

## Special Issue

### GHANA'S PETROLEUM INDUSTRY: THE PROSPECTS AND POTENTIAL IMPEDIMENTS TOWARDS GOOD GOVERNANCE STANDARDS

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# GHANA POLICY JOURNAL

**An international journal on research dealing with policy-related issues concerning Ghana, and Ghana's links and relationships with the rest of the world.**

**Aim and Scope:** The *Ghana Policy Journal* is a multi disciplinary publication of the Institute of Economic Affairs (IEA), Accra, Ghana. IEA is Ghana's first public policy think tank and it was established in 1989. The *Ghana Policy Journal* is intended to be a forum for the presentation and discussion of views from a wide range of scholars dealing with policy-related issues concerning Ghana, and Ghana's links and relationship with the rest of the world. The *Ghana Policy Journal* is sponsored by the International Development Research Centre/Think Tank Initiative.

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## EDITORIAL

### GHANA'S PETROLEUM INDUSTRY: THE PROSPECTS AND POTENTIAL IMPEDIMENTS TOWARDS GOOD GOVERNANCE STANDARDS

Ghana emerged as a new oil-producing economy in December 2010. This special issue of the Ghana Policy Journal, an annual publication of the Institute of Economic Affairs (IEA), Ghana, was initiated to bring together researchers, policy-makers and practitioners to address some of the pressing issues in a newly emerging petroleum producing economy. History has shown that petroleum exploration and exploitation activities involve delicate legal, technical, economic, financial and environmental challenges and that maximizing the benefits from petroleum activities require a constant balancing act between resource owners and international oil companies. The complexity of the industry, the opportunities for growth, the risk of “resource curse” and the challenges associated with the industry, make for a difficult policy environment. The policy challenges are underlined by several practical questions. Here are a few: Have the international oil companies taken advantage of an inexperienced, emerging, oil-producing country in the petroleum contracts? Has Ghana’s fiscal regime asked so much from the industry that investors would not risk their capital in a new oil economy? What are the strengths and weaknesses of the existing legal and regulatory framework? Are the extant laws sustaining enough to guide the emerging industry? What are the potential economy-wide effects of the petroleum industry on Ghana’s growth prospects? How prepared is Ghana against environmental hazards of the industry?

The papers in this volume are by no means exhaustive. They provide partial answers and lay the groundwork for further inquiry. They draw attention to institutional design challenges, to the ways and means by which Ghana may administer its petroleum operations, and to the implications of the institutional design for better performance of the industry, for enhanced transparency and for maximizing the benefits to the State. We summarize below the main contributions from the different articles.

Natural resource endowment has value to which the owner has a claim. When the owner is not the resource developer or producer, fiscal instruments are used to capture that value. Against the background of over a century of mining, Ghanaians are understandably uncertain and anxious about whether the value capture to Ghana is fair. A difficult question to answer, but Amoako-Tuffuor’s paper with Owusu-Ayim provides some answers. The paper reviews Ghana’s petroleum fiscal regime as of the year 2010, compares the key features of the regime with that of a peer group of oil-producing countries in Sub-Saharan Africa, and assesses the regime against five key features of importance to government and prospective investors: the degree of progressivity, stability, flexibility, neutrality and how the regime distributes the burden of risk between the resource owner and contractors.

The key findings are that Ghana’s fiscal regime is based on “work-program bidding”, has minimum front-loading charges, guarantees minimum State take, rates favourably on

flexibility and neutrality, and is progressive in its basic structure. On the surface, when compared with a peer group of countries in Sub-Saharan Africa, Ghana's regime appears reasonably competitive. But the risk of revenue delay is high and the degree of progressivity is weakened somewhat by the absence of cost recovery limits, the weak, thin capitalization provisions and the weak capacity for verification and monitoring of contractors' costs and investments. In addition, several elements of the regime are open to contractual variation, leaving Ghana's take of resource rents subject to potential ad hoc negotiation. The complexities of the industry notwithstanding, it is useful to standardize the key features of the regime in legislation in a way that clearly defines the scope of discretion in the contracting process. The paper points out there are some fundamental flaws in the Petroleum Income Tax Law (PITL). There is scope to improve government take if the revisions to relevant laws guard against open ended exemptions, allowances, withholding taxes and cost recovery measures that further compromise the progressivity of the fiscal regime. A better option may be to repeal the PITL and incorporate all of its essential features into the Internal Revenue Act to ensure consistency of treatment of chargeable income and greater clarity of "cost stop" elements.

Research into the potential impacts of the petroleum industry on Ghana's economy has barely begun. Asafu-Adjaye's paper on "Oil production and Ghana's economy: What can we expect?", has two key objectives. First, it estimates the impacts of oil production on Ghana's economy using a computable general equilibrium model. Second, it proposes policies to mitigate the adverse impacts oil activities may have on various sectors of the economy. The results: production from Phase I of Jubilee Oil Field alone could increase the GDP growth rate by 3.5 percent per annum. The growth rate could more than triple if additional wells are brought into production and natural gas utilized rather than re-injected or flared. However, the results also show that despite the increase in oil and other commodity exports, aggregate exports may decline. Moreover, increased household disposable incomes, mostly from increase in urban employment, coupled with the decline in agricultural production, implies an increase in imports and faster growth in domestic prices relative to imported prices. The net result is a worsening of the trade balance.

Two key recommendations are: First, there is a need for government to provide incentives for the development of new sectors with linkages to the oil sector with the view to boosting local content and participation and employment spin-offs. Second, policies are required to mitigate the potential adverse impacts of oil production, particularly in the agricultural and manufacturing sectors. New sectors that could link up with the oil industry include building and maintenance of equipment for storage and distribution of oil and derivatives; data processing and storing of seismic data; air transport services; tourism and related recreational activities, international trans-shipment and entrepôt services. There are currently infrastructural and human capital impediments to the growth of such activities and as such there is a need for medium and long-term plans to build capacity in these areas.

The questions: How to govern Ghana's petroleum industry and how to manage petroleum revenues have been recurrent themes since February 2008 when Ghana outdoored itself

as a potential oil producer. Heller and Heuty review the accountability mechanisms in Ghana's proposed oil legislations. They critically examine the efforts to establish a strong institutional framework governing the extraction of petroleum and the use of the revenues it generates. The government in 2010 introduced two major pieces of legislation, the Petroleum Exploration and Production Bill and the Petroleum Revenue Management Bill. Each of these bills had provisions with major implications for the level of accountability that Ghana could achieve in the sector, with the Revenue Management Bill notable for the inclusion of provisions for strong public oversight and reporting, and the Exploration and Production Bill notable for their absence. The article looks at the two bills, and analyzes the degree to which they promoted oversight, transparency, and effective management of the oil industry and the revenues that flow from it in the light of Ghana's experiences in the oil sector and international best practice. They conclude that in spite of being introduced at the same time, the two bills demonstrated vastly divergent commitments to accountability and transparency and argue that the process by which the two bills were developed and presented had a major impact in their divergence, as well as in the legislative result, which saw the revenue management bill passed into law in April 2011 and the exploration and production bill forced to be withdrawn. The paper stresses the need for a clear legislative framework for open accountable and responsible oversight to be at the forefront of the political agenda.

Administering petroleum operations is a major challenge for petroleum producing countries. Now that Ghana has emerged as an oil and gas producer, Jantuah Banful's paper examines the legal regime of Ghana's upstream petroleum industry and asks whether the legal and regulatory framework are adequate, provide the needed clarity in regulation, and what ought to be the appropriate role of Ghana National Petroleum Corporation (GNPC) in the scheme of things. She traces the evolution of Ghana's petroleum legislation, from its modest beginnings in the 1980s to now. The paper examines Ghana's emerging oil and gas industry, traces the industry's evolution, the legal and regulatory regime in place and the methods of regulation of the industry. It examines the dual role that GNPC plays as a regulator of the industry and also as a player, compares it with best practice, and offers some suggestions on the way forward. The paper recommends that while a separation of the regulatory and commercial roles of the national oil company is desirable, it should not be done right away due to the dearth of expertise to manage both institutions. However, there should be a clear timetable to this end and a rigorous policy agenda for capacity building and training to accelerate the institutional design.

The Petroleum Exploration and Production Law, GNPC Law 64, and Ghana National Petroleum Corporation Law, PNDC Law 84, provide the framework for the management of Ghana's petroleum industry. The Model Petroleum Agreement (MPA) emanates from these two legislative pieces. The MPA provides the template for crafting petroleum exploration and exploitation agreements. Pamford examines the adequacy or lack thereof of Ghana's Model Petroleum Agreement, focusing on the public policy implications and the requirements for implementation. He examines the technical, financial, legal, physical, environmental and human resource infrastructure or organizational capacity of Ghana to implement terms and

conditions of petroleum contracts; and the important public policy implications of Ghana's institutional capacity to enforce the terms and conditions of the contracts. The key concerns raised by this study are summed as follows: Can Ghana mobilize the necessary financial and technical resources to enforce contracts it enters into with multinational oil companies with huge technical and financial resources and experience that far outpace those of Ghana? On local content provisions, the issues relate to the extent to which Ghanaian businesses can be competitive in both upstream and downstream petroleum businesses. It concludes with suggestions for improving oil leases and measures to enhance capacity building.

Manteaw's paper on "Ghana's EITI: Lessons from Mining and Policy Implications for Oil", reviews Ghana's experience of EITI implementation in the mineral sector and highlights the key lessons that can be drawn from the exercise and their policy implications for the country's oil and gas sector. The paper concludes that Ghana has not made the best of its mineral endowment in terms of revenue generation, management and use; and that guided by the lessons from the EITI in the mining sector, Ghana can do better with its future oil revenues.

In "Managing the Political and Social Expectations of Ghana's Oil and Gas", Attafua discusses the political and social expectations of Ghana's oil and gas and the imperatives of effectively managing those expectations. The paper contends that managing public expectations is one of the most compelling socio-political and governance challenges facing Ghana on the eve of commercial production of the "black gold" and gas. The paper outlines the challenges entailed in managing those expectations and advocates the enactment of a robust legal and regulatory framework for the oil and gas sector. The paper concludes with short and long-term recommendations for managing public expectations in order to avert disruptions to the nation's peace and social order.

Finally, the short article by Mensah on "Challenges of Environmental Degradation Ghana's Preparedness for Effective Oil Spill Response and Remediation" addresses (a) the extent to which the legal and policy frameworks are adequately positioned to combat any form of environmental degradation arising from the emerging oil industry, and (b) the level of preparedness in terms of human and technical capacity for an effective oil spill response and remediation to protect the vulnerable coastal belt.

**Prof. Joe Amoako-Tuffour**  
Guest Editor

# AN EVALUATION OF GHANA'S PETROLEUM FISCAL REGIME

*Joe Amoako-Tuffour\* and Joyce Owusu-Ayim\*\**

## ABSTRACT

Ghana is poised to be one of the fastest growing economies in Sub-Saharan Africa because of its emerging oil and gas industry. Yet, questions have arisen as to whether Ghana is getting its fair share of the revenues from exploiting its hydrocarbon potential. We review Ghana's petroleum fiscal regime as of the year 2010, compare its key features with that of a peer group of oil and gas producing countries, and assess the regime against five key concepts: progressivity, stability, flexibility, neutrality and risk-sharing. The key findings are that Ghana's fiscal regime based on "work-program bidding", has minimum front-loading charges, guarantees minimum State take, rates favourably on flexibility and neutrality, and is progressive in its basic structure. On the surface, when compared with a peer group of countries in Sub-Saharan Africa, Ghana's regime appears reasonably competitive. But the risk of revenue delay is high and the degree of progressivity is weakened somewhat by the absence of cost recovery limits, the weak thin capitalization provisions, and the weak capacity for verification and monitoring of contractors' costs and investments. Several elements of the regime are also open to contractual variation, leaving Ghana's take of resource rents subject to potential ad hoc negotiation. The complexities of the industry notwithstanding, it is useful to standardize the key features of the regime in legislation in a way that defines the scope of discretion in the contracting process. There is scope to improve government take if the expected legislative revisions guard against open ended exemptions, allowances, withholding taxes and cost recovery measures that further compromise the progressivity of the fiscal regime.

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## 1. INTRODUCTION

Who gains the most from the exploitation of a nation's non-renewable resources when the owner is not the resource developer or producer? The gains come in many forms, but the revenue sharing as defined by the fiscal regime is arguably an important predictor of the distribution of benefits. Petroleum fiscal regimes refer to the fiscal instruments and the contractual framework, which define a host country's share of the wealth accruing from petroleum production through a host of instruments – bonuses, royalties, profit oil, taxes and government participating interest. Several considerations go into the design of the fiscal regime, a key one being the relative development of a country's petroleum industry. Petroleum fiscal regimes for countries that have a mature status as oil producers typically tend to give a higher government take compared with those that have fewer discoveries or those that are still trying to attract investments (Johnston, 2007). Fiscal regimes are also affected by the geological promise of the area and the type of contractual policy framework that governs petroleum activities (Johnston, 2007, Nakhle, 2010).

There are three broad strategic options that a country can choose from to design its petroleum production policy framework: (a) a 'go-it-alone strategy' in which the State undertakes production by itself through a national oil company, such as in Saudi Arabia; (b) the State grants entire private ownership and the oil companies have full control over the operations (mainly in OECD countries); and (c) a cross between the two in the form of partnership of sorts between the State and the private oil companies to undertake production- the most popular choice for non-OECD oil producing countries.<sup>1</sup> Ghana's policy framework follows the latter option.

The objectives of this paper are threefold: first, to review Ghana's current upstream fiscal regime; second, to provide a comparative examination of Ghana's fiscal regime against a peer group of petroleum producing countries in Sub-Saharan Africa (SSA); and third, to determine how Ghana's fiscal regime holds up against five key features of importance to government and prospective investors: the degree of progressivity, stability, flexibility, neutrality and how the regime distributes the burden of risk between the resource owner and the oil companies. The rest of the paper is organized as follows. Section 2 outlines the nature of upstream fiscal arrangements and the instruments that make up Ghana's fiscal regime. Section 3 makes comparisons with a sample of regimes, particularly from SSA, focusing on their capture of rents and government take, cost containment and cost recovery provisions, avoidance of revenue leakage, income or profit tax provisions and administrative simplicity. Section 4 evaluates Ghana's fiscal regime against the five commonly used concepts. The conclusions follow in section 5.

## 2. THE UPSTREAM FISCAL ARRANGEMENTS

### 2.1 *World Fiscal Arrangements*

As noted earlier, a variety of upstream fiscal arrangements exist in many oil-producing countries. The up-stream arrangement a country chooses has effect on the range of fiscal instruments that can be applied to the petroleum operations. In the instance where the State uses the go-it-alone strategy, the State bears all the risks of exploration and production, profit oil fully accrues to the State and thus renders a fiscal re-gime almost irrelevant as there are no private companies with which the profit oil will be shared. In the case of entire private control, the private operator bears all the risks and the state take comes through a combination of lease sales, income tax, special petroleum taxes and royalties in what is referred to as the Concessionary or Royalty/Tax systems. A blend of the two is the joint venture where the State and International Oil Companies (IOCs) share in varying degrees the risks of exploration, development and production in proportion to their equity share. The instance of State partnership with private oil companies is usually achieved with the State establishing a National Oil Company (NOC) to act on its behalf as a partner with material, capital and technical expertise in the petroleum operation. The latter known as contractual legal regime has been implemented under two families: Production Sharing Contract (PSC) or a Risk Service Contract (RSC). In the PSC, the ownership of the resource remains with the State and the IOC is contracted to develop and extract the resource in return for a share of production. Typically the IOC finances all exploration, and, if oil is found in commercial quantities, part of development and production costs. The government and the IOC each take a share of the profit oil after cost recovery according to an agreed formula. Under RSC the IOC is paid a service fee - in cash or in kind - by the host government to conduct petroleum operations. The service fee can be fixed or linked to profits.<sup>2</sup>

While different families of oil contracts exist, Johnston (2007) remarked that the type of system may matter less than other design elements, including especially the design of the fiscal system. The fiscal regime consists of a variety of tax, non-tax instruments and cost recoverability provisions. Multiple fiscal instruments may be needed to create an identity of interest between the government and the IOCs over the life of the agreement. Production-based instruments, such as royalties can ensure the government receives at least a minimum payment for its mineral resources. Profit-based instruments on the other hand allow the government to share in the upside of highly profitable projects, but they also increase the government's share in the project's risk inasmuch as the government may receive no revenue if the project turns out to be unprofitable (Tordo, 2007). Increasingly, newly prospecting countries tend to favour the PSC because this option obviates the need for host countries to commit scarce funds up front for exploration. This is also a preferred option by the IOCs because it gives them reasonable autonomy in operations.<sup>3</sup>

### 2.2 *Ghana's Fiscal Regime*

Ghana has opted for a hybrid system of production sharing and concessionary regime to govern contractual arrangements in the upstream petroleum industry. The fiscal terms are contained in the Petroleum Ex-ploration and Production Law (PNDC Law 88) and the

### **Box 1: Ghana's Petroleum Fiscal Regime**

- **Royalty on Gross Production of Crude Oil**
  - Percentage varies from block to block, water depth dependent, but not fixed in current law.
  - Ranges from 5% - 12.5% of gross production of crude oil, 3% of gross volume of gas production.
- **State Initial or Carried Interest**
  - State receives a 10% interest in each contract area. This interest is “carried” during the exploration and development phases. All the risk of exploration and development is borne by IOC's equity since the latter finances both the exploration and development costs.
- **State Additional Interest**
  - If a discovery is in commercial quantities, the State is entitled to buy additional interest in each contract area, for which it is responsible for full costs during development and production phases. The allowable percentage of this interest varies for each contract.
- **Petroleum Income Tax**
  - Petroleum Income Tax Law (PITL) sets default rate at 50%, but can be altered by contract.
  - In Jubilee, the rate has been set at 35%, 10% higher than the corporate profit tax rate.
- **Additional Oil Entitlement (AOE)**
  - An additional payment to be made to the government if the post tax rate of return for a project exceeds a targeted level. Trigger points at RORs of 12.5%, 17.5%, 22.5%, and 27.5%. AOE terms have become more progressive over time.
- **Other Taxes and Fees**
  - Including surface rental fees and a 5 percent withholding tax on subcontractors.
- **Cost recovery, Deduction and Cost Containment**
  - Unlimited carry-forward of losses under PITL.
  - 5-year straight-line depreciation of exploration and development costs and other capital expenditures, including buildings, transportation and communication facilities.
  - PITL contains no provisions against transfer pricing, although the Internal Revenue Act (Act 592) contains provisions to deter abusive transfer pricing.
  - PITL provides no limitation on treatment of interest expense and no withholding taxes on interest and dividend payments.
  - PITL levies a withholding tax on payments to subcontractors - both resident and non-residents - but provides a waiver where the subcontractor is an affiliate for contractor whose services are provided at cost.
  - PITL contains no provision for decommissioning costs, but the proposed exploration bill make provisions and such costs shall be deductible expense.
  - Both the PITL and the IRA impose limited ring fencing.
  - Exclusion of taxation of capital gains.
- **Stability clauses relate to protection from tax regime changes as provided in petroleum agreements.**
- **All gas is the property of the State.**
- **Contractor funds all exploration and funds development and production expenses less the extent of the State's initial carried and additional participating interest.**

**Table 1: Ghana: Summary of Fiscal Terms in Petroleum Agreements**

	Lushann Eternit Saltpond Oil and Gas Field July 2004	Vanco Energy/Lukoil (Deep) August 2002 (Existing)	Vanco Energy/Lukoil (Deep) (Draft New Agreement)	Kosmos Energy HC Consortium (Deep) May 2004	Vitol Upstream (Deep Terms) March 2006	Vitol Upstream (Shallow Terms) March 2006	Hess Corporation (Deep) July 2006
ROYALTY	3.0%	5.0%	10.0%	5.0%	7.5%	10.0%	4.0%
INITIAL PARTICIPATION	15.0%	15.0%	15.0%	10.0%	10.0%	10.0%	10.0%
ADDITIONAL PARTICIPATION	0.0%		5.0%	2.5%	5.0%	5.0%	3.0%
ADDITIONAL OIL ENTITLEMENT:	12.5%						
Rate of Return Thresholds					10.0%	10.0%	5.0%
14.0%							
17.5%					12.5%	12.5%	10.0%
18.0%							
19.0%							
20.0%		7.5%	7.5%				
22.5%					16.0%	16.0%	15.0%
23.0%							
25.0%		12.5%	12.5%	7.5%			
27.5%					20.0%	20.0%	20.0%
28.0%							
30.0%		20.0%	20.0%	15.0%			
32.0%							
33.0%							
35.0%		25.0%	25.0%				
38.0%							
40.0%		30.0%	30.0%	25.0%			
<b>SURFACE RENTALS (\$/ sq km) per annum</b>							
Initial Exploration Period		20	30	20	30	30	30
First Extension Period		40	75	25	50	50	40
Second Extension Period		75	75	30	75	75	75
Development./Production Period	50	100	100	100	100	100	100

	Tullow Consortium Tano (Deep) 19th July 2006	Tullow Consortium Tano (Shallow) 21st July 2006	Gasop Oil Saltpond 28th July 2006	Vitol Upstream South Cape Three Points (Deep) 30th June 2008	Oranto International/Stone Saltpond 3rd July 2008	Afren plc./Mitsui Consortium Keta Amendment 2 13th August 2008	Aker ASA/Chemu Power South (Deep) Tano 5th November 2008
ROYALTY	5.0%	5.0%	5.0%	12.5%	12.5%	10.0%	10.0%
INITIAL PARTICIPATION	10.0%	12.5%	10.0%	10.0%	10.0%	10.0%	10.0%
ADDITIONAL PARTICIPATION	5.0%	10.0%	10.0%	10.0%	10.0%	15.0%	15.0%
ADDITIONAL OIL ENTITLEMENT:							
			10.0%	15.0%	15.0%	12.0%	10.0%
14.0%			12.0%	17.5%	17.5%		12.5%
17.5%							
18.0%		10.0%				16.0%	
19.0%	5.0%						
20.0%	10.0%						
22.5%			17.5%	20.0%	20.0%		20.0%
23.0%		15.0%				22.0%	
25.0%	15.0%						
27.5%			22.5%	25.0%	25.0%		30.0%
28.0%						28.0%	
30.0%	20.0%						
32.0%						33.0%	
33.0%		25.0%					
40.0%	25.0%						
<b>SURFACE RENTALS (\$/sq km) per annum</b>							
Initial Exploration Period	30	75	30	30	30	40	30
First Extension Period	50	75	40	50	50	40	50
Second Extension Period	75	75	50	75	75	75	75
Development./Production Period	100	100	100	100	100	100	100

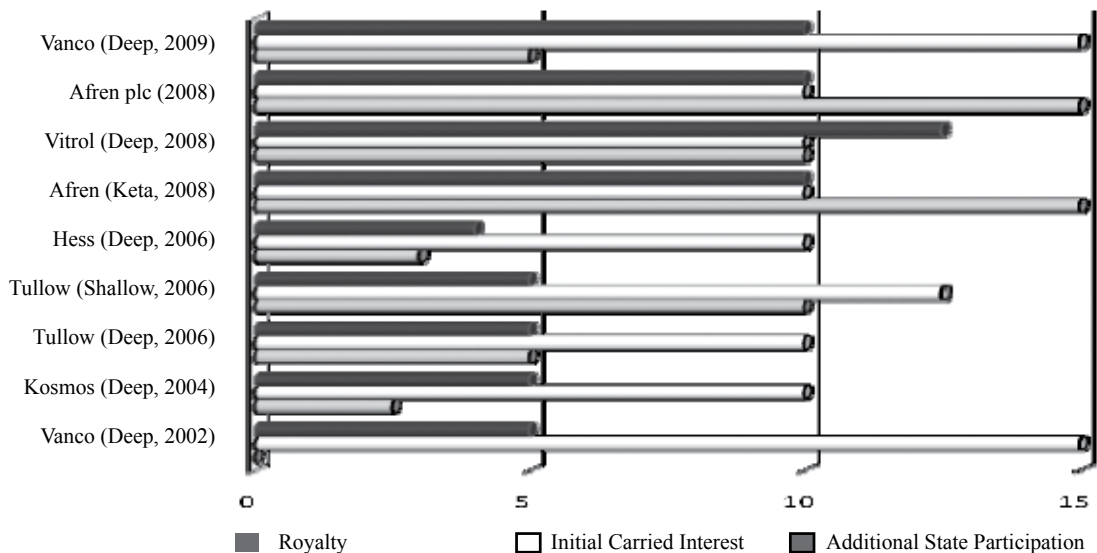
**Notes:** Corporate income tax is fixed at 35% under all contracts. There is also training allowance set as an annual fee for IOC and varies from \$50,000 to \$300,000 plus a one-time technology allowance ranging between \$200,000 to \$500,000 (hardly the equivalent of a signature bonus).

**Source:** GNPC

### Positive Features

The following positive features are noteworthy. First, there are no bonuses or major stock or up-front payments.<sup>5</sup> Ghana's share of revenue therefore accrues from a stream of payments over time and is sensitive to variations in quality and to changes in prices and costs. The training allowance of between \$50,000 - \$300,000 and the technology allowance hardly amounts to what one might refer to as signature bonus.

**Figure 1: Royalty, State Participation (percent): Selected Contracts**



Source: GNPC

Second, it provides for the payment of an ad-valorem royalty which guarantees a minimum State take. For the existing con-tracts, this ranges from 5% to 12.5% of gross production, and as seen from Table 1 is water depth dependent, with higher royalties for more recent agreements (Figure 1), reflecting perhaps the greater prospects of Ghana's deepwater exploration.

Third, the State has participating interest in the form of the initial carried interest, under which the State pays only for its proportionate share of production costs, and the additional participating interest, under which the State pays for both devel-opment and production costs. The initial interest has varied in the range 10-15% and, as we see in Figure 1, the additional interest has risen over time from 2.5% to 15%, together bringing State's interest across agreements in the range of 12.5% – 30%. Fourth after the payment of royalties, an allowance for cost recovery deductions by the companies and the sharing of oil in proportion to the equity interest, the oil companies are subject to a corporate income tax of 35%.

Fifth, the fiscal regime provides for additional oil entitlements to the State when the petroleum project achieves a certain level of profitability. This is an important fiscal provision intended to capture a share of resource rents, thus ensuring progres-sivity in the

State's take.<sup>6</sup> By its design, it is a self-adjusting provision that allows the State's share of revenue to rise in the event of high level of profits without modifying the fiscal regime. As we see from Table 1, except for the Jubilee I partners – Kosmos and Tullow - subsequent agreements (for example, Vitrol, Hess Corporation, Oranto, Afren and Aker ASA) have lowered the rate of return accumulation rates and the tax rates have risen, accentuating the progressivity of the fiscal regime (to which we shall return later). State participation through the NOC also increases the level of government take as profit oil is shared between the partners engaged in the production.

### *Some Potentially Negative Features*

Much of what we identify as negative features of the fiscal regime are contained in the Petroleum Income Tax Law, 1987 (PNDCL 188) which is intended to deal with the accounting and taxation peculiarities of upstream activities. First, there is no limit on the deductibility of interest expense. The deductibility of interest expense in financing petroleum operations (the so-called thin capitalization provisions) presents a major challenge for many countries. Because interest on money borrowed for the purpose of earning income is generally deductible in determining taxable income, the greater the quantity of debt held relative to the value of equity, the greater the interest deduction is likely to be. The absence of any limitations on debt-equity ratio means that contractors may strip profits by charging excessive interest cost.<sup>7</sup> Thin capitalization provisions provide a way, albeit an imperfect one, of preventing IOCs from avoiding domestic corporate income taxes. The absence of any thin capitalization provisions in Ghana's PITL is a potential setback to government's ability to capture rent. While the Internal Revenue Act (IRA), 2000 (Act 592) contains a thin capitalization provision of 2 to 1 debt to equity ratio, that provision to date is not applicable to petroleum operations, nor is it enforced in the case of mining. Even when the planned repeal of the PITL is carried out and petroleum income tax provisions folded into the IRA, it is unlikely to have any consequential effect because of the fiscal stability provision in existing petroleum agreements.

Second, and closely related to thin capitalization provision, is the fact that the interest expense and dividends are not subject to final withholding tax. What that means is that a contractor with high debt to equity ratio will most likely understate taxable income through the deduction of high interest expense and as a result be able to shift profits to a foreign jurisdiction at the expense of the host country. No less worrisome is the provision that withholding taxes "may be waived ...where the subcontractor is an affiliate of the contractor whose services are charged to the contractor at cost" (PITL(1987) Section 27). Surely, this is an invitation for abusive transfer pricing because it is difficult to determine whether a related company is providing services, especially management related expenses, at cost (McPherson et. al., 2009).

Third, and most contentious, is that the withholding tax on employees may be subject to individual contractual variation (PITL (1987) Section 28). Since most industrialized countries tax foreign income but give tax credit for taxes paid to foreign governments, it seems unreasonable that there should be a leeway for exemption from taxes on income

earned within a country's borders, if we consider that the percentage of income paid to expatriate employees may be considerable. Anecdotally, even the 183 days residency requirement is routinely breached or not enforced.

Fourth, ring fencing refers to a limitation on consolidation of income and deductions for tax purposes across different activities, or different projects undertaken by the same taxpayer. In the Ghanaian fiscal regime, consolidation of companies under common control is not permitted. However, the regime permits cost recovery deductions from one license area against production from another license area by a single company. The downside of this is that even this limited ringfencing provision can lead to revenue delays for the government because an investor who undertakes a new project will be able to deduct exploration or development expenditures from the new project against the income of existing projects that are generating taxable income. But strict ringfencing may not necessarily be appropriate either. More exploration and development can be stimulated if taxpayers are allowed a deduction against current income, which will generate more government revenue in the long run as the taxable base increases. The choice between opting for modest early revenues as against higher revenues in the longer term depends on the government's fiscal objectives and preference. One safeguard against current revenue losses to government is the use of cost recovery limits, which is noticeably absent in Ghana's regime. The implication here is that, net of royalty as a percentage of production volume, the rest of annual production could be devoted to cost oil, if required, leaving zero profit oil.

Fifth, transfer pricing concerns the act of pricing of goods and services given for use or consumption to a related party (e.g. subsidiary of a company). Governments try to discourage transfer pricing manipulation which occurs when a company fixes the transfer price on a non-market basis resulting in saving the total tax liability of the company by shifting accounting profits from high tax to low tax jurisdictions. Most countries have explicit provisions in their tax laws enabling a price adjustment to be made where under or over-pricing between related companies results in a lowering of taxable profits. There are no such explicit provisions in Ghana's PITL. The Petroleum (Exploration and Production) Law (PNDC 84) contains a weak provision: "...petroleum operations to be carried out under this Law shall be on the basis of prevailing international competitive prices and such other terms as would be fair and reasonable..."<sup>8</sup> It is the Internal Revenue Act which contains a provision that gives the revenue authority powers to deter abusive transfer pricing (McPherson et. al, 2009). Similar provisions should be echoed in the PITL. The capacity to enforce such provision is however doubtful.

And finally, as seen from Table 1 and as Heller and Heuty also point out in this volume, the regime does not provide for standardization of the fiscal terms. And with no apparent safeguard for contract transparency, this leaves the State's take of the resource rents from petroleum production subject to potentially ad-hoc negotiations with IOCs, vulnerable to corruption, and susceptible to sub-optimal financial outcomes. Most countries no doubt leave some terms up for negotiations on a contract-by-contract basis to facilitate competition among bidders and also to tailor fiscal relationships to the peculiarities of the individual



blocks. But it serves the resource owner's interest if the negotiable terms are small and a core is established firmly in law.<sup>9</sup>

The above cataloguing of the shortcomings and the potential profit-stripping avenues call attention to the role of the NOC on the Joint Management Committee (JMC). The JMC is expected to oversee and supervise all petroleum operations, including budgets that will be implemented by the international contractors.<sup>10</sup> How the JMC operates and the ability to oversee its activities are crucial for cost containment. As we see from the comparative analysis to follow, the absence of cost recovery limits in Ghana's fiscal regime may be justified by how the JMC is expected to operate. Be that as it may, there is concern as to whether the equality of representation on the JMC necessarily amounts to equality of capacities to verify the complex variables of costs and investments. In addition to the imbalance of capacities, the skepticism should come as no surprise because while the ultimate responsibility for cost control may lie in principle in the hands of the JMC, the day-to-day operations and control of costs and expenses remain the responsibility of the contractor.<sup>11</sup> To use the description by Johnston (1994), the bottom line of all this is a financial issue that boils down to the incentives signaling for continued exploration, how costs are recovered and contained, how revenue leakages are safeguarded, profit divided, and rent captured. Of additional interest here is the extent to which Ghana's fiscal system (a) stands against those of other countries in terms of the foregoing considerations and (b) judged on its own, its progressivity, flexibility, neutrality, stability and risk-sharing features.

### **3. COMPARATIVE ANALYSIS OF FISCAL REGIMES IN SUB-SAHARA AFRICA**

Comparison of fiscal systems is always a difficult exercise. Fiscal systems are multi-dimensional, reflecting the diversity in political economy and political risks, in costs and reserves potential, whether offshore or onshore, as well as the time when contracts were negotiated. Features of fiscal regimes for newly-emerging producers are likely to be more investor friendly than fiscal regimes in well-established petroleum producing economies. What the countries selected here have in common is that they are all in Sub-Saharan Africa (SSA) and one will reasonably assume that the political risks that investors face are not too dissimilar, and what investors care most are the political risks and an inefficient rent-collecting fiscal regime. The countries selected are in three categories: (a) oil revenues account for nearly half of all revenues in Nigeria, Angola, Congo, Equatorial Guinea and Cameroon and these are also established producers; (b) Ivory Coast as Ghana's neighbor with potential trans-boundary links to the Ghana's Jubilee field; and (c) Uganda as a newly-emerging producer and likely faces technical and economic challenges similar to Ghana. Table 2 summarizes some of the key fiscal instruments, and they are by no means uniform. Clearly there is no single vector of information that tells whether a country got a better deal than the other. Our goal therefore is simply to look at the features of the range of various instruments.

