

# Meeting the Challenge of the 'Resource Curse'

*International Experiences in Managing the  
Risks and Realising the Opportunities of  
Non-Renewable Natural Resource Revenues*

prepared for  
Bureau for Resources and Strategic Partnerships  
United Nations Development Programme

January 2006



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programme on Business and Development Performance

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The views expressed herein are those of the authors alone.

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## Executive Summary

Countries endowed with non-renewable natural resources (NRNR) are faced with substantial opportunities, but also great risks. Get the choice of industrial and economic policy, their sequencing, and alignment with global value chains right; support this with fiscal prudence, adequate institutional capacity and civil society participation; and NRNR revenues can be a force for sustained economic growth and social development. Get the policies, sequencing and alignment wrong; and ignore issues of absorptive capacity and good governance; and international experience tell us that a 'boom' in NRNR revenues can become a 'curse', depressing economic growth, worsening poverty and increasing political instability.

The basic economic policy flaw is to use resource surpluses to relax fiscal and market discipline. Investment efficiency then declines and the economy stagnates. Recovery from such a collapse in growth can take decades, requiring the rebuilding of economic infrastructure and social and human capital.

There is also a body of evidence that NRNR revenues, particular in periods of high commodity prices, pose a particular risk to the political security of a country, not least in post-conflict states.

Substantial international experience has accumulated on how to manage the risks and realise the opportunities of upstream oil, gas, metals and minerals development and export. Some of the key lessons are as follows.

### Forward Planning

The global geography of NRNR production is changing. Many capital investments are now taking place outside traditional producer markets. A number of low and low-middle income countries are either about to export NRNRs for the first time, or poised to substantially expand existing production. These changes in the extractive industry sectors are coincident with historically high, and possibly sustained, commodity prices. For example, seven year crude oil futures are presently trading at over \$50/barrel, nickel is trading well above its long-term cycle, and gold recently reached a new high for the decade of \$460 per ounce.

The higher the proportion of national income dependent upon NRNR revenues, the more important it is for governments to be able to manage the effects of a natural resource 'boom'. Many countries are now actively preparing for increased NRNR revenues streams, recognising that not to forward plan in this way increases the risk that revenues will be squandered, or worse, lead to economic stagnation and political instability. For example, Kazakhstan, Timor L'Este and São Tomé (along with some established oil economies such as Nigeria) are in the process of passing specific revenue management laws, sensitising their populations to the risks and opportunities of NRNR 'booms' and conducting public consultations on how revenues should be managed for the benefit of society as a whole. In addition, specific programmes are being put in place to support parliament in the formulation of relevant legislation and oversight, and to strengthen the Ministry of Finance and state petroleum and mineral agencies in budget management and accountability.

### Policy Sequencing

Countries that have managed oil, gas and mineral wealth relatively well – Norway, Alaska, UK, Botswana, Chile, Colombia, Indonesia – paid attention to the way in which revenue management strategies and economic policy 'fitted' with the evolution of their NRNR sector. For example, in the early investment phase, to varying degrees efforts have been made to adapt 'model' production sharing, royalties and tax regimes to local circumstances and market conditions, maximise 'local content' provisions and the economic impact of construction and operations, and build up a capital fund from early revenue streams. As the sector has developed, efforts have shifted to towards medium and long-term budget stabilisation and investment of revenues to achieve competitiveness in other tradable sectors.

But the sequencing of industrial and economic policy also has to be sensitive to changes in the external environment, for example: sterilising ‘windfall’ revenues against Dutch disease effects when commodity prices surge, responding strategically to new export markets, and balancing national interests for mid-stream developments with the cost savings of importing of energy and refined products.

The formulation of economic policy to manage NRNR revenues is of course also a function of the targets and milestones agreed in national development plans. Policies therefore have to accommodate trade-offs between delivering long-term productive investment and achieving shorter-term poverty reduction returns. Perhaps most critical, the design of revenue management strategy and related economic policy needs to take account of the realities of the political system and institutional absorptive capacity. Countries with strong political interest groupings, for example, need to combine revenue management strategies with new and effective mechanisms for transparency and public accountability. Countries with weak civil service capacity in economic planning, budget management and public procurement need to put in place rapid competency development programmes.

### **Revenue Management and Funds**

Managing NRNR revenues is essentially about deciding ‘what to spend’ and ‘what to save’, and ‘when’? Central to the expenditure question is avoiding such outcomes as: ‘stop-go’ public spending, unsustainable ‘boom-based’ foreign borrowing, Dutch disease effects, a shift to consumption rather than productive investment, exchange rate appreciation, rent seeking, corruption, and a disincentive to private sector investment. The ‘savings’ question is both about short- and medium-term stabilisation of fiscal budgets, and long-term saving for intergenerational equity.

There is a wide array of international experience in establishing natural resource funds (NRFs), whether that be for managing revenue volatility, stabilisation, sterilisation, savings, investment, or some combination. The only consensus seems to be that there is no ‘right answer’ to the design and management of a NRF. Funds need to be customised to fit the combination of domestic and international factors, and constantly re-evaluated as time and circumstances change.

NRFs are also not without controversy, for a number of reasons. First is the belief by some that the revenue volatility of resource revenues should be handled in the same way as normal fiscal and budget management, with NRNR revenues allowed to accumulate as a general budget surplus. Second, the weaker the economy, the more politically challenging it can be to justify revenue savings and stabilisation strategies that significantly delay the release of income to the national budget. Foregoing expenditure on social and economic programmes for the purposes of long-term budget support or inter-generational equity needs to be carefully balanced with the returns to society of more immediate productive investment in physical infrastructure, promotion of domestic savings and poverty reduction through improvements in health care, education etc. Third, there may be limitations to the overall development impact of NRNR revenues if the expenditure plans and allocation criteria governing NRFs are divorced from mainstream national development plans and poverty reduction strategies.

### **Democratic Governance**

Non-renewable natural resources are arguably the most lootable of all economic activities, for a number of reasons: (i) resources are geographically fixed and cannot relocate; (ii) resource extraction requires relatively low on-going operational investment to maintain the productivity of the initial physical infrastructure; and (iii) the products are usually exported offering many ‘choke’ points for extortion, such as pipelines, roads and ports.

There is a body of evidence that NRNR revenues, particular in periods of high commodity prices, pose a particular risk to the political security of a country, not least in post-conflict states. For example, statistically the most powerful factor for why countries might be at risk of civil conflict is the share of their income (GDP) derived from the export of primary commodities. It is also argued that the rise and continuing presence of rebel forces and civil conflict in some NRNR-endowed countries can be related in part to ‘economic predation’ – the exploitation of

natural resources through bribes, facilitation payments, protection, hostage taking, sabotage, 'booty futures' etc.

International experience suggests that part of the solution may lie in the following principles: create a visible link between NRNR revenues and improvements in national economic performance; surgically address institutional and judicial barriers to effective revenue management, transparency and accountability; build capacity in public expenditure management and execution at national and local levels; provide oversight to parliament, the media and civil society; and ensure people who live in resource producing regions benefit economically.

### **Aid and Revenues**

Many resource-endowed, low-income, countries are also recipients of official development assistance. For some of these the prospect of substantial NRNR revenues is coincident with increases in aid targeted at the country's persistent development challenges in employment, health care, basic education, water and sanitation etc. This again presents both an opportunity and a risk. The opportunity is to redirect more of the aid to reduce debt burdens, build the institutions and infrastructure required to ensure linkage between NRNR revenues and the achievement of social and economic development goals, and align aid with NRNR revenue surpluses so as to support regional (cross-border) economic and security policy. The risks centre around how to prevent 'big-push' aid strategies from compounding Dutch Disease effects, eroding institutional absorptive capacities and fuelling corruption.

### **Conclusion**

Relative to national income in the recent past, revenues from oil, gas, metals and mineral revenues are accruing (or about to accrue) to a significant number of low and low-middle income countries in 'windfall' proportions. There is also the prospect of these revenues being sustained in the medium to long term. Concurrently, we are witnessing an historic effort by the international development community to bridge the 'financing gap' of poor nations in meeting national development and poverty reduction targets. The question is what should governments and donors do about this coincidence? What combination of revenue management principles, competitiveness and economic policy, institutional reform, good governance and aid architecture is it right to adopt? There is much to learn from the experience of each other in managing NRNR revenues. But each country is also unique, and external markets and global politics constantly change. Adaptation is key.

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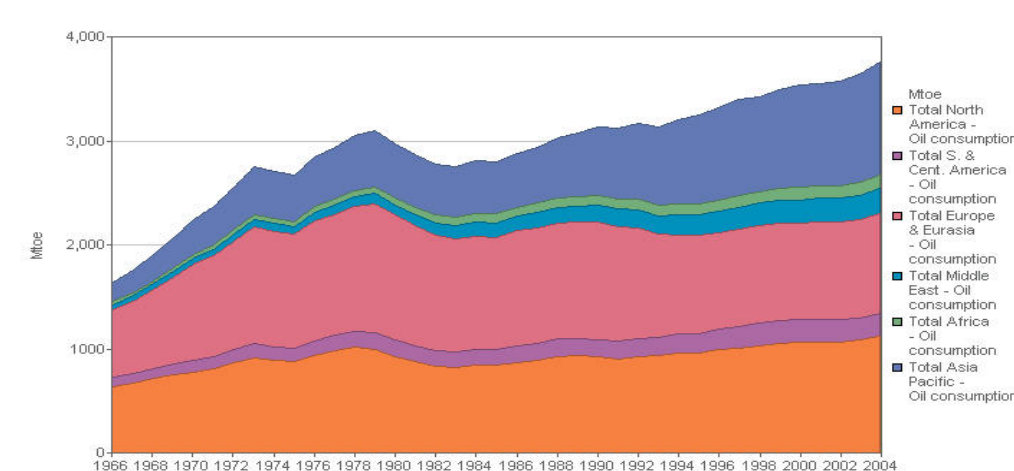
# 1. An Historic Opportunity

Over the next 25 years global demand for energy may rise as much as 50%, with 75% of this demand driven by the developing world<sup>1</sup>. 60% of the increase in demand is anticipated to be met through oil and gas. Likewise, strong economic growth in many parts of the world continues to drive demand for metals and minerals. Some data on trends in non-renewable natural resources are given below.

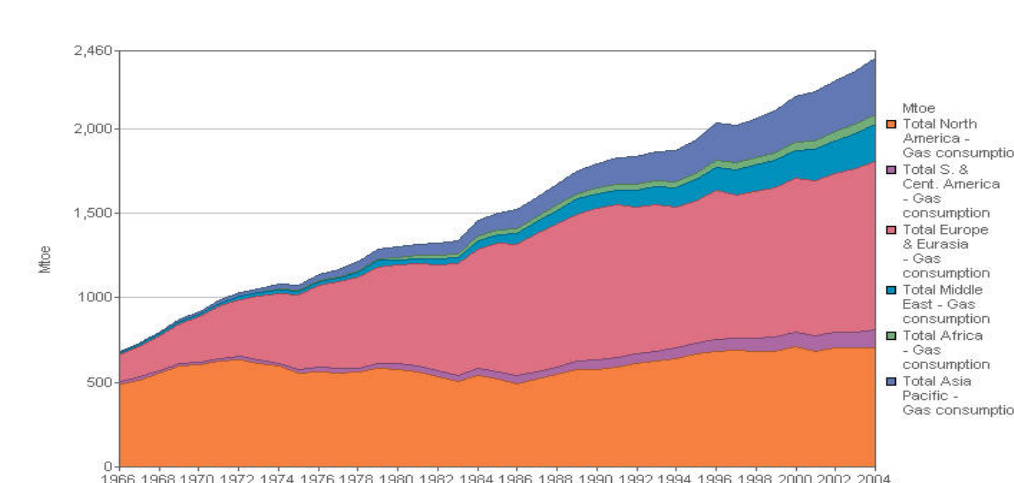
## 1.1 Basic Data and Trends

Following a decline in the mid 1980's, the trend in global consumption of oil and gas has been upwards (see *Fig 1* and 2). Regional trends are given in *Annex A*.

**Fig 1 World Oil Consumption – millions tonnes/yr<sup>2</sup>**

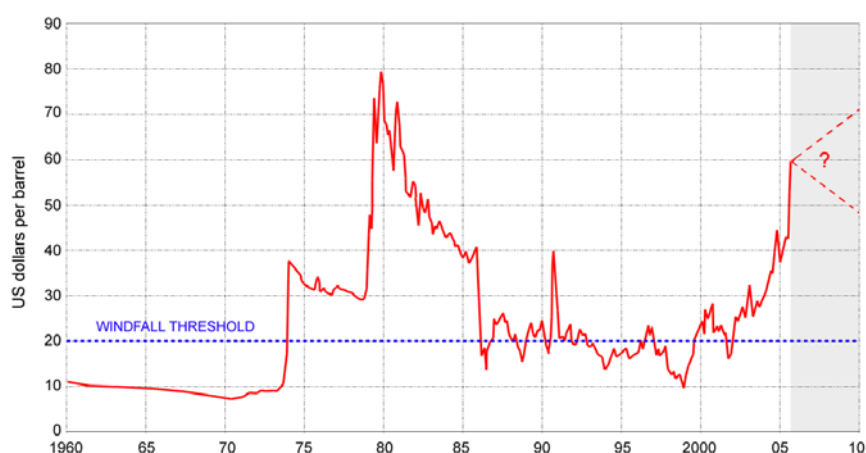


**Fig 2 World Gas Consumption – million tonnes oil/yr equivalent**

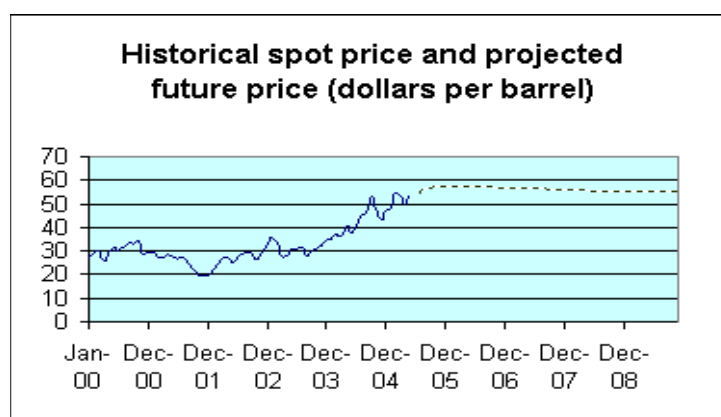


Both the IMF and the G8 anticipate that current oil demand will continue to be strong<sup>3</sup>. This trend is reflected in current prices of commodities and refined products. For example, oil prices at the time of going to print on 20<sup>th</sup> December 2005 were \$55/barrel (spot Brent Crude)<sup>4</sup>. Historic price trends for crude oil are given in *Fig 3*. There is also anticipation that the current high oil and gas prices have some degree of permanence. For example, long-term crude oil 'futures' are commanding prices in the region of \$50-60<sup>5</sup> (*Fig 4*).

**Fig 3 Crude Oil Price Trends (at 1995 prices)<sup>6</sup>**



**Fig 4 Historical Spot Price and Projected Future Price (\$ per barrel)<sup>7</sup>**



More conservatively, the World Bank anticipates a slowing in the rate of growth in global demand for oil over the next few years, combined with new supplies coming on stream. This coincidence could mean that prices decline slowly, reaching \$33 dollars by 2007<sup>8</sup>.

As with oil and gas, the demand for minerals and metals is historically high and has the potential for some longevity. Gold recently reached a new high for the decade of \$460 per ounce<sup>9</sup>, and nickel is trading well above its long-term cycle<sup>10</sup>. The historic price trend for nickel is given in Fig 5. The key emerging markets for minerals and metals include Brazil, China, Czech Republic, India, Mexico, Poland and Russia, along with, but to a lesser extent, Indonesia, Iran, Malaysia, Thailand and Vietnam. In 2004, demand from China contributed to metal and minerals rising 3.7 percent, and inventories to fall by 50 percent (60 and 90 percent in the case of lead and copper)<sup>11</sup>.

**Fig 5 Nickel Price Trends: (actual prices)<sup>12</sup>**



The World Bank note that the big uncertainty in current metals and minerals projections is Chinese demand. If consumption remains at the levels seen in the first half of 2004, metals prices, in particular steel and iron ore, along with coal and freight could remain high for an extended period 'or even rise further'.

## 1.2 The Global Context

Across the non-renewable natural resource (NRNR) sectors a similar set of circumstances seems to underlie these sustained price rises: weak data on supply, demand and stocks (particularly in oil); low levels of spare production or critical transport and processing capacity; uncertain prospects for increased production in the usual supplier markets; and strong economic development in Asia (especially China and increasingly India). For the oil and gas sector, circumstances also include international security concerns and the prospect of a decline in global petroleum production resulting from exhaustion of the world's oil fields. The result is that, relative to national income in the recent past, NRNR revenues continue to accrue to many low and middle income countries in 'windfall' or 'near windfall' proportions. Conversely, countries not so endowed are suffering from high import prices.

Continued world economic growth, particularly in SE Asia, is set to increase demand for oil and gas in the medium, if not the long-term. With limitations on the spare production capacity available world-wide, increased world demand will require increased development activity in both OPEC and non-OPEC countries. Thus it is expected that world investment in exploration and production facilities will rise still further.

West Africa is set to become a more important source of oil, partly as a strategic offset to dependence on the Middle East<sup>13</sup>. Already, windfall revenues are accruing to six countries each with 60% or more dependency for national income on oil revenues: Angola, Nigeria, Congo, Equatorial Guinea and Gabon. It is also thought that potential reductions in oil use by developed countries will be counterbalanced by increases in demand in emerging economies. For example, demand from India and China is predicted to double between 2000 and 2020<sup>14</sup>.

One legacy of the slump in crude oil prices following the 1970s and 1980s has been more cautious resource investments by international oil companies. Until recently, for example, BP made investment decisions on the assumption of an oil price of \$20 a barrel, despite the prospects of prices remaining 'above \$30 per barrel in the medium term'<sup>15</sup>. Such caution has probably slowed global investment, placing pressure on existing capacity at the same time that economic growth in the US, China and emerging economies has gathered pace, raising demands for oil and other primary commodities. This trend is being compounded by the perceived threat of terrorism and political instability in countries traditionally providing a substantial source of energy and mineral sources.

There is also increasing interest in gas (see *Fig 2*). Demand is currently growing, and is forecast to grow, at a higher rate than oil over the next two decades. Field developments will be matched by investment in major transportation systems, either liquefied natural gas (LNG) or pipeline. Key regions include SE Asia, South America and linkage between Central Asia and Middle East to Europe. The trends are being driven in part by the availability of gas and in part by its attractions on environmental grounds, especially to European countries. There is also increased interest in the development of Gas-to-Liquids technology, where gas is concentrated into liquid to exploit smaller gas reserves. Finally, the importance of power generation as a market for gas is encouraging companies to become involved in both gas and power utilities.

As a result of these trends, attitudes in the host governments and states of NRNR commodity exports are rapidly changing, with increased effort to secure the best fiscal terms for both short-term revenues and long-term security. Closer attention is being paid to the structure of royalty payments, allocation of production, cost recovery corporate tax etc. The potential of high prices to be sustained means that not only do 'existing' exporters need to react to increased revenues, but that those countries poised either to dramatically increase their existing production or transform new resource discoveries into exports for the first time, need to ready themselves for strong revenue streams.

### 1.3 NRNR Booms and Increased Aid

Coincident with these trends in NRNR commodities is a concerted effort by multi-lateral and bi-lateral development assistance agencies to bridge the ‘financing gap’ in the fiscal regimes of poor nations, in order to meet national and international poverty reduction targets. *Table 1* shows calculations of the Millennium Development Goals (MDG) ‘financing gap’ for five low income countries. *Table 2* shows the coincidence of oil, gas and mineral exporting countries in sub-Saharan Africa, and the countries with an MDG Financing Gap (2015).

At the time that these calculations were first attempted, international donors had yet to commit to any substantial increase in aid, and many countries had few options to mobilise additional domestic resources. For a NRNR rich countries, both of these situations have now changed. Given this, the critical question is how policy makers and national planners will respond to this new and potentially historic coincidence.

**Table 1 MDG Investment Needs and Financing Gap for Five Countries<sup>16</sup>**

US\$/capita	Bangladesh			Cambodia			Ghana			Tanzania			Uganda		
	2006	2010	2015	2006	2010	2015	2006	2010	2015	2006	2010	2015	2006	2010	2015
<i>MDG investment needs</i>															
Hunger	2	4	8	4	7	13	3	5	12	4	7	14	3	5	10
Education	11	17	25	15	19	22	17	19	22	11	13	17	14	15	17
Gender equality	2	3	3	2	3	3	2	3	3	2	3	3	2	3	3
Health	13	19	30	14	21	32	18	24	34	24	33	48	25	32	44
Water supply and sanitation	4	5	6	3	5	8	6	7	10	4	5	12	2	3	9
Improving the lives of slum dwellers	2	3	4	3	3	4	2	2	3	3	3	4	2	2	3
Energy	20	19	20	9	13	23	13	15	18	14	15	18	6	10	19
Roads	12	21	31	12	21	31	11	10	10	13	21	31	13	20	27
Other	8	9	13	8	9	13	8	9	13	8	9	13	8	9	13
<b>Total</b>	<b>74</b>	<b>100</b>	<b>140</b>	<b>71</b>	<b>101</b>	<b>148</b>	<b>80</b>	<b>94</b>	<b>124</b>	<b>82</b>	<b>111</b>	<b>161</b>	<b>75</b>	<b>100</b>	<b>143</b>
<i>Sources of financing</i>															
Household contributions	8	10	14	9	13	18	9	11	15	9	11	17	8	9	14
Government expenditures	23	33	49	22	30	43	19	27	39	24	32	46	27	35	48
<b>MDG financing gap</b>	<b>43</b>	<b>56</b>	<b>77</b>	<b>40</b>	<b>58</b>	<b>87</b>	<b>52</b>	<b>57</b>	<b>70</b>	<b>50</b>	<b>67</b>	<b>98</b>	<b>41</b>	<b>56</b>	<b>80</b>

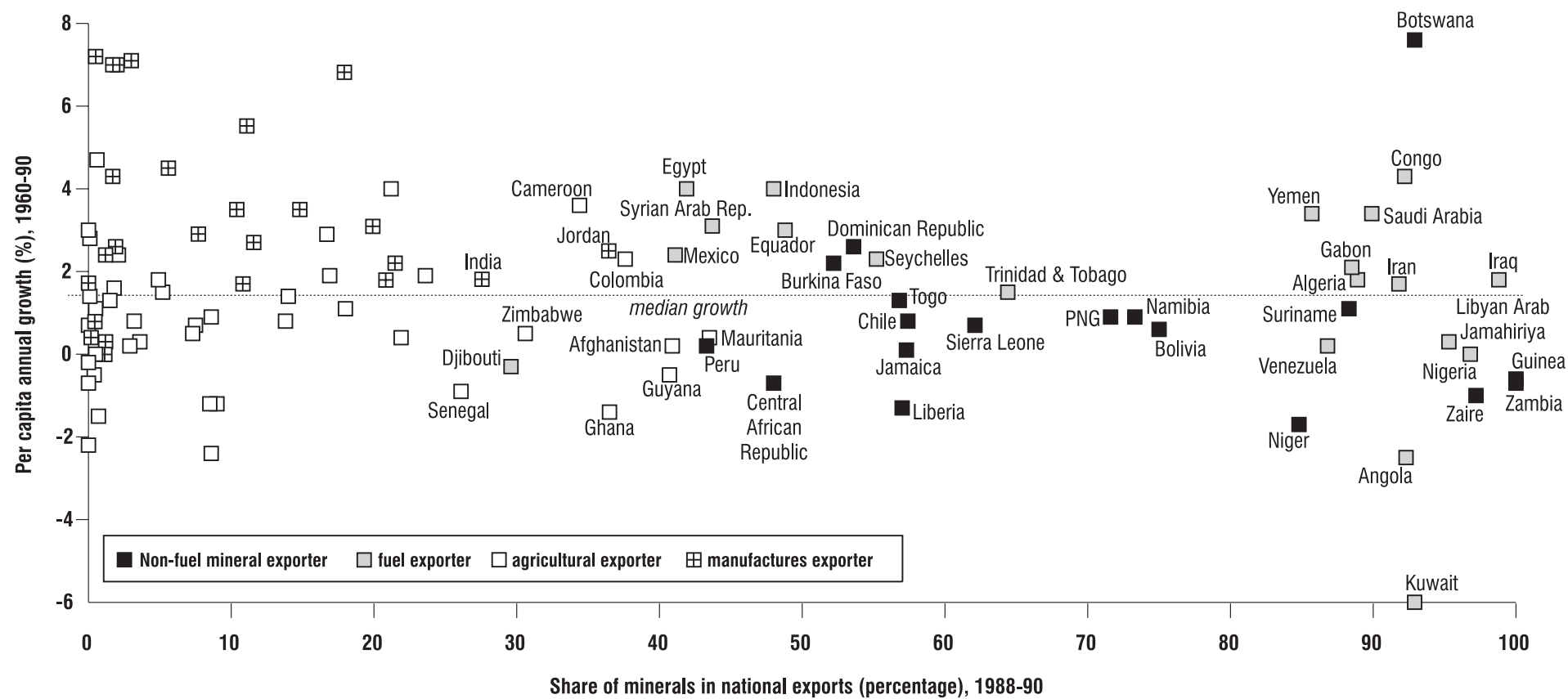
### 1.4 Patterns of Resource Dependency

*Fig 6* shows how the rate of a country’s per capita annual economic growth (1960 to 1990) varies with its level of dependence on fuel and minerals (non-fuel), as compared to dependence on agriculture or manufacturing. Notable is the clustering of countries exhibiting high levels of fuel and mineral dependency with negative per capita annual growth rates over the period. *Table 3* lists countries with existing total export revenues from natural resources of greater than 30%<sup>17</sup>. In essence these are countries vulnerable to ‘windfall’ revenues from recent increases in commodity prices. With respect to new discoveries, *Table 4* lists ‘first timers’: countries new to a major natural resource sector. Also included are countries anticipating a dramatic increase in their existing production volumes and revenues, ie those starting from a present, but low, baseline of production and exports.

