



Columbia Center on Sustainable Investment

A JOINT CENTER OF COLUMBIA LAW SCHOOL
AND THE EARTH INSTITUTE, COLUMBIA UNIVERSITY

How International Oil Companies Could Assist the Republic of Cyprus to Achieve the Sustainable Development Goals: A Conversation Starter

October 2018

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Acknowledgement:

The authors are extremely grateful to Andreas Poullikkas (Chairman of the Cyprus Energy Regulatory Authority of Cyprus), Evi Neophytou (Lawyer in the oil and gas industry), Tasos Tzionis (Ambassador of Cyprus in Italy), Tehtena Mebratu- Tsegaye (Legal Researcher at CCSI) for their thorough reviews and inputs.

Suggested Quote

Andreas Tornaritis, Perrine Toledano, "How International Oil Companies Could Assist the Republic of Cyprus to Achieve the Sustainable Development Goals: A Conversation Starter," Columbia Center on Sustainable Investment, Columbia University, (2018).

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Executive Summary

This policy paper is addressed to International Oil Companies (IOCs), public officials and Non-Governmental Organisations (NGOs) involved in the natural gas industry in Cyprus. There is currently no conversation happening in Cyprus on how the oil and gas industry could help Cyprus achieve their Sustainable Development Goals. Therefore, this paper hopes to initiate a debate and conversation around this topic. It provides an overview of the ways in which IOCs operating in Cyprus could contribute towards the sustainable development of the natural gas industry and assist the Republic of Cyprus to achieve a number of their 2030 Sustainable Development Goals (SDGs). First, the development of hydrocarbon resources should take specific environmental characteristics of Cyprus into account. One such example is the fact that Cyprus suffers from water scarcity, which necessitates the development of proper processes to ensure that water can be used responsibly and efficiently (SDG 12). Moreover, the development of offshore hydrocarbon resources requires IOCs to adopt high standards of safety for the protection of marine life and the underwater environment (SDG 14). By minimizing the carbon emissions of their operations and investing in other renewable forms of energy (SDG 7), IOCs would also contribute towards Cyprus's goal of minimizing carbon emissions and increasing the use of renewables in its energy mix (SDG 13). Furthermore, by providing training and advice to local officials, IOCs could enable Cyprus to develop local capacity and expertise with regard to natural gas exploration and development. IOCs could contribute to the establishment of robust government institutions and promote the principles of good governance within the sector and ensure that their local partners operate according to the same principles (SDG 16). A successful operation in a national or local environment depends on a successful and dynamic public consultation process in order for the social licence to be obtained. IOCs need to establish dynamic consultations and clearly demonstrate that developing hydrocarbons would not harm the local industries and environment (SDG 16). IOCs could actively contribute to the reduction of economic inequalities in Cyprus by eliminating corruption, employing a local workforce, and assisting in the development of an inclusive natural gas sector which would be a source of prosperity for all citizens (SDGs 8 & 10). Through Small Medium Enterprise (SME) programs, IOCs could assist and invest in the development of local service companies which could support the sector (SDG 9). IOCs could also encourage STEM education and establish high-quality academic and technical programs in those educational institutions to create a highly skilled workforce in Cyprus (SDG 4). This could be achieved through mentoring and collaborating with local schools, technical academies, and universities. Through targeted schemes, IOCs should encourage more women to be prepared to join and to excel in the industry from an early age, because that would reduce gender inequalities (SDG 5). All of the above suggestions could only materialise if all the stakeholders, public organizations and NGOs come together to collaborate and engage in dynamic negotiations geared at aligning their interests. This could happen if IOCs offer dialogue platforms where all the relevant stakeholders can come together (SDG 17).

SDGs covered in the paper



Table of Contents

Introduction	6
Affordable and Clean Energy (SDG 7), Responsible Consumption and Production (SDG 12), Climate Action (SDG 13) and Life Below Water(SDG 14)	9
Building Strong Institutions: Promoting Peaceful and Inclusive Societies (SDGs 16).....	15
Quality Education (SDG 4), Gender Equality (SDG 5), Decent Work and Economic Growth (SDG 8), Industry Innovation and Infrastructure (SDG 9) and Reduced Inequalities (SDG 10) .	21
Conclusion	25

Introduction

The Republic of Cyprus's institutional environment and economy, although developed and market oriented¹ shows inefficiencies that impede the sustainable development of the country. Cyprus suffers from corruption,² economic³ and gender inequality, high levels of unemployment (especially among the youth), high public debt, and overdependence on the finance sector.⁴ In addition, the country is introducing renewable sources of energy into its energy mix at a sluggish pace despite high rates of carbon emissions and dependency on energy imports.⁵

The government of Cyprus recognises the need for improvement in order for the country to become politically inclusive, economically prosperous, and environmentally friendly. Cyprus has demonstrated its strong commitment to improving institutional weaknesses and enhancing sustainable development through numerous policies strategic planning under the EU 2020 Strategy.⁶ More recently, Cyprus started ambitiously implementing the UN Sustainable Development Goals (SDGs) as part of its long-term strategy. The SDGs, adopted by 195 UN member states in 2015, are the world- recognized blueprint to achieve a more sustainable future. The Cypriot Government prioritised the following SDGs: SDG1 “No Poverty”, SDG4 “Quality education”, SDG7 “Affordable and Clean Energy”, SDG9 “Industry, Innovation and

¹Rapanos. V. and Kaplanoglou G. 2014. Governance, Growth and the Recent Economic Crisis: The Case of Greece and Cyprus. *Cyprus Economic Policy Review* 8. 3–34.

² In a series of scandals, two mayors and the Deputy Attorney General have been jailed.

³ Especially after the financial crisis (2013).

⁴ Republic of Cyprus. 2017. Review on the Implementation of the 2030 Agenda in Cyprus. Ministry of Foreign Affairs. Available at: <https://sustainabledevelopment.un.org/content/documents/15886Cyprus.pdf>. [Accessed 20.05.2018.]

⁵ *ibid.*

World Economic Forum. 2014. Europe 2020 Competitiveness Report Building a More Competitive Europe. Available at: http://www3.weforum.org/docs/WEF_Europe2020_CompetitivenessReport_2014.pdf [Accessed 23.05.2018.]

