



SHARING OIL AND GAS REVENUE

IN

UGANDA



Front and Back Cover Photos: *Oil exploration in the Albertine Rift (Courtesy of Petroleum Exploration and Production Department, Ministry of Minerals and Energy Development, Government of Uganda; Heritage Oil; and Tullow Oil)*

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This publication is dedicated to the memory of the late Yakobo Olima Moyini, whose contribution to conservation and natural resource management in Uganda will always be remembered.

ACRONYMS AND ABBREVIATIONS

ADE	Alberta Department of Energy
GDP	Gross Domestic Product
GoSS	Government of Southern Sudan
GoU	Government of Uganda
HDI	Human Development Index
IGAD	Intergovernmental Authority on Development
IMF	International Monetary Fund
LGFC	Local Government Finance Commission
MEMD	Ministry of Energy and Mineral Development
MSC	Multiple Service Contract
NPC	National Petroleum Commission
NPV	Net Present Value
OPEC	Oil Producing and Exporting Country
PEPD	Petroleum Exploration and Production Department
PPT	Petroleum Profits Tax
PRML	Petroleum Revenues Management Law
PSC	Production Sharing Contract
SNGs	Sub National Governments
SPLA/M	Sudan People's Liberation Army/Movement
TEV	Total Economic Value
UAE	United Arab Emirates
URA	Uganda Revenue Authority
UWS	Uganda Wildlife Society
VAT	Value Added Tax
WRI	World Resources Institute

EXECUTIVE SUMMARY

Although Uganda has significant natural resource endowments, most communities living in proximity to these resources continue to suffer serious levels of poverty. This situation sets a bad precedent for the developing oil and gas sector. As a result, the Uganda Wildlife Society, with generous support from Irish AID through the World Resources Institute carried out this study to find practical ways local communities, local governments and the central government may fairly and equitably share revenue from oil and gas resources.

The overall aim of the study was therefore to propose a revenue sharing formula and derivation fund for the oil and gas sector in Uganda. The specific objectives of the study were to: (i) define the concept of revenue sharing and derivation funds, its rationale and key features; (ii) review oil extraction models and oil revenue control; (iii) review existing institutional, policy and legal frameworks that have implications for the establishment of derivation funds and oil revenue sharing schemes; (iv) document relevant international experiences; (v) present the challenges, key measures and approaches to establishing a successful revenue sharing scheme and derivation fund for Uganda.

The report is divided into seven chapters including an introduction which explains the motivation of the study and points out the key features of the oil and gas sector in Uganda. The motivation of the report is threefold. First, oil and gas activities are associated with a number of adverse effects which need to be offset using derivation payments. Second, although Uganda has significant natural resource endowments, most communities living in proximity to such resources continue to live in poverty. Yet they play an important stewardship role which must be compensated. Third, several oil and gas exporting countries in the developing world have a poor record in the area of benefits and revenue sharing. Additionally, many governments in developing countries never fulfill their pledges to use oil wealth to deliver social services to their citizens.

Chapter Two briefly discusses the major oil extraction models and petroleum fiscal systems in the world. The chapter presents the Revenue Maximising Model and the Target Revenue Model. The purpose of this chapter is to demonstrate to

government the need for careful targeting of oil extraction levels and extraction profile. The second part of the chapter aims at emphasizing the need to capture as much revenue from the private companies and investors as possible. The chapter also suggests that beyond influencing the extraction profile, government can directly invest in the development of the oil and gas sector, with the upside benefit of increasing her share of oil wealth.

Chapter Three looks at the institutional, policy and legal landscape of relevance to an oil and gas derivation formula and fund for Uganda. The general policy and legal framework in the country is largely silent on derivation funds, save for some ambiguous provisions in the Oil and Gas Policy and the Mining Act. The policy provides for investment support in the areas of derivation and creates the oil fund, but falls short of providing good and strong measures to ensure that the derivation intention of the policy is properly monitored and controlled. It is also not explicit on the model of the derivation fund. Chapter Three underlines the need for strong domestic institutions that will ensure that oil and gas activities deliver positive developmental outcomes. The chapter noted that weak institutions, a malfunctioning bureaucracy and insecure property rights will result in lower than optimum growth outcomes and conflicts. The chapter, however, appreciated government efforts to articulate an institutional arrangement for oil and gas revenue management in the National Oil and Gas Policy.

Chapter Four features general aspects of oil and gas derivation funds and revenue sharing schemes. The chapter presents two types of oil funds including stabilization funds and inter-generational funds. It explains that establishing and operationalising a successful derivation fund involves addressing a number of challenges including ensuring political will and equity in funds flow, recognizing that it is not possible to come up with a single standard derivation formula; and ensuring equity in revenue sharing.

Chapter Five documents relevant international experiences and demonstrates that derivation funds can function very well and help in addressing equity and distributional issues. Chapter Six deals with a proposed oil and gas derivation model for Uganda. The proposed model is designed to address a number of allocative principles including coherence with overall national policy, distributional and equity issues and derivation. The specific proposal is $DF = d[R - (1 - m - t - s)]$

where R = net oil revenue accruing to the government;
 m = percentage compulsory revenue allocation to priority sectors including education, health, agricultural development, social services, environment and infrastructure development of not less than 80 percent (80%);
 t = percentage allocation to an inter-generational fund or escrow account of not less than 10 percent (10%);
 s = percent allocation to a stabilization fund under government discretionary allocation of not less than 5 percent (5%); and
 d = percentage of net government revenue [$R - (1 - m - t - s)$] allocated to a derivation fund set not to exceed 5 percent (5%) of net revenue.

The study concludes that establishing an oil and gas derivation fund is feasible and should be elaborated in the proposed oil revenue management law. The study then recommends that the derivation formula should be proposed within an overall framework of a national petroleum fiscal system that aims at capturing a fair share of oil wealth for sustainable development.

Table of Contents

I. BACKGROUND	9	V. RELEVANT INTERNATIONAL EXPERIENCE ON OIL AND GAS REVENUE SHARING	21
a) Introduction	9	a) Full Centralization Model	21
b) Uniqueness of the Oil and Gas Sector	9	b) Shared Revenue Bases	22
c) Objectives of the Report	10	c) Revenue Sharing	23
d) Methodology	10	d) Full Decentralization	24
e) Structure of the Report	11		
II. OIL EXTRACTION MODELS AND OIL REVENUE CONTROL	12	VI. PROPOSED OIL AND GAS DERIVATION MODEL FOR UGANDA	27
a) Oil Extraction Models	12	VII. CONCLUSION AND RECOMMENDATIONS ON THE DERIVATION FUND FOR UGANDA	29
b) Elements of Petroleum Fiscal Systems	12	a) Conclusion	29
c) Broad Classifications of Petroleum Fiscal Systems	13	b) Recommendations	29
i) Service Fee Systems	13		
ii) Production Sharing Systems	14	REFERENCES	30
iii) Concession Systems	14	ANNEX I: EXISTING OIL FUNDS	32
III. POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK FOR AN OIL AND GAS DERIVATION FUND FOR UGANDA	15	ANNEX II: SUMMARY OF EXTRACTIVE INDUSTRY REVENUE DISTRIBUTION IN SAMPLE COUNTRIES	33
a) Relevant Policy Framework	15		
b) Laws and Regulations	15		
c) Institutional Framework	18		
IV. SPECIAL OIL AND GAS REVENUE MANAGEMENT INSTRUMENTS (SPECIAL FUNDS)	19		
a) Stabilisation Funds	19		
b) Inter-Generational Funds	19		

I. BACKGROUND

a) Introduction

This report is the result of follow-up work on the Uganda Wildlife Society's 2007 study entitled "Sharing Natural Resource Revenue: Towards Derivation Funds for Uganda." The 2007 study explored the possibilities of equitable and meaningful distribution of revenue from the wildlife, forestry and mineral sectors in Uganda through the establishment of derivation funds. This follow-up report specifically focuses on identifying key policy issues relating to oil and gas revenue sharing with a view to articulating them into a proposal for an oil and gas derivation fund for Uganda. This report was prepared by the Uganda Wildlife Society (UWS) with generous support from Irish AID through the World Resources Institute (WRI) in Washington, DC.