#### *3.1 Signature Bonuses and Front-Loading Fees*

Fiscal regimes in some countries provide for a number of front-end bonuses to be paid

to the State at different stages of project development. In our sample in Table 2, there are three main types of bonuses, namely; signature bonuses, production bonuses and commercial discovery bonuses. The major oil-producing countries - Nigeria, Angola, Congo and Equatorial Guinea levy some form of bonuses. In Nigeria and Angola, signature and production bonuses are water-depth dependent, and in Equatorial Guinea bonuses are linked to some predetermined level of production. From a public finances standpoint, what is good about bonuses is that they serve to bring forward revenue receipts for the State and shift risks to the investor. Less desirable however is that they tend to be regressive especially as in Ivory Coast where signature bonus is not tied to any level of activity. Currently bonuses - be they signature, commercial or production are not part of Ghana's fiscal regime. Competition for blocks is based rather on "work program bidding" – namely, the competitiveness of a plan for profit maximization of a particular block.

### 3.2 *Royalties*

Royalty rates vary: they may be negotiable as in Ghana and Cameroon, fixed as in Ivory Coast and Equatorial Guinea, or set between a specified range in other countries based on production capacity (Uganda) or water depth (Nigeria and Ghana). The Ghana Model Petroleum Agreement stipulates a royalty rate of 12.5% of gross production.<sup>12</sup> However, as seen in Table 1, actual agreements signed have levied rates ranging between 3% and 10% depending on the technical risk and the prospectivity of the block concerned measured by water depth and the API gravity (or crude sweetness). Rates between 3% and 5% have been applied to Deep Water and marginal blocks, and 10% for Shallow Water operations.<sup>13</sup> Ghana's high end rate of 12.5% matches Uganda's high end for production in excess of 7000 barrels per day. Unlike Ghana's straightforward fraction of production volumes, Uganda relies on progressive sliding royalty between 5 and 12.5% which adjusts upward on the increments when production rises and vice versa. Well productivity acts as proxy for resource quality. Ghana's rate is also lower than Nigeria's 20% for onshore production, 10% for inland basins and depending on water depth from 8% to 18.5% for offshore production.<sup>14 15</sup>

**Table 2: Key Features of Fiscal Regime for Selected Sub-Saharan African Countries**

	Nigeria	Angola	Cote D'ivoire	Congo	Cameroon	Equatorial Guinea	Uganda	Ghana	World Average Fiscal Terms
<b>Bonuses</b>	Signature Bonus: Offshore Up to 200ms \$10m Up to 500ms \$20m Up to 800ms \$25m Up to 1000ms and beyond \$20m Production Bonuses: at 50mm bbls 0.2% of price; at 100mm bbls 0.1% of price.	One of three bid items in acreage auction may vary by contract.  Signature Bonus: \$10- \$70million. Signature bonuses for 3 ultra deep water blocks in the 1999 licensing round stood at \$300 million each.  Production Bonus: Up to \$12 million	Negotiated. However, model contract provides for \$12 million	None	None	Signature bonus: \$0.5mm Commercial Discovery Bonus: \$1mm  Production bonuses: \$2mm at 20,000 bpd. \$5mm at 50,000 bpd. Production bonuses recoverable	\$0.5m to meet administrative cost. Amounts may vary	None	
<b>Royalties</b>	Water depth dependent <100ms: 18.5% Up to 200ms: 16.67% Up to 500ms: 12% Up to 800ms : 8% Up to 1000ms: 4% Deep offshore: 0%	Established by law	None	15%	Royalties are negotiable-a closing item after investors have been guaranteed a minimum share of profit before tax	10%	Daily production dependent (bbls) <2500 : 5% 2500~p<5000: 7.5% 5000~p<7000: 10% p>7000: 12.5%	12.5% of gross production of crude oil (a number of existing agreements put this figure at 5%)	World average is about 7%. Most systems have a royalty or effective royalty rate due to the effect of cost recovery limit.
<b>State Participation (the maximum equity share the State can take)</b>	Variable	25%	Up to 20%; 10% initial interest; additional 10% interest carried through exploration and development. Reimbursed from State's share of proceeds, includes interest at LIBOR + 1%	---	State participates in a commercial discovery up to 50% on a carried basis	---	15% on carry forward basis including interest rate at LIBOR from production	Initial State Participation through 10%-15% carried interest through production. Additional participation varies from agreement to agreement and has varied from 2.5% - 15%	Typical average is around 30%. Approximately 50% of countries with option to participate are carried through some stages of petroleum activities.

**Table 2: Key Features of Fiscal Regime for Selected Sub-Saharan African Countries**

	<b>Nigeria</b>	<b>Angola</b>	<b>Cote D'ivoire</b>	<b>Congo</b>	<b>Cameroon</b>	<b>Equatorial Guinea</b>	<b>Uganda</b>	<b>Ghana</b>	<b>World Average Fiscal Terms</b>
<b>Cost Recovery and other investment incentives</b>	Current expensing of exploration and/or development costs, with provision for tax credits Duty exemption for imports of equipment and capital goods	Normally 50% of production expensed (up to 65%) Includes uplift on CAPEX (20-50%) Depreciation over 4 years.  Duty exemption for imports of equipment and capital goods	Negotiable. Indicative cost recovery ceiling may range from 40% of gross production in shallow water to 75% (or even 80%) in deep water.  Duty exemption for imports of equipment and capital goods	Current expensing of exploration and/or development costs  Cost recovery limit of 70%  Duty exemption for imports of equipment and capital goods	Current expensing of exploration and/or development costs  No cost recovery limit	Current expensing of exploration and/or development costs  No cost recovery limit	Current expensing of exploration and/or development costs.  60% cost recovery limit (CAPEX and OPEX) is allowed.  Decommissioning costs deductible from income.  Exemption of duties on imports of equipment.	Current expensing of exploration and expenses by 5-year straight-line depreciation.  No explicit cost recovery limit  Decommissioning costs deductible from income.  Exemption of duties on imports of equipment.  Foreign national employees of contractor or its affiliates exempted from the payment of taxes and other duties on imports of personal and household effects	Average 65%. PSA's have limits mostly based on gross revenues. Over 20% of countries have no cost recovery limits.  World average on depreciation is 5-year straight-line decline for capital costs  Most countries (55%) erect ringfence or a modified ringfence (13%) around contract area.
<b>Tax Allowance</b>	50% Credit in Capex for Pre-1998 Contracts. 50% Allowance on Capex for post 1998 Contracts	40% uplift on capital expenditure	N/A	N/A	N/A		N/A		
<b>Income Tax</b>	Petroleum profit tax of 50%, 85%	50%	27%	35%	57.5%/48.65%	25%	30%	Fixed at 35% since 1990s	Average 30-35%
<b>Withholding tax</b>	Uganda: 15% applicable on dividend payments, management fees and interest and service delivery. Ghana: 10% withholding tax on amounts due to sub-contractors as specified in the Petroleum Agreement 2010 Budget recommend 15% No comparable data for other countries								

**Table 2: Key features of Fiscal Regime for Selected sub-Saharan African Countries**

	Nigeria	Angola	Cote D'ivoire	Congo	Cameroon	Equatorial Guinea	Uganda	Ghana	World Average Fiscal Terms
<b>Profit Oil</b>	Profit oil split to government:	Profit oil split to government subject to contract-by-contract variation.	Profit oil split to government:	<20,000bp d at 30%	None	Profit oil split to government:	Profit oil split between State and IOC	Profit oil split between State and IOC based on ROR system (See Additional Oil Entitlement)	Most profit oil splits (about 55-60%) based on production based sliding scale. Others based on ROR system
<b>Additional Oil Entitlement</b>	20% at 350mm bbls 35% at 750mm bbls 45% at 1000mm bbls 50% at 1500mm bbls 60% at 2000mm bbls. Over 2000mm bbls negotiable	<10% ROR at 15% <20% ROR at 30% <30% ROR at 40% <40% ROR at 55% >45% ROR at 80%	<30,000bpd at 40% <50,000 bpd at 44% <100,000 bpd at 46%	<40,000bpd at 50% <40,000bpd negotiable profit oil shares are however biddable		<30% ROR at 0% <40% ROR at 20%-25% <50% ROR at 40%-60% >50% ROR at 60%-80%	See Table 1		
<b>Average Gov't Take</b>	64%-70%	64%	49%	64%	74%-78%		Variable ranges between 43.5% -66%.	Variable: ranges between 38%-50%	
<b>Rentals</b>	<p><b>Uganda:</b> Vary by exploration period: 1st period \$2.50 sq km, 2nd period \$5 per sq km, 3rd period \$7.5 per sq km  <b>Ghana:</b> Surface Rentals: Initial Exploration Period - US\$ 30 per sq km, 1st Extension Period - US\$ 50 per sq. km, 2nd Extension Period - US\$ 75 per sq km, Devt and production Area - US\$ 100 per sq km. Angola's area fees are subject to contract-by-contract variation. No comparable data for other countries</p>								

**Notes and Data Sources:**

**Notations:** a) ms means meters of depth, b) m in currency means millions, c) bbls means barrels  
 Nigeria Signature bonuses and royalties data are taken from Oil and Gas in Africa, Oxford University Press, 2009.  
 Uganda data taken from Twinamatsiko F. N., Is Uganda's Fiscal Regime Sustainable? An Assessment, University of Dundee  
**Others:** Wood Mackenzie PPT to Petroleum Revenue Management Workshops, Luanda, May 2006 (WB website).  
 Cote D'Ivoire: Commonweath Secretariat, Special Advisory Services Division  
 Nigeria, Congo, Gabon, Cameroon, Equatorial Guinea:  
 Mineral and Petroleum Taxation: How Attractive are the Fiscal Regimes of the Deepwater Areas Offshore West Africa to Foreign Investment, Odianosen  
 Data on World Average Fiscal terms taken from Silvana Tordo et. al (2010), Petroleum Exploration and Production Rights, Allocation Strategies and Design Issues, World Bank Working Paper No. 179, 2010, and Johnston (2007)

### 3.3 *State Participation*

State participation, or the maximum equity share the State can take, provide options for the host government or the NOC to participate in petroleum activities. This participation usually takes the form of an initial carried and additional participating interest. For Ghana, the Petroleum Exploration and Production Law 1984, gives the State the right to acquire additional percentage interest in the operations of a petroleum project if there is a commercial discovery.

Typically with free carried interest, the resource owner makes no financial contributions towards exploration and development costs. The contractor bears the State's risk and remains responsible for 100% of all costs. However, the State or its agent pays for its proportionate share of production costs on commencement of production. This is a way of recovering the State's past expenditures in its exploration and promotion efforts on the block and also reduces Government costs and risks of exploration but increases its share in the rewards of discoveries. Additional participating interest gives the State the right to acquire an additional percentage interest in the project upon commercial discovery.

The majority of countries in SSA have taken steps to ensure some degree of State participation. Known exceptions are Mozambique, Sudan and Egypt.<sup>16</sup> In our sample, with the exception of Congo and Equatorial Guinea, State participation is a major element of the fiscal regime. The differences clearly reflect the variations in fiscal systems with Nigeria's state equity varying widely among agreements. Ghana's equity share has ranged from 12.5% to 25% compared to, Angola's 25%, Cote d'Ivoire's 20% and Uganda's 15% and only half of Cameroon's ceiling of 50%. Some advantages of government participation are that it increases the sense of country ownership, facilitates transfer of technology and skills and increases the host government's control over field development decisions.

However, government participation through carried interest whereby the investor pays all the costs reduces the investor's cash flow, and from the investor's perspective this may increase the risk profile of the project. The downside with most State participation occurs when the State's interest is paid out of production and therefore the investors have the burden of raising the entire financing for operating and investment costs. For one thing, partners are not bankers and therefore may charge higher interest cost on any carrying arrangements. This is all the more worrisome if there is no limit on deduction of interest expense under thin capitalization provision discussed below. African governments must be proactive in exploring financing options for their equity participation (in place of the traditional "cash call" operations) that best fits the country's overall long-term fiscal and debt management strategy. Cote d'Ivoire caps the interest charges at LIBOR plus one, Uganda at LIBOR to curtail profit stripping.<sup>17</sup>

### 3.4 *Cost Recovery and Cost Containment Provisions*

The ability of investors to recover their investments and the ability of the State to control and contain costs are important elements of the fiscal regime. Given the complexity of the industry, African governments are particularly vulnerable to the problems of cost

verification, cost overstatement and profit stripping as noted earlier. The challenges range from the monitoring and verification of capital expenditures, loss carryover provisions, transfer pricing mechanisms, ringfencing, and the range and limits of expenses that may be considered deductible for tax purposes.

Some fiscal regimes provide limits on the percentage of crude oil production (after deduction of royalties) that can be used to recover costs. If costs exceed the cost recovery ceiling, the difference is carried forward for recovery in subsequent periods. In our sample, the ceilings range from 40% to 100%. Higher cost recovery limits allow the contractor to achieve payback of its investment faster and therefore serve as incentive for investments. But it also means that the contractor is unlikely to pay corporate tax in the early years of production. This concern may be offset partly by royalty payments which takes effect as soon as production begins.

Uganda provides limitations on cost recovery up to 60% with no uplift on capital expenditures. Cote d'Ivoire's recovery ceiling ranges from 40% of gross production on shallow water to 75-80% in deep water. Congo's recovery ceiling is up to 70%. Angola allows up to 65% of its production to be expensed including a 40% uplift on capital expenditures as tax allowance. It is debatable whether cost recovery limits are necessary in Ghana's case once the competition for blocks has been judged on "work program bidding" which presumably already takes into account the overall profit maximization prospects of a particular block. In which case, what may seem more crucial for Ghana is the "cost stop" elements in the contract— what is allowable cost and what is not. But if Ghana's mining fiscal regime is any indication, the "cost stop" elements in Ghana's petroleum regime, as noted earlier, seem fairly open-ended.

Ghana's PITL allows for; (a) the deduction of capital expenditures, including development costs on a straight-line basis beginning in the year the expenditure is incurred or the year of commencement, whichever is later; (b) losses to be carried forward indefinitely for tax purposes although the Internal Revenue Act allows only a 5-year loss carry forward; (c) deductibility of royalties as expense in determining chargeable income; and (d) exemption of duties and applicable taxes on imports of capital and machinery. The deductibility of royalties in determining chargeable income remains a pernicious provision since "royalty is not paid out of the contractor's share of petroleum".<sup>18</sup> Moreover, there are no sunset clauses in the exemptions regime. In some countries though, these exemptions are limited to the exploration and development phase. There are, however, limitations on ringfencing – that do not permit companies to consolidate income and expenses across activities, but there are no provisions or limitations on transfer pricing, excessive deduction of interest expense or thin capitalization.

### 3.5 *Income Tax*

In our sample, this ranges from 25% to 50%. In Ghana's PITL petroleum income tax was fixed at 50% of chargeable income or 'as negotiated in a Petroleum Agreement'. Since the 1990s, a negotiated rate of 35% has been applied in all agreements. The 35% rate is largely

in line with that for most of the countries in the sample and, except for Nigeria with tax rate in the range of 50-85%, the 50% fixed in Ghana's old legislation seems to be on the higher side relative to the sample countries. For example Equatorial Guinea, a relatively mature oil producing country, has the lowest income tax rate in our sample at 25% as against the world average of 30-35%. A high corporate tax rate unfortunately diminishes incentives for cost reduction and encourages overstatement of cost to understate profit margin.

### 3.6 *Profit Oil Split*

In production sharing contracts, profit oil is the revenue that remains after deduction of royalty and cost recovery. This profit oil is split between Government and the contractor on a pre-determined basis. The alternative to profit-sharing is the gross-production sharing (or Peruvian type PSC) as in Nigeria, Cote d'Ivoire and Congo all of which are on a sliding scale. Tordo (2007) asserts that fiscal systems that use sliding scales based on daily or cumulative production targets are insensitive to changes in prices and costs. Given the price volatility of the oil industry, these systems are more likely to produce a misalignment of interests between host governments and contractors leading to renegotiations. On the other hand, these systems are relatively easy to administer and may prove reasonably efficient in sharing the rent between the contractor and the government when project uncertainty is low.

For PSCs before 2005, profit oil share in Nigeria is based on cumulative production with government share ranging from a minimum 20% to 60%.<sup>19</sup> After 2005, Nigeria's profit oil share is based on ROR factor as in Angola, Equatorial Guinea and Ghana. Angola's structure appears to be more progressive than Ghana's. Angola's minimum profitability threshold is 10% for government take of 15% and a maximum threshold of 45% at a share of 80%. Ghana's minimum threshold for Tullow deep (shallow) is 19% (18%) for government take of 5% (10%). For Kosmos the minimum threshold is 25% for a share of 7.5%. Unlike Angola and Equatorial Guinea, Ghana's maximum profitability threshold for both Tullow and Kosmos is 40% for a share of 25% to the State. ROR based fiscal systems introduce flexibility in the fiscal package to suit the profitability of the particular project. This makes projects under such systems more attractive to contractors and less risky as candidates for project financing. On the down side however, it is relatively more demanding to administer.

### 3.7 *Government Take*

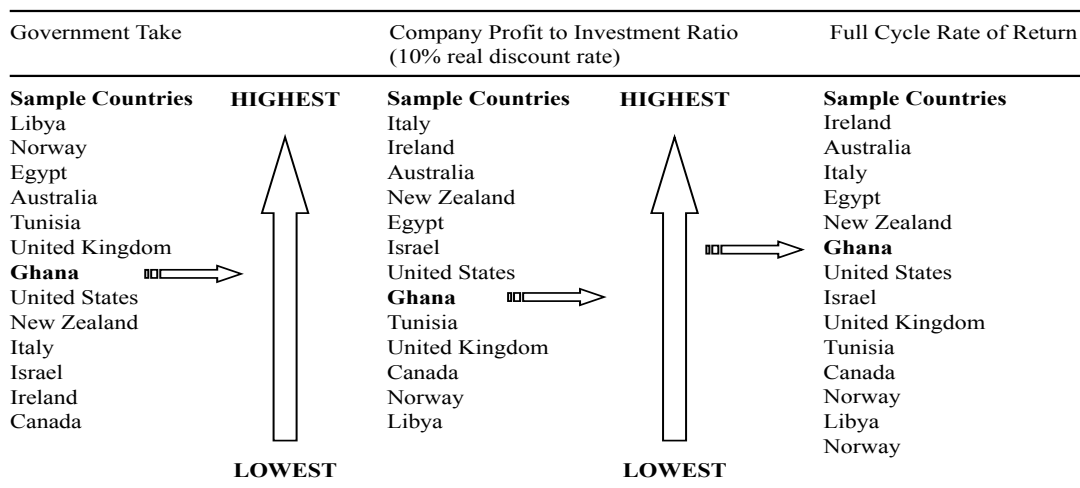
Government take, (defined as the undiscounted revenues that accrue to government from all sources as a percent of total undiscounted gross or net revenues of a project) is often taken as a measure of the fairness or attractiveness of a fiscal regime. On the surface, Ghana's 38-50% government take based on Jubilee Phase I at a price of \$65 per barrel may be judged too low compared to the government take of 64-70% for Nigeria, 64% for Angola, and 74-78% for Cameroon. However, as Johnston (2007) points out, government take can be a misleading statistic "because it does not take into account factors such as the timeframe for payouts to government and the level of government participation" (p. 56). For example, fiscal regimes with more front-loaded taxes and charges such as Angola and Equatorial Guinea are likely to yield higher government take than a regime with back-end loaded taxes



and relies less on front-end instruments like bonuses and royalties. The attractiveness of a fiscal regime may be multi-dimensional. The comparisons in Figure 2 below put Ghana's fiscal regime into some perspective.

In a comparison of fiscal regimes, the Cambridge Energy Research Associates (CERA) placed Ghana among a peer group of 13 deepwater gas producing environments. Ghana in the sample represented a newly emerging producer that lacks the necessary infrastructure and also faces the challenge of developing export markets in the future. Apart from the separate gas royalty which is currently set at 3%-5%, every aspect of the gas fiscal regime is essentially the same as the fiscal regime for oil. By assessing the full-cycle exploration and development economics and at a range of prices, Figure 2 shows Ghana's fiscal regime ranking on the basis of government take, investors' profit to investment ratio, and full cycle rate of return.

**Figure 2: Comparison of Fiscal Regime of Natural Gas**



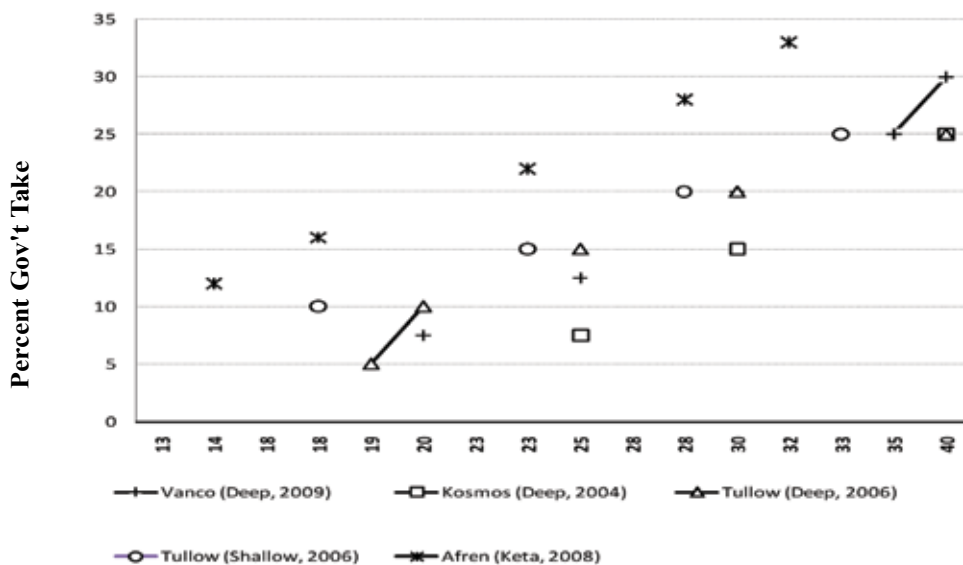
**Source:** Adapted from IHS Cambridge Energy Research Associates, published in "A Comparison of Fiscal Regimes: Offshore Natural Gas in Israel" Special Report, 2010

Based on ranking by government take, Ghana's fiscal regime ranked 7th lowest behind six OECD countries. For the other six countries in the sample, most of them established producers, government take was higher than Ghana. Libya's fiscal regime ranked highest. The last two columns show the ranking based on profit to investment ratio and rate of return, providing a feeling for how quickly investors can get their money back or how long investors can achieve a reasonable return on their investments. Investors' profit to investment ratio ranked highest in Italy and lowest in Libya. Ghana ranked 8th behind OECD countries and, not surprising, as providing more attractive terms than the six other established natural gas producing countries in the sample. As a newcomer with challenges to access to markets, Ghana's fiscal regime appears reasonably competitive and less onerous for investors. It is expected that Ghana's take should increase over time with greater prospectivity, greater clarity about the regulatory environment, and greater predictability of the political environment.<sup>20</sup>

## 4. EVALUATION

In this section we evaluate the strength of Ghana's fiscal regime on the basis of five key criteria which are important to both the resource owner and contractor; namely, the progressivity, stability, flexibility, neutrality and risk sharing capacity of the fiscal regime. Ideally, a fiscal regime should be sensitive to project profitability, signal greater predictability or minimize policy uncertainties, adequately respond to changes in future market conditions, not distort resource allocation decisions and be equitable in risk sharing between resource owner and contractors. We discuss these in turn.

**Figure 3: Additional Oil Entitlement: RoR Thresholds and Percent Gov't Take**



Source: GNPC

### 4.1 Fiscal Regime

A fiscal regime is progressive if the cumulative taxes in the regime are proportional to income and are sensitive to project profitability. Progressivity is important for both contractor and host government. A company will want to pay taxes in proportion to the profitability of its operations or with the level of rents it earns from the operation. Project profitability depends on costs and prices and the government would want to see its take increase as prices improve or as initial costs are recovered making the project more profitable. A progressive regime tends to attract investments for even marginal projects potentially broadening the tax base and eventually resulting in higher government revenues.<sup>21</sup> Progressivity can be attained through a progressive income tax structure, a sliding scale royalty in the case of a concessionary regime, or a progressive government take in the case of production-sharing arrangements. In general, the further downstream the government goes to capture rent,

the less regressive the fiscal regime (Tordo, 2010). On that score, additional profit taxes (as in Namibia, Nigeria, and Equatorial Guinea) or contractors' achieved rate of return (as in Angola and Ghana) rank highly under this criterion. Unlike Uganda, the progressivity of Ghana's fiscal regime is captured through the Additional Oil Entitlement (AOE) provision reported in Table 2. Figure 3 shows a sample of the structure of AOE regime in Ghana. Additional payments have to be made to government as soon as the accumulated cash flow becomes positive at the different rate of return thresholds. At which point, investors have already recovered their original investment recoverable in that period. In Figure 3, the lower and the further to the right is the marker, the less progressive is the additional government take in the contract. Progressivity clearly has not been uniform with considerable contractual variation. On that basis alone, the Afren contract for the Keta basin signed in 2008 has a more progressive government take than (a) Tullow contracts of 2006 and 2006, (b) Vanco deepwater contract of 2009, and (c) the Kosmos deepwater contract of 2004 based.

In comparison with Angola, Madagascar and Namibia, McPherson et. al (2009) remarked that Angola and Namibia's rate structure for sharing petroleum profit had a higher degree of progressivity than Ghana, although Ghana's structure has improved considerably between 2006 and 2008 contracts as evidenced in Figure 3. The income taxes also rate highly here as they target economic rent. It is progressive in the sense that it takes effect at the 'back end' when the company has made its allowable deductions and established the magnitude of its economic rents. The key issues for Ghana are in determining the optimal thresholds, the ROR bands, and the applicable progressive take for each contract. In addition, the absence of cost recovery limit in Ghana's fiscal regime, the absence of thin capitalization provisions and hence limits on interest deductibility, compromise the degree of progressivity that can be attained through the income tax and the AOE because of the scope of 'importing' expenses and limiting the tax base.

#### 4.2 *Stability*

A "stable" fiscal regime is one that does not change over a certain period of time, or whose changes are predictable (Tordo, 2007). Perceptions of fiscal stability influence investor decisions about undertaking production in a country. Given the long term nature of petroleum projects, the fiscal stability over the life time of the project is an important consideration for potential investors. With high volatility of oil prices, it is undesirable for a host government to continuously adjust fiscal regimes based on short-term price movements. For government, a stable fiscal regime is also desirable since it allows for better planning for expected oil revenues.

Contractors have tried to achieve stability of contract terms by negotiating for stability clauses in their agreements with host governments. Stability clauses are of two types: "freezing clauses" that maintain the fiscal terms unchanged typically for the duration of the contract or for a certain period of time, and "equilibrium clauses" that allow for some adjustment that do not have asymmetric benefit or damage to one party.<sup>22</sup> The most important argument for those who favour freezing clauses is that it eliminates arbitrary changes in the fiscal regime to the detriment of contractors. Stability clauses therefore

manage political risks, restrain potential ‘legislative mischief’ and guarantee that contractual terms will remain constant throughout the life of a project, or that any change would require an agreement between both parties before it may be effected (Amaechi, n.d).<sup>23</sup> Two sections of Ghana’s Model Petroleum Agreement bear on stability provisions: Article 12.2 with respect to income tax states:

“Where a new income tax rate comes into force... Contractor shall have the option of either applying the new income tax rate ... or remaining under the Petroleum Income Tax Law.”

Article 12.11 also states:

“Should the fiscal authority involved determine that the Petroleum Income Tax Law does not impose a creditable tax, the parties agree to negotiate in good faith with a view to establishing a credible tax on the precondition that no adverse effect should occur to the economic rights of the State”.

The stability provision in Article 12.2 with respect to income tax rates is for all practical purposes a “freezing clause”. It puts contractors in a stronger position because compliance in the case of upward revisions is not obligatory. It is also asymmetric because the contractor can exercise its option in the event of downward revision of rates. While Article 12.11 stands as an “equilibrium clause”, it is potentially an invitation to interpretation disputes between government and contractors about what is a “credible tax”. Resource owners may rightfully regard stability clauses that seek to freeze the terms of the contract, regardless of changes in the external environment, or even that provide for some equilibrium clauses, as a potential loss of sovereignty over their natural resources.

The potential for conflicts of interest may gradually be waning, leading to narrower definitions of stability clauses where both parties agree to a possible renegotiation of fiscal terms if the economic conditions go beyond a certain range of outcomes. Even here the specific terms of conditions and definitions must be pre-defined by both parties. For Ghana, if the experience in mining is any indication of the challenges of obsolescing bargain, it is highly unlikely that government would seek to make retroactive changes to existing fiscal regime arrangements. An industry at the early stage of development should focus on building trust and stability and apply any fiscal changes to new licenses and subsequent block leases.

### 4.3 *Flexibility*

Flexibility refers to the responsiveness of fiscal instruments to changes in future market conditions – that is the capacity of fiscal instruments to collect a reasonable share of the resource rent over time under a range of future market outcomes (both better and worse than expected outcomes). In general, flexible fiscal instruments limit the need for renegotiation when market conditions change. Profit-based taxes such as the corporate income tax offer more flexibility. This is because the rate is stable over time (the proportion or percentage of income does not change) as market and project conditions which affect profitability

change. With this type of tax, the government take varies with project profitability. The flexibility provision in Ghana's fiscal regime lies in the AOE as explained above. Reviewing the provisions in the relevant legislations that weaken the progressivity of the fiscal regime therefore deserve attention for at least two reasons: to limit the adverse impact of fiscal stability clauses, and to preempt the inevitable pressures to modify the original fiscal regime in the event of sustained price increases.

#### 4.4 *Neutrality*

A fiscal instrument is neutral if an action or project that is assessed to be financially viable in the absence of the fiscal instrument remains viable after the instrument is applied. In other words, a "neutral" fiscal regime neither encourages over investment nor deters investments that would otherwise occur (Tordo, 2007). The neutrality criterion is useful for determining the extent to which the fiscal instruments may negatively affect exploration, development, production and closure decisions.

In general, signature bonuses that are independent of profitability score poorly under this criterion. Output-based royalties can affect extraction decisions and if investors anticipate their impact on profitability it can also affect their decisions on exploration and development. Profit-based taxes and state equity investments instruments rank more highly under the neutrality criterion. This is because the government take from these instruments varies with project profitability. On the surface, Ghana's fiscal regime, with minimum front-end charges and flexible with the State's take adjusting automatically with profitability, can be said to rate favourably on neutrality. But as Mommer (2001) points out a case can always be constructed where any form of taxes and levies can be a disincentive, deter exploration or, even worse, create perverse incentives.

#### 4.5 *Risk Sharing*

In the exploration and development phase, the investor bears all the risk and during this phase the State has no direct financial risk but it is obliged to monitor the investor's progress in fulfilling the agreed work programme. The State, however, shares in the project risk by virtue of the fact that at the production phase it grants tax deductions for investor's capital costs. Risk is not limited to the exploration phase and even during production, the project is subject to price risks. Nakhle (2010) identifies price risks as occurring when there are sudden significant changes in petroleum prices. Contractors and the State, by virtue of its equity share, also face cost risks in the production phase. These risks can be catered for with cost recovery mechanisms in the fiscal regime. With these potential risks facing the investor, an attractive fiscal regime is one that provides some assurance that there will be sufficient cost recovery allowances to cater for its costs and risks during the exploration and production phases.

On the part of the government, it faces a risk of revenue delay. Hogan and Goldsworthy (2010) explain revenue delay as a situation in which the government does not start to collect revenue until sometime after the project commences. For instance revenue collection

can be delayed due to cost recovery mechanisms that give generous capital allowance to investors. The government can also face a risk of fiscal loss. A fiscal loss occurs when the government receives lower than expected returns due to adverse market outcomes.

Stringent stability clauses therefore do not augur well for minimizing the State's risk. Traditional clauses that effectively eliminate the State's powers to change fiscal terms regardless of changes in the economic environment leads to fiscal losses for the State in the event of unanticipated significant improvements in project profitability. For Ghana, the risk sharing on account of the stability provisions in the Tullow and Kosmos agreements is inequitable, especially since the initial fiscal terms granted by the State, arguably, were highly concessional to reflect the prevailing geological risks and Ghana's entry into petroleum production.

In general, output-based fiscal instruments help to minimize risks of fiscal loss and/or revenue delays to the government and therefore rank highly under this criterion of risk sharing. Although output-based royalties ensure that government gets some minimum revenue in all the years in which production from the resource is positive as well as in years in which losses may occur, Ghana's fixed royalty of about 5% provides a minimum take below other SSA countries and below the world average of 7% as noted in Table 2. Unlike Nigeria, Angola, Cote d'Ivoire and Equatorial Guinea, among others, the absence of signature bonuses to generate early revenues for the State also minimizes risks to the investor. Purely back-end loaded taxes may not be ideal as they transfer too much of the risks to the government, especially since companies may manipulate costs and investments which are complex variables with costly verification and monitoring.

Finally, we have discussed how Ghana's fiscal regime rates on these features that are important to both government and contractors as a check list. But, in practice, it makes more sense to think of them as a Venn diagram of varying overlapping circles and mutually reinforcing features. It is a challenging feat to design a fiscal regime that satisfies all of these features satisfactorily and in equal measure. A fiscal regime that is highly progressive may be less neutral and less equitable in risk sharing. In a rapidly changing environment, enhancing flexibility may also mean making it possible to make periodic adjustments to some areas as needed. In fact, it is quite possible that policy-makers do not consciously develop their fiscal regime with the view to addressing all these issues in equal measure. Sufficient to achieve a certain measure of intersection, the degree and desirability of which are likely to change over time. To borrow a caution from Brennan and Buchanan (1977), actual fiscal design especially in this context may look more reasonable when the institutional and political realities are considered than they do from an optimal tax perspective. The fiscal regime's adequacy therefore depends on the fine balance which policy-makers put on these features and on what they consider to be the priorities.

