AFRICA PROGRESS PANEL

Equity in Extractives

Stewarding Africa's natural resources for all

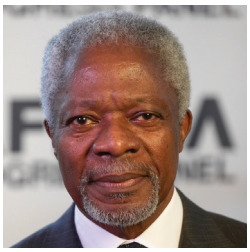
Africa Progress Report 2013

ABOUT THE AFRICA PROGRESS PANEL

The Africa Progress Panel (APP) consists of ten distinguished individuals from the private and public sector who advocate for shared responsibility between African leaders and their international partners to promote equitable and sustainable development for Africa. Mr Kofi Annan, former Secretary-General of the United Nations and Nobel laureate, chairs the APP and is closely involved in its day-to-day work.

The life experiences of Panel members give them a formidable capability to access a wide cross-section of society including at the highest levels in Africa and across the globe. As a result, the Panel functions in a unique policy space with the ability to target decision-making audiences, including African and other world leaders, heads of state, leaders of industry, plus a broad range of stakeholders at the global, regional, and national levels.

The Panel facilitates coalition building at the highest levels to leverage and to broker knowledge, break bottlenecks, and convene decision-makers to influence policy and create change for Africa. The Panel has exceptional networks of policy analysts including academics and policy practitioners across Africa. By bringing together experts with a focus on Africa, the APP contributes to evidence-based policies.


Kofi Annan


Michel Camdessus


Peter Eigen


Bob Geldof


Graça Machel


Strive Masiyiwa


Olusegun Obasanjo


Linah Mohohlo


Robert Rubin


Tidjane Thiam

ABOUT THE AFRICA PROGRESS REPORT

Published every year, the Africa Progress Report is the Africa Progress Panel's flagship publication. The report draws on the best research and analysis available on Africa and compiles it in a refreshing and provocative manner. Through the report, the Panel recommends a series of policy choices and actions for African policy makers who have primary responsibility for Africa's progress, as well as international partners and civil society organizations.

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SECRETARIAT

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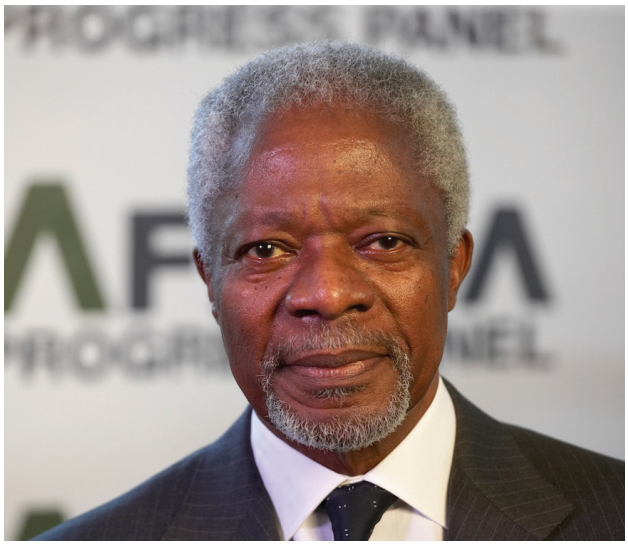
BY KOFI ANNAN



Africa is standing on the edge of enormous opportunity. Will we invest our natural resource revenue in people, generating jobs and opportunities for millions in present and future generations? Or will we squander this opportunity, allowing jobless growth and inequality to take root?

In many countries, for example, natural resource revenues are widening the gap between rich and poor. Although much has been achieved, a decade of highly impressive growth has not brought comparable improvements in health, education and nutrition.

Indeed, our continent still faces many challenges, but this year's Africa Progress Report finds good reason to be optimistic. Building on a decade of strong growth, economic governance continues to improve, providing protection against the boom-bust cycle fuelled by earlier commodity booms. Across the region, democracy is sinking deeper roots – and the accountability that comes with democracy strengthens natural resource management. Defying the predictions of those who believe that Africa is gripped by a "resource curse", many resource-rich countries have sustained high growth and improved their citizens' daily lives. Meanwhile, some foreign investors show they can make a healthy profit while also adhering to the highest international standards of social and environmental protection. And surging demand for limited resources is driving what some commentators describe as a commodity super-cycle, keeping prices high.

With a strong focus on equity, this year's report explores the potential, problems and policy options associated with natural resources by focussing on oil, gas and mining. The starting point is for all countries to develop national strategies that set up the terms under which their natural resources will be developed, including fiscal policies, contractual arrangements and tax regimes. African governments must consult widely to develop these strategies, replacing short-term calculations with the necessary long-term thinking. Critically, these national strategies must identify extractive projects that can generate more jobs, by linking effectively to the local economy. Processing natural resources before exporting them brings extra value to a country's natural resource sector. Africa cannot build dynamic growth and shared prosperity while extractive projects operate within enclaves or countries export natural resources unprocessed.

Above all, national strategies have to set out how the extractive sector fits with plans for poverty reduction, inclusive growth and social transformation.

Success will require leadership, transparency, and accountability, too. There is no substitute for public scrutiny in developing effective and equitable policies. African governments must rise to the challenges posed by fiscal policy, tax reform and the development of industrial policies. They must manage their countries' oil, gas and mining resources efficiently and share revenues fairly.

We therefore call on African governments to set out a bold national agenda for strengthening transparency and accountability to their citizens. For too long, African governments have been responding to externally driven transparency agendas. They have been following, not leading. And it is time to change this pattern.

We welcome the recent adoption by the AU of the African Peer Review Mechanism as the main framework for monitoring natural resource. Building

on the Africa Mining Vision, African governments should adopt legislation that requires companies bidding for concessions and licences to fully disclose their beneficial ownership. They should institute transparent systems of auctions and competitive bidding for concessions and licences, as well as tax regimes that reflect both the real value of their countries' natural resource assets and the need to attract high quality investment.

And yet, acting alone, African governments cannot resolve the most intractable natural resource governance challenges. The international community must also shoulder responsibility. When foreign investors make extensive use of offshore companies, shell companies and tax havens, they weaken disclosure standards and undermine the efforts of reformers in Africa to promote transparency. Such practices also facilitate tax evasion and, in some countries, corruption, draining Africa of revenues that should be deployed against poverty and vulnerability. We call on the G8 and the G20 to step up to the mark, to show leadership in the development of a credible and effective multilateral response to tax evasion and avoidance.

All countries must adopt and enforce the project-by-project disclosure standards embodied in the US Dodd-Frank Act and comparable EU legislation. All countries must apply them to all extractive industry companies listed on their stock exchanges. The time is right to develop a global common standard for all countries. As major players in Africa's extractives sector, Australia, Canada and China should be the next countries to actively support this emerging global consensus.

We welcome the commitment from the current G8 presidency, the United Kingdom, and other governments to put tax and transparency at the heart of this year's dialogue. And we urge all OECD countries to recognize the cost of inaction in this vital area. Africa loses twice as much in illicit financial outflows as it receives in international aid. It is unconscionable that some companies, often supported by dishonest officials, are using unethical tax avoidance, transfer pricing and anonymous company ownership to maximize their profits, while millions of Africans go without adequate nutrition, health and education.

Different partners have similar goals. Their interests overlap. Building trust is harder than changing policies – yet it is the ultimate condition for successful policy reform. This year's report, therefore, identifies a shared agenda for change. When we build national capacity to understand natural resource sectors better – in civil society as well as government – we also build trust between government, business and citizens. Better understanding will generate fairer contracts and more equitable national strategies too. In turn, this creates local ownership, longer-lasting contracts, and a better investment climate. Satisfied local communities pose less political risk. Mutually beneficial agreements are the only ones that will stand the test of time.

The Africa Progress Panel is convinced that Africa can better manage its vast natural resource wealth to improve the lives of the region's people. And we hope this report will make a contribution. We all stand to win from an Africa that is truly prosperous, stable and fair. We are all stewards of Africa's natural resource wealth for future generations.

Kofi A. Annan
Chair of the Africa Progress Panel

INTRODUCTION

Located in a remote corner of southeastern Guinea, the lush, green highlands of Simandou are at the centre of a transformation that is being felt across Africa. Beneath the tropical forests, which are celebrated for their ecological richness, lies another prized asset: one of the world's richest but least developed, and most coveted, repositories of iron ore, the core ingredient for making steel. Fuelled by rapid growth in emerging markets, world prices for iron ore have spiralled and global investors are scrambling to unlock new sources of supply. Today, multinational companies from six continents are competing for a stake in Simandou's ore, with billions of dollars of investment in prospect. Exports are set to boom, generating a surge in economic growth.

What does this mean for the people of Guinea, one of the world's poorest countries? Will resource wealth ensure better lives for themselves and future generations? Or will Guinea become another victim of what some commentators see as Africa's endemic resource curse?

These questions go to the heart of this year's *Africa Progress Report,* which focuses on oil, gas and mining. Over the past decade, Africa's economies have been riding the crest of a global commodity wave. Extractive industries have emerged as a powerful engine of economic growth. Surging demand for natural resources in China and other emerging markets has pushed export prices to new highs – and the boom shows no sign of abating. Africa's petroleum, gas and mineral resources have become a powerful magnet for foreign investment. With new exploration revealing much larger reserves than were previously known, Africa stands to reap a natural resource windfall.

The challenge facing the region's governments is to convert the temporary windfall into a permanent breakthrough in human development. Effective and equitable stewardship of Africa's natural resource wealth could transform the region. Apart from building manufacturing industries, the development of natural resources could provide the revenues needed for investment in smallholder agriculture, food security, employment, health and education. Governments have a responsibility to future as well as present generations to harness natural resource wealth. Sub-Saharan Africa entered the 21st century with a population of 670 million. By 2025 the region will be home to 1.2 billion – a figure that will rise to 2 billion by mid-century. The demography matters. Equipped with skills and opportunities, Africa's youthful population could become a powerful – and positive – force for change. Denied a chance to realize their potential, children born today will become a lost generation. Well-managed resource wealth has the potential to lift millions of Africans out of poverty over the next decade, while giving hope to future generations.

According to the resource pessimists, as revenues generated by extractive industries rise, the quality of governance inevitably declines, reducing economic competitiveness and leaving the poor behind. The pessimists' case is built on a long, inglorious history in which Africa's resource wealth has financed colonial-era monuments in Europe, vast private fortunes of post-independence leaders like President Mobutu Sese Seko of Zaire (and some current rulers), and numerous civil wars. Meanwhile, progress in human development has been far less impressive, and most resource-rich economies have been locked into boom-bust cycles with episodes of unsustainable debt. For those who believe that past performance is a guide to future outcomes, Africa's deepening integration into global natural resource markets points to a bleak scenario.

We do not share that belief. Far from being hostage to a non-curable resource curse, this generation of political leaders has an opportunity to harness resource wealth for a transformation in human development. There are four reasons for our guarded optimism.

The first can be traced to the human development record of the past decade. It is a matter of grave concern that Africa is not on course for achieving the 2015 Millennium Development Goals (MDGs). Yet much has been achieved. For the first time in over a generation, the number of people in poverty has fallen. Child death rates are declining. There has been progress in combating major infectious diseases. More of Africa's children are in school. All of this is evidence that a combination of stronger economic growth and strengthened policies can deliver results. If the revenues generated by Africa's natural resource wealth are invested wisely and

shared fairly, there is every prospect that the region will see an accelerated drive towards the MDGs.

The second cause of optimism is informed by global commodity market projections. Any prediction about these markets is subject to large margins of uncertainty. Yet there is compelling evidence that we are not living through a normal commodity cycle. Strong and highly resource-intensive economic growth in emerging markets and population growth are driving increased demand, while constraints on increased output are holding back supply. Some commentators maintain that we are now in the early phases of a commodity super-cycle – a period of sustained high prices. Of course, governments have to make contingency plans for market volatility and uncertainty. But it appears likely that export growth will generate large revenue streams that could be used to finance the social and economic infrastructure needed to support a human development breakthrough.

The third cause for optimism is the political and economic policy environment. While there have been setbacks, democracy has taken root across Africa – and when it comes to good governance of natural resources, there is no substitute for democracy. While the quality of participation, transparency and accountability varies from country to country, Africa's citizens are claiming their right to hold their governments to account for their management of natural resources. Fiscal policy and macroeconomic management has also strengthened. Resource-rich countries in Africa are far less vulnerable today to the boom-bust economics of the past. That is one reason they were able to recover so swiftly from the global downturn in 2008. Many of the countries in the early stages of developing their non-renewable resources – including Ghana, Guinea, Kenya, Liberia, Mozambique, Sierra Leone and Tanzania – have greatly strengthened macroeconomic governance over the past decade. Governments in these countries have another great advantage: they can learn from the mistakes of the past and take a different route.

The fourth source of our optimism is grounded in the practices surrounding resource management. Fifteen years ago, most governments treated the governance of resource wealth as a state secret. Citizens were informed of decisions taken by governments on a "need to know" basis – and the assumption was that they needed to know very little. Complex commercial transactions between government agencies and foreign investors were cloaked in secrecy – an arrangement that was highly conducive to corrupt practice. There is still too much secrecy. But the world of resource governance is changing. Global partnerships such as the Extractive Industries Transparency Initiative (EITI) have helped to build a new culture of openness. Governments are making contracts on oil and minerals publicly available. Guinea has recently placed online the full text of contracts covering all major mining deals, including those planned for Simandou. Many major mining companies have strengthened their transparency and accountability standards – and they are assessing with more rigour the social and environmental consequences of their investments. Critically, a vibrant and growing national and international civil society movement is holding governments and companies to account.

Guarded optimism should not be interpreted as endorsement of the exuberance that has taken hold in some quarters. All too often, Africa is presented as a new El Dorado in the global economy – a dynamic hub of resource-led wealth creation and investment opportunity. The underlying message is that another decade of growth fuelled by extractive industries will automatically pull countries and people out of the poverty trap. That message is flawed. If the next decade looks like the last decade, Africa will unquestionably emerge with impressive gains in gross domestic product (GDP) and export activity. But the wellbeing of nations is not measured by growth alone. What matters for African people is the rate at which new resource wealth reduces poverty and expands opportunity.

Governments across the region have paid insufficient attention to this issue. The reduction in poverty achieved over the past decade should be celebrated. Yet as we demonstrate in this report, resource-rich countries have seen poverty levels fall by less than predicted on the basis of their economic growth performance. The reason: in many countries, the poor have seen their share of income shrink. Rising inequality is slowing the rate at which growth reduces poverty.

The wider human development record is also a cause for concern. Most resource-rich countries have human development indicators far below the levels that would be predicted on the basis of their average incomes. Angola and Equatorial Guinea have some of the largest gaps between income and human development as reported in the United Nations Development Programme's Human Development Index (HDI). The Democratic Republic of the Congo, one of the world's best-endowed resource economies, is at the bottom of the HDI. Progress in countries such as Ghana, Tanzania and Zambia has been held back by disparities in human development linked to poverty, the rural-urban divide and other markers for disadvantage.

In this report we set out an agenda for converting increased resource wealth into improved wellbeing. The starting point is a strengthened focus on equity and human development. Too many governments continue to view extractive industries solely as a source of growth and a magnet for foreign investment. Insufficient attention has been directed towards ensuring that the benefits of growth are distributed fairly across society. Governments also need to consider the quality of growth. In many countries, the petroleum and mining sectors continue to operate as enclaves insulated from the national economy. They create few jobs and have weak linkages to local firms. They add little value in production. Africa is exporting predominantly unprocessed natural resources and using the revenues to import consumer and agricultural goods, many of which could – and should – be produced locally. This is not a route to inclusive growth and shared prosperity. And some extractive companies generate healthy profits that do not translate into commensurate government revenues, because of excessive tax concessions, tax evasion and the undervaluation of assets.

There is no blueprint for reform. Policies have to be designed in the light of the constraints and opportunities facing individual countries. However, there are principles and examples of good practice that serve as a guide to policy. We highlight the critical importance of fiscal policy and equitable public spending. Strategies geared towards saving for the future are inappropriate given Africa's vast unmet needs for infrastructure, health, education, water and sanitation. These are all areas in which judicious public spending has the potential to yield not just high economic returns but also windfall gains for human development. Moves towards greater transparency and accountability should be broadened and deepened, not to satisfy the demands of aid donors but to respect the rights of Africa's citizens. The haemorrhaging of resource revenues that occurs through secretive deals and the operations of offshore companies is an unconscionable blight on the lives and hopes of their citizens. Full public disclosure is the most effective tourniquet. The Dodd–Frank legislation adopted in the United States and comparable measures in the European Union (EU) will greatly strengthen the momentum towards greater transparency – and African governments should apply similar principles in domestic legislation.

Breaking with the enclave model of natural resource extraction is another priority. Africa's vast mineral resources could transform social and economic development. The Africa Mining Vision sets out a compelling agenda for change. It calls on African governments to "shift focus from simple mineral extraction to much broader developmental imperatives in which mineral policy integrates with development policy." Achieving that goal will require not just new policies but also the development of institutional capacity and a wider industrial policy. Foreign investors can play a critical role in facilitating change by partnering with governments to strengthen transparency, by supporting skills development, and by carefully assessing the social and environmental impacts of their operations – and many companies are providing leadership in these areas.

In each of these areas there are examples of good practice. Some of Africa's poorest countries are demonstrating that strengthened governance is possible. Yet African governments acting alone, or even in concert, cannot solve all of the problems that are undermining the development potential of resource exports.

Foreign investors have a key role to play. Global companies operating in Africa should apply the same accountability principles and the same standards of governance as they are held to in rich countries. They should also recognize that disclosure matters. The extensive use by multinational investors of companies registered in tax havens and offshore centres, and their dealings with other offshore companies, is potentially damaging to their own corporate reputation and shareholder interests. It is also associated with practices that hurt Africa and weaken the link between resource wealth and poverty reduction.

International action can create an enabling environment for strengthened governance in Africa. Tax evasion, illicit transfers of wealth and unfair pricing practices are sustained through global trading

and financial systems – and global problems need multilateral solutions. African citizens should demand that their governments meet the highest standards of propriety and disclosure. Governments in developed countries should demand the same thing of companies registered in, or linked to, their jurisdictions. The G8 and the G20 should establish common rules requiring full public disclosure of the beneficial ownership of companies, with no exceptions. They should also strengthen multilateral rules on taxation to clamp down on the transfer pricing practices that cost Africa billions of dollars annually. This is an area in which Africa and the developed world have a shared interest in bringing order to a system that allows the pursuit of private profit to be placed above the public interest in transparency, accountability and financial stability.

This report does not offer easy answers. There are none. The surge in resource wealth brings with it complex challenges and very real risks. Yet it also brings an unrivalled opportunity. Effectively harnessed and well managed, Africa's resource wealth could lift millions of people out of poverty over the next decade. It could build the health, education and social protection systems that empower people to change their lives and reduce vulnerability. It could generate jobs for Africa's youth and markets for smallholder farmers. And it could put the region on a pathway towards dynamic and inclusive growth.

Seizing these opportunities will be difficult. Squandering them would be unforgivable and indefensible.

PART I

THE NATURAL RESOURCE PARADOX: RESOURCE WEALTH AMID HUMAN POVERTY

Africa's economic fortunes have changed dramatically in the past decade. Economic growth has been driving up average incomes, and most countries in the region have recovered strongly from the global recession. Resource-rich countries have contributed to the region's impressive growth record, but their record on human development is more chequered. Rising inequality seems to be the main reason for the disappointing overall record on reducing poverty.

"Of all those expensive and uncertain projects, however, which bring bankruptcy upon the greater part of the people who engage in them, there is none perhaps more ruinous than the search after new silver and gold mines."

Adam Smith, *The Wealth of Nations*, 1776

In theory, natural resource wealth should strengthen economic growth, provide governments with an opportunity to support human development, and create employment. In practice, it has often led to poverty, inequality and violent conflict. These are symptoms that have been widely attributed to a "resource curse" or to "mineral-based poverty traps".[1]

No region has provided more abundant evidence in support of the resource curse theory than Africa. Countries such as Angola, the Central African Republic, Equatorial Guinea, Liberia and Nigeria have been widely used as case studies to explore the links between resource exports, conflict and poor governance. There are some exceptions, such as Botswana, but they are few. The question at the heart of the debate over the resource curse in Africa is: "How can countries be so rich in mineral wealth and yet so poor?"[2]

This part of the report looks at the relationship between resource wealth and human development in Africa over the past decade. It focuses on 20 countries identified by the International Monetary Fund (IMF) as "resource-rich" on the basis of their dependence on minerals for government revenues and export earnings (see Part II). In almost every case, resource wealth has contributed to significant increases in average income.

Some countries in the group have made impressive strides in improving the lives of their people, calling into question some of the bleaker predictions of proponents of the resource curse. But overall progress has been uneven – and in some areas it has fallen short of reasonable expectations. After a decade of strong growth, several of Africa's resource-rich countries remain at the bottom of the international league table for human development. Others register some of the world's largest inequalities in wealth, as measured by average income, and in wellbeing, as captured by indicators such as life expectancy and education. Several resource-rich countries have reduced poverty, but these gains have seldom matched the level of economic growth, and in some countries progress on reducing poverty has stalled or even slipped despite rising average incomes. Rising inequality seems to be the main reason for the disappointing overall record on reducing poverty.

In this part of the report we start by reviewing the record of the past decade and the potential for resource wealth to accelerate human development. Section 2 looks at the gap between wealth and wellbeing in resource-rich countries, and explores the complex and varied interaction between economic growth, inequality and poverty reduction. Section 3 looks beneath the national level to consider the more direct effects of the extractive sector on economic growth and human development.

1. A DECADE OF UNPRECEDENTED GROWTH AND UNEVEN DEVELOPMENT

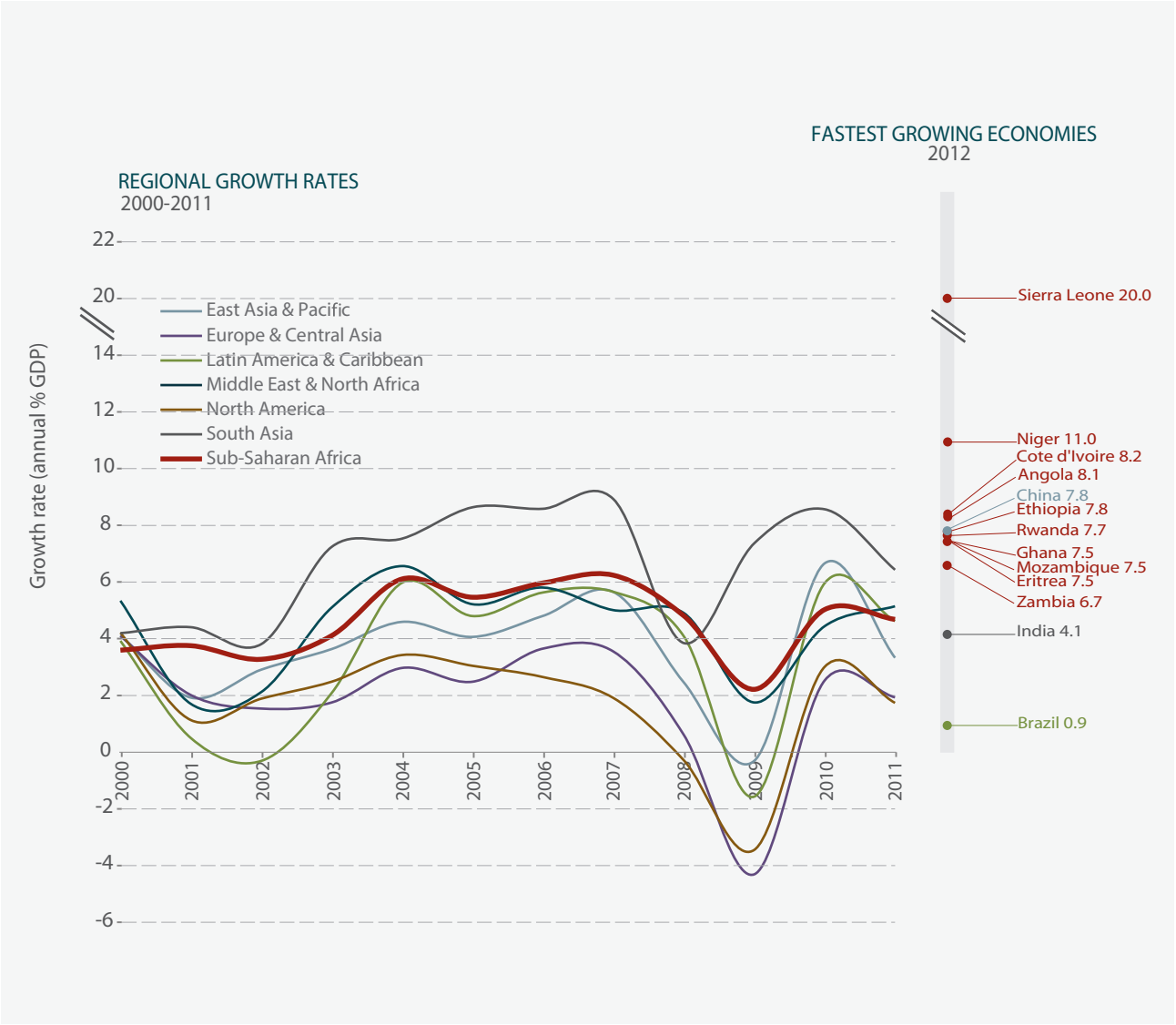
Africa's economic fortunes have changed dramatically in the past decade. Economic growth has been driving up average incomes, and most countries in the region have recovered strongly from the global recession. Resource-rich countries have contributed to the region's impressive growth record, but their record on human development is more chequered.

The rising tide of economic growth

Despite a weaker global economy, Sub-Saharan Africa's growth has remained robust, averaging more than 5 per cent annually over the past 10 years. While the global economic downturn at the end of 2008 interrupted the region's strong growth performance, Africa recovered strongly. In 2012, several countries grew by at least 6 per cent (Figure 1).[3]

The IMF has identified 20 countries in Africa as "resource-rich".[4] These countries are "export dependent", meaning that over one-quarter of export revenues is derived from minerals, or "fiscally dependent" in that their governments depend on minerals resources for

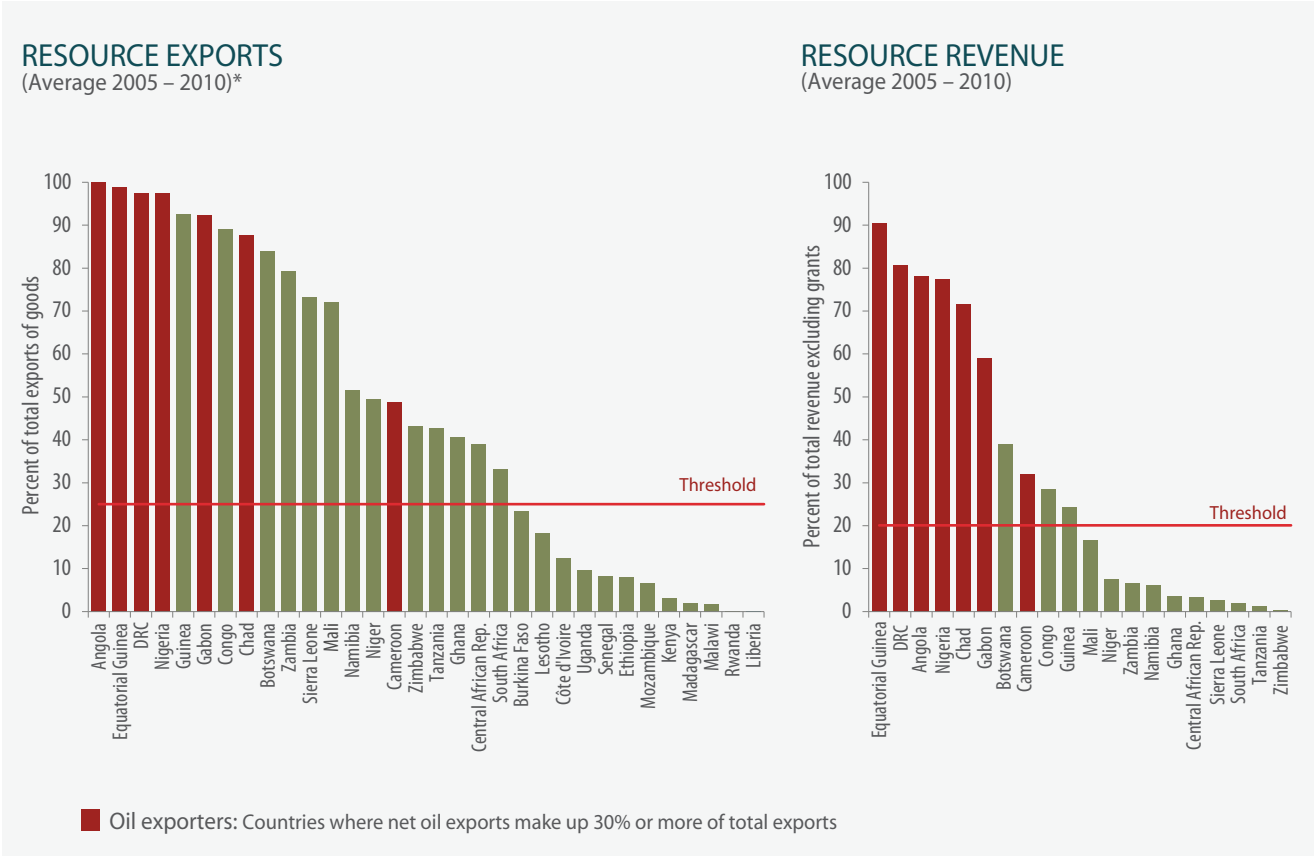
Figure 1: AFRICA HAS JOINED THE WORLD'S HIGH GROWTH LEAGUE



20 per cent or more of domestic revenue. There are 13 countries that depend on natural resources for more than half of their export earnings (Figure 2). Reflecting the fact that oil exports are associated with higher levels of revenue collection, the seven oil exporters in the group have a greater fiscal dependence than exporters of minerals. Collectively, the 20 countries covered under the IMF's criteria account for 56 per cent of the region's population and 79.6 per cent of GDP.

Resource-rich countries have outperformed other countries in the region. This is a reversal of the situation in the 1990s. The effects of the global commodity price boom are evident in the post-2000 growth surge. While the growth record has converged since 2005, partly reflecting the fall in world commodity prices that accompanied the global recession, the record of the past decade demonstrates the combined effects of a more favourable external trading environment and stronger domestic policies (Figure 3).

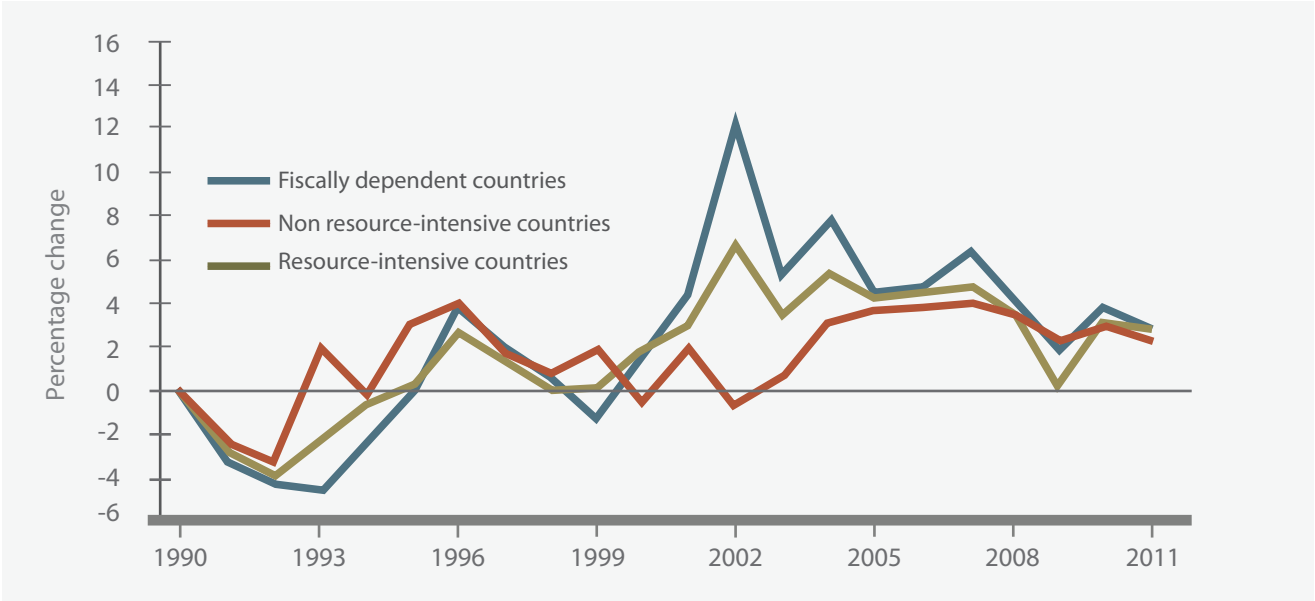
Figure 2: RESOURCE-RICH COUNTRIES IN AFRICA: SELECTED COUNTRIES BASED ON EXPORT AND FISCAL CRITERIA



Source: IMF (2012), Regional Economic Outlook: Sub-Saharan Africa.

*Data for Côte d'Ivoire and Senegal exclude re-exports of refined oil products

Figure 3: REAL GDP PER CAPITA GROWTH



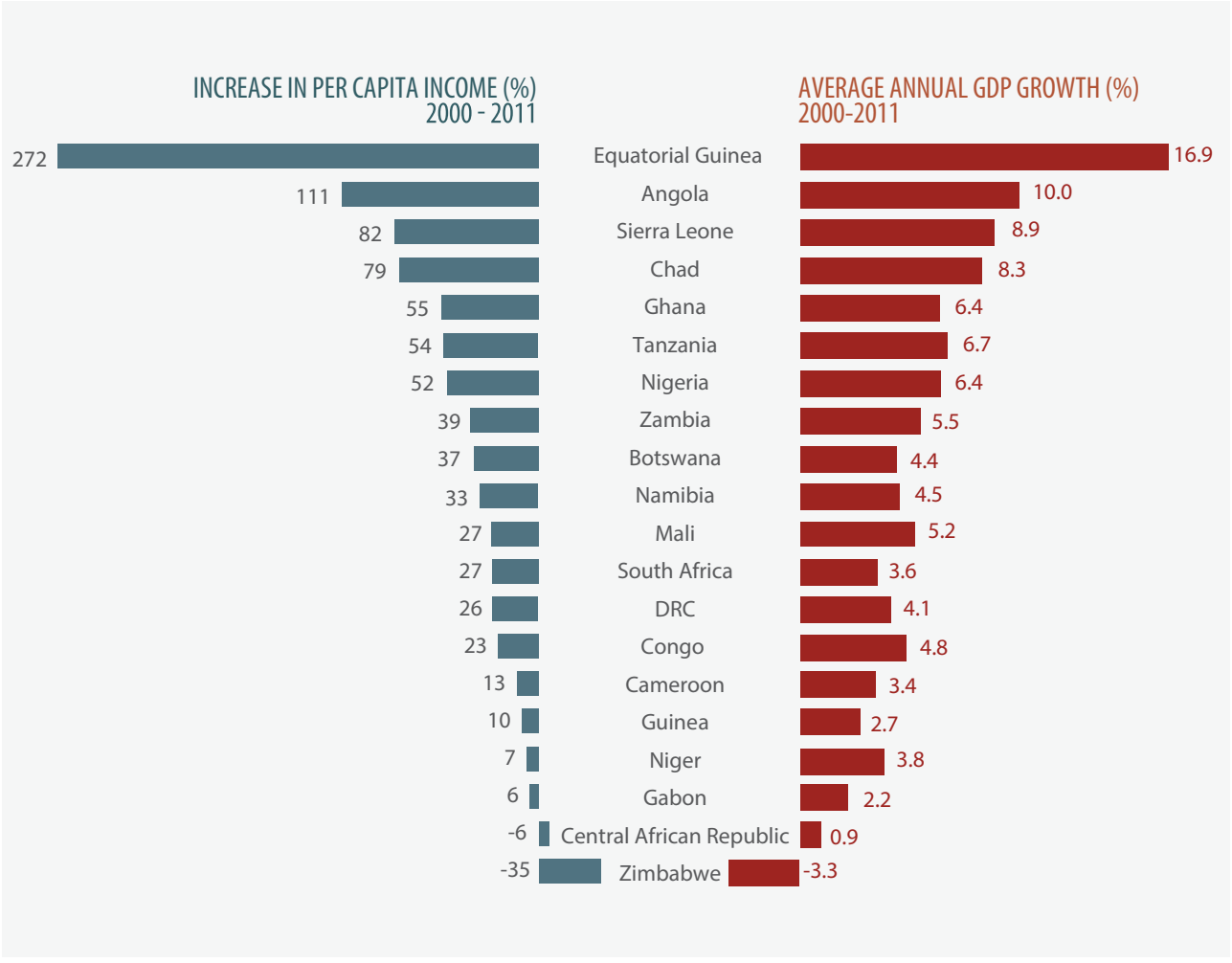
Source: IMF (2012), Regional Economic Outlook. Sub-Saharan Africa.