**Table 2 Oil, Gas and Mineral Exporting Countries in sub-Saharan Africa, against MDG Top and High Priority Countries<sup>18</sup> and the MDG Financing Gap (2015)<sup>19</sup>**

Category	Country	MDG Priority Level		MDG Financing Gap			
		TOP: Failing/reversing progress for multiple goals	HIGH: Facing failed/reversing progress or progressing too slowly to meet multiple goals	None	<10%	10%-20%	20%>
> 10% of GDP from mineral exports <sup>20</sup>	Botswana		✓	✓			
	Sierra Leone	✓					✓
	Zambia	✓					✓
	Liberia	✓				✓	
	Democratic Republic of Congo	✓					✓
	Niger	✓					✓
> 30% of GDP from oil or gas exports <sup>21</sup>	Angola	✓			✓		
	Congo (Brazzaville)		✓		✓		
	Equatorial Guinea		✓	✓			
	Nigeria	✓		✓	✓		
	Gabon		✓	✓			
Other current African mineral, oil or gas exporters (<10% GDP)	Sudan		✓			✓	
	Cameroon	✓				✓	
	Chad		✓				✓
	Cote D'Ivoire	✓			✓		
	Ghana					✓	
	Togo	✓					✓
	South Africa		✓	✓			
	Tanzania	✓					✓
	Uganda						✓
	Zimbabwe	✓				✓	
Countries are either exploring for oil reserves or offering concessions	Benin	✓				✓	
	Central African Republic	✓					✓
	Ethiopia	✓					✓
	Guinea Bissau		✓				✓
	Kenya	✓					✓
	Madagascar	✓					✓
	Mali	✓					✓
	Malawi		✓				✓
	Mauritania	✓					✓
	Namibia		✓	✓			
	Senegal		✓		✓		
	Western Sahara			✓			

Fig 6 Economic growth and Mineral Export Dependency – 1960 – 1990<sup>22</sup>



**Table 3 Resource-Rich Countries Anticipating ‘Windfall’ Revenues from Recent Rises in Commodity Prices (oil, gas and minerals)**

Countries currently with > 30% total export revenues (Stevens, 2003b)			Performed better than previously thought (Stevens, 2003a)	Considered to have beaten the ‘curse’
Africa	Non-African low and low-middle income countries	Upper-middle and high income		
Algeria	Lao PDR	Brunei	Trinidad and Tobago	Australia
Angola	Papua New Guinea	Bahrain	Colombia	Botswana
Cameroon	Jamaica	Cyprus	Tunisia	Chile
Congo Brazzaville	Bolivia	Gabon		Indonesia
Dem Rep Congo	Ecuador	Greenland		Malaysia
Liberia	Egypt	Iran		Norway
Niger	Guyana	Iraq		
Nigeria	Kiribati	Jordan		
Senegal	Morocco	Kuwait		
Sierra Leone	Peru	Libya		
Togo		Mexico		
Zambia		New Caledonia		
		Mauritania		
		Norway		
		Oman		
		Panama		
		Qatar		
		Saudi Arabia		
		Seychelles		
		Syria		
		UAE		
		Venezuela		
		Virgin Islands		
		Yemen		

**Table 4 Potential ‘First Timers’ to Substantial Natural Resource Production and Countries Anticipating a Dramatic Increase in Existing Export Volumes – in period 2005 to 2015**

Category of Country	First Timers	Anticipating Substantial Increases in Existing Volumes
Low income countries	Chad Sao Tomé e Príncipe Cote D'Ivoire Malawi Ethiopia Central African Republic Benin Nepal Timor L'Este Cambodia	Tanzania Kenya Sudan Democratic Republic of Congo Sierra Leone Angola Equatorial Guinea
Low-middle income countries	Namibia	Philippines Azerbaijan Kazakhstan





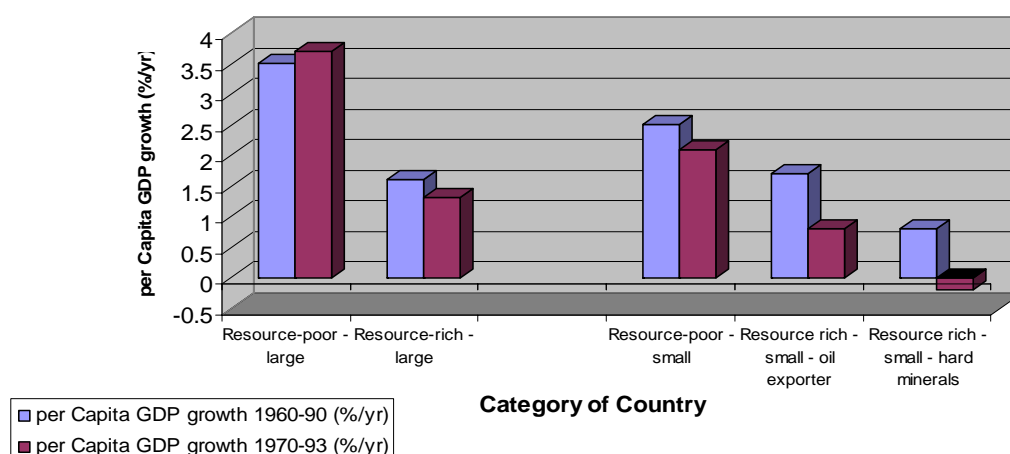
## 2. The 'Resource Curse'

The 'resource curse' is the phenomena whereby a country with an export-driven, natural resources sector, generating large revenues for government, leads paradoxically to economic stagnation and political instability. This section summaries the main causes, drivers and sustainers of the 'resource curse'. These transformational factors are analysed in terms of their differential effect on political stability and economic performance.

### 2.1 The Resource Curse and Poor Economic Performance

Recent studies have shown that countries with a strong natural resources sector have economically and socially under-performed compared with resource-deficient countries<sup>23 24 25 26 27 28 29</sup>. For example, evidence shows that between 1960 and 1990 per capita incomes in resource-deficient countries grew at rates two to three times faster than those of countries with a dominant export-driven non-renewable resources sector with rates widening from the 1970's onwards<sup>30</sup>. (See Fig 7). Small countries endowed with minerals suffer the most because they have less developed alternative sectors to off-set the effects of revenue volatility and/or long-term decline in production.

**Fig 7 Comparison of Economic Growth between of Resource-poor and Resource-rich Countries<sup>31</sup>**



These conclusions are not without critics. One group of scholars “point out that the reported negative outcomes of mineral economies are case-specific and that economic performance is mixed, heterogeneous and should not be generalized”<sup>32</sup>. Further, some challenge studies that judge the economic performance of resource rich countries by changes in time series data for annual per capita GDP<sup>33 34</sup>. They argue that a period of decline in real oil prices will inevitably generate a decline in per capita GDP, and that..”growth processes take place across the very long run and probably cannot be convincingly summarised by cross section regressions of one highly turbulent 20 year period at the end of the 20<sup>th</sup> Century”<sup>35</sup>.

An alternative is to look at non-oil, gas or mineral traded GDP, eg agriculture, tourism, manufacturing and services<sup>36</sup>. This criterion may be a better measure of whether natural resources are generating an economy that in the long-term is diversified and sustainable. It also makes sense in the context of the 'Dutch disease' given that these are the sectors most anticipated to contract.

Using this criterion, some of the countries frequently identified as suffering the 'resource curse' might have suffered less than supposed. This includes Colombia, Trinidad and Tobago and Suriname. There is also criticism of whether the countries usually identified as 'bucking' the resource curse trend – Botswana, Indonesia, Malaysia, Chile – have really done so well given their recent performance on poverty alleviation<sup>37</sup>.

Notwithstanding these counter arguments, there is considerable evidence that non-renewable natural resource revenues, especially ‘windfall’ revenues, can, if not properly managed, adversely affect economic growth. A wide number of explanations for these effects have been advanced, as follows.

### **2.1.1 *Worsened Income Inequality***

A number of studies<sup>38 39</sup> have shown that resource-abundance frequently leads to increased income inequality. Two reasons why this might occur are as follows. Firstly, oil, gas and mining industries are often characterised by their ‘enclave’ nature, with few forward and backward linkages into the economy. During production, such industries employ only a relatively small number of highly-skilled, well-paid workers, and generally import the majority of inputs<sup>40 41</sup>. Arguably more damaging is the possibility that what opportunity there is for manual and semi-skilled jobs (most specifically during construction) may be lost through the influx of cheap foreign construction labour and the trend towards global procurement and sourcing<sup>42</sup>.

Second, public expenditure may exacerbate inequality. This can result where expenditure is concentrated in the formal sector in towns and cities, skewing distribution against rural households<sup>43</sup>, or where it is orientated towards the interests of the wealthier classes, for example favouring the construction of a university over investment in rural roads. As a consequence of these factors society comes to identify the production and export of natural resources with the interests of the rich.

### **2.1.2 *Poor Performance in Poverty Alleviation***

Certain studies identify a relationship between an abundance of oil, gas and minerals and poor performance in poverty alleviation<sup>44 45</sup>. Examples include worsening infant and child mortality and life expectancy at birth. The effects are possibly more pronounced for non-fuel minerals. As one researcher paper concludes: *“for every 5 points that a country gains in ... [non-fuel] minerals dependence, it tends to drop 3.1 points in the HDI rankings [...] The effect in oil states is somewhat ambiguous: when we control for per capita income, oil wealth has a harmful effect on the standard of living; when we do not, we detect no correlation”*<sup>46</sup>. More generally, the extractive industries sectors are associated with a wide range of developmental impacts, both positive and adverse. Fig 8 shows various linkages between large-scale mining and different aspects of development.

### **2.1.3 *Dutch Disease and Crowding Out***

The Dutch Disease is the economic phenomenon in which the discovery and exploitation of natural resources deindustrialises a nation's economy. In essence, ‘both’ the value of a country's currency rises and domestic spending patterns and other internal resource allocation effects make tradable manufactured goods and other tradable sectors such as parts of the agricultural sector less competitive. Imports increase, exports decrease, productivity falls and there is a shift away from the tradable sector to the non-tradable, such as construction. In its simplest, most narrow sense, the Dutch disease is the ‘contraction of the tradable sector’<sup>47</sup>. Local farmers can suffer considerably with the pressure of relatively cheaper agricultural imports. The phenomenon was first observed in the Netherlands in the 1960s, when large reserves of natural gas in the North Sea were initially exploited<sup>48</sup>.

Mexico is often cited as a case in point. *“By 1982 virtually the entire non-oil economy became non-tradable i.e. in need of total protection or subsidies”*<sup>49</sup>. Venezuela is a commonly held example. Results suggest that Venezuelan growth was 0.77% lower due to natural resource intensity. This implies that at the end of the 20-year period in 1990, Venezuelan per-capita GDP was about 14% lower than it would have been if Venezuelan had no natural resources<sup>50</sup>.

**Fig 8 Linkages between Large-scale Mining and Aspects of Development**<sup>51</sup>

Economic Impacts	Positive Impacts	Negative Impacts
Macro Economic.	Fiscal flows.	Potential for Dutch Disease.
	Foreign exchange generation.	Poor governance of key economic factors such as exchange rates and interest rates.
	Significant economic multipliers.	Cyclical commodity price impacts on an unbalanced economy where there is heavy dependency on minerals.
Economic Development.	Associated economic and tertiary development.	Sudden end of economic opportunities and employment in the context of mine closure.
	Significant opportunities for SME development.	
	Upstream and downstream opportunities.	Competing for resources (land, water, infrastructure) can create barriers in other economic sectors.
	Job creation.	Contractions of mining activity can create major unemployment in an undiversified economy.
	Mining infrastructure and related secondary and tertiary industries catalyse and create an enabling environment for cross sectoral development.	Income security of non-mining activities compromised by increases in income resulting from high-income levels for miners.
Socio-economic Factors Infrastructure Development.	Physical.	Dependency on mining related infrastructure leads to collapse of infrastructure with mine-closure.
	Social.	Rapid change in the economic and social fabric of society. Threats to indigenous land rights and usufruct on infringement by powerful mining companies. Social tensions and local price inflation due to large migration of job seekers. Conflicts between original residents and newcomers. Substance abuse, prostitution, HIV/AIDS and STDs.
	Industrial. Commercial. Administrative.	
		Government tendency to leave service delivery to mining companies exacerbates community dependency on mining infrastructure and services.
Skills Development.	Life skills.	Work-related health risks, widespread HIV, alcoholism, and related gender issues.
	Vocational skills.	Over reliance on non-transferable mining skills.
Empowerment.	Economic empowerment.	Corruption: Benefit of mining diverted for personal /political gain.
	Political empowerment.	Risks to political stability – mineral revenues fund conflict; competition for mineral resources fuels political and civil conflict.
	Presence and development of local government Capacity.	High level of corruption can keep the poor further excluded from decision-making processes.
	Community capacity through consultative partnerships with NGOs and mining companies building reduces vulnerability.	Development of culture of dependence on mining incomes and infrastructure.
		Local communities often excluded from planning and decision making processes on issues of fundamental importance to their interests.
Social Security.	Security of food supply.	Development of community dependence on mining incomes.
	Shelter.	Dependence on mining accommodation and infrastructure.
	Health care.	Increase in disease vectors sp. HIV/AIDS.
	Crime prevention and control.	Increase in local money flow in mine dependent communities encourages crime.
Environmental Impacts	Economic empowerment reduces the impact of poverty on the environment.	Inter-sectoral competition for critical natural resources and infrastructure.
	Deforestation for domestic fuel, charcoal making, land clearance for subsistence farming, overgrazing, water pollution.	Environmental risks and impacts on health and environment (tailings, toxic waste, waste management, water, soil and air pollution, dust, land disturbance, deforestation).

Much of the literature divides the effect into a 'resource movement effect', a 'spending' effect and an 'exchange rate' effect. The resource movement effect is where the lucrative natural resource sector drains resources (talent, capital, public spending etc) from other sectors, tradable or non-tradable, so depressing their growth. The resource movement has the effect of 'crowding out' other sectors as the dominant oil, gas or mining industry makes first claim on scarce resources (local capital, skills, infrastructure, suppliers). This effect is particularly dramatic in smaller countries when the size of the investment project is large or where there are strong sub-national, regional dimensions to an economy and the project is focussed in one region. In particular, the concept is relevant to the transition economies, where the process of transition has effectively destroyed the old productive base and a new and private tradable sector, eg manufacturing, is struggling to emerge<sup>52</sup>.

The 'spending effect' takes place when the 'windfall' of revenues in the natural resource creates a rising demand (and thus inflation) in other sectors in the economy, both tradable and non-tradable. Since the tradable sectors have prices determined by international markets, the country soon becomes internationally uncompetitive in that sector.

### 2.1.4 Debt Obligations

One legacy of the 1970's oil boom was an excess of capital in the global markets and relaxation in prudence in the provision of debt to non-resource nations. Consequently, low growth and reduced levels of productive investment by many developing countries governments during the 1980s was due in part to large payments on government debt obligations<sup>53</sup>. Unsustainable debt obligations did not only affect non-resource countries. *"Mineral exporting countries appear to be especially vulnerable to debt crises, in part because of past nationalizations and in part because of the instability of export revenues."*<sup>54</sup> With high and rising energy and mineral prices, there is the risk that the 1970's debt problems will again resurface.

### 2.1.5 Economic Policy Failure

Linked to the Dutch disease is the effect that natural resource revenues has in exposing existing policy failure, eg in economic investment, regulatory reform and trade. For example, policy decisions on economic diversification – choices governments make in supporting regulatory reform, skills development, business support, public investment physical infrastructure such as ports and roads - will effect the way in which the Dutch disease impacts on the economy. There at least two features here:

- ▶ the effect of resource 'booms' (via government investment and industrial policy) on tradable vs non-tradable sectors; and
- ▶ the differential effect of this impact depending on whether government policy is skewed towards sectors that are 'close to', or 'far from', the natural resource market.

On the first variable, on study concludes that *'the question of whether the resource earnings could 'sow the seeds' of development, depends in our model on whether the increasing-returns-to-scale (IRS) production is in the tradeables or the non-tradeables sectors. When the IRS sector is non-tradeable, a resource boom can indeed pull more goods into that sector [create more demand], and thereby set off a dynamic growth process. When the IRS sector is in tradeable manufactures, a resource boom can frustrate growth, via the Dutch disease phenomenon'*<sup>55</sup>. It also matters whether investment policy promotes growth in non-tradable sectors that is consumptive or productive. For example, in the Russian economy at present, little of the revenues are being channelled into the productive non-tradable sector. Instead *"Moscow has experienced a frothy rise in consumer consumption and real estate prices"*<sup>56</sup>.

On the second variable, if the natural resource sector is closely integrated with other tradable sectors in the economy, eg specialist component suppliers or engineering and construction services, then resources are more likely to be drained out of these sectors. The same is so for the non-tradable sectors, eg public infrastructure, non-traded crops. As noted, *"the national oil companies are often the largest local enterprises by a wide margin and they enjoy a near monopoly on local technical and commercial talent."*<sup>57</sup> In this 'close to market' scenario, with regard to the 'spending effect' although the tradable sectors will benefit from an increased domestic demand in the short-term, in the medium term domestic inflationary effects and exchange rate appreciation are likely to reduce international competitiveness. Conversely, the 'close to market' non-tradable sectors may benefit in both the short and medium term, ie from increased domestic demand driven by the natural resource sector, with less competitive downside (although domestic price inflation may dampen growth over time).

Economic policy that promotes separation of natural resource sector from other sectors – a *far from market* scenario – is likely to see less risk of resource 'draining' or declining international competitiveness of the tradable sector. But there are also less substantial growth benefits likely to accrue to the non-tradable sectors.

### 2.1.6 Trade Regime Failure

A common response to the erosion of export competitiveness in the tradable (non-natural resource) sectors is for governments to use the revenues to support trade subsidies. One of the main causes of policy failure in resource-rich countries is arguably that governments distort the

economy by protecting 'non-booming tradeables'. These subsidies are often unsustainable when revenues fall, exposing the supported sector to the full force of international competition, and undermining the prospects of sustaining economic growth in the long term.

Thus in general an 'open', rather than a 'closed' trade policy is frequently advocated to beat the 'resource curse'. The exception is where subsidies are targeted to attract foreign companies carrying specific downward or upward linkage attributes, such as in fabrication, power generation and refining. The aim here is to establish industries (non-tradable, or tradable in the medium term) that will generate a 'mid-stream' economic multiplier effect out of 'upstream' oil, gas or metals and mineral production.

### **2.1.7 Slow Skill Accumulation**

Based on empirical data, it has been concluded that resource-abundance leads to lagging skill accumulation, which then lowers the rate of economic growth<sup>58</sup>, not least in the non-natural resource sectors. High levels of natural resource revenues divert attention from the process of wealth creation, and institutional and human development. A case in point is the potential for reducing attention to human capital. Countries that rely on natural resource exports may neglect education because they see no immediate need for it.

### **2.1.8 Unfulfilled Public Expectations**

Knowledge that government is in receipt of large flows of natural resource revenues also raises public expectations, encouraging rapid public spending and related public expenditure problems, eg lack of 'due diligence' and co-ordinated planning. Natural resource endowment provides more scope than resource-paucity does for this type of cumulative policy failure. As has been argued, resource-rich countries are more susceptible to a politicised economy in which vested interests vie to capture resource surpluses (rents) at the expense of policy coherence<sup>59</sup>. The link between natural resource revenues and economic collapse is summarised in *Box 1*.

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#### ***Box 1 How Policy Failure Can Lead to Economic Collapse in Resource-Rich Countries***<sup>60</sup>

A prolonged dependence on primary product exports means that the labour-intensive stage of competitive industrialisation is leapfrogged. Income inequality therefore remains high and skills accumulate slowly. Fears of 'Dutch Disease' (the contraction of tradable agriculture and industry) and unemployment encourage trade policy closure so that manufacturing matures slowly, if at all. Yet governments resist the politically unpopular reform that is required to restore growth. Instead they either borrow from abroad or squeeze the primary sector further. Incentives in farming and mining are depressed, competitiveness wanes and the economy becomes vulnerable to even mild shocks. Both social capital (the trust and institutions required to lower transaction costs) and natural capital are depleted so that growth is not sustainable. *Economic growth then collapses.*

The basic policy flaw is the use of resource surpluses to relax market discipline so that investment efficiency declines. Recovery from a growth collapse takes decades because it requires the rebuilding of economic infrastructure and social capital. Growth collapse was most acute in the small resource-rich economies, whose diversification options tend to be fewer, and especially where the resource surpluses accrue mainly to the government, as in the mineral economies and transition economies.

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### **2.1.9 Decline in Administrative and Fiscal Efficiency**

The intra-governmental distribution of 'windfall' revenues can re-position government departments as key drivers of economic growth. However, a lack of policy and administrative absorptive capacity in the public sector frequently leaves governments departments and regulatory frameworks ill-prepared for the challenge of translating resource revenues into economic development. This in turn fuels inefficiencies in public sector management and can lead to excessive spending (e.g. on social expenditure, public infrastructure). This engenders political pressures to sustain the high levels of recurrent expenditure, which, in some societies, carries with it security risks if levels cannot be maintained.

Eroding of the local tax base and post-boom declines in export revenues serves to exacerbate this problem<sup>61</sup>. Much of a 'government's strength' comes from its capacity to extract taxes from the population, a capacity often built up considerably over time. Governments that fail to maintain this tax-raising capability during 'resource booms' are likely to be unable to resume the provision of public goods or ameliorate social conflicts once the revenues from the boom recede<sup>62</sup>. This effect can be particularly marked in resource-producing rural regions, where the local tax base may be all but wiped out by the distribution of resource revenues from national government to the provinces.

### 2.1.10 Inter-Generational Inequality

There is evidence of the unsustainability of growth in the smaller resource-rich developing countries in the 1970s and 1980s due to the 'once-and-for-all' consumption of natural capital, and the disregard to intergenerational benefits<sup>63</sup>. Economic policies in Norway epitomises how this trend might be reversed - how intergenerational equality can be built on the careful saving of a country's natural resource endowment. In essence the policy is for non-renewable resources 'in the ground' to be transformed into financial assets 'above ground' in ways that ensure intergenerational benefits. The Norwegian government recently committed \$8 million per year of technical assistance to aid resource-endowed countries through sharing their expertise and experiences in revenue management.

### 2.1.11 Corruption and the Political Economy

The concentrations of capital expenditure during the development stage of oil, gas and mining projects, and subsequent large flows of revenues into government, provide ample opportunity for corruption and other manifestations of the political economy including 'leakage', clientelism, patronage and 'raiding', by elites or bureaucracies. These problems can be exacerbated by the use of 'off-budget' accounts (including those established by national oil companies). Such accounts are in general more prone to corruption because they fall outside the supervision of government auditors<sup>64</sup>.

As has been concluded, "*resource-rich countries such as the mineral economies tend to be associated with factional or predatory [rather than developmental] states, which may repress a potentially dynamic peasant society and deflect a country from pursuing a development strategy in line with its underlying comparative advantage*"<sup>65</sup>. One example of resource-linked corruption is Angola. Almost \$1 billion are reported to have disappeared from the Angolan government's accounts in 2001 due to corruption<sup>66</sup>. Another example is the Sani Abacha family, who are estimated to have 'looted' \$4-\$6 billion from the Nigerian state during the period in which the international community provided \$1.1 billion of development assistance<sup>67</sup>. A typology of corruption practices is provided in Box 2.

<b>Box 2 A Typology of Corrupt Practices<sup>68</sup></b>		
<b>Type</b>	<b>Main actors</b>	<b>Mode</b>
Incidental	Petty officials, interested officials, opportunistic individuals.	Small-scale embezzlement and misappropriation; bribes, favouritism and discrimination.
Systematic	Public officials; politicians; representatives of donor and recipient countries; bureaucratic elites; businessmen and middlemen	Bribery and kickbacks; collusion to defraud the public; large-scale embezzlement and misappropriation through public tender and disposal of public property; economic privileges accorded to special interests; large political donations and bribes.
Systemic	Bureaucratic elites; politicians; businessmen; white-collar workers	Large-scale embezzlement through "ghost worker" on government payroll; embezzling government funds through false procurement – payment for non-existent goods; large-scale disbursement of public property to special and privileged interests under the pretext of "national interest".

### 2.1.12 Rent-Seeking

*Rent-seeking* behaviour, distinguished in theory from *profit-seeking* behaviour, is where entities seek to extract value by engaging in mutually beneficial transactions. In the context of natural resource revenues, rent-seeking collusion can take place between extractive industry firms (in particular national owned or controlled companies) and government agencies ministries of energy petroleum and mining, finance, economic planning and infrastructure as well as business suppliers. It is apparent in particular when a firm applies to a government agency for various forms of permission or approval. In essence, rent-seeking is about any form of 'artificially contrived transaction', and is more pronounced in resource rich-countries because of the large revenues circulating which some believe induce a 'feeding frenzy'. Although debated at the margins, there is broad agreement that rent-seeking behaviour slows economic progress<sup>69 70 71</sup>. The experiences of Trinidad and Tobago in the early 1970s is cited as an example<sup>72</sup>. One difficulty is that rent seeking, and even corruption, is frequently mixed up with patterns of neo-patrimonialism, or at the least different conceptions or limited consensus in society as to what constitutes an abuse of power.

### 2.1.13 Localised Resource Curse

Income inequality, poor performance in poverty reduction, corruption and rent-seeking may all be intensified in the resource producing regions of a country. These same problems can also provide a potential source of grievance to underpin civil conflict and claims on succession. The key problem seems to be one of a failure of communities in the producing region to accrue tangible benefits from their hosting of the industry.

A study by the World Bank as part of the Extractive Industries Review found that, "*all stakeholders groups recognise that the distribution of benefits and costs is the crucial issue in EI [Extractive Industries]*"... and yet the "*IFC [along with other development banks and many companies] typically has not calculated shares accruing to different levels of government or accruing direct to local communities*"<sup>73</sup>. A variety of explanations are given for this apparent 'economic benefits gap' in producing regions<sup>74</sup>. These include:

- ▶ the long cost-recovery periods for capital investment;
- ▶ inefficiencies in public sector expenditure management at the national and provincial level;
- ▶ the short-term nature of the majority of employment opportunities;
- ▶ technical constraints to supply chain access for local firms;
- ▶ community investment narrowly targeted at directly affected people; and
- ▶ relatively low-level direct tax receipts by municipal and provincial authorities

### 2.1.14 Factors of Poor Economic Performance in Resource-Rich Countries

*"The resource curse phenomenon 'is not an iron law, rather it is a strong recurrent tendency'"*<sup>75</sup>

Linkage between natural resource revenues and poor economic performance differs in propensity and multitude of many reasons. As one author cautions: "there is a 'lack of clarity' on these factors, in particular what weighting to be given to which, and in what peculiar circumstances...Although certain effects appear to be statistically significant, there is no consensus on what precisely causes the resource curse or the sure pathways to a blessing"<sup>76</sup>. Some of the possible factors of poor economic performance in resource-rich countries are listed in Box 3.