⁶ Such as the Action Plan for Growth and the National Reform Programme for a Green Economy.

Infrastructure” and SDG14 “Life Below Water”.⁷ In addition to the above prioritised SDGs, the implementation of the following SDGs are also of importance for Cyprus’s SDG5 “Gender equality”, SDG8 “Decent work and economic growth”, SDG10 “Reduced inequalities”, SDG 12 “Responsible Consumption and Production”, SDG13 “Climate Action”, SDG16 “Peace, Justice and Strong Institutions”.⁸ The SDGs are interrelated and interdependent on one another. By improving one SDG, the conditions of another SDG may witness vast improvement.⁹ For example, if a country works on the enhancement of equal opportunities for education and the quality thereof (SDG4), that may help with developing strong public institutions (SDG16) and reduce gender (SDG5) and economic inequalities (SDG10).¹⁰

Meeting the SDGs requires the active collaboration of multiple stakeholders including government, local communities, civil society organisations, and private sector actors. Partnership is indeed essential to achieving the SDGs and underlies one SDG in particular, SDG17. Indeed, international oil companies (IOCs) operating in Cyprus could contribute to the formation of a sustainable natural gas industry, thus contributing toward the achievement of the 2030 SDGs.

After three successful licensing rounds, Cyprus managed to attract major IOCs such as Eni, Total, and ExxonMobil into its natural gas industry. The first gas field was discovered in 2009

⁷ Republic of Cyprus. 2017. Review on the Implementation of the 2030 Agenda in Cyprus.

⁸ A number of SDGs that have to be achieved by the republic of Cyprus by 2030 are set at the EU level. for instance, the EU aims to reduce greenhouse gas emission of at least 40% by 2030, hence all the member states are required to contribute towards this target. For more information See:

“EU’s implementation of the Sustainable Development Goals (SDGs)” Available at:

http://ec.europa.eu/environment/sustainable-development/SDGs/implementation/index_en.htm

“Next steps for a sustainable European future European action for sustainability” Available at:

https://ec.europa.eu/europeaid/sites/devco/files/communication-next-steps-sustainable-europe-20161122_en.pdf

⁹ IPIECA. UNDP. IFC. 2017. Mapping the oil and gas industry to the Sustainable Development Goals: An Atlas. Available at: <http://www.ipieca.org/resources/awareness-briefing/mapping-the-oil-and-gas-industry-to-the-sustainable-development-goals-an-atlas/> [Accessed 23.05.2018.]

¹⁰ Ibid.

by a consortium of Noble Energy (operator) and Shell. More recently, a very promising gas field has been discovered by ENI (the specific quantity is yet to be confirmed).¹¹ At the time of writing, ExxonMobil and Qatar Petroleum are about to drill exploratory wells.¹² Cyprus has yet to proceed with the development and commercialisation of these resources. With the natural gas industry in Cyprus beginning to grow, it is important that IOCs with broad experience in multiple contexts around the world, partner up with local government and stakeholders to develop local content that is politically and economically inclusive, as well as environmentally friendly natural gas industry to avoid the consequences of ‘resource curse’. The development of a sustainable natural gas industry would aid the implementation of Cyprus’s SDGs by offering employment opportunities, decreasing energy imports, and reducing carbon emissions. The paper will offer potential ways in which IOCs could contribute to the development of a sustainable natural gas industry and assist Cyprus in positively contributing toward the achievement of the SDGs.¹³ It will also demonstrate how such a partnership would, in the long run, benefit the operations of IOCs in the country.

¹¹Eni. 2018. Eni announces a gas discovery Offshore Cyprus. Available at https://www.eni.com/en_IT/media/2018/02/eni-announces-a-gas-discovery-offshore-cyprus [Accessed 25.05.2018.]

Blum A. 2018. EMGC '18: Eni Chief sees rapid development of Eastern Med gas with Zohr. WorldOil. Available at:<http://www.worldoil.com/news/2018/3/21/emgc-18-eni-chief-sees-rapid-development-of-eastern-med-gas-with-zohr> [Accessed 25.05.2018.]

¹² Ekathimerini.2018. Exxon Mobil's Ocean Investigator arrives in block 10 of Cyprus EEZ. Available at: <http://www.ekathimerini.com/227155/article/ekathimerini/news/exxon-mobils-ocean-investigator-arrives-in-block-10-of-cyprus-eez> [Accessed 25.04.2018.]

¹³Anastasiades N. 2015. Address by H.E. Mr. Nicos Anastasiades President of the Republic of Cyprus at the United Nations Summit for the adoption of the post-2015 development agenda 26 September 2015. Available at <https://sustainabledevelopment.un.org/content/documents/20508cyprus.pdf>. [Accessed 24.03.2018.]

The IOCs could also partner and advise the Cypriot local stakeholders as to how to develop the “Hydrocarbon Ten Commandments” equivalent to Norway’s “10 Oil Commandments”, as that would set a long-term vision for the industry.

Affordable and Clean Energy (SDG 7), Responsible Consumption and Production (SDG 12), Climate Action (SDG 13) and Life Below Water (SDG 14)



In summary:

SDGs 7 and 13 require decisive actions for the considerable increase of clean and affordable sources of energy in countries' energy mix so as to decrease carbon emissions and tackle the causes of climate change. Under the Paris agreement, all countries are required to contribute to bringing the increase in global temperature below 2° centigrade. IOCs could help governments achieve these goals by minimizing carbon emissions from their operations (SDG 13) and investing in research on climate change and alternative sources of energy (SDG 7). SDG 12 requires that production and consumption of natural resources and waste management should be carried out efficiently and sustainably.¹⁴ In particular, it is an immediate priority that there is responsible consumption of energy resources and that environmentally friendly waste management practices are in place. IOCs could contribute in a number of ways towards this goal; for instance, they could have proper waste management procedures in place in accordance with international standards. IOCs could also use their expertise to advise local stakeholders on waste management.¹⁵ The aim of SDG 14 is to enhance the protection, conservation and resilience of the sea environment and marine life. Since a big part of IOCs' global operations is in offshore extraction, IOCs must have procedures in place which minimize the risk of

¹⁴ IPIECA. UNDP. IFC. 2017. Mapping the oil and gas industry to the Sustainable Development Goals: An Atlas.