The average growth rate obscures differences between resource-rich countries. Between 2000 and 2011, Equatorial Guinea was the world's fastest-growing economy, with output growth averaging 17 per cent (Figure 4). Angola, Chad, Nigeria and Sierra Leone have also been in the top tier of economic performers. In 2012, Angola, Niger and Sierra Leone outperformed China; and Ghana, Mozambique and Zambia outperformed India.

Even with high population growth, average incomes have been rising across most of the resource-rich countries. Measured in constant US dollars, average per capita income in Equatorial Guinea was just under three times higher in 2011 than at the start of the decade. Average incomes in Angola more than doubled. Over the course of the decade, 10 of the 20 resource-rich countries have seen average income rise by one-third or more; another four have registered gains in excess of 20 per cent. At the other end of the performance scale, the Central African Republic and Zimbabwe have been in economic decline. Both have registered a decline in per capita income, dramatically so in the case of Zimbabwe.

These average income gains have pushed many resource-rich countries towards and across the thresholds separating poorer from richer countries (Figure 5). The World Bank classifies countries as low-income (per capita income of up to US$1,025), lower middle-income (US$1,026–4,035), upper middle-income (US$4,036–12,475) or high-income. Over the past decade, Cameroon, Ghana, Nigeria and Zambia have crossed the threshold from low-income to lower middle-income status. Another five countries – Angola, Botswana, Gabon, Namibia and South Africa – are in the upper middle-income group. Equatorial Guinea, with an average income of US$27,478 in 2011, is classed a high-income country.

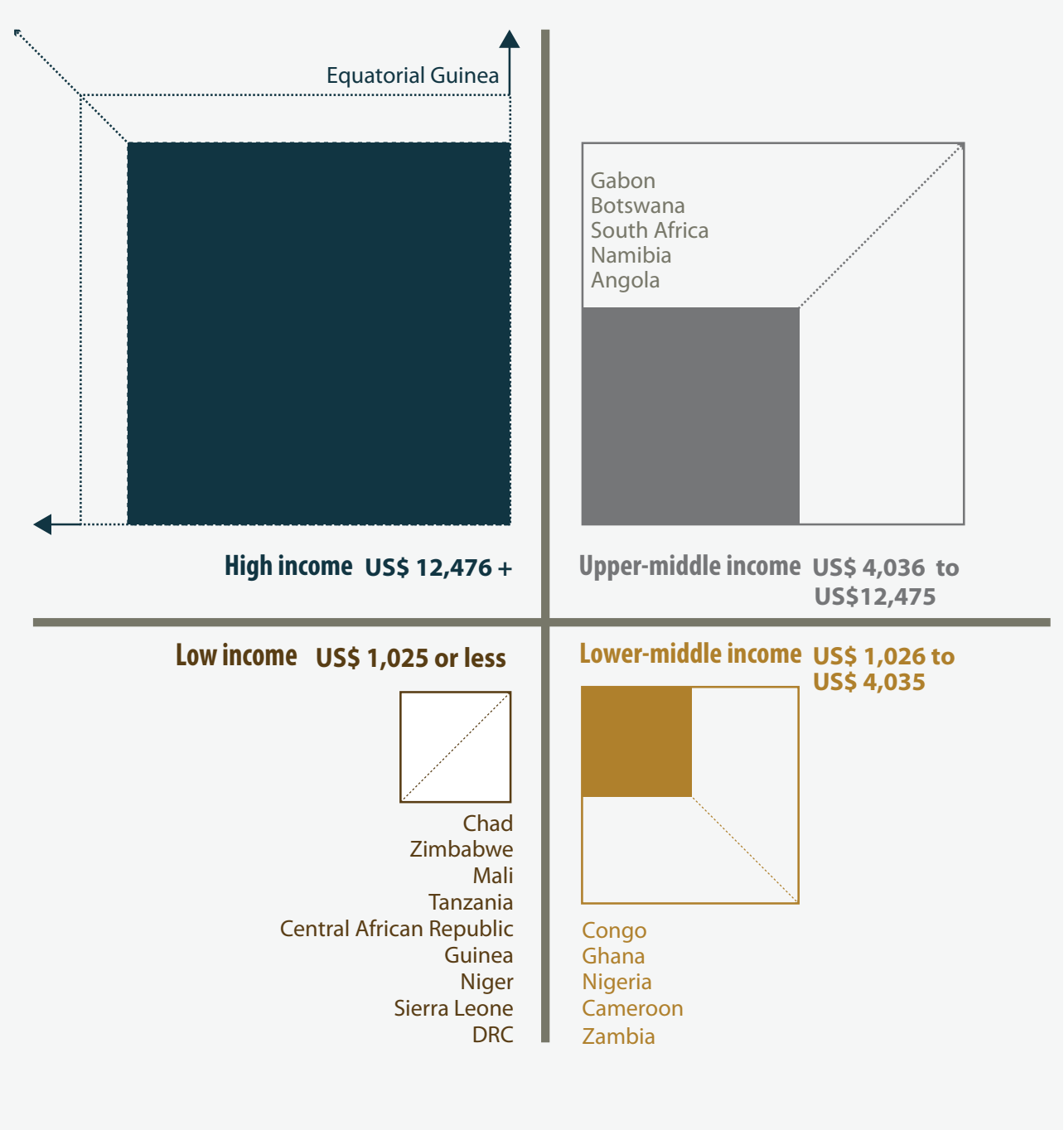
Figure 4: THE RISING TIDE OF WEALTH: ANNUAL GDP GROWTH AND CHANGE IN PER CAPITA INCOME OF SELECTED COUNTRIES



Source: World Bank (2013), PovCal and World Development Indicators.

Note: These 20 countries are identified by the IMF as resource-rich

Figure 5: INCOME STATUS OF RESOURCE-RICH COUNTRIES - 2011



Source: World Bank (2013), PovCal and World Development Indicators.

Note: These 20 countries are identfied by the IMF as resource-rich
For each category countries are ordered from highest income to lowest income

Mixed progress on poverty and human development

Although rising income tends to help reduce poverty and improve human development, data gaps make analysis of the relationship between growth and poverty difficult in Africa. The evidence that is available, however, combines good news and bad news. Tanzania reduced extreme poverty from 84 per cent to 67 per cent between 2000 and 2007. Mozambique also recorded a major advance: poverty fell from 74 per cent in 2002 to 59 per cent in 2007. Ghana reduced extreme poverty by one-third between the end of the 1990s and 2005. In Cameroon and Mali, however, increased growth had no discernible effect on poverty – and Nigeria and Zambia registered small increases in poverty despite increased growth.[5]

Resource-rich countries have an unprecedented opportunity to reduce poverty faster. Measuring that opportunity is inherently difficult. However, a simple comparison of current and projected mineral revenues with the implicit costs of eradicating poverty illustrates the scale of the potential.[6] In many resource-rich countries anticipated revenue flows are very large in relation to the estimated costs of closing the national poverty gap, as indicated by the financing requirements for bringing each poor person up to a poverty line income. In Guinea, Liberia and Mozambique, the average annual revenues projected by the IMF from current natural resource projects could eradicate extreme poverty. Tanzania could halve the poverty gap and Ghana could close the gap by three-quarters.

Looking beyond poverty, the wider human development record of resource-rich countries is highly variable. One of the most sensitive indicators of progress in wellbeing is the survival of children under the age of 5. This is an area in which Africa has been registering progress. Since 2000 the region has doubled the rate at which child mortality is declining, to 2.4 per cent. Some of the resource-rich countries have contributed to this acceleration. The rate of reduction in child mortality has tripled in Tanzania and more than doubled in Zambia. But Ghana and Nigeria have lagged behind the regional average, while the Democratic Republic of the Congo, Equatorial Guinea and Mali have registered no increase. Both the positive and the negative news have to be placed in perspective. Taken as a group, the resource-rich countries have some of the world's highest child mortality rates: 12 have in excess of 100 child deaths for every 1,000 live births.

Progress in education has been equally mixed. Several countries have come a long way from a low base: Niger has more than doubled enrolment, though one-third of primary school age children are still out of school. In Mozambique, Tanzania and Zambia, the share of children enrolled in primary school has risen from around half at the end of the 1990s to more than 90 per cent today. These countries are within touching distance of the 2015 goal of universal primary education. However, other countries have slipped back from a low base, including Nigeria.

As in the case of poverty reduction, increased resource revenues have the potential to transform the provision of education. Research by UNESCO's Education for All *Global Monitoring Report* illustrates the point. The report analysed potential income streams from oil, gas and other minerals in 17 countries worldwide. It estimated that by reaching international benchmarks for tax collection on mineral exports and spending 20 per cent of the additional revenue on education, these countries could mobilize an additional US$5 billion. To put that figure in context, it amounts to two-and-a-half times what these countries receive in aid. Effectively allocated, the increased revenue flow from oil and mineral gas reserves in 13 Sub-Saharan African countries could provide almost 10 million of the region's out-of school children with an education, the equivalent to 1 in 3 of out of school children in the region.[7]

The diversity of the outcomes highlighted in this section underlines the limitations of the resource curse perspective. Some governments have successfully used resource revenues to support policies that reduce child mortality and expand education opportunity. Others have been unable – or unwilling – to do so. The important point is that there is no automatic relationship between resource wealth and progress in human development. What counts is well-designed public policy, backed up by government commitment.

2. THE GREAT DIVERGENCE: WEALTH AND WELLBEING IN RESOURCE-RICH COUNTRIES

The surge in resource-based wealth is one of the forces transforming Africa's social and economic landscape. In many countries its effects are highly visible: the rise of a middle class, the spread of shopping malls, property booms and wider infrastructural developments. At the same time, there remains a vast gulf between economic wealth and human wellbeing in much of the region. This section explores that gap.

The view from the Marginal

The sea front road – the Marginal – that winds around the bay of the Angolan capital, Luanda, is a good place from which to view Africa's natural resource paradox. Oil wealth has transformed the area. Today, the sea front is one of the world's most expensive real estate locations. Dotted along the road are multi-million dollar condominiums, exclusive clubs and boutique stores catering for the country's elite, and hotels for the executives of multinational oil companies.

Track a few streets inland and you are in a different world. Set back from the sea front are slums that house around half of Luanda's population. Small wooden and corrugated iron shacks house families lacking clean water and sanitation. There are no health facilities. Children who should be in school survive by spending their days collecting scrap, hawking on streets and working as porters on the docks.

The oil wealth that has delivered fortunes for the few has left most Angolans – including Luanda's slum dwellers – in grinding poverty. After a decade of rapid growth, half of the country – 10 million people – still lives on less than US$1.25 a day. The benefits of the oil boom have been skewed towards a privileged few. Angola has one of the world's most unequal patterns of income distribution. But the country's elite have benefited not just from the opportunity to enrich themselves. They have also worked assiduously to ensure that the country's oil revenue is geared towards their interests. While the seafront homes of the elite receive heavily subsidized electricity and water paid for by oil revenues, the informal settlements behind the Marginal have no electricity – and some of the country's poorest people are forced to buy high-cost water from private traders.

No country illustrates more powerfully than Angola the divergence between resource wealth and human welfare. Angola is Sub-Saharan Africa's second-largest exporter of oil and the world's fifth-largest producer of diamonds. After financing a 27-year civil war that cost 1.5 million lives, the country's mineral wealth is now financing a construction boom in Luanda and other urban centres.

It is also financing a surge in overseas investment. Angolan state enterprises and enterprising members of the country's elite are buying up companies in the heavily indebted former colonial power, Portugal. Sonangol, the Angolan state oil company, is now the largest shareholder in Portugal's biggest bank, a major stakeholder in its largest mining company and, in a marked reversal of colonial history, holder of Portuguese government debt. Oil wealth has propelled some individuals into the upper reaches of the world's rich list. In 2013, Isabel dos Santos, the daughter of Angola's president, became the first African woman to enter the Forbes list of billionaires after she bought large stakes in Portuguese media and financial companies, building on her holdings of stocks in Angola's largest bank and a 25 per cent share in the telecommunications company, Unitel.

Unravelling the real wealth of Angola's elite is an enterprise in educated guesswork. Much of it is hidden behind some of the world's most opaque reporting systems, including those of Sonangol. Poverty, squalor and poor human development indicators are more difficult to hide. Since the end of the civil war in 2002, Angola's economy has been growing at an average rate of 7 per cent a year. Oil revenues have generated US$3–6 billion annually in government revenues. Yet the country's under-5 mortality rate is the eighth highest in the world at 161 per 1,000 live births, which translates into 116,000 under-5 deaths each year. Angola's average income is higher than Indonesia's, but its child death rate is comparable with Haiti's. While the country's elite use oil wealth to buy up overseas assets, Angola's children go hungry at home: poor nutrition is implicated in one-third of child deaths. And while the rich enjoy highly subsidized private healthcare, poor rural women lack access to even the most rudimentary care. The lifetime risk faced by women of death during pregnancy and childbirth is 1 in 39 – one of the highest rates in the world.[8]

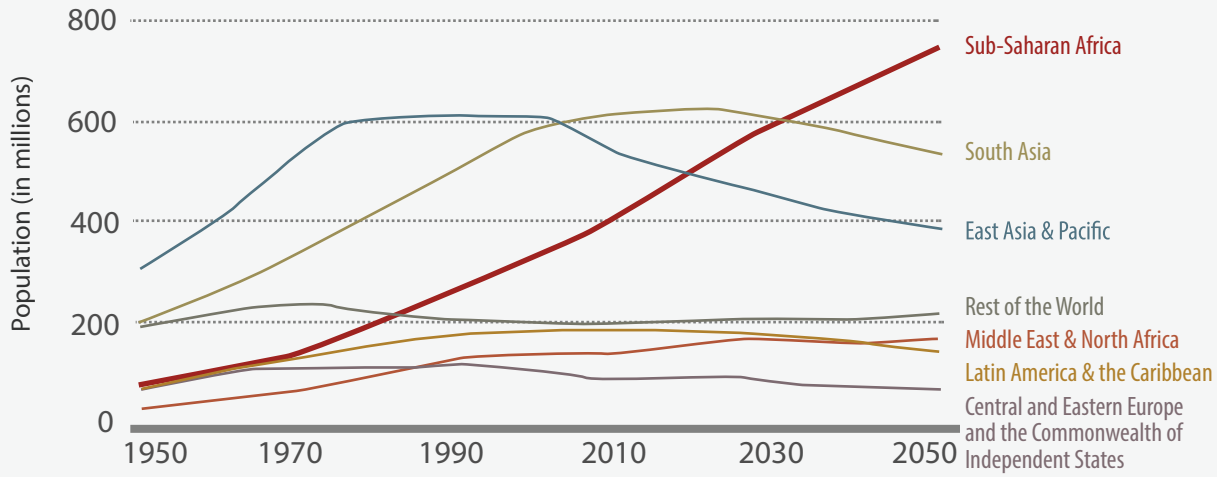
The shocking state of child nutrition and health in Angola offers its own indictment of the national record on human development. It also provides an insight into the wider gap between wealth and wellbeing.

Many resource-rich countries are leaving the poor behind

Africa's growth performance has made international financial news. Commentators have been mesmerized by the figures on exports, foreign investment and GDP growth. Less attention has been paid to the relationship between growth and factors that count in the lives of Africa's poor, such as opportunities for employment, health and education. The record of the past decade has demonstrated that economic growth and human development do not always move in unison – and in some resource-rich countries they are distant partners.

Correcting the misalignment is a political as well as an economic imperative. Sub-Saharan Africa is in the midst of a demographic surge (Figure 6). By 2025 the region's population will reach 1.2 billion – double the level in 2000. It will almost double again by mid-century, to 2 billion. Ensuring that Africa's growing youth population gains opportunities for improved nutrition, health, education and employment is one of the great development challenges of our day. Between 2010 and 2025, the number of children under 14 in Africa will increase by 112 million. In a region where agricultural productivity is struggling to keep pace with population growth, where child malnutrition is declining far too slowly, where the number of out-of-school children is rising, and where high youth unemployment is endemic, it is vital that resource wealth is used not just to lift people out of poverty today but to finance the investments in human capital needed to create hope for future generations.

Figure 6: NUMBER OF CHILDREN UNDER 18 BY UNICEF REGION



Source:UNICEF (2012), Generation 2025 and Beyond.

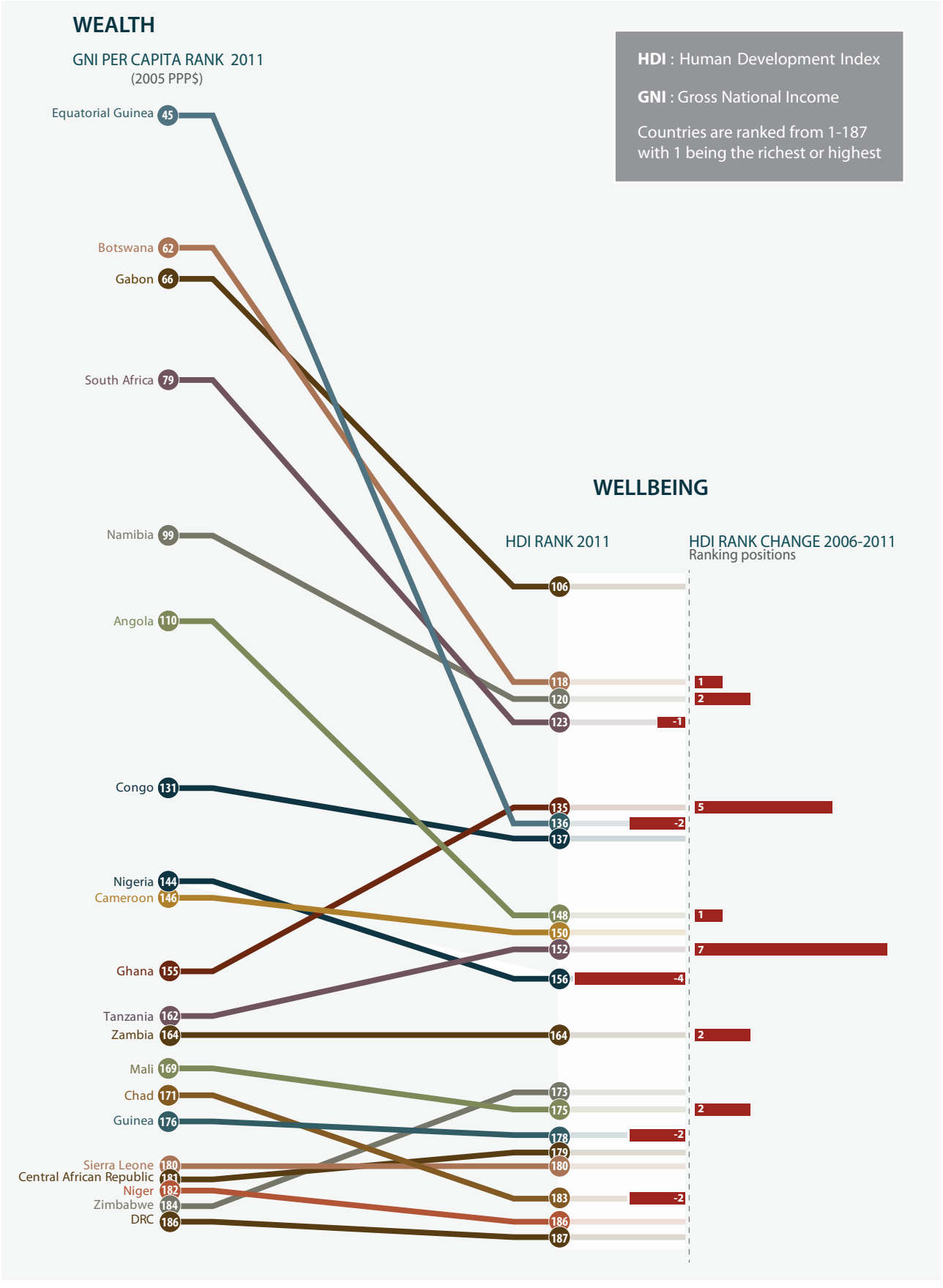
A tale of two rankings: human development versus income

One way of measuring the divergence between wealth and wellbeing is to compare a country's average income with its standing on the UN's Human Development Index (HDI) – a composite measure of wealth, life expectancy and education.[9] The 2011 HDI covers 187 countries.

Resource-rich countries account for nine of the 12 countries at the bottom of the HDI. The Democratic Republic of the Congo, a mineral "superpower", is in last place, with Chad, Mozambique and Niger also in the last five.

What is most striking, though, is the gap between where countries stand in the rankings for wealth, as measured by average income, and the HDI. Of the 20 Sub-Saharan African countries identified by the IMF as resource-rich,

Figure 7: WEALTH/WELLBEING GAP



14 have a lower HDI standing than their income rank (Figure 7). The misalignment is important because it shows that, across a large group of resource-rich countries, economic wealth does not translate into the type of health and education indicators that might have been anticipated. Based on their average incomes, Mozambique and Chad should respectively be 9 places and 12 places further up the HDI. But such gaps pale into insignificance when compared with the HDI–income gaps of countries with higher average incomes, such as Equatorial Guinea (91 places), Gabon (40 places) and Angola (38 places) (Box 1). This is striking evidence of the failure of oil-rich countries to translate rising income into expanded opportunities for human development. In the case of Botswana and South Africa, the reported human development deficit is attributable largely to the effects of HIV/AIDS on life expectancy.

BOX 1: Mind the gap – resource-rich and poverty-stricken

Equatorial Guinea has been one the world's fastest growing economies over the past 15 years. But its HDI rank is 91 places below its wealth ranking. No country registers a wider gap. Vietnam is 8 places higher in the HDI rankings, even though it has an average income one-sixth of the level in Equatorial Guinea. Countries with a comparable income – including Poland and Hungary – are around 100 places further up the HDI rankings.

Angola has an average income 25 per cent higher than Indonesia's, but it is 24 places lower on the HDI. Life expectancy in Angola is 18 years less than in Indonesia.

Gabon has an HDI–income gap of 40 places. Its average income is equivalent to that of Malaysia, but the two countries are separated by 45 places in the HDI table.

Source: UNDP (2011), Human Development Report, accessed April 2013, http://hdr.undp.org/en/reports/global/hdr2011/.

Has the growth surge of the past decade started to narrow the HDI–income gap? Given that improvements in health and education produce measurable results relatively slowly, gains from investments made in the five years after 2000 could be only now starting to come on stream. Unfortunately, the evidence does not lend weight to this positive interpretation. Comparable data for the period 2006–2011 show that most countries remained in the same position or climbed one place. The HDI rankings of several countries slipped, including Nigeria (four places), Chad (two places) and Equatorial Guinea (two places) despite strong growth and increased government revenues.

Other indicators reinforce the picture that emergences from the HDI (Box 2). Child mortality figures provide

BOX 2: Wellbeing deficits in resource-rich countries

- **Maternal mortality.** Fourteen of the 20 resource-rich African countries have levels of lifetime risk for maternal mortality higher than the average for low-income countries. Women face a lifetime risk of mortality during pregnancy and childbirth of 1 in 14 in Chad and 1 in 16 in Niger.
- **Education**. Most resource-rich countries in Africa have high levels of adult illiteracy, low levels of enrolment and school completion, and wide gender gaps. Of the 15 countries with comparable data, 10 have net enrolment rates below 90 per cent. Equatorial Guinea, Gabon and Nigeria have some of the world's lowest levels of primary school enrolment. Resource-rich countries also have some of the largest gender disparities for education.
- **Child health.** Child malnutrition is endemic across the resource-rich countries, as is shown by the proportion of children under 5 who are moderately or severely stunted (short for their age). It exceeds 40 per cent in five countries, while only three countries register rates of less than 30 per cent. Only two countries have provide full immunization coverage to more than 90 per cent of children; and seven countries have 30 per cent or more children not fully vaccinated.

Source: UNDP (2011), Human Development Report, accessed April 2013, http://hdr.undp.org/en/reports/global/hdr2011/.

Figure 8: CHILD SURVIVAL IN RESOURCE-RICH COUNTRIES

Child death rates are falling...

...but remain among the highest in the world.

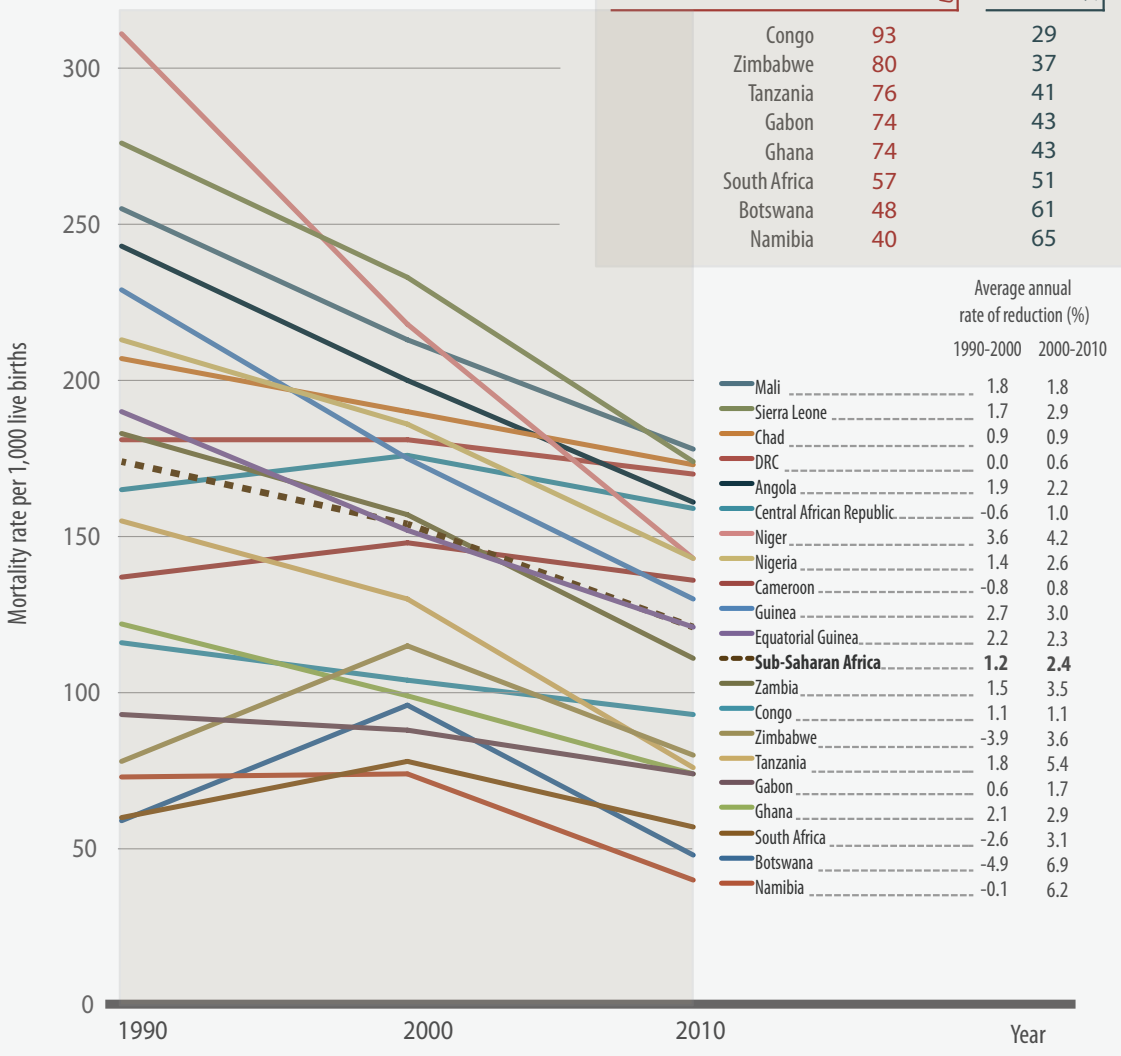
CHILD MORTALITY RATES IN EXCESS OF 100 AND THEIR PLACE IN THE WORLD RANKING

	Under-5 mortality rate (2010)	Under-5 mortality rank (Globally)
Mali	178	2
Sierra Leone	174	4
Chad	173	5
DRC	170	6
Angola	161	8
Central African Republic	159	9
Niger	143	12
Nigeria	143	12
Cameroon	136	15
Guinea	130	17
Equatorial Guinea	121	19
Zambia	111	21
Congo	93	29
Zimbabwe	80	37
Tanzania	76	41
Gabon	74	43
Ghana	74	43
South Africa	57	51
Botswana	48	61
Namibia	40	65

Under-5 mortality rate over 100

12 countries in the bottom 25, globally

RATE OF DECREASE FOR UNDER-5 MORTALITY 1990-2000 AND 2000-2010



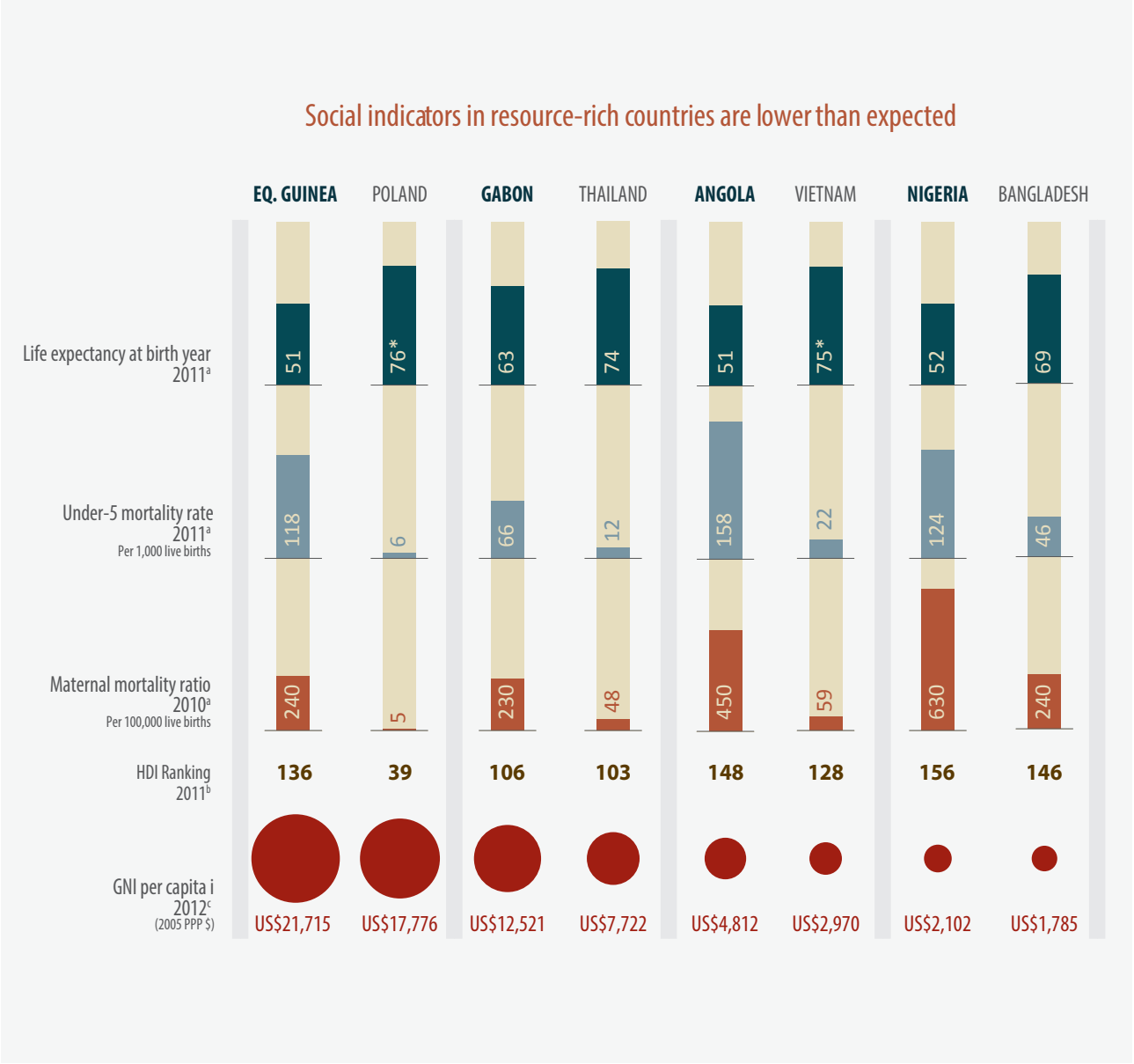
	Average annual rate of reduction (%) 1990-2000	2000-2010
Mali	1.8	1.8
Sierra Leone	1.7	2.9
Chad	0.9	0.9
DRC	0.0	0.6
Angola	1.9	2.2
Central African Republic	-0.6	1.0
Niger	3.6	4.2
Nigeria	1.4	2.6
Cameroon	-0.8	0.8
Guinea	2.7	3.0
Equatorial Guinea	2.2	2.3
Sub-Saharan Africa	**1.2**	**2.4**
Zambia	1.5	3.5
Congo	1.1	1.1
Zimbabwe	-3.9	3.6
Tanzania	1.8	5.4
Gabon	0.6	1.7
Ghana	2.1	2.9
South Africa	-2.6	3.1
Botswana	-4.9	6.9
Namibia	-0.1	6.2

Source: UNICEF (2012), The State of the World's Children.

an insight into the state of nutrition and basic health services, both of which are closely related to survival prospects (Figure 8). Resource-rich countries in Africa have been reducing child mortality, though the record is mixed. Countries such as Niger, Tanzania, Zambia and Zimbabwe have dramatically accelerated the rate at which child deaths are falling. However, other countries – Chad, the Democratic Republic of Congo and Mali among them – have either failed to make progress, or, as in Angola and Ghana, made at best a modest advance. Child mortality levels powerfully illustrate the human consequences of the gap between national wealth and well-being in resource rich countries. Today, 12 of the 25 countries in the world with highest child mortality rates are resource-rich African countries. That group includes Angola and Equatorial Guinea – a high-income country with child death rates similar to those in Haiti, one of the poorest countries in the world.

Wider comparisons between the state of human development in resource-rich African countries and other countries with lower levels of average income are instructive (Figure 9). Equatorial Guinea is richer than Poland but has a child death rate 20 times higher.