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**Box 3 Possible Factors of Poor Economic Performance in Resource-Rich Countries**<sup>77 78 79 80 81</sup>

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- ▶ Differences in the **nature and geography of the natural resource sector**, ie oil vs gas vs heavy minerals, and the rate and extent of development in the sector and geographically.
  - ▶ **Relative economic importance** of the natural resource sector to a country, in terms of GDP, linkage to other economic sectors, population size (eg barrels per capita), government receipts as proportion of national income (ie small resource-rich countries seem to suffer from the resource curse more than large ones).
  - ▶ Differences in the **level of economic development** of a country, eg per capita income, GDP, HDI, MDG
  - ▶ **General attitude** of politicians and civil service – public interest vs personal gain, or ‘development state’ vs ‘predatory state’, ie whether decisions on revenues expenditure are independent of politicians’ whims.
  - ▶ Extent of **commodity price and revenue volatility** – scale, frequency, eg the highly volatile period in 1970s
  - ▶ Absorptive capacity of existing **governance** system at the national, provincial and district levels. There is no evidence that democracy itself is a determinant for successful economic performance in the face of windfalls from natural resource development: ‘even democratic states in Africa typically lack the institutional capability to adequately respond to negative economic shocks and avert conflict’ (Van de Walle, 2002). More important seems to be the need to remove rent seeking and corruption, and to this end many aspects of good governance are relevant factors. These include the extent of revenue and expenditure transparency, political accountability and responsiveness, political stability (nationally and in producing sub-regions of states), government effectiveness (eg policy delivery, regulatory quality and enforcement), the rule of law and enforcement, and the prior extent of rent-seeking and corruption. Various measures of good governance are given in *Annex 1*.
  - ▶ Absorptive capacity of existing **institutions and human capacities**, such as the development of budget allocation and expenditure frameworks, staff performance systems, skills developing in revenue management, and basic education. Stevens (2003) argues that we need to look closely at natural resource-driven economic growth models in the context of the ‘institutional capacity of society’.
  - ▶ Absorptive capacity of existing **physical infrastructure**, eg the likelihood of bottlenecks in the physical capacity of existing schools, hospitals, roads, ports, power etc (bottlenecks), and equipment, various inputs and staff required to run them (eg oil revenues spent on school buildings when there are no trained teachers to staff them).
  - ▶ absorptive capacity of the existing **policy framework** and **policy making** capacities for resource revenue-based economic growth:
    - ▶ design of resource revenue agreements with governments and NOCs, eg PSCs
    - ▶ legal framework for revenue distribution and allocation
    - ▶ industrial, investment and macro economic policy
    - ▶ public investment strategies
  - ▶ extent of existing **tax base** (ie a key part of the ‘social contract’ inherent within a responsive democratic system), and the likelihood that this will be undermined by the influx of resource rents; and
  - ▶ extent of existing **political consensus** on ‘what to do’ with natural resource revenues.
  - ▶ **period of export contracts** – current geopolitical competition amongst major importers of oil, gas and minerals is tending to focus on agreeing commercial contracts to secure short-term needs. Such short-term contracts are likely to reduce incentives on rich elites to tackle the fundamental problems of economic decline, institutional reform and inequality.
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## 2.2 The 'Resource Curse' and Political Instability

There appears to be a statistical and theoretical explanation for the link between a country's abundance of natural resources and an increased risk of violent conflict<sup>82 83</sup>. With a focus on civil war "*the most powerful risk factor is that countries which have a substantial share of their income (GDP) coming from the export of primary commodities are radically more at risk of conflict*"<sup>84</sup>. With primary commodities at 26% of GDP an average country has a 23% risk of civil war in any given five year period. However, if the same country has no primary commodities sector this risk falls to 0.5%<sup>85</sup>.

Other factors do statistically increase the risk of conflict, but possibly less so than the 'resource curse'. These include: geography, history, economic decline, rate of population growth, economic opportunity (eg access to secondary education) and ethnic dominance. Some further factors, which received wisdom suggest 'should' contribute to the risk of civil conflict, cannot be statistically proven. This includes income inequality and ethnic diversity. It should be noted however that the conclusions drawn from the statistical analysis (discussed below) are, in some quarters, controversial, not least the extent to which legitimate social and economic grievances underpin violence, and the use of statistics in this way.

There are at least two separate explanations offered in the literature for linkage between resource endowment and civil conflict. The first has to do with *economic predation*, the second *economic stagnation*.

### 2.2.1 Economic Predation

Some argue that rebel forces and civil war are less underpinned by 'objective grievances' – lack of employment, deficiencies in social services, justice, environmental impacts etc. - and more the result of an opportunity for economic predation<sup>86</sup>. This 'opportunity' then translates into use of force by rebel groups to extort goods or money from their legitimate owners through hostage taking, bribes, facilitation payments, protection and the practice of 'booty futures'. Boxes 4 and 5 provide illustrations.

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#### **Box 4** *Illustration of the Proposition that Economic Predation, and not Objective Grievance, Underpins the Natural Resource Curse*<sup>87</sup>

In the late 1990's a rebel organisation in Sierra Leone built itself into around 20,000 recruits and opposed the government. The organisation produced the usual litany of grievances, and its very scale suggested that it had widespread support. Sierra Leone is however a major exporter of diamonds and there is considerable evidence that the rebel organisation was involved in this business on a large scale. During peace negotiations the rebel leader was offered and accepted the vice-presidency of the country. This, we imagine, would be a good basis for rebel grievances to be addressed. However, this was not sufficient to persuade the rebel leader to accept the peace settlement. He had one further demand, which once conceded, produced (temporary) settlement. His demand was to be the Minister of Mining.

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#### **Box 5** *Booty Future*<sup>88</sup>

'Booty futures' are advance rights granted by a rebel group to companies to extract natural resources in areas that the rebels hope to capture during a civil conflict. Rebel groups sell these rights to raise finance to fund their offensive. 'Unique to Africa, 'booty futures' have been used to initiate at least one, and prolong at least three armed struggles' (p388).

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It is the extent of the opportunity to raise revenue, that some argue is the driving force linking natural resource production to armed conflict. Primary commodities - plantations, forests, oil, gas and minerals - "are the most lootable of all economic activities"<sup>89</sup> for a number of reasons:

- ▶ resources are geographically fixed and cannot relocate;
- ▶ resource extraction requires relatively low on-going operational investment to maintain the productivity of the initial physical infrastructure; and
- ▶ produce is usually exported offering many 'choke' points for easy extortion, such as pipelines, roads and ports.

The non-renewable natural resources of oil, gas and minerals are at present some of the more lucrative of primary commodities. It is argued that countries so endowed present a motivation for the formation of rebel groups or raising of militia, as well as the necessary fuel to keep them going and to grow. For example, in Colombia in 2000, rebel groups have used the bombing of pipelines to extort an estimated annual \$140 million, enabling one group - the National Liberation Army (ELN) - to grow from fewer than 40 members to at 3,000<sup>90</sup>.

There is also a case that some minerals - alluvial gemstones, coltan or tanzalite etc - because they require less capital investment, may present a greater risk to political security than capital intensive upstream oil and gas or deep mine minerals. As described by one author: *"These kinds of mineral deposits attract large numbers of artisanal miners to what are typically rural, 'frontier' regions, where the government's influence is weak. Land claims in these areas become valuable, yet the weakness of the government's authority makes it hard for claimants to enforce or protect their property rights through legal measures. As a result, they often resort to extralegal measures, including violence, to establish claims and adjudicate disputes. The utility of violence creates a demand for organizations - like criminal gangs, warlords, and rogue military units - that for a price will use extralegal means to enforce mineral claims"*<sup>91</sup>.

## **2.2.2 Economic Stagnation**

Other research concludes that a country's state of economic development and not its natural resource abundance is the key risk factor in civil conflict. Studies show that a five-percentage-point fall in annual economic growth increases the likelihood of a civil conflict in the following year by over 12 percentage<sup>92</sup>. One explanation for this finding is that low national income leads to weaker militaries and worse infrastructure and, thus, makes it difficult for poor governments to repress insurgencies<sup>93</sup>.

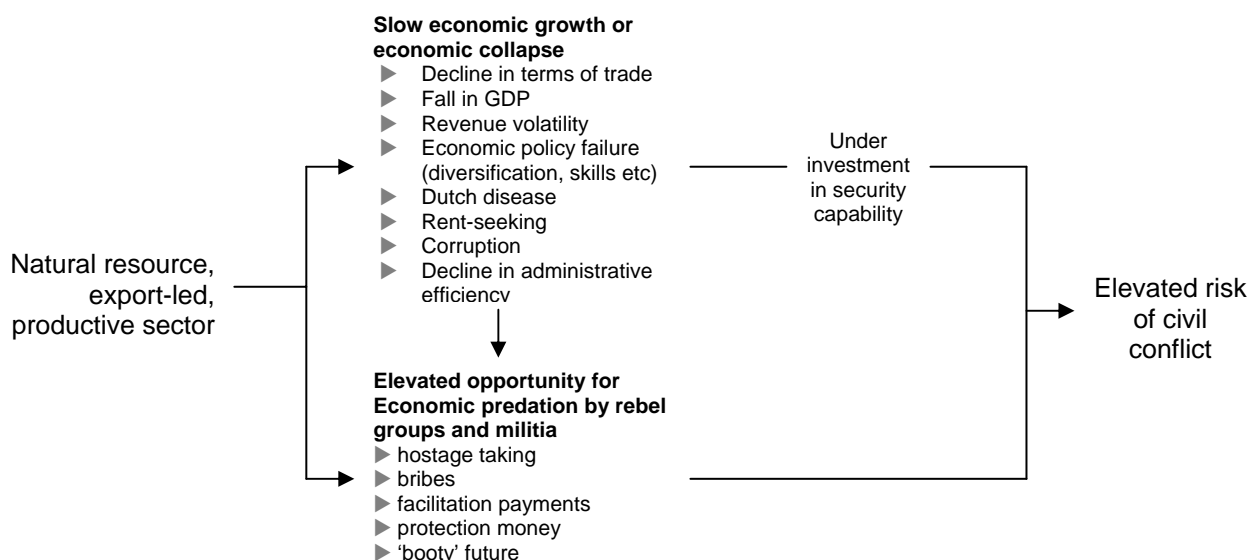
Clearly, economic decline, natural resource abundance and civil conflict are intertwined. Indeed, natural resource dependence can arguably promote civil war through four types of effects<sup>94</sup>, by:

- ▶ harming a country's economic performance;
- ▶ making its government weaker, more corrupt, and less accountable;
- ▶ giving people who live in resource-rich regions an incentive to form independent states; and
- ▶ helping finance rebel movements.

Whether the presence of a dominant natural resource export sector leads directly to civil conflicts due to the heightened opportunity for economic predation by rebel groups, or leads more indirectly to civil conflicts due its adverse impact on economic growth and thus on government military capability, the result seems the same: resource-rich countries have an elevated propensity to civil conflict.

*Fig 9* summarises the two principal cause-effect scenarios currently supported by statistical evidence for a link between natural resource abundance and civil conflict.

**Fig 9 Two Cause-Effect Scenarios Supporting a Link between Natural Resource Abundance and Civil Conflict**



### 2.2.3 Factors of Political Instability in Resource-Rich Countries

A range of factors influence the overall risk of civil war, and 'might' also contribute to linkage between natural resource endowment and civil conflict. These factors are summarised in *Box 6*, divided into pre-conflict and post-conflict situations.

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#### **Box 6 Possible Factors of Linkage between Natural Resources and Civil Conflict**<sup>95 96 97</sup>

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##### Pre-Conflict Situations

- ▶ **Realising the benefits predation** – returns from the sale of extorted commodities will depend on the ease with which they can be sold on, both to criminal and legitimate customers.
  - ▶ **Geography** - how hard it is for a government to control a rebel force within the landscape.
  - ▶ **History** – if a country has recently had civil war it is more likely to return to violence (see post-conflict situation below).
  - ▶ **Diasporas** – ethnic or national groups forced or induced to leave their traditional homeland and establish themselves in other countries or regions. These peoples often have romanticised attachments to their group of origin and may nurse grievances as a form of asserting continued belonging. They also tend to be richer and so can afford to 'finance vengeance' and exert pressure for succession.
  - ▶ **Economic opportunities and benefit** - in countries where incomes and economic development is slow or declining, people may gain economically by joining rebel groups (they also tend not to have access to the same opportunity to, or benefits from, joining government forces).
  - ▶ **Population size and rate of growth** – large, unemployed, populations, and without schooling, are possibly more likely to be recruited to rebel organisations.
  - ▶ **Level of tax base** – where the proportion of national income in taxes is very low - eg less than 10% - this may work against the 'social contract' between the political elite and the people, engendering collective and shared grievance.
  - ▶ **Ethnic composition** – ethnic diversity means that there are many different interests (and grievances) within society. Thus it is arguably more difficult for a protest movement to gather the momentum needed to generate the singularity and magnitude of grievance needed to underpin economic predatory actions. Conversely, a dominant single ethnic group (eg between 45% and 90% of the population) has the political power and interests to exploit the minority. This can lead to 'the
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**Box 6 Possible Factors of Linkage between Natural Resources and Civil Conflict**<sup>95 96 97</sup>

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behaviour of despair' and potentially demands for succession by the minority. An argument can be made that it actually makes little difference whether the majority or minority are in power (eg Sri Lanka vs Rwanda). The risks posed by ethnic dominance are likely to be higher where geographically the politically weaker are located in the oil producing regions (eg Nigeria, Iraq).

#### Post Conflict Situations

- ▶ All the above
  - ▶ **Military capability** – following a civil war the rebel forces (or the beaten government forces) will have a military capability. The extent, rate and success of demilitarization and demobilisation will be factors relevant to the risk of resurgence.
  - ▶ **Political capability** – the extent to which the democratic process allows rebel forces to be integrated into the political process.
  - ▶ **Established grievances** - following a civil war or armed rebellion based on natural resource predation, whether the rebel group has won or lost, within a large part of society there will be a collective consciousness around a set of political, social or economic grievances, ie the legitimate or exaggerated grievances promoted by the rebel group to justify their existence and acts of predation. Whether real or exaggerated, demonstrably satisfying these grievances may be a factor in whether violence is resumed.
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### 3. International Experiences in Managing the Risks and Realising the Opportunities

#### 3.1 Introduction

As noted, there is a degree of consensus that the economic aspects of the resource curse are not inevitable – that revenue ‘windfalls’ in the tradable sector need not inevitably lead to economic decline, rapid inflation and political instability. Sound government policy and good governance seem to have enabled a handful of resource-rich countries to ‘reverse the curse’. Conversely, it is poor government policy and governance that creates the failure<sup>98 99 100 101</sup>. A wide range of factors complicate the intervention of government to manage resource ‘booms’. In transition economies implementing the right policy response is perhaps even more difficult, since the whole aim of transition economies is to reduce the role of the state in the economy.

This section presents a series of strategies for more effective resource revenue management, divided into economic policy and fiscal management, institutional strengthening and human capacity building; linking resource revenue management to aid; and investment risk and conflict prevention. Interspersed are various case-notes from different countries working to management NRNR revenues. *Box 7* lists the strategic areas for managing the ‘resource curse’ discussed.

Formulation of policy to manage NRNR revenues and prepare related budgets and development plans, requires a strategic, and staged, approach. The landscape of NRNR revenue management is complex (see *Fig 10*). Scanning for constraints and entry points within this landscape is a key part of devising feasible interventions, both in the short and long-term. Another key aspect is to develop robust ‘principles’ with which to drive the assessment of policy and planning options.

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#### ***Box 7 Strategic Areas for Natural Resource Revenue Management***

##### **Economic Policy and Fiscal Management**

- ▶ Slow Down Pace of Development
- ▶ Revenue Smoothing through Host Country Agreements
- ▶ Exchange Rate Policy
- ▶ Revenue Stabilisation
- ▶ Sectoral Diversification Policy – close to resource market
- ▶ Sectoral Diversification Policy – far from resource market
- ▶ Sequencing of Economic Policy Initiatives

##### **Good Governance and Capacity Building**

- ▶ Anti-corruption Measures
- ▶ Institutional Strengthening and Human Capacity Building – national level
- ▶ Institutional Strengthening and Human Capacity Building – provincial and municipal level
- ▶ Transparency and Civil Society Participation

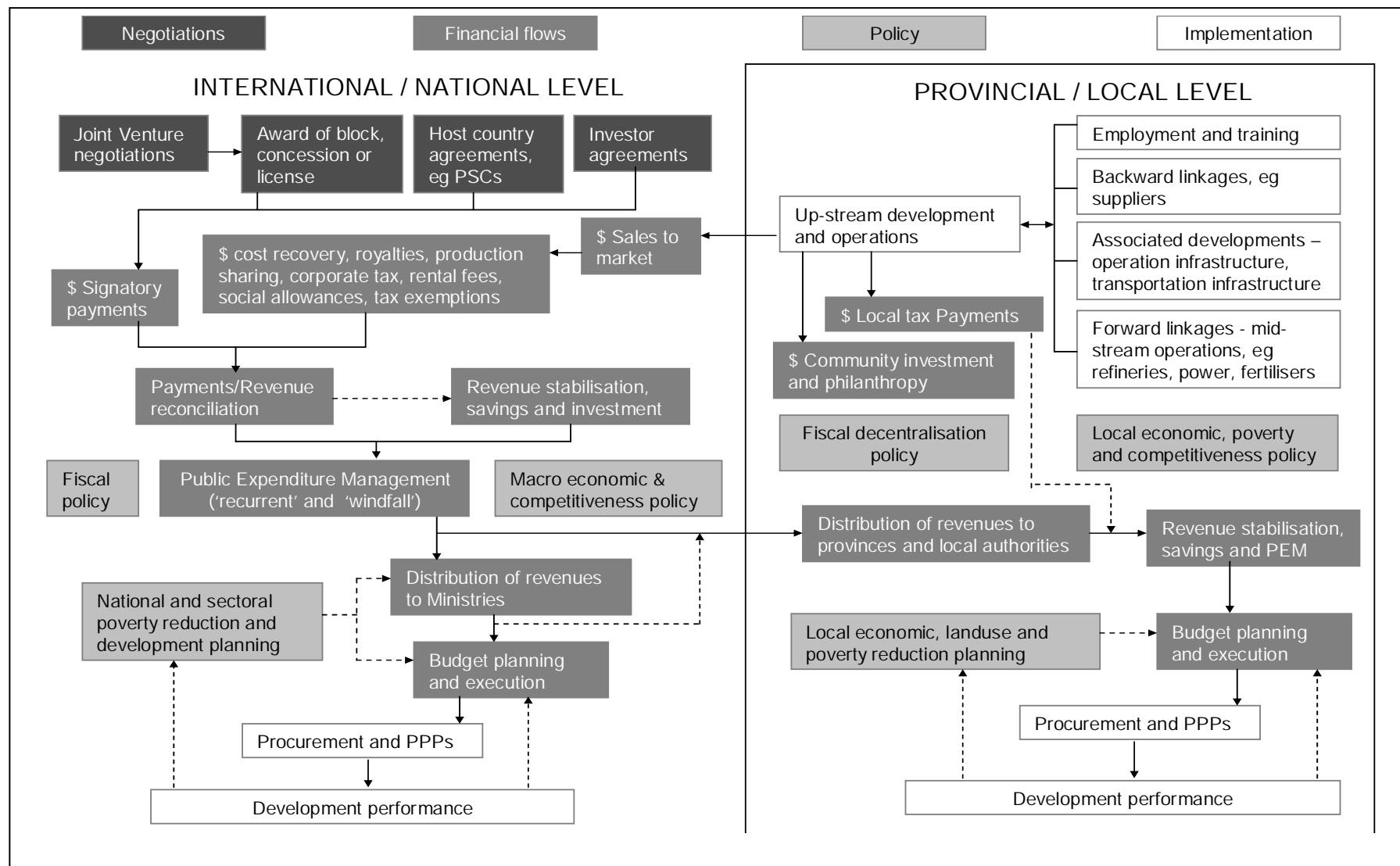
##### **Linking Resource Revenue Management to Aid**

- ▶ Aid and ‘Big Push’ Theory
- ▶ Aid, Dutch Disease and Macroeconomic Policy
- ▶ Government Revenues and General Budget Support
- ▶ Linking Resource Revenue Management to Aid
- ▶ Alignment of General Budget Support with Natural Resource Revenue Management
- ▶ Aid as a Catalyst to Enhance the Developmental Impact of Natural Resource Revenues

##### **Investment Risk and Conflict Prevention**

- ▶ Assessing Investment Risks
  - ▶ Linking Resource Revenue Management to Conflict Prevention
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**Fig 10 Framework for Identifying Constraints and Entry Points for NRNR Revenue Management**



## 3.2 Economic Policy and Fiscal Management

### 3.2.1 Introduction

Table 5 shows the outcomes of implementing three highly characterized suites of economic, fiscal and economic policy in the context of NRNR revenues<sup>102</sup>. A moderately interventionist strategy – for example compensatory export subsidies, competitive depreciation of exchange rate and tightly targeted sectoral incentives, based on comparative advantage – means that the sector takes longer to reach maturity and suffers inflation, but also sees more rapid GDP growth and less pronounced income inequality. The least performing strategy involves letting the exchange rate become overvalued, suppression of other markets, substantial export subsidies and trade protection. The table makes no distinction between strategies for low income and low-middle income countries (e.g. the latter perhaps having a more established manufacturing or agricultural export sector), or for small vs larger countries (e.g. with the former more constrained in terms of the diversification opportunities). CASE NOTE #1 looks at the economic and fiscal policy of the Government of Botswana – a country frequently cited as having beaten the resource curse.

**Table 5 Impact of Different Economic Strategies to Manage the Resource Curse<sup>103</sup>**

	Enabling Environment	Competitive industrial policy	Autarkic industrial policy
Macro policy			
Basic stance	Orthodox	Orthodox	Structuralist
Fiscal stance	No/Low deficit	No/Low deficit	Lax + seignorage
Exchange rate	Floating	Competitive depreciation	Over-valuation
Sectoral intervention			
Market impact	Failure correction	Broad market-conforming	Market-suppressing
Sectoral targeting	None	Emerging comparative advantage	Wide 'infant' support
Incentives	None	Tightly targeted & tapered	Widespread + renewed
Trade orientation	Open	Moving protected swathe	Widespread, strong Protection
Effective protection	Neutral	High for target range	High, wide + variable
Export subsidies	None	Compensatory only	Substantial
Likely policy outcomes			
GDP growth	Modest	Rapid	Erratic, but slowing
Incremental capital			
Output rates	Low	Low, but rising	High, but rising
Inflation	Low <5%	5-15%	>20%
Foreign debt	Modest	Modest	High
Debit service ratio	<20%	<25%	>30%
Trade/GDP ratio	>30%	>30%	<15%
Income rich 1/5: poor 1/5	10-15	<10	>15
Sectoral maturation (yrs)	<3	3-10	>20

## CASE NOTE #1 - *Economic and Fiscal Policy in Botswana*<sup>104 105</sup>

*In 1966 Botswana was one of the twenty-five poorest countries in the world. By 1998, after three decades of rapid economic growth, Botswana had joined the ranks of the upper-middle income economies. Consistently high GDP growth averaging 13.9% over the period 1965-80, 11.3% from 1980-89 and 4.75% from 1990-98, propelled GNP per capita from \$379 in 1965 to \$3,460 (at constant 1995 USD). The primary driver of this economic growth has been Botswana's diamond-dominated mining sector that has generated large revenue windfalls since the 1970s. As Table 6 shows, mining represents a significant share of Botswana's GDP, government revenues and export earnings.*



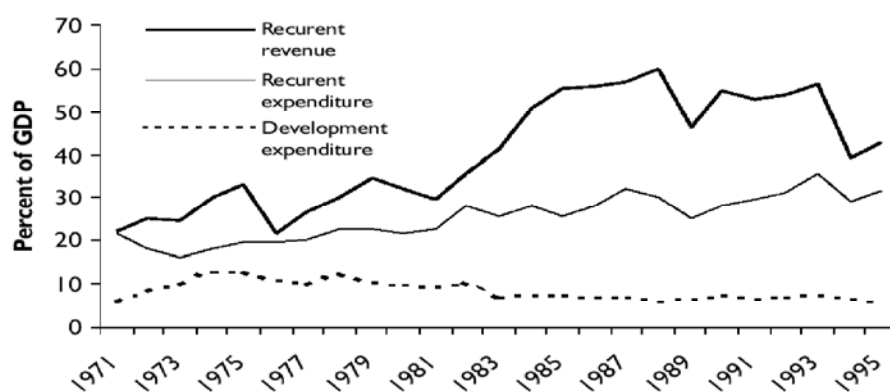
**Table 6 Contribution of the mining sector to GDP, government revenue and export earnings in selected years<sup>106</sup>**

Year	Share of total GDP (%)	Share of total revenues (%)	Share of export earnings (%)
1967	1.6	0	1
1972	11	5	44
1976	14	27	57
1980	23	31	81
1981	22	33	65
1983	32	25	75
1985	41	47	87
1987	44	55	88
1989	51	59	89
1991	40	54	87
1993	33	40	82
1995	33	51	76

To varying degrees, over this period, the government of Botswana has pursued prudent economic policies, with the aim of reducing external debt, stabilising growth and encouraging economic diversification. These policies have been broadly successful: public debt has reduced from 54% of GDP in 1971-73 to 18% in 1990-93; inflation has remained generally stable, averaging 11.5% in 1975-1994; and the manufacturing and service industries have achieved growth consistent with that of the rest of the economy. Two key initiatives have enabled this:

- ▶ a revenue stabilisation and public debt service fund. This fund, established in 1972, sought to sterilise resource rents, service public debt and accumulate ‘windfall’ earnings to be used when diamond revenues decline. The majority of the fund, which reached a value of \$5bn by 1996, is invested in foreign assets to avoid exchange-rate pressure. The interest earned from these investments now makes an important contribution to government revenues; and
- ▶ preparation and implementation of National Development Plans (NDPs). In Botswana, NDPs are regularly produced by government. They determine public expenditure (similar to Medium Term Expenditure Frameworks) and are voted into force by parliament. Critically, it is ‘illegal to implement any additional public projects without going back to parliament’. As a result, the government has maintained a tight control of expenditure, with the aim of staying within domestic absorptive capacity and ensuring recurrent expenditure resulting from development is at a sustainable level. Fig 11 shows the efforts made to avoid development expenditure from fluctuating too widely, and maintaining recurrent expenditure plus development expenditure at sustainable levels relevant to more volatile recurrent revenues.

**Fig 11 Revenue, Expenditure and Development Expenditure as a percent of GDP (Botswana - 1970 to 1995)<sup>107</sup>**



*Though initiatives such as the natural resource fund and NDPs have been essential tools for economic growth, other enabling factors have contributed to Botswana's success and economic sustainability. Of these key have been:*

- ▶ *sustaining a constant real exchange rate against the country's main trading partners;*
- ▶ *establishment of a positive investment climate by investing in institutions promoting private sector interests;*
- ▶ *managing labour relations;*
- ▶ *retaining membership of the Southern African Customs Union (SACU) and agreeing free trade agreements with the EU and the USA;*
- ▶ *avoiding extending government ownership other than to the main utilities (resulting in few parastatals);*
- ▶ *having few import controls and eliminating exchange controls gradually;*
- ▶ *political stability in addition to economic stability;*
- ▶ *the lowest level of corruption in Africa.*

*The principal lesson to be learnt is that development assistance will only be effective where it encourages governments to combine economic and fiscal prudence with investment promotion and improvements in good governance.*

### **3.2.2 Slow Down Pace of Development**

One strategy to enable more effective resource revenue management is to look for ways to physically slow the rate of production and/or the rate of field expansion, with the aim of reducing total revenue streams and elongating the benefits for society of exploiting non-renewable national resources. This strategy also gives domestic economic, political and social institutions more time to adjust, reduce 'resource movement' and 'crowding out' effects and allow for a domestic resource service economy to develop. There are at least two problems with this strategy. The first has to do with the concern of companies about 'obsolescing bargain' - where prolonged development of an asset favours government by increasing regulatory and rent seeking risks. The second is related to the use of 'discounted' cash flow methods. These methods are used to study project feasibility and tend to favour a rapid realisation of natural resource assets via higher rates of production.