The primary motivation of this report is to provide practical suggestions on how local communities, local governments and the central government may fairly and equitably share revenue from oil and gas resources. This is in view of the fact that oil and gas activities are associated with a number of local adverse effects including lost livelihoods, on-shore and off-shore pollution, and lost tourism opportunities; all of which need to be offset. The other issue is that although Uganda has significant natural resource endowments, most communities living in close proximity to natural resources continue to suffer serious levels of poverty. They hardly enjoy any derivation benefits, and do not receive any form of compensation for lost opportunities or environmental degradation. Yet these communities play an important stewardship function in maintaining the natural resource base and should be fairly compensated (Moyini et al, 2006).

The other concern of this paper is that several oil and gas exporting developing countries have a poor record in the area of benefits and revenue sharing. Whereas land owners access modest shares of oil revenues derived from their land holdings in the United States, oil wealth is nationalized in most developing countries. Developing country governments rarely fulfil their pledges to use oil wealth to create lasting wealth for their citizens.

This paper therefore proposes models and frameworks for oil revenue management and equitable sharing to improve the prospect for oil and gas revenue sharing in Uganda. The paper suggests a derivation formula and presents a range of issues with a view to stimulating debate on the policy, legal and institutional framework for fair, equitable and progressive sharing of oil and gas revenue in the country.

b) Uniqueness of the Oil and Gas Sector

Oil and gas resources are exhaustible resources implying that their extraction today precludes their availability to future people and future generations. This "user cost" is critical to the design of both the resource extraction path and the utilization of proceeds from oil and gas sales (Muramira, 1994).

The above characteristic coupled with changing market conditions, including volatile resource prices and the possibility of a backstop technology, introduce contest in the design of the inter-temporal extraction profile (the model of extraction chosen considering different points in time) of oil and gas resources. Some countries therefore set their extraction profiles against a wealth or net present value (NPV) maximizing extraction model, while others set extraction volumes against national budget requirements. The two oil extraction models are known as the Revenue Maximising Model and the Target Revenue Model, respectively (Muramira, 1994).

However, recent economic surveys indicate that with good, flexible oil revenue management systems, both models provide immense opportunities for extensive economic growth in resource rich countries. A number of oil producing and exporting countries (OPECs) have good wealth indicators and their human development indices (HDIs) are commendable. The presence of oil wealth has however not uniformly improved the conditions of the people within and across oil exporting countries. As a matter of fact, the economic performance of many oil exporting countries remains disappointing. This has prompted many analysts to wonder whether oil is a blessing or a curse (Davis et al, 2003).

In addition to failing to improve livelihoods in some countries, oil and gas activities also introduce an array of both direct and indirect costs. The main costs include pollution of air, land and water systems. In other countries, the oil boom causes the “Dutch disease”¹ characterized by squeezes on the non-oil sectors due to damaging macro-economic instability (Davis et al, 2003). The “Dutch disease” results from the shift of the factors of production away from agriculture, manufacturing and other industrial sectors making them high cost producers (Melby, 2002).

But the deeper sense in which oil resources impede economic development and democracy is that they minimize the two way interaction between the state and its citizens. Political scientists and economic historians have emphasized this effect. Governments that have easy recourse to oil rents are less inclined to promote wealth creation that they can subsequently tax; in turn, citizens have less incentive to hold governments accountable (Subramanian and Sala-i-Martin, 2004).

This last category of costs is most clearly manifest in Nigeria. Nigeria has witnessed the assassination of two leaders, six successful coups and four failed ones, and 30 years of military rule. Many Nigerian rulers have also plundered oil wealth to the tune of tens of billions of dollars while large government expenditures fuelled by kickbacks and corruption, and other macro-economic factors have curtailed economic growth and led to staggeringly destructive development outcomes. The Biafran war of secession – Africa’s biggest civil war of the late 1960s – which led to one million deaths was in part an attempt by the eastern region to gain exclusive control over oil resources. Thus oil and the institutional deterioration that it has led to, has perhaps been the single most important cause of Nigeria’s economic and political problems (Subramanian and Sala-i-Martin, 2004).

This report emphasizes the role of proper oil revenue management and suggests an oil revenue sharing model as one practical method for tackling the oil curse.

c) Objectives of the Report

The overall aim of the report is to propose a revenue sharing formula and derivation fund for the oil and gas sector in Uganda.

The specific objectives of the report include:

- (i) defining the concept of revenue sharing and derivation funds, its rationale and key features;
- (ii) reviewing oil extraction models and oil revenue control;
- (iii) reviewing existing institutional, policy and legal frameworks that have implications for the establishment of derivation funds and oil revenue sharing schemes;
- (iv) documenting relevant international experiences;
- (v) presenting the challenges, key measures and approaches to establishing a successful revenue sharing scheme and derivation fund for Uganda;
- (vi) deriving main conclusions and present key recommendations for operationalising the oil revenue sharing scheme and derivation fund for Uganda.

d) Methodology

The methodology used in this study consisted mainly of desk reviews and expert consultations with a number of professionals and practitioners in natural resource planning, resource economics and finance in Uganda and abroad. Specific attention was given to the environmental impact studies of the oil exploration, extraction and proposed refining activities in western and south western Uganda, the National Oil and Gas Policy for Uganda, and the various critical reviews of the aforementioned policy. A limited legal review and interpretation of the constitution and oil and gas law enriched this study.

¹ An economic concept originating from the decline of the manufacturing sector in the Netherlands after the discovery of natural gas in the 1960s. It refers to the theory that an increase in revenues from extraction of natural resources will deindustrialize a nation’s economy by raising the exchange rate, which makes the manufacturing sector less competitive.

e) Structure of the Report

The report is divided into seven chapters including this introductory chapter. Chapter One on the introduction presents the key motivation for the report and the unique features of the oil and gas sector in Uganda in particular and elsewhere in general. Chapter Two briefly discusses the major oil extraction models and petroleum fiscal systems. Chapter Three looks at the institutional, policy and legal landscape of relevance to an oil and gas derivation fund for Uganda. Chapter Four features general aspects of oil and gas derivation funds and revenue sharing schemes. Chapter Five documents relevant international experiences. Chapter Six deals with a proposed oil and gas derivation model for Uganda while Chapter Seven contains conclusions and practical recommendations for establishing and operationalising a derivation fund for Uganda. This is followed by a list of literature cited in the report and annexes.

II. OIL EXTRACTION MODELS AND OIL REVENUE CONTROL

a) Oil Extraction Models

There are two major oil extraction models applied in the world. These include the wealth maximizing model and the target revenue model. The nature of the model is defined by the objectives against which oil extraction levels are set. The wealth maximizing model sets inter-temporal oil extraction levels to achieve a long-term profit maximization objective (Griffin and Teece, 1982). The target revenue model on the other hand exhibits non-wealth maximizing extraction behaviour setting oil extraction levels mainly with reference to national budgetary requirements (Teece, 1982).

The ingredients of a wealth maximizing oil extraction decision are many and complex. They include a delicate balance of the marginal oil extraction costs and marginal revenues and a flow condition that ensures that price fluctuations do not change the discounted value of a marginal unit of oil in subsequent extraction periods (Hotelling, 1931). The wealth-maximising oil extraction model also takes into account the possible invention of a “backstop technology” or alternative fuel (Muramira, 1994).

Though less rigorous, most oil exporting countries prefer and therefore apply the target revenue model for oil extraction. Teece (1982) explained that countries set extraction volumes against budget requirements, which are in turn a function of national absorptive capacities. Teece defined “absorption capacity” as the ability of a country to convert oil revenues to domestic investments and services for her citizens (Teece, 1982).