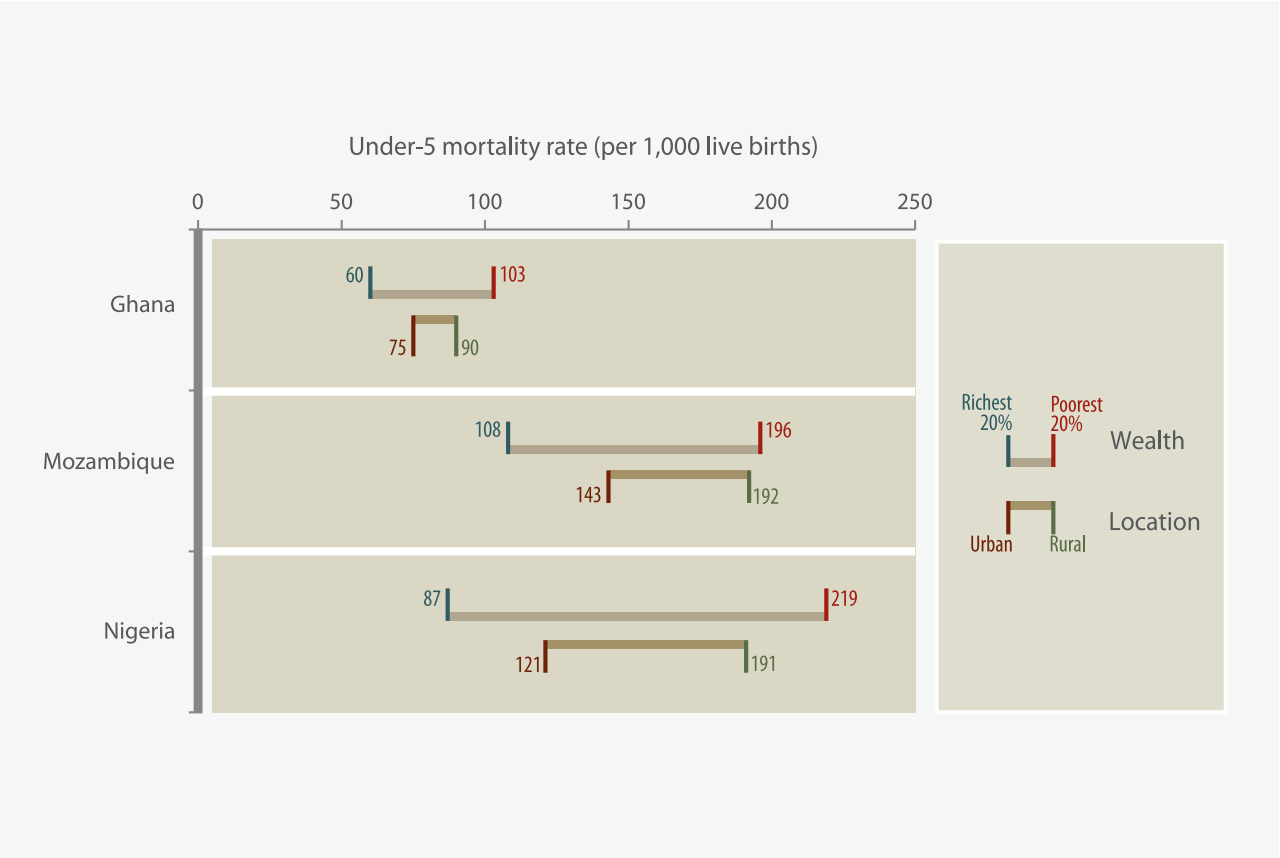
Figure 9: LEFT BEHIND IN HUMAN DEVELOPMENT



Sources: a/ World Bank (2013), World Development Indicators. - b/ UNDP (2011), Human Development Report. - c/ UNDP (2013), Human Development Report.

* 2010

Figure 10: INEQUALITIES IN CHILD SURVIVAL



Average incomes in Angola are higher than those in Vietnam, but the gulf in life expectancy and child survival indicators tells its own story about Angola's failure to translate oil wealth into reduced improved wellbeing. Measured on the scale of average income, both Bangladesh and Nigeria are poor countries – but Bangladesh is poorer. Average incomes in Nigeria are 18 per cent higher (Figure 9). On every indicator for human development, however, the performance level is reversed. Child mortality rates in Nigeria are nearly three times higher than those in Bangladesh. While Bangladesh has achieved universal primary education and eliminated gender gaps in school attendance through to lower secondary education, over one-third of Nigeria's primary school age children are out of school and there are just eight girls in school for every 10 boys. While Bangladesh has an HDI rank 11 places above its wealth ranking, Nigeria's is 12 places below. What differentiates Bangladesh from Nigeria is not wealth, but the public policies and political leadership needed to translate wealth into expanded opportunities.

The apparent disconnect between income and human development in resource-rich countries points to underlying failures in public policy. Successive governments have failed to put in place the mechanisms needed to transform resource wealth into expanded opportunity for the poor. That failure is reflected in the scale of social disparities. The national average human development indicators highlighted above mask extreme national inequalities in opportunity, starting with the opportunity to stay alive. (Figure 10). In Nigeria, children from poor households are twice as likely to die before their fifth birthday as those from wealthy households. In Mozambique, living in a rural area raises the risk of child mortality by 73 per cent. Child mortality rates in Ghana are almost three times as high in the Upper West Region as in Accra, the capital. Some of the world's starkest inequalities in education can be found in resource-rich states. In Chad, children from the wealthiest households on average have five more years of schooling than children from the poorest households. These disparities point to the need for governments to

Figure 11: UNFAIR SHARE: INCOME SHARE OF THE POOREST AND RICHEST 10 PER CENT IN RESOURCE-RICH COUNTRIES

Source: World Bank (2013), World Development Indicators.

distribute the benefits of resource revenues much more fairly across society.

Inequality drives a wedge between growth and poverty reduction

Why has the strong surge in economic growth in resource-rich countries not propelled more people out of the poverty trap? Caution has to be exercised in drawing wide-ranging conclusions from a limited evidence base, but there is cause for concern that high levels of inequality are dampening the effects of growth on poverty reduction.

Inequality matters for poverty reduction for several reasons. The rate at which poverty falls depends on the rate of increase in average income and how much of that increase goes to the poor. Apart from slowing the pace of poverty reduction, highly skewed patterns of income distribution also act as a brake on growth itself. This is because extreme inequality restricts the development of markets, undermines investment opportunities and limits the ability of poor people to secure access to the resources they need to raise productivity. Many resource-rich countries are highly unequal by international standards. The poorest 10 per cent account for just 0.6 per cent of national income in Angola and less than 2 per cent in Nigeria, South Africa and Zambia (Figure 11).

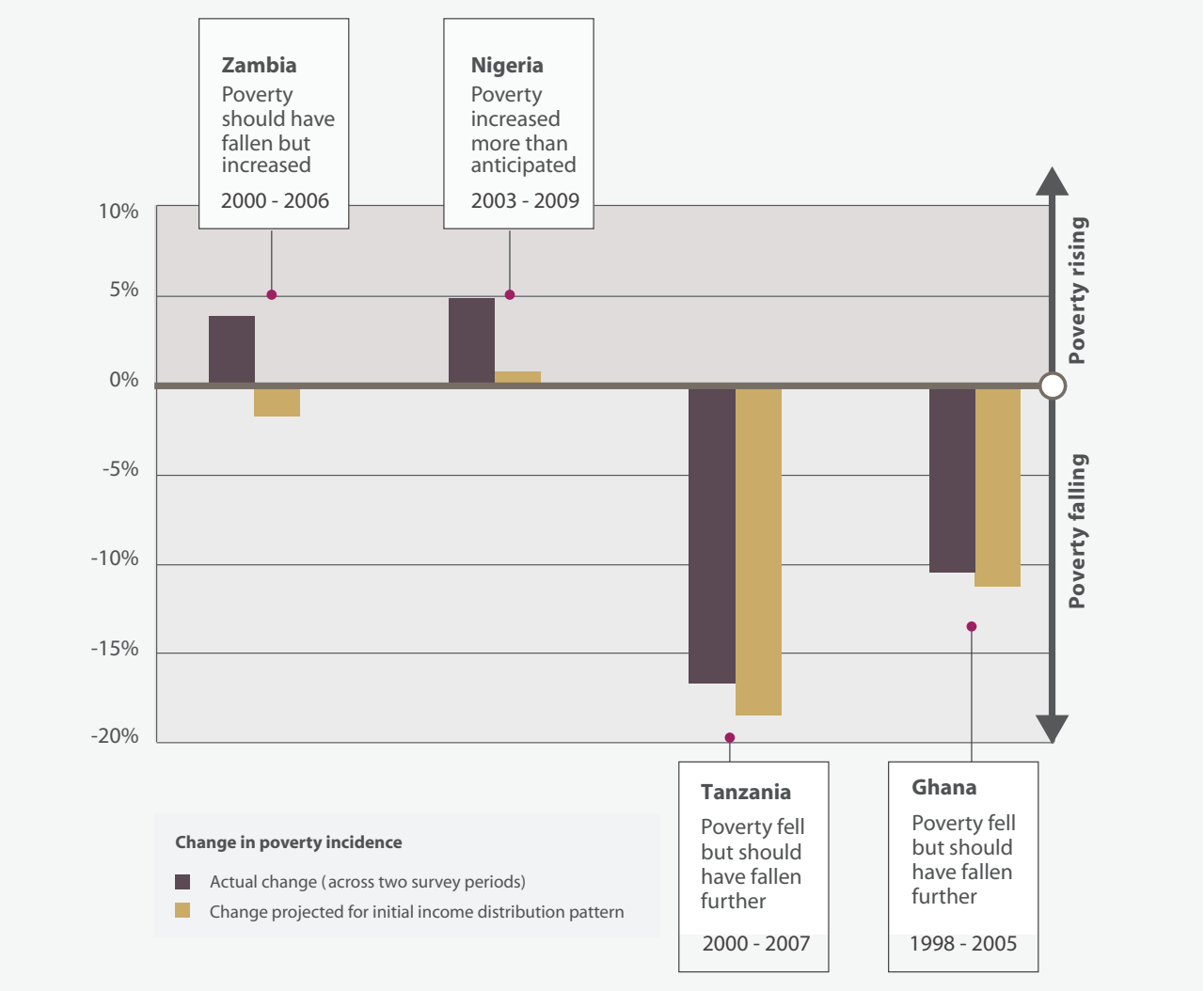
There is evidence that economic disparities in resource-rich countries are rising with economic growth, dampening the potential for poverty reduction. Research carried out for this report analysed the relationship between growth, inequality and poverty reduction in four countries: Ghana, Nigeria, Tanzania and Zambia. Efforts to explore this in Africa have been hampered by large discrepancies between (annual) national income accounts and (periodic) household surveys on consumption, as well as by the limited availability of data on poverty and inequality. Our research, carried out at the Brookings

Institution, circumvents these data problems by tracking consumption, poverty and the distribution of income at two points in time using comparable household surveys. We addressed two critical questions that have a wider relevance across Africa. First, by how much did poverty fall between the two surveys? Second, given the increase in reported consumption levels, by how much would it have been expected to fall on the basis of the pre-existing pattern of income distribution?

The results are striking. In each of the four countries there was a significant gap between the anticipated poverty reduction effects of growth and the actual outcomes (Figure 12). In two cases – Ghana and Tanzania – poverty fell, but by less than expected on the basis of the reported growth in consumption. In the case of Tanzania, growth based on the initial pattern of income distribution would have been expected to lift another 720,000 people out of poverty. In Zambia, poverty increased despite the fact that the reported increase in consumption was predicted to lift another 660,000 people out of poverty. In the case of Nigeria, the consumption record pointed to a predicted increase in poverty. However, the actual increase in poverty recorded in the second survey was far higher than that anticipated – some 6.7 million more people were in poverty than anticipated.

Increased inequality explains the apparent discrepancy between anticipated and achieved poverty reduction. In each of the four countries covered in the research, the wealthiest 10 per cent captured a disproportionately large part of the increase in overall consumption generated by growth. Beyond the wealthiest 10 per cent, there were marked differences in patterns of distribution, but in each case the poorest 40 per cent (and most of the deciles in between) saw their share

Figure 12: PROJECTED AND ACTUAL CHANGE IN POVERTY INCIDENCE: SELECTED COUNTRIES (VARIABLE SURVEY PERIOD)



Source: Brookings Institution (n.d.), based on National Household Consumption Survey data.

of income decline. In other words, economic growth is driving an increasingly unequal pattern of wealth distribution and weakening the link between growth and poverty reduction. It is worth emphasizing that the pro-rich shift in distribution was superimposed on already highly unequal patterns of wealth distribution. In the four-year period between the two surveys in Zambia, the richest 10 per cent saw its share of consumption increase from 33 per cent to 43 per cent, while the consumption share of the poorest 10 per cent fell from 2.6 per cent to 1.4 per cent. In Nigeria, growth in consumption by the poorest decile fell by 12 per cent, while consumption by the richest rose by 18 per cent (Figure 13).

Striking as these findings are, the data almost certainly underestimate the degree of inequality. Consumption surveys are relatively accurate in capturing the expenditure of the poor, but the real consumption of the wealthy is heavily understated. That is partly because the very wealthy are less likely to participate in surveys, and partly because much of their consumption occurs through activities that are less likely to be recorded. In the specific cases of some resource-rich countries, the illegality of wealth accumulation accentuates the understatement of consumption (Box 3).

The growth patterns identified in the Brookings research have to be interpreted with caution. The survey periods vary across countries, and the results can be skewed by events such as a drought or economic downturn. However, with all of these caveats, the Brookings research underlines the powerful effects of distribution on poverty reduction and the possibility that economic growth is becoming less equitable – and shows that the rate at which growth reduces poverty may be falling.
Behind the discrepancies in poverty reduction lie specific growth patterns in each country. In Tanzania, economic reform and increased mineral exports have generated a sustained increase in average income – by 70 per cent over the past decade. However, growth has been heavily slanted towards capital-intensive sectors such as mining, telecommunications, financial services and construction, and towards urban centres. With the vast majority of the poor living in rural areas or in urban informal sectors, and lacking the skills to secure employment, the potential for poverty reduction has not been fully realized.

Elements of the Tanzanian story are repeated in other countries. In Zambia, the rural poor have been cut adrift from economic growth – hence the sharp increase in poverty. Marked regional disparities in access to basic services reinforce income inequalities by heightening the vulnerabilities faced by poor households and limiting access to productive infrastructure. Like Tanzania, Ghana has established a track record on reducing poverty, but growth has done little to diminish the highly concentrated poverty in the northern region. Between 1999 and 2006, the number of poor rural people in northern Ghana increased from 2.2 million to 2.6 million, even as the overall number of poor fell by just under 1 million.[10]

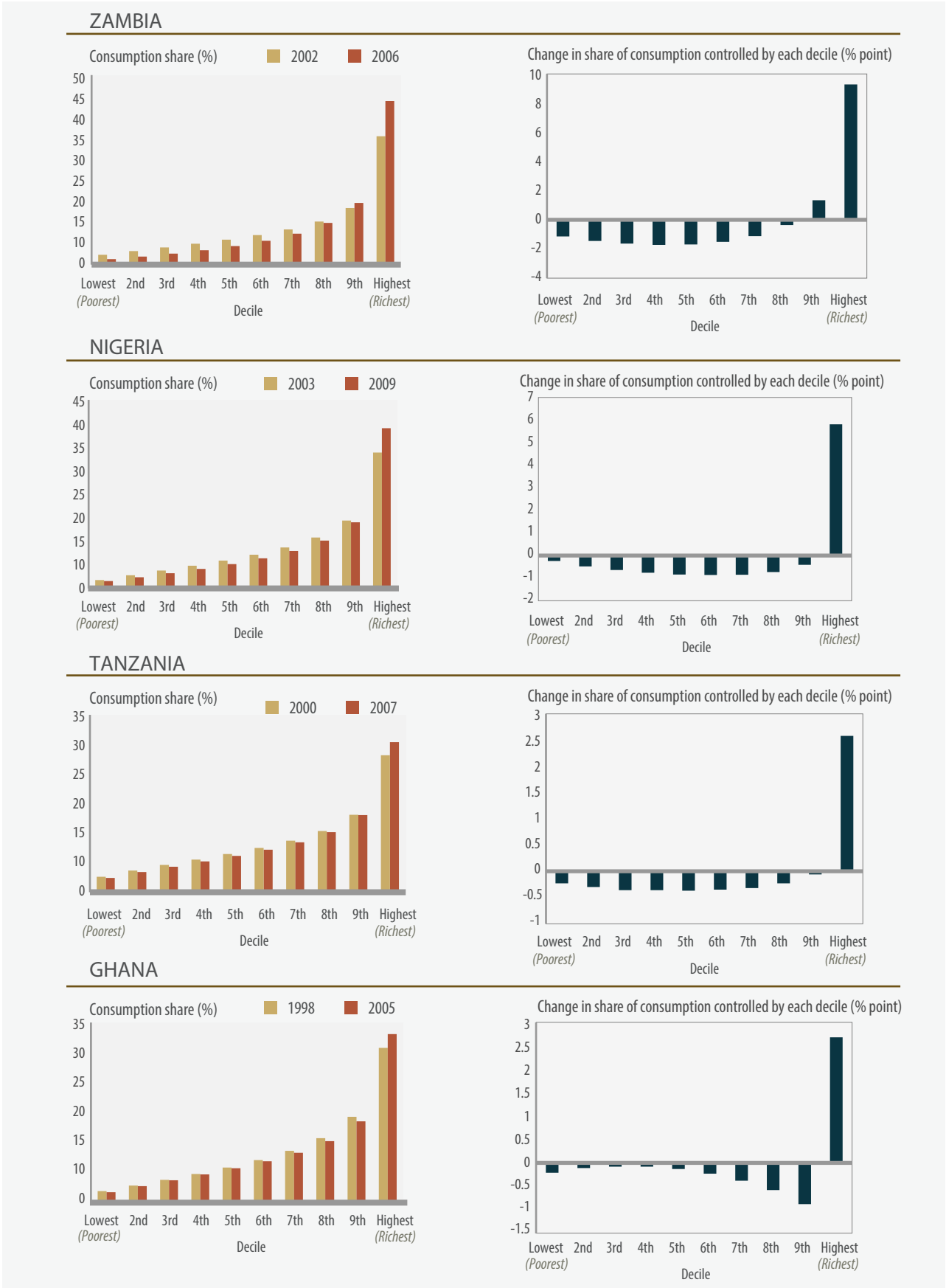
BOX 3: The hidden wealth of political elites

While survey-based evidence provides only a limited insight into the share of national wealth captured by elites, legal proceedings in foreign countries sometimes help to fill the information gap. In 2009, a French judge decided to investigate in response to a lawsuit filed by the non-government organization Transparency International, which accused Presidents Omar Bongo Ondimba of Gabon, Denis Sassou Nguesso of the Republic of Congo and Teodoro Obiang Nguema Mbasogo of Equatorial Guinea of buying luxury homes with state funds. Sassou Nguesso allegedly owned 24 estates and operated 112 bank accounts in France, while Bongo and his relatives allegedly owned about 30 luxurious estates on the French Riviera and in Paris and its suburbs.

Cases brought in the United States against President Teodoro Obiang Nguema Mbasogo's son Teodoro Obiang Mangue, who is a government minister, cast further light on the scale of the assets accumulated. The US Justice Department civil forfeiture action against assets allegedly acquired with money stolen from the people of Equatorial Guinea details items of property including a Gulfstream jet, a variety of cars – including eight Ferraris, seven Rolls-Royces and two Bugattis – a 12-acre estate in Malibu valued at US$38 million, and white gloves previously owned by Michael Jackson.[11]

The wealth accumulated by the Gabonese political elite during the four-decade presidency of Omar Bongo is evidenced in buildings and property prices that would not be out of place in high-income suburbs of France, where the late president also owned 39 luxury properties. One journalist has described Libreville, the capital of Gabon, as "a living museum of kleptocracy" financed by oil wealth.[12] The description would be apt for capital cities in many resource-rich states.

Figure 13: RISING INEQUALITY WITH ECONOMIC GROWTH: CHANGES IN SHARE OF NATIONAL CONSUMPTION BY DECILE (SELECTED COUNTRIES)



Source: Brookings Institution (n.d.), based on National Household Consumption Survey data.

Why has high growth reduced poverty so little in resource-rich countries? The answer varies from country to country, but several themes recur:

- *Inequitable public spending and the neglect of regions and sectors with concentrated poverty.* Governments in resource-rich countries have often failed to use resource revenue to support wider development strategies. This partly explains the weak poverty-reduction effects of resource-led growth. Over the past 10 years, for every percentage point increase in GDP, Malaysia and Vietnam have reduced poverty more than 10 times as fast as Tanzania.
- *Limited revenue collection.* The degree to which governments are able to capture for the public purse a fair share of the export wealth generated by minerals depends on the efficiency of taxation, and on the practices of investors. Many countries – the Democratic Republic of the Congo is a stark example (see Part III) – are losing revenues as a result of weak management of concessions, aggressive tax planning, tax evasion and corrupt practices.
- *Weak linkages between the resource sector and the rest of the economy.* In developed resource economies, the growth of the mining and petroleum sector tends to boost the rest of the economy. In Brazil, one dollar of economic activity in mining can generate three dollars or more in economic activity elsewhere.[13] In Africa, such effects are far weaker. This partly explains the phenomenon of "jobless growth". While oil exports have fuelled real GDP growth of over 5 per cent a year in Nigeria, the official unemployment rate climbed from 15 per cent in 2005 to 25 per cent in 2011, and youth unemployment rates are estimated to be as high as 60 per cent.[14]

3. FROM NATIONAL TO LOCAL
EMPLOYMENT, ENVIRONMENT AND SOCIAL IMPACTS

In terms of its direct effects on people and the environment, the extractive sector is sometimes portrayed as an unmitigated blight – a source of exploitation, environmental damage and human rights abuse. That assessment is misplaced. As we show later in the report, transparency, effective regulation and good corporate governance can unlock the potential for extractive industries to operate as a force for social progress. In this section we look at the problems that can arise when these governance standards are bypassed or ignored.

Avoiding harm to the environment

Extractive industry operations come with unavoidable environmental impacts. Large-scale mining cuts back forest and grassland cover, removes topsoil and introduces heavy machinery into fragile environments. For each carat recovered from the Catoca mine in Angola, the fourth-largest diamond mine in the world, more than a tonne of material is removed. Many of the environmental problems associated with mining stem either from the contamination of water, or from the overuse of surface water and groundwater. The petroleum sector is engaged in extracting oil and natural gas from marine, land and lake environments that are highly susceptible to ecological damage. Such environmental impacts can inflict serious harm on the livelihoods of vulnerable people.

These environmental threats apply on a global scale. One of the world's largest copper mines, a highly water-intensive operation, is being developed in the water-scarce Gobi desert region of Mongolia.[15] In Papua New Guinea, toxic discharges from the Ok Tedi copper and gold mine caused what has been described as the world's worst environmental disaster.[16] There is no shortage of documentation of major environmental impacts in Sub-Saharan Africa:

- Seabed mining for diamonds in the Sperrgebiet region of southwestern Namibia has removed a strip of beach 300 metres wide and 110 kilometres long. This has taken the beach down to the bedrock and increased turbidity and sediment as a result of the disposal of the sand tailings directly into the ocean.[17]
- An environmental assessment of the Democratic Republic of the Congo conducted by the United Nations Environment Programme (UNEP) in 2011 found extremely high concentrations of highly toxic cobalt salts in the Katanga province. Urinary cobalt concentrations in a sampled population were the highest ever recorded for a general population, illustrating the link between environmental damage and human health.[18]
- Zambia, which is heavily reliant on copper and cobalt mining, is facing serious problems with air pollution. One recent study documented sulphur dioxide pollution surrounding copper smelters and mines leading to the die back of trees and failures of local vegetable production.[19]
- Increased demand for minerals is pushing exploration and mining into previously inaccessible areas.[20] More than 80 per cent of Sierra Leone and more than 50 per cent of the Democratic Republic of the Congo are already covered by mining, forestry and oil concessions. In both countries, mining concessions often overlap with areas identified as environmentally protected. In 2012 it was estimated that 22,000 square kilometres of nominally protected land in the Democratic Republic of the Congo was covered by mining concessions.[21]

Mining produces large volumes of waste. How this waste is managed and discarded affects its environmental impact. Tailings, dumps and other mining waste add to environmental problems. Typically the ratio of waste to ore is at least one to one, but may be much higher. In uranium mining, for example, producing 1 tonne of usable uranium oxide requires processing 3,000 tonnes of waste,[22] which often contain elevated levels of radioactivity. One challenge in oil production is the disposal of "produced water", which is extracted from the reservoir along with the crude oil and separated from it before the oil is transported. The volume can be extremely large and is typically heavily contaminated with hydrocarbons. Sudan's Heglig facility, near the disputed border with South Sudan, generates over 10 million cubic metres of produced water annually.[23]

Nowhere in Africa, and probably nowhere in the world, illustrates the ecological risk that comes with poorly regulated extractive operations as powerfully as the Niger Delta. The source of Nigeria's vast oil wealth is also a site of an ecological disaster that has destroyed livelihoods of farmers and fisher folk in the delta's inlets on a huge scale (Box 4).

BOX 4: Ecological disaster in the Niger Delta

Nigeria's oil and gas is extracted from the Niger Delta area, more than half of which is made up of creeks and small islands. The nine states of the Niger Delta are home to 32 million Nigerians (22 per cent of the nation's population), 62 per cent of whom are below 30 years of age, distributed among 40 main ethnic groups using 120 mutually unintelligible languages. Fishing and agriculture have historically been the main occupations in the delta, and continue to account for almost half of employment in the zone.

The inadequately monitored and controlled activities of some oil companies, along with illegal "bunkering" (oil theft) and sabotage, and continuing high levels of gas flaring, have made the Niger Delta an environmental disaster area. According to a June 2012 estimate, up to 546 million gallons of oil have poured into the ecosystems of the delta over 50 years of production.[24]

A 2011 assessment of the Ogoniland section of the delta by UNEP found communities drinking from wells contaminated with benzene, a carcinogen, at levels 900 times greater than World Health Organization guidelines. The report suggested that a lack of coordination among government departments was hindering environmental management and enabling some oil companies to close down the remediation process before contamination was eliminated.[25]

Environmental damage not only affects health and wellbeing but also decimates livelihoods, such as fishing and agriculture, that depend upon natural resources. Oil companies operating in the delta have implemented social and economic welfare programmes, but often these have not been appropriately designed, or have ended up stoking rivalry and violence between communities.

The adverse environmental impacts of mining in Africa are holding back human development. But as the Africa Mining Vision observed: "Negative impacts from mining activities … can be avoided during the mining cycle if prevention and mitigation measures are established." From a business perspective, the reduction or elimination of adverse environmental impacts can actually lower the costs of doing business and create opportunities for fruitful relationships with local communities.

A mixed blessing for communities

In most of Africa's resource-rich countries, extractive industries employ relatively few people. But their operations have wider effects on local communities, which often feel excluded from the benefits and the wealth that extractive industries generate, and harmed by the disruption or ecological impacts of extraction.

Conditions for workers in the mining industry vary across countries. The fatal shooting of 34 workers at the Marikana platinum mine in South Africa in August 2012 has generated a long overdue debate about employment conditions in mines that frequently offer pay barely above the poverty threshold (Box 5). As Jay Naidoo, the founding general secretary of the Conference of South African Trade Unions and a former cabinet minister, wrote: "Marikana is a wake-up call that leaders in unions, politics and business should heed. The platinum mines yield a precious metal while many of their workers live in informal settlements."[26] The tragic episode at Marikana is a reminder to corporate leaders and governments across Africa that social stability and the reduction of extreme inequality should be seen as part of the business agenda.

The extractive sector has emerged as a focal point for deeper social tensions in other African countries. In October 2010, two Chinese mining managers in Zambia shot and killed 13 workers at the Collum mine who were protesting over wages and conditions. The Zambian government brought charges against the managers, but they were eventually dropped.

Extractive industries often operate in complex social environments surrounded by communities living in extreme poverty. The seven villages around North Mara, the site of one of Africa's largest gold mining concessions, are among the poorest in Tanzania. The region is a major contributor to Tanzania's gold sector, which has emerged as the country's most valuable export. The mining site, operated by African Barrick Gold, has become a focal point for labour disputes, raids by armed groups and conflicts between security guards and local residents. Many lives have been lost. Efforts to quell tensions through projects that provide clean water, electricity, new schools and health clinics have done little to change the situation.

BOX 5: South Africa – a mining sector in decline

Like other countries in the region, South Africa has experienced a decade of near jobless growth with little change in poverty levels. Unlike other countries, it has seen its mining sector shrink – an outcome that has reinforced inequality.

While per capita incomes in South Africa have increased by one-quarter since 2000, there has been no discernible impact on poverty.[27] In contrast with the rest of the region, the extractive industries have not been a source of growth over the past decade. Mining's share of GDP has halved since the mid-1990s to 5 per cent of GDP – and output has dropped to its lowest level in 50 years.

Mining remains a central part of the social and economic fabric of a society with high levels of poverty and inequality. The sector provides around half a million jobs directly and many more indirectly, but a job in mining is no longer an automatic route out of poverty. Many mineworkers live in informal settlements starved of even the most basic services, in some cases receiving wages too low to meet basic needs. The shooting of workers at the platinum mine in Marikana brought into the spotlight a simmering tension. Workers producing one of the world's most expensive metals in one of Sub-Saharan Africa's wealthiest nations live in abysmal conditions on wages insufficient to meet the basic needs of their households for shelter, nutrition and health.[28]

While companies in extractive industries typically focus on the business case for investment, their activities interact with local and national political dynamics. The natural gas revenues about to come on stream in East Africa will have far-reaching political implications. Governments in Kenya, Mozambique, Tanzania and Uganda will have to determine how to allocate those revenues across different regions and levels of governments. How much of Kenya's hydrocarbon wealth should be distributed to Turkana, the district where the discoveries have been made, one of the poorest regions in the country? How should Uganda distribute the wealth from its oil finds in Lake Albert?

Such questions at the heart of the conflict in the Niger Delta area of Nigeria, though the issues at stake are far from straightforward. Oil wealth has brought few benefits and considerable costs to the people of the delta states. The region performs poorly compared with the rest of the country on social indicators such as education, health and the quality of the natural environment. Rates of youth unemployment are conservatively estimated at over 40 per cent. And the Niger Delta has suffered from endemic violence.

The drivers of the violence go beyond the sharing of oil wealth. Much of the political debate in Nigeria has focused on "resource control" – the struggle of oil-producing states to legitimize and retain a higher proportion of oil royalties for themselves. Yet the nine Niger Delta states and their local government authorities already receive almost half of the monthly allocation made to the 36 states of the federation – and there is little to show on the ground for these transfers.

Underlying the conflict is a political struggle at all levels of government over the distribution of petroleum wealth, the lifeblood of the weakly diversified economy. That competition has been conducted on terms that have undermined the formal institutions of government, entrenched corruption and rewarded the pursuit of political objectives through violence and intimidation.

Each of the cases highlighted above are unusual only in that have made global media headlines. Across the continent, conflicts surrounding extractive industries include disputes over displacement, the terms of development projects and the distribution of employment opportunities .

Yet extractive industry operations do not necessarily lead to conflict and violence. There are encouraging signs across Africa that governments are more willing to embrace governance reforms that have the potential to reduce social tensions.

The extractive industry itself is also providing leadership. The corporate social responsibility agenda has now extended beyond a project-based approach to consider the wider social and political processes that companies engage in as foreign investors (see Part IV). Over and above adherence to ethical business

standards and respect for human rights, companies have a strong commercial rationale for adopting best practice. As Lonmin, the owner of the Marikana mine, and Barrick Africa have discovered, the reputational damage that accompanies real and perceived human rights violations has consequences for investor confidence and market valuation.

Artisanal mining can play a positive role

Much of the international debate on extractive industries tends to focus on foreign investment. The firms at the centre of these debates tend to be highly capital-intensive and employ few workers. By contrast, artisanal mining is one of Africa's fastest-growing industries and sources of employment.

As mineral prices soar to record levels, more and more people are drawn towards labour-intensive mines operating with little capital, and with little (if any) regulation. The positive role that artisanal mining can play was underscored in the Africa Mining Vision, which calls on governments to "harness the potential of artisanal mining to improve rural livelihoods, to stimulate entrepreneurship in a socially responsible manner, to promote local and integrated national development as well as regional cooperation".[29] Working under difficult and often dangerous conditions, artisanal miners have the potential to make a significant contribution to poverty reduction.[30] Unfortunately, that potential has yet to be realized.

On one estimate, there are around 8 million artisanal miners, who in turn support some 45 million dependants. Many of these miners are involved in the production of gold. In 2000, artisanal mining contributed 9 per cent of Ghana's gold production. By 2010 that figure had risen to 23 per cent, with over a million Ghanaians directly dependent on artisanal mining for their livelihoods.[31] One World Bank study estimates that there are 620,000 artisanal and small-scale miners in Tanzania, mostly working in the gold sector.[32] Artisanal miners are extensively involved in production across the Sahelian "gold belt". Estimates put the number of artisanal gold miners in Mali between 100,000 and 200,000. These miners produce around 4 tonnes of gold a year – 8 per cent of national output – valued at US$240 million in 2011 prices.[33]

Diamond prospecting is another focal point for artisanal mining activity. In the Central African Republic, 400,000 artisanal miners are responsible for 80 per cent of national diamond production, reflecting the absence of the state and of large formal-sector investors. Each miner produces an estimated 1.5 carats of diamonds a year. The estimated export value of that production in 2009 was US$200 per person, though much of that value is captured by traders and exporters rather than by miners.[34] Another 50,000 to 100,000 artisanal diamond producers work in Liberia.

In the Democratic Republic of the Congo, artisanal mining is a major source of livelihoods. It is impossible to estimate the numbers involved, in part because a large share of artisanal production is in conflict-affected areas such as North Kivu and South Kivu.[35] However, in 2008 the World Bank estimated that 16 per cent of the population was directly or indirectly engaged in artisanal mining.[36] According to one review, women make up half of the artisanal workforce in the Democratic Republic of the Congo.[37] Artisanal mining accounts for a significant share of the production of gold, diamonds, coltan and cobalt. One detailed survey of artisanal mining in the cobalt sector estimated that the total number of miners employed reached 90,000 to 108,000 during peak periods. Based on price data, the survey found that artisanal mining in cobalt alone represented between 0.5 per cent and 2.5 per cent of GDP in 2009/2010.

Artisanal mining is an important source of employment and income for a vulnerable workforce, many of whom are migrants or from local rural populations working on a seasonal basis. Most artisanal miners, however, receive incomes too low to provide an escape from poverty, and many work in dangerous conditions and face acute risks of human rights violations.

Part of the weakness of the artisanal sector as an engine for poverty reduction can be traced to economic conditions and the regulatory environment. Most artisanal mines operate with limited capital, depending on labour to move earth, process ore and find metals. Measured in terms of value added, productivity is low and profit margins are very thin.

Why is capital investment so low, given the potentially high returns to investment? In many cases the operating environment is too insecure to provide an incentive for long-term investment. Procedures for acquiring licences are cumbersome and often expensive. Even when operators have formal licences, their mining rights rarely provide for security of tenure, which limits their potential for borrowing. While the formal mining sector benefits from public investment in infrastructure, artisanal mining has limited support and faces a hostile regulatory environment often designed to favour capital-intensive investors.[38]

Other factors serve to depress incomes in the artisanal sector. Miners typically have little power to negotiate with traders or groups controlling the mines they work in. This is especially true in conflict-affected areas, such as eastern Democratic Republic of the Congo.[39] Coercion and the control of mines by armed groups pose a threat to the security of artisanal miners, while creating a highly exploitative environment.

Many artisanal miners are highly vulnerable. Children are extensively employed. Human Rights Watch estimates that one-fifth of artisanal miners working in Mali's gold sector are children. These children, many of whom start working from the age of 6, are involved in tunnelling, digging and carrying heavy loads. Injury is common. Of 33 child workers interviewed by Human Rights Watch, 21 reported regular pains in their limbs, back, head or neck, while others were plagued by coughing and respiratory tract problems.[40]

Child labourers, like other artisanal miners, are often exposed to environmental threats. One of the most extreme and widespread of these threats comes from mercury, which is mixed with the ore in order to extract gold. Mercury poisoning, to which children are particularly vulnerable, results in a range of neurological conditions, including tremors, headaches, memory loss and problems with coordination, vision and concentration. The toxic effects of mercury are not immediately noticeable, but develop over time – and most adult and child artisanal miners are unaware of the risks.