A more extreme version of the 'slow down' strategy is deliberately not to develop the resources in the first place, a so-called policy of 'no go'. Some advocate this approach, for example, believing that the "*the best course of action for poor states would be to avoid export-oriented extractive industries altogether, and instead work to sustainably develop their agricultural and manufacturing sectors - sectors that tend to produce direct benefits for the poor and more balanced forms of growth*"<sup>108</sup>. Such a strategy is being proposed by some for development of the 'Greater Sunrise Oil Field' in the Timor Sea. The argument is that projections for revenues from the existing Baya-Undan project are sufficient to fill government budget deficits from 2021<sup>109</sup>, and that the Government of Timor L'Este needs time to develop its regulations and civil service in order to avoid the dangers of corruption and mismanagement.

### **3.2.3 Revenue Smoothing through Host Country Agreements**

Instead of slowing the physical rate of development, another option is to 'smooth' over time the payment of taxes and other rents to government. This can be managed in part through the terms of investment agreements between the resource owner (the state) and the asset owner (the companies). Third party involvement is also a potential option, with multi-lateral development banks 'bridging finance' to ensure an earlier flow of revenues for redistribution, for example to oil and mineral producing regions.

With this strategy part of the job of managing volatility in revenue flows is in the hands of the investing companies rather than the state. The approach seems most useful when countries are anticipating short-term revenue peaks, as is sometimes the case with minerals sector, for

example in Botswana with De Beers investments in diamond exploitation<sup>110</sup>. The 'Expert Panel' for the BP Tangguh gas development project in Indonesia proposed a similar smoothing of revenue flows from companies to government.

In most cases, such company-driven smoothing strategies are likely to require substantial payments to government 'before' the start of production (as well as after end of production). If the lead-time to the start of production is particularly long, then such strategies may either raise the risks too high for the investors or introduce too higher a risk- transfer cost on government.

A number of factors influence the flow of revenues to government: the terms of royalty payments, rules for production sharing, cost recovery allowances, corporation tax rates, other tax and tax exemptions etc. There is no single best formula for establishing such terms. Local economic and circumstances, as well as future global and regional production and demand, need to be taken into consideration. In addition, production rules may need to balance early revenues with long-term revenue security, or provide ceilings or sliding scales for cost recovery that prevent the investing companies from securing unfair advantages when prices remain high.

More specifically, model Production Sharing Contracts (PSCs) and other 'cookie cutter' contracts and agreements should be viewed with caution. Model agreements are usually a reflection of the market circumstances prevalent at the time they were first conceived. Thus, the terms of a PSC negotiated when competition between exporting countries is fierce and medium-term futures low, will likely be quite different to one negotiated when global demand is high and futures buoyant. Negotiating PSCs and related royalty and tax terms is a highly specialist area. Effective transaction advisors on both sides of the negotiation are essential. It is also worth noting that negotiating different production sharing and cost recovery terms, as well as recourse to quite different contract types, may provide government with additional strategies for hedging the risks of NRNR revenue management.

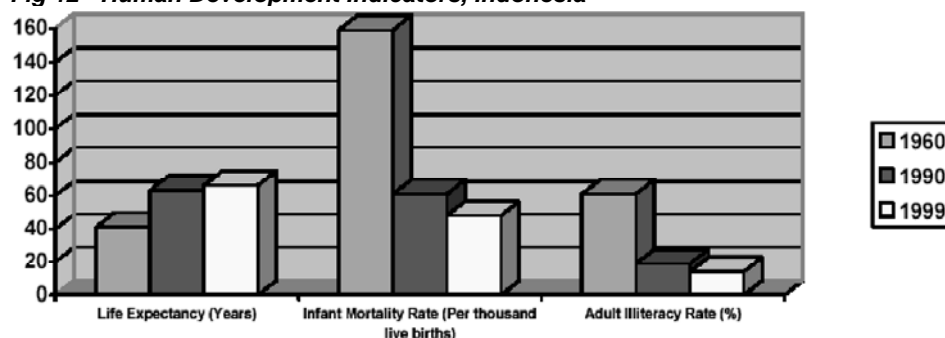
### 3.2.4 Exchange Rate Policy

Dutch disease and the effects of foreign borrowing stimulated by NRNR revenues can lead to exchange rate appreciation. Policies to counter this appreciation include devaluation or embedding fixed exchange rates. Botswana, Chile, Indonesia and Malaysia all implemented significant depreciation of their currency as a component of explicit policy choices. *"In general, it is believed that an efficient macroeconomic policy is promoted by a fixed, but adjustable, exchange rate controlled by an independent central bank"*.<sup>111</sup> CASE NOTE #2 looks at the exchange rate and other economic policies of Indonesia during 1970's 80's and 90's.

## CASE NOTE #2 - Exchange Rate Policy in Indonesia<sup>112 113 114</sup>

*In the period 1976 to 1996, in addition to high sustained annual GDP growth averaging around 6.0%, Indonesia made significant development progress, reducing the share of its population in poverty by 40%. Similar progress has been made across other development indicators, as demonstrated in Figure 12.*

**Fig 12 Human Development Indicators, Indonesia<sup>115</sup>**



*At their peak during 1980-1986, oil and gas revenues accounted for over 60% of government revenues. This had reduced to around 30% by 1994. Although much of these revenues were 'wasted' on unproductive and inefficient hi-technology and capital intensive projects there were also significant investments in infrastructure, particularly in rural areas, with the result that income distribution improved. The effect of subsidies on fertilizer was to benefit non-tradable agriculture crops, improving self-sufficiency and directly benefiting poor farmers. This contrasts to Botswana where income inequality is now twice as high and remains relatively static at this level.*

*Like the other successful resource-rich countries, Indonesia adhered to orthodox macro and exchange rate policies. It also benefited from:*

- ▶ *a benevolent autonomous form of government. For example, President Suharto was able to 'ensure corruption was conducted in an orderly fashion that was within the limits of what the market would bear';*
- ▶ *a large and varied non-hydrocarbon resource base; and*
- ▶ *low mean per capita income that allowed Indonesia to make the transition to labour-intensive industrialisation, competitive on the world stage.*

*The main lessons from Indonesia is that the "nature of political and social coalitions within a country, the balance of power between them, and a country's geo-political and geo-economic context play a significant role in determining a country's ability to successfully manage its natural resource wealth"<sup>116</sup>. However, others argue that aside from the importance of adherence to orthodox macro policy, the lessons from Indonesia for other countries are limited.*

### **3.2.5 Natural Resource Funds**

The central question around the management of natural resource revenues is 'what to spend and what to save'? Controlling the rate of expenditure in the face of 'windfall' revenues is needed to avoid 'stop-go' public spending, unsustainable 'boom-based' foreign borrowing, Dutch disease effects, consumptive rather than productive investment, exchange rate appreciation, rent seeking, corruption, and a disincentive to private sector investment. The 'savings' question is both about saving for short- and medium-term stabilisation of fiscal budgets, and long-term saving for intergenerational equity.

Many resource-rich countries have established natural resource funds (NRFs) to manage expenditure and savings issues. These funds generally pursue multiple, and sometimes overlapping, objectives, which can change over time. There is no 'right answer' to the design and management of a NRF, and they need to be constantly re-evaluated and trade-offs made as circumstances change<sup>117</sup>. The motivations for establishing NRFs can be considered in at least three ways: long-term savings, short to medium-term revenue stabilisation and budget financing.

#### **Savings**

Government revenue derived from the exploitation of non-renewable resources differs from other revenue in that it can be viewed as a depletion of national wealth. There is therefore an argument that some of this wealth should be saved, both to help achieve long-run fiscal sustainability, and to provide for intergenerational equity. This suggests that part of the revenues be constructed as a 'growth fund', with adoption of longer-term asset investment strategies than would be the case for funds (or parts of funds) dedicated to short-term budget stabilisation<sup>118</sup>. As 'growth funds', assets would be invested to maximise returns whilst minimising risk, most likely via a diversified, balanced, portfolio.

One option in designing NRFs is to seek only to spend what can be spent in perpetuity. The most risk adverse approach to this is to spend only the income derived from investments. This type of 'permanent income fund' requires strong political will, not least because in the early years the income stream is likely to be small, relative to revenues. Other options, such as 'percentage of revenue funds' or 'constant revenue funds' provide for larger early income streams, but run the risk of eventually depleting the fund. In the case of 'percentage of revenue funds' there is also the risk of transferring commodity price volatility to the process of budget planning.

At the other end of the spectrum of fiscal management is the Permanent Income Hypothesis. This framework "*envisages spending the expected income from this [NRNR] wealth, which is the present discounted value of future oil earnings. Roughly, this translates into spending the present discounted value of oil wealth multiplied by the expected long-term rate of earning from this wealth (adjusted for the projected rate of population growth)*"<sup>119</sup>.

The poorer the country, the more politically challenging it can be to justify savings and long-term stabilisation strategies that delay the release of income to the national budget. Foregoing expenditure on social and economic programmes for the purposes of ensuring long-term budget support or inter-generational equity, needs to be carefully balanced with the returns to society of productive public investment, be that in short-term physical infrastructure or health care, or longer-term education.

Maintaining the purchasing power of the 'principal' part of a fund, ie inflation proofing, is a key feature of many NRFs. The Alberta Heritage Fund set up in the mid-1970s failed to follow this practice and saw erosion of its capital over time<sup>120</sup>. One way secure against inflation is to ensure that a portion of investment income is reinvested into the fund. Price hedging is another instrument (see Box 8).

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#### **Box 8 Price Hedging**

Price hedging is the use of future markets to guarantee (by 'hedging') commodity price fluctuations so that revenue streams are more predictable. The approach probably works best in a falling market, ie when politicians would be praised for securing a higher than market price. Conversely, this may be unworkable in a rising market. Such a strategy was at one point considered for Papua New Guinea<sup>121</sup>, but then rejected in favour of reforming the existing revenue stabilisation fund.

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#### *Revenue Stabilisation*

'Booming' natural resource commodity prices presents governments with the problem of increases in national income from a potentially volatile, single, source. One aim of many NRF funds is therefore to smooth, ie stabilise, the presence of NRNR revenues in the national budget. There are two aspects to this:

- ▶ *fiscal deficit management* – in years when tax receipts are low the budget can be topped up by the fund. The Norwegian fund is designed in part for this purpose.
- ▶ *income sterilisation* – in years when NRNR income is particularly high, there is need to protect against the potential adverse economic and corrupting effects of NRNR revenues due to a limited absorptive capacity in the economy and within government institutions.

Revenues destined to be used for short-term fiscal deficit management will need to be invested differently from revenues managed for longer-term savings. Specifically, liquidity is needed to respond to short-term volatility in commodity prices. If the NRF has a dual purpose of savings and short-term stabilisation, then account will need to be taken of the liabilities that the different investment strategies have for each other.

In the context of high, sustained, NRNR commodity prices, the question arises of whether stabilising against short-term price 'volatility' is really the problem; rather it is how to manage a substantial, medium to long-term increase in national income in ways that avoid this contributing

to economic decline, corruption and political instability. In other words, smoothing out revenue peaks and troughs over a one to three year period may be less relevant than slowing the rate of increase in the overall budget over a ten year period, and concurrently strengthening budget planning and expenditure systems to be able to absorb the elevated level of income.

### *Budget Financing*

A third component of NRNR revenue management is the extent to which revenues are integrated with the finances of the national budgeting process. Full integration means that NRNR revenue is allowed to accumulate as a general budget surplus. These surpluses are then invested and released to support budgetary shortfalls when natural resource prices are low.

Norway's State Petroleum Fund is characterized as a 'financing fund' – designed principally to finance the fiscal deficit. The Fund does not attempt to deal directly with stabilization and savings issues associated with oil revenues, which are addressed in the context of the budgetary process. However, the budget is required to transfer all oil revenues to the Fund, not only budget surpluses. In turn, the Fund finances the non-oil resource deficit of the budget through reverse transfer.<sup>122</sup> Such a large-scale build-up of public financial resources requires consensus, transparency and accountability. Thus the Norwegian model may not be easily 'exported' to other NRNR endowed states<sup>123</sup>.

In summary, NRFS can be established for a number of reasons, as follows:

- ▶ control the release of revenues to government, eg to the general budget;
- ▶ regulate revenues, either acting to absorb windfalls or release (ie 'top-up') budgets if commodity prices fall;
- ▶ provide a means for long-term savings and revenue stabilisation, eg through investment on global capital futures markets;
- ▶ allocate revenues between consumptive and productive or investment expenditure, ie 'sterilize' against Dutch disease effects;
- ▶ begin to address the intergenerational inequalities, by keeping funds out of the hands of kleptocracies until accountable democracies emerge;
- ▶ facilitate desired changes in exchange rates, either appreciation or depreciation;
- ▶ by their very presence, suppress expectations of spending by government departments and the public; and
- ▶ act as external institutional constraint, thus allowing time for local institutions to strengthen.

*Table 7* presents a sample of NRFs, showing their overlapping objectives. *Table 8* provides an overview of a different sample, indicating whether they are driven by saving, revenue stabilisation or budget financing motives, or a combination. To aid comparison, indication is also given of the fund size, annual NRNR revenues as a proportion of GDP, country size and per capita income (as purchasing power parity). In many countries, funds have only recently been established and have yet to be properly tested. Only limited assessment of their success or failure is therefore possible. CASE NOTES #3, #4 and #5 describe the NRFs developed for Alaska, Kazakhstan and Timor L'Este. CASE NOTE #6 looks at Chile, and the use of a Stabilisation Fund to manage revenue volatility.

**Table 7 Examples of Natural Resource Funds**<sup>124</sup>

Name of fund	Country	Date established	Original purpose		
			Sterilisation	Volatility	Savings
Heritage Savings Fund	Alberta	1976			X
Copper Fund	Chile	1986	X	X	
Foreign Currency Reserve Account	Iran	2000	X	X	X
Reserve Fund for Future Generations	Kuwait	1976			X
State Petroleum Fund	Norway	1990	X	X	X
General Reserve Fund	Oman	1980			X
Alaska Permanent Fund	Alaska, USA	1976			X
Stabilisation Investment Fund	Venezuela	2000		X	
Future Generations Fund	Chad	1999			X

**CASE NOTE #3 - Alaska Permanent Fund (APF)**<sup>125</sup>**Key Characteristics of fund:**

<i>Time Era</i>	<i>Mid-1970s</i>
<i>Resources Base</i>	<i>Hydrocarbons</i>
<i>Philosophy</i>	<i>Privatization</i>
<i>Establishment</i>	<i>Referendum</i>
<i>Governance</i>	<i>Trustees</i>
<i>Economic Development</i>	<i>No</i>
<i>Social Dividends</i>	<i>No</i>
<i>Financial Management</i>	<i>Endowment</i>
<i>Stocks Holdings</i>	<i>Yes</i>
<i>Inflation Proofing</i>	<i>Yes</i>
<i>Investment Profile</i>	<i>Outward</i>
<i>Fund Growth</i>	<i>Yes</i>

*The Alaskan Permanent Fund (APF) places the revenues directly into the hands of citizens, who then make their own economic decisions regarding consumption and saving/investing. The aim is to give citizens a direct and transparent link to the use of their national resources. The APF has grown into a \$US27 billion asset that has earned more than \$US20 billion in net income, with a return over the last 15 years of 12.2%.. The fund has experienced volatility in its investment returns, ranging from 25.6 %/annum in 1985 to 1.5 % in 1994. Establishment of an “arm’s-length” corporation allowed the fund to operate relatively independent of government.*

*The first call on the fund’s investment income is to pay dividends to each citizen. The dividend is calculated as half of 21% of total net income for the last five years. This amount is transferred to a ‘Dividend Fund’. The second call on the Fund’s income is to provide inflation proofing. This amount is transferred into the principal. If investment income remains, this is left in the Earnings Reserve as undistributed income. Requests can be made on this undistributed income for use in the event of a shortfall in income to pay dividends and inflation proofing. In addition, the Legislature may appropriate funds from the Earnings Reserve for ‘any lawful purpose’. In 1998, earnings from investing the fund exceeded state oil revenues, with the principal reaching the \$25 billion mark. Dividends paid for 2005 were \$846<sup>126</sup>.*

**Table 8 Comparison of Country Natural Resource (Oil) Funds**

Country	TYPE OF FUND			No formal NRF	Fund size	Annual NR revenue as % of GDP	Population (m) <sup>127</sup>	PPP per capita <sup>128</sup>	Notes
	Savings	Stabilization	Financing						
Alaska (USA)	✓				\$32.6bn <sup>129</sup>	85% <sup>130</sup>	0.66 <sup>131</sup>	39,710 (USA)	<ul style="list-style-type: none"> <li>• Production has peaked</li> <li>• Regarded by many as a very successful example of savings fund.</li> <li>• See Case #3</li> </ul>
Azerbaijan	✓	✓			\$970m <sup>132</sup>	31.5% <sup>133</sup>	8.3	3,830	<ul style="list-style-type: none"> <li>• Fund has 'significant structural weaknesses'.<sup>134</sup></li> <li>• President appoints oversight body members and has authority to decide expenditures.</li> <li>• Oil fund revenues and expenditures reported in the press<sup>135</sup></li> </ul>
Chad	✓				\$27.4m <sup>136</sup>	8.3% <sup>137</sup> , expected to grow significantly	9.1	1,420	<ul style="list-style-type: none"> <li>• Ten percent of the oil's direct revenues are set aside and invested for future generations<sup>138</sup></li> <li>• Future Generations Fund kept in an escrow account in London, and invested in an interest-bearing Citibank Liquidity investment account<sup>139</sup></li> <li>• Fund has 'significant weaknesses'<sup>140</sup>: executive dominates oversight committee; nominal civil society participation; law governs expenditure allocation but President can modify law after 5 years'; effectiveness of expenditure committee capacity.'</li> </ul>
Indonesia				✓ <sup>141</sup>	N/A	~10% <sup>142</sup> , likely to decrease further	217.4	3,460	<ul style="list-style-type: none"> <li>• Oil production peaked</li> <li>• Indonesia now consuming domestically a significant portion of the oil (and gas) it produces.</li> <li>• Some general concern that revenues have been wasted/lost to corruption in the past.</li> </ul>
Kazakhstan	✓	✓			\$5bn + <sup>143</sup>	~30% <sup>144</sup>	14.9	6,980	<ul style="list-style-type: none"> <li>• Fund has 'significant weaknesses'<sup>145</sup>: weak civil society participation, president appoints oversight body members and has authority to decide expenditures</li> <li>• Oil fund revenues and expenditures reported in the press<sup>146</sup></li> <li>• See Case Note #4</li> </ul>
Malaysia				✓ <sup>147</sup>	N/A	7.4% <sup>148</sup>	24.4	9,630	<ul style="list-style-type: none"> <li>• 'Long-term trend toward declining oil reserves'<sup>149</sup></li> </ul>



Country	TYPE OF FUND			No formal NRF	Fund size	Annual NR revenue as % of GDP	Population (m) <sup>127</sup>	PPP per capita <sup>128</sup>	Notes
	Savings	Stabilization	Financing						
Nigeria				✓	?	46.1% <sup>150</sup>	125.9	930	<ul style="list-style-type: none"> <li>Nigeria's oil wealth not wisely invested to provide a sustainable stream of benefit to the poor.<sup>151</sup></li> <li>Nigeria's federal government followed clear fiscal rules for the first time in 2004</li> <li>Federal authorities now proposing a fiscal responsibility bill that entails formally adopting a fiscal rule that would be binding on all three tiers of government and creating a stabilization fund<sup>152</sup></li> </ul>
Norway			✓		\$160bn <sup>153</sup>	18.4% <sup>154</sup>	4.6	38,550	<ul style="list-style-type: none"> <li>Oil fund revenues are regarded as a model fund (eg Timor L'Este trying to emulate its success)</li> <li>see Case Note #5</li> </ul>
Russia				✓	N/A	17.0% <sup>155</sup>	144.6	9,620	<ul style="list-style-type: none"> <li>Doubling of oil price from 1998 to 2001 led to huge current account surplus, sharp rise in government oil and gas revenues, substantial positive contribution to growth.</li> <li>Changing political economy factors suggest that a more formal defence against excessive spending in future could be helpful.</li> <li>Significant political support exists for the introduction of a fund.<sup>156</sup></li> </ul>
São Tomé and Príncipe	✓				Expected to grow significantly	Oil production not until 2011. <sup>157</sup>	0.1	-	<ul style="list-style-type: none"> <li>Legislation sets percentages, not amounts, adjusted depending on the stage of the exploration.</li> <li>Specifies a maximum that can be withdrawn each year (the Annual Funding Amount) and the minimum that must be saved for future generations.</li> <li>São Tomé's law sets good examples in the areas of democracy and transparency.'</li> <li>Prohibition of investments in São Tomé's territory or controlled directly or indirectly by São Tomé citizens.<sup>158</sup></li> </ul>
Timor-L'Este			✓		Savings estimated to reach ~\$130m by 2007/08 <sup>159</sup>	> 50% of GDP over next several years. <sup>160</sup> Potentially increasing further.	0.8	-	<ul style="list-style-type: none"> <li>Modelled closely on the Norwegian 'fiscal deficit' model.</li> <li>Some concern that the proposed design puts all decisions about the use of petroleum revenues into the annual budgeting process, which of necessity looks only at the next twelve months.</li> <li>"In this environment, it will be virtually impossible to consider the impact on the post-petroleum part of Timor L'Este's history"<sup>161</sup></li> </ul>
Vietnam				✓	N/A	9.8% <sup>162</sup>	82.0	2,700	

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## CASE NOTE #4 - *National Fund of the Republic of Kazakhstan (NFRK)*<sup>163 164</sup>

*Rising commodity prices and increasing oil and metals production in Kazakhstan contributed to the establishment of the NFRK through Presidential decree (No. 543) in 2001. Oil production is expected to double by the beginning of the next decade, and triple over the next 10–15 years, reaching 3.5 million barrels per day (bpd). With this, the government's oil revenue is expected to grow from \$4.2 billion in 2005 to about \$16 billion during 2015–30.*

*The NFRK is an off-budget fund, managed by the National Bank of Kazakhstan on behalf of the government. All NFRK assets are invested abroad. The rules governing the NFRK have changed over time. Initially, the authorities identified 12 major companies in the natural resources sector whose fiscal payments were subject to transfer to the NFRK; this list was reduced to 7 petroleum companies in 2004. The NFRK has both stabilization and savings component.*

*The stabilization component sets 'reference prices' for oil, gas and four metals (copper, lead, zinc, and chrome). All revenues from listed companies in excess of receipts are realized at the reference price. For oil this has remained fixed at \$19 a barrel. In principle, the NFRK could be drawn down if oil prices fall below the reference price, although this has not happened yet. The authorities have also allocated privatization receipts, special bonus payments, and royalties from certain natural resource companies to the fund. At least 20% of NFRK assets must be held in a stabilization portfolio. This has specific investment criteria, basically foreign-issued, short-term, highly liquid financial instruments, so that they can be accessed easily to cover budget shortfall as they arise. The President may also request special transfers to the state and local budgets, earmarked for purposes defined by the president.*

*Flows to the fund consist of a "savings" component equal to 10 percent of budgeted baseline revenue from the listed companies, which is invariant to oil price changes.*

*Since the NFRK was established, about 40 percent of the revenue from the oil sector, including one-off bonus payments, has been saved, and the NFRK has accumulated over \$5 billion in assets. Nevertheless, the increase in oil revenue has given room to expand public spending, which has increased by 27 percent a year on average during 2000–04.*

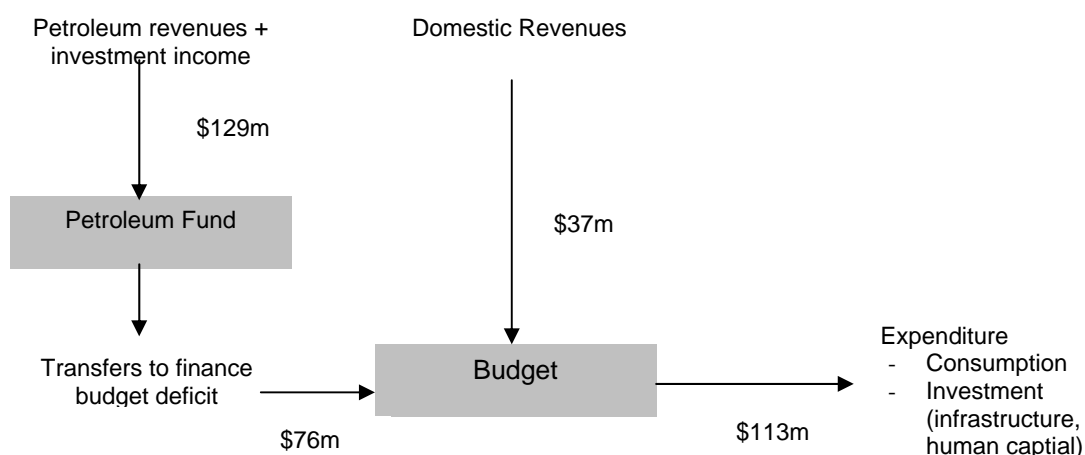
*'The authorities are in the process of redesigning the NFRK rules. The modifications being studied aim to fully integrate the NFRK with the budget, and devise a rule to guide the use of oil revenue, possibly by linking the non-oil fiscal deficit to the amount of development spending.*

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## CASE NOTE #5 - *Timor L'Este Petroleum Fund*<sup>165</sup>

*The 'proposed' Timor L'Este Petroleum Fund is based on the Petroleum Fund model used in Norway. The outflow from the Fund will be the amount necessary to finance the government budget deficit. This design creates a direct link from the budget deficit (excluding petroleum) and the use of the Fund's capital. Increased government expenditure or lower tax incomes (from domestic activities) result in smaller net allocations to the Fund.*

### *The Anticipated Workings of the Fund in 2007-2008*

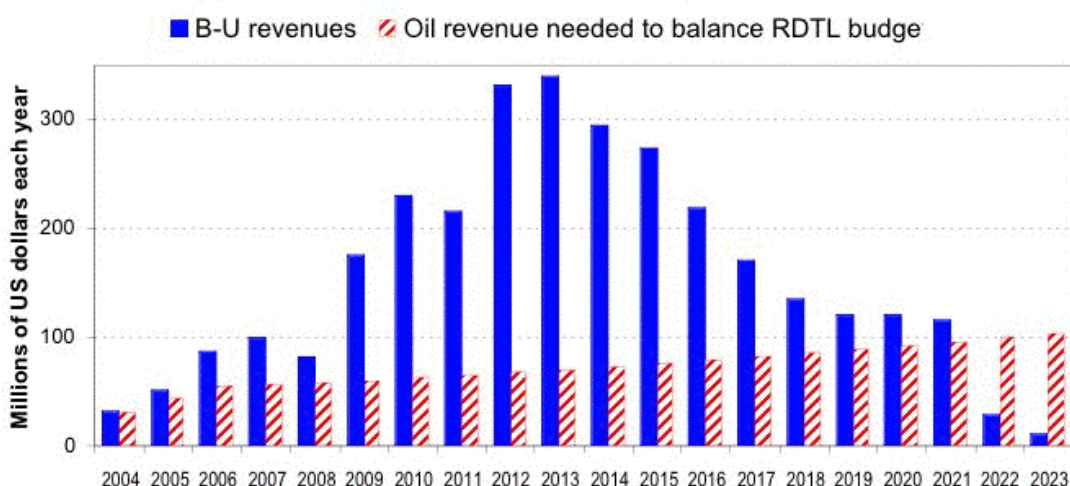


*The Petroleum Fund's savings are to be invested in low-risk financial assets abroad, but with high liquidity. The Fund is not intended to be a separate institution, but fully integrated with government finances. Savings will be deposited in a separate account with the Banking and Payments Authority (BPA) – which carries out central bank functions.*

*The Minister of Planning and Finance will have overall responsibility for the management of the Fund, and will report to the Prime Minister. The Minister of Planning and Finance will be advised by an Investment Steering Committee. Members of the committee will be key staff from the Ministry of Planning and Finance (MoPF) and the BPA, supplemented by external members, some of whom will have experience from the financial services sector. The intention of the committee is to strengthen the quality of advice preceding decision making on the management of the Fund.*

*Some argue that given revenues from the Bayu-Undan project, the government has no anticipated requirement for additional revenues from the adjoining (but as yet undeveloped) Greater Sunrise field 'for at least 17 years'<sup>166</sup>. This begs the question of how to handle revenues from Greater Sunrise, if they arrive before economic growth or institutional absorptive capacity has evolved to be able to effectively utilise them.*

### **Bayu-Undan revenue available and required 2004-2023**



A generalised list of operating rules for NRFs is as follows<sup>167</sup>:

- ▶ professional management of the fund is essential'
- ▶ reporting to an independent board of control, also essential';
- ▶ income to be used for public expenditure (or to finance non-oil deficits) should be transferred to fiscal authorities, with oversight by the independent monetary authority';
- ▶ fund should not have independent spending authority otherwise it undermines the budgetary process;
- ▶ there needs to be simple general rules for accumulation and withdrawal';
- ▶ the government needs to define clear goals for the fund to fulfil';
- ▶ there is a need for transparency and accountability via regular reporting, audits, press releases etc; and
- ▶ need to enhance citizens' interest in prudent use of the resources, in general.