¹⁵ Ibid.

Another way in which they could contribute is by requiring their sub-contractors to abide by strict environmental standards and to adopt procedures which ensure the efficient use of energy and water.

offshore accidents and allows them to respond promptly in case of such an accident occurring.¹⁶

Through assistance programs, IOCs could also contribute to the creation of robust offshore health and safety regulations in the countries where they operate.¹⁷

Cyprus is one of the signatories of the Paris Agreement and is an active supporter of it.¹⁸

However, the country's carbon emissions still need to be reduced.¹⁹ Cyprus imports and uses oil for electricity generation, which increases carbon emissions. In a recent report by the EU commission, Cyprus alongside Finland had the highest increase in carbon emissions in 2016.²⁰

Joining the nation's response to climate change, the IOCs could assist the decarbonisation of the Cypriot economy in a number of ways. IOCs can start with their own operations by reducing methane emissions from their activities in Cyprus. Methane emissions a result of gas released (leaks or escapes) or burned (flaring) is one of the major causes of global warming. Methane leaks resulting from natural gas production and operations are endangering the reputation of natural gas as a 'cleaner' form of energy.²¹ There are multiple practices which IOCs could undertake in order to minimise methane emissions from their operations. First, they should minimise flaring from their operations; around 5% of natural gas is wasted and not utilised due to flaring. In order to reduce methane emissions and utilise otherwise wasted energy, IOCs should try to capture and utilise the gas for energy production, liquifying it for transportation

¹⁶ IPIECA. UNDP. IFC. 2017. Mapping the oil and gas industry to the Sustainable Development Goals: An Atlas.

¹⁷ Ibid.

Cyprus has a number of plans for the preservation of the environment and the encouragement of sustainable development, such as the National Action Plan for a Green Economy and the National Action Plan for Renewable Energy Sources; <https://sustainabledevelopment.un.org/content/documents/15886Cyprus.pdf>

¹⁸ Republic of Cyprus. 2017. Review on the Implementation of the 2030 Agenda in Cyprus.

¹⁹ Ibid.

²⁰ European Commission. 2017. EU CO2 emissions from energy decreased in 2016. Available at: <https://ec.europa.eu/energy/en/news/eu-co2-emissions-energy-decreased-2016> [Accessed 21.03.2018.]

²¹ *The Economist* (23 July 2016). 'A Dirty Little Secret'. Available at:

<https://www.economist.com/business/2016/07/23/a-dirty-little-secret>

Sachs, Maennling & Toledano.

IOCs should start planning, preparing and implementing policies which would allow them to transit into a net-zero emission business model.

or putting it back to the source.²² IOCs could also introduce technological innovations in the form of methane detectors which can identify leaks and which can capture gas which escapes into the atmosphere between the drilling, production and transportation processes.²³ Pressure by governments, the World Bank²⁴ and NGOs on the IOCs to decrease these methane emissions is mounting and failure to comply would affect the public image of the IOCs severely. For instance, the Environmental Defence Fund (a US NGO) has recently launched a project to use a satellite to monitor methane emissions from natural gas products all over the world.²⁵ The IOCs are moving in the right direction as very recently IOC majors have agreed to decrease and eventually eliminate methane emissions from their operations.²⁶ Therefore, IOCs should ensure that their operations in Cyprus would be part of this global emissions reduction plan.²⁷

IOCs could also advise and assist Cyprus on how to transition to gas and aid its efforts to import natural gas to be included in Cyprus' energy mix.²⁸ Moreover, once the production of natural gas starts, IOCs could collaborate with the government to develop new sustainable industries using gas as an ingredient for manufacturing products such as chemicals etc.²⁹ The development of those industries would also increase the local demand for natural gas, expanding the sale of domestic gas.

²² Shay Banerjee, Perrine Toledano, "A Policy Framework to Approach the Use Of Associated Petroleum Gas," Columbia Center on Sustainable Investment, Columbia University, (2016), available at:

<http://ccsi.columbia.edu/files/2014/06/A-policy-framework-for-the-use-of-APG-July-2016-CCSI.pdf>

²³ *ibid.*

²⁴ World Bank (2018). *Zero Routine Flaring by 2030*. Available at:

<http://www.worldbank.org/en/programs/zero-routine-flaring-by-2030>

²⁵ <https://www.ft.com/content/311d4f4a-3df5-11e8-b7e0-52972418fec4>

²⁶ Kent S. (2018). 'Oil Majors Pledge to Cut Methane Emissions'. *Wall Street Journal*. Available at:

<https://www.wsj.com/articles/oil-majors-pledge-to-cut-methane-emissions-1537797829>

²⁷ Kent S. and Olson B. 2017. Exxon, Shell, BP Join Forces to Cut Emissions from Natural Gas. *The Wall Street Journal*. Available at: <https://www.wsj.com/articles/exxon-shell-bp-to-join-group-to-cut-emissions-from-natural-gas-1511360150> [Accessed 21.03.2018.]

Helman C. 2018 BP's New Oilfield Roughneck Is an Algorithm. *Forbes*. Available at:

<https://www.forbes.com/sites/christopherhelman/2018/05/08/how-silicon-valley-is-helping-bp-bring-a-i-to-the-oil-patch/#60f238fa30a8> [Accessed 21.05.2018.]

²⁸ For Cyprus plan to transition the economy to gas. See: https://www.defa.com.cy/presentations/26-28Feb13Rome_Presentation_.pdf and <https://www.defa.com.cy/en/projects>

²⁹ Republic of Cyprus. 2017. Review on the Implementation of the 2030 Agenda in Cyprus.