The same is true of wider health threats. In the Zamfara region of northern Nigeria, about 400 children have died of lead poisoning from the lead-laden rock that they pulverize in search of gold, and thousands of other children need urgent medical care, according to reports by Human Rights Watch and Médecins Sans Frontières.[41] In the Democratic Republic of the Congo, artisanal miners are exposed to heavy metals through dust inhalation, food and water contamination, and in some areas to potentially damaging levels of radioactive uranium. All artisanal workers face the threats of flooding, landslides and collapse of poorly constructed tunnels.

Lacking recourse to legal protection, artisanal miners have frequently faced systemic human rights abuse. In the Democratic Republic of the Congo, the militarization of mine governance in eastern regions has been associated with widespread and systematic human rights abuses, including arbitrary killing, rape and the forced recruitment of children.[42] Similar concerns are reported for the Central African Republic.[43]

One of the most shocking recent episodes of human rights violation against artisanal miners occurred in Zimbabwe. One of the world's richest deposits of diamonds is located near the town of Marange in the country's Manicaland province. In 2006, the discovery of diamonds drew thousands of artisanal miners to Marange. Two years later, the miners were evicted out in a security operation called "Hakudzokwi" – meaning "you will not return" in Shona – involving helicopter gunships and the army. Several artisanal miners (the exact number is unknown) were killed in a brutal campaign. The 60,000-hectare Marange site was declared a commercial monopoly of the Zimbabwean Mining Development Corporation (ZMDC), which has sold concessions under highly secretive conditions to domestic and foreign mining interests. Since then there have been further waves of eviction, with smallholder farmers moved to make way for concession holders. There are well-documented reports of mining companies polluting the Save River with toxins that pose a threat to public health.[44] ZDMC has been subject to sanctions by the European Union because of its failure to account for alleged human rights violations.

Women and young girls often face elevated threats in the artisanal mining sector. The presence of a transient, mostly male workforce in mining areas is often accompanied by high levels of alcohol abuse and violence. Many young girls are forced into prostitution by a combination of poverty and powerlessness. High levels of HIV/AIDS and early pregnancy are widespread.[45]

None of this harm is automatic; under the right conditions, artisanal mining can have a variety of benefits. Artisanal mining is labour-intensive, offering more direct and indirect job opportunities than large-scale operations. The revenues generated can increase local purchasing power, creating a source of income for some of Africa's poorest people. Artisanal mining could become a dynamic source of growth for the extractive sector and the national economy. What is missing is a regulatory environment that attracts investment, protects human rights and addresses environmental and public health risks. As we show in Part IV, these are areas in which reformed mining legislation, capacity building, international cooperation, and partnerships between the small-scale mining sector and large-scale commercial mines could make a difference.

PART II

THE COMMODITY "SUPER-CYCLE" AS AN ENGINE OF GROWTH

For more than a decade, African economies have been riding the crest of a global commodity wave. Demand for energy resources and metals has been outstripping supply, pushing up prices to near record levels in some cases. There is more to Africa's growth performance than booming extractive industries and investment by foreign energy and mining companies – but commodity prices have contributed considerably to the growth surge.

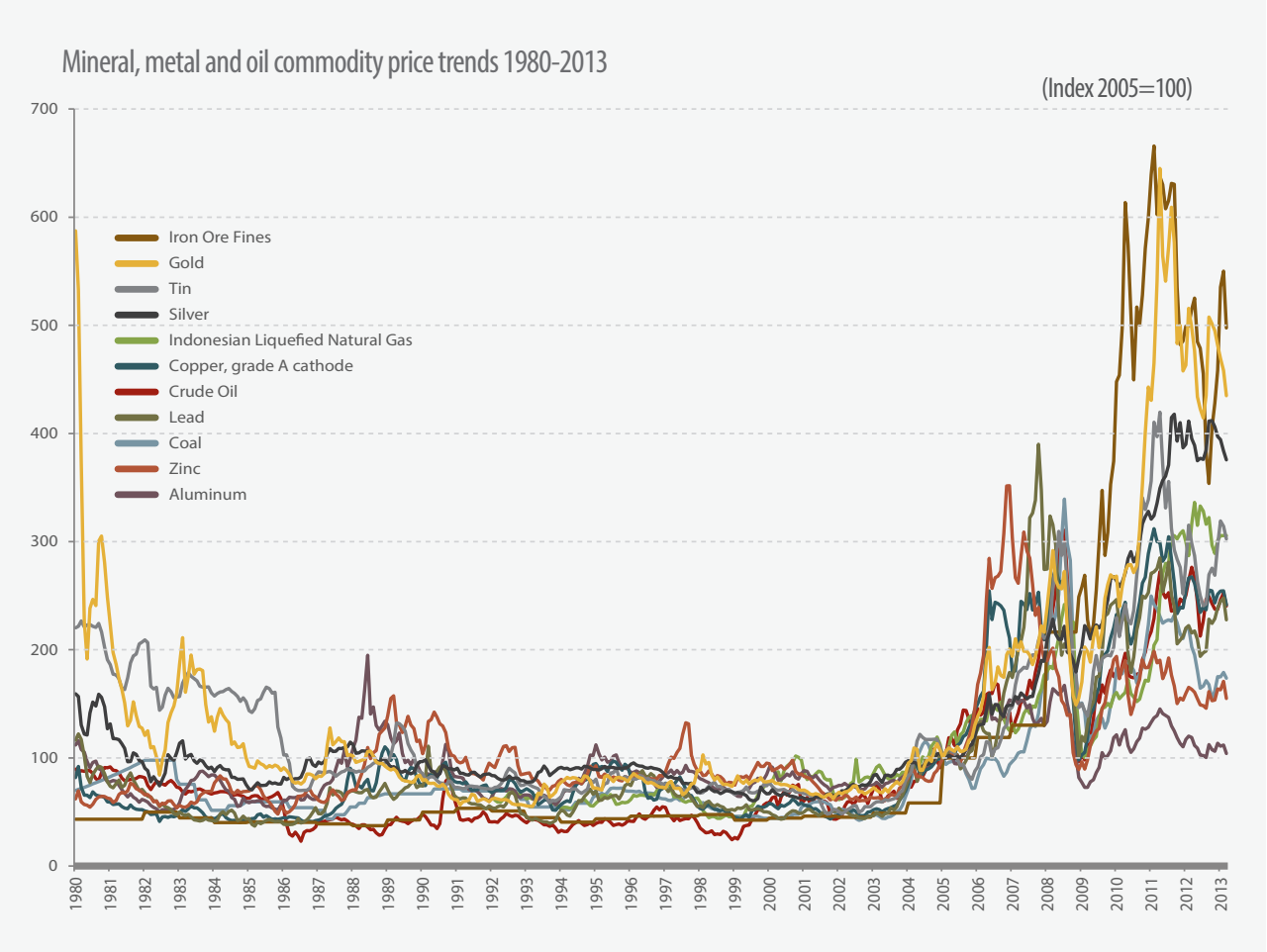
Commodity booms do not have a positive record in post-independence Africa. Short-term booms have often been followed by a protracted decline in prices. Countries seeking to finance imports of machinery and manufactured goods from their mineral exports have faced a long-term decline in terms of trade, which has paved the way towards unsustainable debt. Will it be different this time around?

It is unlikely that the rapid increase in prices recorded over the past decade will continue across the next decade. By the same token a severe downward spiral does not appear probable. The shift in the locus of economic power towards fast-growing emerging markets that use resources intensively is likely to sustain high levels of demand. Even though supply of some commodities is unpredictable, markets are set to remain tight over the coming years, with real prices remaining well above the average level of the 1990s. (Figure 14)

Africa is part of a global economy in which the premium on raw materials is rising in the face of strong growth, demographic pressures, urbanization and, above all, the emergence of China as a global economic power. Deeper integration comes with the risks of interdependence. African economies will be affected by market events over which they have little control. By the same token, integration on the right terms into global markets for energy commodities and metals offers tremendous opportunities for sustained growth and human development. The central message of this part of the report is that governments need to plan for uncertainty while seizing the opportunity.

We start this part of the report by looking at the contribution of resource exports to economic growth – and at the commodity super-cycle. Section 2 provides an overview of Africa's resource wealth and potential revenue flows, highlighting the potentially transformative role of new discoveries. Section 3 looks the role of foreign investment in Africa's extractive industries and beyond.

Figure 14: THE RISING TIDE OF COMMODITY MARKETS



Source: IMF Commodity Prices; World Bank Global Economic Monitor.

1. RIDING THE CREST OF THE NATURAL RESOURCE WAVE

Africa's economic record over the past decade is an extraordinary achievement. Most countries have registered sustained growth at a pace which, viewed from the vantage point of the late 1990s, would have seemed well out of reach. African economies have recovered strongly from the 2008 global economic downturn, from surges in food prices and, in some countries, from drought. Growth has been resilient as well as robust. All of this represents a sharp break with the past, when low-income countries in Africa were lagging far behind other developing regions.

Many factors have combined to strengthen Africa's growth performance. Improved macroeconomic policies, increased investment in infrastructure, institutional development, the deepening of financial systems and rising productivity have all played a part. The role of resource exports in the growth story can be exaggerated. As commodity markets weakened in 2011–2012, domestic demand was the main source of growth.[46] But exports of energy commodities and minerals have played a critical supportive role in many countries. On one estimate, extractive industries have accounted for around one-third of regional GDP growth over the past decade – more than transport, telecommunications and manufacturing combined.[47]

Behind headline figures such as this are numerous variations. Oil makes up a large share of GDP in Africa's major oil exporters, but mining typically contributes only 2 per cent to 4 per cent of GDP. While oil accounts for a large share of the overall GDP growth for Angola, Equatorial Guinea and, to a lesser degree, Nigeria, when the resources are minerals, as in Cameroon and Tanzania, their contribution to overall GDP growth is modest.[48] Mining's contribution to GDP growth is limited partly because many countries lack the industrial base to supply technology, and links between the mining sector and the local economy are limited.[49]

Resource exports also influence growth through wider channels. The foreign exchange provided by exports of minerals finances the import of capital goods and technologies needed to raise productivity. Similarly, government revenues from mineral exports finance the social and economic infrastructure needed to support growth. Coupled with more prudent economic management and greater fiscal stability, mineral wealth has transformed the economic environment in many countries.

The commodity super-cycle

Commodity prices have increased dramatically since 2000. Interrupted briefly by the global financial crisis and a modest decline in 2011, the upswing in international markets has now lasted 13 years. There is little evidence to suggest that a downturn is imminent. Some commentators maintain that the world is still in the middle phase of the third commodity "super-cycle". These are episodes in which the upward price trend lasts much longer than usual (10–35 years) and covers a broad range of commodities.[50] The first two super-cycles were driven by American industrialization in the late 19th century and post-war reconstruction in Europe and Japan. The primary driver of the post-2000 upswing is the growth of emerging markets, especially China.

Prices have risen across a wide range of natural exports. By the end of 2011, average prices for energy and base metals were three times as high as they had been a decade earlier, and were approaching or surpassing record levels over the past 40 years.[51] In some cases – oil, iron ore and gold – they were near the highest levels seen in the past 110 years.[52] Inflation-adjusted oil prices peaked at the highest level since 1864.[53] Reflecting the underlying market conditions, mining investments increased more than fourfold between 2000 and 2010, reaching almost US$80 billion annually, and the value of world metals production rose at twice the rate of global GDP – a marked contrast with the stagnation in value of the previous decade.[54] The upshot is that Africa has been integrating into one of the most dynamic sectors of world trade.

Economic growth in China has been the game-changer in global commodity markets. China has one of the world's largest mining industries, but its rapid and resource-intensive growth, coupled with the poor quality of its ores, means that it increasingly depends on imports. Since the end of the 1990s, consumption of refined metals in China has climbed by 15 per cent a year on average, driven by demand for materials in construction, infrastructure and manufacturing. The country's share of global demand for copper, aluminium and zinc has more than doubled; for iron ore, nickel and lead it has tripled. China's share of global base metal consumption increased from 12 per cent in 2000 to 42 per cent in 2011.[55] Metal intensity (measured as resource use per US$1,000 of real GDP) is nine times higher in China than the global average.

Chinese demand for resources has been transmitted to Africa both directly and indirectly. Companies from China have established operations in Africa, using foreign investment to source minerals and petroleum. And China's resource-intensive growth has helped to spur the investment drive that is integrating Africa into international markets. To take one example, it is China's demand for iron ore that has fuelled the scramble among global mining conglomerates to secure a stake in the rich untapped deposits of Guinea, Liberia and Sierra Leone.

While China's growth may moderate, most projections point to sustained expansion, with resource intensity unlikely to peak until around 2020. The Chinese steel industry is set to increase output from 700 million tonnes (Mt) to 900 Mt by 2030. From a far lower base, India's steel industry is also expanding – and demand for metals is rising across a range of emerging markets. Projections by the Organization for Economic Cooperation and Development (OECD) suggest that overall demand for metals will grow at 5 per cent a year through to 2030.

Scenarios for the energy sector follow the wider pattern. The International Energy Agency (IEA) baseline scenario predicts that global demand for energy will increase by over one-third to 2035, with emerging markets accounting for almost the entire increase. Global demand for coal is set to increase by 70 per cent to 80 per cent, reflecting growing demand from China and India. Meanwhile, high prices for oil and the development of new technologies are pushing the world towards what the IEA describes as a "golden age of gas." The share of gas in the global energy mix is set to increase from 21 per cent today to 25 per cent by 2035, according to the IEA.[56] If these scenarios are correct, African exporters of coal, oil and natural gas can expect buoyant markets.

While demand is strong and rising, supply faces some marked constraints. Mature mining economies such as Chile and South Africa are struggling to maintain current output. Chile's copper production has not increased since 2004. Traditional suppliers' production costs are increasing as ore grades decline for base metals such as iron, copper and nickel, and for precious metals like platinum and gold. Some countries may seek to limit exports as they develop their own industries. In 2012, Indonesia announced the introduction of quotas and taxes on a range of metal exports, including nickel, tin and copper.[57]

Whether or not we are in the midst of a commodity super-cycle, market projections point strongly towards the continuation of high real prices. While the picture will vary across commodities and price levels may moderate from their peaks, resource constraints show few signs of loosening. Scenarios by the World Bank anticipate real prices for most metals and energy resources remaining well above those of the 1990s through to 2025. Compared with prices in 2005, which were already well above average levels for the 1990s, projected prices for 2025 are around 20 per cent higher for metals and minerals, 25 per cent higher for energy commodities, and over 90 per cent higher for gold and other precious metals. (Figure 15).

None of this is cause for African governments to adopt an extravagantly bullish mind-set. Commodity market scenarios are notoriously weak guides to real outcomes even in the near-term. Extending the time horizon for price forecasts multiplies the margins of uncertainty. The sharp but short-lived declines in natural resource prices in 2009 and again in the first half of 2012 – by 20 per cent for raw materials – provided a timely reminder that commodity markets are inherently volatile and prone to the effects of recession in the global economy.[58] It is critical that planners in Africa monitor the risks in the markets to which their economies are connected. Any slowdown in the Chinese economy would drive down prices for metals and energy commodities. Protracted recession in the eurozone and slow recovery in the United States would have similar effects. Supply scenarios can change very quickly. The more tightly Africa is integrated into natural resource markets, the more carefully governments have to manage the risks that come with interdependence.

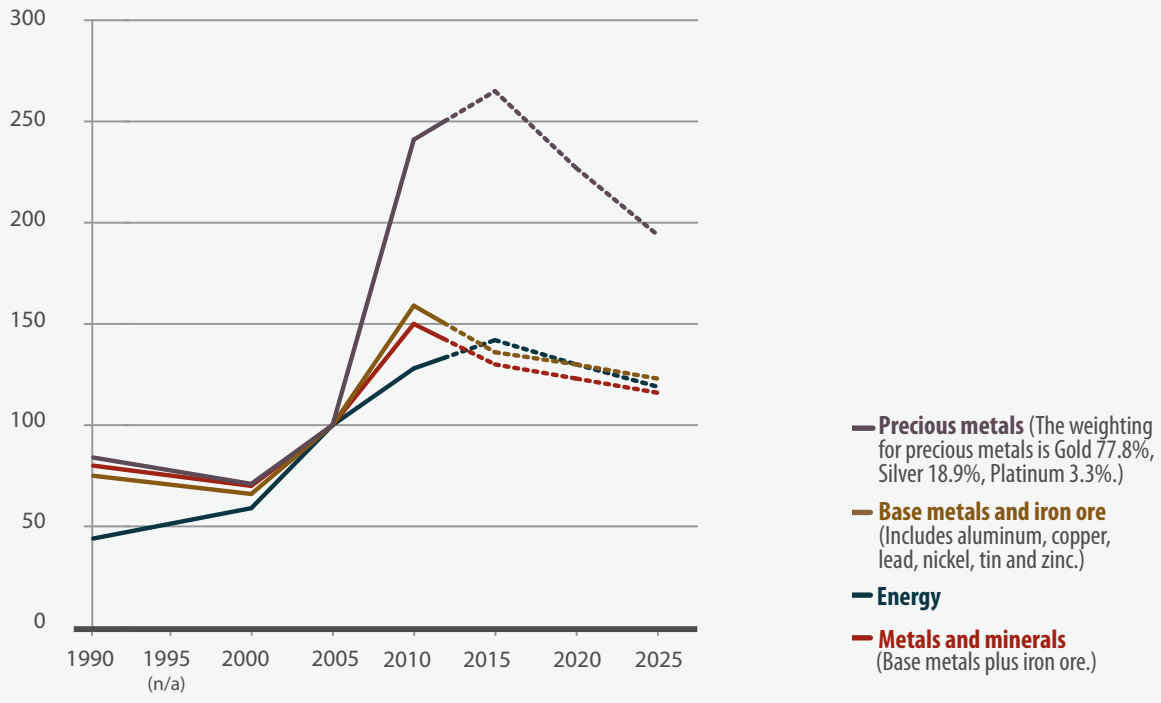
It is also important that governments recognize where Africa stands in the global market. While mineral exports figure prominently in the export earnings and government revenues of many countries in the region, the same countries are marginal players in world exports – and in the investment operations of the major multinational companies that dominate production and trade. Global metals and metallic ore exports are dominated by Australia, Brazil, Canada, Chile, Indonesia and Peru. Energy exports are dominated by the Middle East and (for natural gas) Russia. Increased supply in the established mineral exporters could drive down prices and restrict Africa's market share. New competitors – such as Mongolia in copper – are also coming on stream. It is true that Chinese companies are investing in Africa with a view to securing strategic supplies. But these operations pale into insignificance against the investments that Chinese energy companies are making in Brazilian deep-water exploration, Canadian oil sands and Russian natural gas.[59] African governments face strong competition for high-quality investment.

The euphoria surrounding hydrocarbon discoveries and export potential in East Africa and the development of petroleum reserves in West Africa may prove justified – but a healthy dose of cautious realism is required. Two years ago, the conventional wisdom was that prices for oil and natural gas were locked into an upward trajectory by the need to fuel emerging markets, demography and supply constraints. In the event, high energy prices triggered what has been called the "unconventional energy revolution". Natural gas and oil production in the United States has increased with the commercialization of horizontal drilling and hydraulic fracturing ("fracking"). Natural gas prices have fallen dramatically in the United States. If US energy reforms promote exports there will be global market effects. At the same time, the development of the Keystone pipeline in the United States, which could increase energy self-reliance, as well as natural gas discoveries in Mexico, Malaysia and parts of the Mediterranean, could contribute to a fall in the price of both natural gas and oil. Environmental policies will also play a role. Taxes on carbon would shift demand away from coal and oil and towards gas and renewable energy sources.

The volatility and uncertainty surrounding commodity markets is not a reason to play down the potential for natural resource development. But it is a reason for governments to strengthen public finance management systems, notably by adopting strategies for managing price fluctuations and the variable revenue flows that come with unpredictable commodity cycles (see Part IV).

The importance of natural resource governance can hardly be overstated. If Africa is to develop its mineral wealth, the region needs to attract high-quality foreign investment. "Quality", in this context, refers to investment that is geared towards the sustainable development of resource wealth over the long term, building linkages with local markets, and meeting high levels of accountability and disclosure. Political instability and economic uncertainty are barriers to such investment. They encourage and attract companies geared towards speculative exploration, short-term profit maximization and poor standards of governance. Deficits in infrastructure and skills also weaken the potential for building linkages and developing a dynamic resource-based growth strategy. If Africa is to develop mining and minerals industries that are globally competitive, it needs to strengthen its economic infrastructure. The current infrastructure financing deficit is US$80 billion per year – about twice current spending levels.[60] Critically, governments must also invest in the education systems and training opportunities needed to provide the skills that can raise productivity.

Figure 15: GLOBAL COMMODITY PRICES ARE SET TO REMAIN HIGH: WEIGHTED INDICES FOR SELECTED COMMODITIES (2005=100)



Source: World Bank Commodity Price Forecast Update. January 2013

2. BOOMING RESOURCE WEALTH PROMISES STRONG REVENUE FLOWS

The importance of natural resources to Africa's economy is set to increase. Africa's natural resource wealth is largely unexplored, so its reserves are likely to be heavily underestimated. On a per square kilometre basis, Africa spends less than one-tenth of the amount that major mineral producers such as Australia and Canada spend on exploration.[61] With investment in exploration increasing, new technologies lowering the cost of discovery, and demand rising, the level of known reserves has been rising. Major discoveries and the development of existing facilities are changing the resource map of Africa and the region's place in global markets, with potentially far-reaching consequences for national budgets (Figure 16).

Gas and oil discoveries could transform the energy sector

In 2012, Sub-Saharan Africa's major oil producers accounted for around 5 per cent of known global reserves, 7 per cent of production and a slightly higher share of exports. Production is dominated by the "oil superpowers", Nigeria and Angola, but other countries are emerging as major suppliers.

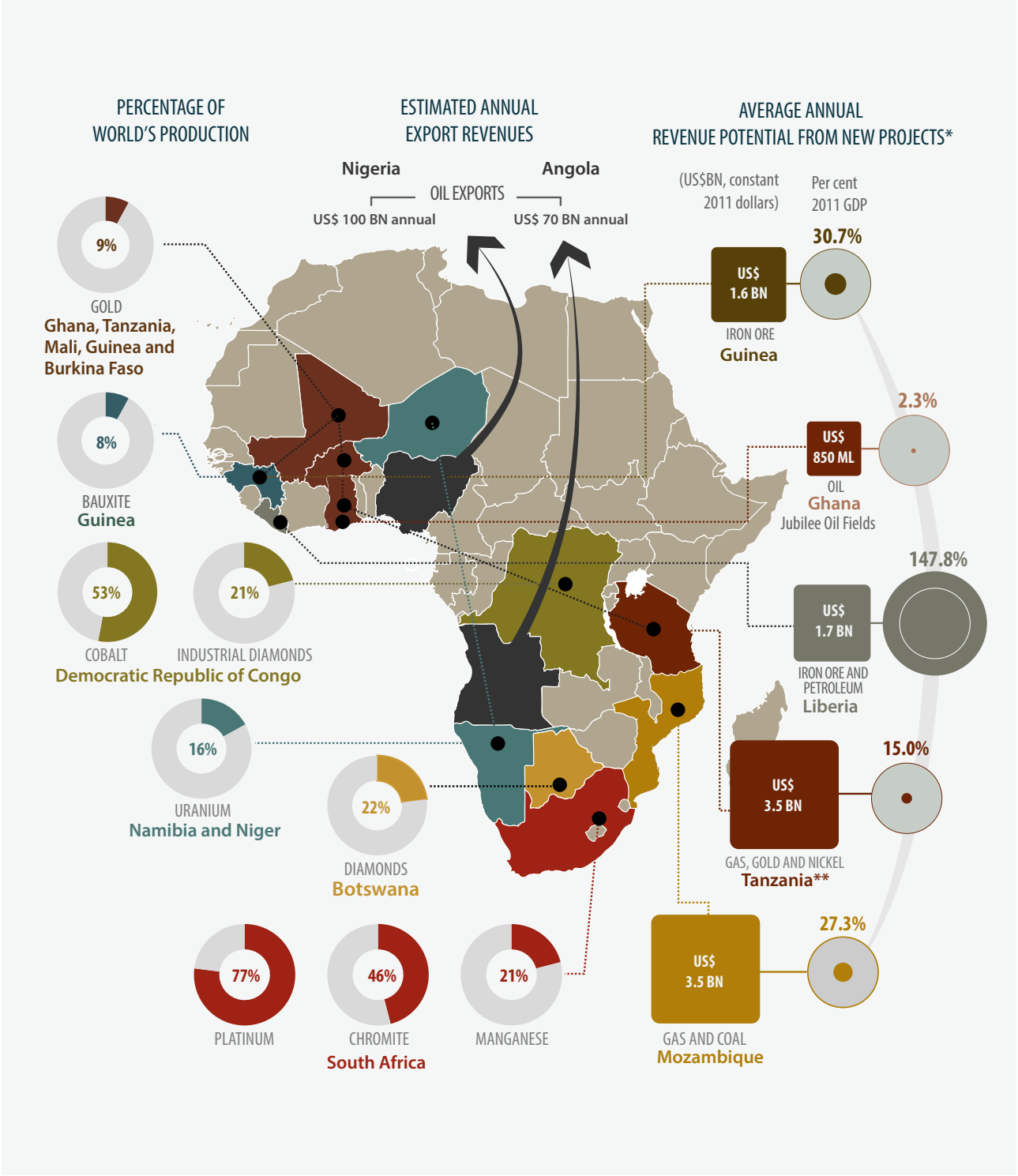
In the energy sector, rising world prices have spurred a new wave of exploration. Drilling has increased threefold since 2000.[62] The ratio of proven oil reserves to production has increased from 30 per cent to over 40 per cent since 2000. Among the more significant finds, Ghana's Jubilee field will add another 120,000 barrels of oil a day to Africa's production, while the Lake Albert Rift Basin, which straddles Uganda and the Democratic Republic of the Congo, has known reserves in excess of 1 billion barrels and could add a further 150,000 barrels of day in production by 2015. A major oil strike in the Turkana region of northern Kenya in 2012 prompted a new wave of drilling and the prospect of new finds across northern Kenya and Ethiopia.

Traditional oil suppliers have also increased reserves. Angola's known reserves doubled between 2001 and 2010, while Nigeria's increased by 20 per cent. Exploration is prompting upward revisions of production estimates across several countries. In Equatorial Guinea, production in the largest oil field has been in decline since 2004, but new discoveries by US-based Noble Energy and Marathon Oil led to two major new fields coming on stream in 2011.[63] In Chad, a Taiwanese company, the Overseas Petroleum and Investment Corporation, discovered a major new reservoir in 2011, estimated at 100 million barrels.[64]

Discoveries of natural gas off the coasts of Mozambique and Tanzania could transform Africa's place in the global energy economy. The US Geological Survey estimates that the coastal areas of the Indian Ocean could hold more than 250 trillion cubic feet (Tcf) of gas in addition to 14.5 billion barrels of oil.[65] To put this figure in context, it exceeds the known reserves of the United Arab Emirates and Venezuela. Proven reserves in the United States are only slightly larger. Moreover, East Africa is far less explored than other regions. The success rate of companies exploring for gas offshore is phenomenal: of the 27 wells drilled in the last two years off the coasts of Tanzania and Mozambique, 24 have yielded discoveries, according to a report by Control Risks.[66] In 2012, operators in Mozambique announced as much as 100 Tcf of natural gas discoveries – double the level of Libya's reserves – positioning the country as a major player in the sector over the coming decades. In addition, Mozambique is primed to become a major exporter of coal to India and China. Production could reach 100 million tonnes over the next decade, establishing the country as a major regional exporter alongside South Africa.

West Africa is also emerging as a major natural gas producer. With energy production traditionally dominated by oil, most gas output has been flared – a source of global ecological damage and regional economic waste. This is starting to change, with gas capture emerging as a strategic focus in Angola and Nigeria, as well as Cameroon, Equatorial Guinea and Gabon. The World Bank's Global Gas Flaring Reduction initiative and other gas monetization programmes have created incentives for gas capture and commercial sale.

Figure 16: MAPPING AFRICA'S NATURAL RESOURCE WEALTH: SELECTED COUNTRIES AND COMMODITIES



Sources:
Raw Materials Data, IntierraRMG, 2013
World Bank, Africa Pulse October 2012, Volume 6
IMF, Fiscal Regimes for Extractive Industries: Design and Implementation, 2012
U.S. Geological Survey, Mineral commodity summaries 2013
*Estimates are intended to show order of magnitude. Revenue projections are highly sensitive to assumptions about prices, phasing of production, and underlying production and capital costs
**Data represents annual revenue at peak production

Mineral reserves hold significant potential

Africa occupies a significant place in global markets for several minerals. According to one estimate, the continent hosts 30 per cent of the world's mineral reserves, and an even higher proportion of deposits of gold, platinum, diamonds and manganese.[67] South Africa is one of the world's leading mining economies, producing three-quarters of the world's platinum, 40 per cent of chromium and over 15 per cent of gold and manganese. Other countries occupy a significant market share in one or more mineral sectors:

- Guinea accounts for 8 per cent of world bauxite production.
- The Democratic Republic of the Congo accounted in 2010 for half of production the world's cobalt, one quarter of industrial diamonds, 14 per cent of tantalum, and 3 per cent of copper and tin.
- Zambia is estimated to rank sixth in the world in the production of copper ore and fifth in the production of cobalt ore.
- Botswana accounts for around 20 per cent of diamond exports.
- Africa's gold producers – mainly Burkina Faso, Ghana, Guinea, Mali and Tanzania – together account for 9 per cent of gold production, double the share in 2000.
- Sierra Leone is the 10th-ranked producer of diamonds by volume and the third-ranked producer of rutile, a heavy mineral used in paints, ceramics and plastics.
- Namibia and Niger are respectively the fourth- and fifth-ranked producers of uranium, together accounting for about 17 per cent of world output.

Developments in the minerals sector could rival those in natural gas. Measured in terms of global market value, iron ore is second only to oil as a traded commodity. With costs rising in traditional exporting countries such as Australia and Brazil, the iron ore belt in West Africa has witnessed a surge in foreign investment and exploration. Guinea has some of the world's highest-grade reserves. In Sierra Leone, known reserves in the vast Tonkolili mine, which started production in 2011, are estimated at 10.5 billion tonnes. Liberia is attracting large flows of foreign investment for iron ore mining, with ArcelorMittal, the global steel conglomerate, having started shipping ore from its US$2 billion Yekepa concession in Liberia, with a reported potential to increase exports from 4 million tonnes to 15 million tonnes a year by 2015. BHP Billiton, the world's largest mining company, also holds four licences for iron ore exploration in Liberia.[68]

Resources are poised to provide large revenue flows

With the commodity super-cycle set to continue, Africa's vast natural resources could generate large streams of revenue. Using data on reserves, current production and exploration activity to estimate future revenue flows is inherently difficult. The level and composition of these flows will depend on patterns of investment, world prices and taxation policies. It is clear, however, that the potential revenue flows will be very large in relation to current budgets and GDP.

Research on the energy sector illustrates the potential for revenue. Analysis for East Africa has estimated exploration and development costs at US$6–14 per barrel.[69] At a world price of US$80 a barrel, well below current and projected levels, and assuming that governments secure half of the excess price over cost, the revenue stream from 1 million barrels of oil would represent 1 per cent of Sub-Saharan Africa's GDP. So the 15 million barrel increase in proven oil reserves in Africa between 2010 and 2011 could increase government revenues by US$180 billion (at 2011 prices), or 15 per cent of regional GDP.[70]

The projected resource revenue flows will dramatically change the public financing environment (Box 6). Governments will have opportunities to put in place the investments needed to make a breakthrough in human development, and to create a social and economic infrastructure capable of supporting inclusive growth. They will also face difficult judgements, such as determining the potential of the economy and institutions to absorb and manage the new resources, and deciding how much to invest today and how much to save in order to smooth revenues over time. Further risks are associated with "Dutch disease", which occurs when resource exports push up the exchange rate and inflation, reducing the competitiveness of other exports and increasing the competition that domestic producers face from imports. We look at these problems and potential solutions in Part IV.

BOX 6: From resources to revenue – a potential windfall

Many resource-rich countries in Africa stand to reap a public revenue windfall over the next decade. The degree to which these revenue streams reduce poverty, improve human development and foster inclusive growth will be determined by policy choices in individual countries.

- **Ghana:** The first phase of production in the Jubilee field is expected to generate revenue flows of US$850 million – equivalent to 2.3 per cent of GDP.
- **Guinea and Liberia:** Simandou in Guinea and iron ore and petroleum projects in Liberia could generate average annual revenues of US$1.6 billion in each country, respectively representing 31 per cent and 147 per cent of 2011 GDP.
- **Mozambique:** The World Bank estimates that revenues from natural gas could be as high as US$10 billion annually when market demand is sufficient to allow development of all discovered reserves. Initial flows from gas and coal are estimated by the IMF at around US$3.5 billion annually, or 18 per cent of GDP. These figures represent an increase of 100 per cent to 300 per cent over the current budget.
- **Nigeria and Angola:** Nigeria has sufficient reserves to maintain production at current levels for 41 years, generating export revenues of US$90–100 billion; Angola has sufficient reserves for 21 years of production at current levels, implying annual export revenues of US$60–70 billion.
- **Sierra Leone:** In 2012, exports of iron ore from the Tonkolili deposits generated US$1.18 billion – three times average exports over the past three years. Per capita GDP is projected to increase from US$366 in 2011 to US$656 in 2013, largely as a result of exports of iron ore and diamonds.
- **Tanzania:** IMF estimates place the increased flow of revenues from gas, gold and nickel at US$3.5 billion annually, or 15 per cent of GDP.
- **Uganda:** Production from the Lake Albert field could generate US$2 billion annually in government revenues by 2020.

Sources: IMF 2012; World Bank 2012

Unless it adds value to exports, Africa will miss out

The rapid growth of natural resource exports and the prospect of a fiscal windfall have deflected attention from Africa's underlying weaknesses. Africa remains an exporter of unprocessed or lightly processed commodities. To unlock the full economic potential of its natural resources, Africa urgently needs to climb the value-added chain of mineral processing and manufacturing.

African exporters typically capture only a small share of the final value of mineral exports. The Democratic Republic of the Congo is the world's largest exporter of cobalt, mostly in the form of unprocessed ore – but value is added elsewhere, by the smelting industry in China and other importing countries. Guinea's exports of bauxite are processed into aluminium overseas. Angola and Nigeria export (low value-added) crude oil and import (high value-added) petroleum and petroleum-based plastics and fertilizers. A study by the Southern African Development Community of the value chain for a range of minerals in Africa found that the value of processed products was typically 400 times greater than the equivalent unit value (by weight) of the raw material.[71] Without processing industries that add value, mining creates fewer jobs, produces less revenue and contributes less to GDP growth. In addition, processed products are less vulnerable than raw materials to extreme price fluctuations on world markets.

The low level of value added in African mining is symptomatic of the low level of manufacturing activity in the region's economies. Measured in terms of contribution to regional GDP, the share of manufacturing has fallen from 15 per cent to 10 per cent since 1990. That trend has in turn affected Africa's place in global markets. Impressive as the region's export growth figures may be, Africa still accounts for just 1 per cent of global value-added in manufacturing – the same share as in 2000.[72] Ironically, the rapid growth in exports of raw materials to China has decreased the already limited share of

manufactured goods in Africa's exports. So while natural resource exports have boosted economic growth, they have also deepened Africa's integration into low value-added areas of international trade – which could ultimately reinforce the region's marginal role in emerging patterns of globalization.

