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LEBANON'S OIL AND GAS WEALTH:

POLICY RECOMMENDATIONS FOR ESCAPING THE "DEVIL'S EXCREMENT" CURSE

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N.B: The article only reflects the opinion of its author.

LEBANON'S OIL AND GAS OPPORTUNITY

Lebanon's prospects as an oil and gas producer are fueling expectations, verging on irrational exuberance, that an energy windfall would jump start the economy out of its lethargy, increase exports, investment and consumption spending, create new jobs in the energy sector and raise growth rates. How realistic are these expectations and what should be done to effectively manage Lebanon's prospective energy wealth? A 2010 US Geological Survey report estimated that there were 122 trillion cubic feet (TCF) (equivalent to 3,455 billion cubic meters) of gas and 1.7bn barrels of oil off the coasts of Israel, Palestine, Cyprus, Syria and Lebanon[1]. Furthermore, a seismological survey in Lebanese waters indicated vast natural gas deposits beneath the seabed, potentially as much as 25 TCF (in Aug 2012)[2] or some 0.36% of world gas resources. Though small by international standards (they pale in comparison to Russia's 1688 TCF and Iran's 1193 TCF ***proven*** gas reserves), Lebanon's oil and gas reserves present a potentially transformational opportunity for Lebanon.

Nevertheless, we should recall the old proverb that "there's many a slip 'twixt the cup and the lip". There are four major sources of risk and uncertainty. The first is price

1 For background, see "The Petroleum Sector in Lebanon: History, Opportunities and Challenges", Lebanon Petroleum Administration.

2 Since no exploratory drilling has been undertaken, it is not possible to confirm the reserves or their value. In October 2013, the then Acting Minister of Energy revealed estimates of 95.5 TCF of natural gas and up to 865 million barrels of oil.

volatility and unsustainability. Oil and gas prices have declined by some 70% compared to June 2014 and the prospects of recovery are dim over the medium term. We are in the age of the "New Oil Normal" with plentiful sources of new energy. Shale oil and gas producers have become a marginal source, able to compete at a $45–$55 barrel price. Moreover, the world is becoming strategically climate change active, increasingly energy efficient and witnessing a renewable energy transformation and expansion: solar, wind and geothermal are becoming directly competitive with traditional sources of energy. Dubai, for example, is building the world's largest concentrated solar power plant (CSP), including a massive 800-megawatt solar plant that will produce electricity at an average cost of 2.99c per KWH, more competitive with oil or gas fired power plants. These energy demand and supply side trends imply downward pressure on oil and gas prices in the coming decade.

Secondly, there is reserves and production uncertainty. Surveys are, at present, the only estimates of prospective resources. Until exploration, drilling, production/extraction begin, we need to maintain realistic, conservative expectations as to the level of ***recoverable*** reserves that are technically, economically and legally feasible. For example, the only confirmed natural gas find in Cyprus, Aphrodite turned out to be smaller than initial surveys' expectations.

Thirdly, there is geopolitical and legal risk. Lebanon's oil and gas wealth is offshore which, in the absence of a maritime border agreement between Lebanon, Cyprus, Israel and Syria, involves significant legal uncertainty.

With established territorial disputes amongst these countries, there is a strong disincentive to bid on and exploit these blocks. In addition, given a limited domestic consumption due to the relative size of the economy and a decrepit energy infrastructure, much would need to be exported. Developing export markets for LNG, oil or natural gas requires substantial investments and agreements to link up to the Arab Pipeline or a prospective Cyprus-Turkey pipeline. Neither option is currently available and would therefore require extensive bilateral/multilateral negotiations. Delays would mean that potential revenues would be further postponed into the future.

Fourthly, there is domestic political risk. Lebanon's dysfunctional politics and dismal governance are likely to pose insuperable obstacles to sound, transparent and sustainable management of its natural resource wealth. It is a seemingly long road to extraction and exploitation, given the political hurdles: six years have passed since the ratification of the Offshore Petroleum Resources Law[3], but successive governments have yet to issue two implementing decrees that would pave the way for the first licensing round[4] of offshore gas exploration in

3 The Law defines the State's legal rights to manage its energy reserves. The Council of Ministers in Dec 2012 appointed the Petroleum Administration, in charge of managing the logistics binding hydrocarbon reserves in Lebanon's territorial waters.