Teece (1982) observed that a number of oil extracting countries do not seek to maximize their wealth, but rather attempt to match their oil revenues with desired levels of government expenditure using various government policy instruments. When prices are high, revenues from oil extraction are large triggering cuts in

extraction because domestic expenditure needs have been met. Reverse actions are taken if for some reason, the price of oil decreases or budgetary requirements expand following increases in import prices of food, medical care or simply when national populations increase. Teece noted that the flexible extraction behaviour produces a peculiar extraction profile over time which he described as a “backward bending oil supply curve.”

Lately however, contradictory extraction behaviour has been observed. A number of oil extracting countries actually increased rather than cut back their extraction levels following the hiking of the price of oil. The policy argument has been that such countries need to cash in on the revenue windfall presented by unprecedented increases in the global price of oil. The purpose of the discussion in this section is to emphasize the need for government intervention in setting oil extraction models guided by well thought out development objectives. The Government of Uganda should not leave the decision of oil extraction levels to the private concession holders but rather engage them to follow clear, objective and patriotic extraction programs.

b) Elements of Petroleum Fiscal Systems

The other policy decision is whether oil revenue will primarily benefit the capital accumulation goals of private corporations and investors or the people of the areas of derivation, the general public and future generations. This decision on revenue sharing between the state and the private corporations or investors, is both an economic and political question that needs careful assessment and planning. The next section therefore, attempts to provide models for oil revenue management and equitable sharing at the government and private company or investor interface. The section is not fool-proof or final but rather aims at stimulating debate on the policy framework and necessary work that will ensure that Uganda’s oil revenue is fairly, equitably and progressively shared between the government as a representative of the citizenry and private companies and investors.

A number of instruments may be applied to access oil revenue shares for government. The combination of instruments used to do this is also called a “fiscal system.” The main instruments applied for most fiscal systems include one or a combination

of all of the following instruments: (i) resource rent based taxes levied on profits; (ii) royalties based on a percent charge on net well head value of production and; (iii) crude oil excise taxes where initial production may be exempt but variable excise rates apply to annual production at different levels.

Resource rent based taxes are levied on any profit received by a project after taking into account project receipts and indexed expenditure; after allowing for a minimum compound rate of return on most expenditure. Resource based taxes are part of a progressive fiscal system that allows government shares to change with the level of project profitability. Royalty based instruments on the other hand are based on production and are the price that the owner of the resource (in our case, government) charges for the right to develop the resource. Normally royalties have nothing to do with the costs of developing and producing a resource and are levied simply as a right of ownership. Royalties may however be a fixed percentage, or may change with resource prices or level of production. In unique cases, royalties may change with the level of costs like for the "Alberta Oil Sands Projects" in Canada (ADE, 2007).

In practice therefore, there is a wide range of royalty and tax combinations that are employed around the world. This is reflective of the fact that royalties are not the only means available for the resource owner to collect its share. Each system is specifically designed to reflect the resource characteristics, policy objectives and even culture of each jurisdiction. Jurisdictions that are net importers often have special provisions, including lower royalties to encourage domestic production. Net exporting jurisdictions tend to have higher royalties to capture export revenue. For purposes of attracting and retaining investments in domestic production therefore, the Ugandan fiscal system should include such special provisions as lower royalties to encourage domestic production.

In some countries, governments invest directly in comparable proportions as the private sector through national corporations. This is referred to as state or government participation and therefore, in addition to royalties and taxes, the state obtains a share of the corporate profits. In these cases, however, the state must also pay its share of costs. This model is useful where the oil industry is relatively under-

developed or if domestic policy prohibits private, particularly foreign corporations from owning domestic petroleum resources.

The above model fits very well with government proposals to directly invest in the oil and gas sector in Uganda. Sections of the production sharing agreement (PSA) indicate that government has negotiated a 15-20 percent state participation, 5-12.5 percent share of royalties, 50-60 percent cost of oil and 40-75 percent production share, depending on the daily extraction rates. Government will also levy up to 30 percent income tax, surface rentals, signature bonuses and training fees to attract up to 70 percent total government take of the generated wealth (Kabagambe-Kaliisa, 2008). It should be noted however, that the above state participation model exposes government to some risk which must be forestalled. The notion of risk however, has with it the balancing notion of reward; with the downside risk attracting a higher upside share of the generated wealth for government, which must be taken advantage of.

c) Broad Classifications of Petroleum Fiscal Systems

There are three broad categorizations of petroleum fiscal systems used in the world. They include the: (i) service fee systems, (ii) production sharing systems and (iii) concessions. The fiscal system used in Uganda is the production sharing system.

The applicable fiscal system for Uganda is the production sharing system. This section will however discuss all three fiscal systems to provide a more comprehensive understanding of oil revenue management scenarios.

i) Service Fee Systems

These are applied where host country law prohibits foreign ownership of domestic production. This is the case applying in Iran (the Iranian buy-back formula) and Mexico (Multiple Service Contracts - MSCs). In these cases, the foreign oil company is not permitted to actually own any of the oil or gas produced. Instead, the company is guaranteed a mark-up or rate of return on the basis of the investment made with no connection to the level of production achieved or the price received.

ii) Production Sharing Systems

Production sharing systems, also known as production sharing contracts (PSCs), are popular in countries whose legal systems are viewed as unstable. Production sharing contracts have the same basic components as concession systems, except that these emphasize the contractual approach to guaranteeing and securing investor incomes. The contract is aimed at securing an additional measure of security of investor incomes through international law. Host countries also like this system because they feel it gives them some added security as well.

Security for the host country explains the origin of the term “production sharing.” Production (referring to the value of production) is often shared even before the investor’s costs have been recovered. In these cases, production is first split into cost component-cost oil or gas, and a profit component-profit oil or gas. The proportion allowed for the recovery of costs in a given year is often limited to ensure that the profit component is positive and that the state will receive at least a minimum level of annual or monthly revenues. Production sharing systems typically also include corporate income tax, royalties, bonuses and land rental fees to form the overall fiscal system. In this way they are similar to concession systems.

iii) Concession Systems

Concession systems also known as royalty/tax systems are generally applied where the host country’s legal system is considered stable enough to afford reasonable protection to the investor. Most European countries, the USA, Canada and Australia use concession systems. Concessionary systems often include some form of special tax or royalty in addition to normal corporate income taxes and royalties. For example, in addition to corporate income tax, land rental fees, bonuses, and royalties, some countries levy a special tax known as the Petroleum Profits Tax (PPT). This may be a combination of the traditional royalty on gross revenue and a profit share based on net revenue.

III. POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK FOR AN OIL AND GAS DERIVATION FUND FOR UGANDA

a) Relevant Policy Framework

Uganda has developed a number of macro-economic policies aimed at the improvement of livelihoods and poverty reduction through sustainable extraction of the resource base in the country. The policy focus is private sector led economic growth that tackles absolute poverty. The policy target is to reduce absolute poverty in the country to levels below 10 percent by the year 2015. The development of an oil and gas sector in the country will contribute significantly to the early achievement of this goal by enhancing the country's capacity to invest in productive sectors of the economy, economic and social infrastructure, development of new industries and businesses, creation of new jobs and boosting of national and household incomes. This development shall be undertaken in line with the country's national development plan and investment framework.

Whereas derivation funds have proved to be important instruments for ensuring economic growth and stability in other countries, a close examination of Uganda's current macro-economic dispensation, has no specific provision for derivation funds. There is only limited reference to some elements of active public participation and revenue sharing in some policies like the National Environment Management Policy and the Wildlife Policy. The National Environment Management Policy also has provisions for resource pricing which support the view that economic rent should be used as a basis for valuation of resources and that the total economic value (TEV) concept should be applied. The policy however, falls short of proposing a revenue derivation model for the environment and natural resource base of the country.

Of all the macro-economic policies, the decentralization policy is the most specific with respect to how the GoU is to share tax revenues with districts and lower local

governments. However, the policy is also fairly silent on the modalities for allocating non-tax revenue.

