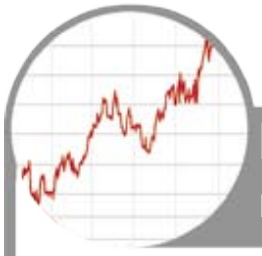


Briefing Note 6

Does the Sustained Global Demand for Oil, Gas and Minerals mean that Africa can now fund its Own MDG Financing Gap?

Many governments in sub-Saharan Africa have a substantial financing gap between their available resources and the total investment needs to achieve the MDGs by 2015. Coincidentally, global demand for metals, minerals, oil and gas continues to generate sustained 'windfall' revenues for a number of governments in the region. As a result, some African countries may be closer to funding their own MDG financing gap than previously thought. Furthermore, we calculate that for the eight major oil exporters in sub-Saharan Africa, their combined financing surplus over and above their internal MDG investment needs and recurrent public expenditure could be as high as $22bn in 2006 and $35bn in 2015. This is around half the total MDG financing gap for the region. Linking 'windfall' revenues to MDG delivery is of course constrained by institutional absorptive capacity and the economic and political-economy realities of the 'natural resource curse'. This paper argues for a strategic re-think on how some of the $25billion/annum of commitments of new aid to Africa by the G-8 and others might be deployed to overcome these constraints, with the aim of mobilising domestic 'windfall' revenues to deliver the MDGs. We propose three strategies. First, for selected natural resource exporters, align technical assistance for general budgetary support to the MDGs with 'windfall' revenue management. Second, for other natural resource exporters, design new forms of technical assistance to mobilise domestic 'windfall' revenues such that these revenues behave as though they were general budget support. Third, work with African institutions to incentivise some of the capital surplus from 'windfall' countries to be channelled to productive MDG and extractive industry investments across boarders within the region.

The Global Oil, Gas and Minerals Market

> "If oil could be turned into aid the development consequences would be enormous"
>
> Source: Paul Collier (2005) 'Is Aid Oil?', p22

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.[1] Only a small proportion of this is likely to be met through renewable energy or energy efficiency. The majority will be through oil, gas and coal. Both the IMF and the G8 anticipate that oil demand will continue its strong recent growth,[2] with '*the average price of crude oil …[rising] by more than 40 percent since the beginning of 2004…[and with]… a perceived permanent component*'.[3] Indeed, the price at the time of going to print (September 2005) was $62.26.[4] This continues a seven-year upward trend. The demand for non-hydrocarbon minerals is likewise historically high, and also to have some longevity. Examples of growth patterns for crude oil and nickel are given in *Figures 1a and b*.

Looking across the oil, gas and minerals sectors a similar set of circumstances seems to underlie these sustained price rises: weak data on supply, demand and stocks; low levels of spare production, or critical transport and processing capacity; uncertain prospects for increased production in the usual supplier markets; strong economic development in Asia (especially China and increasingly India); and international security concerns. Partly as a consequence, the geographic pattern of mineral production is changing. To meet global demands and to fulfil foreign policy objectives for national security, production continues to expand into emerging and underdeveloped economies. West Africa in particular is likely to become a more important source of oil, partly as a consequence of repositioning by some sections of the global energy industry and various western powers to reduce dependence on the Middle East.[7] For gas, the Caribbean region and southern Asia are rapidly growing their production capacities.

Figure 1a Crude Oil Price Trends (at 1995 prices)[5]

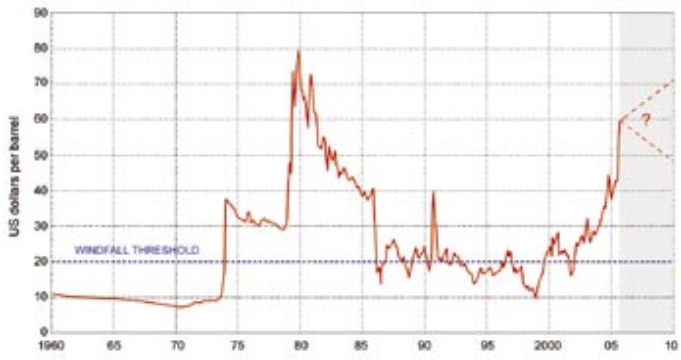


Figure 1b Nickel Price Trends (actual prices)[6]

Oil, Gas and Minerals in Africa

We now focus our paper on Africa. Twenty-one countries in the sub-Saharan African region (over half) are already sizable oil, gas or mineral exporters[8] (see *Table 1*). For example, five countries are dependent on hydrocarbons for more than 30%[9] of their GDP, and six countries on non-fuel minerals for greater than 10%.[10] Many African countries have thus been enjoying natural resource revenue 'windfalls' for a number of years. Considering oil in isolation, a further thirteen countries are either exploring for reserves or offering concessions.[11] In short, there are few countries in sub-Saharan Africa not already active in some way in the oil, gas or minerals sector, each with either a current or near-future potential to benefit from sustained high mineral commodity prices.