4 In May 2013, the first offshore oil and gas licensing round was opened up for nearly 50 major international energy corporations, including Total, Shell, Chevron and ExxonMobil. But, without the decrees, companies could not submit offers, and the bidding process has been repeatedly delayed. The Salam government has tactically slated closure of the licensing round for "a maximum period of six months from the date of the adoption of the two decrees".

Lebanon's Exclusive Economic Zone (EEZ). One of the missing decrees would delimit Lebanon's territorial sea and EEZ, carving the offshore into blocks open for bidding, licensing and exploration. The other decree would stipulate the provisions of future Exploration and Production Agreements (EPA). The EPA would determine the way in which future revenues are to be shared between the State and the investors that provide capital, technology, and expertise. The proposed fiscal regime – yet to be finalized – comprises fixed and sliding scale royalties for gas and oil respectively, a cost recovery limit (open to bidding), a production/profit sharing scheme (open to bidding), and a corporate income tax (CIT).

How Valuable Are Lebanon's Oil and Gas Revenues?

The IMF[5] has made a detailed evaluation of the proposed fiscal regime for the oil and gas sector and the various options which depend on bids and the government's share (low, medium, high) of revenues. The Lebanese government's take under the various options varies between 57% and 78% of total revenues in undiscounted terms. These average effective tax rates are comparable to the government take in petroleum-producing countries which ranges from about 60 to 85%[6].

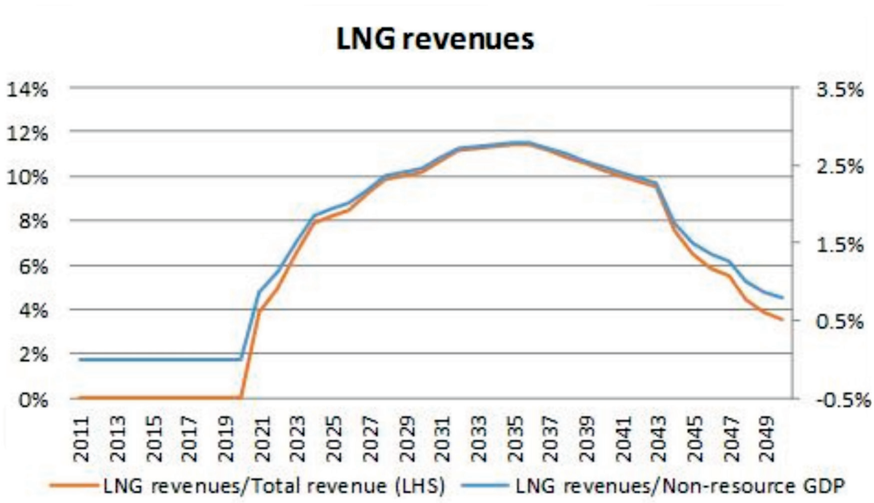
IMF estimates rely on the assumption that production starts in 2021, based on exploration by 2018; production is expected to last for 35 years, with full capacity

5 See IMF Working Paper, "Designing a Fiscal Framework for a Prospective Commodity Producer: Options for Lebanon", WP/14/193, October 2014.The updated results shown in the chart were kindly provided by the IMF.

6 See IMF, "Fiscal Regimes for Extractive Industries: Design and Implementation", 2012.

reached by 2036. Given these premises, it is estimated that once production is in place, resource revenues could reach about 2.8 % of GDP (excluding oil & gas) and represent about 9% of government revenues ***at the peak***, followed by a gradual decline afterwards (see chart below).This would be a sizeable addition to the country’s revenue resources. However, these estimates are subject to price and volume uncertainty: we cannot predict future prices and, until drilling and extraction begins, we remain unsure of available quantities. It is also important to note that even if blocks are auctioned in 2017 and exploration begins and is successful, revenues would only start in 5 to 7 years, as of 2022 at the earliest. There is no manna from heaven about to fall on Lebanon any time soon.