## 5. CONCLUSIONS

Ghana emerged as a new oil-producing country in 2010. The question we have tried to help answer, at least partially, is whether Ghana is getting a fair share of the revenues from petroleum exploitation. Of course, it is not just the revenue shares that constitute benefits. The employment opportunities for Ghanaians during development and production, the profits that accrue to local businesses, the technology transfer skills and know-how matter as well. In this paper we have focused on the fiscal regime, made comparisons of some of its key features with those of a sample of Sub-Saharan African countries, and assessed the strengths of the regime on the basis of progressivity, stability, flexibility, neutrality and its risk-sharing features.

With minimum front-end charges, Ghana's fiscal regime guarantees minimum State take, rates favourably on neutrality and flexibility. While it appears to be competitive against a peer group of SSA, its risk of revenue delay is high. On the surface, Ghana's 38-50% government take based on \$65 per barrel may be judged too low compared to the 64-70% of Nigeria, 64% for Angola and 74-78% for Cameroon. But a comprehensive review suggests that the current share is neither the largest nor the smallest, that the percentage take alone is not sufficient to judge the fairness of value sharing. One thing is certain, government share should increase with greater prospectivity, greater clarity about the regulatory environment as Ghana seeks to build political stability at home and trust in the industry. While Ghana's regime by all standards is progressive, it is not the most progressive with competing jurisdictions in SSA. For sure, in the current regime, progressivity is undermined by the weak thin capitalization, the absence of cost recovery limits and weak capacity for monitoring of contractors' costs and investments.

There is a world of choice open to the design of a petroleum fiscal regime. Decisions over the type of fiscal regime, the State's needs for revenue for the extraction of its resources, the incentives system, the monitoring and cost verifications, and equitable risk-sharing are important considerations within the context of the geological uncertainties in petroleum activities. The reality is that both oil and gas contractors and governments, to quote one industry expert, "want to maximize rewards and shift as much risk as possible to the other party".

The balancing of interest should begin with defining the fiscal regime in legislation in a way that is not rigid yet does not leave too much discretion in the contracting process. The current regime does not provide for standardization of the terms governing contracting. As impressive as the additional oil entitlement provision is, too many elements of the regime are open to contractual variation, leaving Ghana's share of the resource rent subject to potential ad-hoc negotiations.

Second, we have not fully reviewed the Petroleum Income Tax Law (PNDCL 188) promulgated in 1987. But it does contain some fundamental flaws. The revisions to the

law should reflect current industry best practices with the view to guarding against open-ended exemptions, allowances, withholding taxes, transfer pricing and cost containment. A superficial revision that does not respond adequately to these concerns betrays the trust of citizens in the State's capacity to realize the full benefit of resource extraction for the public good. Indeed a better option might be to repeal the PITL and incorporate all its essential features into the Internal Revenue Act to ensure consistency of the treatment of chargeable income and with greater clarity on "cost stop" elements for all extractive industries, mining included. Third, the revisions to the PITL or its incorporation into the Internal Revenue Act, ought to keep in mind that stability does not mean no change, but the conditions for change should not be asymmetric with the contractors holding the stronger discretionary position.

Finally, while fiscal design elements are important, so are the means by which blocks are allocated. Ghana's "work program bidding" by which blocks are awarded on the basis of competitive bids, has a major shortcoming of lack of transparency on what is judged to be "competitive". In the end what could become a competitive bid is in fact a negotiated package on several items.

## ENDNOTES

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<sup>1</sup>See Johnston (1994) and Nakhle (2010) for a taxonomy of legal framework governing hydrocarbon activities.

<sup>2</sup>Service contracts can be a pure service contract, in which a contractor is engaged to undertake specific upstream activity and is paid for its service, or a "risk service contract" whereby a company undertakes all the exploration and is paid for its services at a fixed rate of return if there is a positive find ( Johnston, 1994). See also Tordo (2007) for a rendition on the key features of the legal arrangements. For the classification of petroleum fiscal regimes and "who" has title, see Johnston (2007).

<sup>3</sup>Oil and Gas in Africa, AfDB and AU (2009).

<sup>4</sup>It should be noted here that the legal framework that embodies the fiscal regime was at the time of writing the subject of debate on two fronts: first, whether the PITL should be repealed and rolled into the Internal Revenue Act, 2000 (Act 592) to ensure consistency of tax and cost containment provisions, and second, whether a new exploration and production and legislation should be promulgated to repeal PNDC Law 88.

<sup>5</sup>"Overview of Ghana's Fiscal Issues", presentation by Ghana National Petroleum Corporation, 3rd February 2010, Accra.

<sup>6</sup>McPherson, Goldsworthy and Sunley ( 2009).

<sup>7</sup>Ibid

<sup>8</sup>Clause 25, PNDCL 84.

<sup>9</sup>Heller and Heuty, "Accountability Mechanisms in Ghana's 2010 Proposed Oil Legislation", in this volume.

<sup>10</sup>Joint Management Committee (JMC) is a committee of Ghana National Oil Corporation and International Oil Company. (Model Petroleum Agreement, Article 6) The JVC consists of 2 representatives of GNPC and 2 representatives of the Contractor. However, much of the work of JMC - the accounting for the complex costs and investments expenses, and the preparation of the agenda for meetings and supporting documents - remains the responsibility of the contractor. Clause ix) of Article 6 states that costs and expenses incurred by GNPC in its participation in JMC meetings shall be borne by contractor.



<sup>11</sup>Duval et. al (2009), Production Sharing Agreements.

<sup>12</sup>Royalty rates are traditionally set at a level close to 12.5% (1/8th rule) of production as was customary for many operations in North America. This was increased to 1/6th in the 1970s then to 1/5th in the 1980s (Mommer, 2001).

<sup>13</sup>Commonwealth Secretariat (2003).

<sup>14</sup>Nazeer Bello, Presentation to IMF's Conference on Petroleum taxation in Sub-Saharan Africa, Kampala, June 29, 2010.

<sup>15</sup>From the investor's perspective royalties can be regressive as they are frontloaded. It is not profit based and the contractor has to make this payment before considerations of cost deductions are made. To mitigate the negative effects of royalties some countries apply sliding scale royalties based on production levels or sales values, well depths or R-factors (Kazakhstan, Mali and Peru). On the other hand, royalties are attractive to governments because they ensure an upfront revenue stream as soon as production starts.

<sup>16</sup>Oil and Gas in Africa, Oxford University Press, 2009.

<sup>17</sup>LIBOR is the London Interbank Offered Rate. This is the average interest rate at which banks can borrow funds, in marketable size, from other banks in the London interbank market.

<sup>18</sup>McPherson et.al (2009) p. 22.

<sup>19</sup>Nazeer Bello, Kampala, 2010.

<sup>20</sup>In countries where the probability of discovering large reserves remain high as in Angola, Libya and Nigeria, IOC's strongly compete against each other to gain access to such acreage, offering favourable terms in competitive tenders and biddable terms (Duval et. Al, 2009).

<sup>21</sup>Tordo (2007), McPherson et. Al. (2009)

<sup>22</sup>Tordo (2007) and the reference to footnote 19 p. 15.

<sup>23</sup>The need for such stabilization clauses have been occasioned by past experience with expropriations and nationalizations that took place in some oil Producing countries, resulting in a number of IOCs losing their investments in these countries. Although most IOCs are currently less likely to be wary of outright expropriations due to the possibility of international arbitrations, they still see the need for protection against any changes to the fiscal and regulatory provisions that govern their agreements with the host country. The relevance or legitimacy of this need rests in the logic that petroleum projects are costly and IOCs more often than not need to take on debt to finance the initial project costs, which generally take a long period to recover for the IOCs to earn a reasonable return. As such any later attempts by the host country to alter the fiscal or regulatory terms of a contract may lead to a disruption in the profitability of the petroleum project and affect the ability of the IOC to service its debt obligations.

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# OIL PRODUCTION AND GHANA'S ECONOMY: WHAT CAN WE EXPECT?

*John Asafu-Adjaye\**

## ABSTRACT

This paper has two key objectives. First, it seeks to estimate the impacts of oil production on Ghana's economy using a computable general equilibrium model. Second, it proposes policies to mitigate the adverse impacts oil activities may have on various sectors of the economy. The results indicate that production from the Jubilee oil field could increase the GDP growth rate by 3.5 percent per annum. The growth rate could more than triple if additional wells are brought into production and the natural gas utilised rather than flared or re-injected. However, the results also show that despite the increase in oil and other commodity exports, aggregate exports actually decline. Moreover, increased household disposable incomes, mostly from increase in urban employment, coupled with the decline in agricultural production, implies an increase in imports and faster growth in domestic prices relative to imported prices. The net result is a worsening of the trade balance.

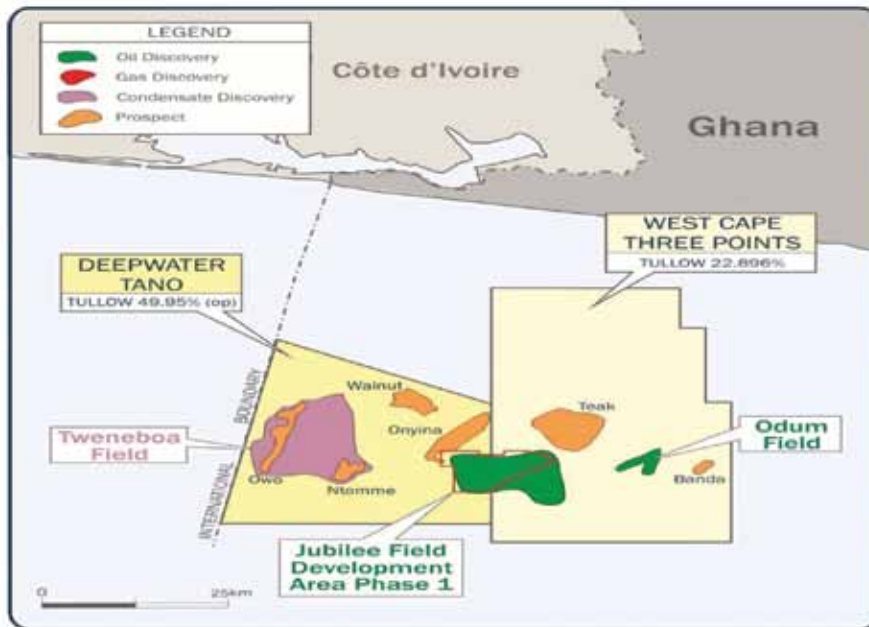
Two key recommendations are; First, there is a need for government to provide incentives for the development of new sectors with linkages to the oil sector with the view to boosting local content and participation and employment. Second, policies are required to mitigate the adverse impacts of oil production, particularly in the agricultural and manufacturing sectors. New sectors that could link up with the oil industry include building and maintenance of equipment for storage and distribution of oil and derivatives; data processing and storing of seismic data; air transport services; tourism and related recreational activities, international trans-shipment and entrepôt services. There are currently infrastructural and human capital impediments to the growth of such activities and as such there is a need for medium and long-term plans to build capacity in these areas.

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# 1. INTRODUCTION

Ghana is on the verge of becoming a significant oil producer. Oil was first discovered in Ghana in 1970 by the US firm AgriPetco off the coast of Saltpond. However, the reserves were not in sufficient commercial quantities and were abandoned for some time. The field is currently being exploited by a joint venture comprising the Ghana National Petroleum Corporation (GNPC) and Lushann Eternit Energy Limited of Houston. The Saltpond Oilfield is currently producing 600 barrels of crude oil per day and there are plans to increase output to 2,000 barrels per day. The Jubilee Oilfield was discovered in June 2007 by Kosmos Energy LLC in the Gulf of Guinea's Tano Basin, (Figure 1).<sup>1</sup> Ultimately, 278 million barrels of oil (mmbo) are expected to be recovered over 20 years of the Phase I development (Tullow, 2009). However, the recoverable reserves of the field are estimated to be more than 600 mmbo with an upside potential of 1.8 billion barrels. The Phase I production begun in December 2010 and is expected to deliver 120,000 barrels per day when in full production. Since the Jubilee discovery, another substantial oil discovery has been made. Tullow Oil announced in September 2010 that it had discovered between 70 and 550 million barrels of light crude oil in the Owo field within its Deepwater Tano Block (see Figure 1). Such level of proven reserves puts Ghana at par with neighbouring Cameroon (400 mmbo) and above Côte d'Ivoire (100 mmbo), but much below Nigeria (36 billion barrels).

**Figure 1 Location of Ghana's Jubilee Field Phase I Development**



Source: Tullow Ghana Ltd. (2009)

Based on the fiscal regime in place,<sup>2</sup> and a price assumption of US\$75 per barrel, the potential government revenue would be about US\$1.0 billion on average per year between 2011 and 2029. At a price of US\$65 per barrel, the potential government revenue would be about US\$828 million on average per year. By comparison, government revenue in

2008 reached US\$3.7 billion (excluding grants) and GDP of US\$16.1 billion. Therefore, oil production will only increase the size of the economy by just over 10-12 percent but will increase government revenues by a quarter.<sup>3</sup> This implies that oil production per se will not have a huge impact on the economy under a business-as-usual scenario, which in this study is defined as the current structure of the economy and current government policy framework.

In a country where the average per capita income is still below \$400 per annum and most people live under \$1.25 per day, the prospect of oil production has heightened public expectations. According to a survey conducted by Reuters, Ghana's economy could grow at about 14.7 percent in 2011, one of the world's fastest growth rates, boosted by oil production (Ndaba, 2010). There is a need to properly manage these expectations, as the average citizen may not receive any private benefits from oil production in the short to medium term. The reality is that the foreign partners will aim to recoup their investment in the shortest possible time. The extent to which the Government's receipts can be translated into benefits for the people depend crucially on the implementation of appropriate policies backed by strong institutions.

One of the major concerns about Ghana's entry into oil production is the adverse effects associated with that industry. Previous studies of resource-rich countries paint a relatively pessimistic picture of exploitation of natural resources, variously referred to as the natural Resource Curse and/or the Dutch Disease. These studies suggest that real exchange appreciations driven by natural resource booms could have negative effects on long-term development by reducing the relative size of domestic manufacturing and production. In a similar vein, another important body of literature suggests that natural resource abundance produces institutional weaknesses and mismanagement of natural resource wealth (e.g., see Auty 1998 and 2001; Gelb, 1988). However, a growing number of more recent papers and country analyses show that it is possible to avoid the pitfalls of resource abundance, by pro-actively establishing a sound institutional framework and macroeconomic management (e.g., Bravo-Ortega and de Gregorio, 2007).

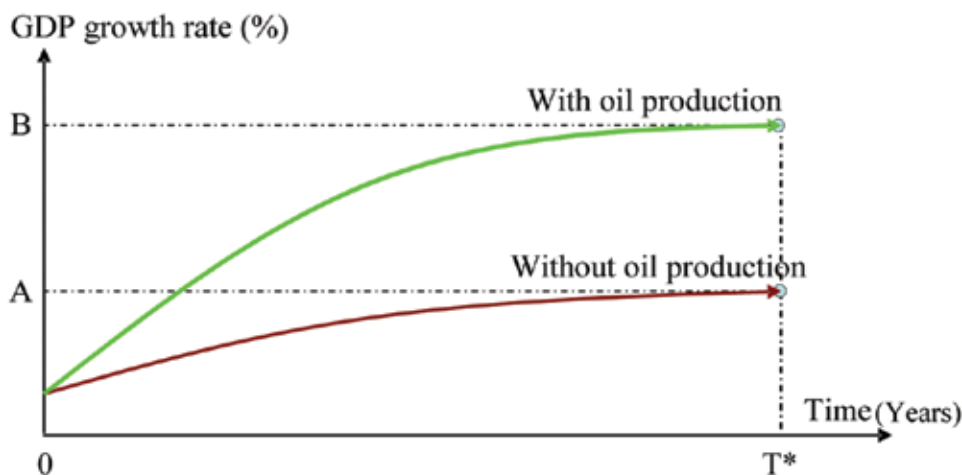
Given the concerns about Ghana's nascent oil industry, this paper has two key objectives. First, it seeks to estimate the impacts of oil production on the non-oil sectors using a computable general equilibrium (CGE) model. The goal is to identify the potential positive and negative economic impacts of oil production. The second objective is to propose policies to mitigate the adverse impacts. In particular, we examine a number of policies that could maximize the local benefits from oil exploration. The paper is structured as follows. Section 2 briefly describes the modeling approach in a non-technical manner. Interested readers are referred to sources for further information on the modeling approach. Section 3 presents and discusses the model results. Section 4 discusses various strategies for local content promotion in the oil industry and makes recommendations for Ghana. Section 5 concludes.

## 2. THE MODELLING APPROACH

To analyse the potential impacts of oil production in Ghana, we perform a counterfactual simulation using a CGE model of the Ghanaian economy. General equilibrium models are noted for their ability to measure the impacts of one or more policy variables on several sectors simultaneously. Oil production will have backward linkages (i.e., supply of inputs) as well as forward linkages (which result from the processing and marketing of the product).<sup>4</sup> These linkages will have ripple effects in the economy (often referred to as secondary effects). The CGE model uses as its main data source an input-output (I-O) table of the economy which registers flows between the different sectors of the economy. The CGE model used here is the Global Trade Analysis Project (GTAP) model (version 6.2a), a multiregional and multisector CGE model which captures world economic activity in 57 different industries of 87 regions of the world (Hertel, 1997).

The GTAP model is referred to as a comparative-static model because it provides projections at only one point in time, the solution. The comparative static approach may be illustrated with the aid of Figure 2. Without oil production, the Ghanaian economy could be on a growth trajectory A at a given point in time, say, a 7 percent per annum growth rate. With the start of oil production, there is a jump in the economy's growth rate, reaching a higher trajectory of B, say, 15 percent after oil production has stabilised by time  $T^*$ .

**Figure 2 Illustration of the comparative-static approach**



Comparative statics is only concerned with the gap AB and it does not say anything about how the economy got to point B. The gap AB is 8 percent at  $T^*$ , which is the increase in the economy's growth rate due to oil production. In general, comparative models are solved for

a short run ( $t = 2$  years) and a long-run ( $t = 5-10$  years). They are not very specific about the timing of effects and represent the time taken for an economy to adjust following a policy shock.

In this application, we utilise the GTAP Africa Data Base which includes data for 39 regions (30 African regions and 9 other aggregated regions) including Ghana. The data for Ghana is based on the 2005 social accounting matrix (SAM) jointly constructed by the International Food Policy Research Institute and the Ghana Statistical Service (GSS) using national accounts, trade and tax data, and household income and expenditure survey data. The model uses an algebraic framework resulting from imposing the conditions of producer and consumer maximization on the accounting framework of the SAMs. The algebraic framework is used to analyse the behaviour of numerous economic agents including producers, households, and governments. The standard GTAP assumption is perfect competition and constant returns to scale where bilateral trade is handled via the Armington framework (products are differentiated by country of origin). The model assumes that there is a regional household that collects all income and allocates across private consumption, government, and saving. Household demand for commodities and services are in constant difference elasticity form, which assumes non-homothetic preferences and is more flexible than the constant elasticity of substitution form. Producers are assumed to have a constant elasticity of substitution production function (Hertel and Tsigas 1997; McDonald and Walmsley, 2003).

We adopted the standard GTAP model closure with taxes, tariffs and technical change parameters set exogenously. Since population is determined by demographic factors, it is also set exogenously. Our closure rules also reflect the situation in developing countries where there is no full employment of unskilled workers. In most of these countries there is commonly an excess supply of unskilled labour that can be used by industries in case there is an increase in production. To account for this fact, wage rates are assumed to be exogenous and labour supply is assumed to be endogenous. Lastly, we account for fixed prices in the market for commodity exports. In this application, we have aggregated the 57-sector GTAP database to 14 sectors to facilitate the solution.

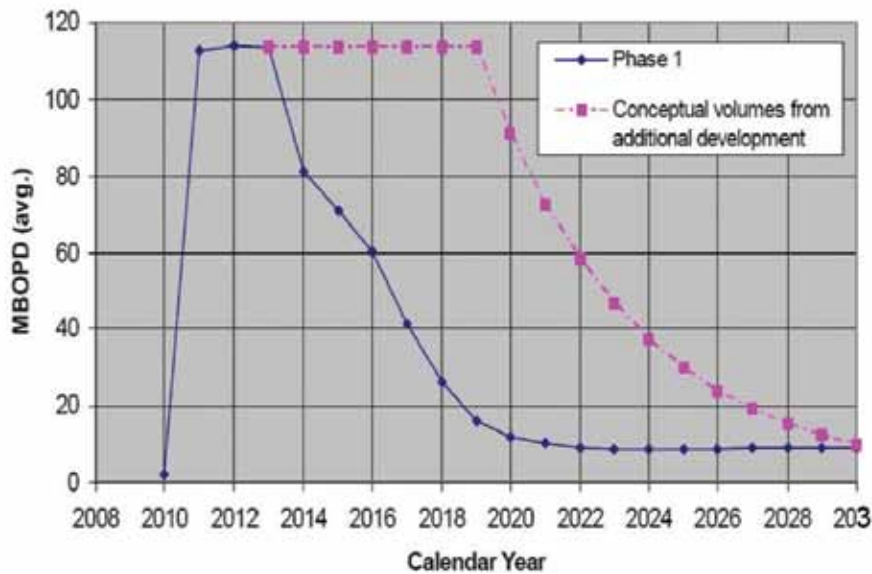
### **3. EMPIRICAL RESULTS AND DISCUSSION**

#### *3.1 Assumptions and Simulation Scenarios*

First oil production from Phase I of the Jubilee Oilfield is planned for December 15, 2010 and the field is expected to produce oil for 20 years. Immediately after First Oil, the field will be capable of flowing up to 55,000 barrels of oil per day (bopd). But as new wells are completed over a three to six month period, average production volume is expected to reach 115,000 bopd by the first full year of operation (Figure 3).



**Figure 3 Production Profile Forecast for the Jubilee Field**



Source: Tullow Ghana Ltd. (2009)

According to the project operator, Tullow Ghana Ltd, further project phases may extend the project life and increase ultimate recovery as shown in Figure 3. Another associated resource in the Jubilee field is natural gas. Currently, the infrastructure does not exist to utilise the gas resources. A small proportion of the separated natural gas (about 15 percent) will be used for power generation to run the Floating Production Storage and Offloading vessel (FPSO), while the remainder will be re-injected into the reservoir. Plans are underway to build a gas pipeline to the shore and also to develop a natural gas processing facility. Considering the possibility of utilising the natural gas, as well as additional production wells coming on stream, the Jubilee field could have a much bigger economic impact. Therefore we consider two scenarios in the policy experiments. The first is a conservative one in which the field will produce 115,000 bopd. This represents a 190 percent increase in the current volume of oil output. The second scenario assumes that additional wells come into production and also that the natural gas is utilised. Because the volume of output in this scenario is more difficult to predict, we have arbitrarily chosen a 30 percent increase over the projected output of the Jubilee field in its first full year of operation, which is equivalent to about 247,000 bopd.

The correct way to interpret the results in the following section is to consider two ‘what if’ scenarios. The first is to ask what would be the economic impact of the proposed project if the proposed projection of 115,000 bopd is actually achieved in about one to two years of production. The second simply asks what the impacts would be if actual production were to be much higher than projected due to additional utilisation of the oil and gas resources. It is important to keep in mind that the reported results are not forecasts of what the actual

impacts would be. Rather, they give us some sense of the relative magnitudes of the impacts of the two scenarios on some key macro and micro economic variables. However, with some further work, the model could be modified to give year by year forecasts.

### 3.2 *Macroeconomic Impacts*

For Scenario 1, the results indicate that oil output from the Jubilee field will increase the GDP growth rate by 3.5 percent per annum (Table 1). This represents a growth rate that is additional to the current GDP growth rate of about 7.5 percent per annum. As will be shown later, even though there is an increase in oil and other commodity exports, aggregate exports actually decrease. In this case, aggregate exports decrease by 10.2 percent, while aggregate imports increase by 6.9 percent. The net result is that the trade balance declines by US\$402 million. The terms of trade (i.e., the ratio of export to import prices) increases by 2.3 percent. Also, household disposable income increases by 3.7 percent, while welfare (measured by equivalent variation) increases by US\$113 million. Therefore, the net decline in exports, combined with the increase in consumption expenditure moderates the impact in the massive increase in oil production, resulting in a modest increase in the GDP growth rate.

**Table 1: Impact of Jubilee Oil Production on Ghana’s Economy**

Variable	Scenario 1	Scenario 2
GDP growth	3.5	12.2
Aggregate exports	-10.2	-28.5
Aggregate imports	6.9	23.4
Trade balance (US\$ million)	-402.01	-1280.90
Terms of trade	2.3	5.8
Household disposable income	3.7	12.8
Welfare (US\$ million)	113.23	257.93

**Note:** All values except trade balance and welfare are expressed as percentage change from underlying growth path.

**Source:** Model simulation results.

In Scenario 2, which is the more optimistic outlook for oil production, there is more than a threefold increase in the economy’s growth rate. Following the trend in the previous scenario, exports increase at a faster rate than imports, resulting in a larger trade balance of about US\$1.3 billion. The growth in household disposable income closely follows the growth in GDP and there is a doubling of welfare with an increase of US\$257.9 million.

### 3.3 *Sectoral Impacts*

The modelling results indicate that although oil production has a net positive effect on Ghana’s economy as a whole, it will not directly benefit all sectors of the economy. For example, the results show that the project has the potential to impact adversely on the agricultural sector in general, in particular, domestic production of crops and livestock. This could be due to a number of reasons including the fact that capital is bid away from the sector because of the decline in the rate of return to investment and also because of

declining terms of trade in the sector. The modelling results summarised in Table 2 show that, in Scenario 1, value added in the grains and crops sector contracts by about 4 percent, while the meat and livestock sector contracts by about 1 percent. It is interesting to note that the resource export sectors such as cocoa and mining are not negatively impacted by oil production as might have been expected. This is mainly due to the fact that the prices of these commodities are determined on the world market. Therefore, oil production as a new activity does not reduce the rates of return and investment in these sectors as much as it does in, say, import substitution sectors such as grains and processed food. The results in the second column of Table 2 indicate that a further increase in the level of oil production has even greater devastating effects on the agricultural sector. In this case, grains and livestock production declines by about 19 percent, while meat and livestock declines by about 11 percent. These changes are caused by a combination of factors including multi-sectoral general equilibrium adjustment effects through supply and demand drivers, as well as changes in the labour market.

**Table 2: Impacts of Jubilee Oil Production Sectoral Output**

Sector	Scenario 1	Scenario 2
Grains and Crops	-4.03	-18.65
Meat and Livestock	-1.3	-11.18
Forestry	9.16	26.71
Oil	118.22	140.55
Cocoa	122.16	147.42
Fisheries	-0.58	0.8
Mining	55.47	-287.36
Processed Food	-3.77	-28.17
Textiles and Clothing	-8.9	-36.62
Light Manufacturing	-3.13	9.52
Heavy Manufacturing	-8.69	-36.7
Utilities and Construction	14.57	70.3
Transport and Communications	-5.82	-20.64
Other Services	-1.88	-8.92
Capital Goods	27.05	56.31

**Note:** All values are expressed as percentage change from underlying growth path.

**Source:** Model simulation results

Oil production also has a strong negative impact on the manufacturing sectors, which contract at varying rates ranging from 4 and 9 percent per annum under Scenario 1. The impacts are much more adverse in Scenario 2 for most industries. The only sectors that benefit from oil production are utilities/construction and production of capital goods, which increase by 15 percent and 27 percent, respectively, under Scenario 1. The growth in capital goods is to be expected as oil production is a capital intensive activity. Furthermore, the discovery of oil should increase general construction activity in the country.

The potential adverse impact of the booming oil sector on agriculture fits the classic example of the ‘Dutch Disease’ (Corden and Neary, 1982). This phenomenon was first

identified in Holland, when revenue from North Sea oil flooded into the country. It occurs when an influx of resource wealth, and the spending that comes with it, drives up the exchange rate and inflates the domestic economy. This is a problem because it reduces the international competitiveness of the country's non-resource exports and import-competing activities. The result is that a resource project can indirectly take place at the expense of other forms of activity. Apart from the appreciating exchange rate, the other causal factor in the Dutch Disease phenomenon is that the high rate of return generated by the booming oil sector tends to bid resources (labour and capital or mostly labour – skilled and unskilled) away from other sectors, further depressing non-resource sector output.

**Table 3: Trade Impacts of the Jubilee Phase I Oil, by Sector (Scenario 1)**

Sector	Exports	Imports	Ratio of domestic to imported prices
Grains and Crops	-8.2	5.3	2.8
Meat and Livestock	-16.7	8.8	3.7
Forestry	23.8	-13.6	-5.2
Oil	221.2	-3.1	-14.6
Cocoa	97.5	-0.1	-23.5
Fisheries	7.4	-22.9	-42.0
Mining	48.5	-7.1	-2.5
Processed Food	-5.9	3.6	2.2
Textiles and Clothing	-15.5	5.2	3.3
Light Manufacturing	-3.9	7.1	1.2
Heavy Manufacturing	-14.6	8.7	3.0
Utilities and Construction	-9.6	6.3	3.6
Transport and Communications	-6.9	3.5	3.9
Other Services	9.2	4.0	4.1

**Note:** All values are expressed as percentage change from underlying growth path,

**Source:** Model simulation results

Table 3 shows why net exports decline despite the massive increase in oil production. Basically, the import-competing sectors lose their external competitiveness due to the activities in the oil sector. Therefore, exports in these sectors decline. However, given that households experience an increase in their disposable incomes, they increase their demand for food, clothing and other goods and services which now need to be imported. Therefore, as can be seen from Table 3, imports for goods such as grains/crops and meat/livestock increase by 5 percent and 9 percent, respectively. Imports of processed food, manufactured goods and services also increase by rates ranging from 1 to 4 percent. The table also shows a rise in the ratio of domestic to imported prices, which fuels upward increases in the general price level.

It is important to appreciate that the potential Dutch Disease effects associated with oil production can be largely avoided if the revenues are managed appropriately. The current proposal in the Petroleum Revenue Management Bill to invest part of the revenue from the oil sector in a Heritage Fund is a step in the right direction as it will to some extent help to minimise the effects of the Dutch Disease. Prudent spending of the proceeds from the fund

will mitigate the effect on the exchange rate and minimise the impacts on the non-mining and oil sectors. In that sense, therefore, the Dutch Disease problem can be seen more as a result of how the Government chooses to apply the revenue from resource extraction, rather than a result of the resource extraction activity itself.

Although, the model does not explicitly measure employment by sector or region, a number of conclusions on employment can be derived from the model's results. First, given that oil production and associated activities are predominantly urban based, while agriculture is predominantly rural-based, it can be inferred that the increase in household income will mostly accrue to urban residents. Thus, the increase in oil production will increase urban employment, while decreasing rural employment. This means that rural poverty will increase relative to urban poverty and hence there will be a need for targeted programmes to increase rural employment.

#### **4. MAXIMISING THE DOMESTIC BENEFITS FROM OIL PRODUCTION**

According to recent versions of export base theory<sup>5</sup>, large capital-intensive mining projects tend to create inflated expectations of local benefits. This arises because foreign investors send an unusually high share of mining revenue flows abroad to service foreign capital. Furthermore, the fiscal linkage (i.e. taxation) tends to dominate domestic linkages from such projects and the revenues tend to accrue to the national government, rather than to regional/local administrations. Another important factor is that most of the inputs tend to be imported, leading to limited backward linkages. Similarly, forward linkages (e.g., from the processing and marketing of the outputs) are also limited because processing activities, if any, are often carried out closer to overseas final markets.

Recent works published in the local content literature have expressed support for active government participation in the development of specific activities as a means of increasing local content of industrial activity, thereby promoting economic development (e.g., see Rodrik, 2004) It is argued that government's failure to intervene could be a major impediment to product diversification, structural change, and economic development. The reason given is that the emergence of new productive activities, as is the case in Ghana's emerging oil industry, is often constrained by the lack of or poor price signals which create substantial uncertainties for private economic agents and therefore make it difficult for them to make informed decisions. The challenge for government is what criteria to use for identifying and promoting specific activities. Based on Rodrik (2004), we offer these three guidelines:

- Government incentives should target activities that promote economic diversification by creating new areas of comparative advantage;
- Government should not merely target sectors, but should also identify activities that can generate cross-cutting opportunities;
- the activities that are promoted should have the potential to provide sufficient spillovers and demonstration effects.

Recent examples of countries that have implemented successful local content policies in their oil industries include Nigeria and Trinidad and Tobago. After many years of missed opportunities for developing its oil sector, Nigeria has finally implemented a raft of local content policies. These include the establishment of an official goal of 45 percent local content by 2006 and 70 percent by 2010. The government has established task specific directives on local content. These include: (i) an expansion of the existing requirement for seismic data processing projects to be sourced in the country, (ii) a requirement that all front end engineering and design work for upstream projects be conducted in country, and (iii) a requirement that floating production, storage and offloading integration work takes place in the country by the end of 2006 (as reported by INTSOK, 2003). Trinidad and Tobago has also implemented programmes for workers' training, small-enterprise capacity building and technology development for its gas industry. The policy objective of the Trinidad and Tobago government is to firmly establish the country as a key supplier of gas to the North American market.

The foregoing CGE analysis confirms the fact that the oil sector has few linkages with the rest of the economy and that, under a business as usual scenario, this will result in adverse impacts on other sectors. The major implications for public policy are twofold. Firstly, the government would need to promote the development of new sectors with linkages to the oil sector with the view to boosting local content and participation. Secondly, policies must be devised to mitigate the expected adverse impacts of oil production, particularly in the agricultural and manufacturing sectors.