At the same time, many sub-Saharan African countries are

Table 1 Oil, Gas and Mineral Exporting Countries in sub-Saharan Africa, against MDG Top and High Priority Countries[12] and the MDG Financing Gap (2015)[13]

Category	Counrty	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	Botswana		✓	✓			
	Sierra Leone	✓					✓
	Zambia	✓					✓
	Liberia	✓				✓	
	Democratic Republic of Congo	✓					✓
	Niger	✓					✓
> 30% of GDP from oil or gas exports	Angola	✓			✓		
	Congo (Brazzaville)		✓		✓		
	Equatorial Guinea		✓	✓			
	Nigeria	✓			✓		
	Gabón		✓	✓			
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			✓			

struggling to reach the MDGs.[16] Indeed, of the eleven countries heavily dependent on oil, gas or mineral exports for GDP and national income, all are considered to be failing or progressing too slow to meet the multiple goals (see *Table 1*). In September 2005 the UN Millennium Project is likely to present its final estimates of the global MDG 'financing gap' (at the country level, this is the difference between total MDG investment needs and domestic resource mobilisation for the MDGs, assuming a rise in government expenditures of up to four percentage points per annum of GDP over the next decade).[17] The estimate of this gap across sub-Saharan Africa is $36bn in 2006, rising to $83bn in 2015).[18] *Figure 2, Map 2* shows the MDG financing gap for all sub-Saharan African countries. *Table 2* shows the derivation of this 'gap' for the five countries for which the Millennium Project has published detailed costings.[19]

It is these projections that have in part encouraged the G8 countries and other donors to commit to an increase in official development assistance to Africa of $25 billion a year by 2010.[24] This will take place through budgetary support and vehicles such as the Millennium Challenge Account, the Emergency Plan for AIDS Relief, an account for Humanitarian Emergencies and a new malaria initiative. At the same time, the G8 and other OECD countries have committed to progress the cancellation of outstanding debt by Heavily Indebted Poor Countries to the IMF, IDA and African Development Fund, not least Nigeria, where there has been an 'agreement in principle by the Paris Club aimed at achieving a sustainable exit for Nigeria from its debt problems'.[25] From the perspective of governments with shortfalls in MDG investment, there are at least two substantial limitations to these commitments. First, new ODA expenditure

Figure 2 MDG Top and High Priority Countries,[20] MDG Financing Gap (2015),[21] Oil, Gas and Mineral Exporting Countries[22]

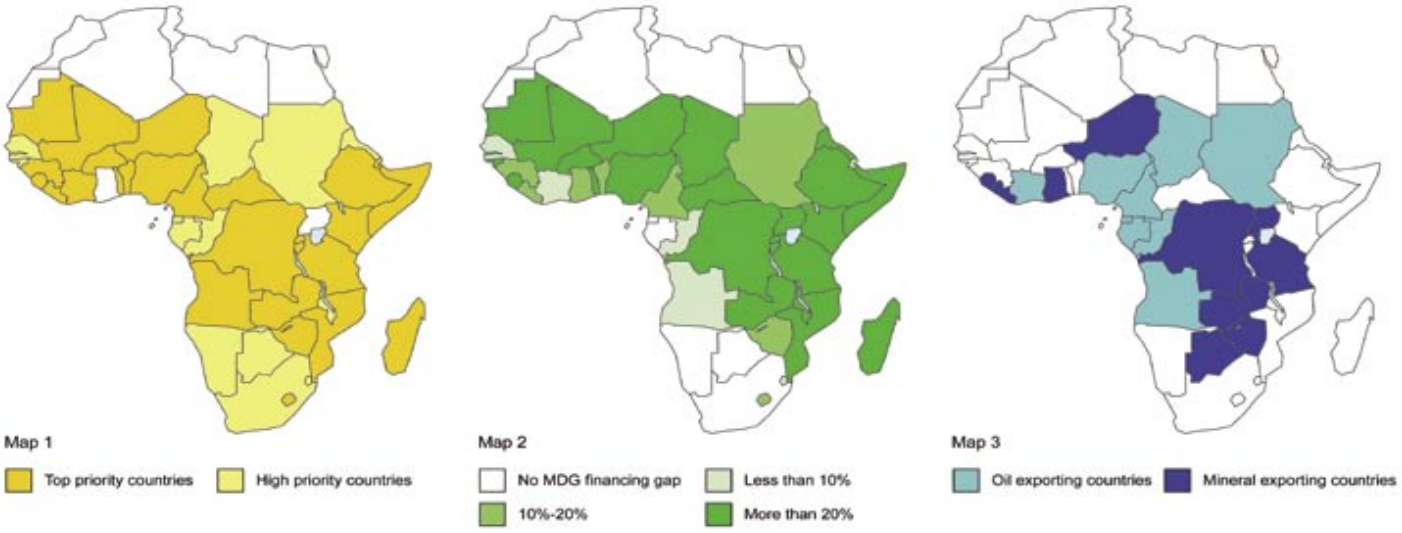


Table 2 MDG Investment Needs and Financing Gap for Five Countries[23]

US$/capita	Bangladesh			Cambodia			Ghana			Tanzania			Uganda		
	2006	2010	2015	2006	2010	2015	2006	2010	2015	2006	2010	2015	2006	2010	2015
MDG investment needs															
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 & 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	21	27
Other	8	9	13	8	9	13	8	9	13	8	9	13	8	9	13
Total	74	100	140	71	101	148	80	94	124	82	111	161	75	100	143
Sources of financing				P						P					
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
MDG financing gap	**43**	**56**	**77**	**40**	**58**	**87**	**52**	**57**	**70**	**50**	**67**	**98**	**41**	**56**	**80**

will likely be directed only at countries with sufficiently good planning and governance.[26] Secondly, to fund MDG investment governments need capital resource flows, whereas many of the current commitments to aid in general do not release such flows, namely unserviceable debt cancellation, emergency assistance and MDG target-specific initiatives, eg on Malaria. Alternative sources of capital to fill the MDG financing gap are clearly going to be in demand.

