Mineral rights to human rights: mobilising resources from the Extractive Industries for water, sanitation and hygiene

Case study: Ghana

WaterAid

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Cover image: Women fetching water from a dam in the community of Kakpayili-Shizugu in the Northern Region of Ghana. At present, the community relies on untreated water from this dam for all their water needs. WaterAid/ Nyani Quarmyne/ Panos.

List of abbreviations

ABFA	Annual Budget Funding Amount
AOE	Additional Oil Entitlement
CIT	Corporate Income Tax
CWSA	Community Water and Sanitation Agency
DACF	District Assemblies Common Fund
EIU	Economist Intelligence Unit
EI	Extractive Industries
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GHEITI	Ghana Extractive Industries Transparency Initiative
GHF	Ghana Heritage Fund
GIF	Ghana Investment Fund
GLAAS	Global Analysis and Assessment of Sanitation and Drinking-Water
GNPC	Ghana National Petroleum Company
GPF	Ghana Petroleum Funds
GSF	Ghana Stabilisation Fund
GRA	Ghana Revenue Authority
GWCL	Ghana Water Company Limited
HIPC	Heavily Indebted Poor Countries
ICMM	International Council on Mining and Metals
IGF	Internally Generated Funds
IOC	International Oil Company
IFEJ	Institute of Financial and Economic Journalists
IMF	International Monetary Fund
ISODEC	Integrated Social Development Centre
MDG	Millennium Development Goal
MDF	Mineral Development Fund
MMDA	Metropolitan, Municipal and District Assemblies
MOFEP	Ministry of Finance and Economic Planning
MWRWH	Ministry of Water Resources, Works and Housing
MSWR	Ministry of Sanitation and Water Resources
NRGI	Natural Resource Governance Institute
OASL	Office of the Administrator of Stool Lands
PHF	Petroleum Holding Fund
PIAC	Public Interest and Accountability Committee
PITL	Petroleum Income Tax Law
PMMC	Precious Minerals Marketing Company
PRMA	Petroleum Revenue Management Act
PSA	Petroleum Sharing Agreement
SDG	Sustainable Development Goals
SSA	Sub Saharan Africa
SWA	Sanitation and Water for All Partnership
TEN	Twenoboah, Eneyema and Ntomme
WASH	Water, Sanitation and Hygiene
WGC	World Gold Council
WHO	World Health Organisation
WSSDP	Water Sector Strategic Development Plan

1. Overview

Since independence, Ghana has been a continental leader. From regaining sovereignty in the 1950s, through the process of nation-building, to economic reform in the 1990s and the successful transition of power through a series of democratic elections over the last decade, Ghana has been a pathfinder in African development. The country has benefited from strong and broadly inclusive growth over the past two decades, achieving substantial progress in reducing poverty and delivering essential public services to its population. Ghana has attracted substantial inflows of Foreign Direct Investment (FDI) which has supported economic growth, and facilitated graduation to lower-middle income status. The country's democratic evolution since its return to constitutional rule in 1992 has been regarded as one of the best in sub-Saharan Africa. Citizens enjoy a vibrant civil society, freedom of press, independent media and strong public dialogue, all of which are reflected in Ghana's strong performance in worldwide governance indicators (e.g. World Bank, 2015).

Ghana is one of the major resource-rich economies in Africa, looking to make the most of its natural resource assets for inclusive growth and development. Ghana falls squarely in the category of a resource-rich country. Historically, its economy has been dominated by the export of commodities (gold, cocoa and agricultural products, including timber). It has produced and exported gold for centuries, is the second largest producer in Africa and the tenth largest globally (US Geological Survey, 2016). Ghana is highly dependent on the export of natural resources for foreign currency, accounting for approximately 60 per cent of total exports in 2014 (IMF, 2016a). Following a long history of mining, in 2007 the country entered a new phase in its history with the discovery and development of significant petroleum assets. The discovery of oil and gas has generated high expectations amongst the general population and the government, with former President Kufuor enthusiastically announcing in 2007, "even without oil, we are doing so well, already. Now, with oil as a shot in the arm, we're going to fly" (BBC, 2007). The discovery of oil has subsequently resulted in the development of a range of new institutions and legal provisions for managing the sector, with the aim of avoiding a repeat of some of the mistakes made in the mining sector.

However, Ghana's reputation as a top economic performer has taken a few knocks in recent years, coinciding with oil and gas discoveries. Despite strong progress through the 1990s and 2000s – including being the first country in sub-Saharan Africa to achieve the headline poverty Millennium Development Goal (MDG) – economic growth and the pace of reform has slowed in recent years. Poor macroeconomic and fiscal management since 2010 has resulted in a substantial increase in public debt, high inflation, double-digit budget deficits and currency depreciation. Ghana's sovereign rating has been downgraded several times in the past few years, most recently in March 2015 when Moody's downgraded the country from B2 to B3, due to spiralling public debt and increasing liquidity risks (Moody's, 2015). In April 2015, the Government agreed a package of support from the IMF, worth approximately US$1 billion over three years, to help Ghana rebound from the deteriorating economic situation. The IMF programme is aimed at consolidating Ghana's fiscal position by mobilising additional revenues and restraining public expenditure (IMF, 2015). Although progress in implementing the programme is largely on track, Ghana faces several years of fiscal restraint in its effort to restore macro fundamentals (IMF, 2016b).

The worsening fiscal situation is only partly due to lower commodity prices, which has exposed Ghana's position rather than causing it. A rapid expansion of the public wage bill and significant overruns in current expenditures since 2011 have significantly outpaced the higher revenues generated from the sale of crude oil. As a result, a large amount of borrowing (amounting to 12 per cent of GDP in 2014) has been required to finance the budget deficit (IMF, 2016a). The extent of mismanagement is reflected by the fact that Ghana's debt interest payments are now almost six times higher than the value of petroleum revenues. In other words, the additional 'fiscal space' that petroleum revenues should have provided for increased public investment and social sector spending has already been eradicated by public expenditure increases. Reversing civil service pay reforms is an unlikely prospect, and it seems likely that Ghana will need to use a portion

of its future extractives revenues in an effort to restore macro-fiscal stability and a more sustainable debt position.

Within this broader context, public finance for water, sanitation and hygiene (WASH) continues to be less than is necessary for achieving the government's objective of universal water and sanitation coverage by 2025. On average, the government has been spending the equivalent of just 1.6 per cent of total public expenditure on WASH. Based on the costing presented in Water Sector Strategic Development Plan (2012-25) an annual financing gap of 25 per cent needs to be filled in order for the government to achieve its objectives. This indicates a need to raise government spending to 2% of total public expenditure, although the World Bank estimates suggest achieving the Sustainable Development Goal (SDG) 6 targets will require significant further increases. The Ministry of Water Resources, Works and Housing (previously holding the responsibilities of the current Ministry of Sanitation and Water Resources) expected the majority of the shortfall to be financed by donors. However, now that Ghana has achieved lower-middle-income economy status, grants and concessionary finance may well reduce over the coming years. As such, it is vital that Ghana increases public investment for WASH through its own sources of finance if it is to meet the targets it has set itself.

Early revenues from the Extractive Industries (EI) sector could have been very useful for plugging this gap; however, the opportunity may have been squandered in the short to medium run. Although there are no direct linkages between extractives revenue and WASH expenditure in Ghana, there are some legal provisions that provide an opportunity for channelling revenues into specific priority investments through the national budget. However, given that much of the revenue from extractives is now effectively tied up, either within the existing expenditure framework or set aside for fiscal consolidation over the coming few years, increased allocations for social sectors in the short to medium term will require a significant change in policy. This is reflected by the fact that while the WASH sector has received allocations of oil revenue in recent budgets, these have been effectively offset by cuts in allocations from other sources of revenue. Nevertheless there are important steps that the government can take to strengthen domestic resource mobilisation for WASH with increased contributions to government revenue from the EI. This would be consistent with the commitments in the Water Sector Strategic Development Plan (WSSDP) to find additional resources, including from petroleum revenues, for investment in water and sanitation. In this way, the government can demonstrate how the national allocation of mineral rights can ultimately make a more effective and just contribution to the progressive realisation of the human rights of water and sanitation, for which it is the duty-bearer. In the longer run, once Ghana restores macro-fiscal stability and new oil fields start to generate additional revenue, the scope for higher levels of public spending for WASH is likely to increase.

The constrained fiscal environment places a premium on making effective use of existing resource allocations for WASH. Recent analysis has shown that budget execution rates for WASH in Ghana are likely to be significantly lower than the budgeted amounts. This suggests that understanding why allocations are not being fully spent, and rectifying the bottlenecks, are essential conditions for delivering improved performance and results for the sector. This is especially the case if the limited capacity within the responsible ministries for absorbing and managing funds effectively is the cause of the under-spend. Further research to understand the causes of low and/or late disbursement and how best to rectify the situation would be an important complement in the short to medium term to higher budget allocations, as Ghana recovers its fiscal position.

Table 1: Ghana – Key Indicators

	2010	2011	2012	2013	2014
Demographics and Living Standards					
Population, total	24,317,734	24,928,503	25,544,565	26,164,432	26,786,598
Poverty headcount (%)	…	…	24.2	…	…
Life expectancy at birth (years)	60.6	60.8	61.0	61.1	61.3
Mortality rate, under-5 (per 1,000)	74.7	71.9	69.2	66.5	64
Primary completion rate, both sexes (%)	…	92.90	98.15	98.45	96.53
Access to improved water (%)	83.1	84.3	85.4	86.5	87.6
Access to improved sanitation (%)	13.7	14.0	14.4	14.7	14.8
Key Macroeconomic Indicators					
Real GDP per capita growth (% annual)	5.3	11.2	5.3	4.6	1.4
Real non-oil GDP growth (% annual)	6.4	8.4	7.3	6.7	4.0
Fiscal deficit (% GDP)	-7.2	-4.0	-11.6	-10.5	-10.2
Public debt (% GDP)	46.4	42.6	49.1	56.2	69.0[1]

Source: World Development Indicators (2016), IMF (2016a)

[1] Public debt has worsened significantly in recent years as a result of the widening budget deficit; this is expected to stabilise in the medium term, as government makes greater effort to boost revenues and prevent further growth in expenditures.

2. Contribution of the Extractive Industries Sector to Ghana's Economy

2.1 Overview of the EI sector in Ghana

The EI sector plays a critical role in Ghana's economy. Gold and petroleum together accounted for over 60 per cent of Ghana's total export earnings in 2014, with cocoa accounting for a further 20 per cent (IMF, 2016a). However, the sector is less dominant in terms of total economic output and the public finances, especially compared to other sub-Saharan countries. In 2014, petroleum and mining together accounted for approximately 8 per cent of Ghana's GDP and 19 per cent of total revenues (compared to 35 per cent and 70 per cent respectively in Nigeria, for example). In addition to gold and petroleum, Ghana produces manganese, bauxite and diamonds on commercial scale, although their relative contribution to GDP and revenue is far smaller. In summary, although the services and agriculture sectors accounts for the majority of national income, the country is still dependent upon the export of raw materials for foreign exchange, making it highly vulnerable to the fluctuation of international markets for gold, petroleum and cocoa.

Figure 1: Ghana GDP by composition (2014)

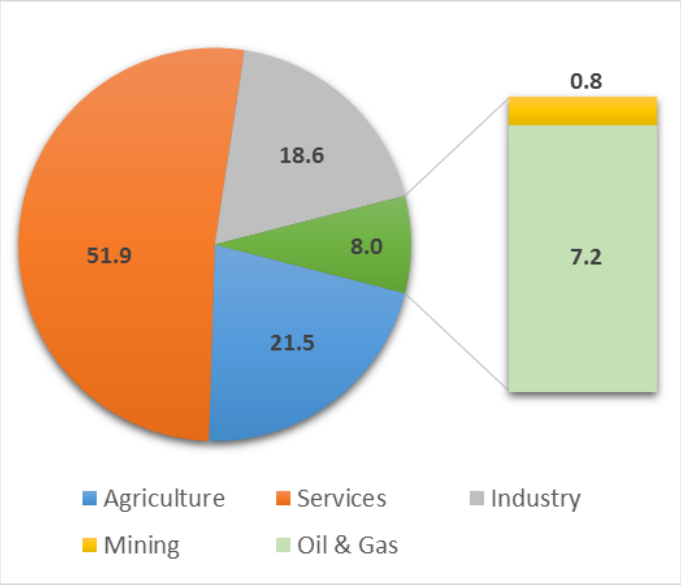
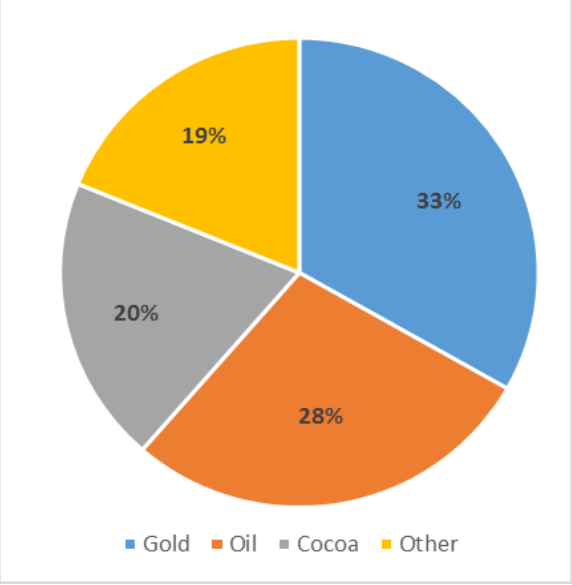


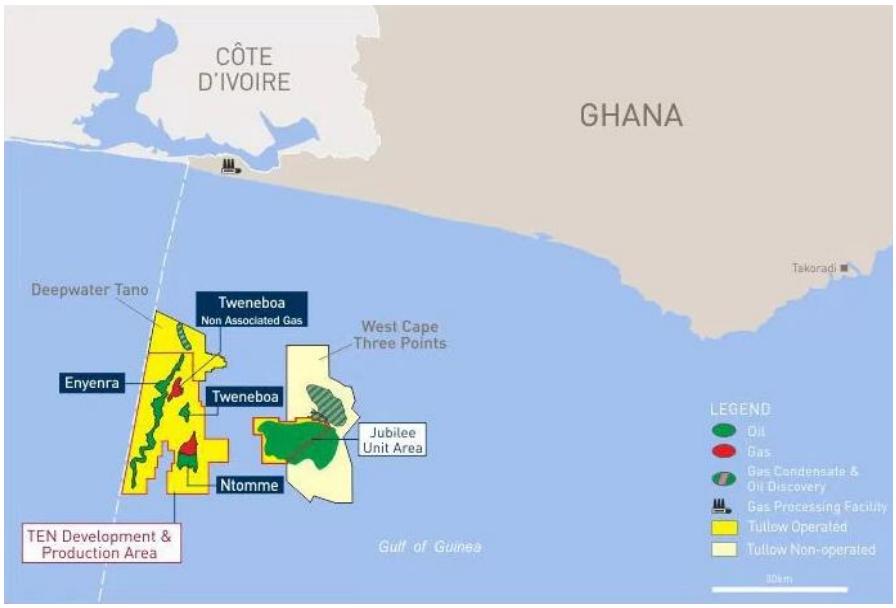
Figure 2: Ghana exports by category (2014)



Gold accounts for approximately 90 per cent of the country's total revenue from solid minerals. Ghana is Africa's second largest gold producer (after South Africa) with 95 tonnes of gold produced in 2015 (World Gold Council, 2016). Gold mining is mostly concentrated in the Western Region and Wassa West District around the town of Tarkwa, where Anglo Gold Ashanti employs about 1,500 Ghanaians. In addition to the established large commercial mining houses such as Newmont and Goldfields, hundreds of thousands of artisanal miners participate in the gold business (see below). In contrast to gold, the diamond industry remains at the fringes of the economy and receives little public attention. Overall production has been declining in recent years, falling from around a million carats in 2005 to around quarter of million by 2014, accounting for just US$9 million of exports (Ministry of Finance, 2015a). The sector is dominated by small and artisanal miners, who sell rough diamonds to the Precious Minerals Marketing Company (PMMC) for onward trade in the international market. Somewhat more significant are manganese and bauxite, accounting for approximately US$133 million and US$32 million of exports respectively in 2013 (Ministry of Finance, 2015a).