In the meantime, Lebanon’s deteriorating fiscal position needs to be addressed. With an absence of economic growth, large fiscal and current account deficits, ballooning social security



related spending and liabilities and service of a public debt in excess of 135% of GDP, Lebanon's current fiscal position is not sustainable. Albeit an oil and gas contribution of under 2.8% of (non-resource) GDP and some 9% of revenues, this will not be a major transformation for Lebanon's economic and fiscal situation, nor will it be a panacea in the absence of structural and fiscal reforms. The bottom line is that the prospective fiscal framework should initially focus on ensuring fiscal sustainability and intergenerational equity. The IMF's simulation of future revenues reinforces the case that fiscal adjustment is required now rather than later, and that future revenues need to be discounted. The alternative, given current governance and politics, is the curse of the "devil's excrement".

Lessons in Avoiding the Curse of the "Devil's Excrement"

International experience offers many lessons on how ***not*** to handle commodity booms. Countries like Norway, Botswana, Malaysia, Mexico and others have managed their natural resource wealth successfully, whereas countries like Nigeria, Congo, Uganda, Angola and Venezuela are examples of the natural resource curse. Venezuela's former minister of mines and hydrocarbons and cofounder of OPEC, Juan Pablo Pérez Alfonso, described petroleum as the "devil's excrement" and warned of its potential to spawn waste, corruption, excessive consumption, and debt. Empirical evidence shows that a resource windfall typically leads to an appreciation of the real exchange rate which undermines non-resource exports, leads to de-industrialization, high dependency on oil and gas revenues, increasing inequality and deteriorating growth prospects. A resource boom also encourages rent grabbing, civil conflict (resource rich Sub-Saharan countries are prime examples), corruption and bribery– especially in autocratic, non-democratic countries and those with weak institutions and lacking the rule of law.[7] Furthermore, many resource-abundant developing economies seem unable to diversify their economies by successfully converting their depleting exhaustible resources into other productive assets, leaving them highly vulnerable to resource price shocks.

The Natural Resource Governance Institute publishes a Resource Governance Index[8] – based on the institutional and legal setting, reporting practices, safeguards and quality controls and the enabling environment – that shows that 80% of countries fail to achieve good governance in their extractive sectors: the public lacks fundamental information about the oil, gas and mining sector. Only 11 of 58 resource-based countries have satisfactory standards of transparency and accountability. Norway tops the list, but MENA is the lowest ranked region in the Index, falling below sub-Saharan Africa, with a failing score of 38 out of 100.

Lebanon's indicators of governance (Voice and Accountability, Political Stability and Absence of Violence, Government Effectiveness, Rule of Law and

7 See Frederick van der Ploeg, Natural Resources: Curse or Blessing?

8 More details on the 50 indicators used and methodology is available on: http://www.resourcegovernance.org/resource-governance-index

Control of Corruption) have rapidly deteriorated over the past five years[9]. The latest Corruption Perception Index ranks Lebanon 123 out of a total 167 nations, while the Open Budget Index finds that the country currently provides the public with scant budget information and that budget oversight is weak and limited: on a scale of 100, Lebanon gets 2 (similar to Myanmar) as compared to New Zealand's 88 and Sweden's 87![10]. It is clear that the existing political and governance structures cannot be entrusted with the oversight, development and management of Lebanon's oil and gas wealth.

The lesson is that in the absence of good governance, strong institutions, rule of law and effective regulations, Lebanon's oil and gas windfall is likely to lead to more corruption and seizing of wealth by special interest groups and politicians to the detriment of national interest. As Lebanon's political struggles persist, it is imperative to establish a sound fiscal regime and a robust governance framework ensuring transparency in the exploitation of Lebanon's scarce oil and gas wealth.