Costing the MDGs in Oil-Rich States

Overall production in the Gulf of Guinea region is expected to jump from 3.8 million barrels per day (bpd) in 2003 to 6.8 million bpd by 2008.[27] Assuming a rate of expansion in production of 100% between 2006 and 2015, by 2015 the main oil exporting countries in sub-Saharan Africa would yield a combined total surplus over and above their own MDG investment needs and recurrent public expenditure of around $35billion per annum.

Assessments of MDG financing needs exist at the global and regional levels.[28] However, few details are available at the country level, not least because of the constraints in many countries to providing adequate data to carry out rigorous needs assessment.[29] Where costings do exist, these tend to address a narrow aspect of the MDGs, which make them of limited value in a broader financial planning context. Furthermore, important differences between the methods used to estimate the cost of achieving the MDGs make conclusions difficult. For example, the UN Millennium Project favours 'intervention-based needs assessments', driven by quantifying the required human resources, financial resources and infrastructure.[30] Other studies use aggregate unit costs, or the Incremental Capital-Output Ratio (ICOR), or aggregate input-output elasticises.[31] One commentator has argued that 'none of the existing cost estimates is robust to the assumptions made – however plausible they may be. Each methodology seems to be driven by an implicit agenda – either to make the case for more aid, to caution vis-à-vis absorptive capacity or to promote "good" policies.'[32]

Despite these limitations we feel that the 'windfall' situation facing many sub-Saharan African governments is sufficiently large and sustained to justify some attempt, however crude and theoretical, to calculate how this trend might affect the availability of domestic finance in the region. We will take as our starting point the Millennium Project calculations for the MDG investment needs in the five countries thus far assessed: Bangladesh, Cambodia, Ghana, Tanzania, Uganda.

Box 1

Estimating the MDG investment needs of eight oil exporting states: Our Assumptions

- $Brent crude spot price holds at $55/barrel 2006 to 2015
- Population projections from World Bank Group (2005) World Economic Indicators – http://www.worldbank.org/data/wdi2005/wditext/Cover.htm
- Projected oil production expansion of 10% between 2003 and 2006, then either (i) 30% or (ii) 100%, to 2015 (excluding Gabon)
- $20/barrel taken as 'windfall' threshold, ie level below which oil revenues are used to sustain recurrent public expenditure
- Proportion of production of threshold revenues 'taken' by government assumed at flat rate of 70%
- 20% of national 'take' assumed to be lost to debt repayments and inflation in refined oil products imports

The Millennium Project 2005 report notes that 'per capita MDG investment needs are remarkably similar across the five countries, even though they derive from country-specific coverage data and unit costs.'[33] However, there are some variations which reflect, in part, the level of development of the country, its population density and its ratio of rural-to-urban settlements. Taking these three determinants into consideration, we have arrived at estimates for the MDG investment needs of eight oil exporting states countries: Nigeria, Equatorial Guinea, Cameroon, Angola,

Table 3 Proportion in Oil Production Revenues Contributing to National Income, at $25 and $50 per barrel *illustrative only*

Category of Production Revenue Split	**Production Revenue Split @ $25 per barrel** (for every $100 of revenue)		**Production Revenue Split @ $50 per barrel** (for every $100 of revenue)	
	Foreign oil companies' income	**National Income** (state oil company/state)	**Foreign oil companies' income**	**National Income** (state oil company/state)
Signature Payment At time of concession	(Tax deductible)	Can be substantial (eg $506million for 7 concessions granted in 2003 under the Nigeria – Sao Tome Joint Development Zone)[34]	(Tax deductible)	Can be substantial
Royalty oil		$20 (20%)		$20 (20%)
Cost oil Cost recovery for exploration/ drilling, capital investment and (some) operational costs	$40/annum (total over life of investment – front loaded, eg first five years)		$20/annum (total over life of investment (front loaded)	
Profit oil Production sharing	$9 (30%	$21 (70%)	$18 (30%)	$42 (70%) R-Factor scheme may allow government to increase proportion of profit oil as oil price rises, eg to 20:80
Corporate tax Usually flat percentage of profits		$3		$5
Total Split		$44 (44%)		$68 (68%)