However, a national natural gas transition policy should not divert Cyprus away from its goal of achieving 13% of its energy share from renewables by 2020.³⁰ Under the program “Making sun blessed Cyprus a solar energy leader”,³¹ the EU is seeking to realize the solar potential of Cyprus, promoting and providing inventive investments in renewables. In nations such as Cyprus, where there is sun is out most of the year, solar power could drive economic growth and reduce energy imports. Major oil and gas companies are actively investing in renewables. Shell, for example, plans to invest \$1-2 billion a year in renewable energy until the end of 2020.³² Shell’s “new energies” fund has already invested in renewable energies like wind and solar power, such as a solar park in Moerdick, and a 43.83% interest in the U.S. solar company Silicon Ranch Corporation.³³ ENI has already invested in renewable sources of energy in its locations all over the world, such as in Egypt, Italy, Pakistan, and Tunisia.³⁴ Similarly, the IOCs operating in Cyprus could tap into the massive potential of Cyprus’s renewable sources by investing in the development of solar parks in Cyprus as well as co-funding university research on renewable energy technologies at the Energy Laboratory of the University of Cyprus.³⁵

Environmental management expertise is in short supply in Cyprus. For example, the lack of competent waste-management policies in Cyprus resulted in 80% of waste being disposed in

³⁰ Republic of Cyprus. 2017. Review on the Implementation of the 2030 Agenda in Cyprus.

³¹ European Commission. 2017. Making sun-blessed Cyprus a solar energy leader. Available at http://ec.europa.eu/research/infocentre/article_en.cfm?id=/research/headlines/news/article_17_11_21-7_en.html?infocentre&item=Infocentre&artid=46502 [Accessed 21.03.2018].

³² Reuters. 2017. Shell CEO urges switch to clean energy as plans hefty renewable spending. Available at: <https://www.reuters.com/article/us-ceraweek-shell-shell/shell-ceo-urges-switch-to-clean-energy-as-plans-hefty-renewable-spending-idUSKBN16G2DT> [Accessed 20.03.2018]

³³ Shell. 2018. New Energies. Available at <https://www.shell.com/about-us/what-we-do/new-energies.html> [Accessed 20.03.2018].

³⁴ Eni. 2018. Development of green investments. Available at https://www.eni.com/en_IT/sustainability/climate-change-and-new-forms-of-energy/commitment-to-renewable-energy.page. [Accessed 20.03.2018].

³⁵ Examples of university projects on renewable technologies could be found here: <http://www.energylab.ac.cy/>

landfills, and only 20% of waste recycled.³⁶ It is noted in the review on the implementation of SDGs in Cyprus, that local stakeholders have no expertise on proper waste management.³⁷ A recent scandal in Cyprus revealed a failure to meet the EU's most basic standards. A company that was responsible for the medical waste management from public hospitals had not processed medical waste, but instead, dumped the unprocessed medical waste in a field.³⁸ While local public services may survive their shortcomings, responsible IOCs must ensure they have efficient waste management policies in accordance with the highest international standards (SDG 12) and impose the same standards on their subcontractors and partners they work with at all the stages of the value chain. Moreover, in a country plagued by severe water scarcity, IOCs' should minimize their water footprint by "reusing and recycling" water.³⁹

Cyprus is a member of the Barcelona Convention and follows all the EU directives regarding the preservation of the marine environment.⁴⁰ Cyprus, Israel, and Greece have also crafted a plan to enhance their collaboration and promote joint action to resolve major hydrocarbon marine pollution incidents.⁴¹ Cyprus is a small island; thus, accidents triggered by the IOC operations offshore could have substantial consequences on the marine environment, tourism industry, and the overall well-being of locals.⁴² Hence, IOCs operating offshore should ensure that they use the best technologies to ensure minimal impact on the sea (i.e. directional drilling

³⁶ Republic of Cyprus. 2017. Review on the Implementation of the 2030 Agenda in Cyprus.

³⁷ *ibid.*

³⁸ Andreou E. Probe after three-months' worth of clinical waste found unprocessed outside disposal unit. Cyprus-Mail. Available at: <http://cyprus-mail.com/2018/02/22/probe-three-months-worth-clinical-waste-found-unprocessed-outside-disposal-unit/> [Accessed 21.03.2018.]

³⁹ IPIECA. UNDP. IFC. 2017. Mapping the oil and gas industry to the Sustainable Development Goals: An Atlas.

⁴⁰ European Commission. 2016. The Barcelona Convention. Available at: http://ec.europa.eu/environment/marine/international-cooperation/regional-sea-conventions/barcelona-convention/index_en.htm [Accessed 21.05.2018.]

⁴¹ A sub-regional Contingency Plan for preparedness and response to major hydrocarbon marine pollution incidents.

⁴² Christou M. and Konstantinidou M. 2012 Safety of offshore oil and gas operations: Lessons from past accident analysis. European Commission. Available at: <https://euoag.jrc.ec.europa.eu/system/files/public/page/offshore-accident-analysis-draft-final-report-dec-2012-rev7-print.pdf> [Accessed 25.05.2018.]

techniques),⁴³ to carefully preserve maritime life and protect marine and coastal ecosystems, as well as biodiversity (SDG 14). Through collaboration with local scientists and the sharing of marine technology, IOCs could also help Cyprus advance its research capacity on maritime environmental and biodiversity issues.⁴⁴ Robust internal environmental strategy and policies are thus crucial for IOCs, shielding them from reputational risk and providing them with a long-term social licence. They also facilitate sustainable development.⁴⁵

In addition to the environmental considerations, under the Mediterranean Sea there are a number of vulnerable cultural sites including ancient shipwrecks (e.g. the recent archaeological discovery in Israel).⁴⁶ IOCs should examine the underwater areas and take care to protect those ancient treasures. They could also potentially fund sub-marine archaeology teams in collaboration with Cypriot cultural authorities to study and preserve such areas.

In Cyprus, environmental awareness needs to be raised by educating the public on matters related to real sustainable practices (e.g. recycling, and cleaner forms of energy).⁴⁷ IOCs could help through supporting TV campaigns or supporting educational programs. Such investments would encourage the public to be more environmentally friendly and raise the profile of the company as a beneficial institutional actor in the local economy.

⁴³ IPIECA. UNDP. IFC. 2017. Mapping the oil and gas industry to the Sustainable Development Goals: An Atlas.