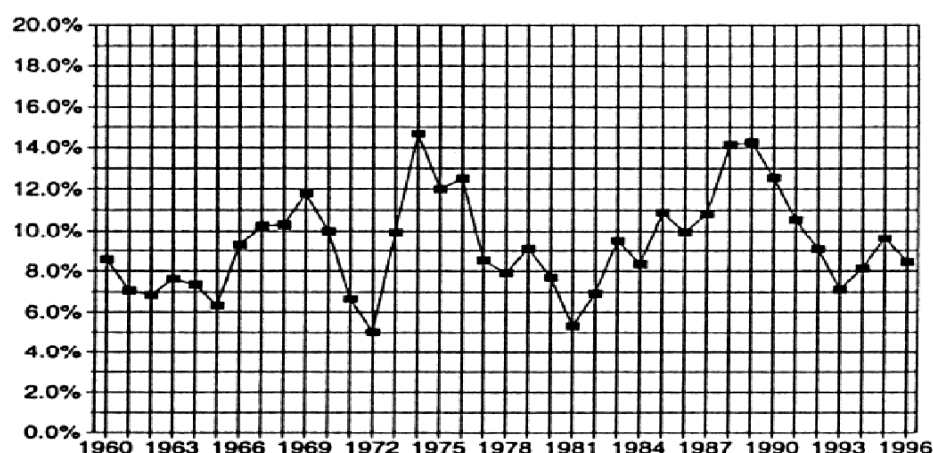
NRFs are increasingly controversial due to a belief by some that the revenue volatility of resource revenues should be handled in the same way as normal general fiscal and budget management. This means accounting for fluctuations in revenues, expenditure, investment, borrowing etc – and not placed in a separate fund<sup>168</sup>. The rationale is as follows:

- ▶ without strict fiscal discipline, funds treated only for the purposes of budget stabilisation may end up providing an excuse not to address structural fiscal reform. This means that funds are depleted far faster than they should, with little development impact beyond the benefits of recurrent expenditure;
- ▶ the mere existence of a fund does not mean that government expenditure will necessarily avoid following NRNR export earnings, and thus being exposed to the same volatility;
- ▶ funds are usually outside existing budget systems and are often accountable to only a few political appointees;
- ▶ reporting and auditing requirements for the funds are often loose;
- ▶ rules governing use of the Fund tend to change with political circumstances;
- ▶ integrating such funds into general budget management and the stabilisation of expenditure continues to be overly complex;
- ▶ their lack of integration with the budget makes it more difficult for both parliament and the public to monitor the use of public resources as a whole; and
- ▶ the fund can give a false sense of security that may undermine the tax base and fiscal prudence in general.

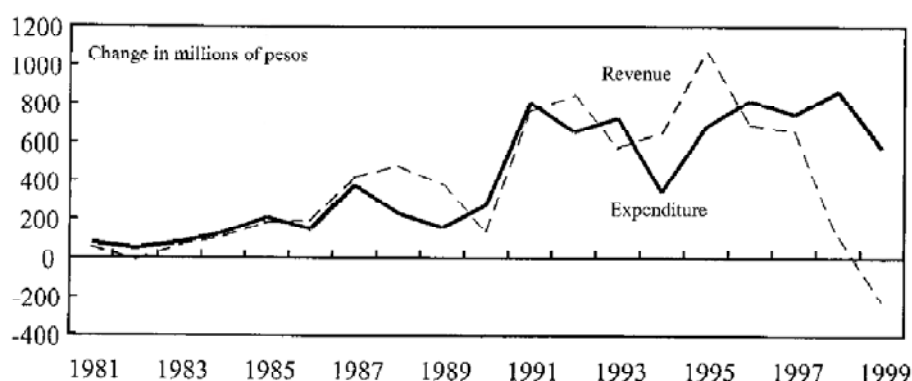
## CASE NOTE #6 - *Managing Revenue Volatility in Chile*<sup>169 170 171</sup>

*In contrast to Botswana, which enjoyed large and stable resource rent flows, the price of copper – Chile's main mineral export – has been considerably more volatile, with revenue flows unstable and unpredictable (see Figs 13a and 13b). Prior to 1973 revenue management policy comprised increasing domestic control of the mining sector and enhanced revenue retention, while deploying protectionism to safeguard the non-mining tradables from Dutch disease effects. The result was that the economy of Chile became depressed, with 'chronic inflation, a relatively low rate of economic growth and frequent economic crises'.*

**Fig 13a Exports of Major Commodities for Chile as Percent of GDP/GNP (1960-1996)<sup>172</sup>**



**Fig 13b Government Revenue and Expenditure – Chile (1981 - 1999)<sup>173</sup>**



*Post 1973, with commodity prices back on the rise, the challenge facing Chile was to dramatically restructure its economy and manage the continuing inevitability of volatile revenue flows. This was ultimately achieved by the military government, which launched a stabilisation programme in 1974. The programme pursued broad and tight fiscal policies. Initially these were disruptive, with the economy contracting by 20%, income inequality increasing and public spending cut from 45% of GDP in 1973 to 25% by 1978. Although subsequently annual growth of 8% was achieved between 1976 and 1979, inflation remained high. Falling copper prices again in 1980, halted economic growth and led to a substantial increase in foreign debt. The IMF became involved which precipitated the establishment of the Copper Stabilisation Fund and the adoption of a 'crawling band exchange rate'.*

*Copper prices continued to fall with the result that by 1985 debt reached a peak of 140% of GDP. But by 1987, copper prices had unexpectedly risen from \$1,300 per metric ton to \$2,800 per metric ton, and by 1989 the government was experiencing a revenue ‘windfall’. The Copper Stabilisation Fund captured much of this boom, smoothing the impact on the economy. As a result, an average of 3.8% of GDP per annum was deposited in the fund in 1988-1989 and 1.2% in 1990-1992. Deposits in the fund peaked in 1997 at \$3.9bn, but declined after as copper prices once again fell. One of the key features of the Chile experience was the ability of the Copper Stabilisation Fund to decouple government revenue from expenditure, i.e. preventing publicly popular but unsustainable increases in public expenditure during ‘windfall’ periods.*

### **3.2.6 Sectoral Diversification Policy – close to resource market**

With respect to economic, industrial and investment policy, one option is to direct effort intentionally to regulatory reform, skills development, business support, physical infrastructure and trade policy/subsidies that promote economic diversification ‘close to the natural resource sector’. The aim is to exploit the sector for its backward linkages (suppliers) and forward (mid-stream) linkages and its effect on the general investment climate (see *Box 8*). Despite global sourcing, for many countries there are real opportunities for a diversification policy based on backwards linkage. In many instances the annual capital and operational expenditure of project operators on procurement of capital goods, consumables and services is greater than their total contributions to government. For example, for 2003 the ExxonMobil group reported \$70.7bn in contributions to governments and \$132.7bn to suppliers<sup>174</sup>.

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#### **Box 8 Illustration of Government Policy to Promote Economic Diversification ‘Close to Resource Market’**

“The Government of Trinidad and Tobago views the creation of local expertise in the energy sector which is transferable to other sectors of the economy, as critical.. [and].. has identified several strategies as the means of achieving this goal. Amongst these are...increasing local enterprises’ share in projects with heavy capital inflows from Foreign Direct Investment.... I expect that this BHP Billiton initiative will be the first of many more to come”.

On the occasion of BHP Billiton awarding a major fabrication contract to a local firm as part of a gas development in Trinidad and Tobago (Minister for Energy, 2004).

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A variation of the close-to-market diversification policy based on backwards linkage, and one advocated in a recent paper for the World Bank<sup>175</sup>, is the idea of geographic ‘clusters’. In the context the minerals sector, critical factors for effective cluster formation include:

- ▶ availability and further development of a local skills base;
- ▶ adequate infrastructure;
- ▶ existence of a critical mass of companies and institutions willing to cooperate, network and share knowledge and information formally (e.g. through industry associations such as Chambers of Mines) and informally;
- ▶ combination of legal requirements and incentives that encourage local outsourcing of goods and services;
- ▶ provision of financial support for the development of small-and medium-scale mining supply and services companies;
- ▶ existence of hives of research and development, innovation, diversification and technology diffusion;
- ▶ establishment of targeted human resources development programmes and technical support systems; and

- ▶ establishment of effective marketing channels, which can improve demand.

The need for adequate incentives to operators to procure locally should not be underestimated. For example, the operations of bpTT in Trinidad and Tobago calculate a \$3.3 million premium as the cost of their lead contractor Flour Daniel working in the country in a joint venture with a local firm to undertake engineering design on the 'Cannonball' gas field project. The premium is the sum that would have been saved had the same work been undertaken in Houston without the joint venture<sup>176</sup>.

One identified problem with developing effective industrial policy to promote forward linkages in the natural resource sector (e.g. in refining and lubricants or in mineral processing), is that OECD states place differential tariffs on the import of processes vs. unprocessed oil and minerals. Thus, *'if oil and mineral-rich countries wish to add value to these raw materials and export them in refined or processed form [...] they quickly run into both tariffs and non-tariff barriers.'*<sup>177</sup> This makes it harder for countries to diversify their economies, reinforcing their dependence on primary exports.

Economic diversification through investment in mid-stream facilities is another option. Refineries, power stations, fertilizer plants and various forms of mineral and metal processing present options for forward linkage (mid-stream and downstream development). Key considerations in developing a downstream industry and market include:

- ▶ the extent to which downstream developments are independent of concessional finance, be that NRNR revenues, other sources of government finance, or from development finance institutions;
- ▶ the economies of scale likely to be achieved by small-scale domestic developments, and whether these are sufficient to compete with cheaper imports or avoid the need for government subsidies (through concessional financing, free oil/gas inputs, tax exemptions etc.) or additional tariffs on imports;
- ▶ whether there are reserves and markets to justify investment in large, more economically efficient, downstream developments;
- ▶ whether Domestic Market Obligations provisions should be included within host government agreements, and if so whether these should be linked to international prices, carry minimum real rates of return etc.
- ▶ the extent to which the downstream developments would substitute for imported goods, or actually only meet a proportion of the domestic demand 'mix';
- ▶ the extent to which the country has the necessary infrastructure in place (transmission lines, transport, telecoms etc.) to utilise the downstream industry for domestic or export purposes; and
- ▶ the political expectations invested in the development, such as security of energy supplies and processed products (and thus pressure to continue or elevate subsidies) versus the politics of maintaining dependence on imported refined products and low levels of economic value added in the sector.

### 3.2.7 Sectoral Diversification Policy – far from resource market

The alternative investment and competitiveness strategy is to diversify away from natural resource development market altogether. For example, Indonesia successfully diversified into the tradable manufacturing sector, supported by appropriate trade and business infrastructure policies. Likewise, Uganda has invested mineral revenues in public infrastructure, especially rural roads which favour the non-tradable rural economy. A recent UNDP report on natural resource revenue management argues that *‘the government should avoid investing in things that the private sector can easily invest in, such as telecommunications [and that] typically a good place to concentrate money will be in developing road infrastructure.’*<sup>178</sup>

Spending resource revenues on infrastructure, and promoting domestic savings and inward investment, is part of general ‘annuity policy’ recommended for Africa, i.e. the *“calculated, parsimonious and well-informed spending, savings and investment (in other assets) strategy, which prioritizes human, social and physical capital creation and transformation of mineral wealth into financial assets that yield higher returns”*<sup>179</sup>. It is also argued that in order to be effective, these policies should form part of an overall poverty reduction and growth strategy, for example ‘mainstreamed’ in Poverty Reduction Strategy Papers or other economic development plans<sup>180</sup>.

Directing policy towards the ‘far-from market’ tradable and non-tradable sectors mean that they are less likely to suffer the same extent of resource drain effects. The effect on international competitiveness of tradable industries is, however, unclear. One policy response to this uncertainty is to let the private sector ‘pick the winners’ (rather than encourage state-led investment). However, experiences in Botswana and Malaysia demonstrate the value of public sector investment promotion and industrial policies that foster far-from-market diversification<sup>181</sup>  
<sup>182</sup>.

Some conclude that in the context of low income countries, the preferred strategy is to intentionally skew public expenditure (i.e. to invest revenue ‘windfalls’) in the non-tradable sector, since this *“delivers the highest growth in [existing] exports and total output and sustains the highest aggregate real income”*<sup>183</sup>. Potentially though, this strategy is a missed opportunity to use the presence of internationally competitive resource industry as a ‘spring-board’ for industrial growth, e.g. in promoting skills transfer, infrastructure development, regional supplier hubs etc.

Whether close to market or far from market, most important seems to be that Dutch disease effects can be addressed if there are ‘productivity spillovers’ in both tradable and non-tradable sectors<sup>184</sup>. As one author concludes, the fundamental condition for sustained growth in a mineral exporting country is that the contribution of mineral exports to growth in other tradable and non-tradable sectors should be maintained over time, *“regardless of the capacity of the country to maintain its mineral production”*<sup>185</sup>.

Developing robust economic and fiscal policy in the light of revenue windfalls is central to avoiding Dutch Disease effects. Computable general equilibrium models (CGEs) are soft-ware supported tools to simulate and analyse the potential economic impact of the natural resource ‘windfalls’ and policy responses. The models allow for quantitative macroeconomic analysis of a variety of policy scenarios. CGEs only require data for a given year, unlike econometric models which require longer time series data, and can be directed towards a particular group of economic agent. They also allow disaggregation of a particular sector of activity or market, and distinguish between different categories of households according to their location, activities and/or income. Different country specificities can be captured in the model, for example, migration, market integration, saving behaviour, and as well as current trends in elements like public spending, HIV/AIDS or population growth. Government spending can also be decomposed in ways that allow different natural resource revenue management policies to be compared.

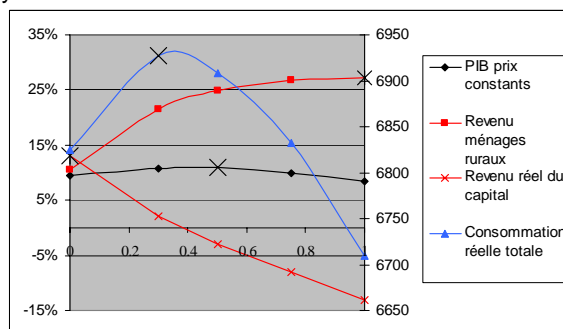
In the case of country’s receiving ‘windfall’ revenues, CGEs can be used to analyse economic policy in the context of the following:



- ▶ **Dutch Disease effects** – revenue management and economic policy can be assessed in terms of its impact on sector development, real exchange rate change, trade, growth, inequality and even poverty (see *Box 9*).
- ▶ **Millennium Development Goals (MDGs)** – taking into account the location and current provision of infrastructure, CGEs could be developed to generate country-specific evidence on the way different policy responses impact upon, sanitation, road network etc, the location and the current provision of infrastructure.
- ▶ **Local development** – a CGE model that distinguishes one or more regions from the rest of the country will allow the study of policies promoting local economic development and fiscal decentralisation. The efficiency of such an exercise will depend on the ability of the model to take into account the region specificities in terms of production sectors, local institutions (and the services they deliver) and household characteristics. Other economic elements, such as essentially agricultural sector and trade, will influence the outcome of local development policies.

### **Box 9      An application of CGE's to Revenue Management in Chad**

A Computable General Equilibrium (CGE) model has been developed to study the economics of Chad. The simulations allow comparison of different uses for 'windfall' oil revenue in relation to their impact on sector production, relative prices and real exchange rate, trade, growth, poverty and inequality. Initial results show that productive investment that encourages an increase in the 'supply response' of the economy is optimal in preventing Dutch Disease effects. For example, the development of a national road network contributes to economic growth without increasing the real exchange rate in the economy. Similarly, the development of irrigation and water systems in rural areas induces a substantial level of local economic growth, and contributes more directly to increases in household income (an indicator of poverty reduction). It is notable that both of these types of public investment are also highly relevant to delivery of the MDGs.



General Equilibrium Model to optimise poverty reduction impact of oil revenues and minimise Dutch Disease effects (Chad)  
 - left axis – ROI from irrigation  
 - right axis – change in household income

Source: Levy, 2004

### **3.2.8 Sequencing of Economic Policy Initiatives**

The choice and sequencing of economic policy depends on a range of both internal and external factors:

#### *Internal*

- ▶ the type of political system, be that mature democracy (stable multi-party system, strong bureaucracy, independent judiciary etc.), factional democracy (unstable politics, political support through patronage, politicised judiciary etc.), or autocracy (paternalistic, predatory or reformist);
- ▶ the status of a country's natural resource industry (scale, geography, stage of investment etc.);
- ▶ the extent of proven resources and reserves, their extraction costs, rate of depletion and accessibility to domestic and export markets;
- ▶ the capacity of domestic institutions to translate revenues into economic and social development (and the speed at which the absorptive capacity of these institutions can be expanded);

- ▶ the physical infrastructure and human capacity in the country;
- ▶ vulnerability to Dutch Disease effects, e.g. the competitiveness of the existing export sector;
- ▶ the status of the tradable economy, e.g. in manufacturing, agricultural, tourism; and
- ▶ the status of the domestic market activity, be that 'close to' the NRNR sector or 'far from' the sector.

#### *External*

- ▶ current commodity prices and future projections;
- ▶ regional and global competition for inward investment in the upstream and mid-stream NRNR sectors;
- ▶ the global sourcing and procurement strategies of operators;
- ▶ anticipated changes in the type and volume of official development assistance, e.g. from programme and projects to general budget or sector support; and
- ▶ proposals for changes to trade rules, e.g. changes in favourable export quotas

Clearly, as the upstream energy or minerals industry develops, and internal and external markets, political priorities and institutional capacities change, the choice and sequence of economic policy will need to change with it. This said, in the short to medium term, policy choices and sequencing need to be coherent and applied consistently, both for reasons of investor confidence and public sector budgeting. In the longer-term, however, flexibility to adapt economic policy to changing circumstances is equally important. *Table 9* provides some typical policy responses for different stages of the mineral development cycle.

**Table 9 Policy Responses to the Mineral-driven Cycle<sup>186</sup>**

Stage	Character	Macro effects	Policy response
<b>Nascent</b>	Mineral investment inflow	Exchange rate pressure	Create rent tax, Build capital fund, Establish revenue stabilisation fund, Grant central bank independence
<b>Youthful</b>	Rapid mineral expansion	Exchange rate appreciation Dutch disease effects	Sterilise windfall rent Expand domestic absorptive capacity
<b>Early-Mature</b>	Slowdown of output mineral	Growing tax and foreign exchange constraints	Substitute new tax sources, Encourage domestic saving, Promote sectoral diversification
<b>Late-Mature</b>	Decline in mineral output	Persisting tax and foreign exchange shortages, Rising unemployment	Depreciate real exchange rate, Boost skill acquisition

This sequence should be treated with care. Little account is taken of what happens when commodity prices rise sharply, or new export markets emerge. These external factors may well carry more influence on economic policy than the different stages of the investment cycle. Crucial is to also assess policy options and sequencing in terms of how proposals contribute to, or detract from, the aims and milestones expressed in national development plans and poverty reduction strategies. For the most promising baskets of policies and sequencing, a risk and opportunities analysis should be applied. Such analysis needs to take account of different global economic scenarios, not least variations in oil, gas and mineral commodity prices.

Equally important, is to understand the limitations placed on economic policy choices and sequencing by the type of political system and institutional capacity. For example, countries with strong political interest groupings may need to combine revenue management strategies with new and effective mechanisms for transparency and public accountability. Countries with weak

civil service capacity in economic planning, budget management and public procurement will need to put in place rapid competency development programmes.

Table 10<sup>187</sup> provides a classification of countries by their political system in the context of an export oil economy, and against which are identified key political and institutional features which influence the choice and sequence of economic policy. These classifications are not exhaustive, and some countries have a blend of features from different categories.

**Table 10 Political and Institutional Features Influencing Economic Policy<sup>188</sup>**

Political features	Institutional Features	Implementations for Economic Policy
<b>Mature democracy</b>		
<ul style="list-style-type: none"> <li>▶ Stable party system</li> <li>▶ Range of social consensus</li> <li>▶ Strong, competent, insulated bureaucracy</li> <li>▶ Competent, professional judicial system</li> <li>▶ Highly educated electorate</li> </ul>	<ul style="list-style-type: none"> <li>▶ Long policy horizon</li> <li>▶ Policy stability, transparency</li> <li>▶ High competitiveness, low transaction costs</li> <li>▶ Strong private/traded sector, pro-stabilization interests vis-à-vis pro-spending interests</li> </ul>	<ul style="list-style-type: none"> <li>▶ Saving likely</li> <li>▶ Expenditure smoothing, stabilization</li> <li>▶ Rents transferred to public through government-provided social services and insurance or direct transfers</li> </ul>
<b>Factional democracy</b>		
<ul style="list-style-type: none"> <li>▶ Government and parties often unstable relative to interest groups</li> <li>▶ Political support gained through clientelistic ties and provision of patronage</li> <li>▶ Wide social disparities, lack of consensus</li> <li>▶ Politicized bureaucracy and judicial system</li> </ul>	<ul style="list-style-type: none"> <li>▶ Short policy horizon</li> <li>▶ Policy instability, non-transparency, high transaction costs</li> <li>▶ Strong state role in production</li> <li>▶ Strong interests attached directly to state expenditures; politically weak private non-oil sector and pro-stabilization interests</li> </ul>	<ul style="list-style-type: none"> <li>▶ Saving very difficult</li> <li>▶ Pro-cyclical expenditure; instability</li> <li>▶ Rents transferred to different interests and to public through subsidies, policy distortions, public employment</li> </ul>
<b>Paternalistic autocracy</b>		
<ul style="list-style-type: none"> <li>▶ Stable government; legitimacy originally from traditional role, maintained through rent distribution</li> <li>▶ Strong cultural elements of consensus, clientelistic, and nationalistic patterns</li> <li>▶ Bureaucracy provides both services and public employment</li> </ul>	<ul style="list-style-type: none"> <li>▶ Long horizon</li> <li>▶ Policy stability, non-transparency</li> <li>▶ Low competitiveness, high transaction costs</li> <li>▶ Strong state role in production</li> <li>▶ Strong interests attached directly to state expenditures</li> <li>▶ Weak private sector</li> </ul>	<ul style="list-style-type: none"> <li>▶ Pro-cyclical expenditure, mixed success with stabilization</li> <li>▶ Risk of unsustainable long-term spending trajectory leading to political crisis</li> <li>▶ Little economic diversification</li> </ul>
<b>Reformist autocracy</b>		
<ul style="list-style-type: none"> <li>▶ Stable government, legitimized by development</li> <li>▶ Social range of consensus toward development</li> <li>▶ Constituency in non-oil traded sectors</li> <li>▶ Insulated technocracy</li> </ul>	<ul style="list-style-type: none"> <li>▶ Long horizon</li> <li>▶ Policy stability, non-transparency</li> <li>▶ Drive for competitiveness, low transaction costs</li> <li>▶ Strong constituency for stabilization and fiscal restraint</li> </ul>	<ul style="list-style-type: none"> <li>▶ Expenditure smoothing, stabilization</li> <li>▶ State investment complementary to competitive private sector</li> <li>▶ Active exchange rate management to limit Dutch disease</li> </ul>
<b>Predatory autocracy</b>		
<ul style="list-style-type: none"> <li>▶ Unstable government, legitimized by military force</li> <li>▶ Lack of consensus-building mechanisms</li> <li>▶ Bureaucracy exists as mechanism of rent capture and distribution; corrupt judicial system</li> <li>▶ Little or no civic counterweight</li> </ul>	<ul style="list-style-type: none"> <li>▶ Short horizon</li> <li>▶ Policy instability, non-transparency</li> <li>▶ Low competitiveness, high transaction costs</li> <li>▶ Spending interests strong vis-à-vis private sector or pro-stabilization interests</li> </ul>	<ul style="list-style-type: none"> <li>▶ No saving</li> <li>▶ Highly pro-cyclical expenditure</li> <li>▶ Very high government consumption, rent absorption by elites through petty corruption and patronage, capital flight</li> </ul>

### 3.3 Good Governance and Capacity Building

In the context of resource revenue management, discussed below are strategies for addressing problems arising from a politicised economy and for building governance capacity, as follows:

- ▶ Anti Corruption Measures
- ▶ Institutional Strengthening and Human Capacity Building – national level
- ▶ Institutional Strengthening and Human Capacity Building – provincial and municipal level
- ▶ Revenue Transparency, Accountability and Civil Society Participation

#### 3.3.1 Anti-Corruption Measures

Non-renewable natural resources are arguably the most lootable of all economic activities<sup>189</sup>, for a number of reasons:

- ▶ resources are geographically fixed and cannot relocate;
- ▶ resource extraction requires relatively low on-going operational investment to maintain the productivity of the initial physical infrastructure; and
- ▶ produce is usually exported offering many 'choke' points for easy extortion, such as pipelines, roads and ports.