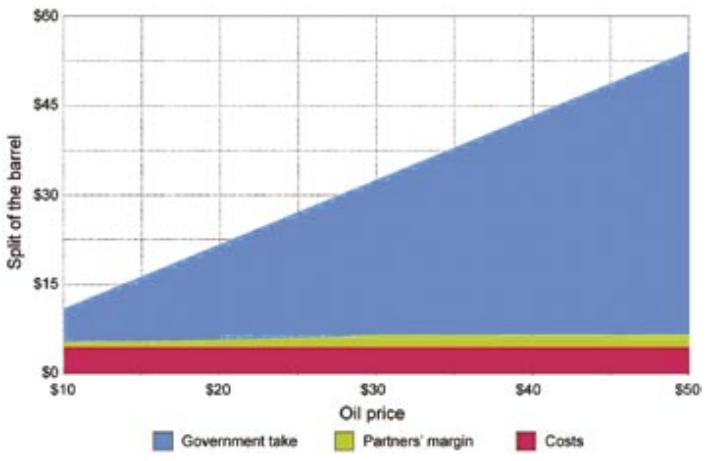
Congo (Brazzaville), Gabon, Sudan, Chad (see *Annexe A*). The assumptions behind our estimates are in *Box 1*.

Annexe A can be found attached or online at
http://www.odi.org.uk/pppg/activities/country_level/odpci/msp/sector1

Annexe A compares these estimates of investment needs for the MDGs with the revenues the countries earn in oil production. At $55 barrel, by 2006 oil production in Equatorial Guinea, Nigeria and Cameroon would generate raw revenues of around $10,910, $353 and $93 per capita respectively. Not all of this revenue is government income. A substantial portion is retained by the investing oil companies in the form of cost recovery for capital investment and allowable operational costs, a share of production (profit oil) and a portion for re-investment. *Table 3* identifies one version of such a revenue 'split'. Note that the variations on this table are numerous, depending not least on (i) whether there is a production sharing agreement, royalty or license agreement in place (and the precise terms of these agreements); (ii) whether the state pays a share of development costs; (iii) the extent to which government wishes to secure early revenues or share the financial risks; (iv) whether there is a flat rate or progressive division of production revenues; and (v) the corporate and income tax regime of the country in question.

For our calculations we assume that for every dollar over $20/barrel, a government enters 'windfall' territory. We also assume that at this point and beyond, 70% of production revenues accrues as national income (this includes revenues to state-owned oil companies). The revenue sharing arrangement in the Nigerian joint venture to which the Shell Petroleum Development Company (SPDC) is party, supports these sorts of numbers. For example, at $30 per barrel, the Government's take (including that going to the state-owned Nigerian Petroleum Development Company) is $24.13 per barrel (80%), while the margin shared by the private partners (including SPDC) is $1.87. At $50 per barrel, national income rises to $44.13 (88%)[35] (see *Figure 3* below).

Figure 3 Nigeria: Split of Revenues Per Barrel of Oil, between Joint Venture Partners and the State[36]



Of these 'windfall' revenues accruing as national income, there will be a series of expenditures prior to any assumed availability for additional investment by government in the MDGs. These include a portion of oil revenues usually contributing to public expenditure (assumed to be the $20/per barrel level), debt repayments (including debt from borrowing against future oil revenues, such as Angola's annual debt service in 2002 of $1.2bn),[37] and rises in the price of imported, refined, oil products. Taking these into consideration we estimate that the available public expenditure arising from a real price $55 per barrel would be (per capita): $3,888 in Equatorial Guinea, $126 in Nigeria and $33 in Cameroon. Assuming $55/barrel stays steady to 2015, and making allowances for population increases and rises in production capacity (other than Gabon for which we make other assumptions), the available public expenditure figures seem to be fairly uniform over time.

The Millennium Project calculates current sources of available domestic finance for meeting the MDGs. This comprises both household and public expenditure. Across our eight countries, total predicted per capita available public expenditure on MDGs for 2006 is in the range $19 to $27. Assuming the lowest end of this spectrum for all eight countries in both 2006 and 2015, and deducting that proportion of recurrent public expenditure normally derived from oil revenues (ie the $20/barrel threshold), then at $55 a barrel, Nigeria, Equatorial Guinea, Sudan, Angola, Congo Brazzaville and Gabon would each generate annual public expenditure surpluses over and above those needed to meet all their MDG investment needs. In theoretical terms these countries have no MDG financing gap. Chad, however, would retain an MDG financing short-fall of around 35% , and Cameroon 40%. This general pattern remains through to 2015, although surpluses reduce marginally, as do deficits. As noted, Gabon is the anomaly, with declining reserves, but also some prospects of new discoveries and investment. For our calculations we have held production for Gabon steady 2004 through to 2006, then assumed a 50% annual fall to 2015.

What might these surpluses look like in financial terms? Applying our base assumption of a 10% production expansion between 2003 and 2006, and 30% from 2006 to 2015 (Gabon treated differently), the total financing surplus for our eight countries from a sustained $55/barrel to 2015 (over and above the theoretical investment needs of the MDGs and recurrent public expenditure) is $22bn in 2006 and $16bn in 2015. (Within the eight, Chad and Cameroon show a combined MDG investment shortfall of around $0.6 billion in 2006 rising to $2billion in 2015). These surpluses are comparable to the $25billion of new aid that the G8 recently committed to Africa, and, in theory at least, represent a significant portion of the aforementioned MDG financing gap for all of sub-Saharan Africa, namely: $36bn in 2006, rising to $83bn in 2015.