⁴⁴ Ibid.

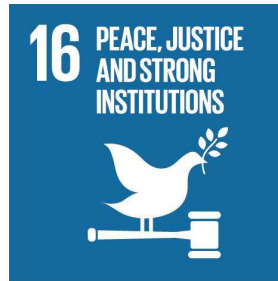
⁴⁵ European Commission. 2017 Environmental Impact Assessment – EIA. Available at: <http://ec.europa.eu/environment/eia/eia-legalcontext.htm> [Accessed 25.05.2018.]

Cyprus, as a European member state, requires the IOCs to undertake an Environmental Impact Assessment (EIA) before proceeding with the exploration and exploitation of the resources.

⁴⁶ Bohstrom P. 2017. Crusader Shipwreck Gold Found by diving archaeologists in Israel. Haaretz. Available at <https://www.haaretz.com/archaeology/.premium.MAGAZINE-crusader-shipwreck-gold-found-in-israel-harbor-1.5446778> [Accessed 21.03.2018.]

⁴⁷ IPIECA. UNDP. IFC. 2017. Mapping the oil and gas industry to the Sustainable Development Goals: An Atlas.

Building Strong Institutions: Promoting Peaceful and Inclusive Societies (SDGs 16)



In summary:

SDG 16 entails the improvement of the quality of the institutions of a country and peaceful relations within countries and between countries. The aim of SDG 16 is to achieve economic and political inclusivity at both the local and national level. SDG 16 also seeks to develop government institutions which are corruption-free and serve the public good.

IOCs should engage actively with the local communities in which they operate and promote political and economic inclusivity.⁴⁸ IOCs should also promote the improvement of the quality of government institutions in the countries where they operate and adhere to strong internal anti-corruption policies. More efficient, inclusive and transparent government institutions benefit both the citizens of countries and the companies which operate in them as efficient governance comes with more political and regulatory predictability.

Before proceeding to the development of important projects in Cyprus, the IOCs (in conjunction with the local government) should engage in dialogue with all the affected groups, local communities, NGOs and civil society organisations to understand their needs and priorities.⁴⁹ Such understanding should help evaluate if the project is in line with the aspirations of the local and national population. In turn, it will gain IOCs social approval. They should

⁴⁸ IPIECA. UNDP. IFC. 2017. Mapping the oil and gas industry to the Sustainable Development Goals: An Atlas.

⁴⁹ Ibid.

have a mechanism for local people to voice their concerns about the ongoing project. IOCs should promote open dialogue with local communities to ensure the long-term success of projects by encouraging active local participation and shaping projects to the needs of the community.

Public consultation enhances ‘openness’ because IOCs directly communicate with people on the ground and take their concerns into account. By developing ‘dialogue-consultation platforms’, IOCs can manage expectations with regards to community demands during every stage of the resource development process.⁵⁰ Lack of public consultation and direct communication risks triggering high costs of operation and hazards for IOCs.⁵¹ In Cyprus, IOCs have already been removed from the port of Larnaca due to the lack of meaningful engagement and dialogue with local stakeholders by the Government and IOCs prior to establishing their onshore bases.⁵²

Local institutions involved in Cyprus’s natural gas industry such as policy makers, regulators, legislators, academics and the general public, have just started developing specific knowledge of the industry. Cypriot public servants are scaling a steep ‘learning curve’ as they have no expertise in the management of natural gas, policy formulation, and enforcement of such

⁵⁰ Ibid.

⁵¹For more information See: “Costs of Company-Community Conflict in the Extractive Sector” Available at: https://sites.hks.harvard.edu/m-rcbg/CSRI/research/Costs%20of%20Conflict_Davis%20%20Franks.pdf and “Conflict and Coexistence in the Extractive Industries” Available at: https://www.chathamhouse.org/sites/files/chathamhouse/public/Research/Energy,%20Environment%20and%20Development/chr_coc1113.pdf

⁵² Hazou E. 2016. Total’s plans in limbo after logistics contract blunder, ENI, Noble hint at logistics move abroad. Available at: <http://cyprus-mail.com/2016/10/25/eni-noble-hint-logistics-move-abroad/> [Accessed 11.02.2018]

Hazou E. 2017. ENI also likely to operate out of Limassol. Cyprus-Mail. Available at: <http://cyprus-mail.com/2017/03/30/eni-also-likely-operate-limassol/> [Accessed 11.02.2018]

Andreou E. 2016. Damage already done to Cyprus gas industry. Cyprus-Mail. Available at: <https://cyprus-mail.com/2016/02/14/damage-already-done-to-cyprus-gas-industry/> [Accessed 11.02.2018]

IHS. Limassol port accusations fly as new concessions begin operations. Available at: <https://fairplay.ihs.com/ports/article/4281216/limassol-port-accusations-fly-as-new-concessions-begin-operations> [Accessed 08.02.2018]

policies. IOCs operating in Cyprus should undertake obligations to assist local policy makers so as to develop natural gas expertise.⁵³ These training activities should be funded by IOCs for the training of public officials on technical and regulatory affairs,⁵⁴ and should continue to do so to better guide policy makers and regulators.⁵⁵ Trainings should be provided by, or in partnership with, internationally known and well-established centers, e.g. Offshore Petroleum Industry Training Organisation, OPITO and the Columbia Center on Sustainable Investment - CCSI, to ensure that the training provided is “unbiased” and can genuinely help the local stakeholders make more effective and well-informed decisions. Similarly, through third party support providers, IOCs could help the government develop policies and practices that would allow them to effectively enforce high standards of health, safety, and environmental practices.

IOCs could also lend their expertise in effective internal organizations and advise the government on how to better manage the sector through more efficient coordination of the public authorities that have a stake in the natural gas, e.g. ministry of foreign affairs, ministry of public works and transport, ministry of energy, ministry of finance. IOC’s assistance would help the government enhance inter-ministerial coordination, reduce red tape, make more informed and rapid decisions and minimise delays for the IOCs. It would also moderate the effect of ‘knowledge gap’ where IOCs have the knowledge and local stakeholders do not, which often leads to unviable contracts, subject to renegotiations.