Artisanal mining accounts for a large proportion of total mining production with approximately one million Ghanaians engaged in small-scale gold and diamond mining. The sub-sector accounts for approximately 34 per cent of total gold exports – around US$2 billion – and despite the efforts of Government to curb illegal activities, artisanal mining continues almost unabated (Agyei-Baffour et al., 2015). Despite attempts to formalise and regularise small-scale mining, some observers have commented that the state has neglected the sector for decades, often with devastating effects on the environment. Alluvial mining (mining of stream bed deposits) has had an adverse impact on water quality and agriculture. The unrestricted use of chemicals (such as mercury) poisons water sources and large tracts of land have become lost to farming, due to excavation permanently removing the top soil. Illegal mining activity has also resulted in a significant loss of revenue for government. The Managing Director of the PMMC recently estimated that Ghana loses almost US$2 billion per year due to gold smuggling in the informal sector (ClassFM, 2016).

Oil and gas exploitation is a more recent development in Ghana, with commercial quantities being discovered in 2007 and production beginning in late 2010. The true extent of Ghana's oil wealth is still unknown, as exploration activity is still ongoing. Since the discovery of the Jubilee Field in July 2007 in the Gulf of Guinea, exploration has resulted in an additional 23 discovery wells. Of these, seven form the basis for two new field developments – the TEN (Twenoboah, Eneyema and Ntomme) oil and gas field and the Sankofa gas field. A further 13 discoveries are being appraised to determine their commerciality. The Jubilee Field is one of the largest oil discoveries in West Africa in recent years and is estimated to hold up to 1.5 billion barrels of oil. Production has reached approximately 100,000 barrels of oil per day (bpd) and 100 million standard cubic feet (cf) of gas (Trading Economics, 2016). Oil is sold on the open market, while gas is delivered onshore to the Atuabo Gas Processing facility for onward sale to the Volta River Authority for power generation. Since 2011, the petroleum sector has provided around US$3 billion in government revenue and created more than 5,000 jobs for Ghanaians (IFEJ, 2016). Over the next decade, oil production will rest largely on the three confirmed developments – Jubilee, TEN and Sankofa. Production in the TEN field began in August 2016, with production in Sankofa expected to commence in 2017.



The EI sector as a whole is an important source of direct and secondary employment in the regional areas of the main producing regions of Ghana. The formal mining industry currently employs about 12,000 Ghanaians directly (Ghana Chamber of Mines, 2014). The sector has attracted a significant number of sector support companies such as security services, transport companies, explosive manufacturers, and mineral assay laboratories among others in these regions. A recent report estimates the mining sector supports about 111,000 jobs on average per year (ICCM, 2015). Roughly 20 per cent of the total mineral revenue by mining companies is spent on local procurement and companies have invested nearly US$21 million in financing a variety of livelihood enhancing projects primarily in the education, health and roads sectors. Direct and

indirect employment in the petroleum sector has been lower due to the high mechanisation of the sector. Competition for jobs is intense and Ghanaian participation in the sector is challenging, as it can take many years to train skilled technical workers and International Oil Companies (IOCs) generally prefer to hire experienced professionals for the challenges of offshore oil work. However, jobs have been created through service firms relevant to the industry, such as catering and driving, along with more specialised services (Foreign Policy, 2014).

2.2 Contribution of the EI sector to the public finances

The EI sector is an important source of revenue for Ghana, but is not of the 'transformative' scale seen in other countries on the continent and elsewhere in the world. As illustrated in Figures 4 & 5 below, revenues from oil, gas and mining reached a peak of 19 per cent of the total resource envelope in 2014, bringing in approximately US$1.4 billion to the exchequer. Approximately 70 per cent of these revenues were derived from the petroleum sector, comprising of royalties on the sale of crude oil (20 per cent), corporate income tax (CIT) paid by companies on their profits (30 per cent) and the Government's carried interest (10 per cent).[2] In the mining sector, royalties and CIT each account for about 40 per cent of the revenues, with the remaining 20 per cent derived from various smaller taxes and charges. Revenues from petroleum were initially relatively small due to companies offsetting their initial investment costs against profits but have exceeded the value of mining revenues since 2013.[3] Nevertheless, recent declines in the price of crude oil have resulted in total revenues from oil in 2015 dropping by over 40 per cent (IMF, 2016a).

Figure 3: Sources of revenue (US$ millions)

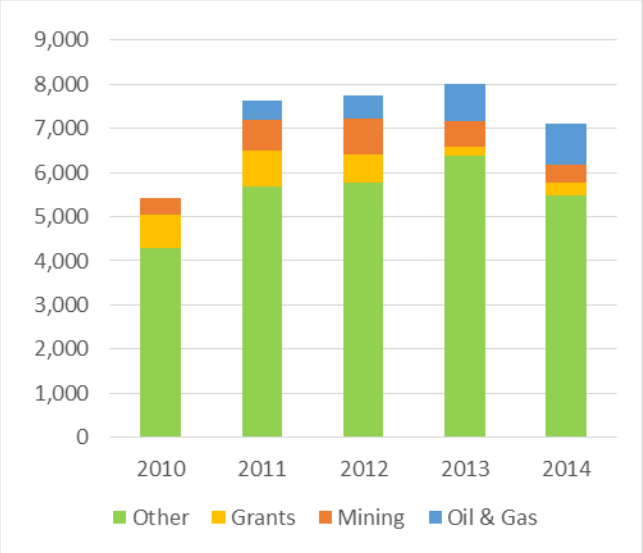
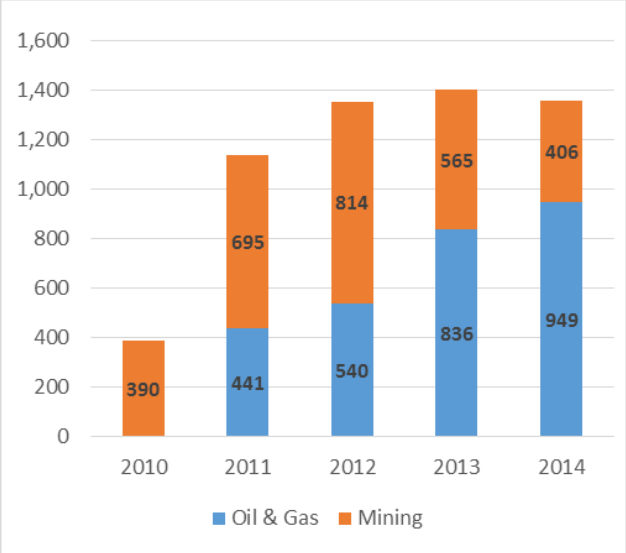


Figure 4: Revenue from extractives ($ millions)



[2] 'Carried interest' refers to the equity held in the project by the government for which it incurred no exploration or development costs. For Jubilee, the government holds a 10 per cent carried interest, which entitles it to 10 per cent of the value of the sale of oil.

[3] In Ghana, IOC investment costs were offset against profits derived from selling oil, resulting in zero corporation tax being paid for the first two years of production.

Figure 5: Sources of revenue in 2014 (%)

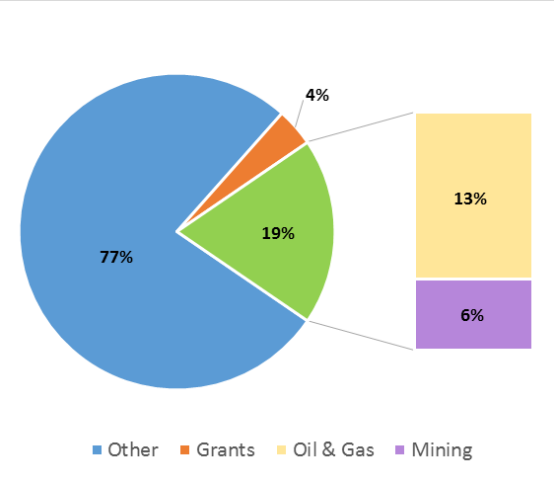
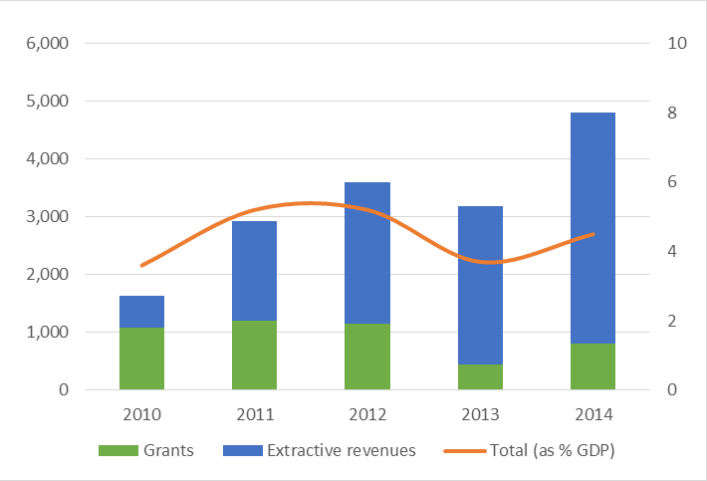


Figure 6: Grants and extractives revenues (GH₵ millions)



Over three quarters of the total resource envelope in Ghana is derived from tax and non-tax sources, with the remainder accounted for by external grants. Although the recent start of production in the TEN oil and gas field and near future start in the Sankofa gas field will further boost extractives revenue, the gains will be modest given the relatively small size of these fields, as well as the likely continuation of low commodity prices (NRGI, 2015a). Furthermore, it is important to note the apparent inverse relationship between external grants and extractives revenues. As illustrated in Figure 6 above, the value of total grants has declined in recent years, partially offsetting the positive impact of extractive revenues to the public finances. This has resulted in the combined value of revenues from extractives and grants remaining relatively stable at around 4-5 per cent of GDP over the past five years, despite increasing oil revenues. Given that Ghana has now attained lower-middle-income economy status, this downward trend in the value of external grants is likely to continue.

Despite the opportunities offered by a new resource stream, Ghana's fiscal position has deteriorated significantly over the last five years. The onset of revenues from oil and gas coincided with a sustained period of poor fiscal discipline, resulting in double-digit deficits, ballooning public debt and a depreciating currency. A rapid expansion of the public wage bill following reform of the public pay scales and significant overruns in current expenditures resulted in a three-fold increase in the fiscal deficit in 2012 (see Figures 7 & 9 below). Expenditure overruns have more than offset the higher revenues generated from the sale of oil. Ghana's debt interest payments are now almost six times higher than the value of petroleum revenue (see Figure 10) while the level of public debt is now back at pre-Heavily Indebted Poor Country (HIPC) Initiative levels (see Figure 8).[4]

[4] Ghana received US$3.5 billion of debt relief from its creditors in 2004 as part of the Heavily Indebted Poor Countries (HIPC) Initiative.

Figure 7: Fiscal deficit and NOPB (% of GDP)[5]

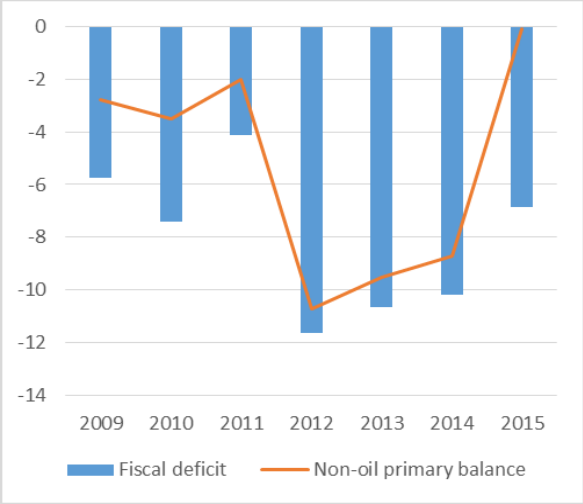


Figure 8: Public Debt (GH₵ millions, % of GDP)

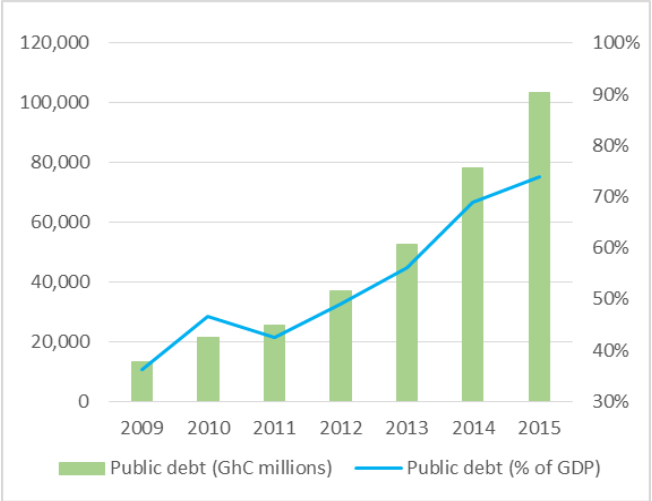


Figure 9: Composition of the budget (GH₵ millions)[6]

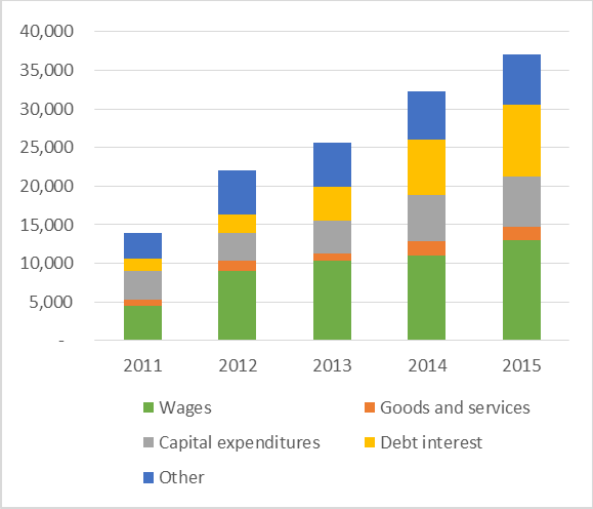
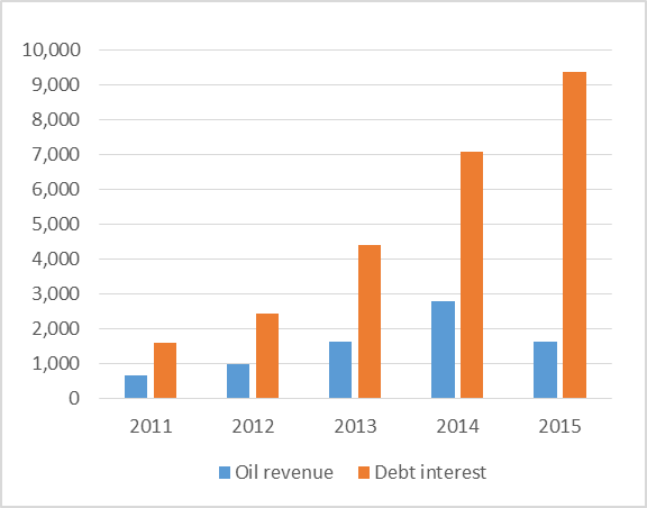


Figure 10: Oil revenue and debt interest (GH₵ millions)



2.3 Impact of commodity price declines on the public finances

2015 was a turbulent year for Ghana's public finances, culminating in a package of support from the IMF designed to rebound the economy. Following several years of poor fiscal discipline, the rapid decline in oil prices starting in mid-2014 (see Figure 11) further exposed the weak position of Ghana's public finances. This followed a decline in the price of gold from over US$1,600 per ounce in 2012 to under US$1,200 in 2015 (see Figure 13). In addition, the country suffered a drop in the price of cocoa and technical challenges with its gas and electricity infrastructure precipitating a major power crisis. Finally, the accumulation of debt, from 36 per cent of GDP in 2009 to almost 70 per cent at the end of 2014 (see Figure 8 above), became so acute that an IMF programme was agreed in April 2015 to restore macroeconomic stability.