The Government of Uganda recently passed an Oil and Gas Policy specifying a revenue share for the central government that will be determined by the production sharing agreement reached with the oil and gas companies. The policy also proposes an oil fund, to be managed by the Central Bank. The fund's purpose is to leverage inflationary pressure, control the exchange rate and direct development funding to other productive sectors of the national economy. While the policy provides for investment support in the areas of derivation, and creates the oil fund, the policy does not clearly provide for an oil derivation fund for Uganda.

b) Laws and Regulations

The National Constitution is the supreme law in Uganda and provides guidance against which a regulatory framework for natural resource management may be developed. Although the constitution does not explicitly mention the sharing of natural resource revenue, it makes reference to sustainable utilization of the natural resource base for the benefit of both present and future generations.

Part XIII of the National Objectives and Directive Principles of state policy oblige the State to protect natural resources on behalf of the people of Uganda. Part XXVII of these Principles expressly provide for the environment and obliges the state to promote sustainable development and further under XXVII (ii), the constitution states that natural resources shall be managed in such a way as to meet the development and environmental needs of the present and future generations.

Article 244 of the Constitution makes reference to minerals and places an obligation on Parliament to make laws regulating the exploitation, sharing of royalties arising from mineral exploitation, payment of indemnities arising out of mineral exploitation, and restoration of mining area lands. In conducting exploitation of minerals, the interests of landowners, local and central government should be taken into account.

Article 245 obliges Parliament to provide measures that would protect and preserve the environment from pollution and degradation, sustainable environmental management and the promotion of environmental awareness.

The Local Government Act, Cap 287

The decentralization and devolution of some services, functions and powers from the central government to local government is set out under Chapter 11 of the Constitution and translated in detail in the Local Governments Act Cap 287. The management of some natural resources is the responsibility of local governments. The Local Governments Act specifies the relationship between the central government and local governments, including the sharing of government revenue. However, the law predominantly focuses on the sharing of tax revenue and the formula government uses to allocate this revenue to district governments in the form of conditional and unconditional grants. The Local Governments Act does not recognize, in the fiscal sense, the region of origin of natural resources. Hence, it is largely silent on the issue of derivation funds.

The Act sets out a number of objectives some of which include ensuring democratic participation in the control of decision making by the people concerned and the establishment of sources of revenue and financial accountability.

In addition to revenues received from the central government, local governments are responsible for generation of their revenue and have power to levy taxes (Section 80). Under Section 76(c) the functions of the Local Government Finance Commission (LGFC) include considering and recommending to the President potential sources of revenue for local governments. Furthermore, the LGFC provides advice to the President on the allocation and distribution of revenue between the central government and local government from the Consolidated Fund.

Local government revenue is regulated under the Fifth Schedule of the Act. Under the Schedule, the major sources of revenue include graduated tax, property tax and grants from central government. Other local government revenue set out under Part 13 of the schedule include fees, fines, bicycle licenses, parking fees, advertisement

fees, user charges, fishing licenses, charcoal burning licenses and any other revenue that may be prescribed by local governments and approved by the Minister.

It should be noted that the sole sources of natural resource revenue recognized under the Act include the forestry and fisheries sectors. Property taxes, land fees, exploration charges or royalties are not levied and collected by most if not all the districts in Uganda. This is restrictive taking into consideration the diverse range of natural resources in some of the districts. Innovative local governments therefore, may expand their tax base to cover other natural resources beyond forests and fisheries.

The Second Schedule of the Act sets out the services and activities that were decentralized and these include the management of natural resources. Under Part 5(a) of the Second Schedule, local governments are responsible for crop, animal and fisheries husbandry. Furthermore, under Part 5(1) of this schedule, local governments are responsible for local forest reserves and wetlands.

Under Part 15 of the Second Schedule, District Councils are responsible for assisting central government to preserve the environment through the protection of forests, wetlands, lakeshores, streams and the prevention of environmental degradation.

The Mining Act, 2003

The Mining Act regulates mineral exploration and extraction and vests all ownership of minerals in the country to the Government of Uganda. Part 11 of the Act provides for mineral agreements and prospecting licenses. The holders of a mineral dealer's license are, under Section 71, liable for payment of royalties due on any minerals bought, received or exported.

The Act makes express provision on the payment of a 3 percent royalty. Under Section 98, all minerals obtained or mined in the course of prospecting, exploration, mining or mineral beneficiation operations shall be subject to the payment of royalties on the gross value of the mineral based on the prevailing market price of the minerals at such rates as shall be prescribed. Furthermore, the Act under Section 98(2) provides

for the sharing of royalties between central government, local governments and owners or lawful occupiers of land subject to mineral rights in the manner specified in the Second Schedule to the Act. Under the Second Schedule, the distribution of the 3 percent royalty is as follows: central government receives 80 percent; local governments receive 17 percent and the owners or lawful occupiers of land subject to mineral rights are entitled to 3 percent. The Mining Act therefore, provides the strongest precedent to the proposed derivation formula for the oil and gas sector in Uganda.

The Petroleum (Exploration and Production) Act provides for a percentage of production going to the central government. In addition, the Central Government receives revenue in form of various taxes and levies. As far as derivation funds are concerned, the focus is on the percentage the central government receives as its share of the production sharing agreement. There is evidence to show Uganda has significant deposits of hydrocarbons that may be of commercial value. If successfully proven, the issue of derivation funds is expected to come to the fore. Already, areas where hydrocarbon discoveries have been reported are agitating for a share of the revenue, some as high as 51 percent.

Traditional Rulers (Restitution of Assets and Properties) Act Cap 247

The Act restored to traditional rulers assets and properties previously owned by them or connected with or attached to their offices but which were confiscated by the state. The Act restored full estate or interest to traditional rulers as they enjoyed before the 1967 Republican constitution, and at least as much as was previously held by the Uganda Land Commission. The Act further provides that traditional rulers, other than those of Buganda, will enter into negotiations with central Government with a view to returning to them such assets and properties as may be agreed.

The Land Act Cap 227

The Land Act Cap 227 provides for the tenure, ownership and management of land and amends and consolidates the law relating to tenure, ownership and management of land and other related or incidental matters. The Law prescribes

that all land in Uganda shall vest in the citizens of Uganda and be owned in accordance with four land tenure systems including customary tenure, freehold, mailo and leasehold tenure. The Act provides for the creation of communal land associations for purposes connected with communal ownership and management of land, under customary law or otherwise.

The Act also defines the rights and powers of lawful occupants and bonafide occupants. The law defines lawful occupants as persons occupying land by virtue of the repealed Busuulu and Envujjo Law of 1928, the Toro Landlord and Tenants Law of 1937 or the Ankole Landlord and Tenant law of 1937. They are also persons who entered land with the consent of the registered owner, and include a purchaser, or persons who occupied land as customary but whose tenancy was not disclosed or compensated for by the registered owner at the time of acquiring the leasehold certificate of title.

The Act defines bonafide occupants as persons who before the coming into force of the 1995 National Constitution had occupied and utilized or developed any land unchallenged by the registered owner or agent of the registered owner for twelve years or more, or had been settled on land by the government or an agent of the government which may include a local authority.

The law also provides that persons who own or occupy land shall manage and utilize it in accordance with existing laws and in particular the Forests Act, the Mining Act, the National Environment Act, the Water Act and the Uganda Wildlife Act. Government or a local government shall hold in trust for the people and protect natural lakes, rivers, groundwater, natural ponds, natural streams, wetlands, forest reserves, national parks and any other land reserved for ecological or touristic purposes for the common good of the citizens of Uganda.

The law provides a mechanism for entering land for the purpose of executing public works. The law provides that an authorized undertaker may enter mutual agreement with the occupier or owner of land, but where no agreement is reached, the Minister responsible for Lands may, compulsorily acquire land in accordance with the Land Act.

c) Institutional Framework

The petroleum and other hydro carbon wealth of Uganda is by and large owned by the Government of Uganda and managed under the Oil and Gas Policy 2007 and the Petroleum (Exploration and Production) Act, Cap 150 of the Laws of Uganda 2000 and amendments and regulations thereof including the Petroleum Exploration and Production (Conduct of Exploration Operations) regulations of 1993. The law vests the day to day management of hydro-carbon resources in the Petroleum Exploration and Production Department (PEPD) of the Ministry of Energy and Mineral Development (MEMD).