⁵³ Under Production Sharing Agreements IOCs might be under Public Official training obligations but since the contracts between the IOCs and Cyprus are not public, we can’t hold it for certain.

⁵⁴ In Norway, when the country developed its oil industry in the 1960’s, it required by law that IOCs provide training to personnel from the ministries and authorities involved in the industry and the law also provided that a reasonable number of employees of the National oil company should also participate in IOCs training programmes, courses and seminars in order to receive both theoretical and practical training in technical, commercial and administrative aspects of the industry.

For more info see: “Local Content Norway-Petroleum” Available at:

<http://ccsi.columbia.edu/files/2014/03/Local-Content-Norway-Petroleum-CCSI-May-2016.pdf>

⁵⁵ IPIECA. UNDP. IFC. 2017. Mapping the oil and gas industry to the Sustainable Development Goals: An Atlas.

Corruption needs to be addressed and robust anti-corruption practices need to be established at the early stages of resource development in countries rich with resources. According to Transparency International (TI), in the years between 2009 and 2016, instead of improving its position in the TI's Corruption Perceptions Index, Cyprus fell from 27th in 2009 to 47th place in 2016.⁵⁶ There have been a number of major corruption scandals in the last few years, where former politicians from major parties, mayors of main cities and other public officials, (most prominently the Deputy Attorney General), have been jailed due to corruption.⁵⁷ According to the European Business Barometer (2017), 68% of the companies operating in Cyprus consider corruption as a serious challenge in the business environment in Cyprus, (compared to the EU's 37% average).⁵⁸ Also, 100% of all the companies in the survey argued that corruption in Cyprus is widespread (highest proportion in the EU).⁵⁹ IOCs should adhere to international anti-corruption laws and participate in international anti-corruption initiatives e.g. the Extractive Industries Transparency Initiative (EITI principles).⁶⁰ IOCs should ensure that they have a robust internal anti-corruption system in place, which includes a zero tolerance to corruption policy, at all stages of the natural gas value chain. IOCs should promote a corruption-free natural gas industry and confirm that their subcontractors have the same anti-corruption standards, encouraging a culture of anti-corruption at all stages of the value chain. Openness

⁵⁶ Transparency International Rankings 2011-2017
2011-30
2012-29
2013-31
2014-31
2015-32

Transparency International 2018. Corruption Perception Index 2017. Available at:

https://www.transparency.org/news/feature/corruption_perceptions_index_2017 [Accessed 20.02.2018].

⁵⁷ Cyprus-Mail.2017. Erotokritou and others found guilty, judges found defence witnesses unconvincing. Available at <http://cyprus-mail.com/2017/02/08/criminal-court-delivering-verdict-rikkos-trial/> [Accessed 08.02.2018]

⁵⁸ EU Directorate General for Information. 2017. Flash Eurobarometer 457: Businesses' attitudes towards corruption in the EU. Available at: https://data.europa.eu/euodp/data/dataset/S2177_457_ENG [Accessed 20.04.2018]

⁵⁹ *ibid.*

⁶⁰ The extractive industries transparency initiative. The global standard for the good governance of oil, gas and mineral resources. Available at <https://eiti.org/>

in contracting needs to be a priority for IOCs, especially in Cyprus where 50% of the people in the EU barometer say that corruption affects them personally (double the EU average).⁶¹ By promoting transparent processes and not engaging in corrupt activities, IOCs shield themselves from potential reputational risks and the threat of litigation. By doing so they ensure the long-term stability of their projects since corruption scandals come with a risk of losing their ‘social licence’ to operate in the host country. IOCs should also be wary of prosecution in their home countries due to domestic legislation that may prohibit the bribing of foreign officials.⁶²

IOCs are particularly concerned about the hazards arising from conflicts among states, particularly associated increases with operational costs.⁶³ Hence, the IOCs operating in the Eastern Mediterranean have a vested interest in a peaceful region with fewer political and regulatory risks. These IOCs promote commercial and energy cooperation throughout the region to secure the viability and profitability of their projects. For example, Eni has suggested an Italian-Egyptian-Israeli-Cypriot cooperation in the exploitation and export of natural gas resources in the Eastern Mediterranean.⁶⁴ IOCs are planning to use Egypt’s liquefaction plants to reach export markets as that would decrease development costs. For instance, Shell plans to acquire gas from Leviathan (Israel) and Aphrodite and liquefy that gas by using existing LNG

⁶¹ EU Directorate General for Information. 2017. Special Eurobarometer 470: Corruption. Available at: https://data.europa.eu/euodp/data/dataset/S2176_88_2_470_ENG [Accessed 20.04.2018]

⁶² France24. 2016. France's Total fined €750,000 over Iraq ‘oil-for-food’ scandal Available at: <http://www.france24.com/en/20160226-france-oil-giant-total-fined-750000-iraq-oil-food-scandal-un> [Accessed 20.04.2018]

Kent S. 2018. Inside the Bribery Scandal Sweeping Through the Oil Industry. The Wall Street Journal. Available at: <https://www.wsj.com/articles/inside-the-bribery-scandal-thats-sweeping-through-the-oil-industry-1518543648> [Accessed 20.04.2018]

⁶³ Associated Press. 2018. Turkey Renews Threat Against Cyprus Offshore Gas Exploration. Available at: <https://www.voanews.com/a/turkey-renews-threat-against-cyprus-offshore-gas-exploration/4284222.html> [Accessed 20.04.2018].