[5] Improvement in the non-oil primary balance reflected the impact of the Government's fiscal consolidation: increased tax revenue and remaining within the wage budget.
[6] Increases in debt interest is related to borrowing since 2010, some of which has been short-term commercial borrowing, thereby attracting a high rate.

Figure 12 below illustrates the dramatic impact of the price decline on revenues collected from the oil and gas sector in 2015. The 2015 budget anticipated oil revenues of over US$1.2 billion in 2015, based on an assumed price of US$99 per barrel. However, actual revenues amounted to just under US$400 million – just 32 per cent of the budgeted amount. Recent research by NRGI (2015b) notes that even using the actual average price of US$55/barrel there was an additional shortfall (circa $350m) caused by lower than expected CIT payments, due to companies offsetting new investment costs in the neighbouring TEN oil field against Jubilee profits. This serves to demonstrate the complexity and difficulty in accurately projecting oil revenues, as well as the trade-offs for the government between generating petroleum revenue and providing industry incentives for new exploration.

Figure 11: Brent spot prices 2014-16 (US$ per barrel)

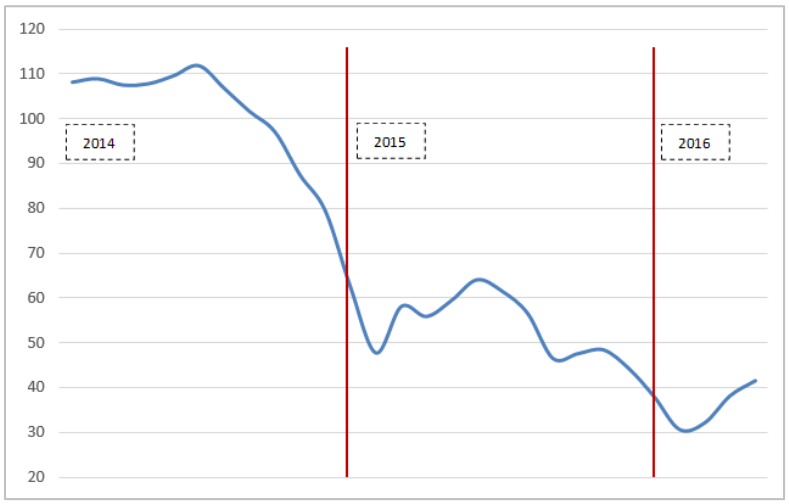


Figure 12: Revenues in 2015, budget vs. actual (US$m)

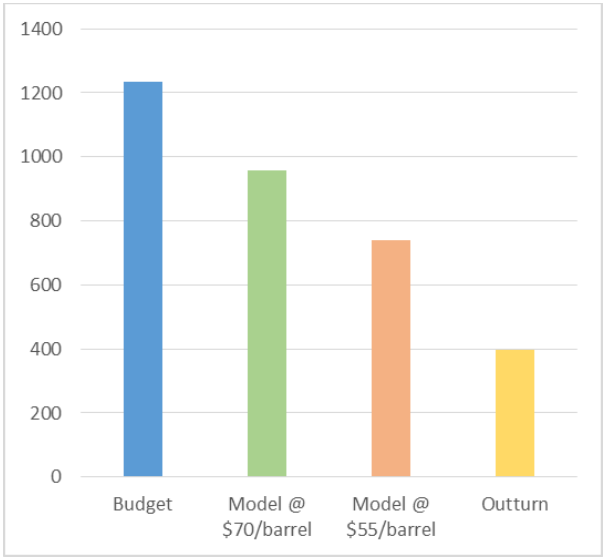
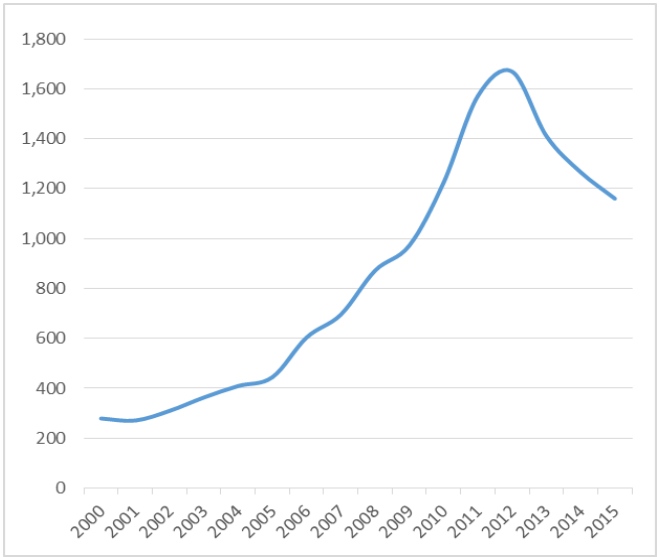


Figure 13: Gold prices 2000-15 (US$/ounce)



3. Collection and Management of EI Revenues

3.1 Revenue collection

Mining sector

Ghana's mining sector has undergone a seismic shift since the 1980s, revolving around changing the role of the state from an owner/operator to a regulator. This change was driven by the IMF's Economic Recovery Programme, which started in 1983 and introduced fundamental policy reforms that sought to boost investor interest in the mining sector. Between 1984 and 1995, there were significant institutional developments and policy changes that offered generous incentives to investors to reflect the new paradigm. For example, CIT on mineral production decreased from 55 per cent in 1975 to 45 per cent in 1986 and subsequently to 35 per cent in 1994, the level at which it currently remains. Opening up the sector to foreign investment has resulted in the dominance of largely internationally-owned companies in exploration and operation. Anglo Gold Ashanti and Newmont are among Ghana's largest extractives companies, contributing significantly to Ghana's mineral tax base. The 1986 Mining Law was reviewed in 2000 as part of an effort to liberalise the sector further, with the overall aim of attracting greater investment into the sector. This culminated in the 2006 Minerals and Mining Act (Act 703) which continues to govern the sector today under the leadership of the Ministry of Lands and Natural Resources.

Productivity and output in the mining sector was stable throughout the 1980s and 1990s, but has risen substantially since 2000, alongside the introduction of investor-friendly policies. The 2006 Minerals and Mining Act had a transformative impact in terms of attracting foreign investment, offering favourable terms to investors by reducing government carried interest in new mining projects to 10 per cent and introducing so-called 'stability clauses'. It remains the dominant legislative framework guiding the mining sector and specifies the royalties, rents and fees that should be collected from the mining sector operators and channelled into the Consolidated Fund. Besides royalties, the other main revenue flow to government is CIT on the profits earned by mining companies. Other taxes and fees include capital gains tax, licensing fees and an annual mineral rights fee. Table 2 and Figure 16 set out in detail the various revenue streams and their uses in the mining sector. Since 2011, CIT payments have been the highest stream of income from mining revenues (50 per cent on average) surpassing royalties (29 per cent) and the various other fees and charges (Ministry of Finance and Economic Planning, MoFEP, 2015). No royalty payments are currently collected from small and artisanal miners, despite the fact that in 2014 Artisanal and Small Scale Miners (ASM) exported gold and diamonds worth about US $2bn.

Figure 14: Revenues from mining by category (US$ m)

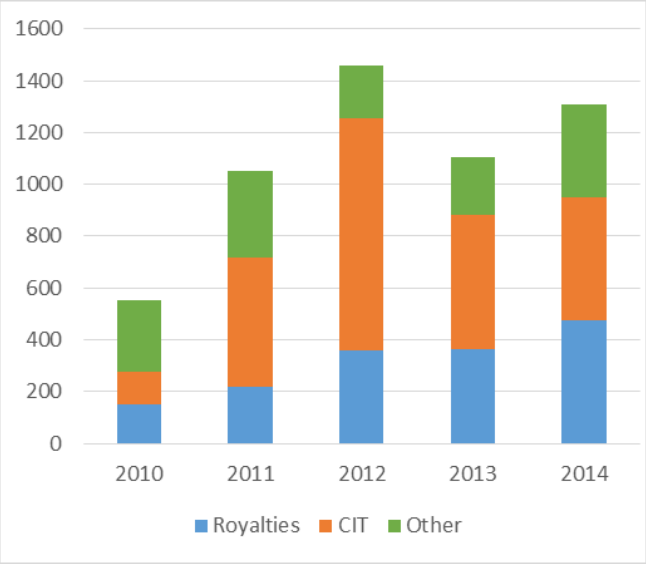


Figure 15: Mineral production (1980–2013)

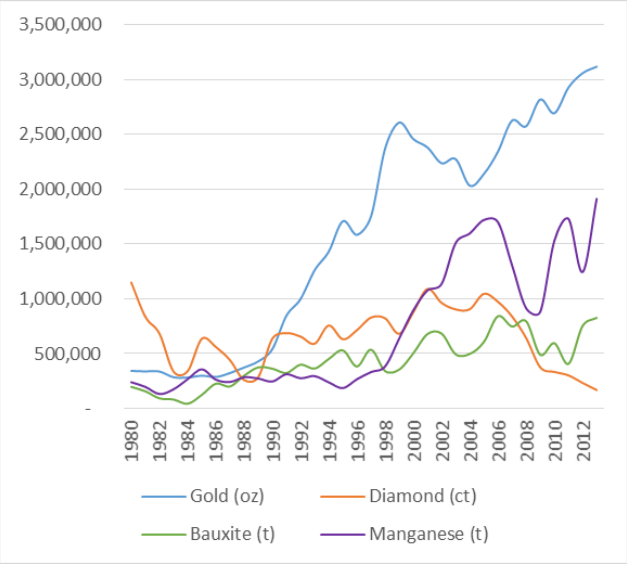


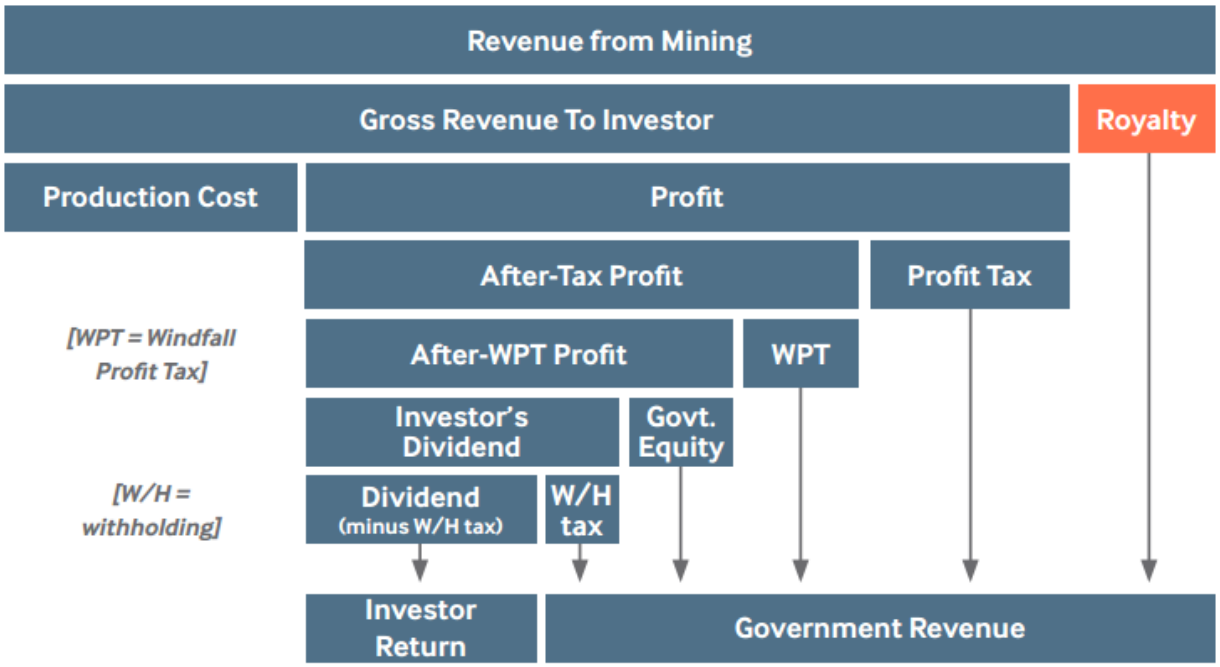
Table 2: Revenue streams and usage in the mining sector

Tax	Description	Usage	Compliance / Issues
Mineral Rights Fee	Mineral rights are vested in the state and granted by the Ministry of Lands and Natural Resources. Licences allow the holder the right to enter the land and perform specific tasks. There are three sequential categories entitling the holder to conduct reconnaissance of, prospect for or mine certain minerals.	Paid to and used by the Minerals Commission as internally-generated revenue.	
Ground Rent	This is the annual payment made by mining companies and other companies to the owners of the land. The amount payable as ground rent depends on the size of the concession.	Ground rent is paid to the Office of the Administrator of Stool Lands (OASL). 10% is received by the Administrator to Stool Lands for administrative expenses. The remainder is shared: 55% to the District Assemblies; 25% to stools and 20% to Traditional Authorities within the jurisdiction of the paying mining company.	There is ample evidence that most companies default on their ground rent payments. The 2014 GHEITI report states that only Ghana Manganese Company and Goldfields Ghana Ltd fully settled their ground rent liabilities in 2014.
Property Rate	Property rates are levies that are imposed on buildings, and plants that are fixed to the ground. Property rates are determined by the District Assemblies after applying a formula to valuation figures with approval from the Regional Valuation Board. Some mining companies divide the amount payable into four parts and pay in four instalments.	District Assemblies collect property rates directly from the mining companies. It is generally used for recurrent expenditure.	
Royalty	Mining companies are liable to pay 5% royalties immediately after they commence mineral production in the country. Payment of mineral royalties is made quarterly by all mining companies.	100 % of royalty receipts initially paid into the Consolidated Fund. This subsequently changes to 80%, with 20% allocated to the Minerals Development Fund and the OASL.	Companies with stabilisation clauses (e.g. Newmont, Anglo Gold) are not subject to the revised (higher) royalty rates.[7]

[7] The largest companies are therefore amongst those insulated from paying the higher royalty rate of 5%.

Corporate Income Tax	Corporate tax is currently fixed at 35% of Net Profit. All the mining companies under consideration are on self-assessment and need to submit their yearly accounts four months after end of accounting year. Mining companies are allowed to carry forward losses arising in any year to the next year for offsetting against profit.	Paid into the Consolidated Fund.	The self-assessment regime and the allowance to carry forward and offset losses against profit potentially weakens CIT revenue generation for the Government.
Capital Gains Tax	All companies are subject to pay 15% capital gains tax on sale of assets.	Paid into the Consolidated Fund.	
Withholding Tax	Withholding tax is a tax on payments that mining companies make to their lenders, owners (in the form of dividends) and subcontractors. It is set at 15% for foreign resident companies.	Paid into the Consolidated Fund.	
Dividend	The Republic of Ghana retains a 10% non-contributing shareholding in every mining lease holder. The government's percentage holding (10%) may be altered in circumstances where special agreements exist. The Government's share of dividends when declared by the companies is collected by the Non Tax Revenue Unit of the Ministry of Finance.	Paid into the Consolidated Fund.	Does not apply to the two biggest companies (Anglo Gold and Newmont).