The department is responsible for leasing Uganda's hydro-carbon resources to private investors for development. The investors are expected, in-turn, to pay the government a royalty and, in some cases, a share of the production through a production sharing agreement. The government could choose to enter into a joint venture or partnership with the private investor in which case it receives a royalty, and a share of the corporate profits. In all cases, all the revenue due to the Government of Uganda is paid into the Consolidated Fund as a requirement by law.

Government is also drafting a new Petroleum Exploration, Development and Production Act and thereafter an oil revenue management law to bring the legal infrastructure in Uganda up to speed with new national and global developments in the oil and gas sector. The current national policy on oil and gas recognizes the competences of the whole range of other government agencies and departments, and assigns them specific roles. The policy proposes an autonomous Petroleum Authority of Uganda with the role of regulating the various players in the sector. It also charges the Uganda Revenue Authority (URA) with collection and recovery of oil revenue in line with relevant laws, the Central Bank with the management of the petroleum fund and ensuring that oil and gas activities do not negatively impact on monetary policy and macro-economic stability. The policy also charges the Ministry of Finance Planning and Economic Development with ensuring the appropriate management of petroleum revenues.

The main concern of this report is whether Uganda has the institutional readiness and discipline necessary to handle oil revenues. Bategeka et al (2008) directly alluded to this concern when they noted that the reason why resource abundance delivers positive development outcomes in some countries and failure in others is cross-national differences in the quality of domestic institutions. They argued that resource-rich countries that have a malfunctioning bureaucracy and insecure property rights tend to attain lower growth outcomes and more violent conflicts than those that have high quality (Weberian) systems of public administration and predictable/reliable property rights institutions. When the domestic institutions are 'grabber-friendly,' the benefits of resource abundance are reaped by a few state elites in alliance with foreign (oil) companies. The nation as a whole benefits when domestic institutions are development-enhancing. This institutionalist theoretical perspective challenges the Sachs and Warner (2001) claim that institutions do not play a key role.

Uganda is substantially a young democracy with a slow judicial system that may not swiftly detect, determine and deter theft of official resources by rent-seeking officials or groups. As a consequence, illegalities such as grabbing of collective wealth via corruption, theft or misreporting could corrode the benefits oil revenue would bring to the country. This paper appreciates the effort government has expended in elaborating an institutional arrangement for oil revenue management at the national oil and gas policy level. The paper however, underlines the need for the institutionalization of the rule of law and strengthening the judiciary and other mechanisms for routine surveillance and monitoring of government projects and programs.

IV. SPECIAL OIL AND GAS REVENUE MANAGEMENT INSTRUMENTS (SPECIAL FUNDS)

The management of oil and gas revenue involves the traditional and primary issues of budgetary control and equitable allocation of national resources. However, key unique issues arise for oil producing countries, including: (i) how to save for future generations; (ii) how to achieve economic stability in the face of uncertain and variable oil prices and (iii) how to ensure that spending, whether on large investment projects, public consumption or subsidies is responsible and beneficial.

The main mechanism for addressing the above issues is the establishment of oil funds. This has become particularly attractive in the wake of high and volatile oil prices and new discoveries of oil reserves. The main objectives of oil funds include combating commodity price volatility, currency appreciation and volatility, inflation and political and economic dependence on oil revenues. The other objectives include the desire to pay for social and economic development needs, provision of financial resources for future generations and provision of an incentive for prudent financial management by putting revenue away for future use. The key types of oil funds include: (i) stabilization funds and (ii) inter-generational funds.

a) Stabilisation Funds

Stabilisation funds set aside a percentage of income for national financial reserves and national emergencies. Such funds may be utilized to stabilize a country's economy during particularly volatile periods. Stabilisation funds have also been used to spur development in non-oil sectors of a country's economy.

The Government Petroleum Fund of Norway, established in 1990, acts as a financial buffer to smooth short-term variations in oil revenues and as a mechanism to cope with the long-term challenge of funding government expenditures when oil resources are exhausted. The primary income sources for the fund are from central

government cash flows from petroleum and returns on invested capital. Money from the fund is solely intended for transfers to the Norwegian government's fiscal budget, upon approval from the Norwegian Parliament. The fund is managed by the Norwegian Central Bank according to Ministry of Finance guidelines.

Kazakhstan created a stabilization fund in August 2000, which aims to reduce the economy's susceptibility to unfavourable external factors. The National Fund of Kazakhstan acts to ensure stable social and economic development of the country. Proceeds from oil royalties and the sale of oil as well as other mineral assets capitalize the fund. Fund activity requires annual approval by Parliament, and the Management Council formed by the President, Prime Minister, and members of Parliament provide oversight. Furthermore, an annual independent audit is conducted on the fund.

Iran created the Foreign Exchange Reserve Account in 1999 to reduce budget reliance on oil revenues and to ensure the sustainability and preservation of national wealth. The Iranian stabilization fund aims to build up a reserve to balance future downturns in oil prices and to support Iran's industrial sector and non-oil exports. The Reserve Account is managed by the Central Bank of Iran.

Stabilisation funds often receive revenue not just from oil sales, but also from royalties, pipeline fees, rental fees, bonus payments and interest income. In the case of Kazakhstan, a transfer of 10 percent of baseline oil revenues finances the fund's savings portfolio, but the fund also receives large privatization receipts and bonus payments from other activity within the petroleum sector.

One disadvantage of stabilization funds is that the government may treat them as slush funds. For example, in Azerbaijan, the government recently used part of the government oil fund to finance commercial pipeline development, although the fund was set aside specifically to benefit the non-oil sectors.

b) Inter-Generational Funds

Inter-generational funds on the other hand are set up to save a share of oil income for future generations. The purpose of such funds is to ensure that future generations reap benefits from prior oil production.

Alaska is the most often cited example of an oil producing region that has established a successful inter-generational fund. The primary goal of the Alaska Permanent Fund is to conserve a portion of the state's oil revenue (as well as other mineral resources) to benefit all generations of Alaskans. A secondary goal of the fund is to serve as a savings account for other appropriations by the Alaskan state legislature. The fund accrues revenue from oil and mineral lease rentals, royalties, special legislative appropriations and annual transfers of fund income to protect the principle against inflation.

Revenue from the fund is only distributed for two purposes: (i) annual dividend payments and (ii) inflation proofing. The principle of the fund remains to benefit future generations, while cash dividends on the principle are paid out annually to all Alaskan residents. The Alaskan Permanent Fund is managed by the Alaskan Permanent Fund Corporation and oversight is provided by a Board of Trustees, the Alaskan State Legislature and the public.

Chad also recently established an inter-generational fund with World Bank guidelines. The Revenue Management Plan reserves 10 percent of oil revenues in a trust for the benefit of future generations. The funds are held in an off-shore escrow account, audited by the World Bank.

Kuwait has also established a successful inter-generational fund. The Kuwait Reserve Fund for Future Generations, established in 1976, receives an annual allocation equivalent to 10 percent of the government oil revenue. The fund is managed by the state-run Kuwait Investment Authority.

The greatest challenge with any inter-generational fund is ensuring that the fund is preserved for future generations, particularly during a financial crisis or other significant emergency. Recently, for example, there has been pressure on the Alaskan legislature to open up its inter-generational fund to deal with the budgetary crisis gripping the state government.

As the use of oil funds is a relatively new mechanism for revenue allocation and management, some key issues to scrutinize include who manages the fund, who audits it and who decides disbursements. Some fundamental factors in the success of oil funds are establishing clear goals on the objectives of the fund, transparency of operations and fund management rules that guarantee accountability. A list of the different types of funds used in the world is included in Annex I.

V. RELEVANT INTERNATIONAL EXPERIENCE ON OIL AND GAS REVENUE SHARING

Data on oil revenue shares by level of government are scarce.² This paper nonetheless looks at four categorizations of oil revenue assignment models. The models include (i) full centralization, (ii) shared tax bases, (iii) revenue sharing, and (iv) full decentralization. The table below lists countries by method of oil revenue assignment.