Identifying strategies that prevent rent-seeking and corruption in relation to natural resource revenues and rents involves unpacking and addressing the different strands of good governance. This includes: revenue and expenditure transparency, political accountability and responsiveness, political stability (both nationally and in the resource producing regions), government effectiveness (e.g. policy delivery, regulatory quality and enforcement), and the rule of law and enforcement. Specific measures include:

- ▶ adopting transparency protocols for revenue payments, receipts, distribution and expenditure by companies and governments, e.g. the EITI;
- ▶ incorporating legal codes on rent-seeking and corruption, e.g. into production sharing contracts and general contract law (i.e. to address supply chains);
- ▶ deregulation, to remove bureaucratic forms of rent-seeking and replace with private sector competition;
- ▶ surgically address the barriers to resource rent 'transparency' initiatives delivering benefits in economic development and political security, e.g. build a capacity in civil society, business and the media to be able to interpret reports published on payments, revenues, auditors reconciliations, revenue distribution and allocation, and delivery of the social and economic priorities of society;
- ▶ building consensus within society for how to manage revenues and address corruption and rent-seeking (e.g. the operating and oversight rules for Oil Funds);
- ▶ an enhanced role for project finance IFIs in supporting (through loan conditionality) a positive link between resource revenues and economic growth, e.g. by elevating requirements for local content; and
- ▶ an enhanced role for civil society in applying pressure to change governments from a predatory to a development state, e.g. recent minerals policy changes in the Philippines.

### 3.3.2 Institutional Strengthening and Human Capacity Building – national level

Creating a 'developmental' rather than 'predatory' state is in part about increasing the absorptive capacity of institutions and developing human skills. Some argue that the success of Chile, Indonesia and Botswana in 'beating the curse', was in part due to having small groups of highly qualified bureaucrats with the right expertise in macro economic policy<sup>190</sup>. In the Philippines – the fifth most mineral endowed country in the world – the legal system was recently changed to attract foreign investors. Here though, a lack of consensus on how to manage mineral development led to entrenched positions between the government and industry on the one hand and civil society (communities and internationally-supported national NGOs) on the other.

The Oil, Gas, Mining and Chemicals Department of the World Bank Group, and this organization's country and other field offices (along with parts of the Asian Development Bank and IMF) dominate international advice to governments on NRNR revenue management. For example, advice is given on investment agreements, revenue stabilization and intergenerational savings, public expenditure management (PEM), fiscal transparency and NRNR sector development. Recent close collaboration of the World Bank with the Government of Chad to develop a state oil fund is just one example from many.

In addition, the Government of Norway has recently committed \$8 million per year to provide oil and gas management expertise to reduce poverty and prevent conflict in oil-producing developing countries. The United Nations Development Programme is increasingly involved in working with government and civil society to link NRNR revenues to development goals. Some initiatives are listed below:

- ▶ **Liberia** – Building on Kimberly Process, Government of Liberia requested UNDP to support "Diamonds for Development" initiative;
- ▶ **Nigeria** – UNDP partnership with Shell in the Niger Delta. This includes preparation of a Human Development Report. For the Delta along with a range of specific initiatives to address development priorities region;
- ▶ **Sierra Leone** – potential to link to 'Diamonds for Development' initiative;
- ▶ **Sao Tomé** – UNDP, WB, DFID jointly sponsored Platform of Dialogue on the Future of Sao Tomé & Príncipe with Oil. Government requested UNDP CO to assist in setting-up oil revenue management mechanism. UNDP plans further support to government;
- ▶ **Indonesia** – UNDP-BP programme in Irian Jaya on linking economic growth in region to human development objectives - includes multi-stakeholder fora on SMEs support and long-term regional development planning;
- ▶ **Azerbaijan** – macro-economic advice on how the Public Investment Programme (PIP) can use oil revenues to promote sustainable human development within the State Programme on Poverty Reduction and Economic Development (SPPRED) and MDG framework.

A key part of institutional strengthening and human resource development is in the area of budget transparency and civil society participation. Drawing on five African case-studies, the International Budget Project<sup>191</sup> proposes seven strategies (see Box 10).

The Extractive Industries Review of the World Bank, included consultation with governments in resource-rich countries. Box 11 summarizes the requests from the World Bank Group for assistance to governments and the public sector. Many of these requests may apply equally to UNDP.

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**Box 10**     **Strategies for Budget Transparency and Civil Society Participation in Resource-Rich Countries**<sup>192</sup>

- ▶ The improvement of **budget documentation** is a critical first step. Budget documentation should include fiscal policy statements, explain the policy base of allocation decisions and be framed in the previous year's actual spending and non-financial information.
  - ▶ **Repeal official secrets legislation** and replace it with legislation that guarantees appropriate citizen access to state-held information.
  - ▶ Entrench the provision of comprehensive and timely **information** on estimated and actual expenditure and revenues **in a budget law** that also sets out a clear budget process and clarifies roles and responsibilities.
  - ▶ **External reporting** during the spending year should be **obligatory**, including under a cash budgeting system. This should include departmental reporting on achievements. If late audit information makes early annual reports at central government and spending agency level unfeasible, interim mechanisms should be created.
  - ▶ **Extra-budgetary spending should be brought into the budget.** If this is difficult, comprehensive and accurate information on these activities should be included with the budget.
  - ▶ The enhancement of external transparency should coincide with efforts to build **internal transparency**. Often political decision-makers and their administrative advisors make decisions on very imperfect information.
  - ▶ The capacity of **auditors** general should be enhanced. Parliamentary capacity to scrutinize budget proposals and oversee implementation should be institutionalised.
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**3.3.3     Institutional Strengthening and Human Capacity Building – provincial and municipal level**

Public expenditure and resource revenue management at the provincial level in oil, gas and mining producing regions appears to be a neglected area. Current experience of UNDP and others in 'decentralisation' could perhaps add considerable value in optimising the pro-poor impact of the inflows of resource revenues to these regional public authorities. This includes both the redistribution of resource revenues from central government (or state oil funds), and the direct inflows of resource rents to provincial and municipal government in the form of land taxes, benefits sharing etc. At least four types of institutional strengthening and human capacity building activities are frequently needed, as follows:

- ▶ *public expenditure management* – building medium-term budget or expenditure frameworks (MTEFs), developing resource allocation criteria that are 'downwardly accountable' to the population, improving budget executions through expenditure tracking, and performance monitoring, evaluation and auditing. The Papua New Guinea Act of 1992, for example, stipulates that a minimum of 20% of royalties received by the government should be paid to landowning communities of the mining lease area, along with Special Support Grants paid to a given provincial government representing 1% of the gross value of mineral sales of companies operating in the province<sup>193</sup>. What seems to be has been the capacity building to transform this new revenue flow into localised poverty reduction and sustained economic development.

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**Box 11     *Requests for Support arising from the World Bank Extractive Industries Review (abridged)*<sup>194</sup>**

- ▶ Help governments reap maximum economic benefit through macro and fiscal policy advice
  - ▶ Policy advice on resource development that would encourage economic diversification – for instance, developing a vibrant inputs sector, value-added processing, job creation, and human capital accumulation
  - ▶ Help countries assess whether or not exploiting their resources should be considered the best option among alternatives
  - ▶ Help set up national and regional planning processes - multi-sectoral and participatory planning processes are needed to frame the setting for extractive industries development
  - ▶ In moving ahead with extractive sector development, governments need advice in order to negotiate the best deals with companies
  - ▶ Focus on building good governance and the capacity of the State. The WBG should avoid making civil society a form of “parallel government,” thereby undermining the authority of the State. Instead, assistance and training must be provided in establishing open channels of dialogue between government and civil society
  - ▶ Provide oversight and financing for the full life-cycle of a project – in particular, support capacity development for good life-cycle project management and find mechanisms to ensure that government at all levels has adequate financial and human resources to meet demands and needs at the beginning of the project cycle
  - ▶ Provide capacity building for local counterparts to improve project governance. The WBG should help remove bureaucratic bottlenecks in extractive project implementation by training local government counterparts in WBG procurement guidelines prior to the start of a project and by involving participating agencies at the early stages of project formulation and design
  - ▶ Government capacity in project implementation, monitoring, and enforcement should be reinforced – for example, through technical assistance for environmental impact assessments. Technical assistance should also include good practices for health and safety in large and small-scale mining
  - ▶ Help build community capacity jointly with local stakeholders, working closely with both nongovernmental organizations and businesses
  - ▶ Communities should be allowed to reap maximum benefit from projects through education and job creation. They should be assisted further in exploring economic alternatives from the outset of a project, with the aim to build sustainable livelihoods, avoiding social conflict and the phenomenon of “ghost towns” after project closure
  - ▶ Help build local institutional capacity for regional development – building on partnerships with local organizations to develop their social capital and establishing strategic alliances with relevant parties, especially extractive companies.<sup>91</sup> formal sector by addressing the policy, legislative, and regulatory requirements as well as exploring practical, community-based needs on the ground
  - ▶ WBG should encourage industry associations to require member companies to comply with standards, achieve certification, and establish good relations with local people
- 
- ▶ *taxation policy and collection* – ensuring that the ‘social contract’ (ie ‘tax-for-services’ and the development of ‘downward accountability’) is not undermined by the presence of large inflows of capital to provincial and municipal government. This is a familiar problem when provincial governments are in receipt of re-distributed resource revenues.

- ▶ *public infrastructure development and management* – assisting public utilities to manage the higher volumes of capital works expenditure, cost recovery and recurrent expenditure, as well as minimising the associated risk of increased corruption common to institutions with weak capital absorption capacities.
- ▶ *Long-term Sustainable Economic and Landuse Planning* – planning for investment, economic diversification and land use strategies in the long-term, i.e. outside the normal electoral cycle. One option is to convene multi-stakeholders to discuss the institutional and practical problems of long-term economic planning and NRNR ‘annuity’ policies. Such initiatives can lead, for example, to improved sequencing of local economic policy initiatives throughout the project cycle, such that non-tradable (close to market) investment is encouraged during construction phases, and investment in tradable (far from market) sectors during operations. See CASE NOTE #7.
- ▶ *local skills development and local business linkage* – another aspect of maximizing local economic is to develop business vertical and horizontal linkages with the resource sector. “One of the keys to maximizing local labour is to have a long-term view of future operations requirements and to implement a comprehensive training programme starting as early as possible to ensure that when required, staff with the right qualifications are available.”<sup>195</sup> Box 12 lists different types of support that governments, donors and natural resource operating companies can provide to nurture business linkages with the natural resource sector. Two specific initiatives that have offered both training and business support include:
  - ▶ ‘local impact and benefits agreements’ (IBAs) involving mining companies, government and traditional aboriginal communities in Canada, and which provide for employment and training of community members and equity in profit sharing; and
  - ▶ the ‘Scorecard for the Broad-based Socio-economic Empowerment Charter for the South African Mining Industry’, which sets targets for South African mining companies to enhance benefits in the form of human resources development, employment equity, migrant labour, mine community and rural development, housing and living conditions; procurement, ownership and joint ventures, beneficiation and reporting<sup>196</sup>.

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**Box 12 Types of Support for Local Businesses Linkages within the Natural Resource Sector<sup>197</sup>**

**Financial**

- ▶ **financial products** - loans (of different sizes and terms); leasing; venture capital; credit guarantee funds; export credit insurance; bond release; micro loans
- ▶ **Equity and joint venture schemes** – where a long-term commitment is shown by the client or lead contractor to local firms through the purchase of equity

**Management**

- ▶ **business management support** - business management, business plans, tendering advice, regulatory navigation advice, marketing
- ▶ **technical support** – on quality standards, reliability etc.
- ▶ **human resource development** – business management and technical skills

**Matching, Mergers and Acquisitions**

- ▶ local ‘meet the buyers’ expos
- ▶ ‘matching pools’ that bring investors and local companies together
- ▶ dedicated searches for value adding joint venture partners
- ▶ advice on mergers and acquisitions between among domestic firms

**Institutional Strengthening**

- ▶ Support and training to **regional SME support agencies** in offering above services
  - ▶ Support to **local banks** to (i) provide a wider range of financial products tailored to SMEs, (ii) to be able to properly rate and manage ‘risk’; (iii) look beyond current collateral requirements, eg to cash-flow expectations
  - ▶ Development (or establishment) of local credit **risk rating agencies**
  - ▶ Development of **national quality standards**, eg project-relevant university diplomas, establishment of institutes specialising in environmental safety, cost effectiveness etc.
  - ▶ Design of **revenue structures** for SME support agencies, taking into consideration government grants, SME contributions, percentage of new finance secured etc.
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## CASE NOTE #7 - Long-term Economic Planning at Provincial Level<sup>198 199 200</sup>

Since 1987, BP has operated several exploration and production blocks in the Casanare Department of Colombia. These include the Cusiana and Cupiagua oil producing fields which together account for close to half of the country's total oil production (production reached its peak of 434,000 bopd annual average in 1999). With the future life of the Cusiana and Cupiagua oil fields limited by their natural decline, the company and departmental governing authorities are developing a new strategic approach that deploys the current tax/royalty revenues, along with the business resources of BPXC to establish a regional economy independent of oil. Currently 20% of the investing oil companies' overall production is paid in royalties. In turn 47.5% of this is transferred to the Casanare Departmental Government (approximately US\$100 million during 2002) and 12.5% for the oil producing municipalities within the region.

The petroleum-boom has brought new problems for municipal governments, including elevated operating costs and levels of borrowing, and an over dependency on oil-related royalty revenues for funding infrastructure and services, and servicing debt. In addition, there remains little institutional capacity at the departmental level to transparently plan for sustainable regional development away from oil dependence or to manage the implementation of such a plan, ie to plan for 'project closure'. For example, co-ordination between municipalities is weak, there is a general failure to assign royalties to priority development areas, and accountability in the allocation of resources is lacking. These inefficiencies are complicated by a short 3-year electoral cycle, corruption, rent-seeking, and the threat of violence from insurgency and paramilitary activity. The indirect effect of these constraints is to inhibit village associations and other civil society groups and organisations in exercising a voice in the development of their own region. In response BP initiated the following combined strategy:

- ▶ **a multi-sector forum for promoting long-term economic development planning and democratic development** across the region – the Grupo Gestor. The founding members of the group include a government-sponsored solidarity network, two regional NGOs (one independent, and one established by BPXC and its oil industry partners), BPXC and ECOPETROL. The Diocese Catholic church of Yopal joined soon after. After more than a year of discussions with the Departmental Government, and after a decision to open the forum to others, the Governor, regional Chamber of Commerce, and representatives of the region's cattle ranchers and millers, joined existing members and agreed a more formalised structure for the group (see margin). As a first step, a regional land-use planning consultative process has been initiated, promoted by the group's new technical Secretariat.
- ▶ **a leadership and governance programme** to address the institutional and governance weaknesses in the Department, drawing on financial support from BPXC, local municipalities (Alcaldías) and the Departmental government, and with curriculum input from BPXC, ECOPETROL, the municipalities, community development organisations and the Casanare university Unitrópico. Skills modules included: ethics and leadership, instruments of law for public participation, development and investment project models, social justice and conflict resolution, environment and agriculture projects and gender.
- ▶ **a public-private partnership to construct a new road.** The 20km road is a regionally strategic transport route through a remote northern region of the Department, with market access and other developmental benefits for the local population. Critically, close involvement of affected local communities in both the design phase and long-term maintenance of the road has helped reduce the effect of opposition from insurgency groups, and generated good will for future oil exploration and development by BP.

### 3.3.4 Revenue Transparency, Accountability and Civil Society Participation

Many of the more recent initiatives to do with natural resource revenue management have focused on issues of *transparency*, 'downward' *accountability* and public *participation*. Those discussed in this report are:

- ▶ Extractive Industries Transparency Initiative
- ▶ Global Reporting Initiative
- ▶ Publish What You Pay
- ▶ IMF Code on Good Practices in Revenue Transparency
- ▶ Aarhus Convention

Other initiatives and methodologies of relevance include<sup>201</sup>:

- ▶ OECD Best Practices for Budget Transparency
- ▶ Promoting Transparency in the African Oil Sector – Centre for Strategic and International Studies
- ▶ Proposed Economic Assistance Conditionality Act – US House of Representatives
- ▶ Bank Track – NGO coalition
- ▶ OECD Guidelines for Multi-National Enterprises
- ▶ proposed IAS Accounting Standards – Association for Accounting and Business Affairs
- ▶ FTSEGOOD Indices
- ▶ Dow Jones Sustainability Indexes
- ▶ Africa Governance report – UNECA
- ▶ Bribe Payers Index – Transparency International
- ▶ Corruption Perceptions Index – Transparency International
- ▶ Democracy Index – Institute for Democracy in South Africa
- ▶ Global Integrity Report – Centre for Public Integrity, Washington DC
- ▶ Worldwide Governance Indicators – World Bank

In addition, the efforts of some international donors with sector-wide and general budget support and in facilitation of poverty reduction strategies papers (PRSP) for highly indebted countries, have also contributed to greater transparency, accountability and participation in revenue management, though not necessarily directed only at natural resource revenues.

The need to focus attention particularly on these three elements of the resource revenue management is built around the growing evidence that:

- ▶ where the government is the only shareholder, the national oil companies are subject to little pressure to be transparent in their operations. Few national oil companies publish accounts that are either consistent with International Accounting Standards, or independently or externally audited<sup>202</sup> (*quote*); and
- ▶ where public revenues come from a small number of concentrated sources, such as a few foreign oil companies or a public mining enterprise, it is relatively easy for revenue and expenditure to be hidden from view. If a legislature exists, it has limited capacity to exercise oversight over the state because it has very incomplete knowledge of (let alone control over) the myriad ways in which state and quasi-state agencies raise and spend money. The official "budget" may represent a mere shadow of the true fiscal situation<sup>203</sup> (*quote*).

There is however also criticism that transparency initiatives are possibly overrated<sup>204</sup>. It is noted that large portions of revenues accrue to national resource companies, middle men or intermediary agents rather than the government or the operating companies directly.

*Table 11* summarises the main initiatives around resource revenue transparency, accountability and civil society participation, and assesses them in terms of their reach against a continuum of transparency, accountability and participation activities. Some highlights are given below.

#### *IFC Code of Good Practices on Fiscal Transparency*

An updated 'Code of Good Practices on Fiscal Transparency' was approved by the Executive Board of the IMF in 2001. An abridged version of the code is given in *Box 13*. The full version

of the code can be seen at: <http://www.imf.org/external/np/fad/trans/code.htm>. Notably, the code is the only formal instrument that appears to offer a fully comprehensive approach, covering all of the main features of effective revenue management (see *Table 11*). Most other initiatives are predominantly piece-meal in comparison. The IMF code thus offers a possible template for undertaking a 'gap analysis' to determine the best role to be played by donors (including UNDP) and others in supporting resource revenue management.

**Table 11 Variable 'Reach' of Initiatives on Resource Revenue Transparency, Accountability and Participation**

Intended 'Reach' of Initiatives or Recommendations	Key Initiatives									
	EITI	PWYP	OSI	CRS	IBP	GRI	IMF	SWAp/GBS	PRSPs	Aarhus Convention
Governments and companies negotiate <b>investment agreements</b> that are transparent and economically prudent with respect to revenue generation				✓						
Companies disclose what they <b>pay</b> to governments		✓				✓				
Governments and national oil (NOCs) companies disclose what they <b>receive</b>	✓	✓					✓			
Credible formal (auditors) and informal (civil society) <b>oversight systems</b> for payments and revenues	✓	✓	✓	✓	✓		✓			✓
Governments disclose the criteria or <b>policies</b> upon which they allocate resource revenues							✓	✓		
Governments facilitate <b>participation</b> by civil society in deciding the allocation criteria, policies and priorities, ie achieving 'downward accountability'							✓	✓	✓	✓
Governments build transparent budgeting and <b>expenditure frameworks</b> and systems							✓	✓		
Governments disclose the <b>distribution of revenues</b> from MoF to other ministries and lower layers of government (and from ministries to local government)							✓	✓		
Governments implement transparent and fair <b>procurement procedures</b> relating to expenditure of resource revenues							✓			
Credible formal and informal <b>oversight systems</b> for revenue distribution, budgetary allocation and tracking, and procurement (eg media, multi-stakeholder etc.)		✓	✓		✓		✓	✓	✓	✓
<b>Outcome performance monitoring and evaluation</b> , with credible oversight, ie impact on poverty					✓			✓	✓	✓
Key: <ul style="list-style-type: none"> <li>▶ EITI - Extractive Industries Transparency Initiative</li> <li>▶ PWYP – Publish What you Pay</li> <li>▶ Open Society Institute</li> <li>▶ Catholic Relief Society</li> <li>▶ IBP – International Budget Project</li> <li>▶ GRI - Global Reporting Initiative</li> <li>▶ IMF – IMF Code of Good Practice in Fiscal Transparency</li> <li>▶ SWAp – Sector wide support from donors</li> <li>▶ GBS – general budget support from donors</li> <li>▶ PRSPs – preparation of poverty reduction strategies for HIPC</li> </ul>										

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**Box 13 IMF Revised Code of Good Practices on Fiscal Transparency (abridged)<sup>205</sup>**

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**1. Clarity of Roles and Responsibilities**

- ▶ Clear mechanisms for the coordination and management of budgetary and extra budgetary activities should be established.
- ▶ Government involvement in the private sector (e.g., through regulation and equity ownership) should be conducted in an open and public manner, and on the basis of clear rules and procedures that are applied in a non-discriminatory way.
- ▶ Any commitment or expenditure of public funds should be governed by comprehensive budget laws and openly available administrative rules.
- ▶ Taxes, duties, fees, and charges should have an explicit legal basis. Tax laws and regulations should be easily accessible and understandable, and clear criteria should guide any administrative discretion in their application.
- ▶ Ethical standards of behaviour for public servants should be clear and well publicized.

**2. Public Availability of Information**

- ▶ The public should be provided with full information on the past, current, and projected fiscal activity of government.
- ▶ The budget documentation, final accounts, and other fiscal reports for the public should cover all budgetary and extra budgetary activities of the central government, and the consolidated fiscal position of the central government should be published.
- ▶ Where sub-national levels of government are significant, their combined fiscal position and the consolidated fiscal position of the general government should be published.
- ▶ The publication of fiscal information should be a legal obligation of government.

**3. Open Budget Preparation, Execution, and Reporting**

- ▶ The budget documentation should specify fiscal policy objectives, the macroeconomic framework, the policy basis for the budget, and identifiable major fiscal risks.
- ▶ The annual budget be prepared and presented within a comprehensive and consistent quantitative macroeconomic framework, and the main assumptions underlying the budget should be provided.
- ▶ Major fiscal risks should be identified and quantified where possible, including variations in economic assumptions and the uncertain costs of specific expenditure commitments (e.g., financial restructuring).
- ▶ Budget data should be reported on a gross basis, distinguishing revenue, expenditure, and financing, with expenditure classified by economic, functional, and administrative category. Data on extra budgetary activities should be reported on the same basis.
- ▶ A statement of objectives to be achieved by major budget programs (e.g., improvement in relevant social indicators) should be provided.
- ▶ Procedures for the execution and monitoring of approved expenditure and for collecting revenue should be clearly specified.
- ▶ Procurement and employment regulations standardized and accessible to all interested parties.
- ▶ Budget execution should be internally audited, and audit procedures should be open to review.
- ▶ The national tax administration should be legally protected from political direction and should report regularly to the public on its activities.
- ▶ There should be regular fiscal reporting to the legislature and the public.

**4. Assurances of Integrity**

- ▶ Budget data should reflect recent revenue and expenditure trends, underlying macroeconomic developments, and well-defined policy commitments.
  - ▶ A national audit body or equivalent organization, which is independent of the executive, should provide timely reports for the legislature and public on the financial integrity of government accounts.
  - ▶ Independent experts should be invited to assess fiscal forecasts, the macroeconomic forecasts on which they are based, and all underlying assumptions.
  - ▶ A national statistics agency should be provided with the institutional independence to verify the quality of fiscal data.
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### *Extractive Industries Transparency Initiative*<sup>206</sup>

The Extractive Industries Transparency Initiative (EITI) programme is managed by the UK Department for International Development and the World Bank. Presently eight countries are implementing the EITI principles: Azerbaijan, DRC, Ghana, Kyrgyz, Nigeria, Sao Tomé, Timor L'Este and Trinidad and Tobago. Another twelve countries have endorsed the initiative. Central to the initiative is commitment by governments to: (i) voluntarily disclosure independently reconciled audits of *revenues* (received by governments) and *payments* (made by companies to governments); and (ii) initiative a multi-stakeholder process to design, monitor and evaluate the transparency commitments.

EITI is now expanding into skills training for national level public sector. For example the Nigerian EITI chapter recently commissioned a training programme on petroleum industry economics, tax policy and revenue management, a move which takes EITI beyond just transparency. EITI is thus at a cross-roads. Two clear choices face the initiative, either develop a "narrower but deeper" strategy, focused on only a few countries, but extending activities into national expenditure monitoring and reconciliation of payments/revenues at sub national levels of government; versus a "shallower but wider" approach which would remain focused on transparency and bring into the initiative countries such as China, India and Russia. It is recommended that UNDP continue to discuss with EITI how to align their strategies.

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#### **Box 14 Good Practice Examples of the EITI**<sup>207</sup>

- ▶ **Azerbaijan** – the Government's State Commission on the EITI (responsible for overseeing the implementation of the Initiative) is a 'proactive and sophisticated' local NGO transparency coalition. All operating companies have signed a "Memorandum of Understanding" to provide guidance to stakeholder groups as to their responsibilities within the tri-partite process and how disputed issues will be addressed. The MOU guarantees that the local NGO coalition will play a fundamental role in the design and monitoring of EITI implementation and in selecting an independent auditor to verify published data.
- ▶ **Sao Tomé e Príncipe** – a National Forum was established by President Fradique de Menezes in order to inform citizens about the potential impact of the oil industry on the country and to seek advice on how revenues should be spent. Various 'popular information bulletins' were generated for participants in the forum as well as several questionnaires to get their feedback directly.
- ▶ **Timor L'Este** – consultations were held with local civil society organisations, remote communities, universities and schools during the development of the country's oil revenue management legislation.