Issues in Managing Lebanon's Oil and Gas Wealth

Oil and gas are exhaustible natural resources, which raises the issues of sustainability and intergenerational equity.It is therefore essential thatthree basic questions should be publically debated and include civil society[11]:

9 See Appendix 3

10 See http://www.internationalbudget.org/opening-budgets/open-budget-initiative/open-budget-survey/publications-2/rankings-key-findings/rankings/

11 Such as the Lebanon Oil & Gas Initiative (LOGI), http://logi-lebanon.org/ which is an independent NGO that promotes the transparent and sound management of Lebanon's oil and gas resources.

- How fast should Lebanon's oil and gas reserves be depleted? This depends on the quantity of recoverable reserves, prices and inter-generational equity.

- How much should be saved annually? Economic analyses indicate that extracting and selling non-renewable resources amounts to running down capital, unless the receipts are fully reinvested in financial, physical or human capital. The Hartwick Rule states that rents derived from an efficient extraction program for a non-renewable resource should be invested entirely in productive, reproducible capital: physical capital, infrastructure and human capital.[12] In other words, the prescription is that exhaustible capital should be transformed into other forms of yield generating capital and not wasted through current consumption.

- What should be done with the revenue? In Lebanon's case, the majority of the revenue should be saved and invested to upgrade dilapidated infrastructure and in human capital to transform Lebanon into a modern, internationally-integrated, digital economy. Given the high level of debt, interest rates and debt service, consideration should also be given to using part of the natural resource wealth to retire debt and lower the debt burden in order to reduce interest rates, free up budget resources for public investment and encourage private investment.

Policy Recommendations for the Governance of Lebanon's Oil & Gas Wealth

What should be done so that

12 See the discussion in World Bank "Where Is the Wealth of Nations?", 2006.

Lebanon escapes the 'devil's excrement" curse and benefits from its oil and gas sector? The issues are fundamental and go way beyond the trivial matter of passing two implementation decrees. What should be the building blocks of good governance and sound management of Lebanon's oil and gas wealth?

1. **The Government of Lebanon should formally join the Extractive Industries Transparency Initiative (EITI)**[13] in order to ensure transparency and disclosure (see Appendix 1 for more details) of governance and management of its natural resources. The EITI is a Global Standard to promote open and accountable management of natural resources. The EITI would require government and companies to disclose information on the key steps in the governance of Lebanon's natural energy resources: contracts and licenses (including the bidding and auction process and awards of blocks), exploration and production, revenue collection (to ensure that companies comply with the principles of Publish What You Pay[14]), revenue allocation, social and economic spending, and impact on the environment (offshore and onshore).

2. **Lebanon should Adopt and Comply with the Precepts of the Natural Resource Charter**[15]. The Charter is important in that it is comprehensive with twelve precepts that cover the decision chain (see

13 https://beta.eiti.org/about/how-we-work

14 See http://www.publish-whatyoupay.org/

15 The Natural Resource Charter is available here http://www.resource-governance.org/sites/default/files/Natural_Resource_Charter_Ara-bic20141002.pdf

Appendix 2), the associated decision, relevant policy makers and stakeholders. The precepts are highlighted in the accompanying chart below and are available in Arabic so that nothing need be "lost in translation". The Charter should be formally adopted by the Lebanese Government, Parliament and responsible agencies as well as civil society stakeholders such as the Lebanon Oil and Gas Initiative[16] and integrated into relevant legislation and regulations.

3. **Lebanon should establish an Independent Energy Regulator**. The Lebanese Petroleum Administration should be made independent from the Ministry of Energy and Water (MEW) and legally transformed into a regulatory body for the oil and gas sector with a widened mandate for the administration and management of

The Natural Resource Charter Decision Chain

16 See http://logi-lebanon.org/

Lebanon's natural resources. The separation and independence from the MEW is important to protect management and decision-making from political interference. In particular, the LPA should have responsibility for the auctioning of blocks and the licensing of companies to invest and exploit natural resources. It should comply and report in accord with EITI and the precepts of the Natural Resource Charter.