	Full Centralisation	Shared Revenue Bases	Revenue Sharing	Full Decentralisation
Unitary Countries	Algeria Azerbaijan Bah rain Chad Iran Iraq Kuwait Libya Norway Oman Qatar Saudi Arabia Sudan United Kingdom Yemen		Colombia (D) Ecuador(C) Indonesia (C) Kazakhstan	
Federal Countries		Canada United States	Mexico (C) Nigeria (D) Russia (D) Venezuela (D)	United Arab Emirates (1/)

1/: Upward revenue sharing arrangement
C: Rather centralizing arrangement
D: Rather decentralizing arrangement

Most small unitary countries like Uganda centralize oil revenues; often because local governments in these countries do not have important expenditure responsibilities or have other sources of revenue. The challenge for these countries is to develop non-oil revenue bases and to deal with the stabilization and saving of volatile oil revenue at the national level.

Large unitary states such as Colombia and Indonesia on the other hand tend to be pressed into revenue sharing arrangements with sub-national governments, but this leads to many difficulties, not least in terms of macro-economic management. Moreover, oil producing regions are generally unsatisfied with the arrangement, leading to potential political instability.

The same issues arise in federal countries, in particular in Nigeria. While expenditure responsibilities of sub-national governments remain relatively stable overtime, oil revenue transferred through revenue sharing arrangements are highly volatile, leading to major fiscal management problems that these governments cannot address for lack of alternative revenue bases.

Two federal countries including Canada and the United States of America assign oil tax bases to sub-national governments instead of sharing oil revenue collected centrally. This tax assignment creates more accountability for the governments concerned. The revenue disparities with respect to non-oil producing regions can be addressed through a national equalization system like in Canada. Only one country, the United Arab Emirates fully decentralizes oil revenue and has an upward revenue sharing arrangement.

a) Full Centralization Model

This model mostly applies in small unitary states with all oil revenues accruing to the central government. Proceeds of taxes on the extraction and production of oil are included in general revenue of the central government. The countries using this model include Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and Yemen. A number of large unitary oil producing countries also follow this model. These include Algeria, Azerbaijan, the Islamic Republic of Iran, Iraq, Libya, Norway and the United Kingdom.

² However, Annex II shows a very recent sample collated by Morgandi (2008).

The key advantages of this model include:

- (i) better or full absorption of oil revenue fluctuations, since central government has a more diverse tax base;
- (ii) reduced inter-regional disparities through horizontal equalization;
- (iii) less scope for efficiency losses and “a competitive race to the bottom” for other sub-national taxes than would be the case if oil revenue was decentralized.

b) Shared Revenue Bases

This model involves the assignment of specific tax bases to the various levels of government. The assignments may be distinct but sometimes there are over-laps between the levels. This model is an attractive alternative to revenue sharing and Canada and the United States of America provide a good example of how the model operates.

Box 1: Tax Assignment and Revenue Sharing Arrangements

Tax bases can be assigned either exclusively to one level of government (separation of tax bases) or shared between several levels (overlapping tax bases). In the latter case, the same tax base, for example personal income would be used by both central and sub-national governments (SNGs) as the base of their own taxation, which may have different tax rates and schedules.

Once a tax has been assigned to one level or another, there remains the possibility to share the tax receipts among levels of government (revenue sharing). This requires a definition of the share of receipts to be allocated to SNGs, and the appropriate formula for distributing this share among the different SNGs. Typically, the formula can be based either on the revenue that has been collected in each jurisdiction (derivation principle), or on other criteria such as population, expenditure needs (needs assessment), and tax capacity (resource base).

In addition to tax or revenue sharing arrangements, grants from the central government to SNGs are often an important component of inter-governmental financial transfers. Grants can be unconditional transfers usable for general purposes, or can be conditioned by the grantor to specific uses, for example to finance specific programs or projects. The table below summarises the various possible arrangements for assigning revenue to SNGs, which result in decreasing degrees of fiscal autonomy.

Revenue Assignments and Fiscal Autonomy of SNGs

Own taxes	Base and rate under local control.
Overlapping tax bases	Nationwide tax base, but local rates (national and sub-national governments) under SNG control.
Non-tax revenues	Fees and charges under SNG control, but sometimes with specific provisions set by the central government.
Revenue sharing	Nationwide tax base and rates. A fixed proportion is allocated to SNGs, according to the derivation principle or some needs or resource based formula.
General purpose grants (block grants)	Are determined by the central government, but SNGs are free to determine how the grant should be spent. The amount received may have an equalization component.
Specific or conditional grants	The central government specifies the expenditure program for which funds should be spent.

In the USA, revenue bases are assigned to the states which are sovereign under the constitution and own the resources (except on federally-owned land). The income tax base is however shared following specific political and historical dimensions (McLure, 1994b). Alaska, where oil revenue represents about four fifths of its own revenue presents an interesting example of the methods used.

The State of Alaska levies a property tax (at 2 percent on appraised value), a severance tax ranging from 12 1/4 percent to 15 percent on oil, subject to a minimum tax per barrel, royalties, a production tax surcharge for hazardous spills, and a corporate income tax. The corporate income tax is based on corporation worldwide net income apportioned to Alaska under a three factor formula involving: (i) the percent of corporate sales and tariffs from Alaska operations; (ii) the percentage production from Alaska; and (iii) the percentage of property represented by Alaska holdings- at a maximum marginal rate of 9.4 percent. All state taxes and royalties are deductible for federal income tax purposes.

The main advantage of this type of system is that the sub-national government is fully accountable for the fiscal policy choices related to oil revenue and their possible uses for spending or saving. Alaska has created a fund to save part of the oil revenue for future generations. The permanent fund was created in 1976 and receives about one-fifth of oil revenue, as well as other discretionary state transfers. The fund holds part of the revenue, but distributes a fraction to Alaskan residents in the form of annual dividends.

In Canada, taxes on natural resources, mostly oil, are also assigned to the provinces where the provinces levy a range of taxes and royalties. However, oil revenues are strongly concentrated in a few provinces, mainly Alberta and Saskatchewan (Krelove, Stotsky and Verhorn, 1997). On aggregate, however, oil revenues account for only 31/2 percent of the total revenues of sub-national governments. While decentralization of oil revenue contributes to the disparities in fiscal capacity among provinces, the federal equalization system takes these into consideration by not providing any equalization grants to the relatively rich provinces including oil producing Alberta.

However, decentralization and the imposition of oil and gas royalties have led to a heavy taxation of these industries (possibly deterring investment) relative to other industries. In addition, the oil producing provinces have reduced sales and income taxes relative to other non-oil producing provinces, resulting in an overall constraining economic environment (Broadway and Hobson, 1993).

The USA and Canada have designed means to compensate for the drawbacks of assigning oil revenues to sub-national governments. First, oil producing states in the two countries have created oil funds that in effect contribute to shielding their budgets from fluctuations in oil revenue and prevent excessive public spending. Second, the federal equalization system in Canada compensates for the large revenue generated by oil producing provinces by excluding these provinces from the equalization framework. Third, the piggy-backing arrangements for personal and corporate income taxes – whereby provinces can set their own tax rates on the federal tax base – contribute to mitigating the volatility of oil revenue by providing a somewhat more stable revenue source.

c) Revenue Sharing

There are numerous types of revenue-sharing arrangements for oil and gas. Some apply the same rule or formula to share oil revenues as used for other fiscal transfers while others have a different rule. Some arrangements favour the derivation principle, whereby each sub-national government's share is related to the oil revenue originating from its territory. Others follow other criteria such as population, needs or tax capacity. Some revenue sharing arrangements provide relatively large amounts of revenue to sub-national jurisdictions, others provide small amounts. The former are rather decentralizing and include countries like Colombia, Nigeria, Russia and Venezuela while the later are rather centralizing and include Ecuador, the Sudan, Indonesia and Mexico.