These 'windfall' projections are likely to be conservative figures. For example, overall production in the Gulf of Guinea region 'is expected to jump from 3.8 million barrels per day (bpd) in 2003 to 6.8 million bpd by 2008.'[38] Changing our assumptions for the rate of expansion in production to 100% between 2006 and 2015, by 2015 our five countries would yield a total surplus over and above their own MDG investment needs and recurrent public expenditure of around $35billion per annum.

Re-Thinking Aid Policy in the Light of Natural Resource 'Windfalls'

Endorsing the conclusions of the Financing for Development agreements made in Monterrey in 2002, the 2005 G8 Communiqué argues that, with respect to additional financing for development for Africa, 'some of this can and should come from developing countries' domestic resources'.[39] Our calculations suggest that if current 'windfalls' in oil, gas and minerals continue, the MDG financing gap may be considerably smaller for many sub-Saharan African countries than previously thought.

We do not, however, conclude from this that the current commitments to double aid to Africa should be revisited (since many countries in the region are not sharing in these 'windfalls', and are actually hurting from the elevated cost of oil imports). We argue instead for a strategic re-think of aid to mineral, gas and oil windfall countries, with the aim of mobilising internal domestic 'windfall' revenues as an alternative to direct budgetary support or regional investment by development banks. We now know a great deal about how to use technical assistance for fiscal reform in public expenditure management, such that direct budgetary support from donors feeds more directly into poverty reduction, for example, developing participatory poverty reduction policy and strategies, establishing Medium Term Expenditure Frameworks, overcoming constraints in institutional absorptive capacities, minimising the likelihood of 'Dutch Disease' effects through productive and diversified investments, and increasing scrutiny, transparency and accountability in public expenditure management.

To reach the MDGs in much of sub-Saharan Africa we need to use more of the new commitments in official development assistance (ODA) to make natural resource revenue 'windfalls' behave as if it were donor-driven budgetary support, and other forms of aid.

Essentially, to reach the MDGs in much of sub-Saharan Africa we need to use more of the new commitments in official development assistance (ODA) to make natural resource revenue 'windfalls' behave as if it were donor-driven budgetary support, and other forms of aid. As Paul Collier recently argued in his paper *Is Oil Aid?*, 'the task of making oil work more like aid is far more promising than the task of making aid work better'.[40] We offer three strategies to achieve this.

Strategy 1
Aid Policy in Resource-Rich Countries that also Receive General Budget Support

For the few mineral-endowed countries in Africa attracting, or likely to attract, General Budget Support – Tanzania, Ghana and Uganda – we suggest placing greater emphasis on ensuring that the fiscal prudence that comes with public financial management (PPM, MTEFs, budget execution etc.) is also brought to bear on the management of 'windfall' revenues. It fails to make sense for one part of government to be developing solutions to manage one substantial resource flow (natural resource 'windfalls'), whilst another is collaborating with the donor community to manage another substantial resource flow (budgetary support). Specifically, budgetary support and its associated technical assistance needs to be more closely aligned with the efforts of governments to manage natural resource revenue volatility through state stabilisation and (long-term) savings funds, and with related changes to fiscal, public investment and industrial economic policy.

Strategy 2
Aid Policy in other 'Windfall' Countries

Most oil exporters, and some mineral exporters in sub-Saharan Africa do not, understandably, receive budgetary support from donors. Our second strategy applies to these countries. Here we advocate that more technical assistance and project-based aid be directed to mobilising these domestic 'windfall' revenues such that they begin to act as though they were a form of general budget support for investment in the MDGs. This might include, but is not limited to, the following initiatives:

- support for the formulation and finalisation of natural resource revenue laws;
- support to Ministries of Finance and Central Banks to develop fiscal rules and trade or industrial diversification policies that link management of the 'Dutch Disease' effects arising from resource revenues with support for MDG infrastructure investment, eg in power, transport and water;
- assistance in interagency co-ordination among Central Bank, Ministry of Finance, Ministry of Energy/Petroleum, and national oil company;
- re-prioritisation of political and budgetary decentralisation programmes to target oil and mineral producing provinces, with programmes designed to improve local authorities' capabilities to manage re-distributed resource revenues, protect the non-oil/mineral local tax base, improve capacities in public sector procurement, and plan for long-term sustainable recurrent expenditure;
- support for human resource development in both public sector (eg oversight committees in Parliament) and civil society institutions (eg NGOs and the media) with the aim of delivering greater upward accountability in revenue management;
- facilitating greater local economic and development impacts from oil, gas and mineral operations, for example through joint company-donor supplier-based enterprise development programmes; and
- support for the creation of constitutional courts, which would have the ultimate say in case of conflict on natural resource matters.

Strategy 3
Rethinking Regional Aid Policy across sub-Saharan Africa

The Gleneagles G8 Communiqué supports 'efforts to increase South-South trade and regional integration'.[41] It is also explicit in promoting 'significant investments…in the short-, medium-, and long-terms in exploration, production, and energy infrastructure to meet the needs of a growing global economy'.[42] Further, with specific reference to the MDGs, the Communiqué endorses investment in infrastructure, with NEPAD the lead agency in an international infrastructure consortium.[43] For reasons of the Dutch Disease effects and institutional absorptive capacity, there are however limits to the rates that revenue surpluses from 'windfalls' can be invested in either the domestic natural resource sector or in infrastructure for the MDGs. The time therefore seems ripe for donors to encourage the governments of resource-rich countries to look at alternatives to investing their 'windfall' surpluses via national stabilisation or saving funds on the global capital markets.