Policymakers in Africa have called for an accelerated structural transformation through the development of natural resource processing and value-added manufacturing. For this to happen, however, active strategies are needed that attract investment in skills development, increase technology transfer and strengthen links between mining and local economies. As the chief economist of the African Development Bank (AfDB) has argued, it will also require the development of an active industrial policy.[73]

3. FOREIGN INVESTMENT: A SOURCE OF GROWTH AND AN INSTITUTIONAL CHALLENGE

Over the past decade, the pattern of external financing in Africa has undergone a quiet transformation. Private capital flows have increased to the point where they rival development assistance – another outcome that would have appeared implausible at the end of the 1990s. Foreign direct investment is the largest source of private capital. While capital flows to developing regions as a whole fell in 2012, in Sub-Saharan Africa they increased to an estimated US$54 billion.[74] The resilience of foreign direct investment, in particular, can be traced in part to the continued dominance of extractive industries. Moreover, returns on investment in Africa are high by the standards of other developing regions: 20 per cent compared with 12 per cent to 15 per cent in Asia and Latin America.[75]

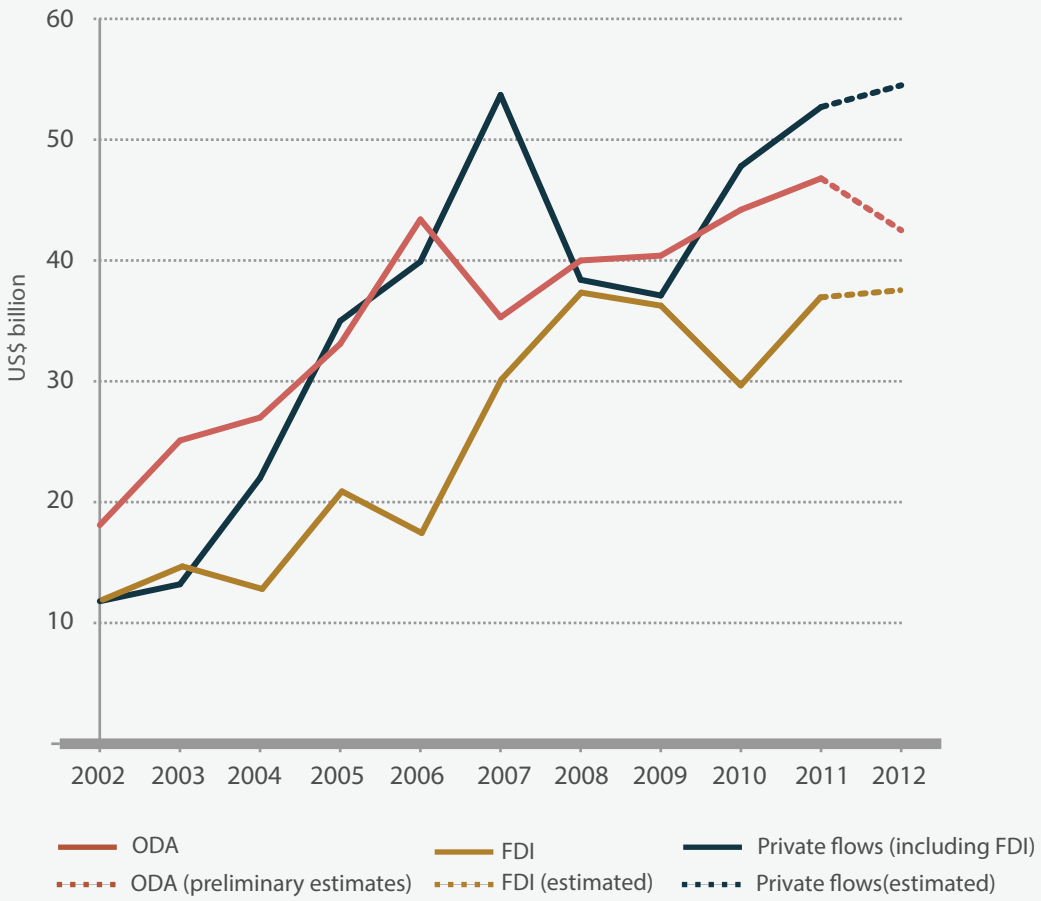
High commodity prices have also attracted other sources of private capital. Some US$7 billion was mobilized in 2012 through bond flows, with the bulk of the increase coming from the sale of sovereign government bonds in Angola and Zambia. Ghana has also entered bond markets. In 2012, overall private capital flows are estimated to exceed aid transfers by 8 per cent.[76] Foreign direct investment was similar to aid flows before the 2008 global recession before falling back slightly (Figure 17). That position has now been reversed, with the latest data pointing to a rise in FDI and a decline in aid. While the increase in private capital flows has reduced financial dependence on aid, development assistance remains a critical source of finance for a significant group of countries (Box 7). Moreover, well-designed development assistance can support national efforts to use resource wealth to accelerate poverty reduction, notably by building institutional capacity.

BOX 7: Dependence on aid is declining – but with marked variations

Sub-Saharan Africa depends far less on aid today than it did a decade ago. This trend is set to continue, with extractive industries and other sectors drawing in more foreign investment, while aid is projected to reach a plateau. But in 2010, aid was still the largest external resource for 20 out of 28 low-income countries, accounting for 52 per cent of Africa's population – and many countries will continue to rely heavily on aid for some time. There are four distinctive patterns:

- **Limited and declining aid dependence from already low levels, with high natural resource revenues:** There are 10 countries in this group, including the major oil exporters. Angola has reduced dependence on aid from around 4 per cent to less than 1 per cent – around the same level as Nigeria.
- **Declining aid dependence from higher levels with rising natural resource revenues.** This group of countries perhaps best exemplifies the "new Africa". Most started the decade extremely dependent on aid. In most cases the ratio of official development assistance (ODA) to gross national income (GNI) had fallen sharply by 2011: Zambia from over 25 per cent to 6 per cent; Ghana from 12 per cent to under 5 per cent.

Figure 17: PRIVATE FLOWS AND AID IN SUB-SAHARAN AFRICA



Source: OECD and UNECA (2013), Mutual Review of Development Effectiveness and the OECD-DAC International Development Statistics database.

- **Persistent dependence on development assistance.** Eleven countries continue to depend on aid for at least 10 per cent of GNI. The group includes three countries – Mali, Niger and Tanzania – identified by the IMF as resource-intensive. Strikingly, the aid dependency ratios for most of this group have shown little tendency to fall over the period. Some of these economies have shown relatively strong growth, however, and should be in a position to increase their domestic revenues and their attractiveness to foreign investors markedly over the coming years, even without major resource discoveries (such as gas in Tanzania).
- **Conflict-affected and post-conflict states with high or rising aid dependence:** Conflict remains a potent barrier to effective mineral resource management across Africa. The Democratic Republic of the Congo depends on aid for around one-third of GDP, despite its vast mineral wealth. The post-electoral violence in Côte d'Ivoire reversed its decline in aid dependence. The experience of several post-conflict countries highlights the fact that the minerals sector does not recover overnight. While Sierra Leone's revenue earnings from iron ore were projected to increase eight-fold in 2011, development assistance still represented around one-fifth of GNI. Liberia remains among the world's most aid-dependent countries, despite increased foreign investment in iron ore.

Foreign investors in the extractive sector: a complex picture

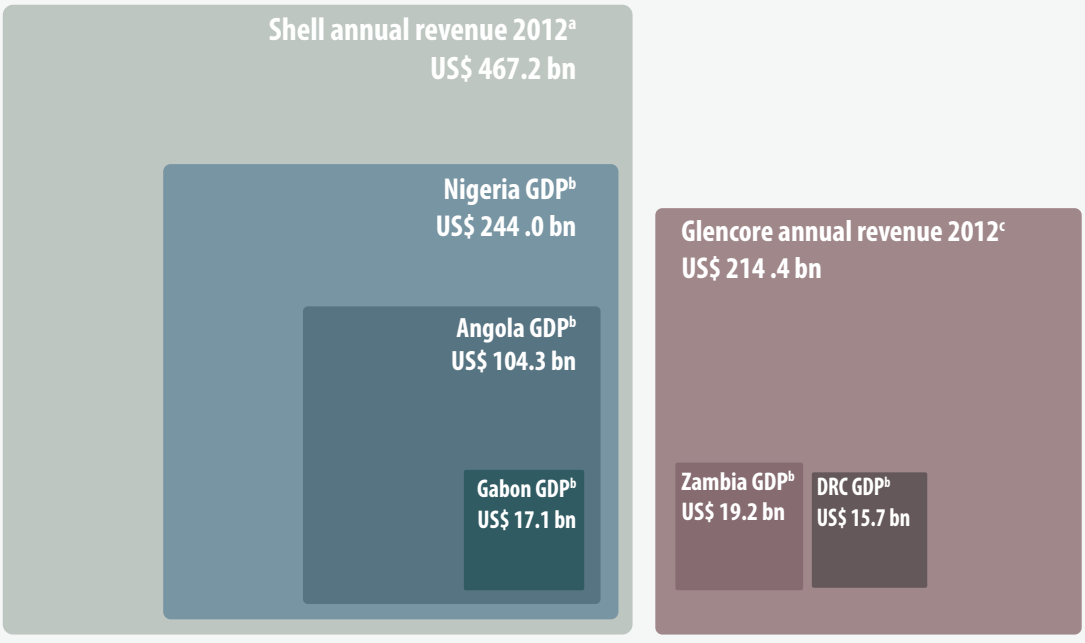
High commodity prices and concerns over the security of supply for energy sources and metals have prompted a global surge in investment activity. Mining investments have increased more than fourfold over the past decade, to around US$80 billion, with iron ore and copper dominating. Exploration and development expenditure by the 70 largest global companies in the oil sector increased from US$315 billion in 2007 to US$480 billion in 2011.[77] Alongside these increase in investment, there have been marked changes in patterns of activity. Companies and government agencies from emerging markets have increasingly been making strategic investments aimed at securing future supplies (Figure 18).[78]

Africa has been part of this global scramble for resources. While the region accounts for a marginal share of global investment in energy, its share of mining investment is far higher – around 15 per cent in 2011.[79] The investment activity of the major petroleum and multinational mining companies has increased across the region, as has the presence of global state-owned companies, second-tier global companies and smaller companies with a regional specialization.

Foreign investment activity takes many different forms, including new or "green field" investment; investment in existing facilities; mergers and acquisitions; and concession trading. Recent activity in the energy sector is illustrative. Sixty-five oil and gas transactions were reported in Africa in 2011, valued at US$7.4 billion.[80] Around 60 per cent of this activity focused on West Africa, with companies investing in infrastructure to exploit existing reserves and in exploration for new reserves. The recent shift in the locus of energy transactions from West Africa to East Africa has been driven by the sale of concessions and licences, and by acquisitions. The sale of a 66 per cent interest in three exploration blocks in Uganda by Tullow, which raised US$2.9 billion, was the largest single deal. In Tanzania, the energy transaction hotspot in 2011, activity centred on the acquisition of Dominion Petroleum by Ophir Energy and on investment in exploration licences by various smaller players. More recently, the Thai energy company PTT purchased Cove Energy for US$1.9 billion, thus acquiring a stake in the rich gas fields off the coast of Mozambique.

Foreign investment in Africa's natural resource sector involves a bewildering array of players. In West Africa, deep-water oil exploration and production is dominated by the large Western petroleum companies. These companies operate through agreements with state

Figure 18: MULTINATIONAL CORPORATION ANNUAL REVENUE VERSUS NATIONAL GDP DATA



Source: a/ Royal Dutch Shell plc (2012), Annual report: Building an energy future. - b/ World Bank (2011), World Development Indicators (GDP Data). - c/ Glencore (2012), Annual Report.

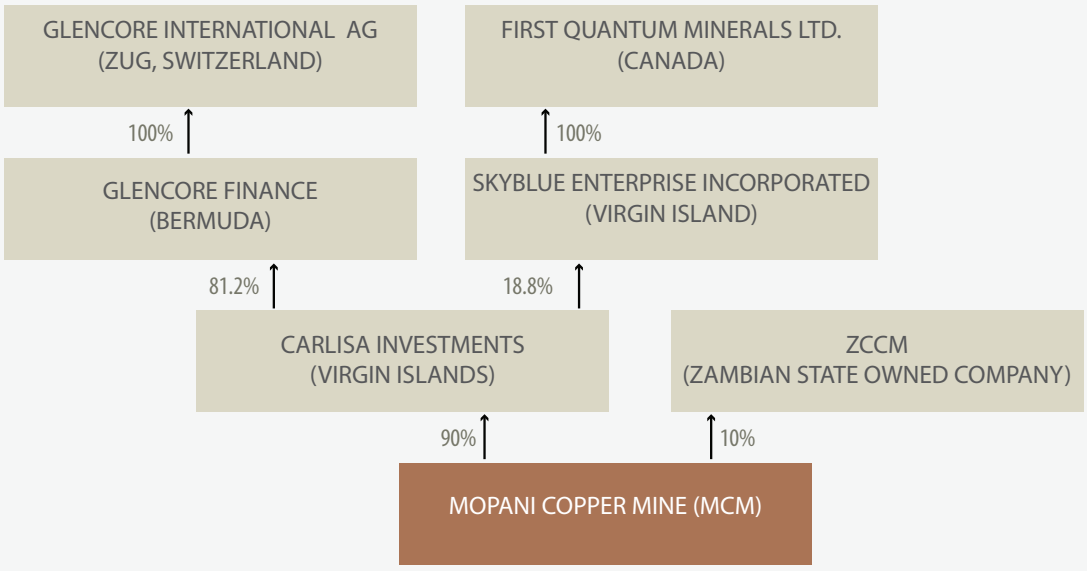
companies, which sell concession and exploration rights, manage production-sharing agreements and joint ventures, and award licences through negotiations or bidding competitions. The Nigerian National Petroleum Company has production-sharing contracts with over 30 oil companies, including ExxonMobil, Chevron, Total and Petrobras. Equatorial Guinea's national oil company, GEPetrol, manages production-sharing agreements with the country's main sources of investment, major US oil companies including ExxonMobil and Marathon, and with a growing number of European and Chinese companies. Angola's state oil company, Sonangol, operates a regulatory environment for international oil companies across 40 offshore blocks.

New technologies, higher prices and growing competition for resources have diversified the range of medium- to large-scale investors involved in energy exploration. Developments in East Africa illustrate the trend. Since natural gas was discovered off the coast of Mozambique by a US independent, Anadarko, and the Italian state-owned company ENI, numerous players have been involved in exploration, often in partnership, including the oil majors (ExxonMobil, Total and Royal Dutch Shell), second-tier international private companies (BG Group), hybrid public-private entities (Norway's Statoil, Brazil's Petrobras and Galp Energia) and small regional specialists (such as Tullow, Ophir, Cove Energy and Premier Oil).

The minerals sector is even more diversified than the energy sector. Sitting at the top of the investment chain are some the world's biggest companies, such as Glencore, Rio Tinto, Anglo American and Xstrata. Glencore, the world's largest commodity trading company, owns majority stakes in two of the Democratic Republic of the Congo's integrated copper and cobalt mines, Katanga and Mutanda, through companies listed on the Toronto stock exchange.[81] Rio Tinto has African investments ranging from bauxite in Cameroon and Guinea, to copper in South Africa, uranium in Namibia and iron ore in Guinea.[82] One of the world's largest copper mines, Tenke Fungurume in southern Democratic Republic of the Congo, is majority-owned by Freeport, with Lundin (Canada).[83] The world's four largest gold mining companies – Barrick, Newmont, AngloGold Ashanti and Kinross – all have operations in Africa.

The company ownership structures linking major multinational companies to assets in Africa often involve complex partnerships and linkages. The Mopani Copper mine in Zambia's Copperbelt illustrates a typical case (Figure 19). Mopani is 90 per cent owned by a company called Carlisa Investments, which is jointly owned by Glencore Finance – a wholly owned Bermuda-registered subsidiary of Glencore – and a British Virgin Islands-listed subsidiary of First Quantum (a Canada-listed company). The other 10 per cent of Mopani is owned by ZCCM Investment Holdings, listed in Lusaka and London, in which the Zambian government holds an 87 per cent stake.

Figure 19: STRUCTURE OF MOPANI COPPER MINE



Source: Mining Journal Online (2011), Company News: Mopani Copper Mine.

Several governance problems are associated with the ownership and operating structures built around extractive investment projects. The presence of offshore-registered companies in the ownership chain limits public disclosure requirements. Meanwhile, the involvement of subsidiaries and affiliates as conduits for intra-company trade creates extensive opportunities for trade mispricing, aggressive tax planning and tax evasion, enabling companies to maximize the profit reported in low-tax jurisdictions – an issue that we turn to in Part III.

Aggregate data on the origins of investment flows are lacking. Companies registered on Canada's TMX exchange, the world's largest by value, are probably the largest single source.[84] Of the 26 countries abroad where Canadian mining assets exceed US$1 billion, eight are in Africa. Rising costs of production in Australia have contributed to the growth in recent years of Australian investment. More than 200 Australian companies are currently operating more than 650 projects across 37 African countries.[85]

While multinational firms capture the international financial headlines, for every major company there are dozens of minor investors. In Liberia, 121 foreign-owned companies reported to the EITI between 2008 and 2010. One survey in Sierra Leone in 2010 identified 265 companies involved in mining. Many of the small companies have a higher appetite for risk than their larger counterparts, including a willingness to operate in countries and regions that may be more prone to conflict.

Companies from emerging markets figure with growing prominence in Africa's extractive industries. Data on Chinese investment are notoriously unreliable, but recent years have seen an increase in investment activity and the evolution of more complex investment strategies. While national companies continue to dominate in the energy sector, investments in mining involve a range of state, provincial and private companies (Box 8). The Brazilian mining company Vale has announced plans to invest US$15–20 billion in Africa by 2015, with major investments in coal in Mozambique and iron ore in West Africa.[86] Companies from India are also expanding their investments.

As in the energy sector, state companies in the minerals sectors act as gatekeepers to concessions, licensing and export production. In the Democratic Republic of the Congo, the state company Gécamines has a monopoly on the sale of concessions. It also retains a stake in several large mining projects, including Tenke Fungurume. In Zambia, the government retains a minority interest in most of the large copper projects through its holding company Zambia Consolidated Copper Mines Investments Holdings.

Mergers and acquisitions have figured prominently in the activities of foreign investors in mining.

Between September 2011 and March 2012, 236 merger and acquisition deals were reported in Africa, with energy and mining dominating. The largest such deal was the acquisition for US$1.25 billion of mining and related exploration interests in the Democratic Republic of the Congo. Merger and acquisition activity provides a window on the emerging patterns of mining investment in Africa. Prominent recent examples include a US$2.5 billion acquisition by Vale of a 51 per cent stake in BSGR in Guinea; the purchase by Sesa Goa, part of India's Vedanta Group, of a controlling stake in Liberia's Western Cluster iron ore concession; Rio Tinto's US$3.8 billion takeover of Riversdale Mining's coal operation in Mozambique; and the purchase by the South Africa-based company Exxaro of African Iron Limited, a group with interests in the Democratic Republic of the Congo and South Africa, for US$349 million.

Investment flows bring potential – and challenges

Foreign investment in extractive industries opens up many opportunities. It brings the technology and capital needed to explore and extract resources. The companies behind the investment are in many cases gatekeepers to international markets. And good quality foreign investment has the potential to create jobs, build skills, enable countries to enter high value-added markets, and expand opportunities for local firms.

Viewed from a different perspective, foreign investment brings many challenges. Few African governments negotiating the terms of concessions and licences have the type of information they need to assess the extent of mineral reserves and the potential costs of extraction and marketing. By contrast, oil and mining companies have unrivalled access to commercial market information, geological analysis, technologies for exploration and extraction, financial resources, and export channels. While corporate revenues are not strictly comparable to GDP, the commercial activities of multinational natural resource companies dwarf the economies of the African countries that they operate in.

BOX 8: Chinese investment emerging strategies and continued blending of aid with trade

Africa is at the heart of China's emerging strategies for dealing with resource constraints. China's national companies continue to occupy a central role – but private and provincial government investors are also increasingly present.

China's energy sector investments are dominated by the three state-owned energy companies, all of which have been increasing investments in Africa. One recent example is the US$2.6 billion purchase by Sinopec of a 20 per cent stake in a Nigerian offshore oil field.[87] In Niger, the China National Petroleum Corporation is spending US$5 billion to develop the Agadem oil block, for which it paid a US$300 million "signature bonus" in 2007.[88]

Both state-owned and private firms are involved in mining. Instead of seeking to acquire assets or projects outright, Chinese companies are increasingly entering into joint ventures or even accepting minority stakes. In some cases, Chinese resource-consuming companies have begun seeking supply agreements in return for investment. In 2011, Shandong Iron & Steel, one of the world's largest steel-makers, bought 25 per cent of the Tonkolili iron ore concession in Sierra Leone for US$1.5 billion from the UK-registered company African Minerals. The deal gives Shandong the right to buy one-quarter of the mine's output annually, including 10 million tonnes of iron ore, at concessional prices.[89]

The financial arrangements involving Chinese investment activity are often highly complex. Concessional loans linked to investment agreements are provided through the China Development Bank and the Export-Import Bank of China (Exim Bank).[90] In some cases, investment activity is linked indirectly to aid programmes that are rolled into the overall package. Exim Bank loans to Africa are estimated at US$67 billion between 2000 and 2010, with the China Development Bank providing US$7 billion.[91]

Loans linked to infrastructure projects figure prominently. In 2012, Ghana signed a US$1 billion loan with the China Development Bank, the largest loan in the country's history, to finance the construction of a pipeline and a plant to process gas for power generation. Under the terms of the project, Ghana will export 13,000 barrels of oil to China a day.[92]

Chinese investment activity remains a source of controversy. Critics see the blending of aid and loans as a violation of the OECD's aid principles. Some of the concerns are overstated. The aid-for-trade provisions are often less pronounced than is claimed. African governments have welcomed the combination of aid, infrastructure investment and project finance. But some of problems have to be recognized. Chinese companies do not fully participate in the EITI – and most have highly opaque reporting systems. This can reinforce the governance problems that open the door to corruption.

Asymmetry in information is not the only problem. Foreign investors in Africa's extractive industries operate across jurisdictions and through enormously complex company structures. Petroleum and mining companies channel their financial and trade activity in Africa through local subsidiaries, affiliates and a web of offshore companies. The combination of complexity, different disclosure requirements and limited regulatory capacity is at the heart of many of the problems discussed in this report. It facilitates aggressive tax planning, tax evasion and corruption. It also leads in many cases to the undervaluation of Africa's natural resources – a practice that drains some of Africa's poorest nations of desperately needed revenues.

As we show in Part III, each of these problems is weakening the potential for Africa's resource wealth to transform the lives of the region's people. Yet each has a solution – and we examine some of the most promising in Part IV. Some require robust national action. Others demand cooperation between African governments, regional organizations and the wider international community.

PART III

THE COSTS OF MISMANAGEMENT

Transparency and accountability are the twin pillars of good governance. Taken together, they are the foundation for trust in government and effective management of natural resources – and that foundation needs to be strengthened.

Africa's fortunes have changed dramatically in the past decade. Rapid economic growth, rivalling the rates achieved in emerging markets, has propelled a growing number of countries towards middle-income status. Macro-economic policy has improved and private investment is rising. Long overdue investments in infrastructure are being put in place. Most countries have become more democratic and more accountable. While the change stops short of a transformation in governance, the opening has given a voice to previously unheard sections of society and informed policy choices. There have also been major gains in reducing poverty and improving health and education, with governments investing in more effective basic services.

This backdrop is encouraging. Over the next decade the economic importance of natural resources is likely to increase, with many countries securing windfall gains. Increased revenues will create unprecedented opportunities for growth and for human development. Fifteen years ago, Africa would have squandered such a chance because of unaccountable government, economic mismanagement and inequitable public spending. The picture looks very different today. Africa's governments have a unique opportunity to build on the reforms of the past decade and use the wealth generated by natural resource revenue to transform the lives not just of this generation, but also of future generations.

That opportunity comes with challenges. Many resource-rich countries – including the Central African Republic, the Democratic Republic of the Congo, Niger and Tanzania – are still far from achieving lower middle-income status. As we saw in Part I, several countries that have already achieved that status are struggling to convert economic growth into poverty reduction and human development. In countries with limited technical capacity, weak checks and balances, and a restricted regulatory capacity, large resource windfalls could act as a catalyst for corruption. Instead of generating widely distributed gains for all, mineral extraction could become an exercise in "winner takes all" politics and economics, confirming the worst predictions of the "resource curse" pessimists.

Translating mineral wealth into lasting gains will require a broad span of policies. Governments need to breach the walls that keep extractive industries in enclaves where little value is added before minerals are exported. They need to prevent the social and environmental damage and the conflicts that often come with mineral extraction. We look at these issues in more detail in Part IV. Here we focus on three themes at the heart of the extractive industry governance agenda:

- Managing state companies and concessions to prevent resource diversion and the undervaluation of assets.
- Collecting taxes and royalties to secure a fair share of resource revenue for the public purse.
- Achieving a wide distribution of benefits through equitable public spending.

Transparency and accountability are the twin pillars of good governance in these areas. Transparency equips citizens with information on the level of resource wealth, how it is managed and who benefits. It enables people to monitor the activities of governments and concession holders, and it helps to facilitate open debate and build consensus. Accountability is about creating structures through which governments become answerable for their actions. Taken together, transparency and accountability are the foundation for trust in government and effective management of natural resources – and that foundation needs to be strengthened.

1. MANAGING STATE COMPANIES AND CONCESSIONS

The diversion of revenues and other losses associated with commercial malpractice are endemic across resource-rich countries. It is impossible to place a figure on the scale of the revenue losses, for good reason: the practices involved are illegal or in the grey area between legality and criminality. What is clear is that the sums involved are often very large in relation to national budgets. Weak national governance creates an enabling environment for graft. But the opaque practices of some foreign companies and the extensive use of offshore companies actively facilitate and support the illicit diversion of public wealth into private bank accounts.

Poorly managed state-owned companies are part of the problem in many countries. Through their control over concessions, involvement in production-sharing agreements, and role as a conduit for foreign investment, export earnings and domestic market activities, state-owned companies occupy a pivotal position in natural resource governance. Their management of revenues, the value that they place on the assets under their control, and the prices they receive for concessions, are not just commercial transactions. They also affect the revenues that governments receive – and hence governments' capacity to invest resource wealth in health, education and economic infrastructure.

All too often the operations of state companies are hidden behind opaque financial management systems, with limited legislative oversight, restricted auditing procedures and, in the worst cases, a comprehensive disregard for transparency and accountability. The terms of production-sharing agreements, reporting on "signature bonuses" for contracts, and concession trading are seldom disclosed. With this lack of transparency comes another endemic concern: the potential for political leaders and public officials to benefit from secret deals made with foreign investors.

One of the starkest examples comes from Angola. In 2011 the IMF identified "financing residuals", essentially missing money, in the accounts of Sonangol, the state energy company, amounting to US$31.4 billion over the period 2007–2010.[93] Most of the deficit was explained through retrospective accounting. In March 2012, however, US$4.2 billion was still unaccounted for.[94] To put this figure in context, it exceeded the 2012 national budget and was double the estimated annual expenditure required for Angola to put in place a basic infrastructure platform covering roads, ports, power and water and sanitation.[95] The interaction between the Angolan state oil company and intermediaries raises wider concern. Much of the oil exported from Angola to China passes through a syndicate called the China International Fund: the terms on which oil is purchased from the state oil company and sold to China are not made public.[96]

Weak governance of some state-owned petroleum and mining companies fuels revenue losses through a range of channels. In some cases, corruption, inefficiency and lack of capacity all contribute. Verifying the claims and counter-claims made in individual cases is beyond the scope of this report, but the credible allegations made by financial authorities, the IMF, the World Bank and international transparency campaigners in several countries indicate the scale of the losses involved:

- **Nigeria:** Numerous examples of shortcomings in the revenue administration of the Nigerian National Petroleum Corporation have been identified. In a recent report, one parliamentary task force concluded that around US$6.8 billion had been lost between 2010 and 2012 as a result of corruption and mismanagement involving transfers of fuel subsidies.[97] Another investigative body, the Petroleum Revenue Special Task Force, identified losses of US$29 billion resulting from a natural gas pricing, along with missing payments connected to concessions and production-sharing arrangements.[98]
- **Equatorial Guinea:** The state oil company, GEPetrol, is one of the most opaque energy companies. Ongoing legal challenges in France, Spain and the United States, as well as a complaint before the African Commission on Human and Peoples' Rights, allege misuse of Equatorial Guinea's oil funds, including transfers to overseas bank accounts.[99]

Lost revenues in the Democratic Republic of the Congo

No country better illustrates the high costs associated with opaque concession trading than the Democratic Republic of the Congo (DRC). Privatization of the DRC's minerals sector has been plagued by a culture of secrecy, informal deals and allegations of corruption.

The government has responded to concerns over the manner in which mining concessions have been sold off. Towards the end of 2010, it agreed to publish all

mining and oil contracts.[100] In 2011, it signed a decree requiring that contracts for any cession, sale or rental of the state's natural resources be made public within 60 days of their execution.[101] However, in 2012, the IMF stopped a loan programme after the government failed to publish full details of a mining deal involving the sale by the state-owned mining company, Gécamines, of a stake in a major copper concession. The recipient was a company registered in the British Virgin Islands.[102] Following the IMF's decision to halt three tranches of loans totalling about US$225 million, the AfDB announced that it was withholding a planned US$87 million in budget support.[103] The World Bank had briefly suspended loans in 2010 because of related concerns over concession arrangements.[104]

With some of the world's richest mineral resources, the DRC appears to be losing out because state companies are systematically undervaluing assets. Concessions have been sold on terms that appear to generate large profits for foreign investors, most of them registered in offshore centres, with commensurate losses for public finance.

In preparing this report we examined in some detail several concession deals in the DRC. In each case, we looked at the terms of sales by Gécamines and other state companies. Our research did not consider allegations of corruption in specific cases, or on the part of individuals. We focused instead on the potential undervaluation of mineral assets by comparing the price received by Gécamines for concession sales with commercial market valuations of the concession. For the commercial valuation we used either the price received by the concession holder in an onward sale, or an independent market valuation of the worth of the assets.

In the interests of comparability, we restricted our analysis to the recent past (2010–2012) and to deals for which robust data are available. We narrowed our sample down to five deals (see Annex 1). In each case the trading arrangement involved a state company and one or more offshore companies, most of which were registered in the British Virgin Islands and connected to one of the largest private investors in the DRC, the Fleurette Group.

The results of our exercise raise fundamental questions about the practices surrounding the DRC's mineral resource governance:

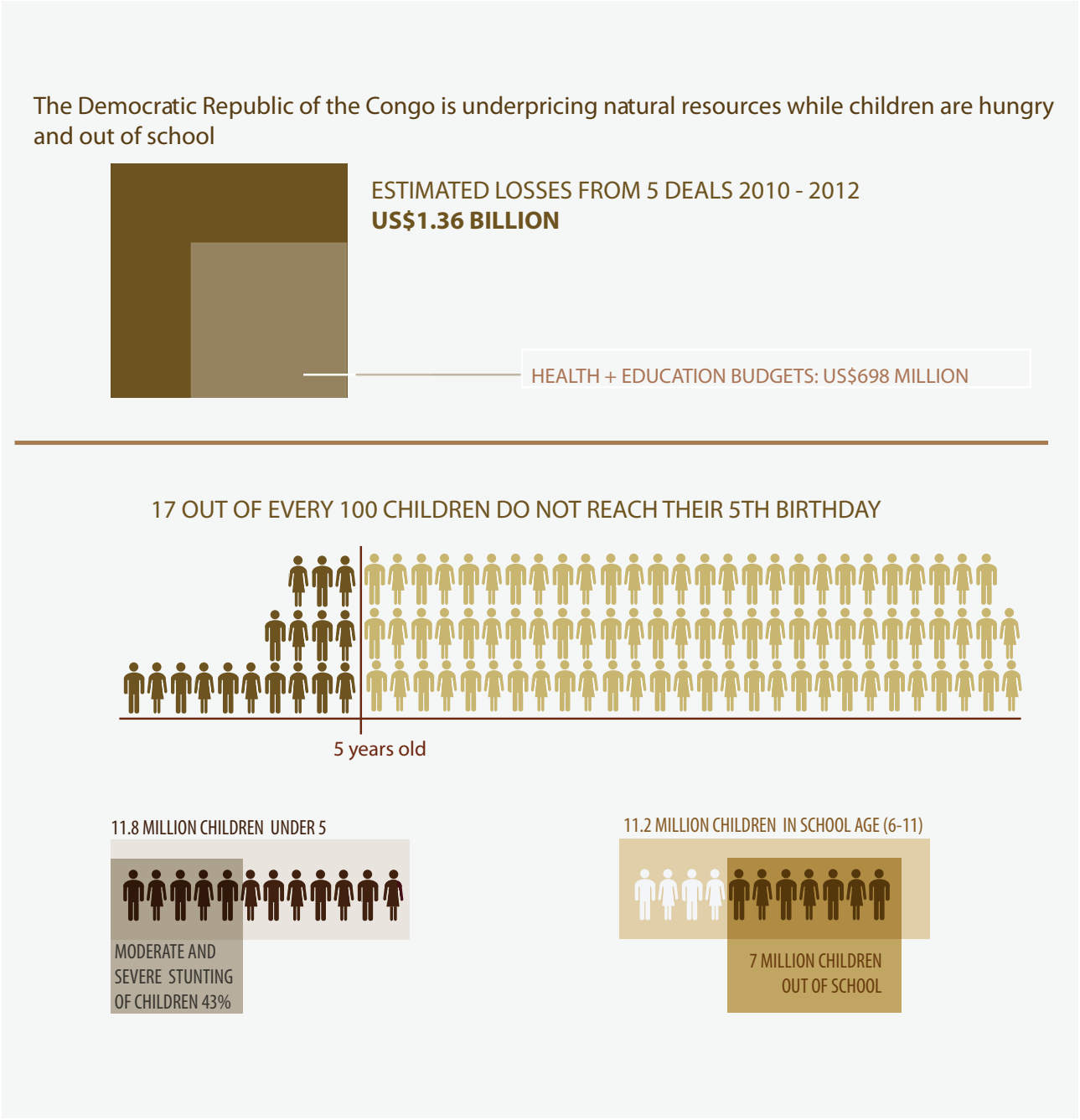
- Between 2010 and 2012, the DRC lost at least US$1.36 billion in revenues from the underpricing of mining assets that were sold to offshore companies.
- Total losses from the five deals reviewed were equivalent to almost double the combined annual budget for health and education in 2012.[105] This is in a country that ranks lowest on the UN's Human Development Index, with some of the world's worst malnutrition, its sixth highest child mortality rate, and over 7 million children out of school (Figure 20).
- Each citizen of the DRC lost the equivalent of US$21 from the underpricing of concession assets –7 per cent of average income. The DRC has a population of 67 million.
- Across the five deals, assets were sold on average at one-sixth of their estimated commercial market value. Assets valued in total at US$1.63 billion were sold to offshore companies for US$275 million. The beneficial ownership structure of the companies concerned is unknown.
- Offshore companies were able to secure very high profits from the onward sale of concession rights. The average rate of return across the five deals examined was 512 per cent, rising to 980 per cent in one deal.