⁶⁴ Stefanini S. 2015. Eni chief: Egypt’s gas gain won’t harm Israel. Politico. Available at <https://www.politico.eu/article/eni-gas-egypt-israel-cyprus-zohr/> [Accessed 20.04.2018]. ENI’s CEO argued that “[they] can create an Eastern Mediterranean hub that can reduce the development costs for Cyprus and Israel, using the existing Egyptian facilities”.

facilities in Egypt (Shell is shareholder in the EDKU LNG plant in Egypt and Aphrodite Gas Field in Cyprus).⁶⁵

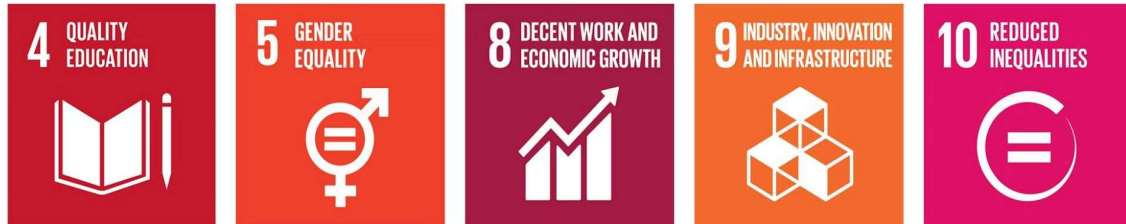
IOCs could do more to improve regional collaboration. They could take the initiative and collaborate with the government of Cyprus, by proposing to form a regional scientific and technocratic Energy Forum. High quality scientific research would enhance cooperation among the states and IOCs and will eventually lower the costs for all the parties involved in exploration and development in the region. The Energy Forum would function through Workings Groups that involve government officials, IOCs executives, academics, economists, sociologists and experts from the region and other regions with more industry experience. Such scientific collaboration could also have a positive effect on the political relations between the countries in the region. ⁶⁶

⁶⁵Benmeleh Y. 2018. Shell Mulls 15-Year Deal for Israeli, Cypriot Gas, Partner Says. Bloomberg. <https://www.bloomberg.com/news/articles/2018-03-21/shell-mulls-15-year-deal-for-israeli-cypriot-gas-partner-says> [Accessed 20.05.2018].

Gordeisky S. 2018 Shell seeks to buy Leviathan, Aphrodite gas – report. Globes. Available at: <http://www.globes.co.il/en/article-shell-seeks-to-buy-leviathan-aphrodite-gas-1001227150> [Accessed 20.06.2018].

⁶⁶ For more detail see: Neofytou E. and Tornatitis. A. 2018. Regional cooperation to enhance FDI in the development of offshore resources. Columbia FDI Perspectives.

Quality Education (SDG 4), Gender Equality (SDG 5), Decent Work and Economic Growth (SDG 8), Industry Innovation and Infrastructure (SDG 9) and Reduced Inequalities (SDG 10)



In summary:

The goal of SDG 4 is the provision of high-quality education to all the citizens of a country. Good quality education enables both social mobility and equitable economic development. By assisting local schools and forming partnerships with local universities and academies, IOCs could enhance the quality of STEM education in countries where they operate.

SDG 5 is a goal to empower women. It decreases gender inequalities and provides equal opportunities to all women around the world. IOCs could actively contribute to that goal by putting processes in place which would encourage more women to participate in these industries in host countries where IOCs operate. SDG 8 is about achieving inclusive economic development and employment conditions reflecting global labor standards. IOCs could play a role in this by ensuring that the working conditions of their local labor force are of a high standard, by employing local people and companies. Contracting local companies helps boost the local economy and develops expertise in order to be able to provide the required services.⁶⁷

SDG 9 is about the achievement and the formation of robust innovative local industries, and providing assistance to local entrepreneurs. By using Small and Medium Enterprise (SME)

⁶⁷ IPIECA. UNDP. IFC. 2017. Mapping the oil and gas industry to the Sustainable Development Goals: An Atlas.

programs, IOCs could encourage the development of SMEs and entrepreneurship in the country.⁶⁸

SDG 10 is about minimizing economic inequality. As private partners of governments, IOCs could contribute to this objective by not engaging in corrupt activities as said above. IOCs can also help countries achieve a more equitable resource revenue distribution, and enhance the economic governance in a country.⁶⁹

The financial crisis hit Cyprus hard; as a result, incomes have fallen, and more people have become unemployed. Between 2011 to 2015, the number of people at risk of poverty has increased exponentially.⁷⁰ Young persons were hit the worst by the financial slump. Youth unemployment is close to 30%, a rate much higher than the EU average. Those who are employed are often underpaid, on casual and part-time contracts.⁷¹ That has triggered severe intergenerational inequalities.⁷² For example, Cypriot millennials are poorer than their parents despite being highly educated.⁷³ This phenomenon also leads to a brain drain for the local economy.⁷⁴ In addition, the gender pay gap is 13.9% in Cyprus a rate that is considerably lower

⁶⁸ Ibid.

⁶⁹ Ibid.

⁷⁰Themistokleous S. Anastasiou I. Vrasidas C. 2017. Cyprus: Fit to Deliver on the 2030 Agenda for Sustainable Development?. Social Watch. Available at: <http://www.socialwatch.org/sites/default/files/2017-SR-CYPRUS-eng.pdf> [Accessed 20.06.2018].

⁷¹Ioannou G. Sonan S. 2016 Youth Unemployment in Cyprus An Examination of the Lost Generation. Friedrich Ebert Stiftung. Available at: <http://library.fes.de/pdf-files/id-moe/12825.pdf> [Accessed 13.04.2018].

Cyprus Mail. 2017. Cyprus faces brain drain. Available at: <http://cyprus-mail.com/2017/06/20/cyprus-faces-brain-drain/> [Accessed 13.04.2018].

The government recognises the impact of the financial crisis on the younger generation and has taken some measures. The National Youth Strategy (NYS) of Cyprus for the period 2017-2022. For more information about the (NYS) See: <https://sustainabledevelopment.un.org/content/documents/15886Cyprus.pdf>

⁷² Cyprus Mail. 2017 Most millennials seen worse off than parents despite aptitude: study. Available at <http://cyprus-mail.com/2017/11/14/millennials-seen-worse-off-parents-despite-aptitude-study/> [Accessed 13.04.2018].