The main advantage of revenue sharing is that it is a convenient form of transferring fiscal resources to sub-national governments, especially if oil is a major source of revenue. While administrative considerations often militate for centralization of tax assignments, including oil revenue, revenue sharing provides a way to redistribute funds to sub-national governments. The sharing formula may also be tailored to

address various concerns regarding equalization or compensating for special regional needs.

In the Sudan for instance, revenue collected by the central Sudanese authority is allocated to three separate entities. Oil revenue is first channeled into a National Oil Stabilisation Account. Two percent (2%) of the oil revenue is then allocated to the oil producing regions in proportion of the output produced in the respective regions. Finally, the balance of oil revenue is divided equally between the Government of Southern Sudan (GoSS) and the national government in Khartoum. Thus a sizeable portion of oil revenue is allocated to regional entities.

The distribution of oil revenue in the Sudan is overseen by the National Petroleum Commission (NPC) among its other responsibilities. The National Petroleum Commission is currently composed of the President of Sudan and the President of the Government of Southern Sudan as permanent co-chairs and eight permanent members, four each from the national government and the Government of Southern Sudan. A maximum of three representatives of an oil producing region in which oil production is being considered are also admitted as non-permanent members.

While demonstrating the valuable principles of distribution, the primary purpose of the Sudanese model was to facilitate a ceasefire between the Sudanese Government and the SPLA/M until a referendum for southern Sudanese independence is held. The model may not be a very good example of a long-term institution for the management of oil revenues.

In Chad, a Petroleum Revenues Management Law (PRML) adopted in 1999, prescribes that government utilizes 80 percent of the total oil revenue on priority projects in education, health, social services, the environment and infrastructure. The law however, does not fix the individual sectoral allocations.

The law further prescribes that the remaining 20 percent is apportioned such that 5 percent is reserved for the oil producing regions, 10 percent is allocated to an escrow account for future generations and 5 percent is left to government's expenditure discretion.

Whereas the above revenue sharing models have a big potential for fulfilling both the distribution and derivation principles of oil revenue allocations, they pose a number of major drawbacks. These include problems of macro-economic management and overall fiscal discipline (Ter-Minassian, 1997b). In Chad for instance, it is feared that though prescribed by law, most oil revenue will not be used on earmarked social projects but rather on the military (Kim et al, 2004). The other key draw back is that, revenue sharing arrangements tend to be politically controversial and unstable. The preferred variant of this model – Shared Revenue Bases – has been previously discussed. This alternative model as already noted is used in the USA and Canada. There specific excises linked to oil production – instead of prices – are used and these have the advantage that they are relatively more stable, and are more positively correlated with environmental damages.

d) Full Decentralization

This model operates mostly where expenditure responsibilities including education, health and local infrastructure lie with sub-national rather than central governments. Typically the central government collects and transfers large amounts of revenue to the sub-national government, especially where the ownership of the oil resources constitutionally lies with the central authority. In a few cases of considerable economic and political autonomy, oil revenues accrue directly to sub-national governments through royalties, company profit transfers and income tax receipts. Revenue is thereafter transferred by an upward revenue sharing arrangement as is the case from the United Arab Emirates (UAE). The transfers in this case are through cash or in-kind contributions negotiated each year between the federal government and each oil-producing emirate.

In Nigeria, for instance, considerable oil revenue transfers are made to state and local government authorities after so called first charges have been deducted. The first charges comprise mainly of the government share of the production cost of oil (cash calls) and priority projects of the national oil company, the external debt service, and the 13 percent allocated to oil producing states.

The Nigerian arrangement is such that the balance after “first charges” (over 75 percent of gross oil revenue) is divided between the central government and sub-national governments. More specifically the Nigerian Constitution assigns the control and collection of oil revenue to the federal government, but attributes at least 13 percent of the net oil revenue to the oil producing states. In addition, about half of the net proceeds (after deduction of first charges) are redistributed to state and local governments according to a formula decided by parliament every five years. Excess proceeds over the budgeted revenue are also redistributed in the same way, after assigning 13 percent to oil producing states.

The Nigerian formula is clearly defined and based on an oil price assumption used in the budget documents. If the effective price exceeds the budgeted price, the excess proceeds are distributed. Excess proceeds need not be spent; they could be saved for spending in subsequent years. If prices are lower than envisaged, the actual amount collected is what is distributed.

In Russia, the federal government collects most taxes including profit taxes, VAT, excises and export duties and then shares the proceeds with sub-national governments according to either a negotiated or fixed rates system.

However, natural resource taxes are mainly collected by sub-national governments and are important sources of own revenue. These taxes include petroleum production royalties, charges for use of mineral deposits and exploration fees.

Because natural resources, including oil, are often highly concentrated in a few regions, the decentralization of taxes on these resources creates large disparities in the revenue between resource rich and resource poor states. In 1997 for instance, the five richest regions in Russia, accounting for only 51/2 percent of the population, collected 53 percent of all sub-national government revenue from taxes, fees and charges on natural resources (Martinez-Vazquez and Boex, 2001).

In spite of the above elaborate system of revenue sharing, there have been strong pressures for local control over natural resources. Resource rich regions with high per capita revenues have demonstrated a strong desire for greater autonomy, and particularly for control over revenue from their own resources. While economic

arguments would favour centralizing oil rents to minimize the large horizontal fiscal disparities, this is resisted by oil producing regions (McLure, 1994a and 1994b). As in other oil producing countries including Nigeria, revenue sharing may not be a fully satisfactory solution, as it does not protect regions from price fluctuations, and would always do better by keeping a larger share. An alternative may be to assign part of the revenue base (e.g production excise) and implement an appropriate and reliable fiscal transfer system under a revenue sharing arrangement.

The most decentralized model applies in the United Arab Emirates where each emirate has full ownership and control over its oil resources. Each emirate collects and maintains control over its allocation. The key instruments for oil and gas revenue collection include royalties, company profit transfers and income tax receipts. Oil revenue collections dominate emirate government budgets. Abu Dhabi, the largest emirate for instance had 58 percent of its revenue coming from crude oil royalties and taxes between 1997-2000 (about 15 percent of GDP).

Nonetheless, each emirate is required to devote a certain percentage of its oil revenue to the United Arab Emirates central government. These contributions may be cash contributions or in-kind. Since the contributions are negotiated annually, there is considerable smoothing between high and low price years, providing the federal government with a relatively stable source of revenue despite price fluctuations. The model also functions well and there have been no noticeable tensions among the seven emirates (Kim et al, 2004).

While the model functions very well in the UAE, it has posed a number of challenges elsewhere. The key challenges of the model, particularly in Nigeria, include conflicting claims over oil resources and the lack of fiscal discipline of sub-national governments (IMF, 2001). A number of authors attribute the controversies surrounding full decentralization to the combination of the derivation and distribution principles for oil revenue allocation. They argue that decentralization presents simultaneous pressure for derivation and distribution by oil-rich and non oil-rich regions respectively.

The other challenge is that full decentralization leaves central government with virtually no room for manoeuvre on the fiscal side. The model places the burden of

macro-economic management on the central authority, yet it has limited control over the overall revenue outcomes.

Ideally, financial resources to state and local governments should be insulated from oil price fluctuations and commensurate with the tasks that they are assigned to perform. The resources should also be related to the capacity of sub-national governments to effectively spend such resources. This would imply a shift from a transfer system, which relies on the sharing of volatile natural resource revenue, to one that provides for stable financing of the provision of at least a minimum set of essential sub-national public services.

VI. PROPOSED OIL AND GAS DERIVATION MODEL FOR UGANDA

As indicated in previous sections of this report, an oil and gas revenue sharing model must fulfill a number of allocative principles. These include (i) coherence with overall national policy on energy, (ii) distributional principles (iii) compensation to areas of derivation for direct and indirect costs of production, (iv) national, regional and local economic stability; and (v) expenditure responsibility.