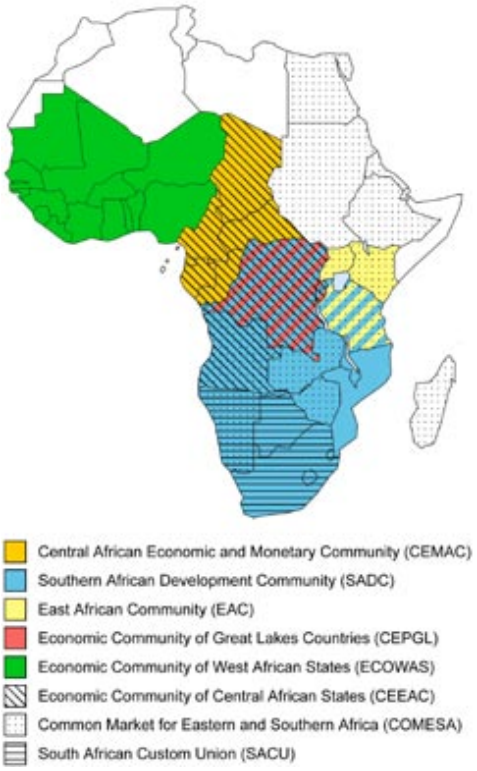
> Is there not a donor strategy here to incentivise resource-rich African governments to invest part of their 'windfall' surpluses in productive infrastructure across sub-Saharan Africa?

Across sub-Saharan Africa are a number of cross-border regional economic 'communities' (see *Figure 4*). At the same time NEPAD is having difficulty implementing its infrastructure investment plans. Is there not a donor strategy here to incentivise resource-rich African governments to invest part of their 'windfall' surpluses in productive infrastructure across sub-Saharan Africa? Some of this investment could be for exploration and development of new oil, gas and mineral reserves. Other portions could be more directly related to the MDGs, for example investing in power generation and distribution, roads and telecommunications. At a recent, partly OECD sponsored, conference on oil in Brazzaville, the UN Economic Commission for Africa made a similar proposal, advocating a financing mechanism to channel oil revenues towards NEPAD infrastructure objectives.[44] Such a venture would need technical assistance, and possibly some financial underpinning, from the African Union and the donor community. Essentially though this 'is about African capital, being managed by Africans for investment in Africa'.[45] The NEPAD African Peer Review Mechanism could clearly play a role here in investment decision-making and ensuring scrutiny and transparency in these resource flows.

This is not to deny a role to the multi-lateral development banks (MDBs). A logical policy extension of the above is to learn lessons from previous oil crises. Here surplus capital was recycled through various savings instruments offered by the West, including concessional funding instruments managed by MDBs aimed at bringing investment to poor regions. It may make sense for part of these 'windfalls' to be tapped by such instruments.

The benefits of such strategies seem evident. For the resource-rich governments it should help reduce 'Dutch Disease' effects by investing surpluses outside the domestic economy. For the donors, with Africa now a serious source of development finance, there would be the opportunity to redirect some of their support for multi-lateral development banks towards more technical assistance designed to encourage oil to behave like aid. For the borrowers, this fresh source of finance for both MDG-driven public infrastructure and expansion of their own natural resources sectors might serve to offset the currently damaging impact on economic growth of high oil and mineral import prices.[47] Finally, for the 'windfall' governments there is the legitimate concern that due to political instability in a number of African countries, investment in their own region might likely yield lower dividends than looking to the global capital markets. However, global investment analysts working within Ministries of Finance might like to factor-in to their return on investment calculations the peace dividend that would come from one African country taking an investment stake in the continued political stability of a neighbour.

Figure 4 Regional Economic Communities in sub-Saharan Africa



Conclusion

The above calculations are at best generalisations, not least on production expansion and debt servicing. However, the merits of debating the accuracy of these figures should not detract from what seems indisputable: that relative to national income in the recent past, oil and gas revenues accruing to eight sub-Saharan African governments and state-owned companies are substantial, and in all but one will quite possibly be prolonged over the period to 2015. Thirteen other sub-Saharan African governments are in receipt of 'windfall' revenues from non-hydrocarbon minerals. At the same time there is an historic focus by the international donor community on financing the MDG investment gap in Africa. The question is what to do about this coincidence. How should we use the new commitments of aid for Africa to ensure that natural resource revenues have the enormous impact on development across Africa that some believe it can?