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### *Publish What You Pay*<sup>208</sup>

Publish What you Pay (PWYP) is a coalition of 250 international and national NGOs. The coalition actively gathers and reports information the disclosure of payments by companies to host governments, highlighting deficiencies as a means to encourage improved performance.

The grouping also advocates for:

- ▶ mandatory disclosure of payments by *companies*, and argue that this serve as a substitute for reporting of income by governments that do not supply such information;
- ▶ transparency in the extractive industries to be made a condition of all lending, development and technical assistance programmes by *international financial institutions* like the International Monetary Fund and World Bank Group;
- ▶ an amendment to the rules for all oil, gas and mining companies listed on *stock markets*, which would require the disclosure of payments (taxes, fees, royalties and other transactions) made to governments for all countries of operation;

- ▶ an *International Financial Reporting Standard* for the extractive industries to include a requirement that extractive industry companies disclose in their accounts all payments that they make to the governments of countries in which they extract resources, and to agencies or representatives of those governments;
- ▶ *export credit agencies* to require the public disclosure of all payments (taxes, fees, royalties and other transactions) as a condition of their support to extractive industry companies seeking loans, guarantees and risk insurance;
- ▶ all *private, commercial and retail banks* to require transparency of revenues from extractive industries as a condition for all resource-backed loans to developing countries, meaning loans which are secured against future resource revenues;
- ▶ country *governments* to (i) remove legal and extra-legal obstacles to transparent disclosure of company payments and government revenues from the extractives sector, including removing non-disclosure clauses in production sharing agreements; (ii) collaborate with citizen groups monitoring the management and allocation of resource wealth including the development of revenue oversight mechanisms involving both government and civil society; (iii) publish the results of regular independent audits of national resource companies; (iv) identify resource revenues in the national budget.

A toolkit has recently been published by PWYP. The resource cites four key success factors for effective participation of civil society in monitoring revenue management:

- ▶ a capacity to gather the right information through formal and informal channels, and analyse and translate the material into an understandable form for the public, the media, and policymakers;
- ▶ building and maintaining effective advocacy positions;
- ▶ working with the media; and
- ▶ engaging public officials and 'push' them in the direction of civil society's agenda.

#### *Other Transparency Initiatives*

Other organisations in the somewhat crowded field of revenue transparency, accountability and participation include: the Global Reporting Initiative; IMF - Code on Good Practices in Revenue Transparency; Open Society Institute; International Budget Project (IBP) of the Centre on Budget and Policy Priorities; OECD Best Practices for Budget Transparency. A number of international conventions are also relevant to this topic: the UNECE Aarhus Convention; UN Convention Against Corruption; African Union Convention Against Corruption; and SADC Protocol Against Corruption.

#### *Working with Parliament, the Media and NGOs*

A key component of accountability in NRNR management is an effective role for parliamentary institutions, the media and established key civil organisations. The aim here is to foster an enhanced scrutiny and oversight capacity explicitly targeted at how NRNR revenues are, or are not, being linked to development goals. This may involve strengthening the capacity of parliamentarians, supporting civil servants on Public Accounts and other relevant parliamentary sub-committees, as well as working with key journalists and editors of the newsprint and broadcast media, and with faith groups and key non-governmental organisations.

Specialist training packages, technical advice and consultancy management expertise already lies with a number of international transparency initiatives, including the International Budget project (IBP) programme, the recommendations of the World Bank Extractive Industries Review (EIR), the IMF Code on Good Practices in Revenue Transparency, the Publish What You Pay

(PWYP) toolkit and the programmes of the Open Society Institute. Building on these initiatives, UNDP could offer to co-ordinate or implement a wide range of initiatives, including:

- ▶ oversight of a process of natural resource revenue laws formulation;
- ▶ oversight of interagency co-ordination among Central Bank, Ministry of Finance, Ministry of Energy/Petroleum/Minerals and the national oil company;
- ▶ oversight of production and royalty negotiations with foreign extractive industry investors;
- ▶ interpretation of reports on resource production, payments and revenue receipts;
- ▶ review of auditors reconciliations;
- ▶ oversight of state mineral or oil stabilisation and savings funds;
- ▶ contribute to public expenditure policy formulation on NRNR revenue stabilisation, intergenerational savings, productive investment and economic policy;
- ▶ review of budgets, revenue distribution and public expenditure management; and
- ▶ oversight of public sector procurement.

### **3.4 Lessons from Aid**

Both the flows of conventional development assistance, in the form of programme and project aid, and the more recent trend towards general budget and sector support provide insights into the problem of the 'resource curse' and how it might be tackled.

#### **3.4.1 Aid and 'Big Push' Theory**

Empirical modelling has been used to show how natural resource 'booms' are a form of the 'big push' theory of economic development, ie potentially stimulating the transition of a country from cottage industry to factory production<sup>209</sup>. These conclude however, that the characteristics of natural resource-driven 'big push' phenomena can "*also frustrate and even reverse industrialization that is in mid-stream*"<sup>210</sup>. What seems to matter most is the 'timing of the boom' and the distribution of returns across other sectors in the economy.

#### **3.4.2 Aid, Dutch Disease and Macroeconomic Policy**

The problems of Dutch disease and distortions in growth patterns are associated with aid as well as natural resource revenues. However, recent studies in Uganda suggest that the Dutch disease effects of aid do not seem to be particularly dramatic<sup>211</sup>: "*beyond the short-run, in which demand-side effects dominate, the relation between enhanced aid flows, real exchange rates, export volumes and welfare is a complex one. It is certainly not inevitable that over a medium term horizon concerns about the Dutch disease effects of aid are warranted.*"<sup>212</sup>

Caution is needed here in drawing similar conclusions for NRNR revenues. Even in the most aid-dependent countries such as Uganda, the level of capital flows is generally of a different magnitude to those that accrue from natural resources during 'booms'. Thus the 'effects' are not unsurprisingly smaller. In both cases – aid and resource revenues - the risks of Dutch Disease effects mean that all resource flows should be accurately incorporated into a sound macroeconomic framework as the basis for making decision in terms of both monetary and fiscal policy.

### 3.4.3 Government Revenues and General Budget Support

Since the late 1990s a policy shift has taken place in aid architecture towards general budget support. General Budget Support (GBS), like the revenues governments receive from natural resource taxation, licensing etc. goes directly (or indirectly) into the budget for domestic expenditure. This change in aid architecture was based on sizable evidence from evaluations such as the 'Wapenhans Report' on the failings of the alternative 'projectised' approaches to aid. These failings are as follows:

- ▶ projectised approaches did not address the problems they were designed to address;
- ▶ corruption was just as high as with budget support;
- ▶ projects are inefficient, particularly in terms of high overhead cost and a multiplication of parallel systems, structures and policies;
- ▶ projects have had widely observed adverse institutional consequence in recipient states, including policy fragmentation, draining capacity and personally from the government sector and undermining the relationship between states and their citizens around service deliver and accountability.

A shift in aid towards General Budget Support (and sector support) brings with it a range of new challenges, many of which provide lessons for the management of NRNR revenues. These included concerns around fungibility, the impact of aid on accountability and the central importance of public finance management. These are discussed briefly below.

#### *Fungibility*

Aid or any other source of revenue once in the treasury can be used for a range of purposes. *Fungibility* in this context is the idea that money is transferable across different development objectives, ie that it is not possible to identify or meaningfully account for what the aid was spent on once it has been disbursed to the national budget. Most specifically, aid can be used to allow existing resources to be diverted to 'other priorities'. Specific concerns within the aid industry include how to ensure that resources are not directly spent on military or defence sector but are used to ensure an 'additionality' of spending on poverty reduction and development. The *fungibility* of revenues is one argument in support of integrating oil revenues with the central budget system, rather than isolating them within separate oil funds where tracking resource diversion can be even more difficult. The counter argument also stands for NRFs with high levels of transparency and clear expenditure criteria.

#### *Accountability and Legitimacy Effects*

Another set of issues that occur around both General Budget Support and natural resources revenue management is the impact on the 'project of government'. In both cases there is the danger that because these revenues are not drawn from a broad public constituency, so the state does not necessarily have to relate to its citizens in its expenditure in the same way as it does over conventional tax revenues. Essentially downward accountability relationships are not fostered. Accountability is instead drawn upwards towards the international donors and/or the interlocking government agencies controlling NRNR revenue management.

#### *The Centrality of Public Finance Systems*

Once revenues, from whatever source, are part of the budget system, then the soundness and quality of that system becomes central. This includes revenue raising, fiscal balancing, allocation of resources, implementation of government plans and budget execution, and auditing. In aid-driven General Budget Support this reality has resulted in a renewed emphasis on the quality of public financial management (PFM). Clearly it is these same fiscal, budgeting and planning systems that will influence the effectiveness and efficiency of NRNR revenue management. The key goals that sound PFM should or can deliver are:



- ▶ linking the aims and policy of government to the availability of resources;
- ▶ linking goals and policies to resourced plans and outcomes on the ground; and
- ▶ mechanism for holding government to account for the deliver of such plans.

There are a number of commonly occurring weaknesses which prevent budgets from fulfilling their functions effectively. These are summarised in *Box 15*.

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**Box 15 Weaknesses which Prevent Effective General Budget Management**

- ▶ *Budget execution:* A general underlying problem is the lack of a relationship between allocations to particular budget lines or programmes and the actual spending that occurs, ie the budget execution. Without this link, budgetary processes rapidly become meaningless.
  - ▶ *Revenue planning:* Another common problem closely linked to both aid and natural resource revenues is the unpredictability of revenue flows. Regular 'mid-year' or 'supplementary' budgets are a symptom of such volatility. These additional budgets sometimes involve cuts to the planned public expenditure programme. In some resource rich countries however budget allocations can increase in association with 'windfall' revenues. If these changes in budgeting arrangements occur regularly it indicates a weakness in the macroeconomic framework and is likely to result in suboptimal and inefficient public spending as planning processes are disrupted.
  - ▶ *Off budget finance:* An issues that is also often linked to high levels of aid and natural resources revenues is the lack of a 'comprehensive' budget. This means that resources are not included in the budget processes – either as revenues or expenditure. This is both a sources of inefficiency as the full 'envelope' of possible funds is not taken into account, and of corruption as tracking and tracing these resources is particularly difficult. Parastatal organisations are a common sources of such problems.
  - ▶ *Procurement:* Sound procurement criteria, systems and implementation are particular important for the tendering processes associated with oil licences and the operations of state owned natural resource companies. Procurement can be a key source of rent-seeking and corruption.
  - ▶ *Performance:* Ensuring a performance or results orientated budgetary systems includes effective a monitoring and evaluation, and an audit system. These sub-systems are needed to provide timely feedback into the allocation of budgetary resources. However the process is often extremely weak in many systems despite its fundamental role in the systems ability to learn.
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#### **3.4.4 Linking Aid to Effective NRNR Revenue Management**

The recent G8 and OECD commitments to increase aid levels to poor countries, comes at time when some of these same countries, and/or their immediate neighbours, are challenged by the receipt (or anticipated receipt) of windfall NRNR revenues. For example, twenty one countries in the sub-Saharan African region (over half) are already sizable oil, gas or mineral exporters<sup>213</sup>. Yet many of the same countries are failing to progress, or progressing too slowly, to meet multiple development goals (including the MDGs) and are thus potential recipients of the increased aid.

This is a new, and potentially historic, coincidence. In response, whether in terms of direct budget support, sector support, project aid or technical assistance, new strategic thinking is required to co-ordinate conventional in-country multi-lateral and bi-lateral aid so that it mobilises resource 'windfall' revenues for effective development. Some of the strategic questions to be answered include the following:

- ▶ how to co-ordinate capital flows from general budget support and sector-wide support with NRNR revenue management (be that via state stabilisation and saving funds or via the national budget)?

- ▶ how to manage debt relief in NRNR revenue ‘windfall’ countries?
- ▶ how to prevent (i) ‘big-push’ aid strategies for MDG delivery from combining with (ii) increased NRNR revenue expenditure to generate adverse economic, institutional and political consequences, including Dutch Disease effects, worsening institutional absorptive capacities, corruption and political instability?
- ▶ how to co-ordinate aid-supported public expenditure management reform programmes with NRNR revenue management assistance?
- ▶ how to utilise programme aid and technical assistance (for example in PRSP preparation) to optimise linkage between NRNR revenue management and the achievement of national and local development goals and MDG delivery?
- ▶ how to mobilise domestic ‘windfall’ revenues such that they begin to act as though they were a form of general budget support for investment in the MDGs and development priorities
- ▶ how existing donor Country Strategies, PRSPs and the proposed 10 year MDG-PRSPs might need to be revised to accommodate the influx of sustained NRNR windfalls revenues?
- ▶ how to use aid to incentivise resource-rich governments to invest part of their ‘windfalls’ in productive infrastructure in neighbouring countries, in part as a strategy to avoid internal Dutch Disease effects and strengthen regional political security?
- ▶ how to assist non-resource endowed countries who are suffering from sustained high oil and gas prices?

Given the likely increases in aid expenditure on infrastructure promoted by the ‘Sachs’ ‘big push’ recommendations for meeting national and international development goals, it will be important to integrate aid policy and architecture – in particular General Budget and sector support - with strategies to manage natural resource revenues in aid-recipient countries. Two types of approaches can be envisaged:

- ▶ alignment of General Budget Support with natural resource revenue management and economic policy; and
- ▶ aid as a catalyst to leverage greater developmental impact (in particular pro-poor impact) from the natural resource revenues.

### **3.4.5 Alignment of General Budget Support with Natural Resource Revenue Management**

Over the next five years some resource-rich countries, particularly in sub-Saharan Africa, are likely to be recipients of large aid flows in the form of General Budget Support and/or sector-wide support (SWApS). This will take the effect of both capital flows and institutional and human capacity support. Assistance will be directed in part at public financial management – the development of medium term expenditure frameworks, accountable resource allocation procedures (eg via PRSPs), budget execution and tracking, and performance monitoring. This type of aid needs to be aligned with the efforts of governments to manage natural resource revenue volatility through revenue stabilisation funds and changes to fiscal, investment and industrial economic policy.

With respect to physical infrastructure, the focus of direct sector support (SWApS) in the ‘hard’ productive infrastructure sectors, such as roads and ports, needs to be aligned with the efforts of government to reduce Dutch Disease effects on key non- NRNR tradable sectors, ie to diversify the economy. Finally, evidence shows that the number of countries that receive General Budget Support in large enough volumes to make alignment with natural resource revenues a significant concern is limited. Where this is likely to be the case – Uganda and Tanzania for example – there is a need to align donor supported processes of public ‘participation’ in national policy

formulation (usually in the form of a PRSP) and on policy content, with transparency, accountability and public participation initiatives for improving resource revenue management.

### **3.4.6 *Aid as a Catalyst to Enhance the Developmental Impact of Natural Resource Revenues***

For the most part NRNR-rich countries will likely receive declining aid in the form of budget support. In these cases technical assistance and project-based aid (including that distributed through civil society organisations) could be better targeted to where it can have the most impact in realising a positive economic, social or security impact from natural resource revenues. This could be in supporting ministries of finance to develop trade policy or industrial diversification, contributing to institutional strengthening and human resource development that delivers greater upward accountability in revenue expenditure, or forming partnerships for development at the national or local level.

## **3.5 Investment Risks and Conflict Prevention**

### **3.5.1 *Assessing Investment Risks***

A key recommendation of the PWYP coalition is that companies and governments that benefit from World Bank Group support, such as funding from the International Finance Corporation (IFC) or guarantees from the Multilateral Investment Guarantee Agency (MIGA), should be required to publish what they pay governments for the right to access and exploit oil, gas and mining resources. Further, that disclosure should include taxes, fees, royalties and other payments, including signature bonuses, and that production-sharing agreements and other contracts vital to the tracking of revenue streams should also be disclosed.

Other NGOs, such as Oxfam, urge that “*if the IFI (international finance institution) support an extractive sector, they should include assistance to help the host country add value to – rather than simply extract – their oil and mineral wealth*”<sup>214</sup>. And, that the same institutions should only support projects in which the host government specifies in advance how the resource revenues are to be used to alleviate poverty, and agrees to independent monitoring to ensure that this occurs.

At present few official international finance institutions place these types of requirements on borrowers or equity partners; nor do they undertake specific assessments to determine the level of risk if these and other revenue management measures are not adopted. The same is so for commercial banks. For example, the ‘Equator Principles’ – the environmental and social safeguard policies of the International Finance Corporation and now adopted by 21 leading commercial banks – do not include requirements for revenue transparency or procedures for assessing or mitigating the adverse effects of resource revenue management.

In response to these types of criticisms, the World Bank published its Extractive Industries Review in December 2003<sup>215</sup>. This report calls for reforms within the institution to give more priority to disclosure and transparency in revenue management, and facilitate improvements of governance in host countries and broader inclusion and participation of local stakeholders.

In addition, the same report suggest the World Bank require higher standards for delivering social and environmental protections and benefits and strengthen its environmental and social requirements for investment in extractive industries<sup>216</sup>.

Aligned with these recommendation the International Finance Institution has published a Position Paper<sup>217</sup>. This states that for investments in projects that are likely to generate high social or environmental impacts or carry high governance or institutional risks, the IFC will systematically assess the risks that government would misuse the large payments or that intended benefits may not reach local communities. Depending on the results of the assessment IFC would consider the following options:

- ▶ engage with the Bank or IMF to seek coordination of work programs that address regulatory, fiduciary, and public expenditures management issues, which are beyond IFC's mandate;
- ▶ in the event that Bank or IMF coordination may not achieve the necessary level of management, consider other mitigation measures, including sponsor's community development programs, if any; and
- ▶ assess the capacity of the sponsor for involvement in any of the mitigation measures, and if sponsor capacity needs to be supplemented, consider identifying additional partners or securing appropriate capacity-building assistance, such as trust funds.

The Compliance Advisor Ombudsman office (CAO) of the IFC proposes that this Position Paper be developed further into a set of implementation procedures. The procedures should apply not only to high risk projects but to any project where the natural resource sector makes a significant contribution to the economy<sup>218</sup>.

### **3.5.2 Linking Revenue Management to Conflict Prevention**

With respect to the risk of violence in resource producing regions, the strategies identified for institutional and human resource capacity building at the provincial and local levels, and those outlined in the Colombia CASE NOTE #7, offer some potential measures. With respect to the specific risk of economic predation by rebel groups, four strategies are identified as follows<sup>219</sup>:

- ▶ first, the government can facilitate diversification of the economy away from dependence upon primary commodities;
- ▶ second, a government can try to make loot-seeking rebels unpopular by transparently using the revenue from primary commodity exports to fund effective basic service delivery;
- ▶ third, the international community can make it more difficult for rebel groups to sell the commodities which they loot; and
- ▶ fourth, "entrench minority rights into the constitution. This can be done either by explicitly legislating group rights, or through strong individual rights. If all individuals are secure from discrimination, then individuals in minority groups are secure."<sup>220</sup>

In addition, the African Union is emerging as an important regional institution and could in time play a strong and stabilising role in Africa. Thus technical support to AU institutions could help.

With respect to the role of business in conflict prevention, a recent report for the United Nations Global Compact<sup>221</sup> argues that "...efforts to develop conflict-sensitive behaviour among companies have proceeded in isolation from the mainstream of international conflict management policy and practice, and with insufficient engagement by governments and intergovernmental agencies – the main guarantors of peace and security". In essence, the report argues that conflict-sensitive business practices cannot progress in the absence of practical public policy on conflict prevention. The term 'conflict-sensitive business practices' refers to efforts to ensure that routine company investments and operations in weak states (including those at war and those emerging from conflict), do not contribute to ongoing violence, corruption, criminality or human rights violations<sup>222</sup>.

No recommendations are made for linking natural resource revenue management to company behaviour per se. However, the report does suggest that public resources (which could include resource revenues) be used to enable the private sector to complement mainstream conflict prevention and reconstruction efforts.

Also of note, the United Nations Panel of Experts on the Illicit Exploitation of Natural Resources in the Democratic Republic of the Congo (DRC), found that large publicly-owned multinationals were being 'squeezed out' by less visible, less scrupulous junior companies, who were

unconcerned about reputational or security risks and that industry-driven efforts have thus far proven to be unable to affect the behaviour of rogue companies.

## 4. Conclusion

The developing world is facing a new era of global economic development. Poor countries now have less need to 'move steadily up the ladder of industrial development', from primary commodities, to manufacturing, to services. The new path to sustained national economic growth is increasingly about finding *niches* within the supply and values chains that govern and stimulate the global economy. Whilst one national economy may find its competitive advantage in manufacturing due to low labour costs, relevant skills and adequate infrastructure; another might be better positioned by growing its export of non-renewable natural resources, combined investment in agricultural processing and tourism.

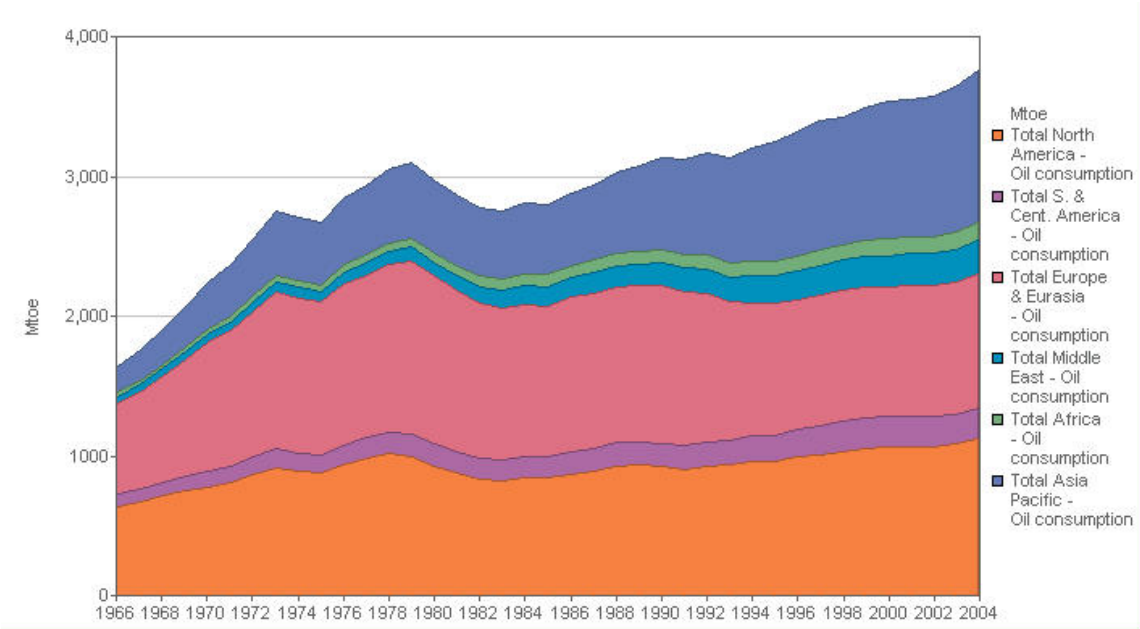
Integral to the formulation of effective industrial and economic policy is to balance growth with tackling poverty, in particular improving rural household incomes, health care services and access to basic education. In addition, fiscal prudence, improved good public and private sector governance and increased institutional capacity, is the glue that binds these policy choices together to deliver visible and sustained development impact on the ground.

In this context, countries endowed with non-renewable natural resources (NRNR) are faced with substantial opportunities, but also great risks. Get the choice of industrial and economic policy, their sequencing and alignment with global value chains right, supported by fiscal prudence, adequate institutional capacity and civil society participation, and NRNR revenues can be a force for sustained economic growth and social development. Get the policies, sequencing and alignment wrong, and ignore issues of absorptive capacity and good governance, and international experience tell us that a 'boom' in NRNR revenues can become a 'curse', depressing economic growth, worsening poverty and increasing political instability.