The key distributional issues relevant to the proposed revenue sharing model for Uganda include derivation, population, basic needs and unique historical circumstance. Other important considerations are national and local economic stability, infrastructure development, modernization, health care (particularly the HIV/AIDS pandemic and the burden of malaria), education, security and the incidence of the responsibilities for government services, and the need to insulate local governments against resource price allocations. Some of the above important issues are reflected in existing law and policy including the Mining Act, the Petroleum (Exploration, Development and Production) Act, the Local Government Act (Central Government Fiscal Transfer System) and the proposed Oil and Gas Revenue Management Law for Uganda.

This report therefore proposes a multi-tiered oil revenue sharing formula with a view to satisfying the legitimate revenue needs and claims of oil producing districts, as well as to ensure that Uganda's oil wealth is prudently utilized to build a balanced and self-sustaining national economy. The key components of the formula include:

(i) initial assurance of an overall revenue benefit to government versus oil extraction companies through an appropriate production sharing fiscal system, which is already prescribed in the National Oil and Gas Policy and the Production Sharing Agreement between government and oil companies.

The fiscal system should be such that net oil revenue accruing to government only includes royalty and tax charges on profit rather than cost oil. This ensures that investment in petroleum exploration and development remains attractive to the private sector. The collection of revenue (R) as indicated in the policy will be the responsibility of the Uganda Revenue Authority (URA) which will then transfer the accruing revenue to the proposed oil fund to be managed by the Central Bank. The Central Bank will thereafter redistribute the funds accrued using the suggested revenue sharing formula:

$DF = d[R - (1 - m - t - s)]$ which is explained shortly.

(ii) operationalisation of oil derivation and stabilization funds and escrow accounts respectively, based on the following proposed revenue sharing formula and shares with DF representing the fractional allocation of oil revenue accruing to the central government:

$DF = d [R - (1 - m - t - s)]$

where

- R = net oil revenue accruing to the government;
- m = percentage compulsory revenue allocation to priority sectors including education, health, agricultural development, social services, environment and infrastructure development of not less than 80 percent (80%);
- t = percentage allocation to an inter-generational fund or escrow account of not less than 10 percent (10%);
- s = percent allocation to a stabilization fund under government discretionary allocation of not less than 5 percent (5%); and
- d = percentage of net government revenue $[R - (1 - m - t - s)]$ allocated to a derivation fund set not to exceed 5 percent (5%) of net revenue.

The formula addresses derivation, distributional and equity considerations by carefully setting the fraction of oil and gas revenue transfers (dedicated accounts

and memoranda items) to key sectors of the economy, particularly agriculture and infrastructure that employ and/or benefit over 90 percent of the national population respectively. The distributional principle emphasizes sector based considerations rather than regional allocations and avoids the potential contentions and disagreements over regional allocation principles. It also pre-empts the risk of the “Dutch disease” by carefully maintaining support to non-oil sectors of the economy, particularly agriculture.

It is anticipated that the proposed “Oil Revenue Management Law” will prescribe and guide on permissible project allocations for the derivation funds. The resources should typically address compensatory needs for direct and indirect local environmental costs and resource draw-down. The fund should therefore finance environmental restoration activities, human resource development and local infrastructure development beyond the scope of central government, among others.

VII. CONCLUSION AND RECOMMENDATIONS ON THE DERIVATION FUND FOR UGANDA

a) Conclusion

This review clearly indicated that oil and gas activities worldwide provide an immense opportunity for extensive economic growth if well planned and managed. The review noted however, that many oil producing countries have not benefited and have even suffered regression due to oil and gas activities, further strengthening the notion of the 'resource curse.'

The above outcomes have been attributed to a number of institutional and policy failures. First, governments simply lost interest in both the economic and political institutions that ensure accountability and democracy thus undermining the climate for investment and growth. In the short-term, the sudden introduction of large amounts of foreign exchange into the economy causes inflation, while in the medium term, the undue focus on the oil and gas sectors draws key factors of production away from agriculture, manufacturing and industry causing the 'Dutch disease.'

The review also noted that the countries that are currently benefiting from their oil and gas wealth have put in place institutional, policy and legal measures to ensure impressive capture of revenue from oil and gas activities. They have also sanitized the large inflows of foreign exchange and combated the 'Dutch disease' by controlling commodity price volatility, currency appreciation and volatility, inflation, consumption and trade imbalance. Those countries have also deliberately supported and maintained a vibrant and dynamic non-oil sector and ensured transparency, accountability and democratic participation using a package of institutional, policy and legal instruments including derivation, stabilization and inter-generational funds.

This paper, therefore, recommends that best practices from those countries be adopted to ensure that Uganda's oil and gas wealth not only pays for current social

and economic development needs but also provides financial resources and assets for future generations and the areas of derivation.

b) Recommendations

The following recommendations are therefore presented for priority action:

- (i) Government should study and actively participate in determining oil extraction levels using a clear, objective and patriotic oil extraction program;
- (ii) Government should participate more directly in the management of Uganda's oil wealth through various investment instruments and public-private sector partnerships including the establishment of a national oil corporation or company that can enter a joint venture or partnership with private oil companies. This would enable government to receive both a royalty and a share of the corporate profits;
- (iii) The proposed national oil fiscal system should set royalties and taxes at concessionary levels for purposes of attracting and retaining investments in domestic oil production;
- (iv) Government should strive to accumulate substantial financial assets over the period of oil production on sustainability, inter-generational, equity and derivation grounds;
- (v) Government should specifically provide incentives and measures to ensure prudent financial management of oil revenue by putting funds away for future use;
- (vi) Government should ensure that communities in oil producing areas receive designated funds;
- (vii) Government should initiate targeted capacity building programs and assist local communities and local governments to establish and manage their share of oil derivation funds;
- (viii) In discharging all the above recommendations, government should ensure strict control of expenditures and safeguard against excessive spending, while ensuring that oil revenue goes to the priority sectors of education, health, social services, the environment and infrastructure development.

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ANNEX I

Existing Oil Funds

Name	Country	Inception Date	Approximate Amount
General Reserve Fund	Kuwait	1960	USD 65 billion
General Stabilisation Fund	Papua New Guinea	1974	NA
Alaska Permanent Reserve Fund	United States of America	1976	USD 27.4 billion
Alberta Heritage Savings Trust Fund	Canada	1976	CAD 12 billion
Sate General Reserve Fund	Oman	1980	USD 2 billion
Government Petroleum Fund	Norway	1990	NON 625 billion (USD 82 billion)
Nun avut Trust Landowners	Government of Nun avut (Canada)	1990	CAD 475 million
State Oil Fund	Azerbaijan	1999	USD 538 million
Revenue Management Fund	Chad	1999	Not yet funded
Foreign Exchange Reserve Account	Iran	1999	USD 1.2 billion
Investment Fund for Macro economic Stabilisation	Venezuela	1999	USD 3.7 billion
National Fund	Kazakhstan	2000	USD 1.2 billion
Oil Stabilisation Fund	Sudan	2004	Not yet funded

Source: Melby, E.D.K. 2002 (updated with data as of April 2004).

ANNEX II

Summary of Extractive Industry Revenue Distribution in Sample Countries

	Bolivia	Brazil	Ghana	Indonesia	Mexico	Nigeria	Papua New Guinea	Peru
Central government	37%	31%	91%	85%	83%	46%	93%	45%
Local government (producing region)	28%	44%	5%	3%		13%	3%	22%
Municipal government (producing region)	13%	17%	2%	6%			2%	4%
Non-producing municipal government (producing region)		4%		6%				28%
Local government (non-producing region)	9%				17%	23%		
Municipal government (non-producing region)	13%					18%		
Privateland owners		3%	2%				2%	
Percentages include special taxes specific to hydrocarbons/mining	Royalty & direct hydrocarbon tax	All oil revenues	Royalty & direct hydrocarbon tax	Royalty & special participations tax	Royalties	All special revenues	Royalties	All oil revenues
Percentages include corporate income tax	Yes	Yes	No	No	No	No	Yes	Yes
Extractive industries considered	Oil	Oil & Gas	Oil & Gas	Oil & Gas	Mining	Oil	Oil & Gas	Oil

Source: Modified from Morgandi (2008).

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