It should be emphasized that our exercise captures what is likely to be a small share of the overall losses caused by underpricing. We cover only a small subset of deals for the period 2010-2012. Moreover, the pattern of selling mining assets to offshore shell companies has been a consistent theme in the privatization of state assets over more than a decade. We do not infer from our analysis any illegality on the part of political leaders, public officials or the companies involved in purchasing and selling the concessions. However, the potential scale of the overall losses merits further investigation in order to clarify the circumstances surrounding the transactions, and to determine whether or not the assets in question were knowingly undervalued. Our findings are consistent with earlier investigations. One legislative committee estimated that in 2008 the government lost as much as US$450 million through a mix of poor management, corruption and flawed taxation policies.[106]

Senior figures in the DRC government recognize the gravity of the problem posed by opaque concession trading. As the prime minister put it in 2012: "We must avoid situations where mining contracts are not published … where sales of mining assets are undervalued and the government is not informed of what state mining companies are doing."[107] Our survey underlines the importance of this objective.

Unravelling the deals involved in concession trading in the DRC is enormously difficult. The complex structures of interlocking offshore companies, commercial

Figure 20: DEMOCRATIC REPUBLIC OF THE CONGO LOSSES IN CONCESSION TRADING VERSUS BUDGETS FOR HEALTH AND EDUCATION



Source: IRIN (2011), DRC: Millions miss out on basic education. UNDP (2012), The Nutrition Challenge in Sub-Saharan Africa. UNESCO (2012), Global Monitoring Report. World Bank (2013), World Development Indicators

secrecy on the part of major mining companies, and limited reporting by state companies and government agencies to the DRC's legislators, creates what amounts to a secret world – a world in which vast fortunes appear to be accumulated at the expense of the DRC's people. However, the issues at stake are so fundamental to the challenge of harnessing resource wealth for human development that we look behind the curtain to reconstruct the circumstances surrounding four of the five deals covered in our analysis (Box 9).

BOX 9: Concession dealing in the Democratic Republic of the Congo – some unanswered questions

The concession sale that prompted the IMF's decision to halt loans to the DRC was not an isolated event. It followed a series of complex deals involving the state-owned mining company, Gécamines, offshore companies and major transnational corporations, including Glencore and the Eurasian Natural Resources Corporation (ENRC). Both Glencore and ENRC are listed on the London Stock Exchange. The two companies strenuously deny charges of impropriety and both have adopted policy guidelines on corruption, bribery and due diligence. Between early 2010 and the end of 2012, the DRC sold off stakes in a least seven[108] prized mining projects to offshore companies. Four deals are summarized below – fuller details are provided in Annex 1. The sales were highly opaque and secretive, with details usually emerging only months later.[109] The ultimate beneficiaries of the offshore companies involved in the deals are unknown.

- **The Société Minière de Kabolela et de Kipese (SMKK):** SMKK owns a copper and cobalt deposit in Katanga province. In 2009, Gécamines and Eurasian Natural Resources Corporation (ENRC) each owned 50 per cent of SMKK under a joint venture agreement. The agreement gave ENRC the right to first refusal on any future sale of Gécamines' stake.[110] ENRC waived that right, instead purchasing in December 2009 an "option to buy" the shares from Emerald Star – an offshore company registered in the British Virgin Islands. The purchase price for this option was US$25 million.[111] At the time, Emerald Star was not a registered owner of shares in SMKK. It was not until February 2010 that Gécamines actually agreed to sell its shares in SMKK to Emerald Star. The shares were purchased for US$15 million, according to documents published by the Ministry of Mines.[112] Four months later, ENRC exercised its "option to buy" and paid Emerald Star US$50 million for the shares in SMKK (in addition to the initial US$25 million).[113] ***The total payment to Emerald Star amounted to US$75 million for shares it purchased at a price of US$15 million – a 400 per cent profit over a four-month period, with a commensurate implied loss of public revenues.***[114]
- **The Kolwezi project:** In January 2010, Gécamines revoked a contract with the mining company First Quantum for a joint venture in the Kolwezi copper project.[115] It subsequently awarded 70 per cent control of the Kolwezi licence to the Highwind Group – a collection of four offshore companies registered in the British Virgin Islands. The contract stipulated that Highwind would pay US$60 million for the assets as a signature bonus.[116] ENRC secured a stake in the project when it bought 50.5 per cent of Camrose, the parent company of the Highwind Group, for US$175 million.[117] It purchased the remainder of Camrose (which was also registered in the British Virgin Islands) for US$550 million in a deal approved by shareholders on 24 December 2012.[118] Taking into consideration other assets wrapped up in the Camrose purchase, ENRC effectively paid $685.75 million for Kolwezi and associated concessions, which were originally purchased by the Highwind Group and its affiliates for $63.5 million – a return of just under 1,000 per cent for the offshore companies concerned (Annex 2).
- **The Mutanda mine:** Mutanda is one of the DRC's main copper and cobalt mines, producing 87,000 tonnes of copper and 8,500 tonnes of cobalt in 2012.[119] It operates as a joint venture between a Panama-registered company called SAMREF Congo SPRL, which controls 80 per cent, and Gécamines. Glencore acquired a stake in SAMREF in 2007.[120] In March 2011, SAMREF (then half-owned by Glencore) waived its right of first refusal on the purchase of Gécamines' separate 20 per cent stake in the Mutanda project.[121] Instead, Gécamines sold this stake to a British Virgin Islands-listed company, Rowny Assets, for US$120 million. ***The average of five commercial valuations at the time of the sale put the value of a 20 per cent share in Mutanda at US$634 million, implying a 428 per cent profit for Rowny Assets – revenue that could have benefited the Congolese state instead.***
- **The Kansuki mine:** In 2010 the Kansuki mining concession was 75 per cent owned by a company called Kansuki Investments SPRL and 25 per cent owned by Gécamines.[122] Kansuki Investments was owned by the Bermuda-registered Kansuki Holdings – itself belonging half to Glencore and half to a Gibraltar-registered holding company called Fleurette. [123] In March 2011, Kansuki Investments waived its right of first refusal on Gécamines' 25 per cent stake, allowing Gécamines to sell its shares to the British Virgin Islands-registered Biko Invest Corp,[124] which is owned in turn by the Fleurette Group.[125] The Fleurette Group has not disclosed the full list of beneficial owners of its subsidiaries in the DRC. ***The sale price for the Gécamines shares was US$17 million. Taking an average of two independent valuations, one by Deutsche Bank and the other by Liberum Capital, the asset value was US$133 million, suggesting an undervaluation of 682 per cent*** (Annex 2).

Lack of transparency in state companies - a cause for concern

Research by Revenue Watch and Transparency International has helped to identify some of the institutional practices that lack transparency and thus cause concern. In a 2011 report, the two agencies placed the operations of 44 major global and national oil and gas producers under the microscope in three areas: reporting on anti-corruption practices, organizational disclosure and country-level financial and technical disclosure.[126] Among the findings:

- Eight companies registered a score of zero on the reporting of anti-corruption measures, including four African state-owned companies: GEPetrol (Equatorial Guinea), Sonangol (Angola), NNPC (Nigeria), Société Nationale des Pétroles du Congo (SNPC, Republic of Congo).
- Three African companies – NNPC, GEPetrol and SNPC – registered the lowest score on institutional disclosure.
- Major emerging market investors in Africa such as the China National Petroleum Corporation, PetroChina and Petronas (Malaysia) registered low scores on country-level disclosure.
- Global oil majors such as Chevron, Royal Dutch Shell, Exxon and Total were among the lowest-ranking companies on country-level disclosure.
- The picture these findings present is starting to change, as governance reforms in many countries enhance transparency and accountability, but the results continue to fall short of the standards required.

In recent years, for example, Nigeria has made significant strides towards greater openness in the oil sector, improving its reports to the EITI, its publication of data on export volumes and its reporting on key budget documents, but gaps in transparency weaken overall accountability. Many of the gaps can be traced back to the Nigerian National Petroleum Corporation (NNPC). The NNPC dominates the oil sector, yet it issues no annual reports and provides limited information on its balance sheet. The lack of transparency has a profoundly malign effect on public financing. The NNPC was implicated in potential fuel subsidy irregularities and mismanagement that may have cost Nigeria US$6 billion in 2010–2011, and evidence from EITI reporting suggests that it is illegally withholding US$8 billion in funds from the federal government.[127]

The lack of transparency in African state companies in the extractive sector is a concern in and of itself given their role in handling large revenue flows. Even small amounts of diversion can have significant impacts on government budget planning and spending on basic services. But the analysis by Revenue Watch and Transparency International also highlights the broader global governance deficit in some oil companies that are major investors in Africa. When opaque African companies are linked to opaque Western and emerging market multinationals, the risk of corruption is greatly increased.

Unequal access to information can magnify the problems associated with weak governance. While mineral resources may be national assets, government agencies are often ill equipped to determine the potential market value of those assets. Consider the case of the Simandou iron ore deposits in Guinea. An initial concession granted by the previous government (under terms that are still disputed) generated a 3,000 per cent return when sold on two years later for a sum representing more than twice Guinea's 2012 GDP (Box 10). Whatever the terms of the initial concession transfer, sale-on value represented a windfall gain. The people of Guinea, who appear to have lost out as a result of the undervaluation of the concession, will not share in that gain.

BOX 10: Guinea's iron ore – a resource in dispute

With one of the world's richest deposits of undeveloped iron ore, Guinea illustrates the high costs – for governments, investors and people – of the lack of transparency surrounding the trade in mineral concessions.

In 2008, Guinea's government claimed Rio Tinto had missed deadlines to start mining – a claim that Rio Tinto rejects – and stripped the multinational of half of its rights to mine the enormous iron ore deposits at Simandou. BSGR, a subsidiary of the Beny Steinmetz Group, bought the rights. Two years later, after an initial investment reported at US$160 million on preliminary development work, BSGR sold 51 per cent of its stake to Vale for US$2.5 billion. Described by one observer quoted in the Financial Times as "the best private mining deal of our generation," the valuation marked a return of more than 3,000 per cent over two years.

The implicit profit on the sale was equivalent to 2.4 times Guinea's entire national budget in 2011. Development of the reserves has been delayed. And Guinea has lost precious opportunities to generate the much-needed revenues to help it address deep development problems: a poverty incidence of 58 per cent, one of the world's highest maternal mortality rates, and one-quarter of primary school age children out of school.

Greater transparency at the outset could have avoided the protracted delay and waste. Had the terms of the initial contracts been subject to full disclosure, Guinea's people and the investment community would have been better placed to judge the fairness and commercial viability of any deals.

Source: IMF 2012, Guinea Iron ore limited, Tom Burgis 2013, Tom Burgis, Helen Thomas and Misha Glenny 2012. See http://www.giolimited.com
Burgis, T. (2013), "Guinea seeks iron ore deposit deal", Financial Times, February 3, 2013, accessed April 16, http://www.ft.com/intl/cms/s/0/f5c0a2d2-6df0-11e2-983d-00144feab49a.html" \l "axzz2Qj2CXAwB" http://www.ft.com/intl/cms/s/0/f5c0a2d2-6df0-11e2-983d-00144feab49a.html#axzz2Qj2CXAwB
Burgis, T., H. Thomas and M. Glenny (2012), "Guinea reignites $2.5bn mining tussle", Financial Times, November 2, 2012, accessed April 16, "http://www.ft.com/intl/cms/s/0/06d895f4-24f7-11e2-8924-00144feabdc0.html" \l "axzz2KhqLoBFw" http://www.ft.com/intl/cms/s/0/06d895f4-24f7-11e2-8924-00144feabdc0.html#axzz2KhqLoBFw
Burgis, T., H. Thomas and M. Glenny (2012), "Guinea – what lies beneath", Financial Times, November 7, 2012, accessed April 16, "http://www.ft.com/intl/cms/s/0/db0642da-2827-11e2-a335-00144feabdc0.html" \l "axzz2KhqLoBFw" http://www.ft.com/intl/cms/s/0/db0642da-2827-11e2-a335-00144feabdc0.html#axzz2KhqLoBFw
Rio Tinto Simandou (2013), "Investment", accessed April 16, http://www.riotintosimandou.com/ENG/project_overview/33_investment.asp
IMF (2012), "Guinea: Poverty Reduction Strategy Paper—Annual Progress Report", IMF Country Report No. 12/61, IMF, Washington DC, accessed April 14, 2013, http://www.imf.org/external/pubs/ft/scr/2012/cr1261.pdf

Offshore companies can facilitate corruption

The governance problems surrounding natural resource deals go beyond Africa – and they cannot be solved by African governments alone. Multilateral action to regulate the activities of foreign companies is a critical, and currently missing, part of the jigsaw.

Hundreds of offshore-registered companies are linked to investment in extractive industry concession trading in Africa. Many are registered in traditional tax havens, such as the Cayman Islands, the British Virgin Islands or Bermuda. Some are associated with shell companies registered in the United Kingdom. Others are integrated into networks that extend from offshore private banking and trading centres in Switzerland or the United States. While the rules vary across jurisdictions, offshore centres typically operate disclosure rules that vary from limited to non-existent. The governance vacuum surrounding companies operating from offshore centres is undermining reform in Africa itself. Under the EITI, some African governments are meeting higher standards of disclosure (see Part IV). Yet, some foreign investors dealing with state companies are able to hide behind the secrecy surrounding offshore centres. Some companies use registration in these centres to avoid disclosure and to facilitate the transfer of illicit funds. African governments and citizens driving governance reforms have no recourse to information about the operations of these companies, many of which are connected through concession contracts to major multinationals.

Offshore trading makes it possible for investors to hide the real "beneficial owners", or the ultimate beneficiaries, of companies. Using multiple investment vehicles, a practice known as "layering", compounds the problem.[128] This arrangement is widespread in

Africa. One company operating in Sierra Leone in 2011 operated through three separate offshore holding companies (two registered in Guernsey and one in Bermuda) with a primary owner registered in Bermuda, owned in turn by three separate holding companies (two of which were registered in London and one in China).[129]

Regulators in rich countries recognize the risks posed by complex offshore company structures, which often serve as a conduit for corruption, money laundering and bribery. But with all of the resources at their disposal, they still struggle to contain those risks. In Africa, regulatory authorities and civil society groups working for greater transparency have even more limited financial, technical and legal capacity, so the offshore world creates an impenetrable barrier behind which public officials and unscrupulous political leaders can hide the diversion of resources.

That is why, in Part IV, we make the case for a strengthened multilateral effort to create an international environment conducive to good governance of Africa's natural resources. At that heart of that effort should be a concerted move across all tax jurisdictions to full public disclosure of beneficial ownership.

Lack of budget transparency undermines the public interest

State companies in the extractive sector do not operate in financial isolation. They are linked to the wider system of public finance through the budget. Progress towards greater transparency in state companies can be supported – or undermined – by the governance of national budgets.[130]

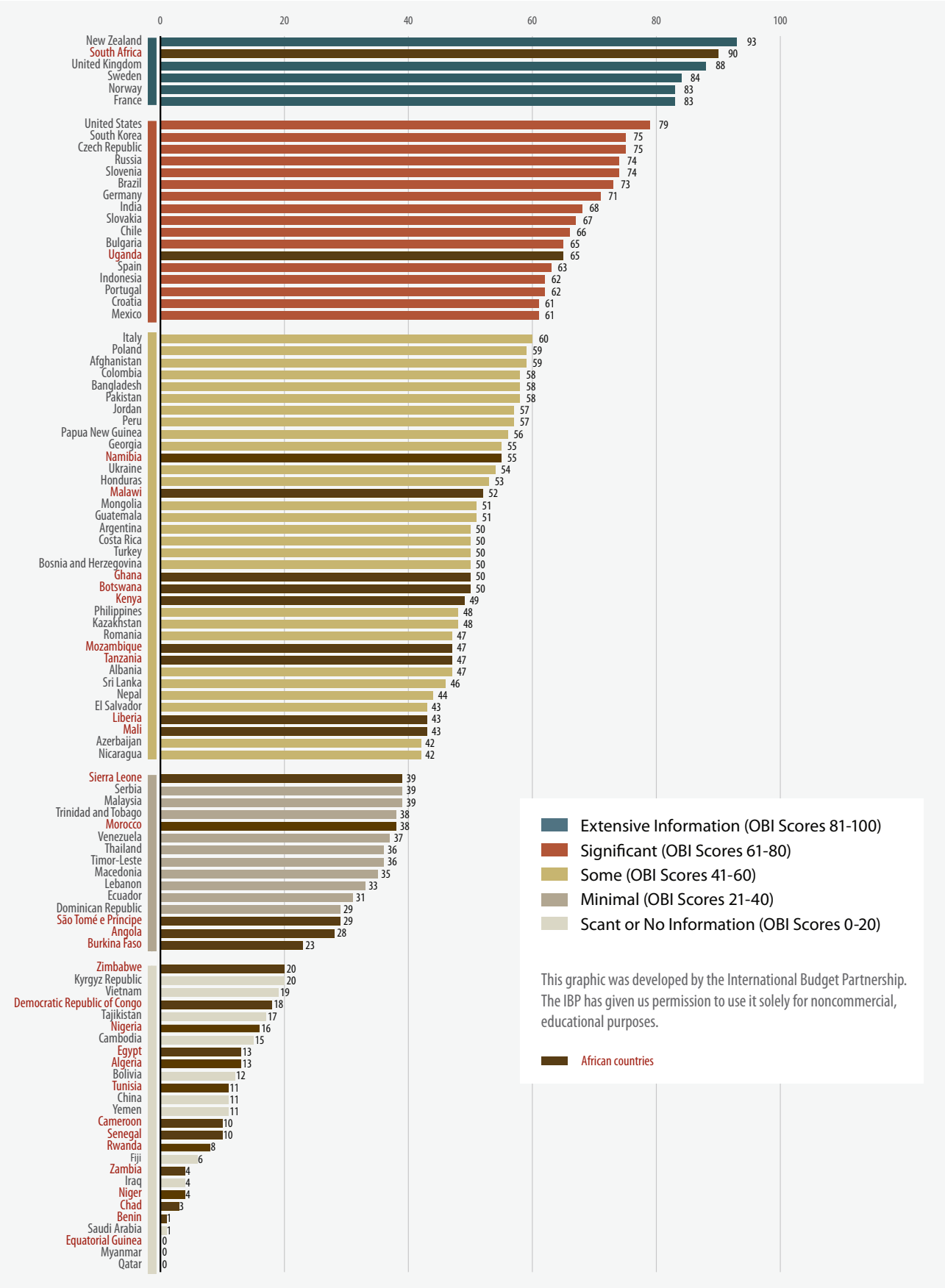
Measuring transparency in budgets is inherently difficult. Informal arrangements frequently subvert both the letter and the spirit of the legal requirements to report resource revenues. Two of the most widely used scales, the Resource Governance Index (RGI) and the Open Budget Index (OBI), provide a useful snapshot, however. The RGI assesses 58 countries on a wide range of benchmarks in the oil, gas and minerals sectors. The OBI views transparency through a wider lens, focusing on how openly governments report to their citizens through key budget documents. Both parts of the equation matter, since an opaque budget can undermine the benefits of transparency in the resource sector, and vice versa.

The picture for resource-rich Africa, while mixed, is discouraging. The RGI divides countries into high, medium and low performance categories. No African country is in the high performance category, and five – Cameroon, the Democratic Republic of the Congo, Equatorial Guinea, Mozambique and Zimbabwe – are in the lowest category. However, several countries – Ghana, Liberia, South Africa and Zambia among them – score well in a number of areas.

The OBI's 2012 survey, covering 100 countries, provides an even more sobering assessment.[131] Many of Africa's resource-rich countries register abysmal scores for budget governance (Figure 21). Equatorial Guinea is one of three countries to score zero out of 100. Another seven countries – Cameroon, Chad, Democratic Republic of the Congo, Niger, Nigeria, Zambia and Zimbabwe – score less than 20, with Angola and Burkina Faso just marginally above the threshold. In all these countries, budget transparency, legislative oversight and auditing are weak – an environment that creates a fertile soil for theft, the subordination of public interest to the pursuit of private gain, and corruption.

There are some bright spots in the OBI ranking. South Africa has one of the world's most transparent budgets. Uganda also performs creditably. But no other country in the region meets the criteria for significant or extensive information disclosure. Given that the survey includes countries on the brink of major resource-based revenue surges – such as Ghana, Kenya, Liberia, Mozambique, Sierra Leone and Tanzania – this raises worrying questions.

Figure 21: TRANSPARENCY OF BUDGETS: OPEN BUDGET INDEX SCORES



Source: International Budget Partnership (2012), Open Budget Index.

2. "AGGRESSIVE TAX PLANNING" DRAINS THE PUBLIC PURSE

A country's natural resources belong to its citizens, who have a right to enjoy a fair share of the benefits such wealth can bring. In most countries, extractive industries generate few jobs directly and have weak links to local markets. To distribute benefits from the extractive sector widely, governments need to secure revenue through taxation and use public spending to extend opportunities and strengthen economic growth. Obtaining a fair share of natural resource wealth and allocating the proceeds equitably are two of the most pressing governance challenges in the extractive sector.

Designing fair tax regimes

In designing appropriate tax regimes, governments in Africa's resource-rich countries have to walk a fine line. With their citizens facing acute deficits of basic services and growth constrained by weak infrastructure, they need to maximize revenues. At the same time, they need to attract investment from extractives companies to generate future revenue streams, and to make sure that those companies' investments contribute to the domestic economy, to society and to environmental sustainability. Aligning these goals is far from easy. Specifying the minimum proportion of revenues that should accrue to a government given the value of the resources extracted and the cost of extracting them is technically challenging. Changes in underlying market conditions add to the complexity, both for governments and for investors.

To attract foreign investors, many governments may have erred in providing excessive tax concessions. Taxation regimes designed during the 1990s, when demand for resources was more limited and Africa's economic environment less favourable, featured extensive exemptions from corporation taxes, withholding taxes and import duties. In many cases royalty charges were reduced or waived. Many of these arrangements were continued even when the projects in question were highly profitable.

Since 2000, governments have been slow to realign their taxation systems with the emerging realities of buoyant world markets that have increased the profit margins of mining and petroleum companies.[132] However, there has been a move towards renegotiating contracts, often prompted by evidence from national reviews. In 2006, the current government of Liberia initiated a review of concession agreements signed between 2003 and 2006. Of 105 contracts, 36 were recommended for outright cancellation and 14 for renegotiation. Among the key criteria for cancelling or renegotiating was whether the Liberian government received a fair value in the signed contract. The contracts renegotiated included an iron ore concession agreement between the state and ArcelorMittal signed in 2005. The renegotiation, carried out with international assistance, led to changes in 30 separate areas covered in the original contract.[133] In the Democratic Republic of the Congo, a government commission reviewed 61 mining deals over the decade up to 2006 and found none acceptable: it recommended renegotiating 39 and cancelling 22.

The complexity of tax regimes, and the variable weight attached to corporate taxation, royalties, export levies, withholding taxes and other instruments, makes comparisons between countries difficult, as does the implicit taxation through production-sharing arrangements, and mandated investment in infrastructure. Investor perceptions of risk also have a bearing on the appropriate level of taxation. Even so, there is compelling evidence of systemic undertaxation:

- Liberia continues to provide extensive tax concessions to foreign investors involved in ore projects that go far beyond the arrangements set out in the Liberia Revenue Code (LRC). In a review of the natural resource sector, one IMF assessment made the following recommendation: "If these concessions come up for renegotiation, the authorities should aim to harmonize the terms with the LRC and avoid tax breaks."
- Sierra Leone has provided very generous concessions to foreign investors (including royalty rates as low as 0.5 per cent) on mining exports. Individual companies have negotiated highly advantageous agreements. In 2011, only one of the five major mining companies operating in the country paid corporation tax.
- Zambia entered the copper boom with one of the lowest royalty rates in the mining sector in Africa under an agreement negotiated with two mining companies in the late 1990s. It was not until the 2013 budget that tax concessions for the copper industry were moderated in the light of buoyant world prices. The first EITI report in Zambia indicated that, between 2005 and 2009, half a million Zambians employed in the mining sector were carrying a higher tax burden than companies.

- Until 2010, the average royalty payment on gold exports in Sub-Saharan Africa was 3 per cent – one of the lowest levels in the world.[134] The structure of royalty payments also favoured companies. With world prices increasing from US$300 to US$1,600 per ounce between 2000 and 2011, investor profits increased at four times the rate of government revenues.[135] In a review of tax structures in the gold sector, the AfDB recommended the introduction of 5 per cent royalty rates – a proposal adopted under mining sector reforms in Ghana and Tanzania. It is estimated that Tanzania lost US$25 million over the period 2005 to 2010 as a result of an artificially low royalty rate.[136]

A report on Africa's minerals regimes by the International Study Group observed what it described as "a widespread sense that Africa has not obtained commensurate compensation from exploitation of its mineral resources"[137]. That sentiment, the authors noted, had intensified with the mineral commodity price boom, which substantially lifted profits for mining companies. Governments in other developing (and developed) regions have reformed tax regimes in the light of changed world market conditions without deterring investment. Some governments in Africa are moving in this direction, and there are strong grounds for all resource-rich countries to strengthen their tax systems by removing concessions and responding to real market conditions. At a minimum, royalty levels should be linked and indexed to commodity prices in order to secure a fair share of revenues during the commodity super-cycle discussed in Part II.

The revenues secured by many resource-rich countries appear to be very low in relation to the value of exports, and compared with international standards. The IMF estimates that globally, the effective tax rate in mining is typically 45–65 per cent (it is higher in petroleum). But in 2011, Zambia's copper exports generated US$10 billion, while government revenues from copper were only US$240 million – or 2.4 per cent of export value. In the same year, exports of mining products from Guinea reached US$1.4 billion, representing 12 per cent of GDP, but government mining revenues were just US$48 million, or 0.4 per cent of GDP.

The revenues are lower still when the very substantial profits generated by concession sales are factored into the equation. Few countries in Africa apply capital gains taxes on these profits. In Uganda, for example, a company involved in oil exploration arranged to sell its licence for US$1.45 billion, with an implied return of US$9 for every US$1 in capital investment. The government sought, but was unable to secure, a tax payment of US$400 million on the capital gain – an amount equivalent to more than the national health budget.[138] Transactions involving the sale of exploration and extraction licences in Tanzania and Mozambique raise similar concerns. While compensation for the risks associated with exploration is legitimate, the returns reported on exploration in Africa are often excessive by international standards. The same holds true for the onward sale of concessions, illustrated by experience in the Democratic Republic of the Congo (Box 9) and Guinea (Box 10).

Tax reform has proven difficult in many resource-rich countries. In some cases mining companies have resolutely opposed reform, threatening to invoke "stabilization" clauses written into agreements negotiated in the 1990s. When Zambia sought to renegotiate its royalty rate on copper exports, major investors opposed the measure despite a four-fold increase in the price of copper between 2000 and 2011, and the very low effective tax rates that transnational companies were paying. In 2013 the government of Nigeria is to raise taxes from a nominal level of 63 per cent to 71 per cent (still at the lower end of the tax range identified by the IMF).[139] The reform is long overdue: royalty rates were negotiated during the 1990s, when oil prices were US$20 a barrel, or around one-fifth of post-2000 average levels. But the major oil companies have strongly opposed the reforms.

Opposing balanced tax reform is not in the best interests of the companies themselves. Governments of resource-rich countries need a fair stake in revenues to invest in the infrastructure that extractive industries themselves require. Governments also need the revenues to share resource gains with citizens who might otherwise see extractive industries as benefiting only a privileged few foreign investors and the national elite – a perception that is unlikely to foster a stable environment for investment.

When companies evade tax responsibilities

Tax avoidance has emerged as a global concern. Governments – and societies – can only function if the individuals and companies who benefit from

wealth generation, public investment and public goods share in the cost of financing. Globalization has made it increasingly difficult to ensure that companies operating across borders provide their fair share of revenues. In Europe and North America, public anger has been directed towards highly visible multi-billion dollar firms that minimize their tax liabilities through sophisticated but aggressive "tax planning".

Resource-rich countries in Africa are highly vulnerable to aggressive tax planning and tax evasion facilitated by the extensive use of offshore companies, the high levels of intra-company trade and the commercial secrecy surrounding foreign investment activity. African governments lack the human, financial and technical resources needed to secure tax compliance, and the commercial market intelligence needed to assess company tax liabilities. As a result they are losing significant revenue streams.

Extractive companies in Africa can minimize tax repayments in several ways. Some are legal, some are illegal, and some are in the grey area between the two; all are difficult to detect. An estimated 60 per cent of world trade is now conducted between affiliates of the same company, and many extractive companies operating in resource-rich countries are virtually self-contained. They import goods and services from one subsidiary or affiliate, secure finance from another, and sell upstream to other companies in the group involved in processing. As a report by KPMG puts it: "Many of the world's major oil and gas and mining companies have already established international trading structures to gain competitive advantage, and the trend toward centralized trading is expected to continue."[140] These structures typically include extensive use of companies located in offshore centres or low-tax havens, facilitating tax planning strategies aimed at minimizing the profit – and hence the tax liability – reported in higher tax jurisdictions.

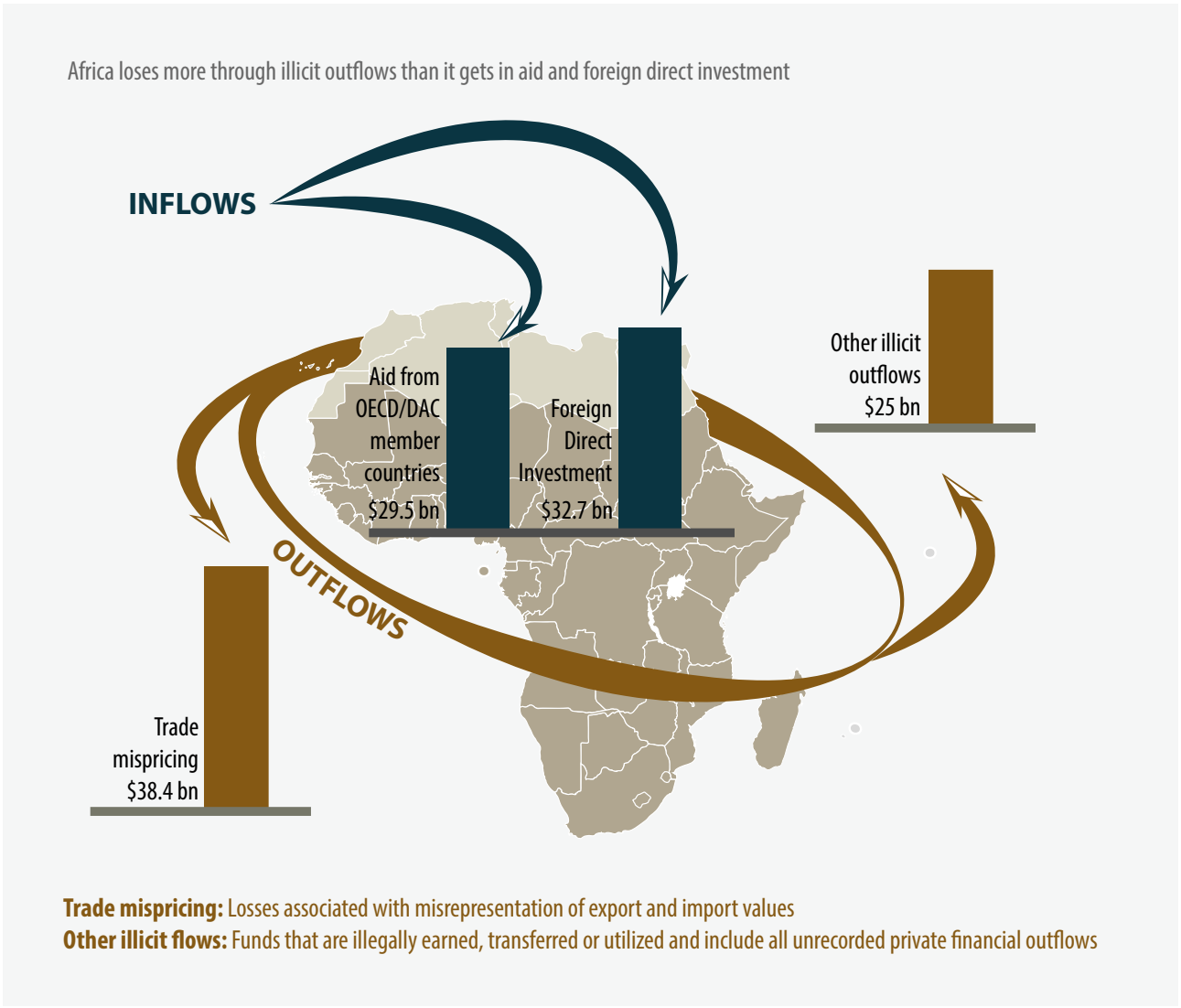
False invoicing – or mispricing – is one way of achieving that goal. Companies can overstate the prices they pay for imported technologies and technical services, and sell to connected companies at artificially depressed prices. Transfer pricing, as these arrangements are known, is illegal. The OECD's *Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations* establish the "arm's length principle" as the benchmark for good practice. This requires that all transactions within a company be conducted on the same terms that would apply if they were carried out between unrelated companies. In practice, however, the application of the principle can be very difficult. Tax authorities may have little access to information on intra-company transactions. It can also be difficult to establish final sale prices, real profit margins, and benchmark prices against which to assess the reported costs for specialized goods and services.[141]

African revenue authorities face difficulties in all of these areas. Tracking value-added through a maze of interconnected companies linked through shell companies, holding companies and other intermediaries registered in centres from the British Virgin Islands to Switzerland and London is challenging for even the most developed tax bodies in the OECD – and governments across the OECD have identified transfer pricing as a threat to their tax base. For authorities in Africa, enforcing tax codes is often impossible.

Several governments in the region have been sufficiently concerned about transfer pricing to investigate individual companies. In 2008, the Zambia Revenue Authority engaged an international tax accounting team to audit selected mining companies, including the Mopani Copper Mine (MCM).[142] The main shareholder in MCM is Glencore, the world's largest commodity trading company, which holds a controlling stake through Carlisa Investments – a company based in the British Virgin Islands owned in turn by Glencore Finance (Bermuda). The audit report noted that MCM was selling copper to Glencore, which is registered in the town of Zug, Switzerland, at prices far below those on international markets – a practice that the team identified as plausible evidence of transfer pricing. Glencore executives strenuously denied wrongdoing. However, the European Investment Bank, which had extended a loan to MCM, expressed "serious concerns about Glencore's governance".[143]

Attempting to estimate the overall losses associated with mispricing has been described as an exercise in night vision. One of the most detailed analytical studies, carried out by Global Financial Integrity, put the average annual loss to Africa between 2008 and 2010 at US$38 billion. To place this figure in context, it was slightly higher than the flow of development assistance to the region over the same period.[144] Put differently, Africa could double aid by eliminating trade mispricing (Figure 22). Another US$ 25 billion is lost through other illicit outflows.

Figure 22: AFRICA'S ILLICIT OUTFLOWS



Source: OECD (n.d.), OECD Stats Extracts.
Global Financial Integrity (2012), Illicit Financial Flows from Developing Countries 2001-2010.
World Bank (2013), Global Economic Prospects – January 2013.

(All figures are average annual 2008-2010 for Sub-Saharan Africa)

3. PUBLIC SPENDING: THE PRICE OF INEQUITY AND INEFFICIENCY

The revenues generated through natural resource exports provide governments with finance to invest in health, education, water and sanitation, and infrastructure that can expand opportunity and support inclusive growth. Unfortunately, many governments have made poor use of the revenues at their disposal.

While management of commodity-based revenue flows has improved, inefficient and inequitable public spending systems have limited human development gains.

Escaping the boom-bust cycle

During the 1980s and the 1990s, African governments responded to rising commodity prices by increasing spending and taking on more debt. Subsequent price declines locked countries into a boom-bust cycle. Most resource-rich countries have now pulled out of that cycle. Analysis by the IMF shows that governments are

assessing future revenue streams more cautiously and pursuing counter-cyclical budget strategies, increasing spending during economic downturns rather than during upturns.[145]

There are exceptions to the general rule of improved fiscal policy. The six countries of the Economic and Monetary Community of Central Africa (CEMAC) – Cameroon, the Central African Republic, Chad, Equatorial Guinea, Gabon and the Republic of Congo – continue to suffer from weak fiscal management, limiting the scope for sustained increases in public investment.[146] In Ghana, the current government has been making painful adjustments to a fiscal deficit amounting to 15 per cent of GDP inherited from the previous government in 2008. This has restricted urgently needed spending on capital investment and basic services.