#### *4.1 Promoting Local Content and Participation*

With Ghana starting an oil industry literally from scratch, the promising areas to target for local content development include the following: building and maintenance of equipment for storage and distribution of oil and derivatives; data processing and storing of seismic data; air transport services; tourism and related recreational activities, international trans-shipment and entrepôt services, and agriculture and fisheries. We briefly discuss each of these areas below.

Building and maintenance of equipment for storage and distribution of oil and derivatives. This area is located towards the upstream area of the oil industry and there will be potential demand for some unskilled, but particularly skilled labour in technical areas. Activities include structural engineering, as well as civil and infrastructure engineering and supervision. More specialized areas such as electrical, instrumentation and controls, and mechanical engineering for the oil, gas and process industries could be entered into with joint venture companies.

#### *Data processing and storing of seismic data*

The current trend in the oil industry is to outsource the collection of seismic and other geological data to specialized firms, while the subsequent data interpretation and modelling is done in house by the oil companies. There is therefore an opportunity for local firms to enter this area of the industry. However, admittedly, there is need for specialised workers who may not easily be available locally.

### *Air transport services*

Servicing of offshore rigs and movement of workers and materials will create a demand for chartered fixed wing air planes and helicopters, as well as for pilots and support teams. Once again there is opportunity for local sector development of this area.

### *Tourism and related recreational activities*

The GOG has expressed a desire to develop tourism as a way of diversifying the economy. It is a well known fact that Ghana has immense tourism potential which remains largely untapped. The tourism sector could have potential linkages with the oil sector. The influx of foreign oil workers and other professional visitors into the country would increase the demand for hotel and other accommodation, recreational activities, food and beverages, transport, communications and other services. However, there are currently a host of infrastructural constraints that hold back the development of tourism and other sectors. These include a lack of transport infrastructure, health risks from malaria, poor sanitation, inadequate health care infrastructure, and poor water and energy infrastructure.

### *International trans-shipment and entrepôt services*

Ghana has a hidden or under-utilised comparative advantage, which is its geographical location. It is located within a couple of hour's flight from many countries in West Africa, and about five hours from other Sub-Saharan African countries. Thus, there is an opportunity to provide services such as port and cargo handling, education, health and financial services for the entire region. In the area of ports, examples of services that could be provided include those that require unskilled labour (e.g., warehousing and sorting), as well as services that employ more skilled labour (e.g., processing, quality control, clerical and logistics).

### *Agriculture, agro-processing, and fisheries*

The government could address the adverse impacts of oil on the non-oil sectors by using revenues from oil production to carry out targeted productivity-enhancing investments that takes into consideration Ghana's existing comparative advantages. For example, the agriculture sector is currently dominated by inefficient small-scale labour-intensive production of basic staples and cocoa. One possible consequence of a booming oil sector is that it is likely to lead to labour shortages. Therefore, it is necessary to make the agricultural sector more efficient with the use of productivity-enhancing inputs (e.g., irrigation, fertilisers, tractors, etc) with a view to producing not only for domestic consumption and exports, but also producing for the food-processing sector in order to generate higher linkages. The fisheries sector could also be developed by transforming it from the current artisanal base to higher value addressed activities such as fish processing and production for exports.

## **5. CONCLUSIONS AND POLICY IMPLICATIONS**

The aim of this paper has been to estimate the impacts of oil production in Ghana on the non-oil sectors using a computable general equilibrium model and to propose policies for mitigating any adverse impacts. Ghana currently produces about 600 barrels of crude oil per day and the estimated 115,000 barrels to be produced from the Jubilee Phase I Oilfield represents a nearly 200 percent increase in the volume of output. Based on a price assumption

of US\$75 per barrel, the average annual gross revenue from Jubilee I is estimated to be US\$2.0 billion, from which the government's annual take is expected to be about US\$1 billion. To put these figures into context, government revenue in 2008 was US\$3.7 billion (excluding grants) and the size of the economy was estimated at US\$16.1 billion. Thus, oil production will only increase the size of the economy by just over 10-12 percent but will increase government revenues by a quarter. This implies that oil production per se will not have a huge impact on the economy under a business-as-usual scenario, which in this study is defined as the current structure of the economy and the current government policy framework. Furthermore, as has been the experience in most natural resource dependent economies, oil production has the potential to have negative impacts on the non-oil sectors.

The results of the CGE analysis generally confirm the above expectations of the potential impacts of oil production. It was shown that production from the Jubilee Oilfield could increase the GDP growth rate by 3.5 percent per annum. This implies that if the economy were to be growing at the normal rate of 7.5 percent per annum, the start of oil production could increase the growth rate to 11 percent per annum at the height of oil production by 2012. In the event that additional wells could be brought into production and the natural gas utilised rather than flared or re-injected, the additional GDP growth rate could more than triple. However, the results also showed that despite the increase in oil and other commodity exports, aggregate exports actually decline. The net result is a worsening of the trade balance. On the positive side, there is an increase in household disposable income in line with the GDP growth grows by 3 percent. However, the increase in incomes, coupled with the decline in domestic food production, implies that there will be an increase in imports and a faster growth in domestic prices relative to imported prices. Although the model does not have urban and rural employment sectors, we infer that the increase in household disposable income derives mostly from an increase in urban employment given that oil production and its associated activities are mostly urban based.

The results also indicate that oil production has positive impacts on the commodity export sectors (cocoa, forestry and mining) and the utilities/ construction sectors. However, there are negative impacts on the grains/crop, meat/livestock, manufacturing and service sectors. These effects are viewed as classic examples of the Dutch Disease and arise as a result of increase in public and private income and spending which bids up the real exchange rate and increases inflation in the domestic economy. The net result is a reduction in the international competitiveness of the non-resource export and import-competing sectors. In regard to the Dutch Disease effects, the current proposal to invest some of the proceeds in a Heritage Fund is a step in the right direction as it would partly sterilise the effects on the domestic economy. Furthermore, prudent spending of the proceeds from the fund would mitigate the effect on the exchange rate and minimise the impacts on the non-mining and oil sectors.

Two key recommendations arise from the analysis. First, there is a need for government to provide incentives for the development of new sectors with linkages to the oil sector with the view to boosting local content and participation. Second, policies are required to mitigate the adverse impacts of oil production, particularly in the agricultural and



manufacturing sectors. New sectors that could be developed to link up with the oil industry include building and maintenance of equipment for storage and distribution of oil and derivatives; data processing and storing of seismic data; air transport services; tourism and related recreational activities, international trans-shipment and entrepôt services. There are currently infrastructural and human capital impediments to growth of these activities and as such there is a need for medium and long-term plans to build capacity in these areas.

## ENDNOTES

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<sup>1</sup>The field, located about 12 km from Ghana's coastline and 95 km southwest of the port city of Takoradi, is named after the Ghana's golden jubilee celebration of Independence in 2007.

<sup>2</sup>The fiscal regime comprises the following elements: a 5 percent royalty for oil revenue; a 10 percent initial carried interest, a share of the oil rent growing with the rent amounts; and 35 percent income tax.

<sup>3</sup>Information on the cost of inputs in the oil sector would be needed to estimate the exact value added. This figure is an estimate of the possible upper and lower bounds.

<sup>4</sup>It has however been demonstrated that extractive industries have relatively few linkages with other sectors (e.g. see Auty, 2006).

<sup>5</sup>Export base theory has been one of the most used theories of economic development to describe a local economy and target sectoral economic development. The primary tenet of export-base theory is that the local economy can be divided into exporting and non-exporting sectors (e.g., see Tiebout, 1956).

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# ACCOUNTABILITY MECHANISMS IN GHANA'S 2010 PROPOSED OIL LEGISLATION

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## ABSTRACT

In mid-2010, the Ghanaian government introduced to Parliament two pieces of legislation that promised to be critical to the country's efforts to transform its petroleum resources into an engine for national development. Despite being introduced at the same time, the Petroleum Revenue Management Bill (PMRB) and the Petroleum (Exploration and Production, E&P) Bill demonstrated vastly divergent commitments to public accountability. Principles of good governance and accountability were enshrined throughout the PMRB, from its core motivation as a vehicle for responsible long-term management to the procedural and reporting requirements it established for day-to-day implementation. The E&P Bill, by contrast, failed to reflect the vibrant debate taking place both internationally and within Ghana on oil-sector good governance, and included provisions providing for weak oversight, unaccountable institutions, and opaque sector management. The authors examine the strength of each bill's commitment to accountability, and argue that the process by which they were developed and presented had a major impact in their divergence, as well as in the legislative result, which saw the PMRB passed into law in early 2011 and the E&P Bill forced to be withdrawn.

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# 1. INTRODUCTION

Among the many challenges that Ghana faces in reinvigorating its petroleum-sector institutions, one of the most important revolves around the need for accountability. The onset of production brought into sharp focus the critical importance of mechanisms to ensure that oil companies and the Ghanaian government are held accountable to the population. In mid-2010, as first oil loomed, the government introduced to Parliament two major pieces of legislation with divergent approaches to public accountability.

The Petroleum Revenue Management Bill (PRMB) submitted to Parliament in July 2010, itself a product of extensive public consultations, represented a careful attempt to enshrine well-established norms of good governance and rules to promote sound oversight. The fundamental revenue management scheme embedded in the law is itself an attempt to enhance long-term economic accountability and insulate spending from oil price volatility and capricious political cycles. The Bill included clear rules on the division of petroleum revenues among the annual budget, a Stabilization Fund, and a Heritage Fund for future generations of Ghanaians. It provided careful procedural requirements on the executive's ability to withdraw petroleum revenues in excess of limits set by formula, and spelled out a clear role for Parliament in the exercise of expenditure policy. The Bill met international standards on public disclosures of fund assets and activities. Building on the experiences of Timor-L'este with a similar Petroleum Fund, it called for the establishment of a multi-stakeholder Public Interest and Accountability Committee, to monitor compliance, promote public debate on revenue management, and advise Parliament and the government.

Though it was introduced at the same time as the Revenue Management Bill, the Petroleum (Exploration and Production, E&P) Bill shared little of the former's careful attention to accountability issues. The E & P Bill ostensibly sought to revamp all elements of the system governing the exploration, development and exploitation of oil and gas, but in actuality it would have done little to promote more responsible or accountable oversight. The Bill provided for excessive levels of discretion on the part of the Ministry of Energy and the Ghana National Petroleum Corporation (GNPC). It left the award of petroleum contracts subject to the views of individual government officials, rather than systematic and open bidding processes. It did nothing to embed the government's stated commitment to publish petroleum contracts or to promote transparency of revenues, thereby threatening to place Ghana out-of-step with emerging international and African norms. It did not provide for increased standardization of the fiscal terms governing petroleum, leaving Ghana's share of the revenue pie subject to ad-hoc negotiations with international oil companies.

The two Bills took divergent paths once they reached Parliament. After a flurry of doubts expressed by members of parliament (MPs), the Exploration and Production Bill was rapidly withdrawn in November 2010, in large part because of concerns that it failed to provide for a stable, accountable framework that would give Ghana a strong opportunity to maximize the benefits of the sector and minimize the risks of corruption and volatility that can accompany it, and because of arguments that it was inconsistent with Article 269

of Ghana's Constitution. Debate over the Revenue Management Bill was intense, focusing principally on the original draft's prohibition of using expected future revenue streams as collateral for debt obligations and on the viability of the Public Interest and Accountability Committee. But the challenges to the Bill focused on specific details rather than the fundamental nature of the Bill, and it was passed by Parliament in early 2011, retaining most of its core components.<sup>1</sup>

This article assesses each of the July 2010 Bills vis-à-vis its potential to contribute to accountable and effective management of Ghana's oil heritage. It asserts that the creative, forward-thinking elements of the Revenue Management Bill found their negative image in the Exploration and Production Bill, which reflected outdated conventional wisdom and failed to reflect the vibrant debate that has been going on within Ghana on petroleum accountability. We contend that the process by which the bills were formulated had a major impact on their content. The extensive consultations that fed into the Revenue Management Bill resulted in tangible changes to the document that made it simultaneously more palatable to a wide cross-section of Ghanaian society and a richer reflection of national and international perspectives on economic accountability. The E&P Bill, by contrast, appeared in Parliament with virtually no prior public vetting, which manifested itself in a text that was out-of-touch and devoid of effective strategies for enhancing accountability. The consultation process on Revenue Management was time-consuming and costly, but helped the government avoid the massive time-suck that will be experienced now that the E&P bill has been withdrawn and must be re-crafted.

The elephant in the room in debates about the Revenue Management and E&P Bills was the institutional structure of Ghana's petroleum administration, which was barely addressed in either bill. Without revisions to the roles and responsibilities of the Ghana National Petroleum Corporation (GNPC), the Ministry of Energy, and other administrative bodies, and the implementation of stronger mandates for intra-governmental accountability and public reporting, the legislation could produce, at best, piecemeal improvements in accountability. In December 2010, the government took a step to attempt to rectify that shortcoming with the introduction of the Petroleum Commission Bill, which seeks to establish an independent regulatory body to monitor the sector. As of the writing of this article the shape of the debate on this legislation had not yet come into focus, but we provide some preliminary assessment of its likely impact on accountability.

After this introduction, this article proceeds in five additional sections. Section 2 reviews international experiences in promoting accountability in petroleum-sector management and the potential impact of these lessons-learned in Ghana. Section 3 discusses the accountability mechanisms embedded in the Revenue Management Bill. Section 4 examines the shortcomings of the Exploration and Production Bill, and how they would have impeded effective oil-sector management had the bill become law. Section 5 explores the role that the drafting and consultation process had in enhancing the Revenue Management Bill, and the impact of the corresponding lack of consultation on the E & P Bill. Finally, section 6 provides a preliminary assessment of the Petroleum Commission Bill and offers some

overarching conclusions on how Ghana can continue to build on its nascent legislative efforts to develop strong, transparent, and effective institutions.

## **2. INTERNATIONAL LESSONS LEARNED ON NATURAL RESOURCE ACCOUNTABILITY**

There have been several attempts to crystallize lessons learned by developing countries trying to build effective and accountable systems that mitigate distortions and transform natural resource wealth into broad-based national development. One prominent new effort along these lines is the Natural Resource Charter, a policy framework developed by a consortium of politicians, technocrats, academics, and activists with deep experience in devising policy solutions to the challenges of natural resource extraction.<sup>2</sup> The Charter includes twelve precepts designed to give concrete guidance to policy-makers at all stages of the oil or mineral value chain, from the decision about whether or not to extract through the exploration and production processes to questions of revenue management and the effective expenditure of resource revenues. Other influential compilations of natural resource sector lessons learned include the IMF's Guide on Resource Revenue Transparency<sup>3</sup> and the Santiago Principles on Sovereign Wealth Funds.<sup>4</sup> In addition to these international guides, governments and civil societies have developed individual experiences at a national level that contribute to a rich tapestry of knowledge about building accountability in the sector.

It is outside the scope of this paper to review all of the rich observations made by these and other documents. For purposes of our discussion of the strengths and shortcomings of the legislation proposed in Ghana, three key priorities emerge as tools for accountable oversight – transparency, clarity of roles and responsibilities, and the enshrinement of core rules in law rather than in contracts. We discuss these in turn.

### *Transparency:*

Precept 2 of the Natural Resource Charter puts things succinctly: “Citizens can only be confident about the integrity of the resource extraction process if they know about it.”<sup>5</sup> Transparency gives the public the ability to monitor the performance of the government and companies, and to organize effective advocacy where change is needed. It reduces the information asymmetries that often exist among companies, governments, and the public and cause outcomes perceived as unjust. It spurs stronger administrative performance, by creating pressure on public officials to deliver results and eschew corrupt behavior. It reduces the risk of distrust and conflict, thereby enhancing political and economic stability.

Transparency is critical across the natural resource value chain. Public disclosure of the rationale for the award of natural resource contracts, and the contracts themselves, promotes awards to qualified actors, reduces the risk of corruption, and facilitates effective contract enforcement. The release of environmental impact assessments facilitates effective planning by community groups and local governments, and can help prevent some of the largest environmental risks posed by extraction. Publication of revenue data enables

citizens to understand how much the state is benefiting from extraction, ferret out potential points of corruption, and advocate for effective economic policy. Transparency in the macro-economic management of resource revenues and in public expenditure is crucial for accountable spending and a participatory national development process.

*Clarity of Roles and Responsibilities:*

The petroleum sector is typically managed by an array of public bodies with intersecting mandates, among them a panoply of ministries – including Energy, Mining, Finance, Environment, Labor, and Planning – independent sector regulators, national oil companies, tax collection bodies, the Presidency, and the legislature. To minimize the risk of inefficiencies, corruption, and policy or regulatory incoherence and to promote meaningful oversight, the roles of these bodies should be clearly established in law and well-understood by those both inside and outside government. Checks and balances should be built into the institutional framework at all stages, and chains of command and reporting should be comprehensive. Too frequently in the oil-sector one body – often a National Oil Company or sector regulator – operates as a fiefdom that overflows its ill-defined role and occupies a more and more powerful role in sector management with little accountability.<sup>6</sup> This causes myriad distortions and inefficiencies. As with transparency, the need for clear rules has an impact on every stage of the extractive value chain – from well-defined procedures for contract award to clear steps for expenditure approval and oversight.

*Enshrinement of Core Rules in Law Rather than Contracts:*

Countries benefit by standardizing as many as possible of the core rules governing the balance of economic benefits between government and company, the work procedures and approvals necessary for project implementation, environmental protection measures, and other central considerations in laws and regulations, rather than leaving them subject to negotiation and variation from one contract to another. When too many elements of the legal and fiscal regime are left open to contractual variation, a state leaves itself vulnerable to the negotiating skills of experienced company dealmakers, which can produce suboptimal results for the state. Variation also increases the risk of corruption in contract negotiations. Finally, standardizing terms as far as is possible – while leaving in place scope for limited flexibility – strengthens government's ability to monitor and enforce terms effectively.

All of these core lessons about extractive industry management have been championed in varying degrees by civil society, technocrats, and the research community in Ghana. The debate around oil has been vigorous, attracting the attention of all elements of Ghanaian society. At a civil society level, the Publish What You Pay Coalition and the Civil Society Platform on Oil and Gas have coordinated the inputs of dozens of national and local organizations and generated a steady stream of advocacy. Revenue transparency has been concretized by the Ghana Extractive Industries Transparency Initiative (GHEITI), which has produced comprehensive data on mineral-sector payments from 2006 to 2008 and served as a forum for debates about the sector.<sup>7</sup> There has been a significant push for contract transparency, particularly as advocates seek greater clarity on the terms governing the development of the Jubilee field.<sup>8</sup> And Ghanaians have called for greater clarity in

the roles assigned to its oil-sector institutions, manifested in a vibrant public discourse around how to manage the Ghana National Petroleum Corporation and whether to create a Petroleum Regulatory Commission.<sup>9</sup>

### **3. THE PETROLEUM REVENUE MANAGEMENT BILL**

The Petroleum Revenue Management Bill submitted to Ghana's Parliament in July 2010 represented, at its core, an attempt to promote accountability and responsibility in the government's use of Ghana's oil money. Petroleum revenue is exhaustible, which raises complex issues of sustainability and intergenerational resource allocation. It is also unpredictable (stemming in particular from price volatility), which complicates budgeting and fiscal management. The Bill is an attempt to establish a set of rules and institutions that enable the government to face these challenges in a predictable and effective manner.

The Bill provides a framework limiting how much oil revenue can be spent in a given year, and mandating transfers into (1) a Stabilization Fund to smooth public expenditure and protect against volatility; and (2) a Heritage Fund to provide income for future generations. The Bill calls for all petroleum revenue to be paid into a Petroleum Account at the Bank of Ghana. To determine how funds in the Account are to be disbursed, the government first is required to calculate the Benchmark Revenue, an average based upon recorded and expected petroleum receipts and production. A percentage of this Benchmark Revenue, the Annual Budget Funding Account, is available to be transferred to the budget. The percentage transferred to the budget may vary from year to year and is supposed to be guided by "a medium-term development strategy aligned with a long-term development framework, the economy's absorptive capacity, and the need for prudent macroeconomic management."<sup>10</sup> For an initial three-year period, the allowable range for the Annual Budget Funding Amount is set at 50 – 70%. Of the revenues not transferred to the budget, a "minimum of thirty percent" must be transferred to the Heritage Fund, with the rest going to the Stabilization Fund.

The amounts allocated to the budget are to be used to promote an equitable distribution of the national wealth and to maximize the rate of economic development guided by the long term development strategy. Clause 22 requires that 70 percent of the annual funding amount will go towards public investment, cast broadly to include eleven priority sectors.<sup>11</sup> This focus on investment represents an attempt to direct the spending of Ghana's petroleum wealth to growth-enhancing sectors, which is critical for the long-term welfare of Ghana's citizens.<sup>12</sup> To date only one country in Africa, Botswana, has been able to maintain growth over a significant period, and it has done so only through sustained high savings and investment.

These central features of the Bill represent an attempt to promote a sort of ex ante fiscal accountability. The obligatory transfer of revenues to the Stabilization Fund commits the government to limiting spending on an annual basis, and setting funds aside to counter-act volatility and stabilize the economy in the event of a price downturn. Similarly, the Heritage Fund ensures that at least some oil and gas money will be saved for the use of



future generations once the resource has been exhausted. The requirement that 70% of revenues made available for spending via the Annual Budget Funding Amount must be directed at public investment is an attempt to prevent the spending of oil wealth to be dominated by consumption that will do little to promote Ghana's long-term growth.

This accountability to long-term development goals and fiscal prudence could easily be undermined if the Bill did not also pay attention to procedural accountability and transparency to ensure that citizens and parliament were able to monitor the revenue management process. A system lacking in rigorous reporting requirements would be at serious risk of corruption and mismanagement, no matter how well-intentioned. A system that provided for no flexibility in the event of changing economic circumstances would risk undermining the very sort of stability and growth-promotion it ostensibly sought to promote.

Fortunately, the authors of the Revenue Management Bill built a set of procedural checks that provide for strong oversight, adhering to many of the criteria elaborated in the Santiago Principles and by Edwin Truman of the Peterson Institute for International Economics for Best Practices in sovereign funds.<sup>13</sup> The Bill calls for a public definition of the rules and procedures of the Funds and the publication of performance against benchmarks and the annual returns on the Funds.<sup>14</sup> It requires an annual report to be submitted to Parliament and disclosed to the public. The Bill does allow for the Minister to keep confidential "information or data, the disclosure of which could in particular prejudice significantly the performance" of the Funds, but requires Parliament to approve such a declaration and that it provide "a clear explanation of the reasons for treating the data as classified."<sup>15</sup> These transparency measures would provide the Ghanaian public with a strong sense of how their oil revenues are being invested and whether the returns they are generating are sufficient for stabilization and savings purposes.

Beyond the public reporting requirements, the Bill also includes several internal oversight mechanisms likely to enhance its management. Parliament is to oversee the reconciliation of actual petroleum revenues with the Annual Budget Funding Amount,<sup>16</sup> disbursements of the Annual Budget Funding Amount through the budgetary process,<sup>17</sup> and the percentage of benchmark revenue allowed to be allocated for annual spending.<sup>18</sup> The Funds and the Petroleum Account are subject to internal audits by the Bank of Ghana, external audits by the Auditor-General or his designee, and "special audits" in the public interest. A Public Interest and Accountability Committee, composed of representatives of eleven non-governmental groups including social and professional associations and civil society,<sup>20</sup> is charged with monitoring compliance with the Act, creating the space and platform for public debate on "whether spending prospects and management of revenues adhere to development priorities," and providing independent assessments to help Parliament and the executive in the oversight and performance of revenue management programs. If effectively managed, this Committee, which represents an expanded version of a broadly-similar body that has overseen petroleum revenue management in Timor-L'este, has the potential to enhance public accountability and management of petroleum revenues.<sup>21</sup>

In order to allow for the revenue management system to adapt to evolving economic circumstances, Clause 19(3) provides for review every three years of the percentage range of receipts in the Petroleum Account allowed to be transferred to the budget. This will be crucial, since high levels of uncertainty and the evolution of Ghana's economy will require periodic adjustments of formulas to ensure that spending and saving decisions accurately reflect the country's needs and capabilities. Once the Stabilization Fund reaches a healthy level and as the spending capacity of the public sector grows it may be in Ghana's interest to make more money available for spending by increasing the range above its initial 50 – 70% level.

These features combine to make the Bill a strong force for accountable management of Ghana's petroleum revenues, but it is not without shortcomings and risks. Principal among them is that successful management of the amounts transferred to the annual budget will depend on Ghana's ability to articulate a development plan linked to a medium term expenditure framework (MTEF) and annual budgets. This alignment is critical to ensure that the oil and gas sector plays a positive role in Ghana's development strategy and that the resource windfall is spent effectively. The Bill implicitly recognizes the risks associated with the expiration of Ghana's Poverty Reduction Strategy in 2009 and the weak alignment between the MTEF and annual budgets. The Government of Ghana urgently needs to address this issue to define a sustainable, effective and coherent investment path, otherwise the risk of wasteful spending remains high. This risk is exacerbated by the breadth of the eleven categories of expenditure which are permitted by Clause 22 to receive petroleum funding – the list extends beyond such traditional growth-producing sectors as health, education, and infrastructure to cover such issues as public safety, environmental protection and social welfare. While they are undeniably important for Ghana, the inclusion of these sectors increases the risk that the Annual Budget Funding Amount could be directed toward populist or unsustainable measures rather than being focused on expenditures that will promote long-term development. Thus the success of the revenue management strategy is very dependent upon development of appropriate development plans and budget implementation.

Some small changes would also have made the Bill even more transparent. The Bill does not clarify that the government's ability to declare information confidential can under no circumstances be used to withhold information disclosure of which is a mandated part of the annual report. In addition to the disclosures required under Clauses 48 and 50, the government should also have required that the annual report include information on the composition of the categories of investment and their geographic location.

#### **4. THE PETROLEUM (EXPLORATION AND PRODUCTION) BILL**

The contrasts between the Revenue Management Bill and the Petroleum (Exploration and Production) Bill are stark. In some sections, the E & P Bill failed to take advantage of opportunities to correct shortcomings in the current system for managing petroleum operations. In other sections, the Bill actually threatened to make the system less accountable than the status quo. Throughout, it failed to reflect the vibrant debate about oil-

sector accountability that has been going on in Ghana for several years. It also did not seem to benefit from the international lessons learned discussed above regarding responsible and effective extractive-sector institutions.

The Bill threatened to leave the contracting process – so crucial for the selection of effective partners and the effective monetization of underground resources – subject to broad discretion. Clause 19 would have empowered the Minister to award a contract based on a simple application by an oil company, with no requirement for competition, disclosure of other proposals, any standard for company qualification, or any showing of why a particular award was made. Article 49(3)(n) subsequently indicated that the Minister “may” make regulations in respect of “competitive bidding procedures for petroleum agreements,” but this was left totally at the Minister’s discretion.<sup>22</sup>

International best practice suggests that countries most successfully find strong private partners and secure the best terms for the state when awards are made via open and competitive bidding procedures. The Natural Resource Charter states: “Competition in the award of contracts and development rights can be an effective mechanism to secure value and integrity.”<sup>23</sup> By giving the government a range of offers to compare against one another, competition enables a country to select the option that best suits its development needs, and obligates companies to make more attractive offers. Transparent competition in the award of contracts also provides citizens with vital information about the rationale behind the selection of partners and the terms those partners will be obligated to follow. The system proposed by Article 19 did not offer any of the benefits generated by an ordered and competitive system. Perhaps more troubling, the sort of discretion afforded to the Ministry under the Bill would have exposed Ghana to the risks of corruption and ill-informed decision-making that have plagued too many petroleum-rich countries.

The Bill did little to advance the cause of public disclosure of key oil-sector data and documents. As was discussed above, transparency of a wide range of information is critical to ensuring public oversight. Ghana is developing a strong international reputation for transparency and good governance, but in the natural resource sector there remain several major transparency gaps that threaten to undermine public awareness of the management of the petroleum sector and to damage accountability. These transparency shortcomings are underscored by the Revenue Watch Index, which measures the degree of natural resource transparency in 41 countries. Ghana scored only 32 points on a possible 100-point scale encompassing disclosures of mining-sector revenues, contracts, licensing processes and institutional rules, earning the ignominious ranking of “Scant Revenue Transparency.”<sup>24</sup>

President Mills attracted positive international attention in 2009, when he announced his intention to publish Ghana’s extractive-sector contracts, but as of this writing no concrete actions have been taken to follow up on this announcement, and contracts remain opaque.<sup>25</sup> The E & P Bill represented a perfect opportunity to enshrine this commitment in law, but no provision for contract transparency was included.<sup>26</sup> Similarly, the Bill did nothing to deepen Ghana’s commitment to make transparent its receipts from the oil sector.

Ghana's Extractive Industries Transparency Initiative (GHEITI) has published extensive information on the revenues that are being generated by the country's mineral sector. But in the absence of enshrinement in law, EITI remains subservient to political cycles and lacks guarantees of reliability, predictability, and regularity. Future regimes with weaker commitments to transparency of public revenues could retrench on the commitment to revenue reporting in the absence of a firm legal requirement. Both Liberia and Nigeria have mandated revenue reporting in law – the E & P Bill disregarded the opportunity to do so in Ghana.

The Bill did not provide for a strong oversight role for Parliament, which is particularly crucial in the petroleum industry, given (1) the complexity of the industry; (2) the large size of the revenues contemplated; (3) the risks of environmental destruction if management is not effective; and (4) the high level of public scrutiny of the industry and risk of conflict if it is not perceived to be serving the public interest. Many other countries have included in their Exploration and Production legislation firm rules requiring periodic reports to Parliament by the Ministry, the regulatory body, and/or the National Oil Company, covering issues such as progress on exploration profiles, production levels, state revenue, community relations, and environmental management. Ghana's E&P Bill did not include any explicit rules on executive reporting to Parliament. In fact, besides reaffirming the Constitutional requirement that agreements are subject to legislative approval, the word "Parliament" did not appear once in the Bill.

The fiscal terms in Ghana's oil sector have heretofore been allowed to vary on a contract-by-contract basis rather than being enshrined in law, with the concomitant risks discussed above – sub-optimal financial outcomes, corruption, and difficulty of enforcement. Most countries leave some terms up for negotiation on a contract-by-contract basis; this can facilitate competition among bidders and the tailoring of fiscal relationships to the peculiarities of individual fields. But it tends to serve the interests of producing countries best when the number of negotiable terms is small, and a core is established firmly in law. In Angola, for example, the law establishes the tax and royalty rates, and leaves the production-sharing split (which serves an economic purpose somewhat akin to Ghana's Additional Oil Entitlement), area fees and bonuses subject to contract-by-contract variation. The E & P Bill did virtually nothing to attempt to alter the status quo, leaving most of the key fiscal terms variable from one contract to the next, including royalty,<sup>27</sup> acreage fees,<sup>28</sup> Additional Oil Entitlement and income taxes.<sup>30</sup>

A final concern was perhaps the most significant in the frosty parliamentary reception that led to the E & P Bill's withdrawal: it did nothing to address the current confusion that surrounds the institutional relationships among the public bodies charged with managing the petroleum sector. Situating and establishing the rules for the regulatory/monitoring function often proves particularly complex – and particularly crucial – for new oil producers. Different governments have chosen different models for the regulatory function, with some situating it in the sector ministry, others giving the National Oil Company (NOC) de jure or de facto regulatory power, and still others creating a separate independent regulatory body.

Whichever model is selected, it is crucial for the regulatory role to be clearly established, and for the rules on the relationship between various government actors to be firm. In its report on Good Governance in the National Petroleum Sector, Chatham House articulated international best practice as follows: “Whatever the organizational model for governing the petroleum sector, clarity of goals, roles, and responsibilities between agencies is crucial.”<sup>31</sup>

The role of institutional actors in Ghana’s oil sector has been hotly debated for several years, with critics charging that GNPC had assumed an oversized role relatively unconstrained by intra-governmental accountability mechanisms. The E&P Bill offered no significant clarification of the rules of the game. The Bill offered the Ministry of Energy broad regulatory powers – Clause 4 explicitly stated that the Minister “shall regulate petroleum operations,” and further clauses explicitly empowered the Ministry to inspect operations (Clause 5), request information from companies (7), make decisions on block maps and unitisation (8 & 10), review and approve decommissioning plans and production programmes (14 – 15), and issue regulations on safety, environment, economic impact, community relations and a host of other key issues (49).

Within the context of this assignment of regulatory responsibilities to the Ministry, the Bill provided no clear guidance on the relationship between the Ministry and the GNPC. The Corporation’s activities are currently governed by the GNPC Law of 1983 (PNDC 64), which provides little structure for the Corporation’s reporting structure and authorizes GNPC to “establish and maintain a reserve fund” to meet its expenditures.<sup>32</sup> Several reports have indicated that in practice, GNPC has to date been performing most of the regulatory functions inherent in the management of the petroleum sector. The E & P Bill sought to formally transfer many of these functions to the Ministry without providing changes to the status quo on the relationship between the Corporation and the Ministry, GNPC’s level of decision-making autonomy in commercial issues, or the mechanisms by which GNPC will finance its activities.

The Bill made several references to the (now downstream-only) Petroleum Regulatory Authority – giving it a role, alongside the Ministry in inspection, the review of plans, sub-contracting, auditing, and health and safety, without establishing the core provisions on the expansion of the Authority’s activities into the upstream sector or the chain of command between the Authority and the Ministry in these matters. In several instances a responsibility was allocated to “the Ministry or the Authority” (e.g., Clauses 5, 7, 38, 46) without spelling out how the two bodies were to interact or who would have ultimate responsibility.

A law that left in place so much confusion vis-à-vis the relationship between the major public actors in exploration and production would have exposed Ghana to several risks, including weak oversight of the activities of private companies, confusion in reporting, delays in approvals and inefficient sector development, opacity and corruption. Objections to the Bill’s treatment of these questions of institutional role were severe, with some analysts

charging that the failure to establish an independent regulatory body violated Article 269 of Ghana's constitution, which calls for the establishment of independent commissions to "be responsible for the regulation and management of the utilization of the natural resources concerned and the co-ordination of the policies in relation to them."