⁷³ The Economist.2016. “The real intergenerational inequity. Available at ” <https://www.economist.com/blogs/freexchange/2016/03/britains-millennials-sixth-highest-rate-of-university-education-in-the-e> [Accessed 13.04.2018].U

⁷⁴ Stothard M. 2013. Cyprus fears for ‘lost generation’. Financial Times. Available at <https://www.ft.com/content/b6a18a44-988e-11e2-867f-00144feabdc0> [Accessed 13.04.2018].

than that EU average.⁷⁵ Extreme economic inequality can trigger protests, and create hazards to IOCs operations not only in developing countries but in developed countries as well. For instance, a high degree of economic inequality in Israel was one of the triggers of hazards that Noble Energy experienced in the country. IOCs could help Cyprus reduce those inequalities by working with the government on achieving more economically inclusive growth and a more sophisticated and diversified economy that is not only dependent on the financial sector and takes full advantage of the gas industry.⁷⁶

In the latest presidential elections, it has been stressed that to reduce unemployment among younger generations there is a need for the youth to pursue degrees and careers paths that are in demand.⁷⁷ A prosperous natural gas industry could create jobs for locals, as the IOCs operating in Cyprus would be required to recruit local staff. The lack of trained local labor, would require IOCs to contribute towards the development of a skilled workforce (local content). To build the needed sophisticated workforce, IOCs could collaborate with local universities and other educational institutions to design and establish degrees and other technical courses that are in demand by the industry and up to date with the most recent trends of the global energy industry.⁷⁸ Such a strategy is underway in Russia, where Statoil has formed partnerships with universities in Russia to provide a Master's in petroleum management.⁷⁹

In order for more young people (especially women) to join the extractives industry and pursue associated university programs, IOCs should encourage STEM subjects from primary and

⁷⁵Ekathimerini.2018. Gender pay gap shrinks below EU average in Cyprus. Available at <http://www.ekathimerini.com/226499/article/ekathimerini/news/gender-pay-gap-shrinks-below-eu-average-in-cyprus> [Accessed 20.06.2018].

⁷⁶ Republic of Cyprus. 2017. Review on the Implementation of the 2030 Agenda in Cyprus.

⁷⁷ Ibid.

⁷⁸ IPIECA. UNDP. IFC. 2017. Mapping the oil and gas industry to the Sustainable Development Goals: An Atlas.

⁷⁹ Ibid.

secondary schools through mentoring and training teachers.⁸⁰ Chevron has devoted 130 million dollars in the United States to promote engineering in primary school classes.⁸¹ To promote gender parity in the industry, IOCs should encourage women in particular to study STEM from an early age.⁸²

Moreover, IOCs could help in the development of local service companies. As is the case with the local workforce, service companies and other supportive sectors need to develop. Through several SME programs, with assistance and collaboration from IOCs, local businesses could develop specialisation to support the various activities of IOCs through the resource development chain. Such efforts have been successful elsewhere, e.g. BP's Enterprise Center in Azerbaijan which helps local companies generate knowledge in order to compete in the local market and obtain procurement opportunities.⁸³

IOCs could contribute towards the formation of a dynamic 'start-up' industry in Cyprus. They could support existing government programs focused on building an entrepreneurial ecosystem. They could also propose new entrepreneurship funds to sponsor local entrepreneurial initiatives supporting research improvement techniques for the development of natural gas resources, innovative technologies to support the implementation of the Paris agreement⁸⁴ and more efficient methods of using energy.⁸⁵ For instance, Repsol has an entrepreneur's investment fund that supports start-ups operating in the field of energy, and aims

⁸⁰ Ibid.

⁸¹ Ibid.

⁸² Ibid.

⁸³ BP. 2018. Enterprise Development. Available at:

https://www.bp.com/en_az/caspian/sustainability/Enterpdevelopment.html [Accessed 20.06.2018].

⁸⁴ United National Climate Change. 2017. Technology Innovation to Support Paris Agreement Implementation Meeting. Available at

<https://unfccc.int/news/technology-innovation-to-support-paris-agreement-implementation> [Accessed 20.06.2018].

⁸⁵ IPIECA. UNDP. IFC. 2017. Mapping the oil and gas industry to the Sustainable Development Goals: An Atlas.

to advance socio-economic mobility.⁸⁶ The support of similar entrepreneurial activities also helps reduce youth unemployment.

Conclusion

The discovery of resources in a number of contexts encourages overconsumption of resources and fossil fuels, with associated environmental damage and negative effects on the quality of local institutions. It may also lead to the ‘Dutch disease’ if the revenues are not properly managed.⁸⁷ These consequences are problematic for the host country but also for the stability of the IOC investments. To avoid this, IOCs should embrace the philosophy of SDG 17 and partner with local and national stakeholders, NGOS, and international institutions; and assist in the development of a sustainable natural gas industry that serves as a reliable partner for the implementation of the SDGs. Helping Cyprus contribute to the achievement of these SDGs may translate into long term business benefits for IOC operations in the country.

Therefore, the set of SDGs that should be prioritized in IOC-government negotiations are SDGs 7, 12, 13, and 14 because they have to do with minimizing the environmental impacts of the natural gas industry on Cyprus’s onshore and offshore environment. Meeting these SDGs ensures that the inhabitants of Cyprus live in a safe and non-hazardous environment and emphasizes the formation of a sustainable energy sector powered by cleaner sources of energy. SDG 16 also deserves attention in the negotiations between the country and IOC. It requires IOCs to assist in the development of local capacity and formation of inclusive, efficient, corruption-free, and competent institutions in the natural gas industry. Robust and efficient

⁸⁶ Repsol.2018. Accelerate your start-up. Available at <http://www.fundacionrepsol.com/en/talent-development/entrepreneurs-fund> [Accessed 20.06.2018].

⁸⁷ For a Definition of Dutch Disease See: <http://lexicon.ft.com/Term?term=dutch-disease>

institutions would allow the country to maximize its revenues from the natural gas industry for the benefit of the majority of its citizens. The final set of SDGs that should be prioritized are SDGs 4, 5, 8, 9, and 10. They relate to the development of local supporting industry and economic development (SDG 8), such as the reduction of economic and gender inequalities by educating and employing local staff (SDGs 4 & 10), and providing assistance for the creation of a dynamic support industry (SDG 9). While the requests on the IOCs seem onerous they are nothing more than requiring the IOCs to be good corporate citizens in Cyprus, integrating negative externalities and maximizing the positive ones.