Public spending on basic services needs to be more equitable

Public spending is the primary mechanism for linking Africa's citizens to the natural resource wealth of their countries. Yet many of the poorest people in Africa have yet to see the high growth of their national economies translate into improved access to decent quality services.

Resource-rich countries in Africa still have some of the worst human development indicators in the world. Millions of people suffer debilitating and protracted periods of ill health because of avoidable diseases. Resource-rich countries probably account for two-thirds of Africa's out-of-school children – one in three of the world's total. Social protection systems are underdeveloped. When drought or sickness strikes, the poorest and most vulnerable have no safety net to support them. They are forced to sell productive assets, cut nutrition and take children out of school, perpetuating the cycle of poverty. Smallholder farmers are denied a chance to produce their way out of poverty by the poor state of the production and transport infrastructure.

Underspending is part of the problem. Few resource-rich countries have acted on the African Union's commitment to spend 15 per cent of national budgets on health. Several under-invest in education. The Central African Republic, Chad, the Democratic Republic of the Congo and Mauritius spend less than 3 per cent of GDP on education. In Sub-Saharan Africa, only 13 per cent of people in the poorest income quintile benefit from social safety net programmes, well below the 41 per cent share for the world – and while 20 per cent of all the beneficiaries of safety nets in Africa belong to the poorest quintile, that share is 30 per cent for the world.[147]

Several resource-rich countries stand out as systematic under-investors in social protection. Chad, Guinea, Niger, Uganda and Zimbabwe all spend less than 0.5 per cent of GDP, compared with a regional average of 2.5 per cent. The 1.5 per cent of GDP spent on social protection by Nigeria provides limited coverage. One of the main programmes, Care of the People (COPE), provides modest grants to only 22,000 households (0.001 per cent of the poor).[148]

Public spending is often heavily skewed against the poor. Nigeria spends around 6 per cent of GDP on education – a relatively high share by international standards. Yet unequal allocations across states, a strong emphasis on subsidies for tertiary students, and the bypassing of urban slums leaves millions of the country's poorest children without schooling.[142] Both Kenya and Tanzania spend less per pupil in most disadvantaged regions than they do in more prosperous areas.[149] In Zambia's Eastern, Northern, Western and Luapula provinces, where poverty rates exceed 70 per cent, fewer than 10 per cent of the population have access to clean water and sanitation – less than one-third of the national average.[150] In Ghana, poverty is concentrated in the northern region, but financing for basic services favours wealthier parts of the country.[151]

Some of the starkest illustrations of the lack of attention to equity in public spending come from the CEMAC countries. Cameroon spends US$50 per capita on health but has the epidemiological profile of a country that spends just US$10.[152] In Chad, oil exports increased government revenue sixfold between 2003 and 2008. Yet Chad has some of the world's worst indicators for child survival, maternal health, education and gender inequality. What has gone wrong? Successive governments have mismanaged the windfall in oil revenues through inequitable and unsustainable public spending policies (Box 11). Chad's proven oil reserves are limited, so there is a real danger that unless political leadership improves, the country will miss out on the poverty reduction opportunities created by the commodities boom.

Some resource-rich countries have allowed public spending on basic services to be crowded out by other priorities. Poorly targeted food and fuel subsidies often benefit the non-poor more than their intended beneficiaries, while revenue sharing arrangements seldom reflect national strategies for poverty reduction.[153]

As a federal country, Nigeria pools revenue and shares it across all tiers of governments – 13 per cent to the producing area, with the remainder spread across federal government (48 per cent), states (26 per cent) and local government (20 per cent). Many sub-national agencies lack the capacity to manage these revenues, which are not well linked to strategies for inclusive growth. Meanwhile, the efficiency and equity of federal government expenditure has been compromised by a gasoline subsidy, which in 2011 reached US$9 billion, or 4 per cent of GDP. The subsidy is highly regressive – the largest benefits go to the richest households – has crowded out urgently needed public spending in Nigeria's power sector, roads and ports, where a dilapidated infrastructure limits growth and prospects for non-oil employment.

Many other resource-rich countries also under-invest in infrastructure. The AfDB puts the regional infrastructure financing gap at about US$31 billion annually, or 5.1 per cent of GDP. Over 70 per cent of the deficit is for energy. Much of the remainder is accounted for by water and sanitation. Resource-rich countries have a potential advantage in financing infrastructure through revenues from mineral exports, but some show little inclination to exploit that advantage in the interests of their poorest citizens. Angola's oil exports increased in value from around US$350 per capita in 2000 to around US$3,000 in 2011, but the benefits have been directed towards the privileged few. Wealthy residents of Luanda, the nation's capital, receive highly subsidized electricity and water, while the city's poor and the vast majority of people living in rural areas go without.[154] Some 40 per cent of the urban population rely on untreated water sold by vendors; as a result Angola has one of the world's highest rates of diarrheal disease. Meanwhile, a complex web of subsidies and operational inefficiencies has left the country with one of the world's least efficient power grids.

BOX 11: Unsustainable and inequitable – managing Chad's oil revenues

Since the Doba field came on stream, Chad has benefited from an oil revenue windfall. The domestically financed budget increased from 14 per cent to 40 per cent of non-oil GDP between 2003 and 2009 – an almost threefold increase in monetary terms. Oil represented 70 per cent of government revenues over the period. Unfortunately, the public spending financed by oil wealth has not sparked a human development breakthrough.

Revenues from oil could have financed the ambitious National Poverty Reduction Strategy (NPRS) adopted in 2003, but the priorities set out in the NPRS have not been mirrored in budget allocations. Spending on basic services and infrastructure has been crowded out by security spending, which made up 18 per cent of the 2004–2007 budget compared with a planned allocation of 12 per cent. Large allocations were made to the offices of the president and the prime minister, while allocations to health and education were respectively one-half and 60 per cent of the levels indicated in the NPRS. Chad spends just 3 per cent of GDP on education, for example – half the average for Sub-Saharan Africa.

Mismanagement of oil revenues extends beyond spending priorities. The government sharply increased public spending when oil prices were high, without making adequate provision for downturns in the market. As a result, Chad's non-oil primary fiscal deficit is equivalent to 28 per cent of GDP, leading the World Bank and the IMF to warn that the country is on a pathway to an unsustainable debt-service burden.

The danger is that by 2020, Chad will have experienced two decades of relatively strong growth and harvested an oil revenue windfall, only to be left at the bottom of the HDI – and with an unsustainable debt.

Source: IMF 2011. World Bank 2011, EnergyPedia 2011 http://www.imf.org/external/pubs/ft/scr/2011/cr11302.pdf
IMF (2011), "Chad: 2011 Article IV Consultation", IMF Country Report No. 11/302, IMF, Washington DC, accessed April 17, 2013, from http://www.imf.org/external/pubs/ft/scr/2011/cr11302.pdf
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EnergyPedia. (2011, February 11). Chad: Taiwan's CPC discovers new oil and gas reserves in Chad. Retrieved April 17, 2003, from http://www.energy-pedia.com/news/chad/taiwans-cpc-discovers-new-oil-and-gas-reserves-in-chad

PART IV

UNLOCKING THE POTENTIAL FOR FUTURE GENERATIONS

Over the next decade, governments in resource-rich countries across Africa have a unique window of opportunity. Many have built up a track record in strong macroeconomic management. Innovative international partnerships between governments, the private sector and civil society are driving reforms. And some African governments already have road maps for governing their natural resources. But more action is needed for effective and equitable stewardship of Africa's natural resource wealth to transform the region.

"It is said … that we cannot even agree among ourselves how best to utilize our resources for our own social needs. Yet all stock exchanges in the world are preoccupied with Africa's gold, diamonds, uranium, platinum, copper and iron ore."[155]

Kwame Nkrumah, 1963

Africa's resource wealth has bypassed the vast majority of African people and built vast fortunes for a privileged view. Mineral exports have financed monuments in Europe, generated profits for foreign investors, and benefited commercial and political elites. Few African countries have successfully used their natural resource capital to extend opportunity, combat poverty and support dynamic, inclusive growth.

Countries are not captive to history, however – and the course of nations is not dictated by their resource endowments. Africa has been afflicted by poor resource governance, and by a failure to secure the benefits of African resource wealth for African people, but it is not afflicted by a "resource curse" that denies present and future generations the chance to build a better future.

Half a century ago, the first post-independence leaders saw their countries' mineral wealth – which had been exploited under colonialism for the benefit of others – as a source of self-reliant development. Patrice Lumumba, the first democratically elected prime minister of what was then named the Republic of the Congo (now the Democratic Republic of the Congo), realized his country's vast natural resources could be used to pay for schools, health clinics and infrastructure. In 1963, at the inaugural meeting of the organization that evolved into the African Union, Ghana's first post-independence president, Kwame Nkrumah, called on political leaders to develop strategies that would give Africans a stake in the region's resource endowments. "The resources are there," he said, "it is for us to marshal them in the active service of our people." Those words retain a powerful resonance.

Daunting as the challenges may be, there is cause for optimism. Over the next decade, governments in resource-rich countries across Africa have a unique window of opportunity. Many have built up a track record in strong macroeconomic management. Innovative international partnerships between governments, the private sector and NGOs are driving reforms. And Africa's governments already have road maps for efficient and equitable governance of natural resources. The Africa Mining Vision, produced under the auspices of the African Union and the Economic Commission for Africa, provides a forthright acknowledgement of what has gone wrong and practical prescriptions for achieving change. The Natural Resource Charter, a set of principles developed to help governments manage mineral assets, identifies the governance strategies and economic policies needed "to secure maximum benefit for the citizens of the host country."

This part of the report identifies antidotes to some of the most pressing natural resource governance problems in Africa. These antidotes are not medicines yet to be developed; they are already being applied through practical reforms in some of the poorest countries in Africa. We focus on three critical areas:

- Strengthening transparency as a force for accountability and the empowerment of Africa's citizens.
- Spreading the benefits of mineral wealth through fair taxation, efficient and equitable public spending, and strategies for linking extractive sectors to national markets.
- Managing the social and environmental impacts of natural resource exploitation to benefit countries and people.

1. TRANSPARENCY AND ACCOUNTABILITY: EMPOWERING AFRICA'S CITIZENS

Concern over transparency is not a recent development. Writing almost 200 years ago, James Madison, the fourth president of the United States and one of drafters of the constitution, commented:

"A popular Government, without popular information, or the means of acquiring it, is but a Prologue to a Farce or a Tragedy; or, perhaps, both. Knowledge will forever govern ignorance. And a people who mean to be their own Governors must arm themselves with the power which knowledge gives."[156]

Public access to information is recognized in a wide range of international and African declarations and conventions as a fundamental human right. Identifying principles and designing policies for good governance in natural minerals is vital, but not enough. The real force for change is the exposure of policymakers to the force of public opinion. In Nigeria, the reforming finance minister Ngozi Okonjo-Iweala has done a great deal to improve the quality of policy-making. On her own account, the single most important reform that she has led in Nigeria is the move towards greater budget openness. Asked to provide advice to Ghana on managing the oil sector, she commented: "If I can provide any sisterly advice on this; it is that you should be uncompromising on issues of transparency and accountability in that sector."

In recent years, more and more Africans have gained the power to change governments. But real democracy is about more than an occasional vote. It is also about being able to hold governments to account – for putting the public interest ahead of private gain, managing the public purse with integrity, and allowing public scrutiny of policies that govern the commercial exploitation of a country's natural resource wealth. Accountability has two dimensions. The first is transparency – making clear, comprehensive information on government business fully available to all. That business includes dealings with companies that affect the management of natural resources. The second dimension is voice, or having the power to use information through political and legal processes to influence decisions.

When it comes to holding governments and companies to account for their management of natural resources, citizens need many types of information– and in a form that is accessible and understandable. Unfortunately, resource wealth often goes hand in hand with a drip-feed approach to sharing information that has corrosive effects on democracy. As we showed in Part III, much of the region's resource wealth is hidden from public view.

"Transparency" has become such an abstract development buzzword that there is a danger of its importance being overlooked. Failure to provide transparency has some very tangible outcomes. Keeping citizens in the dark about natural resource deals facilitates theft from the public purse, misallocation and waste. Restricted transparency is at the heart of the gap between wealth creation and human development outlined in Part I of this report. And if keeping people in the dark is a source of the malaise then, as the US Supreme Court Justice, Louis D. Brandeis, put it, sunlight is "the best disinfectant".

When governments are more transparent, their countries are not only less prone to corruption, they are also more likely to enjoy higher levels of human development, stronger fiscal discipline and long-term economic growth.[157] Moreover, greater transparency is affordable, unlikely to do harm and an important goal in its own right. The bad news is that most resource-rich countries in Africa score poorly on most indexes of transparency in managing natural resources.[158]

Letting in the sunlight is not a straightforward operation, however. Effective transparency may start with the disclosure of information, but it does not end there. It is also vital to verify that the information made available is complete and accurate, ensure that is presented in a form that can be understood by the wider public, and facilitate national dialogue on the issues at stake. Many countries have made impressive progress, but with Africa's natural resource revenues set to rise still further, far more has to be done to unlock the transformative power of transparency.

The prospects for greater transparency in resource-rich Africa offer plenty of cause for pessimism. There is compelling evidence that the higher the share of GDP accounted for by resource wealth, the less information is made available to citizens.[159] However, there is equally compelling evidence that change is possible. In resource-rich countries with regular elections and institutionalized political competition, the tendency towards opacity is less marked.[160] An active civil society and the media can also tip the balance in favour of

greater transparency, as can international initiatives.[161] Ultimately, transparency depends on political dynamics and power relationships within society.

Opening up the accounts – national legislation and international action

Across the resource-rich countries of Africa, there is a marked impetus towards greater transparency. Part of that impetus comes from below. African civil society is increasingly effective in using political processes, social media and information sharing to demand information on mining contracts. Reformers in government and parliamentarians have drawn on the demands of transparency campaigners to enshrine greater openness in national law – and to strengthen the legislative oversight of elected representatives. International partnerships have supported the reform process, with the EITI playing a decisive role. National action and international solidarity have yielded results, though much remains to be done.

Africa on the move – building on the Extractive Industries Transparency Initiative

While progress has been partial and uneven, several governments in Africa are demonstrating high levels of leadership in improving transparency and accountability. Take the case of Sierra Leone. Until recently, information relating to mining agreements between the government and natural resource extraction companies was kept at the Ministry of Mines on paper documents that were neither secure nor accurate. Even the most basic data on contracts, commercial transactions and payments were missing. That is no longer the case. In 2012 the government of Sierra Leone established an online database for mining contracts.[162] The purpose of the system, developed with the support of international partners, is to place all revenue data for the country's extractive industry – including payments made for licences, royalties and contributions to local chiefdoms – collected, recorded and published for public accessibility.

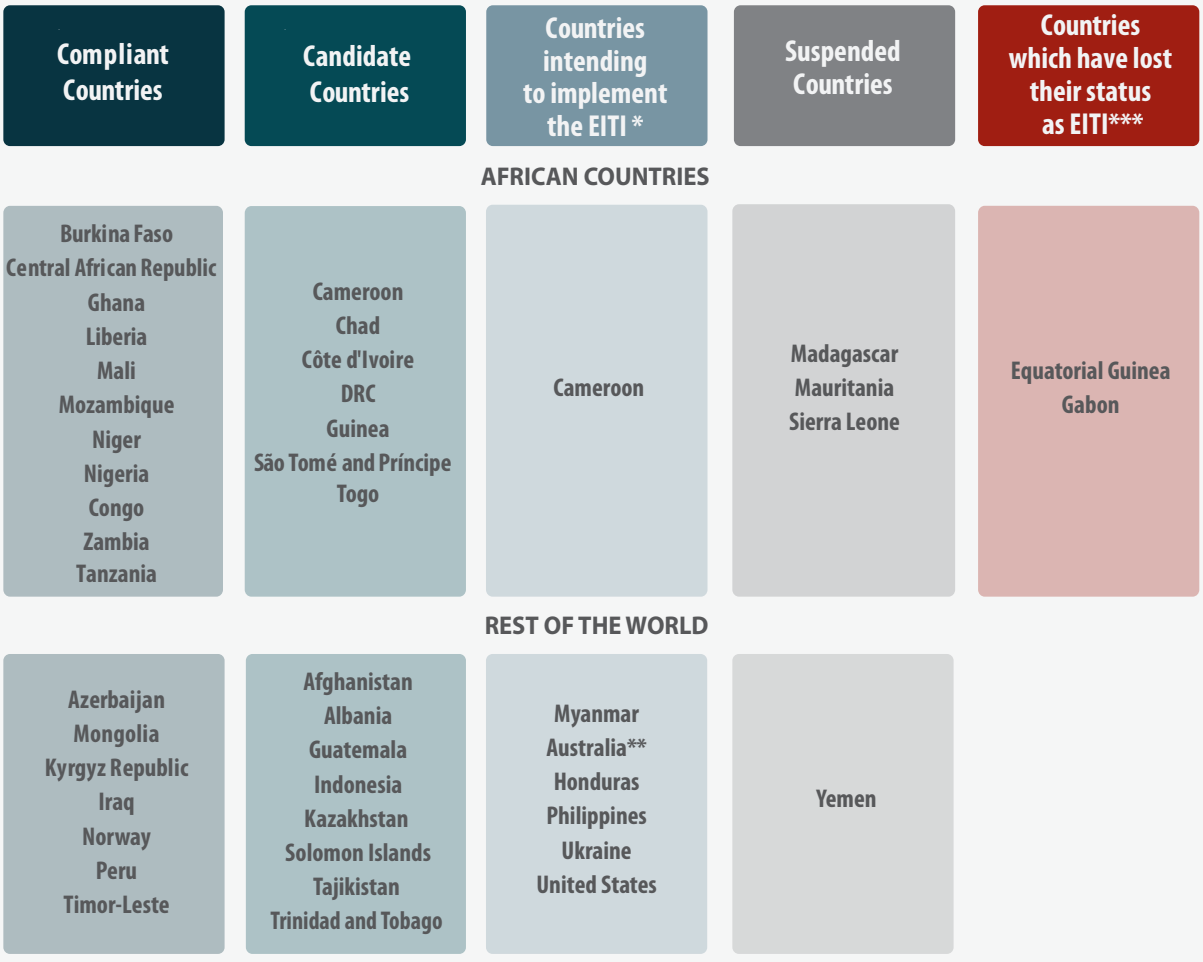
Emerging legislation on extractive industries places a far greater emphasis on openness. The recent experience of Guinea demonstrates that political leadership is the key to greater transparency: governments determined to cut through the administrative and technical details surrounding the disclosure of contracts can do so. Guinea's transition to greater transparency came in 2011. The government of President Alpha Condé was elected on a platform that included a pledge to review mining agreements, and to reform reporting practices. A new mining code was adopted, with an independent Technical Contract Review Committee charged with preparing the ground for a more open system of information on contracts. In February 2012, the committee published on its website more than 60 contract documents covering 18 mining projects, along with a searchable summary of contract terms, allowing non-experts to find key sections and understand the obligations of companies and the government.[163] Dozens of previously secret contracts were subsequently placed online, including projects managed by Rio Tinto, BHP Billiton and Vale. The new policy will allow public scrutiny of deals involving major concessions, including Rio Tinto's US$700 million payment for rights related to the Simandou iron ore deposit.[164]

The EITI has acted as a catalyst for reform in many countries, providing governments, civil society and foreign investors with a set of benchmarks for good practice.[165] Over the years, the EITI, which grew out of the Publish What You Pay campaign spearheaded by NGOs, has evolved into a global standard. It has promoted revenue transparency through a simple but powerful mechanism: a reporting process that reconciles company payments with government revenues. In 2013, African countries accounted for 11 of the 18 countries that are EITI compliant. Another 7 are registered as EITI candidate countries, while Equatorial Guinea and Gabon have lost their EITI status (Figure 23). Seventy of the largest global oil, gas and mining companies support and participate in the initiative at the country level.

The EITI process is about more than technical financial reporting. While the EITI's Board and International Secretariat oversee the broad methodology for implementation, each country creates its own process. The reporting arrangements bring together government, non-government organizations and companies – and the national reports that are produced provide a focal point for national dialogue. International organizations such as the World Bank, the IMF and regional development banks are active participants in the EITI.

Even though EITI reporting is voluntary, the processes that it supports generate a powerful political

Figure 23: EITI COUNTRY STATUS



*Governments in several other countries have announced that they intend to implement the EITI. When the international EITI Board has accepted a country's application, the country will be recognised as an EITI Candidate
**Conducting an EITI Pilot but has not committed to implement the EITI
***Some countries have lost their status as EITI implementing countries following EITI Board review in accordance with the EITI Rules. These countries may at any time re-apply for EITI Candidate status

Source: Extractive Industries Transparency Initiative (2013), EITI Countries, accessed in March 2013.

momentum. Reformers in government can use EITI reporting to turn the spotlight on opaque practices. Citizens and civil society benefit from access to the information they need to hold governments and companies to account. Companies stand to gain from a level playing field that creates disincentives for their competitors to resort to illicit payments.

Principles enshrined in the EITI have informed emerging legislation on natural resource management. Liberia stands out as a country that has used participation in the initiative to drive wider reforms. The government started by disclosing all mining, oil and forestry contracts on the EITI website, making Liberia one of the first countries to adopt comprehensive natural resource contract transparency. It then enshrined the EITI in law, mandating disclosure by all active mining companies. The new Liberian Draft Petroleum Policy has a section devoted to transparency measures that will influence the eventual drafting of sector legislation.

It includes provisions requiring the disclosure of the beneficial ownership structure of mining companies, revenue forecasts and oil sale price information. There is evidence that the EITI dialogue has also increased budget transparency – albeit from a low base. In 2008, when the country was first included in the Open Budget Index, Liberia scored 2 out of 100 for transparency. In the 2012 exercise it scored 43. The government recently launched a budget portal providing easy access to key documents as part of its Open Budget Initiative.

Building on the foundations created through the EITI, Ghana has emerged as a regional leader in natural resource transparency. Reformers in government and civil society used the EITI as a platform for policy dialogue and transparency. At a time when legislative oversight was weak, the country's EITI reports represented the most comprehensive source of information on mining revenues and include production volumes, the value of mineral exports, the names of companies operating in the country, production data by company, production stream values, royalties, special taxes, dividends, and licence and acreage fees. Reporting has now been extended from mining sector to the oil and gas sector, which started production in December 2010.[166] The Ministry of Energy has put Ghana's most important petroleum agreements online.[167] Apart from sharing information, legislation has created mechanisms that institutionalize transparency in revenue management (Box 12).

BOX 12: Ghana's Petroleum Revenue Management Act

Having become EITI compliant in the petroleum and mineral sector, in 2011 Ghana enacted the Petroleum Revenue Management Act (PRMA). The legislation exceeds EITI standards. Apart from establishing rigorous rules for reporting on oil fund assets and investments, the PRMA created an independent regulatory body, the Public Interest and Accountability Committee (PIAC), to monitor compliance with the law, provide a platform for public debate and assess the management and use of petroleum revenues.

While the PIAC is an advisory body with no formal powers, it has significant leverage. The committee comprises 13 representatives of religious, traditional, and professional bodies; civil society and community-based groups; trade unions; and the Ghana Extractives Industries Transparency Initiative. The committee publishes bi-annual reports that have forced the government to explain its performance; its first report highlighted a 50 per cent shortfall between forecast and actual government revenues forecast and actual outturns – which was due to uncollected corporate taxes.

Greater accountability in the natural resources sector has helped to increase budget transparency. In 2012, Ghana scored 50/100 on the OBI – the highest in West Africa and well above the regional average.

Sources: Bell, J. C., P. Heller and A. Heuty (2010), "Comments on Ghana's Petroleum Revenue Management Bill", Revenue Watch, New York.
Veit, Peter G. and Carole Excell. Forthcoming. "Access to Information and Transparency Provisions in Petroleum Laws in Africa: A Comparative Analysis of Cases." In: Queen's University, Ed. New Approaches to the Governance of Natural Resources: Insights from Africa. Palgrave Macmillan
De Renzio, P., A. Gillies and A. Heuty (2013), background paper commissioned by the Africa Progress Panel

Transparency and accountability are important goals in their own right. At the same time, improved access to information is a means to wider ends. It can enable governments and civil society groups to identify losses of revenue and inefficiencies that limit the benefits of natural resource wealth for the host country.

In 2007, for example, the Nigerian National Assembly passed into law the Nigeria Extractive Industries Transparency Initiative Act, which made the reporting of all payments binding and enshrined in law the right of civil society to obtain the details. Three years later, Nigeria became one of the first countries to achieve EITI compliant status. The audit that led to that outcome identified a shortfall of US$800 million in taxes and royalties owed to the government, along with discrepancies in reported signature bonuses and payments. It was also an EITI audit that drew attention the Nigerian National Petroleum Corporation's failure to transfer revenues to government (see Part III). Closing these loopholes is estimated to have prevented revenue losses that exceed the combined budgets for health, education and power. It has also strengthened the hands of reformers in Nigeria.

Building transparency takes time

Governments can adopt transparency and accountability principles and enact legislation

relatively quickly. But building institutions, capacity and political processes that foster greater openness is a long process – and breaking down long-established practices can be difficult.

Mozambique, for example, became EITI compliant in October 2012, but has yet to follow the best practices established in Ghana, Liberia and Sierra Leone. The National Petroleum Institute of the Ministry of Mineral Resources regulates the hydrocarbon sector and collects payments from energy companies. Yet it makes available very little information about licensing procedures, financial information is provided only at a very highly aggregated level, there is little parliamentary oversight, and – critically – detailed contractual information is not available to the public. This is not an encouraging backdrop given the imminent prospect of a surge in natural gas revenues. A detailed review of access to information rules in several other countries has identified wider concerns about the limits to emerging transparency (Box 13).

The EITI plays a critical role in advancing reform, but there are gaps in the current framework, as an evaluation in 2011 showed. Reporting requirements on licences and individual contracts need to be more stringent, and state-owned companies should be required to disclose not just the names of companies bidding for concessions and licences, but also the beneficial ownership of those companies. The EITI should also adopt the central principle of Section 1504 of the US Dodd–Frank Act, which requires companies to report on their payments on a project-by-project basis, rather than by providing aggregate national-level reporting – a practice that can obscure potential sources of corruption and revenue diversion. Proposals in all of these areas were under consideration by the EITI Board in preparation for an annual meeting scheduled for May 2013.

BOX 13: Emerging legal frameworks for access to information

Petroleum laws being developed or reformed in many African countries will have an important bearing on the ability of citizens and civil society groups to secure access to information. One recent survey of information provisions in the laws of five countries – Ethiopia, Ghana, Liberia, Uganda and Zimbabwe – identified several concerns:

- **Weak provisions on enforcement:** Few petroleum laws provide for the enforcement of the right to access information, or appeal against refusal. Some laws oblige the executive branch of government to report to the legislature, but the detail of the information to be provided is seldom specified. There are few provisions for information to be made accessible in local languages and understandable to non-experts.
- **Unclear instructions on terms of disclosure:** Petroleum law information provisions do not typically provide clear directions for effective implementation. For example, while all laws require licensees to provide the government with information, most are silent on how the information should be shared and what government should do with it. Uganda's Petroleum Bill requires licensees to keep records of a wide range of information on the quantity and quality of crude oil reserves, discovery, and drilling operations, but the information is only transferred after the expiry of the licence, precluding public access to information.
- **Ambiguity over what is confidential:** Confidentiality clauses are typically silent on how confidentiality is justified, who can access confidential information, how long information can be deemed confidential, and how claims of confidentiality can be challenged in the public interest. By not clearly delineating what is considered confidential, legislation leaves government officials with considerable discretionary authority. Establishing a presumption in favour of disclosure that places the burden on government to justify withholding information would enhance access to information.
- **Criminalizing the release of confidential information:** Most laws incorporate harsh sanctions against the release of confidential information. Coupled with the ambiguity surrounding what is confidential, this creates a perverse incentive for officials to err on the side of withholding information.

Source: Veit, Peter G. and Carole Excell. Forthcoming. "Access to Information and Transparency Provisions in Petroleum Laws in Africa: A Comparative Analysis of Cases." In: Queen's University, Ed. New Approaches to the Governance of Natural Resources: Insights from Africa. Palgrave Macmillan

Towards mandatory reporting – the US Dodd–Frank Act and EU legislation

The EITI is a voluntary reporting standard. That is a source of strength as well as weakness. The strength lies in moral persuasion and an appeal to enlightened self-interest: governments and companies that fail to comply run the risk of reputational damage. An underlying weakness of the EITI is that it has no recourse to mandatory reporting standards, or to sanctions. Until recently, the global architecture for transparency and accountability lacked teeth – but this is about to change.

In July 2010, the United States Congress passed the Dodd–Frank Wall Street Reform and Consumer Protection Act. Its Section 1504 represents a landmark, requiring full disclosure of "any payment made by the resource extraction issuer, a subsidiary of the resource extraction issuer, or an entity under the control of the resource extraction issuer to a foreign government … for the purposes of the commercial development of oil, natural gas, or minerals."

In 2012, the Securities and Exchange Commission (SEC), the principal government agency responsible for regulating the US financial sector, adopted the final rules for implementation of the legislation.[168] Companies will be required to file annual reports with the SEC. Critically, the reporting will require public disclosure of all payments in excess of US$100,000 on a project-by-project basis.[169]

Similar legislation has just been passed in the European Union. The importance of the US and EU legislation can hardly be overstated. The Dodd–Frank Act is the first step towards a transparent, rules-based and legally enforceable multilateral regime for the global petroleum and mining industry. Over half of the world's total value of extractive industry market capitalization is found on U.S. exchanges alone, and a large share of international oil, gas and mining companies are registered with the SEC. Once the new laws are in operation, global companies will be held to account for a far higher standard of disclosure than currently required under the EITI.

When companies are unwilling partners in transparency

The Dodd–Frank and EU legislation provide an opportunity for multinational companies to work with governments and African civil society to achieve higher standards of disclosure. Unfortunately, many major petroleum and mining companies appear to be bent on squandering that opportunity. The American Petroleum Institute, an oil industry association that includes BP, Chevron, Exxon and Royal Dutch Shell, along with other plaintiffs namely Chamber of Commerce of the United States of America, Independent Petroleum Association of America and the National Foreign Trade Council have brought a legal case against the SEC seeking the annulment of Section 1504.[170] Some of the same companies have lobbied European governments to weaken the proposed reporting system by securing exemptions.

One proposed exemption, the so-called "tyrant veto", would exempt companies from reporting payments in countries where full disclosure is prohibited by national laws.[171] Qatar has been cited as a country with legislation that would prohibit disclosure at the level required under Dodd–Frank. Another lobbying track has seen companies seek to redefine the "project by project" provision to allow for all operations in a country to be treated as a single project.[172] Some companies have claimed that the new legislation will bring excessive reporting costs and have sought to have the financial threshold on reporting raised from contracts in excess of US$100,000 to contracts in excess of US$1 million – a proposal that would remove whole areas of payment from review.

Many of the charges against the Dodd–Frank legislation stretch credibility. Citing Qatar's laws as grounds for overturning transparency legislation is hardly a claim to the moral high ground: Qatar sits alongside Equatorial Guinea at the bottom of the Open Budget Index, registering zero out of 100. Should all multilateral efforts to strengthen transparency be adjusted to meet the standards of the world's worst-performing countries?

Cost arguments are equally questionable. Most companies already have extensive internal systems for recording payments, already collect project-level information to handle their current reporting requirements[173] and are legally required to submit all payments for auditing and reporting to shareholders. There is no credible evidence to indicate that the Dodd–Frank requirements will impose significant additional costs, let alone threaten the competitive position of some of the world's largest companies.

There is also a striking mismatch between the arguments against mandatory reporting and emerging best practices. Several companies have already embraced greater contract transparency without obvious harm to their competitive position. BP publishes production-sharing contracts in Azerbaijan. The director of corporate affairs at Newmont Mining, one of the world's largest gold mining companies, has publicly called into question approaches that limit disclosure of contracts, describing "the commercially sensitive thing" as "an anachronism."[174] Tullow, an energy company, takes the position "that should a government wish to make these agreements public, we would fully support them in doing so." It has published its Ghana production-sharing contracts.

Industry associations have also recognized the case for greater transparency in contract disclosure. The International Council on Mining and Metals (ICMM) requires that its members – 22 of the largest global mining companies – "engage constructively in appropriate forums to improve the transparency of … contractual provisions on a level playing field basis."

While it is only some companies that are opposed to mandatory reporting, the danger is that their actions will tarnish the reputation of the sector as a whole, undermining Africa's promising efforts to strengthen resource governance. These companies should realize that they are swimming against the tide of reform. Across Africa, governments are amending petroleum and mineral laws to facilitate disclosure. For example, Uganda's 2012 Petroleum Act provides that its confidentiality clause shall not prevent disclosure.

Rather than rolling back the US and EU legislation, as some companies suggest, there are compelling grounds for extending its global reach. The failure of Canada to provide leadership in this area is particularly troubling. Canada is one of the world's leading mining centres. Companies listed on the Toronto stock exchanges control global mining assets in excess of US$109 billion and in 2011 were involved in over 330 projects in Africa.[175] But Canada's regulations governing disclosure of payments are far weaker than those applied by the SEC in the United States. Canada does not comply with or implement EITI standards and, unlike the United States, is not seeking to become an EITI member.

The Canadian government has opposed the adoption of SEC-style disclosure rules; while actively supporting voluntary disclosure, some government figures have raised concerns that more stringent disclosure could lead to a potential loss of competitiveness. That assessment is misplaced. Consistent transparency laws and practices help to establish a level playing field for all extractive resource companies, and promote development. Many of Canada's mining companies recognize this. In September 2012, two major industry bodies – the Mining Association of Canada and the Prospectors' and Developers' Association of Canada – joined with the Revenue Watch Institute to form the Resource Revenue Transparency Working Group. The shared aim is to develop a framework for requiring Canadian oil and mining companies to disclose payments to governments that is aligned with US and EU legislation.

China's stock exchanges, most notably in Hong Kong and Shanghai, also need to be brought into a more transparent multilateral regime. There are some encouraging signs that more stringent disclosure rules are being adopted.[176]

2. USING NATURAL RESOURCES TO EXPAND OPPORTUNITY: FAIR TAXATION, EQUITABLE SPENDING AND STRONGER LINKAGES

The ultimate measure of natural resource is the benefit that it generates for people. In Part I, we highlighted the gap in many resource-rich countries between export-led economic growth and weak progress in human development. To close that gap, governments need to spread the benefits of natural wealth by mobilizing revenue through taxation, and by investing it efficiently and equitably in public goods. This requires taxation systems that combine incentives for investors with fairness for the host country. Resource revenue flows are often unpredictable, so robust public finance management is vital. And public spending policies should be aimed at improving basic services, with an emphasis on reaching the most marginalized.

There is a third dimension to spreading the benefits of natural resource wealth. Extractive industries typically operate as economic enclaves, with few links to local firms and employment markets, and little value added in production. Strengthening linkages and adding value are critical if the benefits of resource extraction are to be spread more widely.

Fair taxation – an international challenge

If Africa is to harness its oil, gas and mining resources for human development, the international community has to create a global environment that fosters greater transparency. Far more than increased aid, what Africa needs is strengthened international cooperation so that it can secure a fair share of the wealth now being drained out of the region through unfair and sometimes illegal practices.

Taxation is a case in point. African governments themselves have to review current extractive industry tax regimes in the light of prevailing world market conditions. Creating incentives for high-quality investment is critical. Given the large initial capital costs and the long-term investment horizons involved in the extractive sector, it is also important that governments create a stable and predictable environment for investors.