Figure 16: Distribution of mining revenues under a royalty system[8]



Source: NRGI (2015c)

There has been a longstanding controversy regarding the fairness of the tax regime in the mining sector, with some commentators perceiving an excessive number of fiscal concessions. Act 703 was amended in 2010 with the Minerals and Mining (Amendment) Act (Act 794). Prior to this amendment, the government found it difficult to operate a 3-6 per cent sliding scale royalty system effectively, resulting in all mining companies paying at the lower end of the range. The 2010 reforms replaced the sliding scale system with a flat 5 per cent rate for all companies. However, the impact of these changes has been uneven across the industry due to the 'stability clauses' that protect some companies from changes to the law. For example, both Newmont and AngloGold – two of the four largest gold producers in Ghana who between them account for 75 per cent of total production – have well-established stability clauses in their contracts that preserve royalty rates at the originally negotiated level. Newmont's operations are governed under an investment agreement, ratified by parliament in 2003, which fixes its royalty rate at 3 per cent for the life of any Newmont project as well as being subject to a corporate tax rate not exceeding 32.5 per cent, regardless of any future changes in law (Ministry of Finance, 2015a). More recently Gold Fields Ghana announced a stability agreement with the Government with a US$33 million tax exemption.[9] A further amendment to the Minerals and Mining Act has been under discussion. This aims to repeal changes made in 2010 and give discretion to the Minister to set a royalty rate that she or he deems appropriate. If this is eventually passed, it is expected that different rates will apply to different contracts, potentially making the assessment of royalty payments by tax authorities more complex (NRGI, 2015a).

[8] Figure 16 explains how revenue is disaggregated between different stakeholders but does not reflect actual proportions, e.g. the size of government revenue relative to investor return.

[9] Gold Fields Ghana was reported to have reached this agreement in March 2016, however the contract was not made public. https://www.oxfordbusinessgroup.com/overview/digging-deep-government-taking-steps-address-recent-decline

The government extends several tax incentives to mining companies, which serve to reduce government take from the sector. For example, as set out in the Minerals and Mining Act, the holder of mineral rights may be exempted from paying customs duties for machinery, equipment and accessories imported specifically for mining operations; employees may be granted exemption from the payment of income tax if furnished accommodation is provided at the mine site; and expatriate employees may be exempted from tax payable on income transferred out of the country (Ministry of Finance, 2015a). Following a combination of high gold prices and the 2008 global financial crisis, in 2012 the government established a commission to review international revenue-sharing agreements with a view to increasing revenue and control for the state and re-negotiate some of the stabilisation clauses. The review is based on an acknowledgement that agreements undertaken by previous governments were too lenient and investor-friendly (Oxfam, 2016).

Petroleum sector

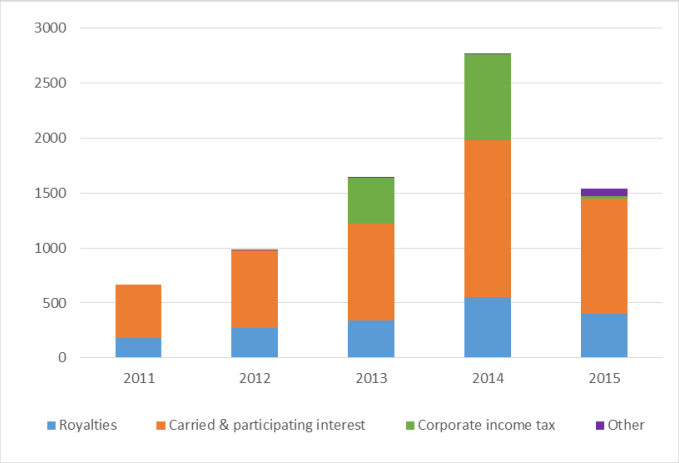
There is considerable debate over whether the government is getting a fair share of the rents from its petroleum assets. The discovery of oil in 2007 generated huge expectations over the impact of the sector on the Ghanaian economy. However, even accounting for over-optimism, returns from the sector to the exchequer have been disappointing. In both 2011 and 2012, Ghana's oil receipts fell well below expectations as expressed in the budget. This has largely been due to much of the early revenue from oil sales being used to refund IOCs for initial investment costs, resulting in CIT from the sector underperforming. This has led to suggestions that the country would be better served by a different fiscal regime, such as a production-sharing system, which is common in other African countries (such as Nigeria and Angola).

Ghana opted for a hybrid system of production sharing and concessionary regime to govern contractual arrangements in the upstream petroleum industry. The fiscal terms for Ghana's petroleum industry are contained in the Petroleum (Exploration and Production) Act, 1984 (Provisional National Defence Committee, PNDC Law 88) and the Petroleum Income Tax Act, 1983 (PNDC 64). Under this framework, Ghana's oil receipts come from three main sources: a royalty on gross production (irrespective of profit), carried and participating interest through the Ghana National Petroleum Commission (GNPC) and CIT on company profits (see Box 1). Specific details of the fiscal regime are set out in Figure 18 below. According to a report released by the World Bank prior to the onset of production (World Bank, 2009) the fiscal regime for the Jubilee Field should have yielded a government take of approximately 50 per cent of total rents over 20 years. However, Ghana's average government take over its first three years of production has been just 20 per cent (EIU, 2014).

Advocates of production-sharing agreements (PSAs) have pointed to the higher government take claimed by other African countries that operate under this system. PSAs usually result in higher early revenue from producing licences, due to the fact that they typically place limits on the annual amounts of IOC cost-recovery, thereby spreading the process over a longer period. However, while royalty tax systems usually result in lower early receipts, these discrepancies tend to even out over the lifetime of a licence (EIU, 2014). Nevertheless, debate in Ghana over the relative merits of different fiscal regimes continues unabated. Excluding the impact of the decline in the oil price, lower CIT receipts have largely accounted for the gap between budgeted and actual revenue since 2011. Companies are also currently allowed to offset investment costs from one field against profits in a separate field, resulting in a complex and unpredictable revenue flow (NRGI, 2015b). As illustrated in Figure 17 below, CIT payments in 2015 were negligible, most likely due to companies offsetting profits from Jubilee against investment costs in neighbouring TEN fields. Current discussions to incorporate stronger 'ring-fencing' of extractives projects into the revised Petroleum Income Tax Law may serve to limit such practice in

the future (see Box 2 for more details). The new rules do not apply retrospectively to existing investments.[10]

Figure 17: Petroleum revenues by category (GH₵ millions)



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% to 12.5% of gross production of crude oil; 3% of gross volume of gas production.
- In Jubilee, the royalty has been set at 5%.

State Carried Interest
- The State receives a 10% interest in each contract area, entitling GNPC to 10% of the oil sales.
- This interest is "carried" during the exploration and development phases.
- Costs of exploration and development is borne by IOC's equity.

State Participating Interest
- The State is entitled to buy additional interest, for which it is responsible for full development / production costs.
- In Jubilee, GNPC holds 3.64 per cent of participating interest.

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% (this is 10% higher than the corporate profit tax rate).

Additional Oil Entitlement (AOE)
- An additional payment made to the government if the post-tax rate of return exceeds a targeted level.
- Trigger points of 12.5%, 17.5%, 22.5%, and 27.5%. AOE terms have become more progressive over time.
- No AOE has been paid via Jubilee to date due to trigger points not being activated.

Other Taxes and Fees
- Including surface rental fees and a 5% withholding tax on subcontractors.

Source: Amoako-Tuffour et al. (2010)

[10] This mainly benefits the IOC Tullow and its consortium partners, as they operate in both the Jubilee and TEN fields.

Debate over the fiscal regime notwithstanding, petroleum revenue capture in Ghana has certain strengths. The legislation contains a relatively clear, detailed collection framework for the various revenue streams and some strong transparency provisions. Overall compliance with its provisions looks relatively better than some other jurisdictions – neighbouring Nigeria, for example. No large, regular, suspicious leakages at the revenue capture stage have been reported to date. The oil companies make fiscal payments directly into the Consolidated Fund through processes that are straightforward and well reported. Multiple analyses (e.g. Amoako-Tuffour et al., 2010) have judged the overall petroleum taxation regime competitive, progressive and flexible, both for the country context and when viewed comparatively.

Nonetheless, a range of issues and practices suggest revenue capture has been problematic in some cases, some of which are due to disagreement over the interpretation of legal definitions. Such instances include (i) various instances of potential tax avoidance, such as transfer mis-pricing and the non-collection of capital gains taxes from the sale of company interests in oil blocks; (ii) discrepancies in reported oil lifting volumes by different parties; (iii) disagreement between revenue figures published by state institutions and accountability actors; and (iv) vague rules and standards for calculating and monitoring additional oil entitlements (AOEs). However, given that the government has not fulfilled its early promises on contract transparency, it is difficult to assess the extent to which the legislation and agreed fiscal regime is being adhered to. This problem is exacerbated by the fact that tax authorities appear to lack deep knowledge of oil and gas sector operations, which affects the quality of its audit functions. Poor understanding of global supply chain patterns and practices leave staff unable to police transfer pricing, for example (GOGIG, 2015).

Inadequacies within the existing law and regulations may be negatively affecting revenue capture. Although the legislative framework for revenue capture is generally fit for purpose, recent World Bank (2013) analysis of the Petroleum Income Tax Law found that actual collection to date was reduced by insufficient rules, standards and limits on capital allowances, inter-company interest deductions and ring-fencing. The recent amendment of the Petroleum Income Tax Law (2015) attempts to deal with some of these problems.[11]

Recent analysis by the Organisation for Economic Development and Cooperation (OECD) confirmed many of the points above. It described the Ghanaian tax system as fundamentally sound and based on the essential pillars of a modern tax system. However, it also found that the system is undermined by reliance on discretionary tax treatments, in the form of exemptions, special regimes and tax holidays. These amounted "to perhaps 6 per cent of GDP", hindering economic efficiency, fair competition and revenue mobilisation. Many of the exemptions are in the mining and petroleum sectors.[12] There seems to be considerable scope therefore for the Government to improve its domestic resource mobilisation (DRM) from the EI sector. Ghana's IMF letter of intent (September 2016) stated that the government would continue to assess the prospects for renegotiating the tax incentives in the mining and oil sectors with investors who were willing to do so.[13] The Government's 2017 budget also announced measures to improve DRM. Referring to an estimated GH¢2 billion of lost revenue from transfer pricing abuses from the extractive sector (revealed by the Tax Justice Network Africa), the Government reported it would be strengthening the Ghana Revenue Authority (GRA) to improve company audits.[14]

[11] This covers both oil and gas, although it is too early to say whether it has been effective, since it only passed in 2015.
[12] "Tax Expenditure Estimates in Ghana", https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2841302, OECD, 2016.
[13] https://www.imf.org/external/np/loi/2016/gha/091616.pdf
[14] 2017 Budget Highlights, KPMG, https://home.kpmg.com/content/dam/kpmg/xx/pdf/2017/03/tnf-ghana-mar15-2017.pdf

Box 2: Examples of Tax Avoidance and Delay in Ghana's Extractives Sector

Transfer mis-pricing: US$40 million cost inflation ignored by the government
In 2012, a group of civil society organisations raised concerns over a possible tax-avoidance case involving Sinopec International Petroleum Services Corporation (SIPSC). It was alleged that SIPSC had inflated the costs of the construction of a gas processing plant procured by and purchased from its subsidiary SAF Petroleum Investments, registered in Dubai (Africa Confidential, 2012). According to the CSOs, it did this in order to reduce reported profits in Ghana and so shift taxable income to a relatively lower tax jurisdiction (so-called "transfer mis-pricing"). To date, the dispute has been ignored by the government. It appears that the government may have overlooked the case due to the fact that the processing plant was financed out of a larger loan by the Chinese government and wanted to avoid any risk jeopardising the rest of the loan agreement.

Ambiguity in tax legislation leads to US$67 million loss of capital gains
In 2011, EO Group's 3.5 percent stake in the Jubilee Field was sold to Tullow Oil and Sabre Oil's 4.1 percent share was sold to South Africa's national oil company, PetroSA. However, due to the precedence of the 1983 Petroleum Income Tax Law (which does not provide for capital gains tax) over the General Income Tax Act (which mandates the payment of 10 per cent capital gains on the sale of assets) no capital gains tax was paid, resulting in almost US$ 70 million of potential government revenue being lost. The legislation has since been amended, but civil society actors continue to question why the government waited until after the sale to rectify the problem.

Lack of "ring-fencing" results in delay in corporation tax payments
Since 2010 and the onset of oil production, ambiguity in the income tax legislation (PNDC 64) has resulted in oil companies being able to reduce their tax liability by offsetting the investment costs incurred on one project against the profits earned from a separate project. This is known as "sideways relief" and is often justified on the basis that it can encourage further exploration and investment to generate future income for both companies and the government. However, in the context of a resource-rich developing country, whose main source of revenue is corporate income tax, unexpected delays in payment can have severe consequences for the timing of government expenditures, especially in the broader context of falling commodity prices. In Ghana, the main source of sideways relief has been the offsetting of exploration and development costs from TEN against Jubilee profits, which has been documented since 2012 (Readhead, 2016). In 2015 the government amended the legislation to eliminate this problem by requiring companies to calculate and pay taxable profits within each project – a practice known as "ring-fencing". Although viewed as a positive move, the new rules will not apply retrospectively to existing investments. This is clearly illustrated in Figure 17, which shows that in 2015 corporate tax payments were negligible, most likely due to companies continuing to offset TEN costs against Jubilee profits.

3.2 Revenue management

Mining sector

Revenues from mining have relatively few explicit conditions attached to their use. There is no legislation guiding expenditure decisions with respect to revenues from the mining sector, only a formula that sets out the distribution of a percentage of royalty payments. This formula states that 80 per cent of the royalty payments from mining should flow into the Consolidated Fund for general allocation and expenditure within the central budget, while the remaining 20 per cent should be channelled in some form back to the area in which the mining takes place. Of the 20 per cent

transferred to the local level, half is channelled into the Mineral Development Fund (MDF) with the other half split between the local district assemblies, traditional councils and stools in the mining regions. All other types of mining revenue (fees, taxes etc.) are channelled into the Consolidated Fund with no earmarking requirements. Unsurprisingly, this has given rise to controversy, both over the respective shares as well over the manner in which these bodies use the funds. For instance, some District Assemblies simply treat the funds as part of their normal revenues to pay for recurrent expenses. In other cases, traditional leaders have been criticised for using MDF money for conspicuous consumption rather than for community development or compensating those adversely affected by mining (World Bank, 2003). The lack of any provisions for governing the distribution of mining revenue to sub-national entities has resulted in grievances that the budget process is driven solely by the Accra-based elite with little input by and consideration of locally affected populations.

The distribution of mining revenues to the local authorities has been highly uneven in practice and considerably less than set out in the formula. For example, in 2012 the Ashanti Region only received one payment in 2012 totalling $204,411 whereas Brong Ahafo received four payments totalling $1,183,730 and Western Region received one payment of $2,259,930 (Ministry of Finance, 2014). In 2014, payments to Western Region Stools and Traditional Councils totalled GH₵4.2 million, representing just 0.04 per cent of total revenues the country derived from the mining sector in that year (Ministry of Finance, 2015). Ground rent payments have also been highly erratic due to a weak enforcement mechanism for collecting payments. The unpredictability of revenue transfers to local governments makes it difficult for the various spending departments to plan for expenditures within their budgeting cycle and for priority projects.

Some municipal assemblies have dedicated bank accounts for mining royalties, which makes the tracking easier. For example, the 2015 GHEITI mining report documents the use of the royalties for two districts. It reports that Obuasi Municipal Assembly spent most of the money on refurbishing or constructing classrooms and the remainder on waste management, while Tarkwa Nsuaem used the funds for research, infrastructure projects, educational projects and WASH (including improving water supply and the construction of toilets and boreholes).

In early 2016, the parliament passed the long-awaited Mineral Development Fund (MDF) Bill. According to the government, the purpose of the Bill is to establish the MDF to address the development challenges affecting mining communities by setting aside a proportion of royalties for development projects. The fund will provide a financial resource for the direct benefit of mining communities, holders of interest in land as well as traditional and local government authorities within mining areas. This should hopefully channel some more revenues to communities that used to have subsoil rights, prior to reforms in 1962. The bill also prescribed guidelines for rolling out corporate social responsibility projects, set health and safety standards, tackle environmental issues and resolve issues relating to blasting activities of mining companies, among others (GoG, 2016). Given that the bill is relatively new no conclusion can yet be drawn on whether this will improve the allocation and disbursement of funds to the regions.