Endnotes

1 International Energy Agency (2005) US Department of Energy http://www.eia.doe.gov/oiaf/ieo

2 G8 (2005) The Gleneagles Communiqué: Climate Change, Energy and Sustainable Development http://www.fco.gov.uk/Files/kfile/PostG8_Gleneagles_Communique,0.pdf

3 IMF (2005) Oil Market Developments and Issues: IMF, Policy Development and Review Department (p5) http://www.imf.org/extneral/np/eng/2005/030105.pdf

4 Opening Brent Crude price on the day, Pilot: http://www.pilottaskforce.co.uk/data/communications.cfm

5 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)

6 1994-1998: Global Insight http://www.messe-duesseldorf.de/gmtn/img/trends2.gif, 1998-2005: London Metals Exchange (online database)

7 Moore, M. (2004) 'Revenues, State Formation, and the Quality of Governance in Developing Countries' International Political Science Review, Vol 25, No 3, 297-319

8 Karl, T.L. and Gary, I. (2003) 'Bottom of the Barrel, Africa's Oil Boom and the Poor' Stanford University, Catholic Relief Services

9 ibid.

10 Ross, M. (2001) 'Extractive Sectors and the Poor' Oxfam America Report, October 2001

11 ibid.

12 Human Development Report 2003 (UNDP) 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 to 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 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)

13 UN Millennium Project (2005) 'Investing in Development: A Practical Plan to Achieve the Millennium Development Goals' New York: United Nations Development Programme, (p249). "Authors Calculations" presumably meaning the coordinators of the UN Millennium Project's 10 task forces and Secretariat

14 Ross, M., op.cit.

15 Karl, T.L. and Gary, I., op.cit.

16 UNDP (2003) 'Human Development Report 2003' New York: United Nations Development Programme

17 UN Millennium Project (2005), op.cit. (p245)

18 ibid.

19 ibid.

20 UNDP (2003) 'Human Development Report 2003' New York: United Nations Development Programme

21 UN Millennium Project (2005), op.cit. (p249)

22 *Table 1*, rows 2 and 3

23 UN Millennium Project (2005), op.cit. (p244)

24 G8 (2005), op.cit. (paragraph 27-28)

25 ibid.

26 UN Millennium Project (2005), op.cit.

27 CAFOD (2004) The rough guide to transparency and natural resource revenues: A CAFOD briefing, London: CAFOD (p2) http://www.cafod.org.uk/var/storage/original/application/phpZCx1R9.pdf

28 Commission for Africa (2005) 'Our Common Interest: Report of the Commission for Africa' http://www.commissionforafrica.org [accessed May 2005]

29 UN Millennium Project (2004a) 'Millennium Development Goals Needs Assessments for Ghana, Tanzania, and Uganda: Background Paper to "Ending Africa's Poverty Trap"', New York, UN Millennium Project

30 ibid.

31 For a useful table that identifies the main differences between the methodologies see UN Millennium Project (2004a), p19

32 Vandemoortele, J. and Roy, R. (2004) "Making Sense of MDG Costing", New York: UNDP (p2) http://www.undp.org/poverty/docs/making-sense-of-mdg-costing.pdf

33 UN Millennium Project (2005), op.cit. (p241)

34 Gomes, C. (2004) The Nigeria-Sao Tome Principe JDA, Oil & Gas IQ Conference, 29-30 January 2004, London

35 The Shell Petroleum Development Company of Nigeria Limited (2005) "2004 People and the Environment: Annual Report" http://www.shell.com/static/nigeria/downloads/pdfs/2004_rpt.pdf

36 ibid.

37 Jubilee Research (2005) 'Angola: Debt Sustainability' http://www.jubileeresearch.org/databank/profiles/angola.pdf

38 ibid.

39 G8 (2005), op.cit. (paragraph 24))

40 Collier, P. (2005) Is Aid Oil? Centre for the Study of African Economies, Department of Economics, Oxford University (p6)

41 G8 (2005), op.cit. (paragraph 22 [c]-23[a])

42 G8 (2005) The Gleneagles Communiqué: Global Economy and Oil http://www.fco.gov.uk/Files/kfile/PostG8_Gleneagles_GlobalEconomy.pdf

43 G8 (2005), op.cit. (paragraph 23[a])

44 Maximizing the Development Impact of Oil Industries in Central Africa, 13-14 July 2005, Brazzaville (Congo), regional tripartite workshop organized by the Initiative for Central Africa (INICA) and the Development Centre of the OECD, in partnership with the United Nations Economic Commission for Africa (UNECA) and the Congolese Ministry of Planning; see http://www.inica.org

45 H. Solignac-Lecomte, pers. comm., 01 August 2005 (Head of Policy Dialogue, OECD Development Centre, Paris)

46 Pourtier, R. (2003) 'Central Africa and the Cross-Border Regions: Reconstruction and Integration Prospects', CITY: Central Africa Initiative (p58) http://www.inica.org/webdocuments/EN/DOC AND MEDIA CENTER/SPECIAL REPORTS/Reconstruction and integration prospects in Central Africa_en.pdf

47 Esipisu, I. (2004) "Africa to Suffer Oil Shock" Energy Bulletin, 27 July 2004 http://www.energybulletin.net/1235.html

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programme on
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This series of briefing notes provides information to oil, gas and mining companies operating in developing countries. The notes aim to assist operators to enhance their social performance, be that: to deliver effective management of the negative local socio-economic impacts of project activities; or extend employment, training, infrastructure and business support benefits to communities and suppliers.

