led by California governor Jerry Brown and former New York City mayor Michael Bloomberg. They launched ‘America’s Pledge.’ This pledge united the private and public sectors to ensure that the United States upheld the objectives set out in the Paris Agreement.

Although security is only mentioned once in the Paris Agreement, Mr Chin-Yee stated that connections are being made between food and water shortages, rising temperatures, and extreme weather patterns are giving rise to violent conflict, increased migration, as well as providing terrorist groups a space through which they can find new recruits. 2017 saw continued droughts across East and Southern Africa, resulting in increased food insecurity, malnutrition and displacement of people on a large scale in Somalia and Ethiopia. Additionally, there was an escalation of poverty linked to rising temperatures in West and Central Africa, a region dependent on rain fed agriculture. Not to mention, extreme weather events on the rise, as Hurricane Irma decimated the small Caribbean island of Barbuda.

The connection between security risks and climate change are not wholly new. However, increasingly countries and regions are looking at alternative energy sources, climate resilience measures and adaptation policies, which are shaping the future of global climate policy.

Frank Umbach – Energy policies in the US have not shifted because of Trump, but because of market conditions

The final intervention was by Frank Umbach, EUCERS Research Director. Dr Umbach began by reiterating what Nick Mabey stated: That the Paris Agreement is a platform for solutions. However, Dr Umbach suggested that the gap between the declared commitments by countries prior to Paris and action today has widened. He argued that this was partly due to time running out to ‘close the window’ if we are to achieve the objectives set out in the Agreement. The question now is, ‘Should the 1.5°C or even the 2°C target still be the goal, as it becomes unachievable or do we need to shift targets?’

Dr Umbach suggested that we need to question the strategies and underlying assumptions we currently have in

place. Are they still correct and/or sufficient? Even before the Paris Agreement, we had the Kyoto Protocol, the essential assumption was that every country was to contribute national contributions in terms of reducing CO₂ emissions and that these reductions would automatically contribute to a global reduction of CO₂ in the atmosphere. Dr Umbach argued that as logical as that sounds the reality for countries is different. He gave the example of coal versus gas: In the US works as you replace domestic coal with domestic gas. However, the situation is different if countries replace domestically produced coal with long-distanced imported gas – in particular by taking the total emissions from gas imported from a permafrost region, such as Russia, and taking life-cycle emissions into account, we soon realise that the energy required for drilling and extracting oil is several times higher than that in Europe, on top of which, it must be transported it over large distances (and via a newly built gas pipeline network, whose building itself has been very CO₂-intensive). The result is CO₂ emissions being even worse than using domestic coal. In other words, we are starting on assumptions that are 10-15 years old that are no longer scientifically valid. Dr Umbach added that there is an unwillingness to reassess those strategies.

In addition, there is an over-focus on Trump. Energy policies in the US have not shifted because of Trump, they have shifted because of market conditions, which is true of coal, shale gas, etc. Additionally, the Obama US climate discussions could not have been possible without the work done by US military admirals and generals in 2006-7, when they began to publish the first climate security analysis. At this time, climate security was put on the highest political agenda, which was driving US policy, without which we would never have had the support by congress and the public. Recently, the Pentagon dropped climate security from its agenda, which has been protested by many of the generals and admirals, especially those involved in the studies. The over emphasis on Trump overshadows other factors that need to be taken into consideration in the US.

We also face difficulties to have frank open discussions with China on climate policy. There is a lack of transparency on the ground, in terms of what is really happening at the local level. What Dr Umbach has found, is that emissions and coal consumption have recently increased again. The overall political scene in terms of

transparent global governance and policy processes needs a democratisation of states such as China, otherwise it will be difficult to make even small steps forward. To understand the climate policy processes today, we need to be able to have a critical debate on strategies and policies that addresses the political dimensions – which are often much more important than the technocratic and economic issues – that are shaping the future of global climate policy.

Discussion

Following these interventions, a lively discussion ensued with the audience, who were made up of academics, students, media, industry and energy experts. The role of China, the US and EU in both global carbon emissions as well as global governance of climate change were key elements of the discussion. The future of renewable energies and the reality of cutting out fossil fuels completely in world's energy resources were also key points in the debate. Understanding the role of governance in reaching the 2°C target was also on the table for discussion, specifically on what governments have agreed to commit to versus actual policy being implemented. Finally, questions were raised by both the audience and the panellists on solutions around public perception, political willingness and changing path-dependencies.

This introductory panel for the 2018 KAS/EUCERS Talk Series opened up the discussion for what will be focused on throughout this year. Keeping with the theme of security challenges surrounding climate change, the upcoming talk series will focus on Africa, the Arctic, and assessing the future of global climate policy and security. The 2nd KAS talk will take place on 13 June 2018, focusing on violent conflict arising from climate change in Africa. It will build upon discussions that have arisen from this first workshop.

EUCERS ON THE ROAD

27.03.2018 Canberra, Australia	Frank gave a presentation on “The Digitalisation of Energy and Cybersecurity” at the Inaugural Energy Policy Dialogue: „Australia, Europe and the Asia-Pacific Region – Global Energy Security and Climate Change“
16.03.2018 Brussels, Belgium	Frank was a panellist at the Policy Dialogue on “Reviewing the Gas Directive: Opportunities and Challenges”, organized by the European Policy Centre (EPC) and Central Europe Energy Partners (CEEP)

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If you have found our Newsletter interesting, wish to hear more about our activities, or, indeed, contribute with ideas or essays, please contact Thomas Fröhlich, Newsletter Editor EUCERS on thomas.froehlich@kcl.ac.uk or call 020-7848-1912.

PUBLICATIONS

Pflüger, Friedbert, “Von der Pax Americana zur Pax Sinica? Der Weltmachtanspruch der chinesischen Energie- und Klimapolitik”, in: Internationale Politik (IP), March/April 2018, pp. 30-36.

Umbach, Frank, “Energy Cybersecurity: The Need for Effective Resilience“, in: Geopolitical Intelligence Service (GIS), 8 January 2017, <https://www.gisreportsonline.com/energy-cybersecurity-the-need-for-effective-resilience,defense,2492.html>

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