Petroleum sector

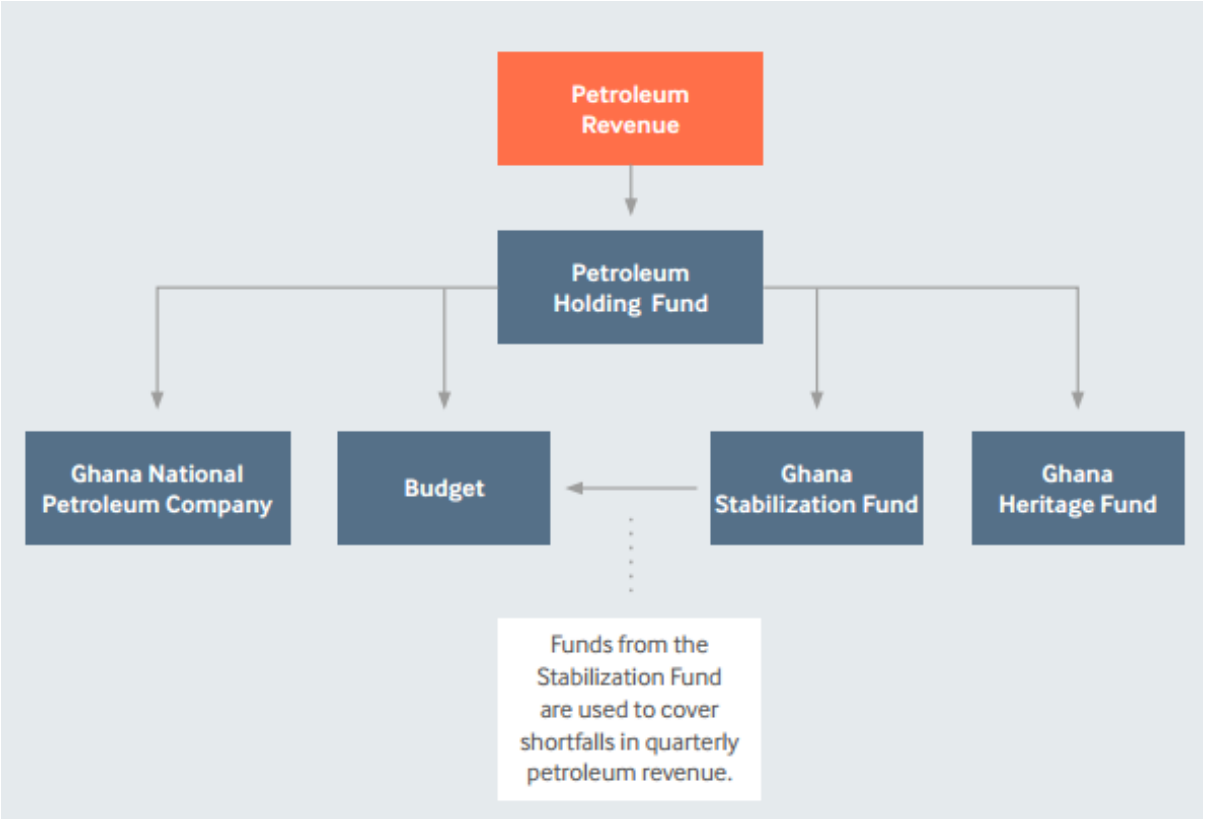
The management of revenues from the petroleum sector is governed by the Petroleum Revenue Management Act (2011) which was subsequently amended in 2015. The rules are somewhat complex, and operate as follows. All petroleum revenues are deposited into the Petroleum Holding Fund (PHF). The PHF then disburses money to the GNPC (up to a maximum of 30 percent of earnings from carried interest), the Annual Budget Funding Amount (not more than 70 percent of a seven-year moving average of potential revenues, which must be approved by parliament), the Ghana Heritage Fund (a minimum of 30 percent of the remaining amount) and the Ghana Stabilisation Fund (the remainder). The payment to GNPC reflects its status as an equity partner of the oil field and is used to cover its operating expenses. The Annual Budget Funding

Amount (ABFA) is intended to support the financing of the central budget and must be earmarked towards specific priority areas, with at least 70 per cent being spent on capital investments. Petroleum revenues not allocated to the ABFA go to the Ghana Petroleum Funds (GPFs). The GPFs are made up of the Ghana Stabilisation Fund (GSF) and Ghana Heritage Fund (GHF). The former is designed to shelter Ghana from the volatility of oil revenues, by building up a reserve of revenues to draw upon should oil revenues decline suddenly. The latter is a long-term savings fund, designed to provide a permanent income for future generations once the oil fields cease production.

The PRMA (2011) was viewed by stakeholders at the time as progressive and provided a transparent framework for managing Ghana's petroleum revenues; however, implementation has exposed some shortcomings. The rules in the PRMA have received high praise for providing clear guidance on allocation of revenues between the different funds, divisions of roles and responsibilities among government agencies, investment of GPF balances, and transparency and oversight. However, like many new laws, implementation has raised a number of weaknesses within the legislation. For example, problems associated with revenue forecasting have undermined the counter-cyclical objective of the legislation. Given that the fiscal framework is revenue-based rather than price-based, overly optimistic forecasts have meant that transfers to the GPFs have been lower than expected, resulting in greater emphasis on spending compared to savings (NRGI, 2015a). Similarly, the provisions within the PRMA relating to the conditions under which withdrawals can be made from the GPFs are vague and allow the government to withdraw as much money from the GSF as is necessary to cover the shortfall between actual revenue receipts and forecast revenue. Both of these shortcomings have been addressed in recent revisions to the legislation; however, new provisions such as the ability of the Minister of Finance to hold discretion to revise projected revenues mid-year have led to further concerns regarding the integrity of the fiscal framework.[15] As at the end of 2015, the GSF and GHF held balances of US$ 177 million and US$ 259 million respectively (GoG, 2015).

[15] In practice this means that the government can change the spending and saving strategy in a given year, weakening the rules in the PRMA. While the amendment may help the government to manage the current fall in oil prices, it poses a significant risk to the long-term integrity of the rules. If revenues come in higher than budgeted, the revised PRMA provides flexibility to spend the excess revenues, rather than to save them for the future.

Figure 18: The flow of petroleum funds in Ghana



Source: NRGI (2015d)

There is also considerable debate over the advantages and disadvantages of the provisions within the PRMA given the broader context of Ghana's macro-fiscal position. As noted in section 2.2, Ghana's fiscal position has deteriorated markedly since the onset of oil revenues, with the government borrowing heavily on international markets to finance its budget deficit. At the same time, it has been parking relatively substantial portions of oil revenue into the GPFs. However, the interest rate paid on servicing public debt has been considerably higher than the rate of return made on investments in the GPFs. There is therefore a strong argument to be made that Ghana would have been better off (from a debt sustainability perspective) using a greater proportion of its oil revenues to finance current expenditure, rather than borrowing. Instead, in recent years, Ghana has been retrospectively paying off previous borrowing using current oil revenues. Ghana's deteriorating macroeconomic situation has now resulted in a proportion of oil revenue being used to finance loan repayment. In 2014, petroleum revenues worth $150 million – previously earmarked for the GSF – were used for the purposes of debt repayment with similar provisions being made in 2015 and 2016 (NRGI, 2015a).

There is also debate over the effectiveness of the earmarking provisions within the PRMA. The PRMA requires that the ABFA funds are allocated to four out of twelve priority areas each year. The twelve priority areas identified in the PRMA are: agriculture and industry; education, science and technology; water and sanitation; telecoms and transport; health; housing delivery; environmental and natural resource protection; rural development; alternative energy; governance and state institutions; public safety and security; social welfare and protection of the disadvantaged. The PRMA requires that the Minister of Finance prioritises no more than four of these sectors for spending the ABFA each year. In addition, the recent amendments to the PRMA include a stipulation to allocate a maximum of 25 per cent of the ABFA for public investment expenditure through the Ghana Infrastructure Fund (GIF). Some commentators have argued that spreading out ABFA spending across such a wide range of priority areas serves to dilute its impact and effectiveness. As noted by the think-tank IMANI Center for Policy & Education (2015), the

portion of the ABFA funding allocated to the education sector was spent entirely on basic education in 2012, tertiary education in 2013, and largely on technical and vocational education in 2014, sending a message that government is 'merely spreading petroleum revenues across the various levels of education, without undertaking any rigorous needs assessment for each level.'

The WASH sector benefited from allocations from the ABFA in the 2015 and 2016 Budget. ABFA accounted for 64 per cent of the budget allocation to the Water Resources Management and Sanitation programme within the Ministry of Water Resources, Works and Housing (MWRWH) in 2015, rising to 70 per cent in 2016. However, it is important to note two things here. First, because money is fungible, looking at the contribution from one source of funding (i.e. ABFA) is misleading. As demonstrated in Figure 19 below, ABFA allocations were accompanied by a reduction in the allocation from non-oil revenues. Although internally-generated funds have remained relatively constant, overall allocations from non-oil revenue to the programme fell 75 per cent from 2014 to 2015, serving to significantly offset the value of the ABFA allocation. Second, actual spending patterns can differ markedly to budgeted amounts, meaning that changes in allocation do not necessarily translate into changes in actual expenditure.

Figure 19: Ministry of Water Resources, Works and Housing budget allocations (GH₵ millions)

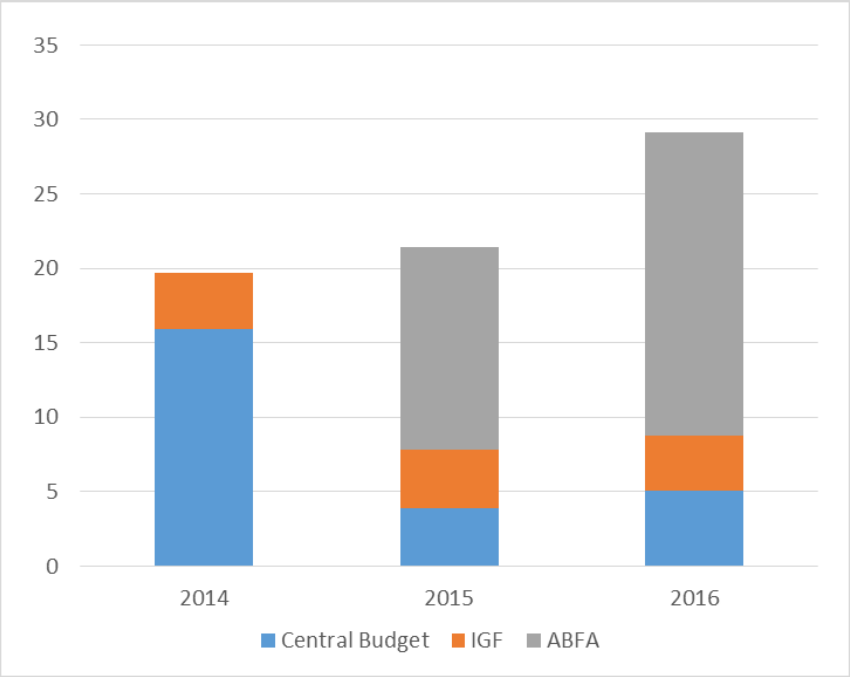


Figure 20: Revenue Flows in the extractives sector in Ghana

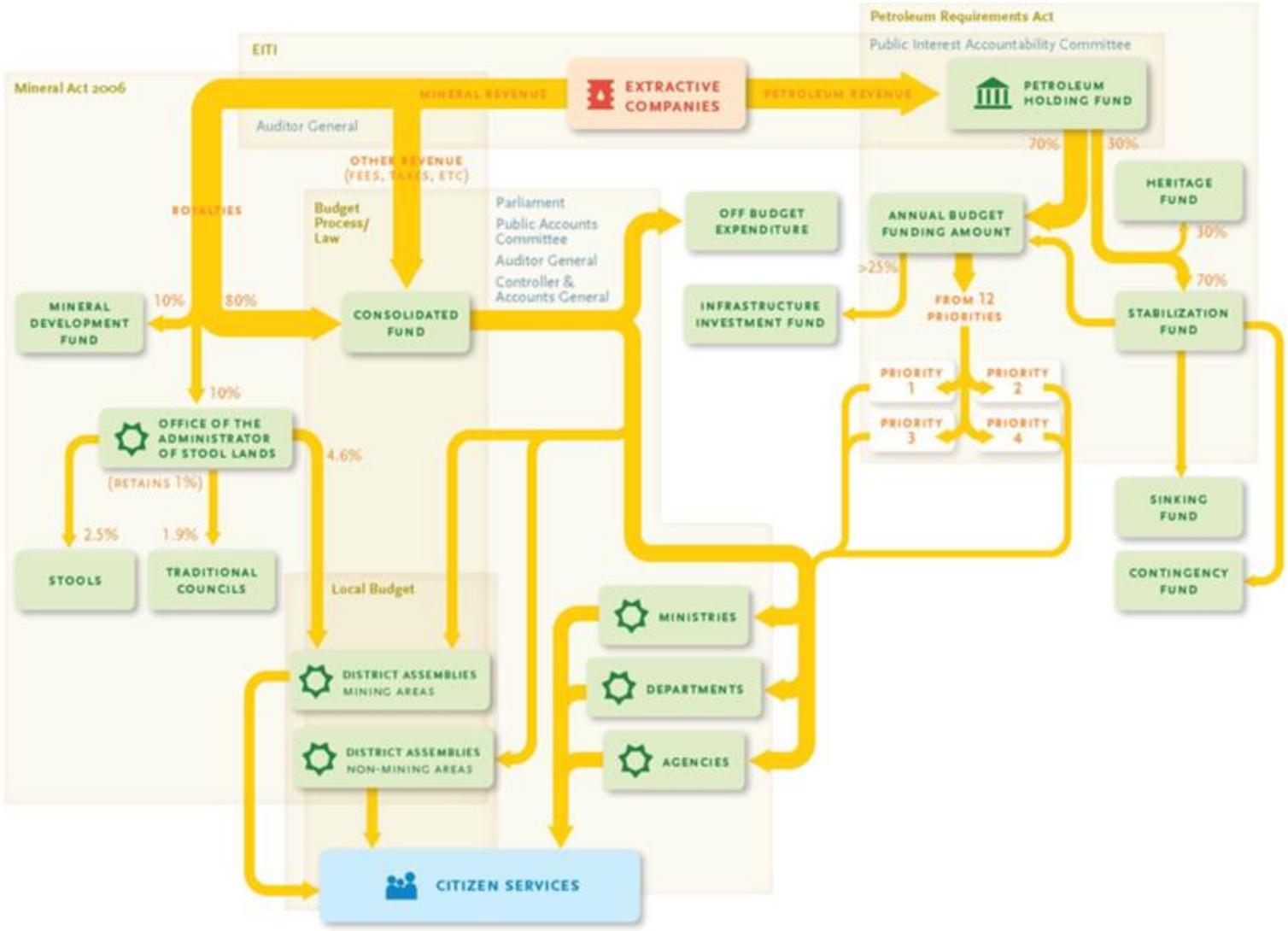


Figure 20 illustrates revenue flows from the extractive industries through the different distribution channels to the point at which they provide services to citizens. Flows of revenue are indicated by solid yellow lines. The shaded rectangles describe the domain of the different pieces of legislation that govern flows. The name of each piece of legislation appears in each rectangle in bold, brown lettering. Finally, the names of the institutions responsible for implementing the relevant legislation appear in blue print within each rectangle. Percentages refer to proportional flows of resources.

3.3 Transparency across the extractives sector

The overall transparency of the extractives sector in Ghana is partial and there is clear room for improvement. Despite efforts by the government to guarantee transparency and efficiency around revenue use, there remain several important issues surrounding legislation, contract disclosures and accountability that need to be dealt with in order to maximise the benefits obtained from the industry. For example, no legislation currently covers transparency around the allocation of rights and publication of contracts. Provisions for transparency and accountability are somewhat stronger in the petroleum sector than in mining, due to the fact the legislation and regulatory arrangements for the former were developed far more recently, resulting in significantly more public consultation and scrutiny from civil society. In contrast, the governance of the mining sector dates back to colonial times, where the main objective of the central authority was to maximise value from mining, often to the cost of regional and community level populations.