As of the writing of this article, the government had submitted a new Petroleum Commission Bill to address this question of regulatory structure. We touch on the implications of this Bill briefly in Section VI.

## **5. THE IMPACT OF PARTICIPATORY PROCESSES ON THE LEGISLATION**

How did the same government simultaneously introduce two petroleum-sector bills with such divergent approaches to public accountability? Why did the Revenue Management Bill reflect the vibrancy of the policy debate that had been raging in Ghana for years, while the E & P Bill read like a generic document cut and pasted from a foreign land in 1990? A full exploration of the drafting processes of the two documents is beyond the scope of this paper, but one major difference bears special note. The drafters of the Revenue Management Bill, associated principally with the Ministry of Finance and Economic Planning, conducted extensive public consultations around the Bill from the earliest stages of its development. They held town hall-style meetings including experts and concerned citizens in Accra, and in all of Ghana's regions, some of which reportedly attracted upwards of 500 people. They conducted a nation-wide survey of revenue management options, focusing on "the twelve fundamental questions guiding the preparation of the law."<sup>33</sup> The Ministry published the full text of preliminary proposals on-line, fulfilling the demands of civil society groups and Ghanaian citizens for an opportunity to review the drafts directly.<sup>34</sup> The authors actively solicited comments on two drafts of the proposed legislation from international advisors, the diplomatic community, Ghanaian experts, and various government officials.

This large-scale public consultation was time-consuming and costly, but it served two crucial purposes in the build-up to the introduction of the Bill. First, it resulted in tangible improvements to the document that made it a better fit for Ghana's economic needs and reduced the risk of mismanagement. Paramount among these changes was a revision in the formula governing the balance between revenues available for budgetary expenditure and allocations to the Stabilization and Heritage Funds. The proposal circulated in March 2010 would have limited the amount available to the budget, and hence domestic investment, to an "Estimated Sustainable Income" (ESI), derived from a formula based on the system in place in Norway and Timor-Leste. The ESI would have restricted annual spending to less than 4% of the projected value of Ghana's petroleum wealth, directing the rest of annual oil earnings to be transferred to the Stabilization and Heritage Funds. This represented an extremely conservative strategy that makes perfect sense in an advanced economy like Norway's but likely would have resulted in extreme under-investment in Ghana and limited the country's ability to use oil revenue to promote broad-based development.<sup>35</sup> As a result of

the inputs received during the public consultation process, the authors revised the formula drastically, and ended up with the legislative proposal to allow 50 – 70% of benchmark revenue to be directed to the budget (with an investment focus), while allocating the rest to build a cushion in the Stabilization and Heritage Funds.

Another example of changes made as a result of the consultation process was the elimination of two programs included in preliminary drafts that lacked adequate oversight provisions and risked becoming sources of leakage and cronyism. Initially, 15 percent of Heritage Fund holdings were to be invested in “Economically Targeted Investments” in strategic sectors of the domestic economy on a “commercial basis,” but the proposals provided no guidance on implementation, creating a risk that these funds could be used for political patronage or for projects that did not efficiently advance medium-term development goals.

The Block Grants provisions of the May 2010 proposal provided for up to 5% of the Annual Budget Funding Amount to go toward financing “socio-economic and environment related mitigating activities in communities negatively impacted by petroleum operations” and to finance “targeted small and medium scale interventions, as defined by the Minister.” The draft provided limited guidelines on the procedures and criteria for allocating the grants, and did not indicate who specifically would have benefited from a grant or been accountable for the use of funds, threatening to generate massive political scrambles at the sub-national level for securing a larger share of the oil windfall. Conflicts ravaging the Niger Delta provide a stark reminder of the risks associated with discretionary allocation and opaque use of sub-national oil windfalls. As a result of the inputs received around these provisions, the drafters ultimately decided to eliminate them, and to promote the accomplishment of key development goals in a structured way via the requirement in Clause 22 to direct 70% of annual petroleum revenue spending to the eleven priority sectors.

The second key impact of the public consultation is that it familiarized Ghanaians with the contours of the government’s proposals, facilitated the formation of coalitions of support, screened out many of the most controversial ideas, and enabled the government to hone its arguments in favor of the approach. This did not trivialize the impact of legislators themselves over the Bill’s content, as is evidenced by Parliament’s decision to remove the prohibition on using projected oil encumbrances as collateral for loans. But it did help ensure that the Bill had the broad public support (or at least public understanding) to make it less likely to be rejected wholesale. This broad public support provided critical support for the ultimate passage of the legislation.

The Petroleum (Exploration and Production) Bill’s introduction into Parliament was preceded by no such public vetting. In fact, many Ghanaians who monitor the oil industry closely were surprised by the introduction of the Bill, which was authored primarily by the Ministry of Energy. This undoubtedly impacted the prompt and forceful outcry against the Bill once it was read,<sup>36</sup> and Parliament’s decision that it was not workable and needed to be sent back rather than simply amended. Clearly the legislative process represents a crucial check in Ghana’s constitutional system, but the difference in the development of

the two Bills demonstrates the additional value of public scrutiny and public inputs before legislation is introduced into parliament.

## 6. CONCLUSION

### *Where Does The Legislation Go From Here?*

The Revenue Management Bill laws approved by Parliament in early 2011, with changes made to the provisions on using expected future revenue streams as collateral for debt, but with the other core provisions of the Bill essentially intact. It is unknown at the time of this writing whether the government will soon introduce a new proposal to replace the E & P Bill. In December 2010, the government sought to address the major omission of the earlier Bills by introducing the Petroleum Commission Bill, which called for the creation of an independent Commission to “oversee the regulation and management of petroleum.” The Commission, whose design adheres largely to Ghana’s experience with similar bodies in the mineral and energy sectors, is called to provide a wide range of regulatory functions, including promoting well-designed and cost-effective exploration and exploitation; monitoring compliance with national policies, laws, and regulations, including on fiscal and environmental matters; auditing activities of oil companies; promoting local content; managing data; and assessing applications.<sup>37</sup>

The Bill contains several features likely to have a positive impact on accountability in the sector. The situation of regulatory duties in the Commission may remove some of the risk of conflict of interest inherent in the current set-up wherein GNPC has broad regulatory powers. The Commission is to be governed by an independent board of directors, and technical expertise is a criteria for members’ selection.<sup>38</sup> The Commission is required to publish an Annual Report on “petroleum resources and activities in Ghana,”<sup>39</sup> report to Parliament, and its activities are to be audited by the Auditor-General.<sup>40</sup>

As Parliament and Ghana’s citizens consider the Petroleum Commission Bill, however, they would be well-advised to reflect carefully on the strengths and shortcomings of similar commissions in other sectors, and to build those experiences into the design of this institution for the petroleum sector. They should also critically examine the relationship between the Commission and GNPC, which is not thoroughly spelled out in the Bill. Clause 23(3) states that “on the commencement of this Act the Ghana National Petroleum Corporation shall cease to exercise any function in relation to the regulation of petroleum exploration and extraction.” But it does not establish a chain of authority between the Corporation and the Commission, nor does it articulate a vision for what GNPC’s role will be if its quasi-regulatory responsibilities are removed. Many National Oil Companies that have not yet reached a stage of technical or financial maturity struggle to develop effectively when they have no administrative role. It is well and good to indicate that GNPC is to have a “commercial” role, but unless the contours of that role are fleshed out, particularly during the initial period where the company will not perform the roles of an operational oil company, GNPC risks becoming an empty shell subject to inefficiency and corruption.



Finally, it should be stressed that the while some version of the Petroleum Commission Bill could be a useful element of a reform package, it does not on its own obviate the need for revised legislation on exploration and production. The Bill says little on licensing procedures, fiscal terms, revenue or contract transparency, or the obligations facing international oil companies. It is not necessary or appropriate that all of these elements be included in the Commission Act, but if Ghana does not take steps to ensure that they are adequately legislated somewhere, the country risks sub-optimal results and serious accountability gaps.

The divergence between the Revenue Management Bill's attention to strong accountability measures and the E & P Bill's failure to reflect Ghanaian or international experience underscores the complexity of the challenge of melding technocratic details with openness and oversight, all the while building credible political constituencies to support the evolution of legislation and its effective implementation once enacted. Now that the oil from Jubilee has begun to flow, the task of building accountable institutions, rules, and procedures gets more difficult with each passing day that legislation is not enacted. As Ghana's leaders and citizens continue their quest for a stable and prosperous oil sector, the need for clear legislative frameworks for open and responsible oversight should remain at the forefront of the political agenda.

## ENDNOTES

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<sup>1</sup>For an account of the Parliamentary debate surrounding the Bills, see Frederick Asiamah, "Parliament Divided," *Public Agenda*, November 22, 2010, available at <http://allafrica.com/stories/201012220240.html>.

<sup>2</sup>See Natural Resource Charter, November 2010, available at [www.naturalresourcecharter.org](http://www.naturalresourcecharter.org).

<sup>3</sup>International Monetary Fund, Guide on Resource Revenue Transparency, 2007, available at <http://www.imf.org/external/np/pp/2007/eng/051507g.pdf>.

<sup>4</sup>International Working Group of Sovereign Wealth Funds, Sovereign Wealth Funds: Generally Accepted Principles and Practices – "Santiago Principles," October 2008, available at <http://www.iwg-swf.org/pubs/eng/santiagoprinciples.pdf>.

<sup>5</sup>Natural Resource Charter, supra note 2, at 4.

<sup>6</sup>See the IMF Guide, supra note 3, at 24 – 31 for a more detailed discussion of this issue.

<sup>7</sup>For a full breakdown on the data produced by GEITI, see [http://www.geiti.gov.gh/site/index.php?option=com\\_phocadownload&view=sections&Itemid=54](http://www.geiti.gov.gh/site/index.php?option=com_phocadownload&view=sections&Itemid=54).

<sup>8</sup>See, e.g., Mohammed Amin Adam, "Kosmos Deal and the National Interest – Slippery Steps of a New Petro-State," *Ghanaian Chronicle*, July 10, 2010, available at <http://www.ghanaweb.com/GhanaHomePage/NewsArchive/artikel.php?ID=185825>.

<sup>9</sup>See, e.g., ISODEC and Oxfam America, Ghana's Big Test: Oil's Challenge to Democratic Development, 2009, available at <http://www.oxfamamerica.org/publications/ghanas-big-test>, at 37 – 42.

<sup>10</sup>Petroleum Revenue Management Bill, Clause 19(2).

<sup>11</sup>The sectors are: agriculture and agro-business; human resource development; physical infrastructure and service delivery in education and health; water and sanitation; road, rail, and port infrastructure; rural development; the strengthening of the institutions of government concerned with governance and the main-

tenance of law and order; public safety and security; alternative energy sources; environmental protection, forest management, and the protection of water bodies; and provision of social welfare and the protection of the physically handicapped and disadvantaged citizens. Petroleum Revenue Management Bill, Clause 22(3).

<sup>12</sup>See Commission on Growth and Development, *The Growth Report: Strategies for Sustained Growth and Inclusive Development*, 2009, available at: [www.growthcommission.org](http://www.growthcommission.org).

<sup>13</sup>Edwin M. Truman, *A Blueprint for Sovereign Wealth Fund Best Practices*, Peterson Institute for International Economics, 2008, available at <http://www.petersoninstitute.org/publications/interstitial.cfm?ResearchID=902>.

<sup>14</sup>Petroleum Revenue Management Bill, Clauses 50 – 51.

<sup>15</sup>*Ibid*, at Clause 51(3)-(4).

<sup>16</sup>*Ibid*, at Clause 16.

<sup>17</sup>*Ibid*, at Clauses 17, 20.

<sup>18</sup>*Ibid*, at Clause 18.

<sup>19</sup>*Ibid*, at Clauses 46 – 49.

<sup>20</sup>Clause 56(1) of the Bill spells out the membership, to include representatives of “independent policy research think tanks;” civil society and community-based organizations; Trades Union Congress; National House of Chiefs; Association of Queen Mothers; Association of Ghana Industries and Chamber of Commerce; Ghana Journalists Association; Ghana Bar Association; Institute of Chartered Accountants; Ghana Extractive Industries Transparency Initiative; and academia.

<sup>21</sup>*Ibid*, at Clauses 53 - 56.

<sup>22</sup>The system proposed under the E & P Bill can be contrasted with the contracting mechanism established in Angola’s Petroleum Activities Law. Article 44 of that law provides that rights are to be provided by open tender under published criteria, and that direct negotiation is only allowable where a tender was conducted and there were either (a) no bids; or (b) no bids that the Concessionaire deemed to meet the established criteria.

<sup>23</sup>Natural Resource Charter, *supra* note 2, Precept 4.

<sup>24</sup>Revenue Watch Index 2009, available at <http://www.revenuwatch.org/rwindex2010/index.html>.

<sup>25</sup>See Revenue Watch Institute, “RWI Convenes Experts in Ghana to Push for Transparency of Oil and Mining Contracts,” June 24, 2010, available at <http://www.revenuwatch.org/news/news-article/ghana/rwi-convenes-experts-ghana-push-transparency-oil-and-mining-contracts>.

<sup>26</sup>By contrast, Niger has enshrined a commitment to contract transparency at a Constitutional level, and Liberia, Timor-Léste, Peru, and Colombia have done so in legislation.

<sup>27</sup>Petroleum (Exploration and Production) Bill, Clause 40.

<sup>28</sup>*Ibid*, at Clause 41.

<sup>29</sup>*Ibid*, at Clause 44.

<sup>30</sup>*Ibid*, at Clause 42. The Bill provides for payment of taxes in accordance with the Petroleum Income Tax Law, 1987 (PNDCL 188), which sets a baseline tax rate of 50%, but provides that this rate can be varied where “the Petroleum Agreement...makes alternative provision” (Article 6).

<sup>31</sup>Royal Institute for International Affairs, *Good Governance of the National Petroleum Sector – The Chatham House Document*, 2007, [http://www.chathamhouse.org.uk/files/9761\\_ggdoc0407.pdf](http://www.chathamhouse.org.uk/files/9761_ggdoc0407.pdf), page 4.

<sup>32</sup>Ghana National Petroleum Corporation Law, 1983, Clause 18.

<sup>33</sup>Ghana Ministry of Finance and Economic Planning, *Ghana Petroleum Revenue Management – Preliminary Proposal*, March 17, 2010, available at [http://www.mofep.gov.gh/documents/Ghana\\_Petroleum\\_RevenueMgmt\\_Outline.pdf](http://www.mofep.gov.gh/documents/Ghana_Petroleum_RevenueMgmt_Outline.pdf); Sarah Wachter, “Oil: Precious Bane,” *Emerging Markets*, May 27, 2010, available at <http://www.emergingmarkets.org/Article/2580121/OIL-Precious-bane.html>.

<sup>34</sup>Publish What You Pay, “Ghana: Recent Activities,” last updated June 10, 2010, available at <http://www.publishwhatyoupay.org/en/where/coalitions/ghana>.

<sup>35</sup>For a more detailed discussion of the economic differences between the original and revised proposals, see Joseph C. Bell, Patrick R.P. Heller, and Antoine Heuty, *Comments on Ghana’s Petroleum Revenue Management Bill*, August 2010, available at [http://www.revenuwatch.org/files/Ghana\\_revenue\\_management\\_brief\\_final.pdf](http://www.revenuwatch.org/files/Ghana_revenue_management_brief_final.pdf).

<sup>36</sup>For examples of public reaction to the E & P Bill, see Civil Society Platform on Oil and Gas, Press Statement on the Need for Transparency and Accountability in Ghana's Petroleum Laws, November 5, 2010, available at <http://www.sierraexpressmedia.com/archives/15796>; Christian Council of Ghana and Ghana Pentecostal Coalition on Oil and Gas Find, Communiqué Issued by the Christian Council of Ghana and the Ghana Pentecostal Council after a Two-Day Roundtable with CSOs at Osu Presby Conference Room, Accra, July 26, 2010, available at <http://ghanaoilwatch.org/images/Articles/communique.pdf>.

<sup>37</sup>Petroleum Commission Bill, at Clause 2.

<sup>38</sup>Ibid, at Clause 2.

<sup>39</sup>Ibid, at Clause 2(2)(k).

<sup>40</sup>Ibid, at Clause 16.

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# THE LEGAL REGIME OF GHANA'S UPSTREAM PETROLEUM INDUSTRY AND THE ROLE OF GNPC AS PLAYER AND REGULATOR

*Ama Jantuah Banful\**

## ABSTRACT

Oil (or 'black gold') has the capacity to make and unmake nations, ensure prosperity or cause conflict. December 2010 will be remembered as when Ghana joined the league of oil-producing countries. As promising a step as it is, the question on the minds of many is: Can Ghana successfully manage its petroleum industry? Can the legal and regulatory framework provide effective organization of the industry? The framework to organize the prospective industrial activities was put in place in the 1980s and given legal backing by two main statutes: Ghana National Petroleum Corporation (PNDC Law 64) and The Exploration and Production Law (PNDC Law 84). These were supplemented by the Petroleum Income Tax Law, PNDC Law 188 of 1987. As impressive as these steps were for an industry that was far from promising, a number of questions have arisen recently. Are the extant laws crafted in the early 1980s comprehensive and sustaining enough to guide the emerging petroleum industry? What ought to be the appropriate role of the national oil company? This paper examines the industry's evolution, the legal and regulatory regime that is in place, the role that the national oil company plays as a regulator of the industry and also as a player, and concludes that while separation of roles is inevitable, and indeed desirable, it need not be immediate. Rather there should be a clear defined policy of capacity building to enable separation of functions within a three-year time frame with clearly defined timelines for implementation.

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# 1. INTRODUCTION

Petroleum exploration in Ghana dates back to the 19th Century in the then Gold Coast. But it was not until the 1980s that Governments realized the potential for oil in the country and begun to put in place the framework to attempt to manage the prospective industrial activities. The framework was established and given legal backing by two main statutes: The foresight to have an agency in place to help manage and regulate the nascent industry led to the establishment of the Ghana National Petroleum Corporation Law (PNDC Law 64), whilst The Petroleum Exploration and Production Law (PNDC Law 84), provides the framework for the management of oil and gas exploration, development and production in Ghana. These were supplemented by the Petroleum Income Tax Law, PNDC Law 188 of 1987 and the Model Petroleum Agreement. From modest beginnings, Ghana found oil in commercial quantities in August 2007.<sup>1</sup> Since then there have been slow but steady new commercial finds in both oil and gas.<sup>2</sup> On the 15th of December 2010, Ghana pumped first oil and joined the league of oil producing nations.

The industry demands strong regulations, ideally a regulator, and clear and unambiguous laws to govern it. Industry best practice is that the industry regulator should also not be a commercial player (Thurber et. al., 2010). In the light of this, the questions being asked are: (a) How will Ghana successfully manage the industry within the existing legal regulatory framework established nearly two decades ago, and (b) What should the role of the national oil company –Ghana National Petroleum Corporation (GNPC) be in the scheme of things? This paper examines existing legislation, the dual role GNPC plays, and offers some suggestions for the way forward, drawing from industry best practices. Section 2 of the paper outlines the evolution of the industry in Ghana, the law that established the national oil company, its objects and its scope of operations under the law. Section 3 examines the scope of activities of the national oil company and draws comparisons with other oil companies around the world. Section 4 briefly looks at the role of the proposed Petroleum Commission and the implications of its establishment for GNPC. Conclusions and the way forward follow in Section 5.

# 2. EVOLUTION OF THE PETROLEUM INDUSTRY IN GHANA

Ghana has four sedimentary basins namely: The Cote d'Ivoire – Tano Basin, Central Saltpond Basin, Accra/Keta Basin, and Inland Voltaian Basin. According to the Ghana Geological Survey Bulletin No. 40,<sup>3</sup> traces of onshore oil and gas seepages found by early explorers prompted exploration of oil and gas in the Onshore Tano Basin. Early wells were drilled without seismic data. Five wells were drilled between 1896 and 1903 with the first discovery in the Takinta concession.<sup>4</sup> Societe Francaise de Petrole drilled six wells between 1909 and 1913. The African and Eastern Trade Company (UAC) drilled two wells in Onshore Tano between 1923 and 1925 and encountered gas and heavy oil. Gulf Oil Company acquired the Tano Basin and drilled four wells from 1956 to 1957.

Onshore exploration continued during the first Republic. Acting under the auspices of the Ghana-Soviet Friendship Pact, Soviet Romanian Geoscientists explored for oil and gas in the Accra-Keta and Voltaian basin. The Soviets encountered traces of oil in the Voltaian Basin in the Northern and Upper East regions. Exploration for hydrocarbons continued during both military and civilian regimes between the 1960s and 1980s.

In 1982, Geophysical Services Incorporated (GSI survey) entered into an agreement with the then Ministry of Fuel and Power to acquire a non-exclusive seismic survey offshore to accelerate the exploration and production of hydrocarbons. The data covered the area from the Eastern border of Ghana to Cape Three Points. The then Provisional National Defence Council (PNDC) decided to establish the institutional capacity, statutory, legal and fiscal framework that would accelerate capacity building, exploration and production efforts. To this end, PNDCL 64 established the GNPC. The Petroleum Exploration and Production Law (PNDCL 84) was also enacted. The Petroleum Income Tax Law (PNDCL 188) provided for a separate tax regime for petroleum operations. The three laws are synthesized into the Model Petroleum Agreement as the standard agreement that is used in negotiating all petroleum operations in Ghana.

### *2.1 History of GNPC*

Established as a statutory body under the then Ministry of Fuel and Power, the Ghana National Petroleum Corporation was to provide the institutional framework to handle the country's petroleum activities. GNPC emanated from the Petroleum Department under the Ministry of Fuel and Power which carried out the procurement of crude oil and petroleum products. The Technical Directorate of the Ministry and the Geological Survey Department coordinated petroleum exploration and received reports on those operations. GNPC was established to support the Government's aim of ensuring a reliable supply of petroleum products and reducing Ghana's dependence on imported crude oil products by developing the country's petroleum resources. GNPC took over the functions of the Petroleum Department and was also made responsible for the importation of all petroleum products.

In the 1980s the Canadian Government acting through Petro Canada International Assistance Corporation funded GNPC activities. In addition to equipping and training personnel for GNPC's research laboratory, Petro Canada acquired extensive 2D seismic data in the offshore Tano/Cape Three Points basin. The Government of Japan through a bilateral cooperation agreement also acquired offshore 2D seismic data for GNPC in 1987. This data covered the area from the Eastern Border of Ghana to Cape Three Points and was an infill to the 1982/83 GSI speculative survey.

In 1989 GNPC funded the acquisition, processing and interpretation of 3D seismic data over the South Tano Field. Following interpretation of the 3D seismic data to determine the viability of gas to the Integrated Tano Fields Development Project (ITFDP) for power generation, GNPC drilled three wells and acquired a drillship, three rigs and other infrastructure to facilitate the rapid development of the Tano field. As part of the ITFDP,

GNPC purchased a power barge (The Osagyefo Barge) to utilise the gas from the Tano fields. The power barge and transmission lines were to be linked to the national grid.

During the fourth Republic the government decided to refocus GNPC to enable it facilitate research for commercial hydrocarbons in Ghana. To that end training programmes for staff involved secondment and attachment to International Petroleum Companies for training in related fields. GNPC was restructured, downsized and retooled to facilitate the work of the Operations Divisions and the technical and non-technical staff.<sup>5</sup> The new dispensation required that GNPC becomes more investor-friendly in order to facilitate exploration work. A campaign to attract investors at international oil fora was intensified. International Oil Companies (IOCs) such as Hess Corporation, Tullow Energy, Norsk Hydro Oil and Gas and Kosmos Energy began to take note of Ghana's hydrocarbon potential as an investor destination.

An analysis of the acreage positions of the IOCs and their respective approved work programmes reveal a gradual shift of focus from shallow water areas to deepwater. The increased spate of activity in offshore deepwater areas was occasioned by deepwater discoveries in the Tano basin from wells drilled between 1999 and 2003. Though this gradual shift of focus to deepwater began less than a decade ago, there is enough evidence to suggest that this area will play a vital role in petroleum exploration in Ghana – a fact quickly borne out by the discovery of oil in commercial quantities in deepwater Tano Basin in 2007.

## *2.2 The Role of GNPC in Upstream Oil and Gas Production*

What role was envisaged in the extant laws for GNPC? And what does the Constitution say about the management of natural resources in general and hydrocarbons in particular?

### *The Constitution*

The 1992 Constitution of Ghana protects all natural resources of Ghana. It stipulates that:

“Any transaction, contract or undertaking involving the grant of a right or concession by or on behalf of any person including the Government of Ghana to any other person or body of persons however described, for the exploration of any mineral, water or other natural resources of Ghana, made or entered into after the coming into force of this Constitution shall be subject to ratification by Parliament”<sup>6</sup>

This implies that any Petroleum Agreement (PA) must be ratified by Parliament or else it is void. The Constitution makes the position clear and transparent. The agreement goes to Cabinet for approval and then to Parliament for ratification thereby offering the investor a stable and transparent arrangement.

### *The Ghana National Petroleum Corporation Law (PNDCL64)*

This law established GNPC as a body corporate that has perpetual succession and a common



seal. The law allows the Corporation to acquire and hold property and where there is a hindrance to the acquisition the property may be acquired under the law.<sup>7</sup> The five main objects of the Corporation are to:

- a. Promote the exploration and planned development of petroleum resources.
- b. Ensure that Ghana obtains the greatest possible benefits from the development of its petroleum resources.
- c. Ensure training and development of national capabilities in all aspects of petroleum exploration.
- d. Ensure that petroleum operations are conducted in a manner that prevents adverse effects on the environment, resources and the people of Ghana.
- e. Obtain the effective transfer to Ghana of appropriate technology relating to Petroleum operations.<sup>8</sup>

It is clear from the foregoing that the powers of GNPC range from the regulation of petroleum operations in Ghana to ensuring capacity building and training in the petroleum sector. These objects tend to emphasise the regulatory role of GNPC, but other activities flow from these objects and these can be found in Section 2(3) of the Act. These provisions state that the Corporation “may” (not shall);

“Advise the Minister in matters relating to Petroleum Operations, engage in petroleum operations either alone or in association with others, enter into petroleum exploration and production agreements and other petroleum contracts, providing for assistance, participation or cooperation of contracts in connection with petroleum operations.”

The Corporation can also, either alone or in association with others, buy, sell, trade, store, exchange, import, or export petroleum and acquire or operate any installation, facilities or means of transportation. The law also allows GNPC to engage in research and development programme related to petroleum and engage in other activities either alone or in partnership with others as may be necessary for the carrying out of petroleum operations. It is clear that GNPC is also allowed under its laws to be a player in the industry. The law allows it not only to be an upstream operator, but a player in the downstream operations of the petroleum industry as well.

The law goes further, in Section (3), to grant GNPC other powers. These include:

- a. The formation of subsidiaries and affiliate companies, branches or agencies outside Ghana to carry out activities the Corporation is authorised to undertake.
- b. Enter into contracts and agreements with individuals or firms in or outside Ghana, and with the approval of the Minister, purchase or own shares in other companies engaged in activities related to the objects of the Corporation, or sell or transfer such shares.
- c. To manage factories, plants and installations and facilities as are necessary for engagement, development, production and disposal of petroleum.

Under these objects GNPC partners investors in petroleum exploration and production.

It enters into production sharing agreements with investors or engages in petroleum operations alone. This is clearly portrayed in its relationship with Tullow, Kosmos and Anadarko in the Jubilee Fields. Within its objectives, it is also mandated to; “ensure that petroleum operations are conducted in such a manner as to prevent the adverse effects on the resources and good people of Ghana”.<sup>9</sup> This object clearly defines GNPC’s role as a regulator, and in the same breath the law allows the Corporation to “engage in petroleum operations either alone or in association with others”.<sup>10</sup> The question is with the discovery of oil in commercial quantities can GNPC remain both a player in and a regulator of the industry? We examine this in further detail.

### 2.3 *Significance of the Petroleum Exploration and Production Law (PNDCL84) to the Role of GNPC*

This law provides the framework for the management of Ghana’s petroleum industry.<sup>11</sup> The law also spells out the contractual relationship between the State, GNPC and a prospective investor in upstream petroleum operations. The law states the terms and conditions of every petroleum agreement (PA) negotiated and executed in Ghana and spells out the rights and objectives of parties to the agreement. Section 2(1) of the law states that no person other than the Corporation shall “engage in the exploration, development or production of petroleum except in accordance with a petroleum agreement entered into between that person and the Republic and the Corporation”.

Hence the law makes the Corporation a party to every petroleum agreement that the Republic of Ghana enters into with any investor. The Model Petroleum Agreement (MPA) which is negotiated only in respect of specific terms ensures that all investors have almost the same broad terms in their contracts, but with contract-by-contract variations.

PNDCL 84 gives GNPC the right to undertake exploration, development and production of petroleum in all blocks that are declared by the Minister as open for petroleum operations. The law also provides for the ownership of gas in section 16(2) which states “that all natural gas produced other than in association with crude oil is the property of the Corporation except where the investor and the Corporation have agreed on different terms in a petroleum agreement”.

The latter provisions emphasise the Corporation’s role as a player in the industry. It must also be noted that the law refers to a Contractor and the Corporation when it refers to the payment of royalties from production of petroleum,<sup>12</sup> for the payment of compensation<sup>13</sup> or the notification and approval of a petroleum discovery.<sup>14</sup> In contradiction and contrast to its role as a player, PNDCL 84 under the part that spells out the obligations of contracts and sub-contracts states: “All data and information obtained by a contractor as a result of Petroleum operations shall be the property of the Corporation”.<sup>15</sup>

This clearly puts GNPC back into the role of a regulator. Section 15 brings to the fore one of the many paradoxes the law draws up with respect to the role of GNPC in the industry. If the Corporation is a player in the industry but owns any data that its competitor investors

produce, there may not be a level playing field in the industry in Ghana. The law also enjoins GNPC to appoint auditors or a person authorised by the Corporation to test, inspect, and audit the works, equipment, operations, etc. relating to petroleum operations performed by a contractor or sub-contractor under the law.<sup>16</sup> Here again GNPC slips into the role of regulator.

### **3. NATIONAL OIL COMPANIES**

In the preceding sections, we have looked at the law and the objects of the Corporation, bringing to the fore its dual role of regulating the industry as well as the dispensation the law gives it to be a player in the industry. But how does the current role of GNPC compare to those of other National Oil Companies around the world?

As stated earlier both PNDC Laws 64 and 84 give the Corporation the mandate to engage in exploration, production and development and disposal of petroleum resources. The Corporation can enter into contracts with investors in the industry, purchase shares in these companies, purchase or lease, or establish and manage factories, plants and installations necessary for petroleum activities<sup>17</sup> and export crude oil and natural gas. The Corporation is also enjoined to conduct its affairs along sound commercial lines and its revenues are to produce a reasonable rate of return on its assets and make payment into the consolidated fund.<sup>18</sup> The Corporation can also open foreign exchange accounts where all monies paid to it are deposited.<sup>19</sup>

PNDCL 84 also deals with the Corporation as it does with contractors and sub-contractors who are operating in the Ghanaian petroleum industry. The law requires the Corporation to pay compensation to the title holder for land it enters upon for petroleum operations. It is also required under the law to notify the Minister of a petroleum discovery and also submit development plans and an annual and long term production programme to the Minister, in respect of any field developed directly by the Corporation.<sup>20</sup> Royalty payments and taxes are also expected from the Corporation when it gets into production. The law clearly anticipates a situation where GNPC acts as the National Oil Company.

Presently industry players are managed by Petroleum Agreements to which GNPC is a party. The PA enables GNPC to participate in petroleum operations and currently GNPC has a shareholding in all the blocks covered by a petroleum agreement. On behalf of the State, GNPC holds a 10% initial carried interest and the agreement allows the State to increase its equity holding to a maximum of 13.5%. Presently the Corporation holds 10% in the Deepwater Tano contract group, 10% in the West Cape Three Points contract group giving it an aggregate of 10% in the Jubilee unit. However, the State does have an option to increase its stake in the Deepwater Tano to 15% and to 12.5% in the West Cape Three Points contract group.<sup>21</sup> Its interest in other blocks vary from 7% - 15%. GNPC is also involved in the development of the gas infrastructure for the production and utilisation

of natural gas. It also supervises the production of petroleum products by the Tema Oil Refinery (TOR). GNPC has also taken advantage of the sections in both PNDCL 64 and 84 that allow it to operate on commercial lines. But how do these operations compare with those of other IOCs?

An NOC is an oil company fully, or in the majority, owned by a national government. According to the United States Energy Information Administration, NOCs accounted for 52% of global oil production and controlled 88% of proven reserves.<sup>22</sup> Such Companies include Statoil of Norway, the Abu Dhabi National Oil Company, Sonangol of Angola and Petrobras of Brazil. A short profile of each and an analysis of their activities in comparison to GNPC's will help us determine whether GNPC fits the cap of a National Oil Company.

### ***Statoil***

Statoil is responsible for the commercial interest of the petroleum industry in Norway. Statoil was the result of the merger of Statoil Hydro and Norsk Hydro in 2007 and became the biggest offshore Oil and Gas Company in the world.<sup>23</sup> It is a fully integrated production company with production operations in thirteen countries and retail operations in eight countries. Fortune magazine has ranked it the 13th largest operation on the Norwegian Continental Shelf with 60% of total production. The company also has trading offices for crude oil, refined petroleum products and natural gas. One of the reasons behind the setting up of Statoil was to “entrust the task of state participation in the company that was fully owned by the state. In doing so an institutional distance would be created between the Ministry of Industry which had the constitutional responsibility of the starting and the actual daily administration of the State's commercial functions.”<sup>24</sup>

### ***Abu Dhabi National Oil Company (ADNOC)***

This is the state owned oil company of the United Arab Emirates (UAE) and is considered as the world's fourth largest oil company. It was established in 1971 to operate in all areas of oil and gas and has 14 subsidiary companies both upstream and downstream including transportation, shipping, marketing and distribution. The Petroleum Council acts as the board of directors for ADNOC. It is chaired by HH Sheik Kalifa Bin Zayeb Al-Nahayan, President of the UAE and ruler of Abu Dhabi. This council formulates and oversees the petroleum production of Abu Dhabi. In the past few years there has been considerable expansion and development of gas fields to meet the increased demand for gas in the industry.<sup>25</sup> The difference between ADNOC and Statoil is that Statoil has expanded beyond the borders of Norway to invest in exploration of petroleum fields. Norway presently has shareholding with non-Norwegian petroleum companies in other parts of the world. ADNOC, however, appears to have expanded internally owning and exploiting most of the resources of Abu Dhabi.