4. **Lebanon should adopt a Fiscal Responsibility Law and a Fiscal Rule.** Fiscal Rules are long-lasting constraints on fiscal policy through numerical limits on fiscal aggregates, typically including budget balance rules, debt rules, expenditure rules, and revenue rules[17]. A fiscal rule for Lebanon is necessary for long-term fiscal sustainability and solvency, to ensure policy transparency and credibility, to address inter-generational equity and for macroeconomic and financial stability. Under the fiscal rule government expenditure would be determined by an estimate of permanent income (including the sustainable contribution of resource revenue), while cyclical revenue would be saved in a sovereign wealth fund. Similar to the well-known examples of Chile and Norway, the fiscal rule would impose that all oil and gas price windfalls are automatically saved (into a sovereign wealth fund) and government spending is determined by cyclically adjusted tax revenue and a share of oil and gas revenue.

5. **Lebanon should setup a Sovereign Wealth Fund** (LSWF) that would

17 See IMF (2015), Fiscal Rules at a Glance.

manage and invest oil and gas wealth. The World Bank (2006) in a study on the wealth of nations concludes that the many resource-abundant economies that did not follow the Hartwick Rule and consumed their resource rents tend to have negative 'genuine' savings rates and become poorer each year because they are consuming wealth rather than investing. The evidence suggests that resource-rich countries that follow a variant of the Hartwick Rule have higher incomes, a more equitable distribution of income and stronger growth. Furthermore, if resource-rich countries had followed the Hartwick Rule (including Venezuela, Trinidad and Tobago, and Gabon) they would all be as wealthy as South Korea, while Nigeria would be five times as well off as it currently is.

Concluding Remarks

I have no illusions that the prescriptive framework advocated above would be willingly, even in part, accepted or implemented by Lebanon's current dysfunctional and failed political system. The aim of this policy brief is to provide clear policy and governance recommendations, raise awareness of the issues and galvanize citizen groups, civil society and all stakeholders striving for a new Lebanon. The stakes are high: sound and efficient management and good governance of Lebanon's prospective oil and gas wealth can be transformational; it may open new vistas and improve welfare and growth prospects for current and future generations. The alternative under current governance and practices is the curse of the "devil's excrement" and exacerbation of the current failed system of waste, nepotism, growing inequality of wealth and income, bribery and widespread corruption. Lebanon's oil & gas wealth belongs to ***all its citizens,*** current and future and any decisions should be based on a national consensus with a governance framework providing transparency, disclosure and accountability.

Appendix 1:
The Extractive Industries Transparency Initiative(EITI) Standard

The EITI Standard outlines the requirements applicable to countries implementing the EITI as well as the Articles of Association governing the EITI. The EITI Standard 2016 was formally launched at the EITI Global Conference in Lima 24-25 February 2016. The International Secretariat has developed guidance notes and templates to support countries with the implementation of the requirements.

EITI Requirement 1 - Oversight by the multi-stakeholder group

The EITI requires effective multi-stakeholder oversight, including a functioning multi-stakeholder group that involves the government, companies, and the full, independent, active and effective participation of civil society. The key requirements related to multi-stakeholder oversight include: (1.1) government engagement; (1.2) industry engagement; (1.3) civil society engagement; (1.4) the establishment and functioning of a multi-stakeholder group; and (1.5) an agreed work plan with clear objectives for EITI implementation, and a timetable that is aligned with the deadlines established by the EITI Board.

(More: https://eiti.org/node/4922#r1)

EITI REQUIREMENT 2 - Legal and institutional framework, including allocation of contracts and licenses
The EITI requires disclosures of information related to the rules for how the extractive sector is managed, enabling stakeholders to understand the laws and procedures for the award of exploration and production rights, the legal, regulatory and contractual framework that apply to the extractive sector, and the institutional responsibilities of the State in managing the sector. The EITI Requirements related to a transparent legal framework and award of extractive industry rights include: (2.1) legal framework and fiscal regime; (2.2) license allocations (2.3) register of licenses; (2.4) contracts; (2.5) beneficial ownership; and (2.6) state-participation in the extractive sector.
(More: https://eiti.org/node/4922#r2)