In particular, there is a distinct lack of transparency around licence allocation in the extractives sector and an excess of ministerial discretion. Although some oil contracts from the Jubilee Field have been published, most oil and mining contracts remain undisclosed. Mining rights are awarded on a first come, first served basis. However, determining who came first is decided by the Minerals Commission and there is currently no open mining licence registry (NRGI, 2015a). The Minerals Commission has committed to introducing tender submission for mining areas but has not produced a timeline. Historically, petroleum licenses have been awarded through an open door direct negotiation process instead of open competitive bidding. It is essentially an administrative process whereby one company applies for an oil block, which is evaluated and awarded without waiting for another company to apply. The lack of transparency in the system has led to accusations of corruption, since it provides government with discretion to contract any company it likes, which could include those with connections to the political elites. It also does not allow citizens to track how companies are selected and on what basis they are given access to the oil blocks.

This makes it extremely difficult for accountability actors to determine whether the government is making agreements in the best interests of the country. A draft Exploration and Production Bill (to replace PNDC 64) was in the works for several years before becoming law in August 2016. The new Act contains provisions for a higher degree of public access to information about the government's decisions regarding the oil and gas industry. It also provides for competitive tender in the petroleum sector but at the same time gives the Minister the ability to skip tender and go to direct negotiation if she or he chooses to do so. It does not require that actual agreements and contract documents will be made available to the public, nor does it include penalties for public officials who fail to declare and address conflicts of interest. Furthermore, there are no mechanisms within the legislation for disclosure of beneficial ownership, meaning that the true licensees of oil fields may remain hidden from the public.[16]

The most prominent body monitoring revenue collection across the extractive industry is the Ghana Extractives Industry Transparency Imitative (GHEITI). EITI is a global standard to promote open and accountable management of natural resources. There are 51 member countries currently implementing the standard. The initiative seeks to strengthen government and company systems, inform public debate, and enhance trust. Following EITI's launch in 2002, Ghana was one of the first countries to express interest and became a candidate country in 2007, initially covering Ghana's mining sector only. In 2011, the government extended the initiative to the oil sector and has plans to cover the fisheries and forestry sectors in the future. The initiative adds value by providing civil society as well as ordinary citizens with accessible reports that detail incoming revenue from the extractive industries. The next report – expected to be published later in 2017 –

[16] http://www.acepghana.com/news/252/

is expected to cover gas revenues, which is a contentious area in terms of foregone revenue for government. GHEITI has not yet been enshrined in law and sometimes has a challenge accessing government information due to it lacking a legal remit to do so. Private companies pushed back on the GHEITI bill during the last Parliament, concerned by some progressive provisions, such as open contracting. Figures 23 and 24 set out the timeline for the establishment of GHEITI and its main achievements to date respectively.

Figure 21: Timeline of GHEITI

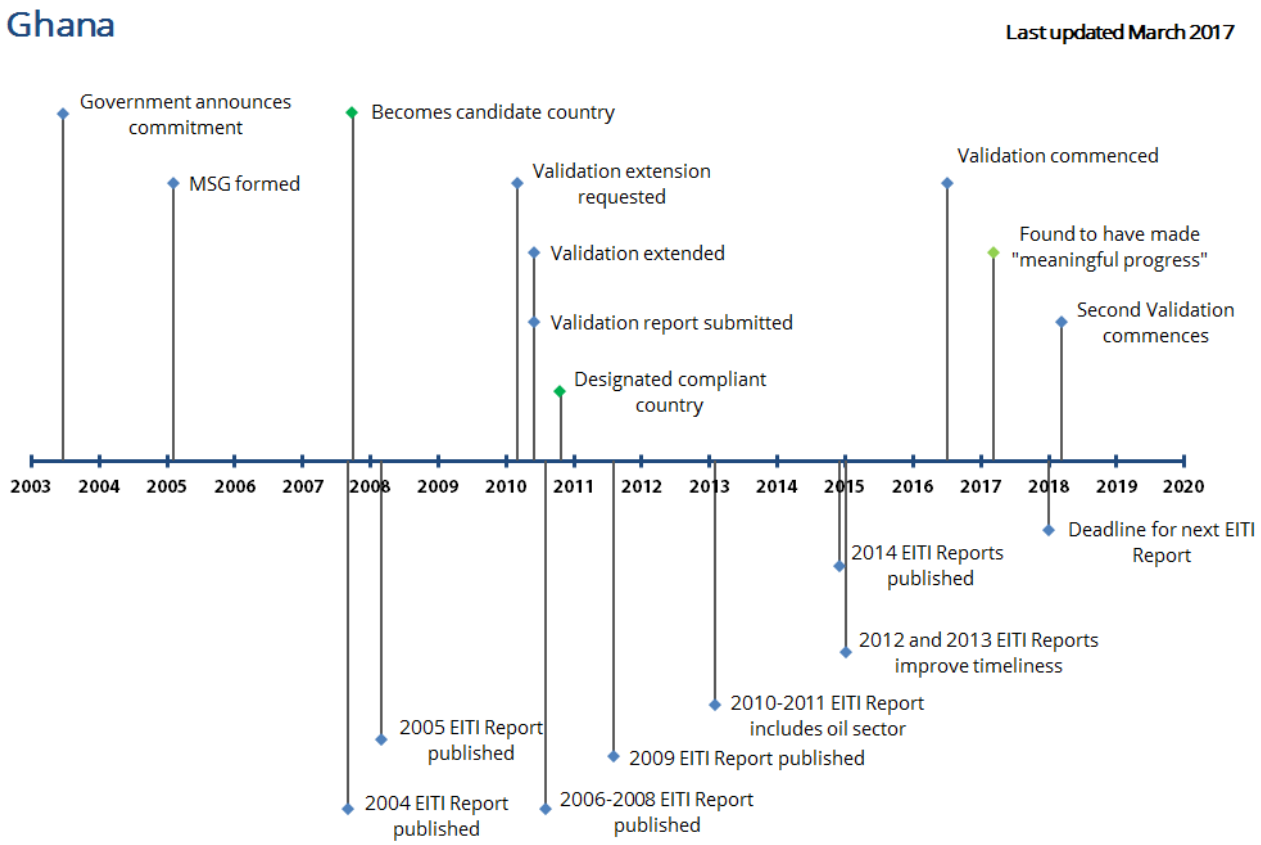


Figure 22: GHEITI impact in short

- Ghana has produced three reports for mining, oil and gas, covering 2012 to 2014, based on the 2013 EITI Standard. Key findings from the reports unveiled institutional weaknesses and policy flaws in the country's efforts to ensure efficiency in the management and realization of benefits especially to citizens.
- Ghana had met most of the new EITI requirements such as disaggregation of data, sub-national reporting, production audit, expenditure information to some extent before they were introduced.
- Ghana has added a process audit in addition to the revenue audit requirement of the initiative. This addition has brought to light some systemic weaknesses which has led to non-payment of certain statutory taxes in the sector such as capital gains tax and ground rent.
- Ghana decided to decentralise its EITI implementation to the sub-national level; a sub-national audit of benefits sent to mining districts revealed that in most cases the revenue (royalties) are used for recurrent expenditures rather than capital expenditures.

- GHEITI has created new channels for local-national dialogue on the disbursement of revenues of the extractives industries. GHEITI community forums constitute arenas for public action at the community level. This has contributed to the empowerment of local communities, but mainly through the link to national advocacy groups rather than locally.
- Despite evidence that GHEITI advocacy has led to policy changes on national level, impact on local level has been limited.
- GHEITI developed guidelines regarding the share of mining royalties that are distributed to local governments.

In March 2017, the EITI Board considered Ghana's status, and agreed that it had made meaningful progress overall in implementing the 2016 EITI Standard. Areas of satisfactory progress were highlighted in terms of licences and contracts, monitoring production and revenue collection. Despite this progress, it also raised significant concerns relating to several areas, including licence registers, state participation, production and export data, comprehensiveness and in-kind revenues. The Board indicated that the Government had until March 2018 to take corrective action to avoid suspension in accordance with the Standard.[17]

Within the petroleum sector, the Public Interest Accountability Committee (PIAC) is a key actor in ensuring accountability in revenue capture and management. PIAC was created in 2011 under a provision within the PRMA, and includes representatives from a broad range of civil society. It is tasked with ensuring government compliance with the PRMA through monitoring and evaluation, providing space as a platform for public debate and providing independent assessments on the management of petroleum revenues to the legislative and the executive branches of government.[18]

Since its inception, the organisation has faced a number of challenges. Quality of analysis is a major issue, given the fact that it struggles to access full, reliable data on revenue capture from GNPC and the GRA. PIAC has also struggled to engage effectively with other industry stakeholders, PIAC's reports do not have a clear audience, and the body has not done much work to educate the public on its findings, largely due to funding shortfalls. The rapid rotation of members (up to one-third leave every year) also makes it difficult to build institutional knowledge and clear priorities. The government's refusal to adequately fund PIAC is a sign of the organisation's limited influence and legitimacy among top executive and legislative branch officials. Donors currently fund most of PIAC's activities and while there are suggestions that a percentage of oil revenue be allocated to fund PIAC, the proposal has not gained any real traction to date.

[17] https://eiti.org/validation/ghana/2016#ghanas-progress-by-requirement
[18] The PIAC covers both oil and gas, but it tends to focus more on the former. Gas is a relatively new resource, consumed domestically rather than sold on the international market, and therefore generates less revenue for Government than oil.

4. Financing of Water Supply and Sanitation in Ghana

4.1 Sector overview: trends in water, sanitation and hygiene (WASH) coverage[19]

The national vision for the WASH sector in Ghana is to achieve universal access to safe drinking-water and basic sanitation by 2025. With access to improved drinking water at 89 per cent in 2015 (compared with 56 per cent in 1990) Ghana has made substantial progress and is above average in comparison to SSA as a whole (68 per cent). This is largely due to significant improvements in the rural water supply, which has seen the percentage of the population relying on surface water reduce from 35 per cent to just 4 per cent over the last 25 years. Nevertheless, significant disparities remain between rural and urban areas (urban: 93 per cent; rural: 84 per cent) and over 3 million Ghanaians are still using unimproved sources of drinking-water. With the last 11 per cent of the population likely to be the hardest-to-reach (and more expensive to reach), well-targeted investments and a willingness to spend more per capita will be necessary.

Sanitation trends present a more alarming picture. As of 2015, only 15 per cent of the population had access to an improved facility, on account of the large proportion that use shared facilities (which international standards currently define as unimproved, even if an improved infrastructure is used). Ghana failed to achieve its MDG target (54 per cent) and is significantly behind the overall trend for SSA, where on average 30 per cent have access to an improved sanitation facility. Almost 20 per cent of the Ghanaian population (and 34 per cent of the rural population) practise open defecation, marginally lower than the average for SSA (23 per cent). However, it is important to note that there is a weak culture of individual household latrine ownership in Ghana (especially in rural areas) and this perhaps results in an exaggerated picture of the gap between Ghana and the rest of SSA. The proportion of Ghanaians using improved or shared improved facilities (at 75 per cent) is significantly higher than that for the rest of SSA (at just 50 per cent). Regardless, significant investment is required in order to achieve the Sustainable Development Goal (SDG) target of ensuring universal access to adequate sanitation and an end to open defecation by 2030.

[19] Unless otherwise stated, all data presented in this sub-section is derived from WHO (2015a) and WHO (2015b).

Figure 23: Drinking water trends (SSA)

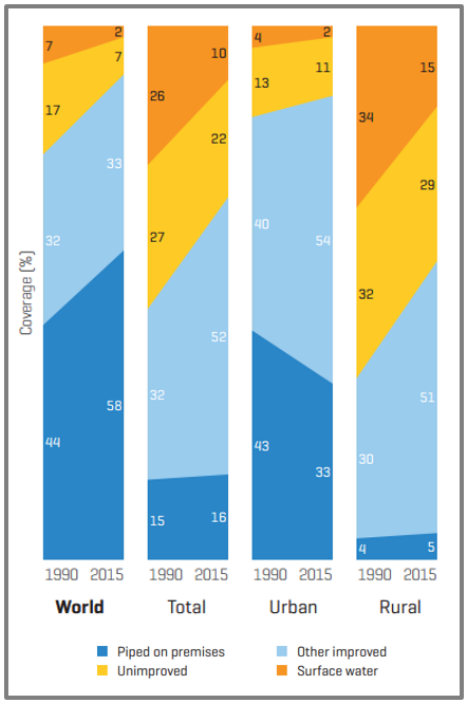


Figure 24: Trends in drinking water coverage (Ghana)

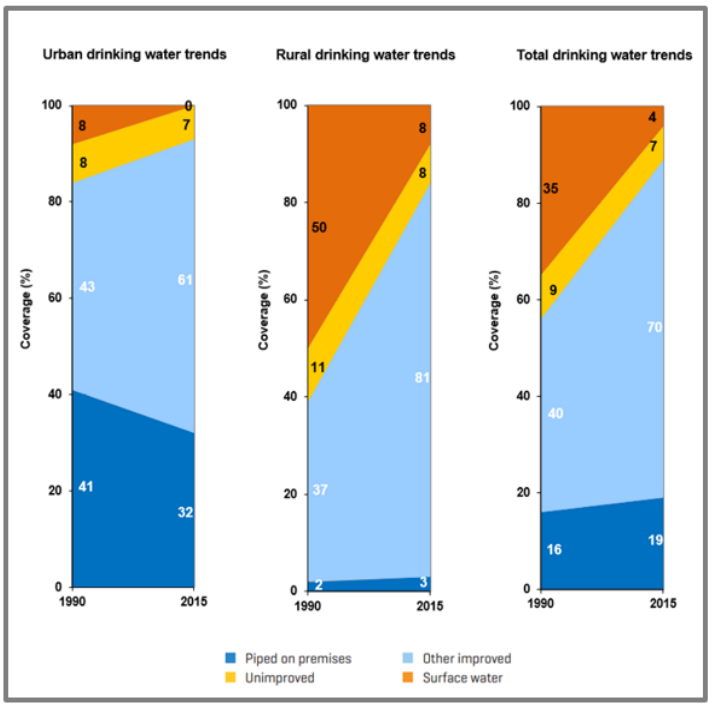


Figure 25: Sanitation trends (SSA)