### ***Petrobras***

Petrobras is Latin America's largest Company. In 2008 its sales capped \$118.3 billion.<sup>26</sup> The Brazilian Government owes 55.7% of Petrobras.<sup>27</sup> It was created in 1953 and is a significant oil producer with an output of more than 2 million barrels of oil equivalent a day.

The company owns oil tankers and is a world leader in development of advanced technology from deepwater to ultra deepwater oil production. It controls oil and energy assets in 18 countries in Africa, North America, South America, Europe and Asia. These holdings as well as its properties in Brazil give it assets to the tune of \$135.5 billion. After 40 years of production, refining, and transportation of Brazil's oil, Petrobras began to compete with other companies in 1997 and Brazil's government created the Agencia Nacional do Petroleo (APN) which became responsible for the regulation and supervision of the petroleum sector.<sup>28</sup>

### ***Sonangol***

Sonangol is the only concessionary for petroleum underground and on the continental shelf of Angola. It was created in 1976 through the nationalisation of ANGOL. The company is involved in prospecting, development, sales, production, transportation and refining of hydro-carbons and their derivatives and these activities are performed autonomously or with other companies such as Braspetro, Daewoo, Naftagas, Petrogel, Segaoil, Shell, Statoil and Svenska, among others. Sonangol is a Corporation with several subsidiaries. It comprises a group of companies that includes Sonangol Holdings. It also has subsidiaries and joint ventures. All its companies are independent business units with their own management structures but the management of the subsidiaries report directly to the Administration Council which determine corporate strategy.<sup>29</sup>

Sonangol is responsible for the negotiation of both offshore and onshore oil concessions and post contract supervision of the concession. Its subsidiaries are involved in the marketing and trading of oil and gas, the products of oil derivatives such as grease and lubricants, air transport to the oil industry, transportation of crude oil and its derivatives and telecommunication services for the Sonangol group. China Sonangol based in Hong Kong is involved in the exploration and production of gas.

All these companies are state-owned or have a majority state share. The common thread that runs through all of them can be summarised as follows. First, they are not regulators of the industry. Apart from Sonangol that is responsible for negotiating the concessions for petroleum, none of the companies described above regulate the petroleum industry in their respective countries. But GNPC does so ostensibly on behalf of the Ministry of Energy. It is responsible for the physical regulation and extant laws enable it to do so. Second, all the companies are into full scale commercial activities and have subsidiaries that have branched off into transportation and production of petroleum, among others. They have either partnership in oil concessions worldwide or they own these concessions. They also appear to be regulated just as international oil companies are regulated by independent regulatory authorities of their respective countries.

These features make their operations very different from that of GNPC. While existing laws allow GNPC to engage in most of these petroleum activities noted above, GNPC is presently more of a regulator than a commercial player in the industry. Yes, it may have a small share in the blocks it gives out to IOCs but it must be noted that the interest is

mainly a carried interest which hardly gives one the clout of a real player in the market. The real decision-making clout rests with the IOC. To become an NOC, GNPC will have to shed its regulatory role and relinquish that to a Regulatory Body. It will have to begin to commercialise its activities and submit to the regulations of its activities by another entity. By shedding its regulatory role it will have more space to develop itself into a viable NOC. This brings us to a brief analysis of GNPC and the suggested Petroleum Commission.

#### **4. THE PETROLEUM COMMISSION VIS-A-VIS GNPC**

Parliament in 2010 suggested that a Petroleum Commission be put in place to oversee, manage and regulate the petroleum industry as specified in Article 269 of the Constitution. This would be consistent with best industry practice in other countries. It is submitted that the suggestion that the Regulator should be set up as a Commission rather than as an Authority may be premised on the concept that once it is a Commission it will be independent and insulated from government interference and manipulation. However, to give it that independence and immunity, it must be a Commission that is specified in the Constitution very much like the Lands Commission. This would ensure some level of autonomy and independence.

GNPC presently, under its act, performs the physical regulation of the industry. It has the personnel and the expertise to do this and its law enjoins it to play this regulatory role. The Petroleum Commission that will be responsible for the regulation of the Upstream Petroleum Industry will also be playing the same regulatory role. This means that there will be two agencies doing the same thing. The duplication of roles will make the industry uncertain and costly. This means that with the coming into force of the Petroleum Commission Bill, amendments will have to be made to both PNDCL 64 and 84 so that the regulatory functions of GNPC are taken away and vested in the Petroleum Commission for upstream regulation. This would mean that with the coming into force of the Commission, GNPC would no longer be responsible for regulation and it would concentrate on its role as a National Oil Company.

The question is, in the short term would this be in the national interest? As stated above GNPC has the expertise and personnel to regulate the industry. The petroleum industry is complex and the same expertise needed to run a viable NOC is also needed in an efficient regulatory body. Ghana needs to run an efficient regulatory body to benefit from the industry. The industry itself prefers to have an independent regulator so that all parties understand what the rules of the game are and fortunately these rules are standard worldwide. Do we have enough expertise and personnel to split between the two? It is submitted that GNPC should increase and train its workforce so that some can be hived off to form a core team for the Commission.

Second, the absence of qualified staff to efficiently and effectively monitor, coupled with inadequate wages in the face of huge oil revenues may corrupt officials who are tasked to do the monitoring. This may also result in an inadequate flow of expected revenue from

royalties and taxes. It has happened in the gold industry and can be replicated in the petroleum industry especially if Ghana does not have a National Oil Company. GNPC therefore should be allowed to play that role. Regulation of the industry must go to an independent institution and policy for the industry should be formulated by the Minister. Best practice dictates that the roles should be separated to ensure transparency and fair play.<sup>30</sup>

## **5. CONCLUSION**

GNPC presently is more of a regulator than it is a player in the industry. Parliament has suggested that there should be an independent regulator in conformity with best practices in the industry. GNPC by its law is enjoined to go commercial and get into the petroleum business. In fact it is suggested that it is the only way that Ghana can get the most out of its petroleum resources. This implies that there must be a separation.

However, it is suggested that the separation should not be made right away. All the relevant expertise is concentrated in GNPC and, as desirable as it is, immediate separation will lead to understaffing of both institutions to the detriment of both. Rather, it is suggested that there should be a rigorous policy of capacity building and training. The universities should begin to formulate curricula that take cognisance of the industry and its needs. Funds should be available for external training for personnel within the public sector to quickly build capacity to enable the separation to be done within a minimum time frame and the time frame should be specific and defined. To get this done the Petroleum Commission Bill may be passed but its operation can be delayed but with clear a timetable to enable capacity to be built to populate it. There is a precedent in the passing of the U.K. Freedom of Information Act. The Act was passed but it came into operation 5 years after the passage of the Act.

There should be a committed plan with a defined timeline to get Ghana to quickly build expertise in the industry to enable it follow best practice procedures that facilitate growth and transparency in the industry. This will also promote investor confidence and help Ghana build her own NOC to compete in a fair and properly regulated environment. The role of GNPC eventually should be that of a proper national oil company. It cannot continue to be a regulator and a player in the industry indefinitely.

## ENDNOTES

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<sup>1</sup>Pronouncement by Tullow of oil in commercial quantities in its Mahogany 1, Hyedua fields.

<sup>2</sup>Djata and Owo discoveries in the West Tano Basin by Tullow.

<sup>3</sup>Moshen H. Khan. Most of the data on this has been collated from the GNPC Data Centre and interview of GNPC officials.

<sup>4</sup>Information derived from GNPC data centre.

<sup>5</sup>Culled from interview with GNPC officials.

<sup>6</sup>Article 268(1) of 1996 Constitution of Ghana

<sup>7</sup>PNDCL 64 of 1984, section 1-4, State Property and Contract Act 1960, CA60 and State Lands Act 1962, Act 125

<sup>8</sup>Section 2 of the Act PNDCL 64.

<sup>9</sup>PNDCL 64 section 3(3).

<sup>10</sup>Section 3(2) of PNDCL 64.

<sup>11</sup>At the date of this article the new law that was laid before Parliament has not been passed and therefore the law regulating the industry is still PNDCL 84

<sup>12</sup>Section 20(2) and (3)

<sup>13</sup>Section 7(1)

<sup>14</sup>Section 9(1).

<sup>15</sup>Section 23(2) of PNDCL 84.

<sup>16</sup>Section 76 PNDCL 84.

<sup>17</sup>Section 3(c),(e),(f)(g)(i) Of PNDCL 64

<sup>18</sup>Section 4 of PNDCL 64.

<sup>19</sup>Section 19 of PNDCL 64.

<sup>20</sup>Section 9 And 10 Of PNDCL 84

<sup>21</sup>Exhibit A to the Unitisation and unit operating agreement, Exhibit A being the group interest, tract participation and unit interest documents.

<sup>22</sup>Energy Information Administration 2009

<sup>23</sup>Culled From Ocean Resources [www.Oceanresources.Com/News](http://www.Oceanresources.Com/News)

<sup>24</sup>Cited From the book Managing Petroleum Resources The Norwegian Mode; In A Broad Perspective Farouk Al-Kasim

<sup>25</sup>[www.adnoc.ue/](http://www.adnoc.ue/)

<sup>26</sup>Latin Business Chronicle ([www.latinbusinesschronicle.com](http://www.latinbusinesschronicle.com))

<sup>27</sup>Culled from Petrobras investor relations website. [www.petrobras.com](http://www.petrobras.com)

<sup>28</sup>supra

<sup>29</sup>[www.sonangol.co.ac](http://www.sonangol.co.ac)

<sup>30</sup>See section 3 PNDCL 84.



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# THE CRUCIAL ROLES OF GHANA'S MODEL PETROLEUM AGREEMENT: THE PUBLIC POLICY IMPLICATIONS AND REQUIREMENTS

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## ABSTRACT

With the discovery of large commercial deposits of oil in Ghana in 2007 and first oil lifting in December 2010, Ghana joined the league of oil producing countries on the Gulf of Guinea coast. Ghana has since 2007 initiated efforts to review and improve its legislative framework for the petroleum activities and as well as petroleum revenue management. The Exploration and Production Law (PNDC Law 84), the Ghana National Petroleum Corporation (PNDC Law 64) and the Petroleum Income Tax Law (PNDC Law 188) are the main statutes. Ghana's Model Petroleum Agreement which provides the template for petroleum exploration and production licensing between the Ghana Government, the Ghana National Petroleum Corporation and multinational companies to produce oil and gas emanates from these statutes. This paper focuses on the Model Petroleum Agreement (MPA). It addresses two key questions. First how adequate are the essential provisions of the MPA? Second, to what extent is Ghana ready to go through the required "steep learning curve" to optimize benefits from petroleum activities through its contractual agreements with multinational oil companies? The paper concludes with some policy recommendations.

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# 1. INTRODUCTION

Following the discovery of oil in 2007, Ghana on 15 December, 2010, joined the league of oil producing countries in Africa. While most local and international public discourse on Ghana's oil discovery has tended to dwell on the fiscal regime, revenue management, the industry framework as well as the "inevitability" of the resource curse, there has been little or no discussion about the adequacy of its oil and gas agreements and to assess the institutional capacity to manage the terms and conditions of the agreements.

Ghana has sought to manage its petroleum industry through three principal laws. The Petroleum Exploration and Development Law, 1984 (PNDCL 84) provides the framework for the management of oil and gas exploration and development. It provides the basic terms and conditions of petroleum agreement negotiated and executed in Ghana. The Ghana National Petroleum Corporation Law, 1983 (PNDCL 64) establishes the Ghana National Petroleum Corporation and charges the corporation first as a regulator and second as a participating agent in exploration and production. The Petroleum Income Tax Law, 1987 (PNDCL 188) sets out the taxation elements of petroleum operations. These three principal statutes are supplemented by the Model Petroleum Agreement (MPA), Environmental Protection Agency Act, 1994 (Act 490), and the National Petroleum Authority Act, 2005 (Act 691). Recent legislative efforts include the passage of the Petroleum Revenue Management Law by Parliament in February 2010 and the proposed amendments to the Exploration and Production Law to reflect best international practices.

The MPA emanates from the Petroleum Exploration and Production Law to guide the implementation of the legislation. Briefly, it guides the process of negotiating the terms and conditions of a Petroleum Agreement among the parties thereto, namely, GNPC, Government of Ghana and the oil company, embodies the final terms and conditions to regulate the intended petroleum operations, and outlines the specific fiscal terms, cost, accounting and reporting of the contractors. This study assesses Ghana's MPA 2000. The key concerns addressed in this paper are summed up as follows: Do the terms and conditions in the MPA

- a. protect Ghana's overall interests as the sole and legitimate owner of crude oil and gas?
- b. optimize Ghana's benefits? and
- c. expose Ghana to unnecessary financial risks, current and future legal and environmental dangers or problems?

The rest of the paper is organized as follows. Section 2 provides a description of the MPA and the parties to a petroleum agreement. Section 3 outlines the key provisions of the MPA, focusing on seven essential elements. Section 4 examines the pivotal roles of selected Ghanaian institutions, the policy prospects and the challenges, and the corporate social responsibilities. Conclusions follow in section 5. We use the terms petroleum, oil

and gas, oil leases and petroleum agreements or contracts interchangeably in this study. Unless otherwise noted, articles and pages cited refer to articles and pages in Ghana's MPA .

## **2. DESCRIPTION OF GHANA'S MODEL PETROLEUM AGREEMENT**

Petroleum legislation generally aims to regulate petroleum activities from exploration to development and production by defining the rights and obligations of contractors and the resource owner. The legislation is typically premised on the petroleum policy of the country (Tordo, 2007). The nature and form of the rights and obligations of the resource owner and the contractors, however, varies according to contract type. The three basic contract types are: concessions, production sharing agreements, and service contracts.<sup>1</sup> Under a typical concessionary system, the contractor has the right of exploration and production of the concession area and is charged a royalty only. Under a contractual system the arrangement may be Production Sharing Contracts (PSCs) or Service Contracts (SCs). The contractor is paid in kind as under PSCs or in cash or in kind under SCs. Today, most agreements use a hybrid of concessionary and PSCs. There are also Joint Ventures (JVs) by way of partnership-based approach which involves creating a jointly managed project company. Distinct about JVs is that they provide a corporate-based, structural means for technology transfer and shared decision-making. But as Likosky (2009) points out, whether the agreement is concessionary, PSC or JV depends on the specifics of the legal arrangement in order to determine where the locus of control and decision-making of the company lies.<sup>2</sup>

Our examination of the MPA shows that, contrary to the perception in the Ghanaian popular media (for example, Ghanaweb.com), the contractual agreement currently in place in Ghana defies simple categorization within existing typology of agreements. Even though Ghana is entitled to a 12.5% royalty for oil and 5% for gas, the MPA cannot be identified as concessionary. In addition to royalties, the Ghana government through the Ghana National Petroleum Corporation (GNPC), acts as if it were a joint partner with the International Oil Companies (IOCs). Also according to section 2.4 of the MPA, the initial State (via GNPC) interest in petroleum operations is 10% and is carried through exploration and development. The IOC bears the costs and risks of exploration and development. Under this arrangement, the GNPC only pays contractors for its share of production costs. The State has the right to acquire additional interests from contractors again after discovery but in this case the State is only carried through exploration.

Despite State participation interests acquired by GNPC, MPA Article 26.7(p 78) states that this agreement is not a joint partnership. Furthermore, each party's rights and obligations are separate and "not joint." These provisions make it inaccurate to describe Ghana's MPA as a joint venture type because the MPA states in plain and legal language that it is not. "This Agreement shall not be construed as creating a partnership or joint venture, nor

an association or trust ... or as authorizing any party to act as agent, servant or employee for any other Party for any purpose... (MPA, Article 26.7). Moreover, Article 19 and other sections of the MPA stipulate that contractors are solely liable for insurance, indemnities and the safety of workers and equipment. The contractor is even required to indemnify the GNPC for losses and claims against it. In short, the MPA together with our observations of relations between the GNPC, the contractors and the operators (Tullow, Kosmos and Anadarko) on the Jubilee Field Phase 1 show that current Ghanaian petroleum agreements is of a hybrid type.

#### *Parties to the Petroleum Agreement*

The MPA exhibits an unusual feature. The State is named as a party in addition to the government-owned GNPC. Hence the State has two agencies involved in oil leases – the State per se, represented by the Minister of Energy and the GNPC. Additional parties to agreements are contractors who may engage operators and subcontractors, most of which are also IOCs. Contractors are responsible for all operations and can engage the services of an operator with the approval of the GNPC and the Minister of Energy (Article 1.40: p 9).

Led by Ghana's Ministry of Energy and with the assistance of the GNPC, the State leases out for rent, royalties and income taxes blocks of oil on- or off- shore to contractors to explore, appraise, develop and produce for export or domestic use with the participation of the GNPC. Contractors supply the financing, technology, equipment and personnel needed to produce oil. While the legal arrangements and the type of decision-making process may not be a big determinant of government revenues or government take (because the revenue stream can be replicated under different agreements), it is still an important tool for regulation and other important provisions of the petroleum agreement.

### **3. ESSENTIAL PROVISIONS OF THE MODEL PETROLEUM AGREEMENT**

This section evaluates provisions of Ghana's MPA by examining selected key issues which could impact adversely or otherwise on how Ghana fares with respect to the oil and gas sectors of the economy. These are: gas flaring; information management; how oil produced is shared; domestic and export uses of petroleum; local content provisions; training, employment and skill transfer; and dispute settlement.

#### *Gas Flaring*

Gas flaring, the burning and release of the by-products of gas from oil into the atmosphere, should be the subject of public discourse because it poses serious health, safety and ecological hazards. This was especially the case in the early phases of petroleum production in the Niger Delta, Nigeria, where flaring became a source of pollution, social discontent and deadly conflicts.<sup>3</sup> Contrary to pledges made by public officials during my field work in Ghana in 2009, gas flaring is permitted by the MPA. Flaring is allowed if the Minister

of Energy and the GNPC approved contractors' operations that included the burning and release of gas and into the atmosphere (See Article 17.5 of the MPA). As much as gas found in oil wells is expected to be re-injected to maintain pressure in production wells and to power equipment and vessels (such as Floating, Production, Storage and Off-take Kwame Nkrumah MV21 in use at the Jubilee oil field), flaring is permitted during testing and production operations and also as a safety measure. According to Article 17, flaring should be done in accordance with petroleum industry standards.

Flaring and adherence to industry practices raise some public policy concerns. What are these industry standards, who established them, and who enforces them in the absence of an independent regulatory authority? Are the Ministry of Energy and the GNPC able to assess compliance and ensure enforcement? And do they have the means to effect appropriate remedies and sanctions if needed? Performing such highly technical functions requires the GNPC, the Ministry of Energy, and the Environmental Protection Agency (EPA) to have the capacity in terms of resources - - personnel, surveillance and monitoring equipment. Although Ghana has barely produced large quantities of oil, it already faces some compliance and enforcement issues. According to the National Geographic (December 15, 2010:1-5) Kosmos (a contractor for Jubilee Field 1) and the public authorities are grappling with a US\$30 million fine assessed on the former for spilling 706 barrels of toxic materials.

### *Information Management*

Information Management is not only necessary in this information age but also due to the crucial and sensitive roles of data and information in the oil business, it is a key driver of successes or failure and costs. Seismic and other information do influence the bargaining positions of the oil producing country and the contractor. For instance, the nature of the seabed in offshore exploration and production will affect Ghana's capacity to obtain favourable or unfavourable terms. Besides, the key phases of oil production – exploration, appraisal, development and production – require the proper management of financial and technical information and data including the physical morphology of fields, their location, crude oil and gas potential, quality of crude oil and marketing. With respect to marketing, for example, there are two world markets for crude-- the North American/ US Texas Intermediate sold on the New York Commodities Exchange and the Western European Crude Brent. Since prices vary on these markets, it is necessary to factor into oil agreements which markets to sell to and what prices to use in determining royalties and accounting procedures.

There are other information and data management issues that the Ministry of Energy, the EPA, GNPC and the Ministry of Finance have to contend with. The long list and types of information provided in Ghana's MPA (17/8/2000, Article 161: p.59 and Article 16.3 p. 60) underscore the enormous challenges posed by information generation, management and use that various public agencies will have to deal with. In addition, public institutions that receive and transmit information should exercise utmost care to protect these highly

valuable and confidential information and data. An important point to stress is that the value of these kinds of information/data depends on their being kept confidential. As we have noted already, access to relevant information can be used as leverage in negotiating oil leases. It is essential that Ghana creates systems to keep such information both secure and confidential. Disputes between the Ghana government, the GNPC and Kosmos in 2010 over alleged unauthorized disclosure of information confirm the highly sensitive nature of information in the oil industry and the commercial value of data. However, with the proper implementation of Article 16 b ii (p. 81) of Ghana's MPA, a regulator should be able to manage appropriately the highly sensitive information and data it acquires.

The need to secure oil related information and data can also contribute to a public policy dilemma-- the right of Ghanaians' access to petroleum agreements, the right to know how much oil and gas is produced as well as the revenues that flow into public coffers. With the passage of a Freedom Of Information Act by Parliament, the government may soon need to reconcile the public's right to know with the need to maintain confidentiality in the oil business. Doing this successfully requires genuine public discussion which is necessary for achieving consensus and transparency, as exemplified in the consultative process leading to the preparation of the petroleum revenue management legislation.

#### *Sharing of Petroleum*

Article 10 (MPA, Article 10 pps. 37-38) lays out the sequencing of the sharing of oil produced in Ghana. The state is entitled to 12.5% of contractors' allocation from the gross production of oil from each field. This payment may be in cash or in kind as royalty to the state which is the sole owner of the petroleum. Next, the GNPC will receive a share of the oil if it acted as a sole risk taker during exploration, appraisal, development and production. This is followed by the GNPC and the contractor receiving their shares according to their participating interests. In the case of Jubilee Field 1 total State's share amounts to 13.75% of the gross production in cash or in kind. Cash payments are based on weighted average prices for crude deliveries for relevant months. But as pointed out by Amoako-Tuffour and Owusu-Ayim in this volume, the concern here is the lack of standardization in the Rate of Return thresholds and the percentage split of the additional oil entitlements between the State and the Contractor. This means that the contractual variation of the thresholds and the percentage split depends on the negotiating capacity of the parties to the agreement.

#### *Domestic and Export Uses of Petroleum*

Besides fiduciary responsibilities, there are more areas that state agencies, especially the GNPC, should be equipped to handle efficiently. In order to ensure that oil sold on behalf of the State and GNPC is done at arm's length (as stipulated by Article 11.7a p.44 of the MPA), the GNPC should have a thorough grasp of the complex market for oil. It must also have the expertise to verify and to test instrument calibrations, measurements and the lifting and transport schedules and other procedures used by MNOCs. Article 11.2 (p. 43) of the MPA specifies, for example, that the GNPC must be present to observe

measurements, testing devices and appliances, the calibration and procedures employed by contractors to establish the quantities and quality of oil produced. This is an onerous responsibility that calls for due diligence on the part of GNPC employees and the board of directors. To meet their obligations and to ensure maximum benefits to Ghanaians, personnel of relevant State institutions, in this case the Customs, Excise and Preventive arm of the Ghana Revenue Authority needs to be technically competent and up to speed in meeting varied, highly sensitive deadlines for important actions and procedures. Their inattention can cost the nation millions of dollars in lost revenue.

The extent to which the MPA seeks to ensure the domestic use of oil and gas produced in Ghana is unclear. It appears the export of gas and crude oil to the international market take precedence over local consumption as in Article 14.16 (p. 54). Article 15 which deals with the domestic supply of crude oil indicates that local oil needs are to be met to “the extent possible” from the state and GNPC’s allocation. This article seems not to require MNOCs to meet “Ghana’s domestic supply requirement.” However, subsequent sections of the MPA such as Article 15.2 (p. 58), sharply contradict Article 14.6 (p. 54) by stipulating that in case the GNPC and the state’s allotments are not adequate in meeting domestic needs, “Contractors shall be obliged with other third parties which produce oil in Ghana to supply a volume of crude to be used for domestic supply requirements.” The only proviso is that domestic supply requirements from contractors should not exceed contractor’s total allocation.

In order to prevent potentially conflicting requirements in meeting domestic crude oil needs, articles and sections dealing with domestic use of oil and gas produced in Ghana need to be reviewed and made consistent with each other. Such a review will facilitate contractors’ meeting of domestic needs by making their obligations clear while making it feasible for public agencies in Ghana to ensure compliance with terms of contracts pertaining to the local use of oil and gas from Ghana’s fields.

With respect to the distribution of natural gas, the sequence remains the same as that for crude oil, except that the state’s royalty falls to 5%. The rationale stated for the low royalties is that Ghana seeks to attract contractors to the natural gas business which is currently not too attractive to investors (MPA: p 54). It is necessary to conduct further research into the natural gas business and to compare Ghana’s royalty rates to other nations. Low natural gas royalties and income taxes paid by MNOCs raise the issue of the extent to which countries that are about to produce commercial amounts of oil and gas for the first time have room to negotiate better terms in an industry with highly technical, capital intensive and a myriad intricate financial and marketing transactions. The approaches that Ghana adopts, especially, the process and the nature of its oil leases may be most affected by institutional weaknesses, its capacity to negotiate, government effectiveness and the perception of political risks.



### *Local Content*

Even though there are provisions for the use of local content/suppliers and indigenous Ghanaians in the MPA, the articles and conditions for fulfilling them require some important changes. Although Article 20 of the MPA (p 68) explicitly states that contractors "... shall give preference to materials, services and products produced in Ghana..." if local suppliers' prices are competitive or better, it does not specify how such an important provision will be implemented. An even more daunting challenge is how in the last few decades, due to outright or benign neglect, Ghana's meager industrial base has virtually collapsed. In addition, Ghana's business climate and capacity to support a new oil sector is currently inadequate. An undisputed fact about the economy is that most locally owned businesses are under-capitalized and not competitive enough to meet the standards of MNOCs. The absence of competitive businesses that can supply oil contractors may be resolved by creating a carefully planned, public-private process targeted specifically at identifying and assisting locally-owned businesses that have potentials to succeed as local suppliers to MNCOs.

### *Training, Employment and Skills Transfer*

With respect to skills transfer, employment and training, Ghana faces enormous challenges. First, with respect to education, skills and training, there has been considerable lag between Ghana's needs and what educational institutions produced and almost without exception, local institutions are not equipping Ghanaians with the requisite skills for the petroleum and high technology industries.

There is also the problem of vague provisions for the employment of Ghanaian nationals in the MPA. Article 21.2 (p 69) states, "... Contractor shall ensure that in the engagement of personnel, it shall as far as reasonably possible, provide opportunities for the employment..." of qualified Ghanaians. As it is with the use of local content/suppliers, the objective of enhancing the role of indigenous Ghanaians may not be accomplished due to lack of specificity. Contractors may not comply with this provision while the GNPC may face difficulties enforcing it because the language is imprecise. Another objective that may pose challenges is found in Article 21.4: (p 69) that requires contractors to "... assist GNPC personnel in every way to acquire knowledge and skills in all aspects of the petroleum industry." A question that emerges is why would MNOCs transfer essential skills involving trade secrets to Ghanaians and to the GNPC which could be their competitor? It is erroneously assumed that contractors would be motivated on their own accord to pass on skills to Ghanaians.

More Ghanaians will be employed in the oil sector if the nation increases the pool of qualified nationals who also can make it possible to transfer skills. Since the nation sorely needs locally qualified staff, an appropriate measure may be the creation of a local public-private funded tertiary training institute. In this respect, the MPA's requirement that contractors provide \$200,000 per contract for training of Ghanaians may be deemed inadequate (Article 21.1; p 69). This is especially the case if the high cost of training in

such a technology-intensive industry were taken into account. In the event that relevant local training may not be available immediately, trainees may have to go overseas as a short-term solution. Under such conditions, only a handful of Ghanaians could be trained leading to a slow and expensive process for skill transfer.

### *Dispute Settlement*

An area which could pose risks with adverse consequences is dispute resolution. As it is in the case of most legal contracts, the MPA has sections for establishing claims and resolving disputes. Two kinds of dispute adjudication are proposed. According to Article 24 (MPA, pp 74-75) disputes are to be subjected to first, consultations and negotiations between the parties. If those fail, claims may be submitted to the Arbitration Institute of Stockholm, Sweden to which each party shall appoint one of three arbitrators from whom one would become the umpire arbitrator. Decisions by the panel are final and binding. Alternatively, the parties may avoid arbitration at the Institute in Stockholm by using a Sole Expert. Parties may also use local and international courts of law in addition to arbitration.

Arbitration and other dispute settlement provisions in the MPA raise legal concerns with significant public policy implications. Some of these are captured by the following questions: Are state agencies such as the Attorney General's Office, the Ministries of Energy and Finance and the GNPC ready to tackle complex legal affairs with crucial financial consequences? Prerequisites for institutional readiness may include ensuring that Ghana has local or foreign personnel well versed in oil related contract disputes; creating a list of preferred panel of arbitrators and being able to (when disputes emerge) tactically use panels or sole arbitrators to the advantage of Ghanaian parties. This can be done through the proper vetting or screening of panelists Ghana nominates and designates as umpires. This ought to be done before the State and the GNPC handle their first disputes including those that go to arbitration.

It is also recommended that tertiary institutions in Ghana and elsewhere in Africa may be identified and assisted to begin training local legal experts in international arbitration specialising in oil and gas. The University of Ghana Law School, Kwame Nkrumah University of Science and Technology Law School, the Institute for Development Studies at the University of Cape Coast and University of Ghana's Legon Center for International Affairs could be designated as national centers for producing skilled Ghanaians to create and manage effective public policies and legal affairs for the oil sector. This will ensure that Ghana's potential pool of legal and other talents is broad and deep enough to assist the nation to manage especially the legal, technical and financial matters involving IOCs which have access to tremendous financial resources and legal expertise.

## 4. PIVOTAL ROLES OF SELECTED INSTITUTIONS

For Ghana to receive maximum benefits from oil and gas, personnel of key public organisations like the Ministries of Energy and Finance and GNPC should be fully cognizant of oil markets and prices and currency exchange rate fluctuations. Hence the capacities of relevant bodies to bear fully their fiduciary responsibilities should be enhanced. There is therefore the urgent need to conduct a methodological audit of the capacity of key public agencies cited in this study with the goal of enhancing their performance. The ones we have selected to review due to the important roles assigned to them by the MPA are: the Joint Management Committee (JMC); the Ghana National Petroleum Corporation, the Environmental Protection Agency and Parliament.

Others whose roles are still pivotal but not addressed in this study are the National Development Planning Commission, Ministry of Finance and Economic Planning, Ministry of Transport and Communications, Attorney General's Office, Ghana Revenue Authority, Labour Department's Inspectoral Services, Ghana Maritime Authority; the Ghana Meteorological Agency, Ghana Geological Survey and the Security Services.

### *Joint Management Committee (JMC)*

Because of the essential duties assigned to the JMC it deserves much attention. Article 6 of Ghana's MPA mandates that a JMC comprising two representatives of Ghana and two representatives of contractors should be established to oversee all oil and gas operations. The GNPC appoints the Chair of the JMC. The state's representatives to the JMC and the GNPC are literally the "eyes and ears" of the state with respect to documenting oil exploration, appraisal, development, production and even lifting for overseas markets or domestic supplies. The JMC's responsibilities range from supervising contractors' oil operations to ensuring that work schedules and development plans are met. It also verifies contractors' compliance with financial stipulations in accordance with industry standards. It is expected to accomplish its responsibilities by ensuring that the GNPC and contractors cooperate. For example, the contractor is expected to develop work schedules in cooperation with the GNPC through consultations facilitated by the JMC. Thus, Ghana's success in managing its oil and gas depends largely on how the JMC operates and is able to oversee most oil operations.

### *GNPC*

The effectiveness of the GNPC in securing Ghana's interests in the domestic oil business is paramount. By executing its functions effectively, the GNPC could literally guarantee Ghana "a seat at the table" of the oil business. That is, it could guarantee the state and hence the public's active involvement in all phases of the oil sector. It is the lead public agency responsible for protecting Ghanaian interests. Thus the country's claim to be "the sole sovereign owner of oil and gas" discovered within its territories and waters will be meaningless if the GNPC fails to perform as it has been assigned to do by the MPA.

### *Environmental Protection Agency (EPA)*

Due to hazards such as ecological pollution, industrial accidents and injuries in and near oil installations, the role of a well-resourced and hence, effective EPA should be a major national priority. In addition to the GNPC and the JMC, the EPA's role in overseeing the safe production and transport of oil and gas will go a long way to ensure Ghana's relatively safe and environmentally sound production of oil. There is thus the urgent need to provide the EPA with equipment, personnel and operating funds to perform the plethora of duties it has to undertake in the field.

### *Parliament*

We draw attention to the apparently minor and ambiguous role of the Parliament of Ghana in the MPA. In our assessment, the role assigned to the legislature is weak and grossly inadequate. This is one of the weakest dimensions of the MPA and it requires immediate rectification. The current MPA needs to be modified to enhance parliamentary oversight to protect the interests of Ghanaians as the primary owners of all oil and gas found in the country. Even though Article 26.8 p. 79 (of the MPA) states the need for Parliamentary approval of oil contracts, this requirement and its significance are not made explicitly clear. The relevant article on the role of Parliament is not unequivocal and if left without remedy, could cause future legal quagmires, especially when there are changes in government. The point being stressed is that, without assigning the national parliament an unequivocal role in oil contracts, it is likely that any change in government may lead to disputes and controversies concerning the legality of oil leases, as has been the case in Guinea.<sup>4</sup> To assure certainty and to avoid controversies over the important role of Parliament, it is strongly recommended that all oil laws and oil contracts should expressly make parliamentary assent a sine qua non for legality. There is clearly therefore the need to elevate the role of Parliament in Ghana's future oil leases.