EITI REQUIREMENT 3 - Exploration and production
The EITI requires disclosures of information related to exploration and production, enabling stakeholders to understand the potential of the sector.
The EITI Requirements related to a transparency in exploration and production activities include: (3.1) information about exploration activities; (3.2) production data; and (3.3) export data.
(More: https://eiti.org/node/4922#r3)

EITI REQUIREMENT 4 - Revenue collection
An understanding of company payments and government revenues can inform public debate about the governance of the extractive industries. The EITI requires a comprehensive reconciliation of company payments and government revenues from the extractive industries. The EITI Requirements related to revenue collection include:

(4.1) comprehensive disclosure of taxes and revenues; (4.2) sale of the state's share of production or other revenues collected in kind; (4.3) Infrastructure provisions and barter arrangements; (4.4) transportation revenues; (4.5) SOE transactions; (4.6) subnational payments; (4.7) level of disaggregation; (4.8) data timeliness; and (4.9) data quality.
(More: https://eiti.org/node/4922#r4)

EITI REQUIREMENT 5 - Revenue allocations
The EITI requires disclosures of information related to revenue allocations, enabling stakeholders to understand how revenues are recorded in the national and where applicable, subnational budgets. The EITI Requirements related to revenue allocations include: (5.1) distribution of revenues; (5.2) subnational transfers; and (5.3) revenue management and expenditures.
(More: https://eiti.org/node/4922#r5)

EITI REQUIREMENT 6 - Social and economic spending
The EITI requires disclosures of information related to social expenditures and the impact of the extractive sector on the economy, helping stakeholders to assess whether the extractive sector is leading to the desirable social and economic impacts and outcomes. The EITI Requirements related to social and economic spending include: (6.1) social expenditures by companies; (6.2) SOE quasi-fiscal expenditures; and (6.3) an overview of the contribution of the extractive sector to the economy.
(More: https://eiti.org/node/4922#r6)

EITI REQUIREMENT 7 - Outcomes and impact
Regular disclosure of extractive industry data is of little practical use

without public awareness, understanding of what the figures mean, and public debate about how resource revenues can be used effectively. The EITI Requirements related to outcomes and impact seek to ensure that stakeholders are engaged in dialogue about natural resource revenue management. EITI Reports lead to the fulfilment of the EITI Principles by contributing to wider public debate. It is also vital that lessons learnt during implementation are acted upon, that discrepancies identified in EITI Reports are explained and, if necessary, addressed, and that EITI implementation is on a stable, sustainable footing.

(More: https://eiti.org/node/4922#r7)

EITI REQUIREMENT 8 - Compliance and deadlines for implementing countries

This section outlines the timeframes established by the EITI Board for publication of EITI Reports (8.2), annual progress reports (8.4) and Validation (8.3). It outlines the consequences of non-compliance with the deadlines and the requirements for EITI implementation. It also explains the possibility and criteria for countries to apply for adapted implementation (8.1) and extensions (8.5).

(More: https://eiti.org/node/4922#r8)

Appendix 2:

The Natural Resource Charter

This includes 12 precepts including strategy, consultation and institutions, accountability and transparency, exploration and license allocation, taxation, local effects, nationally owned resource companies, revenue distribution, revenue volatility, government spending, private sector development, role of MNCs and role of the international community.

Precept 1: Strategy, consultation and institutions
Resource management should secure the greatest benefit for citizens through an inclusive and comprehensive national strategy, a clear legal framework, and competent institutions.
(More: http://resourcegovernance.org/approach/natural-resource-charter/precept-1-strategy-consultation-and-institutions)

Precept 2: Accountability and transparency
Resource governance requires decision makers to be accountable to an informed public.
(More: http://resourcegovernance.org/approach/natural-resource-charter/precept-2-accountability-and-transparency)

Precept 3: Exploration and license allocation
The government should encourage efficient exploration and production operations, and allocate rights transparently.
(More: http://resourcegovernance.org/approach/natural-resource-charter/precept-3-exploration-and-license-allocation)