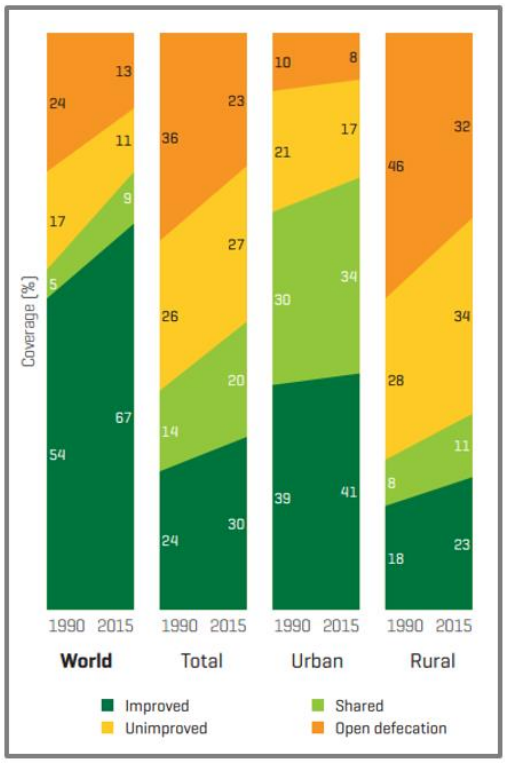
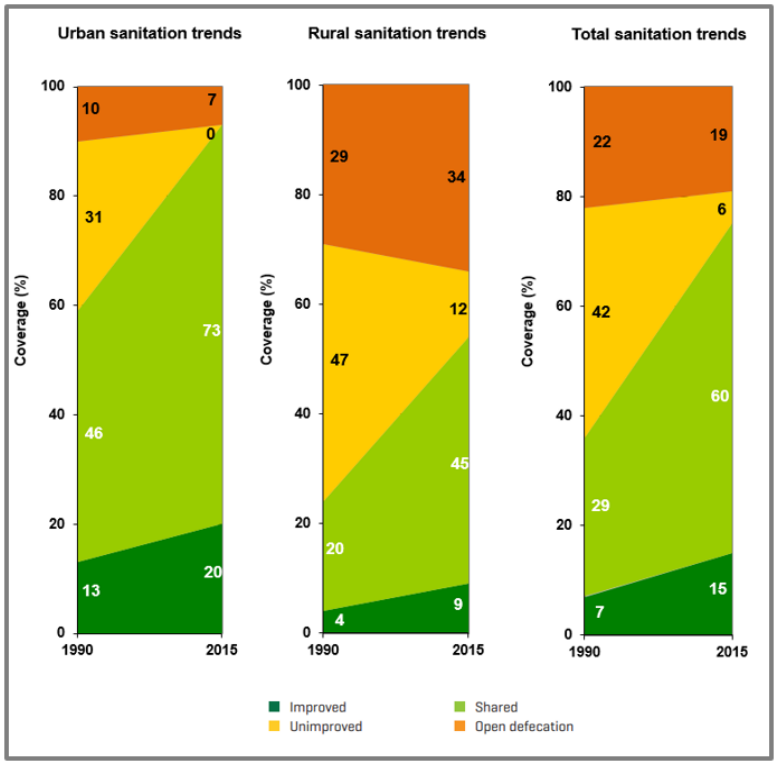


Figure 26: Trends in sanitation coverage (Ghana)



4.2 How are WASH services delivered in Ghana?

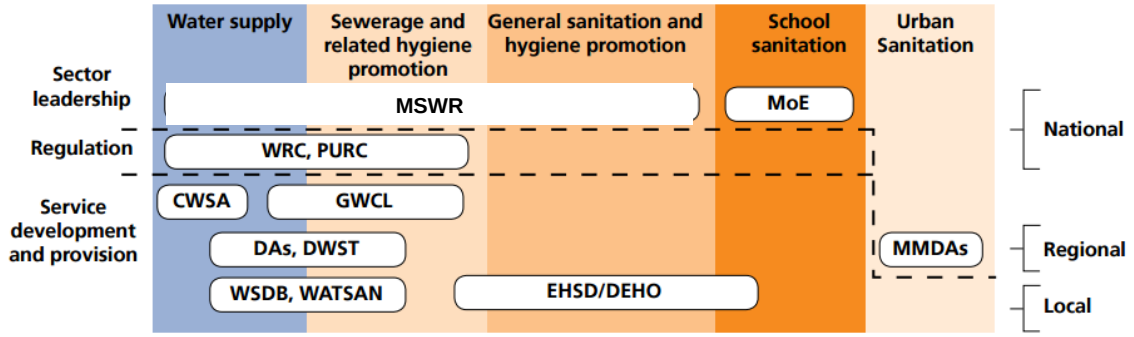
Since the early 1990s, Ghana's water and sanitation sector has undergone major reforms to address systemic weaknesses. The main focus of the reforms were around transforming the role of the public sector away from direct service provision into a facilitator of decentralised service delivery. This involved the introduction of private sector participation in urban water supply, supported by the establishment of dedicated regulatory bodies for water resources management, as well as an emphasis on community ownership and management of local services. There are now clear lines of responsibility and all subsector policies have been consolidated into the National Water Policy, as follows:

- **Policy, planning, financing and monitoring are the responsibility of the central ministries.** In January 2017 the Ministry of Sanitation and Water Resources (MSWR) was created to provide a special focus on the sector. The new ministry assumed the national responsibilities previously held by the Ministry of Water Resources, Works and Housing (water resource management and water supply) and the Ministry of Local Government and Rural Development (sanitation).

- **Regulatory responsibilities are devolved to specialised agencies.** The Water Resources Commission (WRC) is responsible for granting rights, managing the utilisation of water resources and regulating water use. The Public Regulatory Commission (PURC) is responsible for regulating urban water supply (including the setting of tariffs).

- **Service delivery is the responsibility of the 216 Metropolitan, Municipal and District Assemblies (MMDAs)** who plan, operate and maintain water and sanitation facilities in their areas of jurisdiction, in accordance with the Local Government Act. Funding for water and sanitation facilities is derived from the District Assemblies Common Fund (DACF). The Ghana Water Company Limited (GWCL) delivers urban water supply while the Community Water and Sanitation Agency (CWSA) provides water and sanitation services to rural communities and small towns (in collaboration with the MMDAs).

Figure 27: Institutional roles and relationships in the water supply and sanitation sector[20]



Source: AMCOW, 2011 (adapted)

[20] For acronyms not covered in the main text: DA stands for District Assembly, DEHO for District Environmental Health Officer, DWST for District Water and Sanitation Team, EHSD for the Environmental Health and Sanitation Directorate in the Ministry of Local Government and Rural Development (but now in the MSWR), MoE for the Ministry of Education, WATSAN for Water and Sanitation Committee and WSDB for Water and Sanitation Development Board.

4.3 How much is spent on WASH? [21]

The WASH sector receives funding from a number of sources. The sector has enjoyed substantial support from donors in recent years, principally in the form of grants to the rural sub-sector and loan financing to the urban water sub-sector, in addition to user fees and government contributions. In 2012, total expenditure on WASH (from government, donors, households etc.) amounted to GH₵937 million (US$522 million), equivalent to 1.2 per cent of GDP (compared with approximately 5 per cent on health) or GH₵30 per capita per year (equivalent to approximately US$20). Total spending on WASH increased by 28 per cent in nominal terms between 2010 and 2012 (marginally faster than nominal GDP growth) and 13 per cent in real terms.

Direct expenditure by the government accounted for 5 per cent of total spending in the WASH sector between 2010 and 2012. User fees (32 per cent), household expenditure (18 per cent), donor financing (17 per cent) and repayable finance (28 per cent) accounted for the rest. In 2012, adding together the government contribution (GH₵45m) and loans taken out by government institutions (GH₵273m), total *public* finance for WASH accounted for just 0.42 per cent of GDP. According to Rognerud & Fonseca (2016) this is significantly lower than in Benin (0.98 per cent), Burkina Faso (1.04 per cent) and DRC (1.69 per cent) and shows that the government is not meeting the eThekwini and Ngor commitment to spend 0.5 per cent of GDP on sanitation and hygiene. Given that public spending on WASH represented just 1.6 per cent of the total budget between 2010-2012, it is reasonable to conclude that the additional revenues earned from extractives have not played a significant role to date in overall WASH financing.

At the 2014 Sanitation and Water for All High Level Meeting in 2014, the government committed to allocating US$120 million for water and US$50 million for sanitation and hygiene each year. The WASH civil society network CONIWAS identified that the government's plans in 2015 fell significantly short of this commitment. In 2015 the budgetary allocation to WASH sector departments and agencies (including some donor on-budget funds) was GH₵ 294 million, or about US$80 million.[22]

[21] Unless otherwise stated, all data presented in the sub-sections 4.3 to 4.5 is derived from Trémolet (unpublished) and Esseku (2014) who present the key results from applying the TrackFin methodology in Ghana. Note that the study was unable to obtain disaggregated data by type of cost (capital, O&M, support etc.) and that data from certain agencies (e.g. PURC, CSR) was not collected.

[22] Memo to Government on 2016 National Budget, CONIWAS, June 2015.

Figure 28: Total financing to WASH (GH₵ millions)

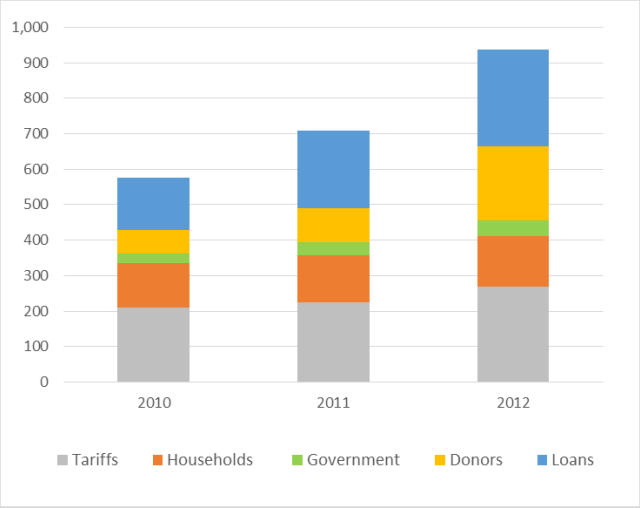
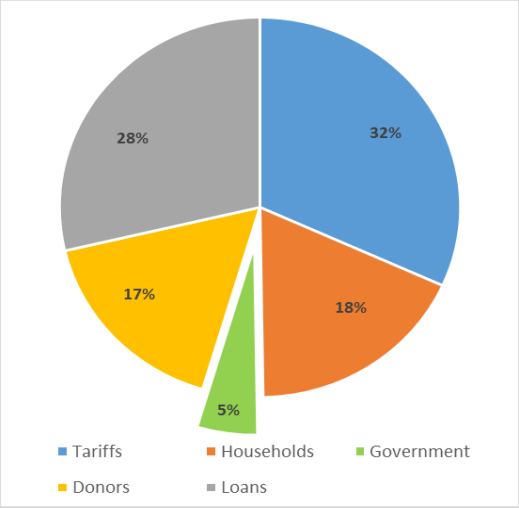


Figure 29: Proportional spending on WASH (2010-12)



Aid levels have increased in recent years. ODA to water and sanitation averaged US$ 71.0 million a year between 2010 and 2012 and rose to US$ 136.8 million in 2015 (US$ 91.8 million annual average 2013-2015). The principal multilateral donors in 2015 were the International Development Association (IDA) of the World Bank (US $ 58.0 million) and the African Development Fund (US $ 14.5 million). The largest bilateral donors were Canada (US$ 25.7 million), Netherlands (US$18.5 million) and South Korea (US$ 11.7 million).

4.4 How much is spent on different types of service?

By far the largest recipient of funding within the WASH sector is the urban water supply sub-sector which accounts for 70 per cent of total expenditure. Despite this, access to piped water through a household connection in urban areas has dropped from 41 per cent in 1990 to 32 per cent in 2015 (see Figure 26) on account of investment lagging behind rapid urbanisation of the Ghanaian population. Emphasis on rectifying this situation appears to be strong. As illustrated in Figure 32 below, total expenditure on sanitation (urban and rural) has averaged around 15 per cent of total expenditure in recent years, which is concerning given how far behind Ghana is in achieving universal access to improved sanitation facilities. Low levels of finance for sanitation have been attributed to the fact that household toilets are perceived by the government to be a household responsibility.

Allocations of *public* finance to the four sub-sectors are difficult to determine. The recent TrackFin case study on WASH financing in Ghana (Trémolet, unpublished) was unable to disaggregate government spending according to the four main sub-sectors, and information obtained from the Ministry of Finance website on the overall budget for WASH was insufficient to disaggregate in any meaningful way. However, recent analysis by WaterAid (2012) suggests that the spread of public finance for WASH across the four main sub-sectors is evenly split. This is in contrast to donor financing, which is significantly skewed towards urban water supply.

4.5 Who ultimately pays for WASH services and how much?

The main financing sources for expenditures on WASH are households and international donors. Multilateral and bilateral donors contribute significantly (46 per cent of total expenditure on average between 2010 and 2012) through grants and loans.[23] Household expenditure is also very significant (46 per cent) and is spent on tariffs and self-supply. In urban areas, it is common for households to spend a large portion of their income on water tanker services and other non-utility water services due to intermittent supply from GWCL. The very small improvements in access to improved sanitation in rural areas suggests that household expenditure on new household toilets has been very limited in recent years.

Figure 30: Distribution of WASH spending (GH₵ millions, 2010-12)

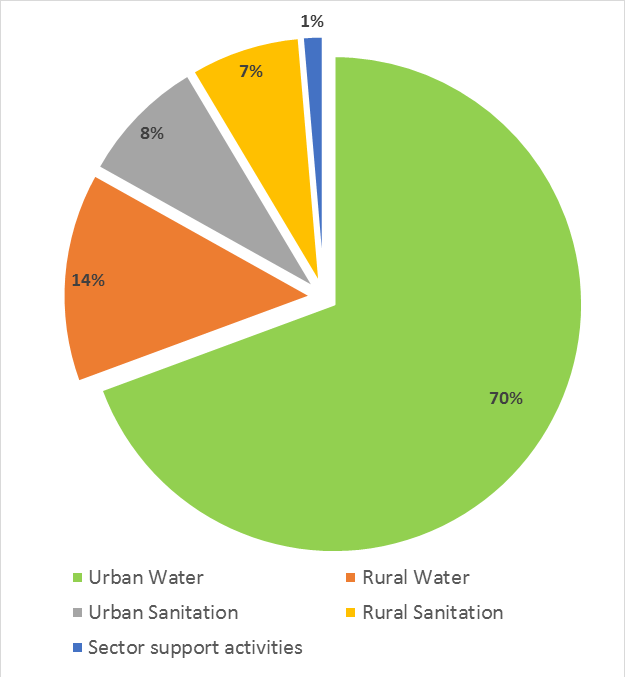
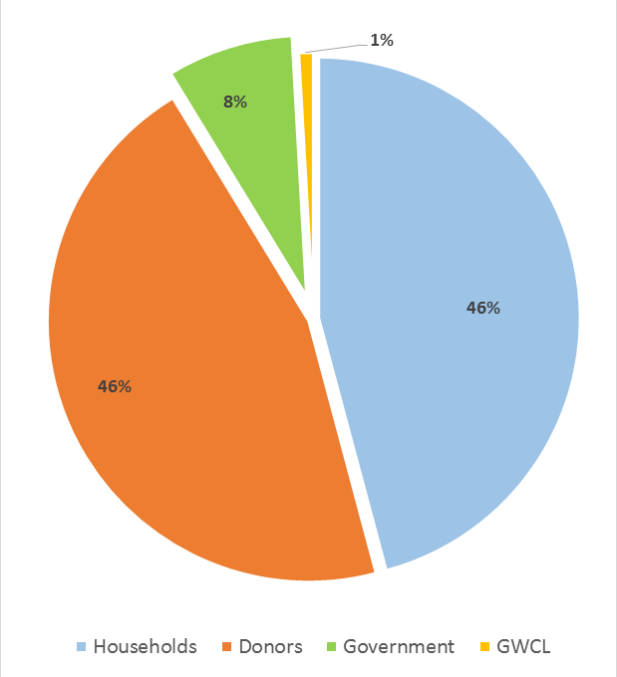


Figure 31: Financing sources for WASH spending (2010-12)



4.6 Is current funding for WASH adequate?

Recent allocations of public finance for WASH fall short of the necessary amount for implementing the government's sector plan. The Water Sector Strategic Development Plan (WSSDP) 2012-25 aims to achieve universal coverage for water and sanitation services in Ghana by 2025. The government has estimated that US$ 387 million per year is required to achieve this target, 90 per cent of which is intended for capital expenditure. Looking at the required financing from each funding source and comparing them to current (2012) allocations estimated from the TrackFin study, an annual financing gap of US$99 million emerges (approximately 25 per cent of the total financing requirement). As illustrated in Figure 32, the government appears to expect the majority of the shortfall to be financed by donors. However, now that Ghana has achieved lower-middle-income economy status, grants and concessionary finance are currently falling. As such, it is vital that Ghana increases public investment through its own budget if it is to meet the targets it has set itself. Analysis by the World Bank suggests that the required funding to achieve SDG 6

[23] Repayable financing should be thought of as government spending since government will ultimately be required to pay back the loan in the future.

targets 6.1 and 6.2 is considerably higher still. It estimates US$1.6 billion, or 2.97% of GDP is required each year through till 2030 for safely managed water and sanitation to be achieved.[24]

In theory, a proportion of the financing gap could be plugged from extractives revenue. The WASH financing gap of US$ 99 million per year compares to annual revenue from oil and gas of between US$ 400 million and US$ 1 billion over the course of 2012-17 (IMF, 2016a). However, the many competing priorities for government expenditure, as well as the fact that much of the revenue is already effectively tied up (see section 2.2) means that will be difficult in the short to medium term, as Ghana attempts to restore macro-fiscal stability. In the longer run, as commodity prices recover and new production from the TEN and Sankofa oil fields start to generate additional revenue, there may be opportunities for securing higher financing allocations for the WSSDP. Furthermore, by addressing some of the weaknesses in the governance of the sector (such as tax avoidance and smuggling) the government could create opportunities for increased revenues from the sector in the future.