### *Corporate Social Responsibility*

Many factors make Corporate Social Responsibility (CSR) relevant to a review of Ghana's MPA and a legitimate topic for public discourse. First, CSR has been a source of deadly conflicts in the oil producing Niger Delta of Nigeria.<sup>5</sup> Second, the Government of Ghana has rebuffed attempts by traditional rulers in the Western Region to obtain special payments from Ghana's oil revenues. The traditional rulers based their claims on the notion that their region abutted Jubilee Field. Third, both the recently approved Petroleum Revenue Management legislation (2011) and the MPA do not permit special monetary allocations to oil producing regions, except in the event of adverse environmental effects. Fourth, the MPA allows contractors to add the cost of CSR projects (approved by the GNPC) to costs of doing business in Ghana.

Due to its wide socio-economic and even political and social conflict implications, CSR cannot be treated as a pure internal corporate matter. Besides, as Ghana's oil fields grow in output and value, it is likely that larger payouts will go toward CSR. This could exacerbate its far-reaching potentially adverse social and public policy consequences. A

case in point is that Tullow Oil Company reportedly has spent in about three years US \$8million on books and science equipment for Nsien Secondary School and medical screening in communities the Western Region.<sup>6</sup>

With current and future large influx of cash, goods and services through CSR, the opportunities for abuse, exploitation and corruption of local leaders and even conflicts may occur if CSR is not managed appropriately. Provisions in the Annex to the MPA can be used to craft policies to optimise CSR through careful planning and oversight. We recommend that the GNPC and other public authorities should use their oversight of CSR expenses to assist oil-bearing communities to implement efficient projects for the welfare of citizens in the oil abutting areas.

### *Public Policy Advantages and Challenges*

This section summarizes key advantages that Ghana has and the major public policy hurdles it has to overcome in using the country's oil to improve living and working conditions. Although Ghana faces tremendous challenges as a new oil producer, it also has a number of advantages it could deploy in drafting oil leases. Politically, although it has not as yet established a long record of multiparty-democracy, it has made adequate progress and ranks high among African and developing nations in political stability.<sup>7</sup> In addition, compared to other African countries, in particular, oil-producing ones, Ghana provides a relatively peaceful environment for business. These two considerations should over the long-term, and with improvements, allow Ghana to become more competitive in receiving bids and attract investments in both upstream and downstream oil businesses.

There are other advantages directly linked to the production, marketing and refining of oil. Ghana's low sulfur content of oil is easy to refine. Ghana's sweet crude can be shipped easily to both of the world's leading oil markets -- the Western European-based Brent Crude Market and the North American /Texas Intermediate Market. The incorporation of GNPC as a public entity with personnel experienced in oil exploration could also be utilised to Ghana's advantage. GNPC has in the past deployed its employees in numerous exploration related activities in Ghana and Angola. It has thus accumulated some oil related technical expertise and data that even if they may be limited, can be combined with effective public agencies led by the Ministry of Energy to boost Ghana's chances for success in the new oil industry. By carefully using these experienced personnel and technical data, Ghana might be in a better position to overcome some of the "teething problems" new oil producing nations have to grapple with.

On the other hand, as a new oil producing nation, Ghana has to identify and manage significant challenges that could undercut the country's leaders' promises to convert crude oil and gas into tangible benefits. For proper oversight, a single public regulatory agency for the oil industry should be created, and the functions of various institutions in the industry clearly and carefully delineated and streamlined to designate responsibilities. This is necessary to avoid "turf wars" or inter-agency conflicts which could severely

undermine the nation's capacity to manage such an important natural resource - oil and gas.

The GNPC's crucial roles in Ghana's new oil sector may epitomize the challenges Ghana faces as it seeks to implement successfully the MPA. One key issue arises from the GNPC being assigned a dual function. The current dual role of GNPC as a regulator and as commercial partner poses an organizational dilemma: Can it perform both functions effectively or it is likely one of these functions may be neglected? The second issue is the limited institutional capacity of the GNPC. For example, does the GNPC have personnel such as geologists, geophysicists, engineers and others well versed in the complex oil industry that can provide the services the MPA has allotted to it? Solving the problems posed by limited institutional capacity and the dilemmas linked to regulatory and commercial operations may be crucial as more oil fields are discovered and brought into production in Ghana.

We have already alluded to what may be the "Achilles' heel" of Ghana that seriously undercuts the country's global economic competitiveness. This is the fact that the country's social infrastructure, especially education and training, coupled with a weak manufacturing sector cannot furnish a strong foundation for a domestic oil sector in the form of a robust local economy and effective public institutions that can act strongly on behalf of the sovereign people who own oil and gas.

## **5. CONCLUDING OBSERVATIONS**

With respect to the enforcement of Article 17 of the MPA, to avoid the potential adverse effects of flaring, measures should be taken to ensure that Ghana's EPA and the GNPC are provided with sufficient equipment, funding and appropriate regulations to ensure that it is done safely and not too frequently. In the area of information and data management, there is the need to strike an appropriate balance between the Ghanaian public's right to know and the need for GNPC, the Ministry of Energy, oil companies, and other parties to keep data and information confidential due to legitimate technical, financial and legal reasons.

As we have sought to demonstrate, Articles 14 and 15 of the MPA that deal with local and foreign uses of Ghana's oil and gas need to be revised to ensure clarity on how the country will be supplied with oil produced domestically. Current provisions are ambiguous and thus could be the source of conflicts between Ghanaian and other parties to the MPA.

Another and equally important condition is that the capacities and effectiveness of GNPC and the EPA should be boosted tremendously. We recommend strongly the adoption of language and provisions in future MPAs that assign realistic and precise roles to Ghanaian public agencies such as the GNPC and the EPA. New policies also need to be created to start training more indigenous people in engineering, petroleum economics, petroleum

accounting, environmental and commercial law, occupational safety and health related to oil and gas production to implement new MPAs to benefit the society as a whole. The implementation of new training programs should be preceded by a thorough assessment of what the real current and future human capital needs are.

## ENDNOTES

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<sup>1</sup>For a classification of petroleum legal arrangements see Tordo (2007), Likosky (2009) and Johnston (1994).

<sup>2</sup>See Johnston (1994) for a taxonomy of Joint Venture/Government Participation spectrum.

<sup>3</sup>C. Ile and C Akukwe (2001), P. Ogon (2009) and Owabukeruye (2000).

<sup>4</sup>See “Guinea: Mining Fight Shows Pressure on Multinationals”, Wall Street Journal, 28 January 2011.

<sup>5</sup>C. Ile and C Akukwe (2001), P. Ogon (2009) and Owabukeruye (2000).

<sup>6</sup>Jeff Smith, “New Oil – and a Huge Challenge for Ghana, National Geographic, 15 December, 2010:5

<sup>7</sup>East Africa Magazine, 27 December 2010-2 January 2011

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# GHANA'S EITI: LESSONS FROM MINING AND POLICY IMPLICATIONS FOR OIL

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## ABSTRACT

Launched at the 2002 World Summit on Sustainable Development, Extractive Industry Transparency Initiative (EITI) is a global effort to end lack of transparency and accountability in the generation and use of extractive sector revenues to enhance national development and poverty reduction in the host countries. Ghana signed on to the initiative in 2003. The three EITI audit reports produced at the time of writing provide useful insights into policy gaps and institutional weaknesses which impede Ghana's ability to maximize its benefits from the mining sector and makes recommendations for addressing these weaknesses.

This paper reviews Ghana's experience of implementing the transparency initiative in the mining sector. It highlights the key lessons drawn from the exercise and their policy implications for the country's emerging oil and gas sector. The main thrust of arguments presented in this paper is that Ghana has not made the best of its mineral endowment in terms of revenue generation, management, and use; and that guided by the lessons from the EITI in the mining sector Ghana can do better with its future oil revenues.

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## **1. INTRODUCTION**

Ghana is a mineral rich country and the second largest gold producer in Africa after South Africa. It hosts three of the world's largest mining companies - Anglo-Gold Ashanti, Newmont and Gold Fields - and is home to over 100 other mining and quarry companies. The country has over the last three decades relied heavily on mining for its development. It privatized almost all its state mines in the 1990s through 2000 in the hope of injecting efficiency and ensuring higher returns from the sector.

In spite of increases in mineral output and gross revenue, partly the results of the sectoral reforms of the 1990s, and partly due to the upward trend in gold prices, many have argued that the government's take of mineral revenues remains marginal. The country has not witnessed any marked change in its gold revenues since 2004. In fact there have been decline in some instances. The mining sector's contribution to total revenue in the form of corporate income taxes, royalties, payroll taxes, National Reconstruction Levy) in 2000 was 13.7%, while in 2006 it was a mere 9.6%, according to a study commissioned by the Integrated Social Development Centre (ISODEC) in 2009.<sup>1</sup> The mining sector's share of corporate taxes alone has also been on the decline accounting for less than 2% of total corporate taxes, compared to 29% for the financial sector, 10% for commerce and 16% for manufacturing sector. Industry analysts point to the fiscal regime, particularly the generous tax incentives, including capital allowances, low royalty payments, non-enforcement of capital gains taxes among others, for the low revenue from the mining sector.

Ghana can indeed be included amongst a host of developing countries that have difficulties achieving a sustainable management of their natural resources in terms of minimizing the social and environmental impacts, maximizing their share of returns, and ensuring the optimum use of revenues accruing from the sector. Two major initiatives, the Natural Resource and Environmental Governance Programme (NREG) supported by the World Bank, and other development partners, including the Dutch, and the British; and the Extractive Industries Transparency Initiative (EITI), are currently being implemented to address these challenges. This paper discusses Ghana's implementation of the EITI in the mining sector, and the lessons and policy implications for the country's emerging oil and gas sector.

## **2. THE EXTRACTIVE INDUSTRIES TRANSPARENCY INITIATIVE (EITI)**

Launched in 2002 at the World Summit on Sustainable Development (WSSD) in Johannesburg, the EITI has come to represent yet another major benchmark in the global quest to ensure that natural resource exploitation and the revenues accruing from them, translate into lasting benefits for the governments and people of developing countries, who though rich in natural resources, continue to wallow in poverty and squalor.

Ghana acceded to the initiative in 2003 and has since taken steps to implement it in its mineral sector. The country has so far produced three EITI audit reports spanning January – June 2004; July – December 2004, and 2005, and is in the process of finalizing its fourth report, spanning 2006, 2007, and 2008. The Ghana EITI (GHEITI) has also gone through international validation and has been adjudged EITI-compliant, making Ghana one of five countries (along with Azerbaijan, Liberia, Mongolia, Timor Leste) and second in Africa to have attained EITI compliant status.

Validation is the EITI quality assurance mechanism. It is meant to ensure that the initiative is implemented in accordance with its guiding principles and criteria as enshrined in the EITI core policy documents. This requires the regular publication of all material oil, gas and mining payments by companies to governments, and all material revenues received by governments from oil, gas and mining companies to a wide audience in a publicly accessible, comprehensive and comprehensible manner (International EITI Secretariat, U.K., 2005)

### *2.1 EITI – Principles and Criteria*

The EITI is a multi-stakeholder (tripartite) initiative, comprising governments, companies, and civil society. Its principles and criteria hinge on the regular publication of all material on oil, gas, and mining payments by companies to governments and receipts of these payments by governments from companies in a manner that is accessible to citizens, both organized and unorganized in a comprehensive and comprehensible format.

The premise is that the availability of such information will bolster the bottom up demand for accountability and therefore ensure effective and efficient use of such revenues. It is required that these payments and receipts, which are to be reconciled by an independent administrator, described variously as auditor, or Aggregator, should have been compiled in line with international accounting and auditing standards. Civil society participation in the initiative is a key requirement. They are to be engaged in the design, implementation, monitoring, and evaluation of the initiative.

### *2.2 The EITI Quality Assurance Mechanism*

Countries join the EITI first as candidates.<sup>2</sup> Later they progress to implementing countries, and end up as compliant countries after successfully undergoing validation. EITI validation ensures compliance to the principles and criteria of the initiative. So far only five countries, Azerbaijan, Liberia, Mongolia, Timor L'este, and Ghana have successfully completed validation and have been conferred compliant status. In March 2010 the validation deadline for Ghana and 19 other EITI implementing countries had to be extended. Following the EITI international board meeting held from April 15 to 16 2010 in Berlin, the Board agreed to grant extensions to 16 countries, namely: Cameroon, Democratic Republic of Congo, Republic of Congo, Gabon, Ghana, Kazakhstan, Kyrgyzstan, Madagascar, Mali, Mauritania, Niger, Nigeria, Peru, Sierra Leone, Timor Leste and Yemen. New deadlines were set for each country. It however, did not approve the request for an extension of the deadline for Equatorial Guinea. Sao Tome and Principe's application for a voluntary suspension was also not approved (EITI International Board Release, April 2010). As a

result, these countries are no longer considered implementing or candidate countries. Both countries can, however, re-apply to become EITI Candidate countries once the barriers to effective implementation have been addressed. Ghana technically missed the deadline, having submitted its validation report at the eleventh hour but was unable to complete the consideration and approval processes before the March 9, deadline. The country was given up to July 9 2010 to complete its validation process, and on October 29 was adjudged EITI compliant, having met the new deadline.

### **3. EITI – GHANA’S EXPERIENCE SO FAR**

Several factors, including, systemic weaknesses, the absence of a clearly articulated national policy, unfavorable fiscal regime, poor planning, misuse of revenues from the sector especially at the district level, perceived corruption and lack of transparency in the sector account for the inability of Ghana to maximize its benefits from the sector. Ghana’s EITI<sup>3</sup> therefore sets itself on a mission to reversing what has been described as ‘the resource curse’ or the paradox of plenty.<sup>4</sup>

Annan (2008) has aptly noted that wrong decisions, and the manner in which they are made, in terms of investment, employment, community relations, environmental concerns and resettlement obligations, on the part of government and corporate bodies, have pushed many extractive sector businesses into conflict with the communities in which they operate. These conflicts, he observed, have often been aggravated by massive corruption and the lack of transparency associated with the distribution of the wealth generated from the extractive sector.<sup>5</sup>

Indeed a major challenge confronting many natural resource dependent countries, especially in Africa, parts of Asia, and Latin America is how to use their natural resource wealth to fundamentally transform their national economies, generate growth, and help reduce extreme poverty among their citizens. Macartan et. al. (2007) argue that the problem arises partly as a result of governments embarking on the indiscriminate spending of revenues accruing from their natural resource exploitation. Such spending they contend amounts to consumption of capital rather than income and therefore leaves the resource owners poorer over time. Linked to this problem is the issue of poor quality of spending and abuse arising out of opaque and unaccountable decisions around spending. The stated objective of GHEITI therefore is to enhance the development outcomes of the mining sector, and to ensure that the sector contributes positively to the poverty reduction efforts of the state.

Like many other implementing countries, GHEITI is based on the assumption that, when citizens get to know how much has been paid by companies and how much has been received on their behalf they will begin to ask questions as to how these revenues have been used, and that in itself will constitute a disincentive for mismanaging such revenues. Ghana’s EITI implementation has so far focused on mining revenues. Benefit streams captured are royalties, corporate taxes, capital gains tax, ground rent, and corporate social responsibility payments.

Ghana on its own accord decided to undertake a process audit in addition to the revenue audit requirement of the initiative. The process audit focused on the legal and institutional arrangements for the payment and receipt of revenues in the mining sector, with a view to identifying potential revenue leaks. The process audit, which has been seen as an international best practice in the implementation of EITI, revealed systemic weaknesses which allowed for the non-payment of certain statutory taxes in the sector, such as capital gains tax and ground rent. These weaknesses are presently being addressed.

Again, Ghana decided to decentralize its EITI implementation to the sub-national level, requiring the disclosure of revenue (share of royalty) transferred from central government to local authorities, and their utilization. This, again, has been touted by the EITI international secretariat as an international best practice. The sub-national audit of benefit transfers to mining districts have revealed that in several instances, beneficiary districts applied their share of royalty to re-current expenditures rather than to capital expenditures, a situation which partly explains why these districts have little to show for decades of mining in their areas.

It also came to light that the release of benefits by the regional Office of the Administrator of Stool Lands (OASL) were often not accompanied by any advice, making it difficult, if not impossible, for the beneficiary districts to verify the basis of the computation and the correctness of the amounts received. There were also instances where amounts received by the regional OASL office were held for up to nine months, and eventual transfers to the intended beneficiaries were often in installments. The result is unpredictable flow of such revenues, which makes planning for their use difficult.

Ghana's first three EITI audit reports have also revealed that over the period, mining companies have generally not complied with the statutory requirement to pay capital gains tax on their earnings anytime concessions are traded to third parties for profit. The official explanation provided by the Internal Revenue Service (now, Ghana Revenue Authority) for the situation is that the Minerals Commission, which is the regulatory agency for the mining sector, does not exchange information with the revenue authorities when such transactions occur. As a result, the revenue collection agency is often unaware of these tax opportunities when they arise.

Another tax which has largely gone uncollected over the period is ground rent. Ground rents are supposed to be collected by the OASL on behalf of the land owners and the Stools. This levy has gone uncollected because the rate is just too low at 50GHp per acre of land. The disincentive to collect the ground rent is in line with a fundamental principle in taxation, which is consistent with common logic, that at no time should the cost of collecting a tax exceed the tax to be collected. The GHEITI Multi-stakeholder Steering Committee has therefore accepted the Aggregator's proposal for an upward adjustment of the rate.

### *3.1 Civil Society and Ghana's EITI*

The civil society platform for engaging with the EITI is Publish What You Pay- Ghana

(PWYP-Ghana), a national chapter of the global extractive revenue transparency movement.<sup>6</sup> The Publish What You Pay campaign was initiated in Ghana in 2004 following a roundtable meeting organized by ISODEC to mobilize civil society input into the EITI and to facilitate an active civil society participation in the monitoring of its implementation.

The broad objectives of the Ghana Campaign are:

- To promote responsible, and sustainable exploitation of Ghana's natural resources.
- To mobilize civil society to engage with other stakeholders in the implementation and monitoring of the EITI process.
- To promote budget and revenue transparency at the community level, through grassroots participation in budget and revenue tracking.
- To eliminate corruption and incidence of revenue leaks in the extractive sector.
- To ensure that the extractive sector contributes positively to national development and poverty reduction, especially in communities immediately affected by extractive sector activities.

The Coalition has devoted a great deal of its resources and efforts since 2004 to sensitizing, mobilizing and organizing citizens, particularly, mining communities to effectively engage in the Ghana EITI. The Coalition sponsored eight community members drawn from the four mining enclaves on January 15, 2007 to a National Multi Stakeholder Conference on the Implementation of EITI in Ghana. It was a welcomed opportunity to state the PWYP-Ghana demands on Ghana's EITI: (a) to bring on board all other legitimate concerns not captured in the current framework, including other dimensions of transparency, such as contracts, policy formulation, regulatory regime, social and environmental costs and compensation; and (b) seek to bring on board other extractive sector activities not captured in the current implementation framework.

The demands also included the call to pursue EITI within the context of a broader range of complementary reform initiatives including but not limited to:

- Reviewing the existing mining law to make it consistent with the transparency requirements of EITI;
- Formulating in the shortest possible time, a mining policy for the mineral sector;
- Anti-corruption legislation;
- Passing the Right to Information bill;
- Providing civil liberty guarantees, especially for civil society activists;
- Legislating the initiative to make disclosures mandatory.

In general, concerns expressed by community groups in durbars held prior to the conference have centered on the relationship between mining companies and the communities in which they operate. In particular, issues of crop compensation, lack of transparency in the disbursement of mineral royalties from the OASL, environmental cost and compensation, livelihood insecurity and human right abuses perpetrated by mining companies, working in tandem with state security agencies were the most nagging concerns.

Clearly, the EITI as currently designed does not address most of the concerns of community people. It appears that the only motivation for civil society and community people to engage in the process is the expectation that as stakeholders, they will be able to influence the content and scope of the initiative.

### 3.2 *Ghana's First EITI Audit Report – CSO's Perspectives*

The first Ghana EITI report was completed in February 2007. As part of the strategy to mobilize around the report, PWYP-Ghana commissioned a technical review of the report, which would subsequently be referred to as the Murphy Critique. Following the submission of the Murphy Critique, a civil society technical roundtable was organized to discuss the first Ghana EITI report, with the Murphy Critique serving as a reference document. The roundtable provided the platform for formulating a civil society response to the first Ghana report, which was submitted at a national stakeholder workshop on the report organized on April 3, 2007.

The CSOs meeting that reviewed Ghana's first EITI report concluded that the report met the minimum requirement of the EITI; that is, to improve development outcomes from payments made to governments by the extractive industries, and to reduce potential for corruption and large scale embezzlement of these payments. Missing from the report, however, was whether the objectives set by GHEITI for itself had been met.

The reasons for the shortcomings of the report were laid largely at the doorstep of the Aggregator's Terms of Reference rather than with the Aggregator.

The Terms of Reference at the time did not require the Aggregator to:

- a. Investigate the basis and the correctness of the computations, as a result of which the appropriateness of the revenues received as mineral royalty, dividends and tax on profit could not be determined.
- b. Analyze the tax deductions claimed by the companies for the purpose of identifying any improper claims.
- c. Check if the declarations of quantities of minerals declared are in conformity with the declarations made to the Mineral Commission and with the refining certificates.
- d. Perform the audit of operating costs in order to assess if the deductions claimed were actually incurred and correspond to legitimate operational expenses as these affect the taxable profit of the companies.
- e. Review feasibility reports of the mining companies in order to compare the projected production with the actual production.

The meeting raised concern that the Aggregator did not have access to the contract documents which provide the basis of what companies pay i.e. tax exemptions, and other incentives. It also expressed the view that it does not make for thorough transparency if amounts accruing to the Minerals Development Fund and its utilization are kept from public scrutiny. It agreed that the difficulties encountered by the Aggregator, particularly with regard to access to information, call for expedited legislation of Ghana's EITI, along with the complementary legislations such as Freedom of Information Bill.

Subsequent to the CSO's submission, PWYP-Ghana was tasked to prepare and submit new Terms of Reference for Ghana's EITI audit. The new Terms of Reference accepted by all stakeholders required the Aggregator to ascertain if the revenues received by government agencies have been properly accounted for and disbursed for the intended purposes. It obliges the Aggregator to verify the appropriateness of payments made with regards to mineral royalties, ground rent, dividends, taxation on profits and on mineral rights. The Aggregator is also required to scrutinize payments made to District Assemblies, Traditional Authorities and Stools within the operational areas of mines, and to check if the declarations of quantities of minerals declared are in conformity with the declarations made to the Minerals Commission and with the refining certificates.

The new Terms of Reference also tasks the Aggregator to review the feasibility reports of the mining companies, and to reconcile the data so collected to ascertain if there is any disparity between the governments reported template and the aggregated companies' reporting template.

#### **4. OIL AND GAS – A NEW FRONTIER OF GHEITI**

Following the discovery of oil in commercial quantities in Ghana, it was expected by stakeholders at the national level and international EITI partners, that Ghana will extend its EITI to the oil and gas sector, especially, given that mining revenues, which have hitherto been the focus of GHEITI, pale into insignificance compared to the expected revenues from oil and gas.

Such a suggestion, however, did not appear to be a priority of the then NPP government. A draft national oil and gas policy prepared by the government at the time was very generic in its commitment to open and accountable management of future oil revenues. It also made no explicit mention of EITI even though the country was busy implementing the initiative in the mining sector.

After the regime change of 2008, there appeared to have been some inertia in EITI implementation even in the mining sector. It later became apparent that what seemed like a reluctance to commit to EITI in the oil and gas sector arose out of a misunderstanding of the EITI delivery mechanism, and which led to a semblance of a turf war between the Ministry of Energy and the Ministry of Finance and Economic Planning over which ministry should lead EITI implementation in the oil sector. The two ministries, however, committed



themselves to negotiations and to finding a common ground, a move which paved way for a joint workshop on the roadmap to extending EITI to the oil and gas sector in March 2010.

#### *4.1 Challenges of EITI Extension to Oil and Gas*

A number of challenges arise from Ghana's intent of extending the EITI to the oil and gas sector. The overarching challenge is to get GHEITI and its stakeholders to begin to look at the entire value chain of the extractive sector from exploration decisions, through licensing, environmental impact assessment, exploration, development, production, to sale and therefore revenue collection. This is important because payments and receipts alone do not constitute maximum benefits to the country.

Other challenges include:

- a. How to deepen awareness and build capacity of community people at the district level to hold local authorities accountable for the use of extractive sector resources;
- b. The need to provide a platform to discuss community concerns in respect of oil exploration and production, and to manage community expectations in respect of the potential impact of future oil and gas revenues.
- c. The need to develop a framework for tracking and accounting for the social and environmental costs of mining, and petroleum extraction activities.

## **5. EITI IN MINING – LESSONS AND POLICY IMPLICATIONS FOR OIL AND GAS**

Most EITI implementing countries are focused on oil and gas. Ghana was the first to implement the initiative in the mining sector. It was later followed by Mongolia, which sent a delegation to Ghana in 2007 to learn from Ghana's experience. The lessons that GHEITI presents are therefore important not only to Ghana but also to all other countries pursuing the revenue transparency agenda in the mining sector.

The key lessons that can be drawn from Ghana's EITI in the mining sector relate mostly to the governance framework, particularly, the policy and the institutional arrangements for collecting, managing, disbursing, and spending mining revenues. These are discussed below.

#### *5.1 Institutional Weaknesses*

A process audit undertaken by GHEITI revealed that substantial revenues are lost to the state as a result of a lack of collaboration between the Internal Revenue Service (IRS) and the Minerals Commission, the regulatory agency for the sector. According to the findings of the first three EITI audit reports spanning 2004 and 2005, even though mining companies had changed hands over the period, none had paid capital gains tax on the profits they presumably made. This is currently being addressed by encouraging the two agencies to exchange information on regular basis to forestall such occurrences.

Presently, Ghana has no independent regulatory agency for the oil sector. A draft National Petroleum Exploration and Production Bill which incorporates the provisions for regulating the industry was laid before Parliament in July 2010. The bill, however, was immediately withdrawn due to several inconsistencies in the assignment of regulatory and policy functions to the Ministry of Energy.

Ghana's EITI audit reports have also revealed that in some instances customs officials stationed at the mines to observe smelting of the gold ores and to authenticate production certificates have been at post for close to a decade, a situation that can compromise the integrity of the monitoring function of these officials. It is hoped that steps will be taken to ensure that the integrity of the mechanism for monitoring oil and gas production will be secured by rotating the personnel that are assigned this task.

### *5.2 Inefficiencies in Tax Policy and its Administration*

Inefficiencies in tax administration and a weak mining fiscal regime – such as the huge capital allowances deducted up-front and unused balances carried over, stability agreements, and ridiculously low rates for ground rents – account for the low levels of tax revenue in the mining sector. Going into oil and gas, it is important that Ghana takes cognizance of this and ensures that the fiscal regime for the petroleum sector brings fair returns to the country. A cost benefit analysis of the current tax incentive regimes in the natural resource sector in Ghana will help determine whether or not Ghana should continue along the path of inducement through incentives as a way of attracting foreign direct investment.

### *5.3 Benefit Transfers to Communities*

The Ghana EITI audit reports as indicated earlier have revealed several instances where transfers of communities' share of benefits have been unduly delayed. Such delays in disbursements inhibit district development planning, and must be avoided in respect of future oil revenues.

Again, transfers from the Regional OASL to the districts are often not accompanied by advice. The beneficiary communities therefore are unable to establish the basis of the computation and for that matter the correctness of the amount received. The Regional OASL should be obliged to accompany all disbursements with advice for the sake of probity.

The most important lesson from the mining sector that should inform how revenues are shared, if Ghana chooses a revenue sharing option in the oil and gas sector, is the need for a legislated sharing formula. The formula currently in use in the mining sector has its origin in the constitutional provision in respect of stool lands revenue. The constitution unfortunately does not adequately establish its rationale, and so makes any assessment of claims being made by the frontline oil districts for similar treatment speculative rather than on the basis of established principles.

### *5.4 Issues of Benefit Utilization*

The Ghana EITI audit reports have again exposed instances of predominant use of

communities' share of mineral royalties for recurrent expenditure to the near neglect of development or capital projects. As already alluded to, this partly explains why most mining districts in Ghana have little to show despite decades of mining activities. The lesson that can be drawn here is the strong need for guidelines on the use of natural resource rents, especially at the community level if direct transfers are made to the sub-national authorities.

### *5.5 Improving upon the Quality of Spending*

For the citizens to feel the real and tangible benefits of natural resource extraction in general, it is important that the legal and institutional arrangements for utilizing the revenues from the sector eliminates the chances of waste by ensuring an open, accountable and participatory decision-making around issues of revenue management. The concept of Community-based Planning, which is consistent with the spirit and letter of the National Development Planning Act 480 of 1994 must be re-activated and pursued in all earnestness.

### *5.6 Ensuring Sustainability of Ghana's EITI*

After some initial reluctance on the part of the previous NPP government to extend Ghana's EITI to the oil and gas sector, the current NDC government having committed to that course in its manifesto has charted a roadmap to the extension. That pursuit requires the expansion of the Multi-Stakeholder Steering Committee to include oil sector Ministries, Departments, and Agencies (MDAs), oil companies, and civil society players in the oil and gas sector. This must be done while ensuring that the expanded MSG does not become too unwieldy for effective and efficient operations. A newly drafted governance framework is currently under consideration by the Ghana EITI Multi-stakeholder Steering Committee.

The fact that EITI remains a voluntary initiative raises concern about its long term sustainability. Two implementing countries – Nigeria and Liberia have recognized this challenge and taken steps to address it through legislation. The initiative has therefore become mandatory in these countries and citizens can go to court to force compliance should either government or the companies decline to make public disclosures of receipts and payments respectively. Ghana is currently contemplating a similar step. A draft EITI bill prepared by ISODEC's panel of Experts on Extractives has been adopted for modification following a multi-stakeholder consensus building workshop on the subject. It is a shared concern that the future EITI Law would not establish a new nomenclature that runs the risk of conflict with existing statutory accountability agencies such as the Auditor General's Department.

## **6. CONCLUSION**

I have attempted in this paper to explore efforts by Ghana to enhance the development outcomes of its natural resource sector through the transparent and accountable management of revenues from the sector. The lessons from the country's implementation of the Extractive Industries Transparency Initiative in its mineral sector are insightful and could serve as a useful guide to managing future oil and gas revenues. Our starting point should be: getting the legal framework right, which will require the legislation of EITI, along with filling

identifiable gaps in existing laws. There is also the need to undertake an institutional audit of agencies in the oil and gas sector, the Internal Revenue Authority, Customs, Excise, and Preventive Service in order to identify possible weaknesses for redress.

The Petroleum Revenue Management Bill, passed by Parliament in February 2011, gives some hope that future oil and gas revenues would be managed in line with international best practices. The legislation is strong with respect to the principles of transparency and accountability, which constitute the tenets of EITI.

## END NOTES

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<sup>1</sup>Towards a fair and equitable taxation for sustainable development financing in Africa – a case study of trends and nature of taxation in Ghana’s extractive sector - a paper commissioned by the Integrated Social Development Centre and written by Akabzaa Thomas of the University of Ghana and Ayamdo Charles of CHRAJ as part of ISODEC’s contribution to the global tax justice campaign.

<sup>2</sup>Globally, 31 countries are recognized as either EITI Candidate or Compliant. These are: Afghanistan, Albania, Azerbaijan, Burkina Faso, Cameroon, Central African Republic, Chad, Cote d’Ivoire, Democratic Republic of Congo, Gabon, Ghana, Guinea, Iraq, Kazakhstan, Kyrgyzstan, Liberia, Madagascar, Mali, Mauritania, Mongolia, Mozambique, Niger, Nigeria, Norway, Peru, Republic of Congo, Sierra Leone, Tanzania, Timor Leste, Yemen, and Zambia.

<sup>3</sup>Companies that have on their own volition opted to be part of the Ghana EITI are:

- Gold Fields Ghana.– Tarkwa
- Gold Fields – Daman
- Anglo Gold Ashanti – Obuasi,
- Anglo Gold Ashanti- Bibiani
- Anglo Gold Ashanti– Iduapriem
- Bogoso Gold Ltd.
- Ghana Manganese Co – Nusuta
- Ghana Bauxite Co.
- Newmont – Ahafo

<sup>4</sup>Resource curse and ‘paradox of plenty’ are lexica that, have found popular expression following the 2003 WSSD in Johannesburg even though they have been used as far back as the early 90s (See Auty 1993). They are usually used to establish a correlation between natural resource endowment of a country and the high incidence poverty, social strife, and violent conflicts among its people. The underlining factor of such situation is often poor governance.

<sup>5</sup>Former UN Secretary General, Kofi Annan, in a foreword to a manual on Conflict-sensitive Business Practice, compiled by International Alert in 2005.

<sup>6</sup>Publish What You Pay (PWYP) as a global campaign for increased transparency and accountability in the generation and use of extractive sector revenues pre-dates the Extractive Industries Transparency Initiative. It emerged as a response to a Global Witness report “Crude Awakening” published in 1999, and which highlighted massive embezzlement and abuse of revenues from Angola’s oil and gas industry during that country’s civil war, and how that has contributed to the impoverishment of the country’s citizens. Launched in 2002 it has over 300 institutional members and national chapters world-wide.