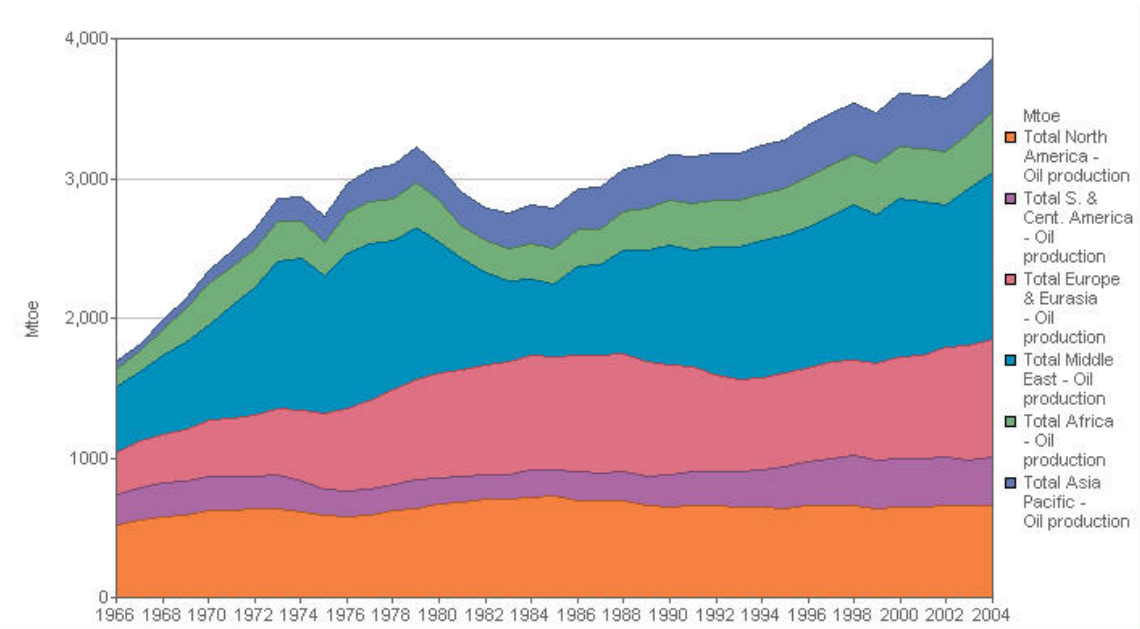


ANNEX A Global Oil and Gas Production and Consumption<sup>223</sup>

World oil consumption, million tonnes

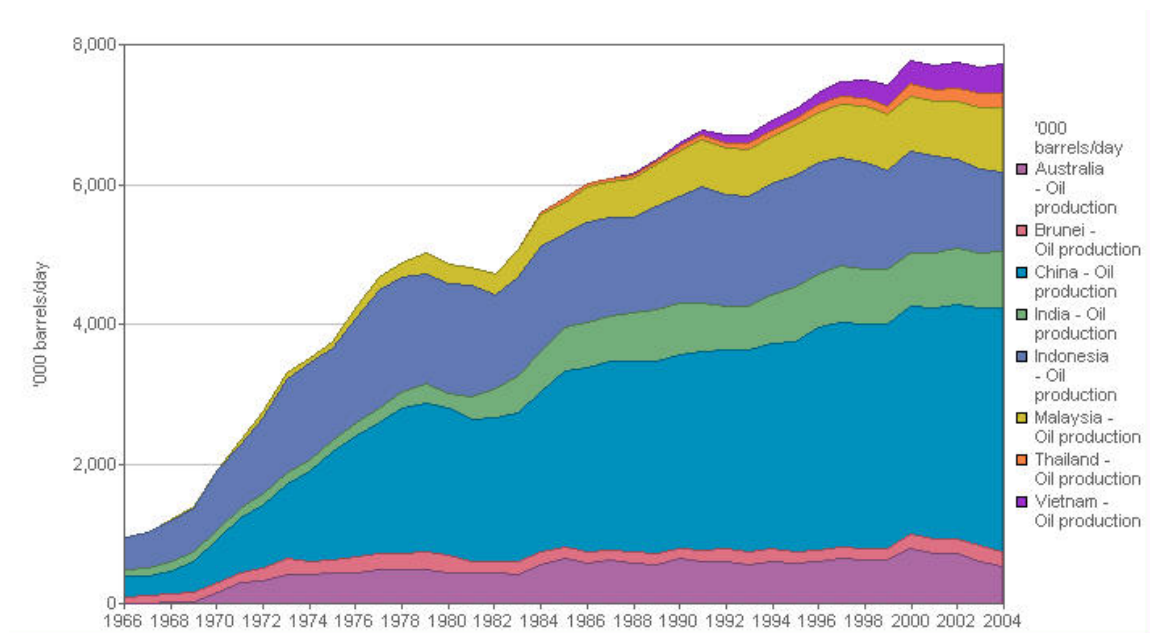


World oil production, million tonnes

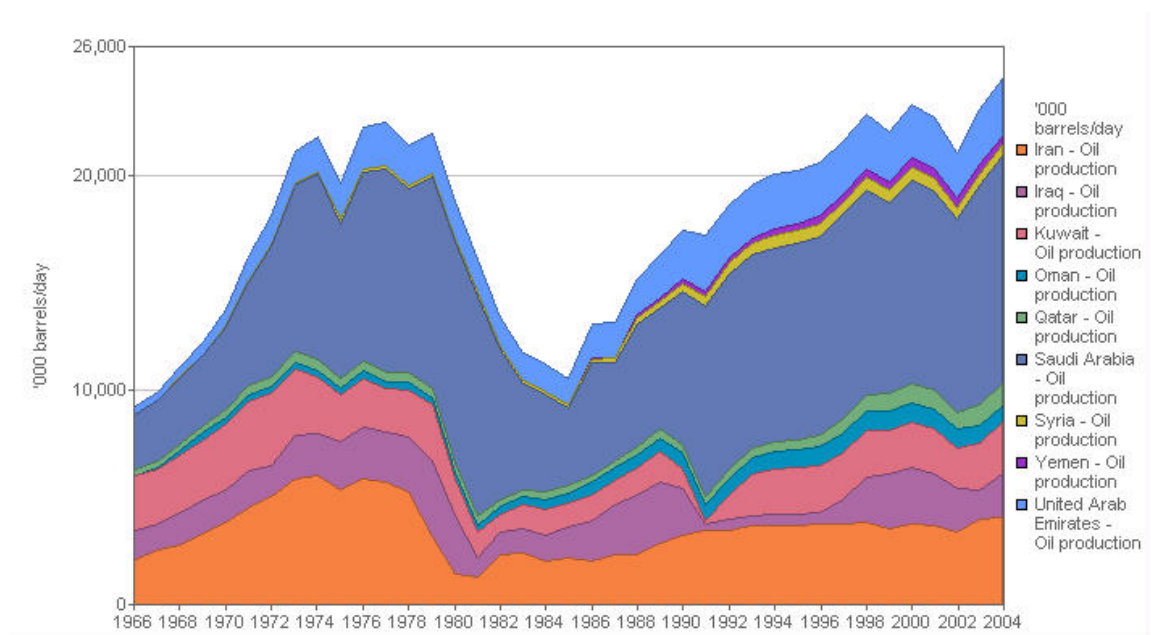




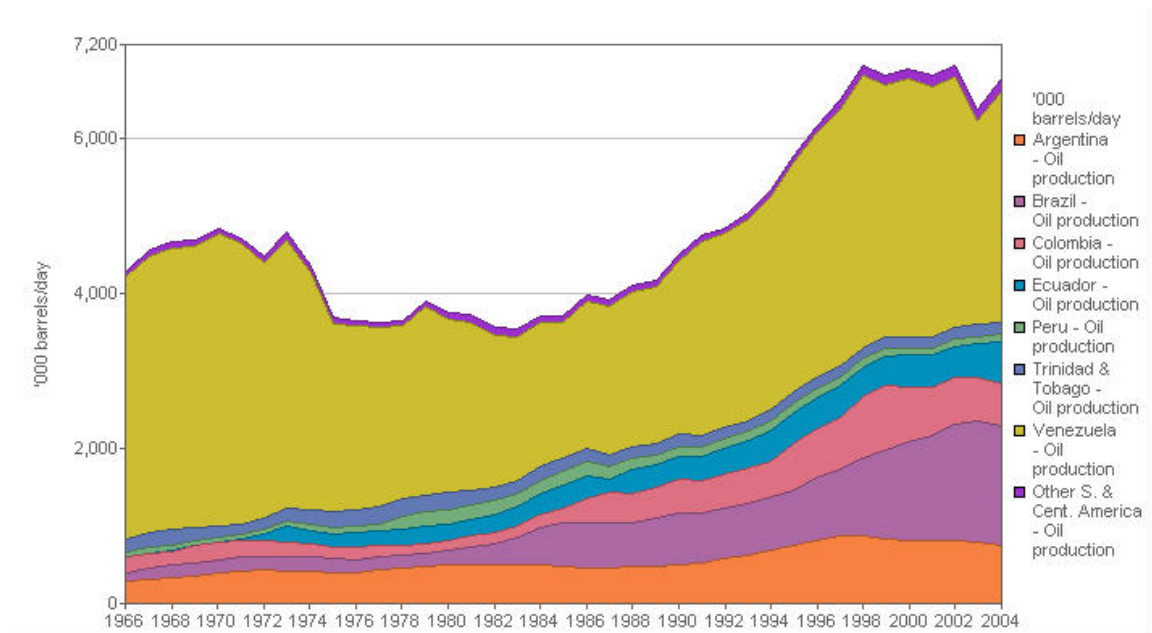
**South East Asia oil production, million tonnes**



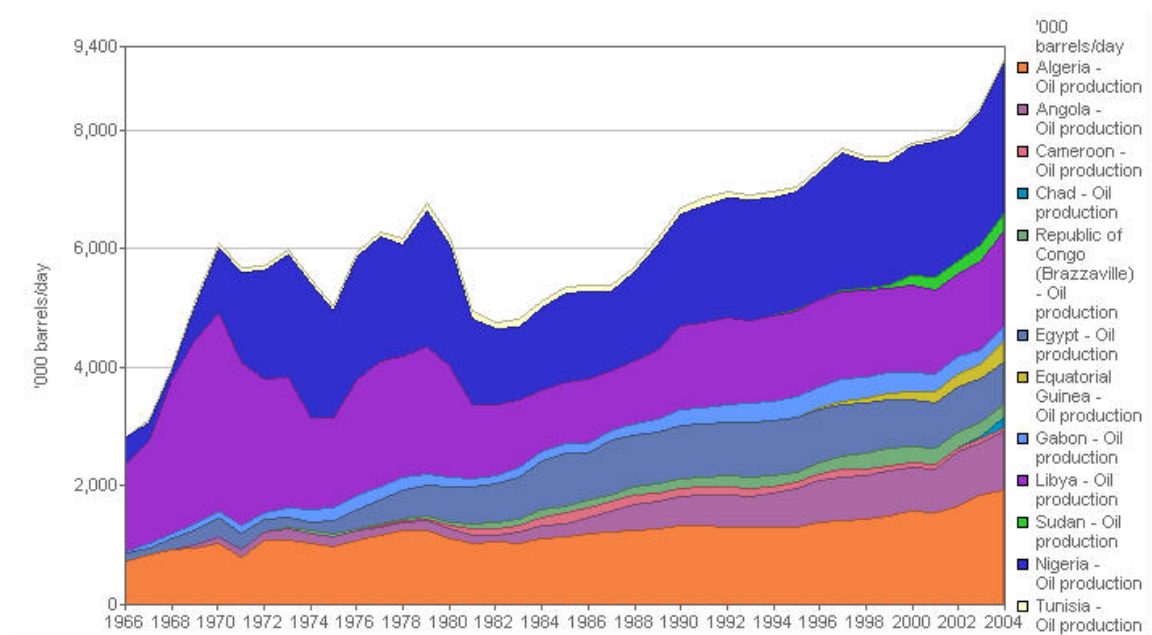
**Middle East oil production, million tonnes**



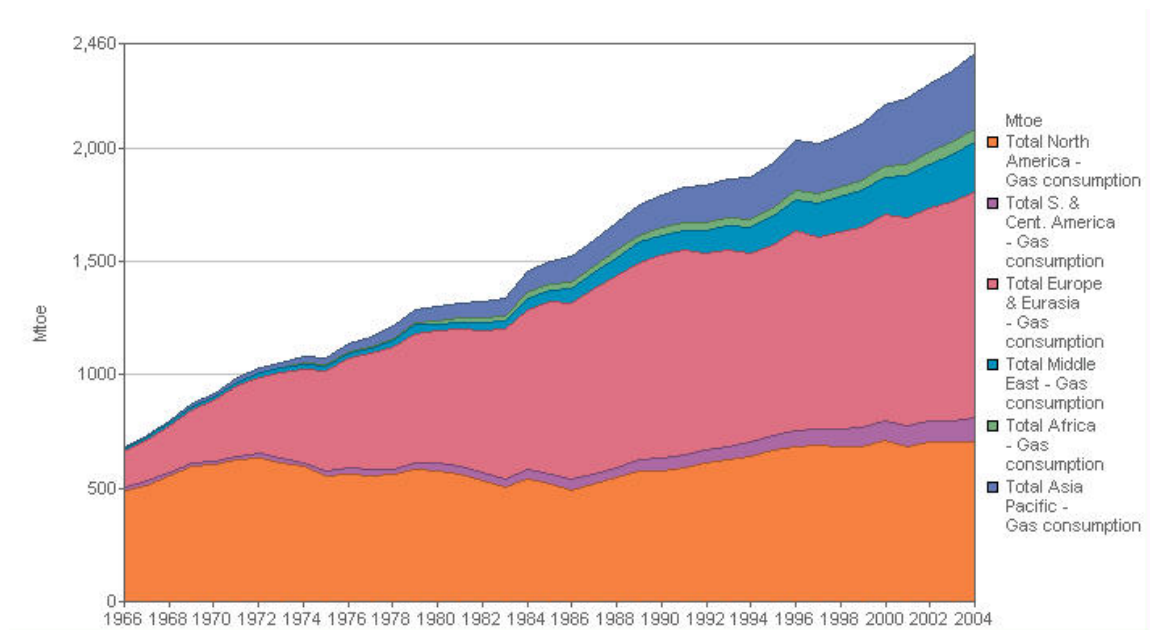
### Latin America oil production, million tonnes



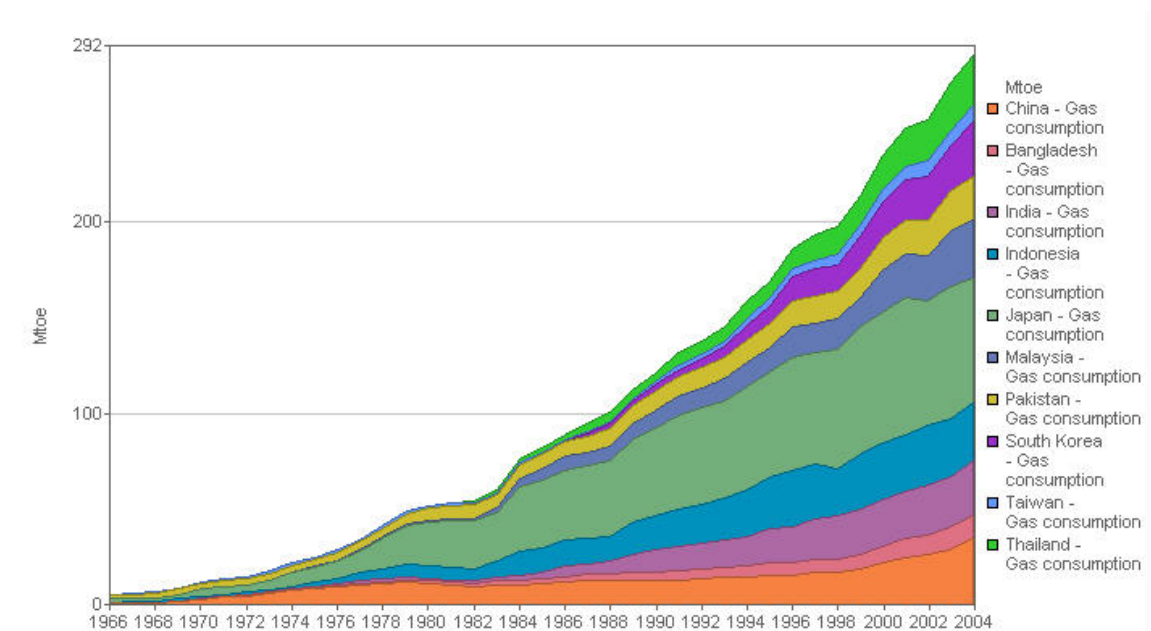
### Africa oil production, million tonnes



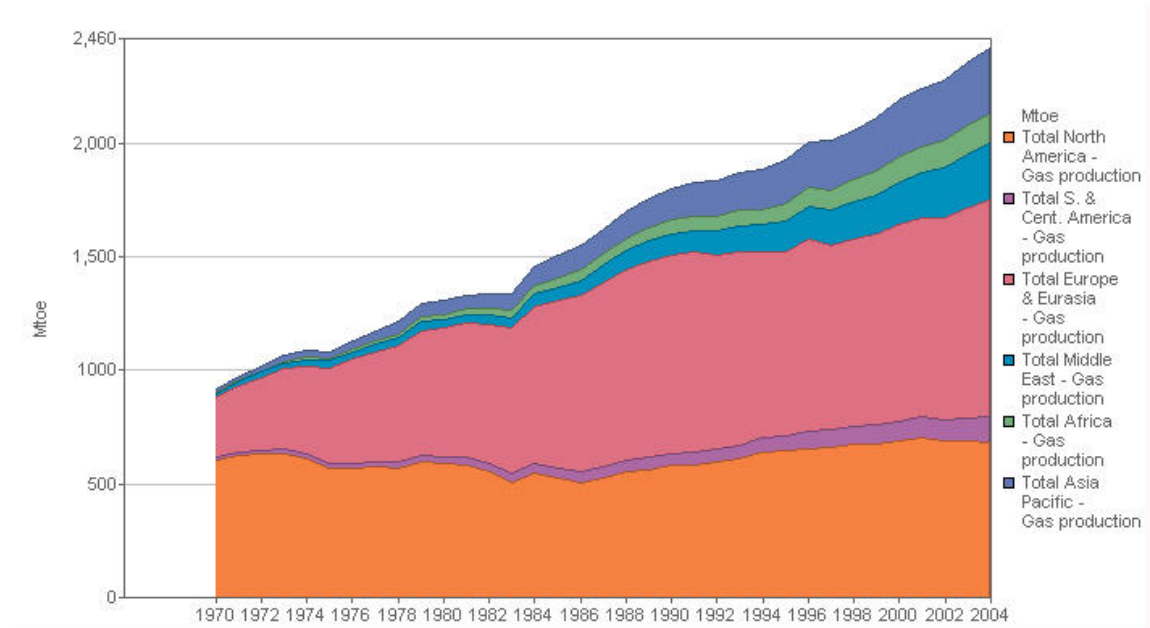
### World gas consumption - million tonnes oil equivalent



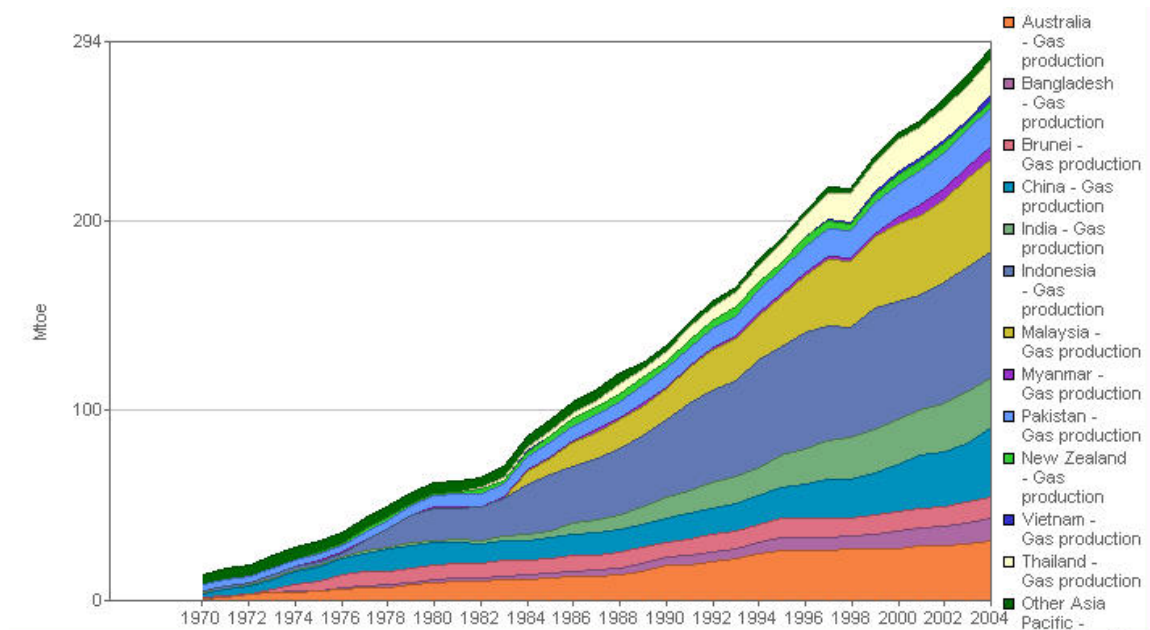
### South East Asia gas consumption - million tonnes oil equivalent



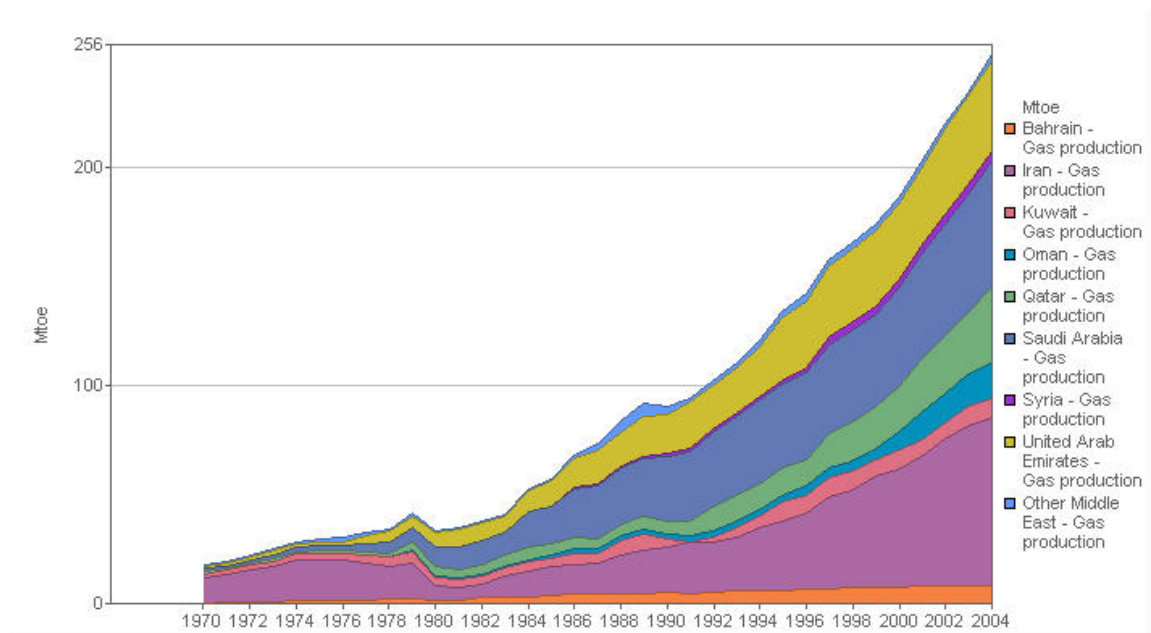
### World gas production - million tonnes oil equivalent



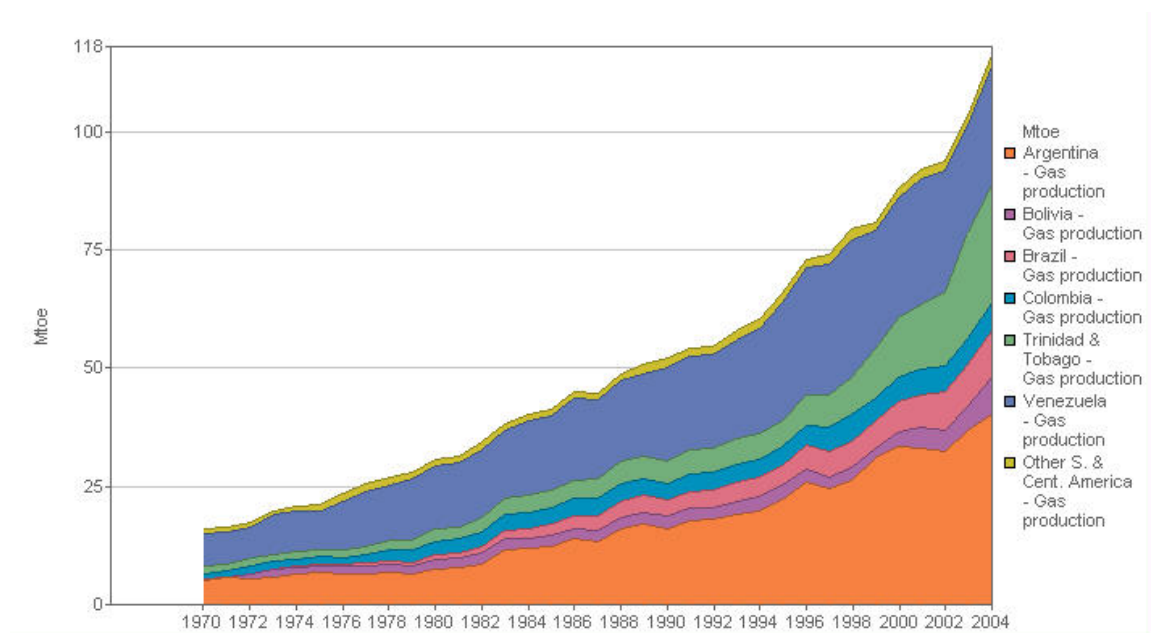
### South East Asia gas production million tonnes oil equivalent



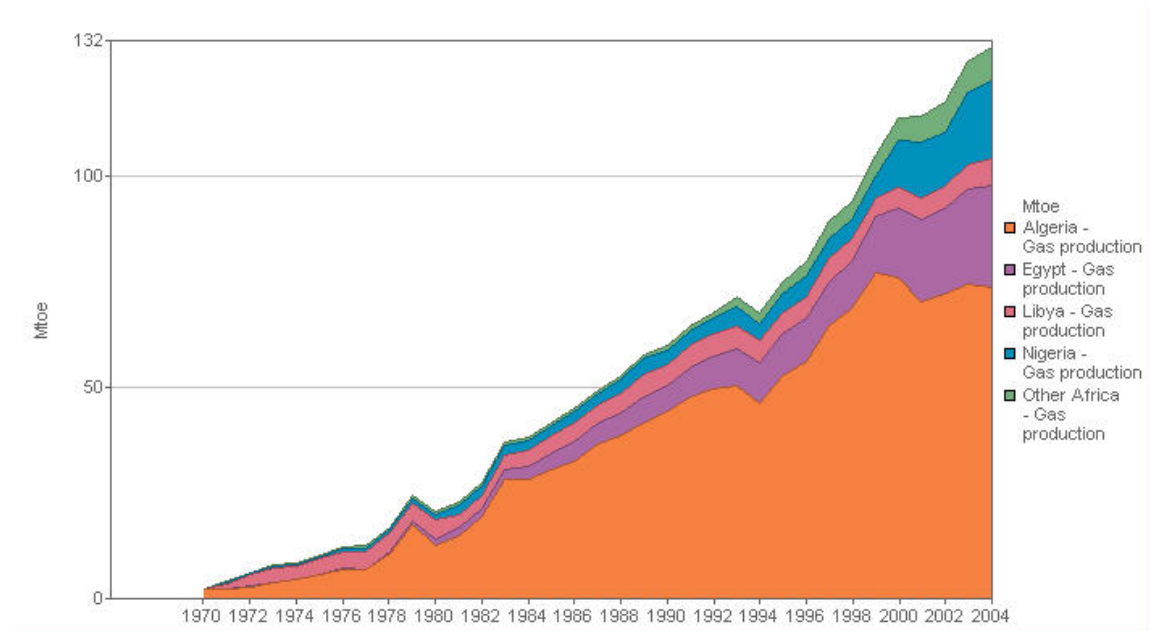
### Middle East gas production million tonnes oil equivalent



### Latin America gas production - million tonnes oil equivalent



**Africa gas production - million tonnes oil equivalent**





## ENDNOTES

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- <sup>4</sup> Brent Crude price at 15:03 on 20<sup>th</sup> December 2005 - <http://www.bloomberg.com/energy/>
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- <sup>6</sup> Crude oil price refers to the average petroleum spot price (APSP), which is the average of the West Texas Intermediate, Dated Brent and Dubai Fateh spot prices. Real oil price converted using the US CPI (1995=100)
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Definition of top priority: '...entrenched human poverty is combined with failing or even reversing progress [for a Goal]...top priority countries [are top priority for] at least three Goals or for at least half of the Goals for which they have data, with a minimum of three data points. If data are available for only two Goals, they are top priority for both.' Definition of high priority countries: '...situation is less desperate – but great needs remain...either at medium starting levels but facing failed or reversing progress, or they are suffering from extreme human poverty yet making moderate progress – but still moving far too slowly to meet the Goal...high priority countries...do not fall into the top priority category but are at top or high priority for at least three Goals, are top priority for two Goals, or are top or high priority for at least half the Goals for



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which they have data, with a minimum of three data points. If data are available for only two Goals, they are top of high priority in both.' (UNDP 2003, p44)

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