Annexe A
Calculations on the Use of 'Windfall' Oil Revenues to Bridge the MDG Financing Gap

Country	Population (2003)	Population (2015)	MDG Investment Needs		Barrels Per Day ('000)			Barrels Per Year ('000)		Assumed Brent Crude Spot Price of $55/barrel (less $20/barrel 'windfall' threshold)	Windfall revenues – $ per capita/yr		Government Take – $ per capita/yr		Available for Public Expenditure – $ per capita/yr (ie less debt repayments and oil imports est @ 20%)		Household Contributions – $ per capita/yr		Anticipated Government Public Expenditure on MDGs – $ per capita/yr		MDG Financing Gap – $ per capita/yr		National Income Surplus – after meeting MDG financing gap and recurrent expenditure – $ per capita/yr		Cash Value of Surplus – $ bn	
			2006 (est)	2015 (est)	2003	2006 (2003 +10%)	2015 (2006 +30%)	2006	2015		2006	2015	2006 (est 70%)	2015 (est 70%)	2006	2015	2006	2015	2006	2015	2006	2015	2006	2015	2006	2015
30% Production Expansion: 2006 to 2015 *(excluding Gabon)*																										
Nigeria	136,500,000	173,800,000	82	161	2,185	2,404	3,125	877,278	1,140,461	35	225	230	157	161	126	129	9	15	19	39	54	107	72	22	9.8	3.8
Equatorial Guinea	504,000	640,000	74	143	249	274	356	99,974	129,966	35	6,943	7,107	4,860	4,975	3,888	3,980	9	15	19	39	46	89	3,842	3,891	1.9	2.5
Cameroon	16,100,000	19,700,000	82	161	68	75	97	27,302	35,493	35	59	63	42	44	33	35	9	15	19	39	54	107	-21	-72	-0.3	-1.4
Angola	13,500,000	18,900,000	82	161	885	974	1,266	355,328	461,926	35	921	855	645	599	516	479	9	15	19	39	54	107	462	372	6.2	7.0
Congo (Brazzaville)	3,800,000	5,200,000	82	161	243	267	347	97,565	126,834	35	899	854	629	598	503	478	9	15	19	39	54	107	449	371	1.7	1.9
Gabon	1,300,000	1,700,000	75	143	240	240	120	87,600	43,800	35	2,358	902	1,651	631	1,321	505	9	15	19	39	47	89	1,274	416	1.7	0.7
Sudan	33,500,000	42,600,000	82	161	255	281	365	102,383	133,097	35	107	109	75	77	60	61	9	15	19	39	54	107	6	-46	0.2	-1.9
Chad	8,600,000	12,100,000	82	161	40	44	57	16,060	20,878	35	65	60	46	42	37	34	9	15	19	39	54	107	-17	-73	-0.1	-0.9
																								Total of surplus countries	**21.6**	**15.9**
100% Production Expansion: 2006 to 2015 *(excluding Gabon)*																										
Nigeria	136,500,000	173,800,000	82	161	2,185	2,404	4,807	877,278	1,754,555	35	225	353	157	247	126	198	9	15	19	39	54	107	72	91	9.8	15.8
Equatorial Guinea	504,000	640,000	74	143	249	274	548	99,974	199,947	35	6,943	10,935	4,860	7,654	3,888	6,123	9	15	19	39	46	89	3,842	6,034	1.9	3.9
Cameroon	16,100,000	19,700,000	82	161	68	75	150	27,302	54,604	35	59	97	42	68	33	54	9	15	19	39	54	107	-21	-53	-0.3	-1.0
Angola	13,500,000	18,900,000	82	161	885	974	1,947	355,328	710,655	35	921	1,316	645	921	516	737	9	15	19	39	54	107	462	630	6.2	11.9
Congo (Brazzaville)	3,800,000	5,200,000	82	161	243	267	535	97,565	195,129	35	899	1,313	629	919	503	735	9	15	19	39	54	107	449	628	1.7	3.3
Gabon	1,300,000	1,700,000	75	143	240	240	120	87,600	43,800	35	2,358	902	1,651	631	1,321	505	9	15	19	39	47	89	1,274	416	1.7	0.7
Sudan	33,500,000	42,600,000	82	161	255	281	561	102,383	204,765	35	107	168	75	118	60	94	9	15	19	39	54	107	6	-13	0.2	-0.5
Chad	8,600,000	12,100,000	82	161	40	44	88	16,060	32,120	35	65	93	46	65	37	52	9	15	19	39	54	107	-17	-55	-0.1	-0.7
																								Total of surplus countries	**21.6**	**35.0**

Assumptions used in Annexe A:

- $Brent crude spot price holds at $55/barrel 2006 to 2015
- Population projections from World Bank Group (2005) World Economic Indicators – http://www.worldbank.org/data/wdi2005/wditext/Cover.htm
- Projected oil production expansion of 10% between 2003 and 2006, then either (i) 30% or (ii) 100%, to 2015 (excluding Gabon)
- $20/barrel taken as 'windfall' threshold, ie level below which oil revenues are used to sustain recurrent public expenditure
- Proportion of production of threshold revenues 'taken' by government assumed at flat rate of 70%
- 20% of national 'take' assumed to be lost to debt repayments and inflation in refined oil products imports