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# MANAGING THE POLITICAL AND SOCIAL EXPECTATIONS FROM GHANA'S OIL AND GAS RESOURCES

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## ABSTRACT

This paper discusses the political and social expectations of Ghana's oil and gas resources and the imperatives of effectively managing those expectations. It contends that managing public expectations surrounding the oil and gas find are among the most compelling socio-political and governance challenges facing Ghana on the eve of the commercial production of the "black gold" and gas. The paper outlines the challenges entailed in managing those expectations, and advocates the enactment of a robust legal and regulatory framework for the oil and gas sector. The paper concludes by making several short and long-term recommendations for managing public expectations in order to avert disruptions to the nation's peace and social order.

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## **1. INTRODUCTION**

Social order turns on the axis of legitimate expectations of compliance with the prevailing social norms and legal regime. Society is possible because humans take the behaviour of others for granted in the trusted assurance of reciprocity. The expectation that others will behave in a lawful manner gives direction, structure, meaning and predictability to our own behaviour. Mismatch in expectations generates conflict which, improperly handled or left unresolved, undermines peace, social harmony and order. Society develops a repertoire of sanctions aimed at constraining, regulating and undermining the scope and frequency of unexpected behaviours, particularly those that deviate from societal norms. Yet the occurrence of the unexpected is celebrated whenever it is interpreted as advancing the established legitimate values and expectations of society. In short, expectations constitute the fabric of human interdependence, order, dynamism and progress.

The objective of this paper is to examine issues related to the management of the political and social expectations arising from Ghana's newly discovered oil and gas resources and to make policy recommendations. The paper begins with a brief conceptual analysis of expectations management, and proceeds to outline the potential nightmare scenarios that may be encountered if the political and social expectations as well as the revenues accruing from the production of oil and gas are not effectively managed. It makes the case for visualizing the oil as a national, rather than a regional asset or property, and for understanding expectations management in the oil and gas sector as a collective national enterprise. The paper offers a number of recommendations on how to manage the social and political expectations surrounding oil and gas production in order to maintain peace and social equilibrium as we harness these most vital but finite natural resources.

## **2. CONCEPTUALIZING EXPECTATIONS MANAGEMENT**

Expectations management is the business of organization and controlling popular ideas and hopes about imminent improvement in life circumstances; it is the art and science of blending ideas of impending prosperity with realism concerning levels, timing and pace of attainment. Managing expectations is about directing minds away from fanciful to feasible progress and mobilizing social energies toward the achievement of negotiated expectations. Successful expectations management contributes to overall levels of satisfaction with project or programme design, delivery, implementation and outcomes. Expectations management is one of the inescapable challenges in modern governance. Whatever their origin and bases, and however they are articulated, expectations are time-bound, and unmet expectations can be severely problematic for vote-seeking politicians in the four-year electoral cycle of our democratic political system. Unless expectations are properly managed, social and political order can be severely disrupted, and protracted violent conflicts and even revolutions may ensue.

The discovery of over 500 million barrels of light crude oil at Cape Three Points off the western shores of Ghana raises hopes of economic growth and national prosperity. Ghana



is expected to earn approximately US\$1 billion annually from the Jubilee Fields alone in respect of royalties, income tax and interest payments on an average crude oil price of US\$90 per barrel (Oteng-Adjei, 2010). The International Monetary Fund predicts cumulative government revenues of US\$20 billion from oil and gas extracted from the Jubilee field alone over the production period of 2011–2030. Among the great social and political expectations associated with the production of oil are massive job creation, provision of infrastructure and social amenities such as hospitals, electricity, schools, and high-end restaurants. The expectations of prosperity are legion.

Nevertheless, legitimate concerns abound in Ghana over the potential for oil wealth to become a plague as it has in many other African countries such as Nigeria, Gabon and Cameroun. The “black gold”, it is feared, may produce such nightmare scenarios as:

- a. unbalanced development arising from the whole-hearted and myopic embrace of the oil industry accompanied by the neglect of alternative revenue sources such as cocoa, palm produce, cola, gold, bauxite, manganese, etc.;
- b. inequitable oil and gas revenue distribution;
- c. increased corruption;
- d. erosion of democratic accountability; and
- e. social and political conflicts and unrest arising from unmet needs and unfulfilled expectations.

These tendencies have the potential to undermine social stability and the long-term viability of the economy. Yet, oil and gas must not fail Ghana, and Ghana must not fail in its management of oil and gas obligations. Speculations of impending unfair treatment and neglect of natives of the “local communities” around the oil fields are already causing severe agitations. Doomsday scenarios based on realities from the Niger Delta have been carefully choreographed and played out in the voracious Ghanaian media. Contentions over the prospective distribution of the oil revenues have mirrored the arguments raised by the Wassu Association of Communities Affected by Mining in the Western Region of Ghana.

Most of the strident articulations of demands are anchored in unexamined expectations arising mainly from sections of the communities lying most proximate to the Jubilee Fields. A Joy Fm/Multi-Media video documentary screened in June 2009 on managing expectations around Ghana’s oil and gas find established that youths in several coastal and adjoining communities have braced themselves for violent political activism, if necessary, to back their demands for “a lion’s share of the revenue oil windfall”. Their claim to entitlement is grounded in the belief that locality equals superiority. In other words, one is entitled to a better share of the oil proceeds because of one’s native proximity to the oil. That is, the oil was discovered in one’s backyard, even though it may be 64 nautical miles away from the coast, 1.4 km to the sea bed, and 4 kilometres below the sea bed. This sense of “ownership” and entitlement to a greater share of the oil wealth runs contrary to Article 257(6) of the Constitution which vests ownership of all mineral resources in the State. Specifically, Article 257(6) provides as follows:

Every mineral in its natural state in, under or upon any land in Ghana, rivers, streams, water courses throughout Ghana, the exclusive economic zone and any area covered by the territorial sea or continental shelf is the property of the Republic of Ghana and shall be vested in the President on behalf of, and in trust for the people of Ghana.

There is no question that oil is a mineral. In spite of the clarity of this provision, strident advocacy campaigns have emerged, led in some instances by lawyers, based solely on the principle that “the first at the scene must be the first to be seen”. Yet, those whose livelihoods will be destroyed as a result of the commercial production of oil and gas, such as fisher-folks, should be provided some compensation or other opportunities for developing alternative livelihood forms, not as a matter of inherent right or entitlement but as an instance of social justice. This tension between social perception and legal reality must be properly managed. The Petroleum Revenue Management (PRM) Bill passed by Parliament in February 2011 makes provision for the payment of royalties to affected and displaced communities where petroleum operations are on-shore. Large numbers of people who expect to reap financial bonanza from off-shore operations may be overly optimistic. This reality must be registered on the minds of Ghanaians before production begins, and thereafter. Another set of expectations is articulated by so-called political ‘foot soldiers’, consisting mostly of opportunistic political actors whose voices and votes, in the final analysis, send politicians into power. It is a demand for oil money to be spent to meet the urgent existentialist needs of “vote mongers” and their associates.

In addition to managing revenue from oil and gas, there is concern about the scale of unmanaged social and political expectations. Indeed, apart from reducing the extreme tenor of negative competition between the two dominant political parties, reducing the growing menace of drug trafficking and real and perceived corruption, perhaps the most significant challenge to Ghana’s democratic order lies in managing the social and political expectations associated with oil production in Ghana. Indeed, the challenges of managing expectations are most acute where perennial poverty intersects with the unfulfilled promise of transformation in the people’s material circumstances. Evidently, managing the social and political expectations and contestations that surround such potentially anomic situation is crucial to maintaining peace and social order.

### **3. VISUALIZING EXPECTATIONS MANAGEMENT AS A COLLECTIVE ENTERPRISE**

In order to effectively manage the expectations surrounding Ghana’s oil production, a number of measures must be taken. To begin with, the political elite must take a leading role by promoting public dialogue on realistic expectations. Furthermore, there is a need to invest in large-scale development projects and to diversify the economy. Mechanisms to establish and invigorate transparency must be instituted, the anti-corruption regime must be strengthened, and unauthorised use of oil revenues must be criminalised. In addition, the distribution of funds for development must be equitable, and efforts must be made to put in place effective conflict resolution mechanisms. Finally, in order for expectations to

be managed effectively, there is a need for transformational leadership. Each of these issues is discussed briefly below.

### *The Role of the Political Elite*

The political elite of the country (including political leaders, members of Parliament, chiefs, religious and opinion leaders, etc.) must first recognize and accept the critical need to pull together our experience, collective knowledge and wisdom to fashion a sense of shared and sustainable prosperity. Fortunately, both the New Patriotic Party (NPP) and National Democratic Congress (NDC) Governments have implemented measures that assure Ghanaians that we are learning from international best practices, particularly the positive experiences of Norway, Canada and other Euro-American countries which have effectively managed their oil finds. We have also been assured that steps will be taken to avoid the so-called “Dutch Disease” which has afflicted Nigeria, Cameroun and other oil-rich African countries which, sadly, remain among the poorest and most severely-conflicted countries in the world. The role of other minority political parties will also be crucial in generating and fostering the requisite national character, ownership and approach to creating a shared and sustainable prosperity.

These hopes, expectations, fears and assurances are encapsulated in the PRM Act 2011 – a law that provides a framework for “the efficient collection, allocation and management of petroleum revenue for the benefit of current and future generations of Ghanaians” (MoFEP, 2010:1). Fortunately, again, it is the goal of the Act to “ensure that the overall management of petroleum revenue is based on sound, sustainable fiscal policies that transcend political regimes” (MoFEP, 2010:2). Our political elites have no excuse than to rise to the occasion and prudently manage both the revenue and the socio-political expectations of the oil in order to positively transform this country in the coming years. The management of oil and gas revenues must move in tandem with the management of the social and political expectations, and, indeed, the latter must precede the former.

### *Promoting Public Dialogue on Realistic Expectations*

The political elite, as well as the leadership of other sectors of civil society, must temper public enthusiasm with realism. The oil industry in developing countries is typically dominated by expatriates with specialized and technical skills, and there is no reason to assume that the situation in Ghana will be any different. It is doubtful how many Ghanaian companies are sufficiently positioned, financially and technically, to compete effectively against their multinational counterparts in the provision of the highly specialized oilfield, seismic, geophysical, drilling, packing (cementing wells) and logging services required in the oil sector? It is imperative that we conduct a meticulous reality check on our current state of competence and assess our levels of preparedness vis-à-vis the external competition. Without fronting for foreign companies, it is important for Ghanaian businesses to develop strategic alliances that will enable them to reap some of the benefits from oil production. In appropriate cases, oil companies must be compelled by contractual provisions to have local content, and provide jobs and opportunities for knowledge and skills transfer through training for Ghanaian engineers and other technicians.

Furthermore, the oil industry is also characterized by the wholesale importation of specialized services. Oil service companies such as Schlumberger, Weatherford and Otis do not typically engage locals for the provision of the sundry technical services required in their operations. From catering through drilling to speed-boat and land security services, oil exploration companies typically rely on their “foreign friends” for trusted auxiliary support. In short, only a small number of jobs may be directly created to absorb the large army of expectant unemployed youths. The communication of this potentially discouraging piece of reality to the expectant public must be managed with circumspection, courage and sensitivity.

The ruling political elite will have to evince exceptional leadership attributes in this enterprise; they have to display courage in toning down unrealistic public expectations of the development manna, while at the same time transferring optimism and confidence in the future. This requires ingenious ways of expressing sincerity and conviction, in informing people not about ‘worst case scenarios’ but about realistic profiles of an oil-propelled prosperity. In this regard, statutory national anti-corruption institutions such as the Commission on Human Rights and Administrative Justice (CHRAJ), the Serious Fraud Office (SFO), and the Economic and Organized Crime Office, as well as civic education bodies such as National Commission for Civic Education (NCCE), must undertake comprehensive public education on the need for the public to hold realistic expectations about the prospects of growth and livelihood improvements from the production of oil and gas. These bodies and institutions, together with the Ghana Police Service and the Customs, Excise and Preventive Service (CEPS), must also undertake strenuous public education on integrity and anti-corruption. They must be supported in this important endeavour by relevant civil society organizations.

#### *Investing the Proceeds from the Oil and Gas Resources*

As a corollary to this call for realism, the ruling elite must also inform the public as to the realistic timeframes within which to expect legitimate expectations to materialize into prosperity. This calls for vision, courage and tact in communicating the truthful but unpalatable information about the future. In managing the expectations, we should not only discard the fanciful and illegitimate expectations but also moderate and direct some of the legitimate expectations into the domain of other opportunities. The PRM Act mandates that petroleum revenues be spent on infrastructure projects such as health, education and transportation. There is a need for the Government to establish a quasi-public investment company to invest oil and gas revenues in high yielding projects like tolled roads and the petrochemical industry to recoup the investment. Foreign investment partners could be enlisted into the investment drive. Numerous spill-over benefits could be derived from small and medium scale industries allied with the petrochemical industry which would be established by Ghanaians in industries such as plastics, paints, adhesives, synthetic fibres, wax, lubricants, insecticides, polythene and bitumen. Such ventures have good prospects of positively impacting on job creation and economic development.

### *Maintaining a Diversified Economy*

There is also a need to minimize the potential negative effects of oil and gas on the management of the economy in general, and on public spending in particular. This is because petroleum revenues are subject to the vicissitudes of the international commodity market, with the result that they tend to fluctuate considerably, with the attendant adverse effects on economic management. In order to minimize the risk of over-reliance on petroleum revenues, there is a need to generate and maintain alternative streams of income to support public expenditure. This requires sustained effort on the part of government to provide incentives to stimulate the non-oil sectors of the economy.

### *Establishing and Invigorating Mechanisms of Transparency*

There is an urgent need to ensure transparency and accountability in the collection, management and use of petroleum revenue and fiscal policy. In this regard, there is a need to establish transparent mechanisms and processes and to use existing institutions of accountability to ensure adequate public oversight of the collection, accounting, use and management of all the revenue due to the State. In line with these objectives, the CHRAJ could be encouraged to establish, within the context of its Anti-Corruption Department, an Oil and Gas Revenue Unit. The chief function of the unit would be to monitor revenues accruing to the state, the lodgements and disbursements of oil and gas revenue, and to investigate, in accordance with its constitutional and statutory mandate, all instances of alleged and suspected corruption. Additionally, the Public Interest and Accountability Committee proposed in the PRM Act is laudable, and its broad and inclusive composition, which has strong civil society component, is commendable.

### *Strengthening the Anti-Corruption Legal Regime*

There is also an urgent need for Ghana to strengthen its already credible anti-corruption legal framework and institutions. The current anti-corruption legal regime includes the following enactments: Whistle Blower Act 2006 (Act 720); Financial Administration Act 2003 (Act 654); Financial Administration Regulations, 2004 (L.I. 1802); Audit Service Act 2000 (Act 584); Public Procurement Act 2003 (Act 663); and the Constitution of Ghana (1992) (Assets Declaration Provisions in Chapter 24). The stern implementation of these laws will be crucial to our collective ability to police graft and protect and advance the legitimate expectations of the citizenry on the proper utilization of the oil wealth. To this end, it is imperative that the amendments to strengthen the Whistle Blower Act of 2006 (Act 720) already passed by Parliament, receive Presidential assent as a matter of great urgency. The CHRAJ, NCCE and other cognate bodies must embark on massive social mobilization exercises to raise public awareness of the potential benefits of the oil find, the imperative to temper the expectations with reasonableness, and the obligation to hold Government and the oil companies to account in fulfilling their lawful duties to the citizenry. They must also educate the public on the Whistleblower Act in order to ensure a broad appreciation of its basic provisions and how the law can be used in fighting corruption in the oil and gas sector.

### *Criminalization of Use of Oil Revenue for Partisan Political Ends*

Special legislation attaching severe legal sanctions against those who use state funds,

particularly revenue from oil and gas to fund partisan and other selfish political activities is urgently warranted. The goal must be to erase the risk of wasting public resources on partisan projects including vote-seeking behaviours. This, indeed, is a key best practice derived from the Norwegian experience in managing social and political expectations around their oil production and revenue utilization.

#### *Equitable Distribution of Development Projects from the Oil and Gas Revenues*

In the medium term, there is a need to ensure that there is an equitable distribution of infrastructural projects and social investments from oil and gas revenues across the country. This is necessary because unbalanced development generates unbalanced population movements and their attendant social discontent and political activism. Ensuring equity in resource distribution will therefore help to avoid distributional conflicts.

#### *Conflict Management and Resolution*

There is a need to develop and implement programmes to build and enhance the capacity of state institutions, groups and individuals to undertake effective community and inter-group conflict prevention, management and resolution as alternatives to litigating conflicts in our over-clogged courts. The Judicial Service and CHRAJ must embark on comprehensive training in alternative dispute resolution techniques such as negotiation, mediation and conciliation, to equip magistrates and district directors, respectively, with the principles and skills for effectively resolving conflicts and restoring social harmony. We must avoid the catastrophic Nigerian Delta Belt syndrome by which oil-related conflicts are allowed to escalate into disputes, crises, disasters and large scale human tragedies.

#### *Need for Transformational Leadership*

In the final analysis, oil-triggered prosperity is possible only through transformational leadership, deeply embedded in patriotism and fairness. Leadership, in the end, will be the fulcrum on which our transformative development will turn. And it is to that singular factor that we must turn. For the sake of Ghana, the political elite must learn to postpone immediate gratification and the penchant for instant political convenience. This demands resistance, rather than yielding, to the intemperate agitations from partisan foot soldiers and other sectarian groupings for immediate, biased and political dividends. In managing the social and political expectations around the “black gold”, there is a need for political leaders to chart a new course, develop new attitudes toward the use of public property, and manifest greater fidelity to the State. The political elite must be prepared to risk unpopularity to do whatever is necessary, not what is expedient. The mark of true leaders is their willingness to take unpopular decisions with integrity and conviction.

## **4. CONCLUDING REMARKS**

The aim of this paper was to discuss issues related to the management of the political and social expectations arising from Ghana’s newly discovered oil and gas resources and to propose policy recommendations. The case was made that the oil and gas resources should be viewed as a national, rather than a regional asset or property. In that regard, expectations

management must be undertaken as a collective national enterprise. Successful expectations management would contribute to overall levels of satisfaction with project or programme design, delivery, implementation and outcomes.

A number of actions are required to effectively manage expectations surrounding the production of oil and gas. First, the political elite have a collective role to play by promoting realistic dialogue and moderating expectations. People need to be informed about the realities of oil and gas production and reasonable timeframes within which improvements in social infrastructure could be expected. But more importantly, there is a need for the government to establish a quasi-public investment company to invest some of the proceeds in high yielding projects and to promote local businesses in the downstream area of oil and gas production. There is also a need for the government to diversify the economy by providing tax incentives to stimulate the non-oil sectors of the economy. To ensure transparency and accountability in the collection, management and use of petroleum revenue and fiscal policy, effort must be put into not only using the existing mechanisms for fighting crime and corruption, but also strengthening the current anti-corruption legal regime.

Finally, there is a need to develop and implement suitable programmes for conflict management and resolution. The extent to which oil and gas resources can be converted into prosperity depends on transformational and visionary leadership. In this respect, there is a need for leaders to begin the process of managing expectations by charting a new course of action, changing attitudes and building more confidence in the State.

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# CHALLENGES OF ENVIRONMENTAL DEGRADATION – GHANA’S PREPAREDNESS FOR EFFECTIVE OIL SPILL RESPONSE

*Dr. Moses Mensah\**

## ABSTRACT

Besides the anticipated “blessings” of enhanced prosperity, the commercial offshore production of oil and gas in Ghana raises concerns about the level of preparedness of the environmental protection of the coastal communities and habitat. In the fundamental petroleum policy for Ghana, government out-lined its commitment to promote sound and sustainable environmental practices in the management of petroleum operations, and to ensure compliance with environmental health and safety regulations as well as standards. The Ghana Petroleum Development Master Plan, the National Oil Spill Contingency Plan as well as the National Oil Spill Strategic Plan constitute the cornerstones of the policy frameworks for a national response to a possible oil catastrophe and environmental degradation.

This note addresses (a) the extent to which the legal and policy frameworks are adequately positioned to combat any form of environmental degradation arising from the emerging oil industry, and (b) the level of preparedness in terms of human and technical capacity for an effective oil spill response and remediation to protect the vulnerable coastal belt. The paper concludes that an effective response capability requires at the national level a solid base of political support, laws and regulations, institutional responsibility and systematic capacity building through the polytechnics and universities. Early warning systems should be established as a matter of policy and the preparedness. At the regional level, there is the need to harmonize national laws and regulations and to synergize response capabilities.

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# 1. INTRODUCTION

The discovery in Ghana of oil in commercial quantities in 2007 and the commencement of its production in 2010 is expected to have a positive impact on the economy. On the other hand, the discovery raises a number of crucial and critical questions regarding the extent to which relevant policies, regulatory and monitoring mechanisms and particularly environmental measures have been put in place to effectively respond to any eventual oil disaster. Oil spills are an avoidable but seemingly inevitable aspect of offshore oil operations as evidenced throughout the world. The questions about environmental policies, regulatory and mitigation measures become all the more crucial for Ghana in the light of reported minor spills in Ghana by Kosmos, and especially given the recent major spills in the Gulf of Mexico, the March 1989 catastrophic Exxon Valdez spill off the coast of Alaska, and the periodic experiences in the Niger Delta over the years.

This note examines the level of Ghana's preparedness with respect to legislative and policy instruments, the countermeasures that will ensure environmental preparedness, the environmental standards for the oil industry, the steps towards human resource development and capacity building. Section 2 of the paper outlines the policy, legislative issues and the standards that are to be met. Section 3 examines waste management options and pollution control. The optimal oil response options follow in section 4 and the conclusions in section 5.

# 2. POLICY, LEGISLATIVE ISSUES AND STANDARDS

In the legal area, Ghana has adopted (by ratification, acceptance, approval or accession) the following key international treaties on environmental protection, namely:

- International Convention for the Prevention of Pollution of the Sea by Oil 1954, as amended in 1962;
- International Convention on Civil Liabilities for Oil Pollution Damage 1969 (Civil Liability Con-vention);
- International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971, (Fund Compensation);
- International Convention on the Prevention of Marine Pollution by the Dumping of Wastes and Other Matters 1972 (London Convention);
- Convention on Cooperation in the Protection and Development of the Marine and Coastal Environment of West and Central Africa Region, 1981;
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 1989;
- Ghana is a signatory to the 1991 Bamako convention on ban of import into Africa and Control of movement of hazardous wastes within Africa;
- International Convention on Oil Spill Preparedness, Response and Cooperation 1990;
- Abidjan Convention: Convention for co-operation in the protection and development of the Ma-rine and Coastal Environment of the West and Central Africa Region (Abidjan Convention, 1981);

However at the national level, the two key legal documents on oil, the National Oil Spill

Contingency Plan (NOSCP), as well as the Ghana Oil Spill Response Strategy, dedicated specifically to the preparation for, and response to, oil spills with the aim to efficiently and effectively minimize the impact of oil pollution on the environment within Ghana's area of responsibility, from ships, oil transfer sites or other sources, are yet to be ratified by Parliament. Work on the legislative instrument on national standards in conformity with international standards on surveillance and tracking, initial response actions, control, mitigation measures, shoreline countermeasures and bioremediation remains incomplete at the time of writing.

### 3. WASTE MANAGEMENT OPTIONS AND POLLUTION CONTROL

There is currently no single integrated pollution legislation in Ghana. Pollution control exists as part of the environmental and water resource legislation. Marine pollution is dealt with in the Oil in Navigable Waters Act 1964 (Act 235) A Marine Pollution Act is currently in draft stages of the legislative process which, when enacted, will empower the Ghana Maritime Authority (GMA) to regulate marine pollution. Section 2(f) of the Environmental Protection Act 1994 (Act 490) enables the Environmental Protection Agency (EPA) to issue pollution abatement notices for: "controlling the volume, types, constituents and effects of waste discharges, emissions, deposits or other source of pollutants and of substances which are hazardous or potentially dangerous to the quality of the environment or any segment of the environment..."



**Fig. 1a**

**Oblique no. 17**

**Location:** The closed Songor Lagoon (Map 79)

**Description:** Beach with coarse sand



**Fig. 1b**

**Oblique no. 18**

**Location:** The Volta Estuary (Map 83)

**Description:** The mouth of the Volta River in the direction to the NE.



**Fig. 1c**

**Oblique no. 19**

**Location:** Approx. 25 km west of Keta (Map 86)

**Description:** Beach with coarse sand near Wuti. The Keta Lagoon is seen on the horizon.



**Fig. 1d**

**Oblique no. 20**

**Location:** Keta Lagoon (Map 91 and 92)

**Description:** Coarse sandy beach. In the background the Keta Lagoon

#### **Figures 1a, 1b, 1c and 1d: Coastal Sensitivity Analysis**

Ghana has no specific waste law, general waste regulations or hazardous waste regulations (as has South Africa). There are no regulations concerning the handling, treatment and disposal of industrial and hazardous wastes and no full waste classification system. The basis for addressing any breach of environmental regulation therefore needs to be examined and developed to provide the needed assessment baselines. In the absence of hazardous sanitary waste landfill facilities, chemical waste treatment facilities and thermal treatment facilities, it is clear that wastes arising from the oil and allied industries cannot be treated and appropriately disposed of. So far Zoil Oil Services Ltd, a subsidiary of Zoomlion Ghana Ltd, has made significant strides towards the acquisition of oil spill, recovery and treatment facilities. Another important area of concern is Environmental Sensitivity Index Mapping (ESIM). The tasks of the ESIM are to identify and map areas sensitive to oil pollution, prioritize sensitive areas in the operational areas to effect quick oil spill reponse strategy, describe ecosystems and other facilities of special socio-economic importance, and integrate physical, ecological and socio-economic concerns into a comprehensive spill response document.

Figure 2 indicates the extent to which any major spill can spread to neighbouring countries. Coastal communities are most vulnerable to any oil hazard and therefore need to be sensitized in understanding how environmentally sensitive their environments are, what impact any oil hazard would have on their environment and livelihoods, what measures are or need to be put in place and what roles will they have to play in any such event.



**Figure 2: Tidal Wave Direction**

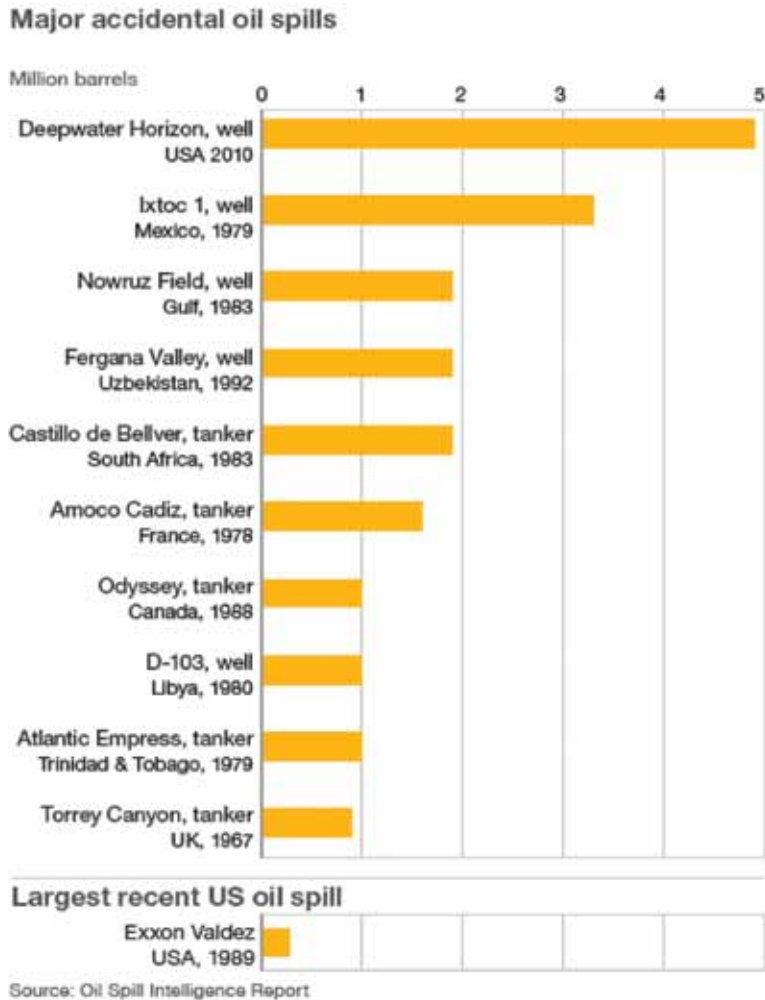
### *Oil Spill Response*

An oil spill means the actual or probable release, discharge, or escape of oil into the internal waters or marine waters of Ghana. It occurs when a significant amount of oil is accidentally released into the environment. This release could be on land or in water bodies, the latter being more common. Oil spills are serious environmental disasters, often leading to significant, long-term impacts on the ecology and socio-economic activities of an area. An oil spill response has to do with actions taken to confirm the presence of an oil spill, stop its flow from the source, contain it, collect it, protect areas from damage by it, mitigate its effects on the environment, and clean up wildlife and areas contaminated by the spill.

So far the discoveries made in Ghana are in the Deepwater Tano and West Cape Three Points blocks, which are all offshore. Oil spills from these offshore areas could eventually end up on the coast and could have devastating environmental impacts on the shorelines of Ghana and beyond (Figure 2). The question here is whether adequate, comprehensive preparations have been made to monitor, inform coastal communities and counter effectively, the outbreak of any major spill. Figure 3 shows the damaging effect of one such spill.



**Figure 3: The Damaging Effect of an Oil Spill**



**Figure 4: Major Accidental Oil Spills**

Figure 4 gives an overview of the major oil spills in recent history, the latest as well as the most massive in scale being the Deepwater Horizon oil spill which occurred in April 2010 as a result of a massive explosion on the BP-run ultra-deepwater semi-submersible oil rig in the Gulf of Mexico killing 11 people. The explosion was caused by a sudden kick of gas through the 5000 feet riser pipe connecting the well to the Deepwater Horizon oil rig that went undetected for several crucial moments. The Macondo well eventually leaked 4.9 million barrels of crude oil into the Gulf of Mexico damaging hundreds of miles of environmentally sensitive coastline before it was capped in July 2010.

The US Commission on BP Oil Spill in its findings came to the conclusions that, the Gulf of Mexico oil spill was an avoidable disaster caused in part by a series of cost-cutting decisions

made by BP and its partners that compromised on an unrelenting commitment to safety as well as the lack of capacity and will by government regulators to demand world-class safety standards. BP neither enforced proper controls nor did it have adequate controls in place to ensure key decisions leading to safe and sound decisions from an engineering perspective are adhered to. The report also found out that a pressure test that indicated that the well had not been properly sealed was misread. Furthermore, BP failed to exercise proper oversight over the cementing job and misread a faulty cementing job done at the bottom of the well. The report recommended besides getting better trained inspectors, the creation of a new agency focussed entirely on ensuring safe operations on oil rigs.

BP accepted responsibility for the disaster and committed itself to improve safety standards. The government of Ghana will have to draw lessons from the systemic safety and oversight failures caused by BP by ensuring that our laws and regulations take care of such loopholes and commit the companies to pay for clean-up costs before they are granted exploration and production licences on the basis of “polluter pays” principle. There is also the need for clarity on the identity and hierarchy of liable parties to ensure that the government and hence the taxpayers do not have to pay for the consequences of off-shore incidents.

#### *Regional Cooperation in Geo-Information for Disaster and Risk Management*

Developing countries like Ghana and particularly poor communities are especially vulnerable not only in the event of an oil spill, but also with respect to other natural and anthropogenic disasters. Human fatalities, extensive marine damage and property losses could be prevented if better information about the assets, the environmental factors in disaster risk and the patterns and behaviour of particular hazards (see Figure 5) were made available to the exposed population. Increasingly, this information is becoming available with the help of technologies such as meteorological and earth observation satellites, communication satellites and satellite-based positioning technologies, coupled with hazard modelling and analysis, and geographical information systems (GIS). When integrated into a disaster risk reduction approach, and connected to national and community risk management systems, these technologies offer considerable potential to reduce losses to life and property.

The use and exchange of geospatial information in disaster situations is facilitated at the national and international levels by initiatives and programmes on harmonisation of geospatial data and building of spatial data infrastructures, such as GMES and INSPIRE in Europe, the United Nations Geographic Information Working Group (UNGIWG), Homeland Security and Digital Earth. The Global Disaster Alert and Coordination System (GDACS), established in 2004, is a cooperation framework under the United Nations umbrella with the aim to consolidate and strengthen the network of providers and users of disaster information worldwide. The goals are to provide reliable and accurate alerts and impact estimations after sudden-onset disasters, and to improve the cooperation of international responders in the immediate aftermath of major natural, technological and environmental disasters.



Sensors and in situ data have been increasingly integrated for early warning and hazard monitoring. Systems maintaining geospatial information are becoming more elaborate and multi- functional than ever before. Many of these systems can meet requirements for early warning and real-time response, and provide suitable models for elaborated predictions, simulations and visualizations



**Figure 5: Risk Cycle Diagram**

Source: GMES

It is imperative therefore that a regional initiative is undertaken with the active participation of Ghana for the establishment and implementation of a geo-information system which is collectively monitored by countries within the sub-region.

### *Capacity Building Challenges*

The high technical nature of oil technology raises concern about local human resource inadequacies and loopholes as exemplified in the lack of a comprehensive programme for training in the sector, inadequate laboratory facilities and technical exposure for Petroleum and Petrochemical Engineering students at KNUST with the result that there is increased dependence on foreign expertise. On the other hand one observes a proliferation of seminars and workshops on oil and gas with questionable academic standards. There is the need to speed up the process of development and promulgation of legislative and policy instruments as well as national standards.

## 4. CONCLUSION

There is the need for concerted and comprehensive human resource development and sensitization in the sector, the latter particularly for coastal communities. Processes for oil spill response acquisition as well as facilities for treatment and disposal of oil and hazardous wastes have to be accelerated. Finally it is important to activate broad collaboration at the regional level to harmonize national laws and regulations and synergize response capabilities.

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