Increased revenue generation needs to go hand-in-hand with the problem of addressing financial absorption rates in the sector. Recent analysis by WaterAid (2015) notes that average budget utilisation rates for five similarly placed African countries hovers at around 60-70 per cent. While recent data could not be obtained for Ghana, studies such as AMCOW (2011) and WaterAid (2012) have noted that budget utilisation rates in the past have been as low as 25 per cent in some years – significantly lower than in other service-oriented sectors. This suggests that understanding why budgets are not spent and rectifying the bottlenecks is a vital accompaniment to higher budget allocations, especially if the cause of low utilisation of finance is limited capacity within the responsible ministries for managing and disbursing funds effectively.

Figure 32: WSSDP Financing Gap

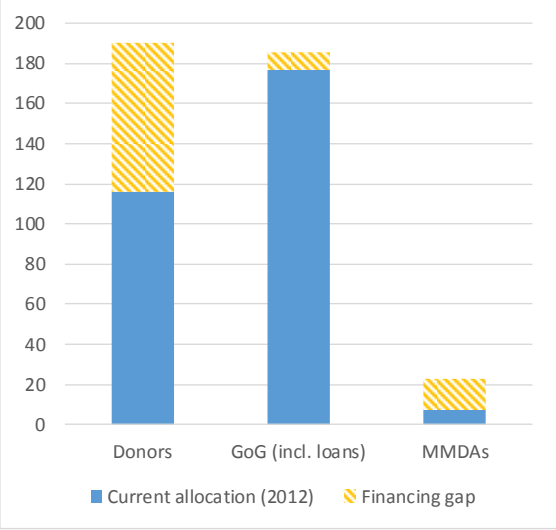
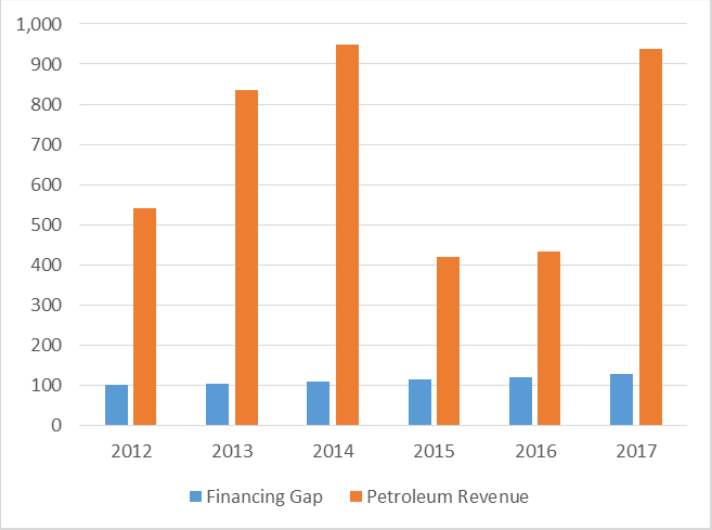


Figure 33: Financing Gap vs. Oil Revenue (US$ millions)



[24] World Bank, 2016, http://www.worldbank.org/en/topic/water/publication/the-costs-of-meeting-the-2030-sustainable-development-goal-targets-on-drinking-water-sanitation-and-hygiene

5. Conclusions and recommendations

The EI account for a significant proportion of total government revenues in Ghana. The combined contribution of the mining and petroleum sectors reached a peak of 20 per cent of total revenues in 2014 (equivalent to around 5 per cent of GDP). However, they are not 'transformative' in the sense that the majority of the budget is financed from other sources such as personal taxation, taxation of other sectors, external grants and borrowing. The start of production in the TEN and Sankofa oil and gas fields may raise the proportion further.

Poor macroeconomic and fiscal management have more than offset the additional 'fiscal space' offered by extractives revenues. New revenues from oil and gas coincided with a period of poor fiscal management and a lack of expenditure control. A rapid expansion of public sector salaries and overruns in current expenditures resulted in a three-fold increase in the fiscal deficit in 2012, the scale of which has remained ever since. The rapid expansion in public expenditure has more than offset the higher revenues generated from higher extractives revenue. Increased borrowing to finance the budget deficit has resulted in Ghana's debt interest payments being almost six times higher than the value of petroleum revenue.

The WASH sector faces significant financing gaps. The government has estimated that US$ 387 million is required—principally capital investment from domestic and international public sources—to achieve its universal coverage target by 2025. Funding estimates from the TrackFin study indicate an annual financing gap of US$ 99 million. Analysis from the World Bank suggests that the annual requirement to reach the SDG 6 targets is significantly higher: US$ 1.6 billion. This includes a higher proportion of household spending, but implies a gap of over US$ 1 billion per year.

The expected fiscal consolidation and debt reduction will place significant pressure on public expenditure, leaving little room for expansion and additional expenditures on WASH. As noted by a 2016 IMF review mission, while this process is broadly on track, the high level of public debt and low commodity prices means that fiscal consolidation needs to continue for some time to come (IMF, 2016b). Furthermore, given that over 80 per cent of total revenues are currently spent on public sector salaries and debt interest, a significant reorientation of the budget towards higher social sector spending on current trends seems unlikely.

Overall, the case study suggests that there is an opportunity for Ghana to step up its progress on domestic resource mobilisation and SDG 6 (and more generally on Agenda 2030 for sustainable development) if the government is able to take firm action across several different policy fronts. These include (i) addressing the lack of regulation of the informal mining sector, (ii) improving transparency in the formal mining and petroleum sectors, (iii) combatting the underpayment of tax identified in these processes, (iv) improving revenue management processes and (v) investing the resources required to place the country on a path to universal access to water and sanitation by 2030 (if not before) recognising the competing needs for finance across all social sectors. The international community should stand ready to support Ghana in these endeavours.[25]

Urgent action is needed on small scale and artisanal mining. Some estimates suggest that Ghana loses almost $2 billion worth of untaxed gold bullion per year due to gold smuggling in the informal sector. This is twenty times current allocations to the water and sanitation sector by the government, and so the government would be wise to invest the necessary resources at central and local levels to stem these tax losses. The issue goes well beyond lost revenue for the government however. Long-term, potentially permanent, damage is being done to water resources

[25] An example of how the international community can support the government is the DFID-funded Ghana Oil and Gas for Inclusive Growth (GOGIG) programme. This aims to improve revenue capture and management, upstream oil and gas management, as well as provide support to accountability actors.

in Ghana through the unregulated use of toxic chemicals. The closing down of illegal mines, banning mining and the use of toxic chemicals in environmentally and socially sensitive areas, and an overall stronger and more effective regulation of the sector and protection of water resources are all required.[26]

There is scope for significant improvement in the transparency of the EI sector. Legislation covering the mining and petroleum sectors does not require that actual agreements, contract documents or the beneficial ownership of companies are made available to the public. This makes it difficult to assess whether the award of contracts, exploration, extraction, sales transactions and the payment of royalties and taxes are following due process, compliant with the law and providing value for money. Documents made available in the release of the Panama papers in 2016 showed that the legal firm Mossack Fonseca had assisted one of Ghana's major gold producers, Anglo-Gold Ashanti, in the creation of multiple companies for off-shore tax purposes.[27] This snapshot suggests that steps to strengthen the transparency of the sector is strongly in Ghana's national interest.

The need for further transparency is reinforced by the EITI. The EITI board at its meeting in March 2017 identified several areas for corrective action. These included the publication of licence registers, information on state participation, production and export data and full coverage of companies. Adherence to the EITI standard will also require that all compliant countries ensure that EI companies disclose their beneficial owners by 2020. Within the petroleum sector, addressing some of the barriers that have held back the effective operation of the Public Interest Accountability Committee (PIAC) is an important and complementary step to improving transparency and would help ensure stronger accountability in revenue capture and management.

The Government should take action to address the leakage of government revenue caused by the extensive discretionary tax treatments that exist in the EI sector. The OECD has stated that exemptions, special regimes and tax holidays—many of which are in the EI sector—undermine economic efficiency, fair competition and revenue mobilisation. Across the economy as a whole they amount to as much as 6% of GDP, or US $ 2.25 billion (based on 2015 GDP). In the formal mining sector, the largest gold producers have stability clauses that keep royalty payments at originally-negotiated levels, and since 2006 the government's carried interest has been kept at a reduced level of 10%. In the petroleum sector the ability of oil companies to offset new investment against profits contributed to CIT at negligible levels in 2015. The 2017 Budget referred to an estimated GH¢2 billion of lost revenue from transfer pricing abuses from the extractive sector. There are therefore strong economic and financial reasons for strengthening the capacity and reach of the GRA to improve company audits, and more generally to support the government in ensuring that revised legislation concerning the payment of CIT is adhered to, in order to strengthen revenue predictability and capture.

The 2016 Mineral Development Fund Act provides the promise of improvements in revenue management. The case study highlights that the distribution of mining revenues has been uneven in practice and less than set out in the relevant formula. The low level of allocations and the unpredictability of revenue transfers makes it difficult for spending departments to plan for

[26] The Ghana Water Company called for a halt to illegal mining and has raised the possibility of Ghana needing to import water for consumption unless action is taken to tackle the damage being done to water resources. https://www.ghanabusinessnews.com/2017/03/27/time-to-halt-illegal-mining-for-potable-water-gwcl/
It is worth noting that legislators in El Salvador banned gold and other mineral mining in order to protect the country's fragile environment and water resources. https://www.nytimes.com/2017/03/29/world/americas/el-salvador-prizing-water-over-gold-bans-all-metal-mining.html?_r=2

[27] http://www.huffingtonpost.com/entry/secret-offshore-deals-deprive-africa-of-billions-in-natural-resource-dollars_us_5795164ce4b0d3568f839c90

expenditures within their budgeting cycles. It will be important that the Government ensures in its implementation of the MDF Act that the economic benefits of the country's mineral wealth are available to those local communities that are adversely impacted during the process of extraction. Concerning the petroleum sector, it is encouraging that funds have been allocated to the WASH sector from the ABFA in the 2015 and 2016 budgets. However, ABFA allocations were accompanied by a reduction in the allocation from non-oil revenues. Past funding commitments for the WASH sector (at the Sanitation and Water for All Partnership meetings) have not been met, and as long as ABFA allocations are off-set, there is unlikely to be significant change in the progress the country makes towards financing and delivering universal access.

There is a need for a significant increase in resourcing and expenditure in the WASH sector to achieve SDG 6.. The Government has not met recent financing commitments made at the Sanitation and Water for All (SWA) High Level Meeting and estimates from the World Bank suggest that achieving SDG 6 will require allocations at almost 3% of GDP a year. A step change of this nature will bring huge health, environmental and economic benefits to Ghanaian citizens and to the economy as a whole—but it represents a major financing hurdle for the government. Addressing some of the domestic resource mobilisation issues raised above can nevertheless make a major contribution towards it. This would be consistent with the commitments in the WSSDP to find additional resources, including from petroleum revenues, for investment in water and sanitation.[28] A ring-fenced fund dedicated to resourcing the SDGs, including SDG 6, with oversight from government and civil society, could be a powerful mechanism and incentive for capturing these revenues and spurring development progress through to 2030.

Given that actual spending patterns can differ markedly to budgeted amounts, it is also important to understand the key bottlenecks to disbursement. Analysis of recent years has indicated relatively low budget utilisation, and a major constraint to WASH financing therefore appears to be the *disbursement* of funds, as well as the low *allocation* of funds. This underlines the importance of understanding why the budgeted amounts are not being spent (or are being spent late) and rectifying the bottlenecks. A combination of an increase in resources and action to tackle barriers to disbursement could have a transformative impact on the sector.

Finally, it is important that the government plans on the basis of a long-term horizon in terms of its management of the EI. Countries that have successfully managed their EI sector, such as Botswana or Norway, have shown the ability to put in place effective governance, transparency and long-term planning. A failure to regulate the EI effectively will cause the country long-term environmental problems and ultimately undermine development. Countries in Africa are also amongst the most vulnerable to the effects of climate change, due to uneven access to safe water and sanitation, dependence on rain-fed agriculture, and high levels of poverty which all make it harder to withstand climate stress. Ghana has significant opportunity in terms of hydro-electricity and solar power, and as the world seeks to effect a transition to a low-carbon economy, the country should think carefully about its energy mix, and what this entails for the management of its EI.

[28] In the WSSDP, the government committed to using revenue from the oil sector for basic social service investment, including water and sanitation. The plan also includes a commitment to increase public sector funding in rural areas, small towns and water resource management. It also identifies the need for increased resources from grants, loans and private sector financing (pages 12 and 44).

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Annex: Overview of extractives companies in Ghana

Commodity	Operators	Area of Operation in Ghana	Ownership	Country of majority owner
Aluminium	Volta Aluminium C. Ltd. (VALCO)	Tema	100% Government of Ghana	Ghana
Bauxite	Ghana Bauxite Company Ltd. (GBCL)	Awaso	Bosai Minerals Group Co. Ltd., 80%, and GoG, 20%	China
Diamond	Great Consolidated Diamond Ghana Ltd	Akwatia (Birm Valley)	100% GoG	Ghana
Gold	AngloGold Ashanti	Kumasi, Takoradi	92.3% and GoG 1.7%	South Africa
	Adamus Resources	Teleku-Bokazo, Nkroful (Western Region)	90% and GoG 10%	Australia
	Chirano Gold Mine Ltd	Chirano (Western Region)	Kinross Gold Corp 90% and GoG 10%	Canada
	Endeavour Mining Corporation	Nzema Mine (Greater Accra)	90% and 10% GoG	Cayman Island / France / Monaco
	Golden Star Wassa and Golden Star (Prestea/Bogoso)	Bogoso Prestea (Greater Accra), Wassa Mine (Tarkwa)	Golden Star Resources 90% and 10% GoG	Canada
	Gold Fields Ltd	Tarkwa and Damang	90% and 10% GoG	South Africa
	Noble Gold Bibiani Ltd	Bibiani Mine (Accra Region)	Noble Minerals Resources (90%), GoG (10%)	Australia
	Newmont Mining Corporation	Kenyasi (Brong Ahafo) and New Abirem (Eastern Region)	100%	USA
	Perseus Mining (Ghana)	Edikan	Perseus Mining Ltd 90% and GoG 10%	Australia
Lead	Gravita Ghana Ltd	Tema	100% Gravita India	India
Manganese	Ghana Manganese Company (subsidiary of Consolidated Minerals Ltd)	Nsuta-Wassaw (Western Region)	Consolidated Minerals Ltd (90%) and GoG (10%)	Jersey
Petroleum (Jubilee)	Tullow Oil & Gas	Western Region (Jubilee Field)	35.5% (Jubilee)	Ireland
	Andarko Petroleum	Western Region (Jubilee Field)	24.1% (Jubilee)	USA
	Kosmos Energy	Western Region (Jubilee Field)	24.1% (Jubilee)	USA

	Petro SA	Western Region (Jubilee Field)	2.7% (Jubilee)	South Africa
	Ghana NPC, Petro SA	Western Region (Jubilee Field)	13.6% (Jubilee)	Ghana

Source: US Geological Survey (2016); Ministry of Finance (2015a); Ministry of Finance (2015b).