Precept 4: Taxation
Tax regimes and contractual terms should enable the government to realize the full value of its resources consistent with attracting necessary investment, and should be robust to changing circumstances.
(More: http://resourcegovernance.org/approach/natural-resource-charter/precept-4-taxation)

Precept 5: Local effects
The government should pursue opportunities for local benefits, and account for, mitigate and offset the environmental and social costs of resource projects.
(More: http://resourcegovernance.org/approach/natural-resource-charter/precept-5-local-effects)

Precept 6: Nationally owned resource companies
Nationally owned resource companies should be accountable, with well-defined mandates and an objective of commercial and operational efficiency.
(More: http://resourcegovernance.org/approach/natural-resource-charter/

precept-6-nationally-owned-resource-companies)

Precept 7: Revenue distribution

The government should invest revenues to achieve optimal and equitable outcomes, for current and future generations.
(More: http://resourcegovernance.org/approach/natural-resource-charter/precept-7-revenue-distribution)

Precept 8: Revenue volatility

The government should smooth domestic spending of revenues to accommodate revenue volatility.
(More: http://resourcegovernance.org/approach/natural-resource-charter/precept-8-revenue-volatility)

Precept 9: Government spending

The government should use revenues as an opportunity to increase the efficiency of public spending at the national and sub-national levels.
(More: http://resourcegovernance.org/approach/natural-resource-charter/precept-9-government-spending)

Precept 10: Private sector development

The government should facilitate private sector investments to diversify the economy and to engage in the extractive industry.
(More: http://resourcegovernance.org/approach/natural-resource-charter/precept-10-private-sector-development)

Precept 11: Roles of international companies

Companies should commit to the highest environmental, social and human rights standards and contribute to sustainable development.
(More: http://resourcegovernance.org/approach/natural-resource-charter/precept-11-roles-international-companies)

Precept 12: Role of international community

Governments and international organizations should promote an upward harmonization of standards to support sustainable development.
(More: http://resourcegovernance.org/approach/natural-resource-charter/precept-12-role-international-community)

The complete charter is available for download at: http://resourcegovernance.org/sites/default/files/documents/nrcj1193_natural_resource_charter_19.6.14.pdf

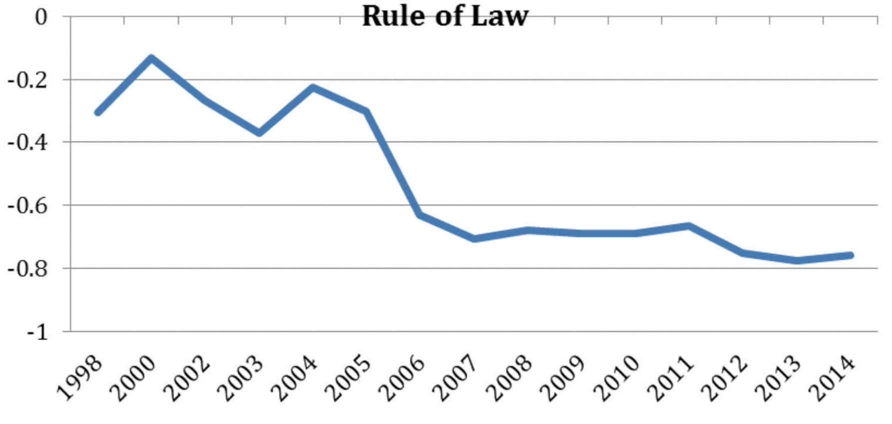
Appendix 3:

Governance, Transparency and Accountability

World Governance Indicators

	2000	2006	2014
Control of Corruption	-0.405	-0.938	-1.063
Government Effectiveness	-0.142	-0.322	-0.375
Political Stability and Absence of Violence/Terrorism	-0.529	-1.846	-1.721
Regulatory Quality	-0.387	-0.190	-0.220
Rule of Law	-0.134	-0.631	-0.759
Voice and Accountability	-0.288	-0.410	-0.417

Source: World Bank.



Source: World Bank.

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