Current tax regimes suffer from several failings. Many are highly complex, difficult to administer and structured around project-by-project concessions provided to individual investors. Multiple tax structures do not make for efficient administration. International evidence documented by the IMF suggests that the advantages of case-by-case negotiation are frequently exaggerated.[177] They pitch governments into negotiations on the potential profitability of a deposit with investors who are likely to be better informed. Adherence to a general tax structure is the rule in Latin America and much of Asia, but the exception in Africa – and governments need to review this arrangement.

Many governments also need to review the specific concessions on offer. Several countries provide tax concessions that might be considered highly favourable to investors under normal market conditions. In an era of high and rising prices they are excessively generous. The "rents" associated with resource wealth – the excess of revenue over costs and normal profits – are rising. Some governments – Ghana, Tanzania and Zambia among them – have recognized this by increasing royalties and other taxes. Production-sharing arrangements can also be adjusted in the light of the profits secured on exports.

Concession and licensing agreements play an important role in determining the revenues that countries receive for their natural resource wealth. As we highlighted in Part III, several countries are systematically undervaluing the assets. The Democratic Republic of the Congo is an extreme case, but not an isolated one. Natural resources have to be managed as a public asset – and that means regulating markets for concessions and licences efficiently. The Natural Resource Charter underscores the importance of competition as a critical mechanism for ensuring that resources are efficiently utilized. Transparent bidding through competitive auction is the best way to secure a realistic price, and to prevent corruption. In cases where concessions or licences are sold at excessive profit margins, governments should consider corporate gains taxation or a windfall tax.

Domestic tax reform alone will not be sufficient to secure revenues commensurate with the wealth generated by resource exports. The EITI reporting process has exposed the very low real tax levels and excessive profit margins of foreign investors. An excessive approach to concessions is just one part of the story. Many resource-rich countries in Africa are losing out as a result of "aggressive tax planning" – a euphemism in

some cases for tax evasion. Transfer pricing is another endemic concern. As we highlighted in Part III, Africa is losing as much through transfer pricing as it receives in aid.[178]

International tax action needs to go beyond dialogue

Tax evasion is a global problem that requires multilateral solutions. Africa cannot combat tax evasion solely through national and regional policy. The systems that allow companies to under-report tax liabilities operate across borders. Extensive use of tax havens, shell companies and multilayered company structures operating across tax jurisdictions creates an impenetrable barrier of secrecy.

Tax authorities in all regions struggle to prevent the erosion of their tax bases, but Africa struggles more than most. That is partly because of the restricted human, technical and financial resources available to revenue administrations. But it is also because companies involved in the extractive sector are highly integrated and make extensive use of offshore centres and tax havens with limited disclosure requirements. These are ideal conditions for tax evasion through mispricing.

There is a growing recognition that multilateral tax cooperation in general and support for Africa in particular falls far short of what is required. G20 leaders acknowledged this in 2010 when they called for enhanced measures "to counter the erosion of developing countries' tax bases" and to highlight non-cooperative jurisdictions. The 2011 Cannes Summit restated familiar concerns, but failed to initiate decisive action.

Developed countries have promised much but delivered little by way of meaningful support to revenue authorities in Africa. The emphasis has been on the exchange of information and the establishment of standards. Operating under the auspices of the G20, the Global Forum on Transparency and Exchange of Information for Tax Purposes (Global Forum) is promoting internationally agreed standards. There has been a proliferation of agreements on information exchange – about 700 between OECD countries and developing countries in 2010. The African Tax Administration Forum (ATAF) is part of the wider dialogue. But while dialogue is necessary, it is not a substitute either for the multilateral action needed to curtail tax evasion, or for the capacity-building support that Africa needs to strengthen tax administration systems.

At the heart of the problem is the unwillingness of the OECD countries and wider international community to strengthen disclosure standards. In 2009, the OECD removed the last jurisdictions from its list of offshore havens, claiming that all such centres had met international reporting standards. That may have been technically correct, but the reporting standards are far too weak to address the problems that have been identified.

In reality, offshore centres are thriving. Worldwide, 50 to 60 active havens host over 2 million companies, including thousands of banks and investment funds.[179] The companies and the funds they control are lured by low taxation, limited regulation and secrecy. Some operate from centres such as the Cayman Islands, Belize and the British Virgin Islands. But as highlighted in a recent in-depth survey by The Economist, developed countries offer plenty of opportunity for offshore action. Japan, Russia, Switzerland, the United Kingdom and the United States all operate regimes that allow for aggressive tax planning and limited regulatory oversight. Six of the G8 countries are either only partially compliant or non-compliant with the OECD Financial Action Task Force's recommendations aimed at preventing money laundering. Switzerland is the world's leading commodity-trading hub, accounting for around 60 per cent of metals and minerals trade. Yet the political influence of the commodity-trading sector has enabled it to resist moves towards more stringent regulation with mandatory reporting.

Closing these loopholes and raising disclosure standards is vital for strengthened natural resource governance in Africa. All tax jurisdictions should be required to declare the beneficial ownership structure of registered companies. Without this provision it is impossible for governments or civil society groups in Africa to determine whether or not concession trading has involved illicit payments. International banking regulations also need to be strengthened so that offshore centres cannot act as conduits for natural resource wealth stolen from Africans.

Efforts to curtail transfer pricing have suffered the same malaise as tax cooperation in other areas. Extensive dialogue focused on the OECD has established core standards,[180] and there is an international consensus that intra-company trade should be conducted on the same basis as trade between two unrelated companies – the so-called "arm's-length" principle. But it is difficult for African governments to enforce this principle, given the sheer complexity of the operations of multinational extractive companies, the fact that intra-company transactions may not be easily comparable with "arms-length" prices, and the limited capacity of Africa's revenue authorities.

These are areas in which Africa's development partners could do far more. Tax authorities in rich countries have developed extensive systems for benchmarking prices, in most cases in consultation with multinational companies. Petroleum and mining companies themselves could make more data available. If Africa is to enforce the "arm's-length" principle, tax cooperation must be strengthened. This implies not just more dialogue between tax authorities, but also an expanded role for regional development banks, multilateral development banks and aid agencies in building technical capacity for effective enforcement.

Governments in Africa could also look beyond the OECD dialogue. Brazil has carried out a major reform of tax provisions aimed at combating transfer pricing. While the issues are technically complex, the underlying principle is relatively straightforward. When dealing with intra-firm trade in areas lacking comparable prices, tax authorities will determine a price through a credible institution, or relevant price on a commodities exchange, and apply it to the transactions in question. All companies trading from Brazil through low tax jurisdictions will be subject to the new regime.[181]

Spreading benefits through revenue management and equitable public spending

The growth surge in resource-rich African countries is often presented, with some justification, as one of the development success stories of the past decade. Yet there is an increasingly stark contrast between the rising wealth of nations and the wellbeing of people. Moreover, no resource boom lasts forever – and governments in resource-rich countries have to make hard decisions on how to translate resource revenue streams into sustained development.

The current global commodity boom presents a major opportunity. As we saw in Part II of this report, high prices are generating large revenues and inducing new discoveries that will generate future revenue flows. Countries across the region stand to reap a financial windfall. But resource windfalls are, by definition, temporary in nature: extraction depletes the asset that generates the revenue.

The corollary is that governments have a window of opportunity to transform their revenue wealth into investments that address the needs of today while building for the future. Simple distinctions between "investments in growth" and "investments in social welfare" are unhelpful in this context. In societies beset by mass poverty, malnutrition and restricted opportunities for health and education, there are compelling grounds for using resource revenues to raise consumption levels, and put in place the spending needed to enhance the quality and accessibility of basic services. This is an ethical imperative backed by economic logic. Malnutrition, ill-health and low levels of education are a powerful constraint on growth in Africa. By the same token, governments have to ensure that, as resource assets are depleted, they are offset by the accumulation of other social and economic infrastructural assets – a more skilled work force, transport infrastructure, an efficient power grid, water and sanitation, more productive smallholder farming – with the potential to support increased and more inclusive growth.

Achieving these goals is technically and politically difficult. Governments have to make tough decisions about how to balance the interests of the future and the present. Should they prioritize long-term investments or consumption? And how should the balance between saving and spending shift over time? There are no simple answers to these questions. Much depends on the levels of reserves, whether countries are in the early or late stages of resource depletion, technical capacity, and the prevailing balance between consumption and spending. However, recent research, international experience and evidence from Africa demonstrates that although the past record may be disappointing, resource-rich countries have an opportunity to put in place policies that could lift millions out of poverty today while investing in increased productivity for the future.

"Investing in investing"

Resource-rich countries face two distinct but related challenges in managing natural assets. The first is depletion: because natural resource wealth is finite it declines as production rises. The second centres on price shocks. Fiscal dependence on natural resources exposes budgets to the volatility that characterizes world markets, with potentially destabilizing effects for public finance. In addressing these challenges, Africa's governments must also wrestle with an apparent paradox. Resource-rich countries urgently need to increase investment and resource revenues provide a source of capital, but few have the capacity to ramp up domestic investment rapidly.

How should these pressing public financial management issues be addressed? The starting point is to recognize that Africa cannot simply adopt "off-the-shelf" practices from countries at the pinnacle of good governance in natural resources.[182] Norway's sovereign wealth fund prioritizes savings for future

generations, in part because – unlike Africa – Norway already has very high levels of capital investment. Low-income countries need to save part of their resource revenue, both to manage volatility and to support investments as resources are depleted.[183]

They also have to take advantage of the potential for generating high social and economic returns in the near term and the medium term. Using savings from resource revenues to accumulate overseas financial assets, when investing savings at home offers higher returns, makes little sense in terms of either efficiency or equity. This is another difference separating resource-rich low-income countries from resource-rich high-income countries – the former are not capital abundant.[184] If resource-rich African countries are to sustain and build upon the growth record of the past decade, they need to gradually increase the share of investment to GDP from around 20 per cent today to 30 per cent, the level found among middle-income countries.

Drawing down natural resources solely to finance a surge in consumption is not a sustainable activity. For income gains to be sustainable over time, the depletion of natural assets must be offset by the accumulation of other assets that will sustain growth over time. Failure to put in place these investments will guarantee that any increase in income is temporary, and it will undermine efforts to use resource revenues to strengthen basic services. For example, the salaries of teachers and health workers recruited today will have to be paid for out of the revenues generated through future growth.

There are no simple rules for determining when and where resource-rich African countries should invest. The textbook guide is that the share of resource revenue directed to investment should rise as the stock of resources declines – and as consumption levels converge towards the world average. It should also rise during periods of high world prices – and as we highlighted in Part II, there is compelling evidence that we are in the early to middle stages of a commodity "super-cycle". However, in countries that lack the skills and firms needed to rapidly scale up investments in infrastructure, there is a risk that investment surges will drive up inflation and the exchange rate (and drive down the rate of return) – classic symptoms of "Dutch disease". The Oxford University economist Paul Collier has neatly encapsulated the appropriate policy response by calling for strategies that prioritize "investing in investing", or building the capacity to make good investments.[185]

Translating that injunction into policy poses technical difficulties that governments have to address country by country. Some relate to the selection of infrastructure projects. Poor transport links, power shortages and inadequate investment in smallholder farming hinder growth in many resource-rich countries. Building investment assets in these areas has the potential to loosen those bottlenecks. But governments and international financial institutions need to look beyond a project-by-project, cost-benefit approach and frame ambitious strategies for infrastructural transformation. In areas such as transport, power and water, this implies regional cooperation at a level that is conspicuously absent at present.

Beyond the economics, "investing in investing" is also about building institutional capacity. Optimizing the use of resource revenues requires decision-making and management structures that operate across political cycles, and which look beyond the interests associated with political competition. The time horizon for thinking about investment in natural resource development is typically 20 to 40 years. Countries such as Botswana and Chile have succeeded in natural resource governance partly because they have built institutions and adopted legislation that establishes clear rules on the management of resource revenues, along with independent institutions that uphold those rules.

Managing revenue flows

Public financial management is a key link from commodity markets to the lives of people in resource-rich countries. In the past, the volatility of resource revenues has contributed to damaging boom-bust cycles. Governments ramped up spending during the upswing and failed to adjust during the downturn, generating large fiscal deficits and contributing to unsustainable debts. The record of the past decade in Africa, and the experience of countries in other regions, demonstrates that these symptoms of the resource curse are preventable.

Reviews of fiscal management by the IMF provide an encouraging story. Across a large group of resource-rich countries, the association between surges in revenue and public spending has weakened. In many cases public spending has become counter-cyclical: governments spend more during economic downturns to boost the economy.[186] This has benefits for growth and for equity, given the vulnerability of the poor during economic recessions.

Governments have adopted a range of strategies to stabilize revenues. Nigeria's experience is revealing. In 2004 authorities created the Excess Crude Account (ECA), a stabilization fund. A reference price for oil was used to delink budget revenues from world

market volatility, with excess funds put in the ECA during periods of high prices and the stabilization fund transferring revenues to the budget when oil prices were low. Reserves accumulated during the 2005–2008 price increase provided a buffer to maintain spending and insulate the non-oil economy from the downturn in 2008–2009.[187] The 2007 Fiscal Responsibility Act provides the overall rules-based framework for fiscal management in Nigeria, prescribing ceilings on the federal government deficit and debt, along with the reference price rule for oil.

Nigeria illustrates another dimension of non-renewable resource management – the complexity of fiscal reform. As the ECA accumulated large balances during 2009 and 2010, political pressures to spend intensified, and a succession of unplanned discretionary withdrawals almost depleted the fund. The government subsequently replaced the ECA with the Sovereign Wealth Fund (SWF), which has far more robust governance rules.[188] Jointly owned by all three tiers of government, the SWF has three components, each of which receives 20 per cent of excess oil revenue: a stabilization fund, an infrastructure fund and an inter-generational savings fund. The governing board has discretion in allocating the remaining 40 per cent of revenues across these components. While the SWF is better protected against unplanned withdrawals, there are concerns that disagreements over benchmark oil prices and discretionary allocations will compromise its operations.

Price smoothing, an apparently technical issue, is vital to the stability of public finances. Several approaches are possible. Without it, budget planning is subject to the vagaries of volatile world markets. Petroleum legislation in Ghana projects budget revenues on the basis of a seven-year moving average of benchmark prices. Other countries, such as Chile, use a committee of independent experts to establish reference prices.[189] The choice of options depends in part on the political environment. In countries lacking a deep pool of independent expertise, using moving averages may be the best option for budget stability.

Well-designed fiscal rules can help to guide countries through the commodity price cycle. The system developed in Chile represents a gold standard that is relevant to Africa.[190] Copper plays a major role in Chile's economy, accounting for over half of exports and one-fifth of government revenues. Under fiscal rules developed in 2006, the government allocates revenues through a formula that protects public spending from the effects of cyclical variations in copper price. Excess funds are placed in the Economic and Social Stabilization Fund (ESSF), which provides a fiscal buffer. High growth sustained over two decades – around 5 per cent annually – bears testimony to the benefits of fiscal stability, with fiscal buffers enabling Chile to recover rapidly from the 2008 global recession.

Africa does have positive role models in this area. One country that has conspicuously escaped the resource curse is Botswana. Revenues from the country's mineral exports – mainly diamonds – are allocated through a rule that limits their use to investment spending, with the remainder placed in a saving account, the Pula Fund. The Pula Fund is used to save for future generations. But it has also been used to stabilize the economy in the face of external shocks, enabling governments to avoiding damaging fiscal adjustments that could reinforce recession and lead to cuts in vital budgets. Botswana's strong growth performance has not been based on the Pula Fund: the country has a tradition of robust macroeconomic management. But the fiscal rules governing mineral revenues have enabled successive governments to avoid damaging policy choices.

There are no simple rules for determining how much to spend and how much to save. Until recently, the received wisdom was that governments should save a large proportion of resource revenue, using only a small fraction to support current consumption. The responsibility of government, so the argument ran, was to save today in order to support spending for future generations, thereby enhancing cross-generational equity.

Some elements of this approach remain valid. Any public finance management strategy has to consider whether or not the economy has the capacity to absorb additional investments. Putting more spending into economies that are unable to raise productivity is a prescription for inflation. Weak public finance systems can also open the door to graft as more revenues flow through them. But the low levels of physical and human capital in Africa provide a strong case for spending early on urgently needed domestic investments – an issue that we take up in the next section.

Public spending – the equity imperative

Governments have to strike a balance between saving and current spending based on institutional and economic capacity to absorb resource revenues, and to use them effectively and equitably. But in a region with the world's greatest human development and infrastructure deficits, choosing savings over spending is likely to prove bad for both equity and efficiency – and would do little to close the gaps between resource wealth and wellbeing.

There are potentially very high human development returns to early spending in terms of lives saved, children educated and opportunities created. The priority is not just to build clinics and classrooms, but also to train health workers and teachers and – critically – build public service delivery systems that are responsive to needs and accountable to the communities they serve. Financing alone does not deliver qualitative change. But financing on the scale in prospect could be potentially transformative. UNESCO's Education for All Global Monitoring Report estimates that increased revenue from minerals could put another 16 million children into school across 17 resource-rich countries.
Commercial logic also points towards a case for public spending. Returns to savings in secure bond markets are currently less than 1 per cent. Potential returns to investment in infrastructure typically range between 15 per cent and 20 per cent.[191] The World Bank estimates that infrastructure investments could raise Africa's long-term growth rate by 2 per cent a year. [192]

Investment in social protection is one of the most powerful ways in which governments in Africa can extend the benefits of resource wealth to their citizens. Well-designed social safety nets can build resilience among vulnerable populations, support growth and reduce inequality. These are urgent priorities in resource-rich African countries, where the benefits of high growth are trickling down to the poor at a desperately slow rate. Yet resource-rich countries in Africa are under-investing in social protection (see Part III).

This is unfortunate because experience in many countries demonstrates the vital role that social protection can play. In Rwanda, much of the rapid decline in poverty, from 57 per cent in 2006 to 45 per cent in 2011, can be traced to the Umurenge programme of public works and cash transfers. During the 2011 drought in East Africa, Ethiopia's Productive Safety Net Programme not only saved lives, but also enabled people to cope with the crisis without having to sell off vital productive assets and take children out of school.

Few resource-rich countries are drawing on these – and other – successful initiatives. In 2010, Mozambique launched a Basic Social Protection Strategy covering four areas: national safety net and welfare programmes, education, health and the targeting of extremely vulnerable populations. The institutional framework is well developed, but the financing provisions have yet to be aligned with the goals. In Tanzania, the government is developing a framework for social protection that will provide cash transfers to vulnerable groups, principally through public works programmes. However, implementation details remain unclear.

Success stories from other regions should also inform approaches to social protection in Africa's resource-rich countries. In Brazil, the Bolsa Familia programme reaches around 13 million households. It provides cash transfers to poor families on the condition that their children attend school. The transfers are modest, at just US$12 per month. But they have been instrumental in dramatically increasing in school attendance, especially in poor rural areas, and in cutting rural poverty by over half since 2000.[193] While the cash transfers represent just 0.5 per cent to 1 per cent of GDP, they have also lowered inequality, reducing Brazil's Gini coefficient – a widely used measure of inequality – from 58 to 54. The positive examples do not just come from middle-income countries. In Bangladesh, a school stipend programme has helped to overturn one of the world's biggest gender gaps in education to achieve universal enrolment for girls in primary and lower secondary schooling.[194]

Governments in resource-rich countries have a unique opportunity to go beyond the current patchwork quilt of fragmented and underfinanced social initiatives. Revenues generated through resource wealth could be used to finance national social protection systems, providing the region's most vulnerable people with security against the impact of drought and sickness. These systems could include cash transfers to the poor targeted either by region, by social group, or by incentives – such as stipends for education – geared towards expanding opportunity. Almost all of the resource-rich countries could spend 1–2 per cent of GDP on national social protection within the next three years, and scale this up to 2–4 per cent within five years.

Concerns have been raised about the capacity of African governments to target support where it is needed. Some commentators have therefore argued that resource-rich countries should distribute part of the revenue generated by mineral resources as a payment to every citizen on a non-targeted basis, building on a model that has been successfully applied in the US state of Alaska.[195] The "oil-for-cash" model has been seen as a strategy for strengthening resource governance in Sub-Saharan Africa, with a potential application for countries as diverse as Equatorial Guinea and Ghana.[196] While such proposals merit consideration, when it comes to equity they are a poor substitute for social protection systems – and African governments' targeting problems may have been overstated.

As they develop social protection programmes, governments in resource-rich countries should seriously consider adopting new technologies that have the potential to strengthen the efficiency of transfers by lowering administrative costs and improving targeting. Mobile banking systems are a case in point. In Kenya,

NGOs have piloted a successful scheme using mobile phones to transfer payments to participants in a cash-for-work programme in the three of the most drought-prone northern districts.[197] In India, the Unique Identification (UID) system is part of an ambitious project to identify the country's 1.2 billion people using biometric data from iris scans and finger-printing. Initial tests covering a sample of over 80 million people point to very low levels of error.[198] The scheme has the potential to provide proof of identity to people currently denied access to bank accounts, financial services and government programmes because they lack such proof.[199] The UID could improve the targeting of payments at hard-to-reach groups and reduce the corruption that currently diverts money from the poor to public officials.

Beyond the enclave – boosting prosperity and adding value

Africa's growth surge over the past decade has driven by extractive industries that operate in enclaves with few links to the local economy and that export largely unprocessed oil and minerals. These are weak foundations for sustained and inclusive economic growth. The challenge for African extractive industries over the next decade is to climb into higher value-added areas of production and to operate beyond their current enclaves. This will require the integration of extractive industries in a wider industrial policy.

Linkage – the term most often used for the connections between export industries and the local economy – is a simple goal that is difficult to achieve. In the petroleum and mineral sectors, upstream linkages connect extractive producers to suppliers, while downstream linkages connect them to consumers through processing activities that add value.

Extractive industries in Africa tend to have weak linkages in both directions. Africa refines only a small fraction of its crude oil, has few petrochemical industries and squanders much of its gas reserves through flaring. In the minerals sector, the region is for the most part a major exporter of ores but a minor producer of processed metals. This is not a viable model. Extractive industries are driving a growth process that is leaving the region locked into low value-added areas of world trade. Meanwhile, the foreign exchange generated by mineral exports is financing a boom in the import of basic consumer goods and foodstuffs. This is depriving smallholder African farmers and small firms of opportunities for investment, further weakening in the process the contribution of extractives exports to economic growth and poverty reduction.[200]

There is a way out of the low-value added enclave model. The history of successful economic development in East Asia was, to a large degree, built on long-term strategies to build value-added industries. Governments used a range of measures – subsidized credit, local content programmes, tax breaks and temporary protection – to strengthen the competitive position of national firms. Critical to the success of these measures (and to the failure of comparable programmes in Africa) was the application of strict guidelines requiring firms to become competitive in local and, eventually, international markets.

Several countries have applied these principles to their extractive sectors. Successful performers – including Brazil, Canada, Chile and Malaysia – have adopted different policy tools. An overarching objective has been that of increasing "local content", or the share of domestic products in the inputs used by extractive industries. Chile's national copper company, Codelco, purchases over 90 per cent of the goods and services it needs from local firms.[201] Brazil has combined local content with agreements between the state oil company and a national small business association. Local supply of inputs increased from 57 per cent in 2003 to 75 per cent in 2008.[202]

While past African efforts at promoting linkages have had mixed success, the context today is very different. Rising demand for Africa's commodities puts governments in a stronger negotiating position. There are large untapped opportunities for governments, foreign investors and local businesses to frame joint strategies aimed at increasing local content, with resource revenues supporting well-designed industrial development policies.

Several countries have already put in place elements of such a framework. The 2011 Mining Code in Guinea requires holders of mineral concessions to give preference to national enterprises, subject to their ability to meet price and efficiency standards. Mining legislation in Ghana, Senegal and Zambia carries a similar injunction, and Ghana requires gold mining companies to submit plans for the recruitment and training of Ghanaians. Local procurement and employment is encouraged by the Mining Charter scorecard in South Africa, and mandated by the national petroleum law in Angola. In Nigeria, recent legislation requires that preference be given to Nigerian-owned companies in competitions for licences; and all companies bidding for licences are required to submit a local content plan.[203]

Alongside this national legislation, regional bodies have also promoted linkages. The African Union and the UN

Economic Commission for Africa, the co-authors of the Africa Mining Vision 2050, have set out a broad framework for action. The Economic Community of West African States (ECOWAS) treaty calls for procurement policies that favour local and regional firms. Similarly, the AfDB supports programmes aimed at strengthening local content.[204]

Legislation is only effective, however, if it is implemented. One recent survey of linkages in a range of sectors across 10 countries in Sub-Saharan Africa[205] showed that principles and policies aimed at increasing local content were failing to do so, with local producers often penalized by trade and tax policies favouring production by the mining companies themselves.

Comparisons between Africa's two largest oil producers are instructive. Angola and Nigeria have both developed strong local content legislation, but Angola's broad vision in favour of enhanced linkages is not matched by specific policies. Linkages that exist are very shallow and the policy framework itself appears to conflate local content with Angolan participation in the firms supplying the oil sector.[206] In Nigeria, by contrast, over 70 per cent of extractives companies reported sourcing over one half of their inputs from Nigerian firms.[207]

A lack of coherence between stated aims and practical measures to boost local content emerges as a striking theme from the cross-country survey of linkages. Tanzania has adopted several local content principles aimed at strengthening linkages. Yet there are no targets, monitoring mechanisms or strategies designed to provide incentives for local sourcing. Zambia also suffers from a dearth of practical measures aimed encouraging the development of local firms.

There are some encouraging exceptions to the rule of weak planning. Botswana has a well-developed vision and, unusually in the African context, a set of strategies for building local content and climbing the value-chain.[208] When the diamond-mining lease of De Beers expired in 2005, the government of Botswana made renewal conditional on the company agreeing to a joint venture. The Diamond Trading Company was established with clear performance targets for the production of rough diamonds, at least 80 per cent of which had to be cut and polished domestically. Targets for employment and training were also set, backed by penalty clauses for non-performance. The government set up two new institutions, the Diamond Office and the Diamond Hub, to design tax incentives and support training.

As in other areas, there is no blueprint for success in linking extractive industries to local firms and increasing value-added. Countries start in very different positions and face different constraints and opportunities. However, the evidence of the past decade strongly points to the need for governments in resource-rich countries to develop an active, market-oriented industrial policy, backed by programmes that raise the level of skills in the workforce.

Foreign companies have in some cases taken the initiative. The Ahafo Linkages project in Ghana was implemented by Newmont Mining and supported by the International Finance Corporation (IFC), the commercial arm of the World Bank, between 2007 and 2010. It aimed at increasing local procurement of low-value items such as tools, paint, maintenance and vehicle repair. In 2007, 25 small and medium-enterprises were supplying goods valued at US$1.7 million; by 2010, this had increased to 125 enterprises supply goods valued at US$4.7 million.[209] The Ghana Chamber of Mines has now built on the Ahafo project. It is working with the Minerals Commission and the IFC to identify local firms in a position to strengthen local supply capacity.[210]

3. MANAGING SOCIAL AND ENVIRONMENTAL IMPACTS

The Africa Mining Vision calls for "a transparent and inclusive mining sector that is environmentally and socially responsible … which provides lasting benefits to the community and pursues an integrated view of the rights of various stakeholders." The document also highlights the critical role of public participation in assessing environmental and social impacts.[211] Translating this compelling vision into practice is vital if Africa is to reap the benefits of the extractive industry boom.

The social and environmental impacts of mining now receive far greater attention than they did a decade ago. Public scrutiny by national and international civil society has been one force for change. Governments are now held to a higher standard of accountability, as are donors and international financial institutions. Corporate practices are also improving. Shareholders are increasingly demanding that companies adhere to higher social and environmental standards. There is a growing awareness that reputational damage brings commercial market consequences. While much remains to be done, there is now sufficient evidence to dispel the myth that extractive industries are inherently harmful for development.

Assessing environmental and social impacts

Twenty years ago, the industry standard for dealing with adverse social and environmental impacts was to compensate those affected and clean up after the event. Today, most governments, donor institutions and companies have adopted internationally recognized environmental impact assessment (EIA) and social impact assessment (SIA) tools that identify potential problems in advance. International financial institutions have developed mechanisms aimed at ensuring that extractive industry investors adequately account for environmental and social impacts in their project evaluations.

Several African countries have mandated impact assessments in their mining and petroleum legislation. The Libreville Declaration of 2008 brought together health ministers from across Africa behind an agenda aimed at reducing environmental impacts on health.[212] Yale University's 2012 Environmental Performance Index shows that many countries in Africa are making progress on environmental challenges.[213]

There has also been a steady growth of environmental protection agencies (EPAs). Charged with developing environmental policy, setting acceptable standards for pollution, devising regulations for mining companies, and monitoring and enforcing those standards, these agencies have a critical role to play in regulating extractive industries.

Many of the larger mining companies now invest considerable resources in social and environmental impact assessments. That makes a great deal of commercial sense because a smaller environmental footprint is often associated with economic benefits. For example, energy efficiency is good for the environment. But energy also represents 30 per cent to 50 per cent of the production costs for most metals, so energy efficiency can drive considerable cost savings. Avoiding the costs associated with litigation is another incentive to manage environmental, social and health liabilities carefully. Almost all of the major extractive companies are now also required to include social and environmental reporting in annual company statements. Environmental assessment organizations in Africa like the Southern African Institute for Environmental Assessment say that growing numbers of mining companies are approaching them directly asking for information and guidance.[214]

Corporate social responsibility in the mining sector is also propelled by the environmental and social safeguards that are conditions for loans from global financial institutions like the IFC, the AfDB and the World Bank. The safeguards require mining companies using their funds to conduct EIAs, consult with affected communities and put monitoring systems in place.[215] There are also several voluntary initiatives that aim to inform investors of social and environmental issues, and to encourage them to include stricter criteria in their funding decisions, including the United Nations Global Compact, the OECD Guidelines for Multinational Enterprises, the International Council on Mining and Metals, the Equator Principles, and the Principles for Responsible Investment.

Civil society organizations have played a central role in pushing environmental concerns in resource-rich countries on to the international agenda. A 2010 report by the World Economic Forum described "not only the growing power of civil society in resource-rich countries, but the growing political assertiveness of resource-rich countries themselves".[216] One example of that assertiveness is the Treasure the Karoo Action Group, founded in 2011 to oppose the expansion of hydraulic fracturing for natural gas in the Karoo region of South Africa.[217] Another is the Coalition of NGOs Against Mining

Atewa (CONAMA), which has been campaigning since 2012 against bauxite mining in the Atewa Range Forest Reserve of Ghana.[218] Such organizations have a vital role to play in informing a wider public debate on the tensions between resource exploitation and environmental sustainability.

Environmental and social protection: an incomplete journey

The progress that has been achieved is not a cause for complacency. Africa lags behind other regions in meeting environmental and social protection standards, and catching up will require a concerted effort over a long period.

Capacity constraints and, in many cases, a lack of political leadership remain barriers to more effective social and environmental impact management. Rafts of new mining laws and environmental and social regulations have been produced over the last 10 to 15 years, many of which are of high quality,[219] but implementation and enforcement have a more mixed record.[220] The Yale 2010 Environmental Performance Index listed Sub-Saharan Africa as the weakest region by far in terms of its environmental management capacity, with countries from the region accounting for 30 of the bottom 50 spots in the list; and for every one of the last six places.[221]

Sierra Leone's Environmental Protection Agency (EPA-SL) illustrates the capacity problem. Established as a self-standing agency reporting directly to the president's office, the EPA-SL had a 2010 budget of US$150,000 a year, with nine staff in three cramped rooms. Given such limited resources, carrying out its broad mandate – setting environmental standards, monitoring the impacts of all activities nationwide and mainstreaming environmental priorities across government – was barely possible. With just one technical expert responsible for reviewing all environmental impact assessments on a part-time basis, there was unsurprisingly a backlog of more than 200 EIAs pending review. While the agency's capacity has increased, its reach and effectiveness remain limited – and the challenges faced by the organization are common to those shared in many other countries across Africa. This is a vital area for strengthened international cooperation.

Environmental protection is also made difficult by the fact that standards across the corporate sector are highly variable. Mining companies in Africa frequently employ the cheapest option for exploration and processing. Waste disposal often involves releasing tailings and sludge directly into the sea or into rivers, with some companies failing to invest in the technologies needed to lower environmental impacts.[222]

Part of the problem can be traced to the very large number of small companies operating in the extractive sector. One recent report estimated that there were 500 separate companies working in the African upstream oil and gas industry.[223] Many of these small companies have a public profile low enough to be able to "fly under the radar" of their host country's patchy monitoring systems. Another problem is that some companies adhere to an anachronistic model of corporate social responsibility, supporting development projects but failing to align their core business practice with social and environmental standards.[224] Companies adhering to best practices have a strong interest in promoting them industry-wide to prevent competitors from exploiting opportunities to cut costs by ignoring social and environmental impacts.

Public participation is often more limited than the regulations might suggest.[225] The environmental and social impacts of mining are often poorly understood or perceived as long-term and distant. Many communities continue to experience displacement without adequate information, compensation or recourse to the rule of law as a result of extractive industry investment.

Conflict and human rights abuses: breaking the link with resources

Natural resource management can affect social conflict through many different channels. From Angola to Liberia, Sierra Leone and pre-partition Sudan, many of Africa's most brutal civil wars were sustained by resource revenues. In the Democratic Republic of the Congo, armed local militia, linked in some cases to neighbouring countries, have used mineral revenues to finance their operations. In Nigeria, the struggle for control over oil revenues has sustained a long-running conflict. At a lower level of intensity, extractive industry investments are frequently associated with conflicts sparked by the displacement of local communities, or by local grievances.

There has been a proliferation of international and regional initiatives aimed at breaking the link between conflict and natural resources. Most of these initiatives are voluntary. The OECD has drawn up Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.[226] The guidelines provide detailed advice on international conventions and reporting practices, and supplements on individual commodities.

The Kimberley Process Certification Scheme (KPCS) is the best-known international voluntary initiative. Founded in 2002, the KPCS brings together government, industry and civil society to ensure that conflict diamonds and stolen diamonds do not enter the diamond markets. Members account for almost all global production of rough diamonds.

The KPCS has inspired an Africa-led regional initiative. The International Conference on the Great Lakes Region has adopted a Protocol on the Fight against the Illegal Exploitation of Natural Resources.[227] Action was prompted by growing concern over the role of minerals such as gold, tin and tantalite in financing gross violations of human rights by armed groups. Under the Lusaka Declaration of 2010, governments agreed to establish a regional certification mechanism and database to track minerals trade, while at the same time promoting the EITI.[228] The database is now partially operational.[229] However, there have been problems in implementation and enforcement. While there are a number of certification schemes in place – such as the Tin Supply Chain Initiative and Certified Trading Chains in Mineral Production – enforcement mechanisms are weak. Government authority in many of the conflict areas is limited; some regional governments continue to actively support armed groups operating in mining areas.

In recent years there have been moves towards more stringent mandatory standards for monitoring and compliance. The US Dodd–Frank Act, discussed in the previous section, has a conflict minerals provision commonly referred to as 3TG – for tin, tantalum, tungsten and gold — to cover minerals exported from the Democratic Republic of the Congo.[230] These metals are used in a wide range of industries, including electronics and communications, aerospace and automotive, jewellery, healthcare devices and diversified industrial manufacturing, so many companies stand to be affected beyond the immediate suppliers. Companies will be required to file reports for 2014 certifying whether products are "DRC Conflict Free" on "DRC Not Conflict Free", with smaller firms given a longer time period (four years) for compliance.

Following the wider pattern of resistance to legally binding legislation, parts of US industry have sought to overturn the conflict minerals legislation. The US Chamber of Commerce and the National Association of Manufacturers both filed lawsuits seeking to stop or modify the rules.[231]

This is an ill-advised response. Companies sourcing from conflict-affected areas in the Democratic Republic of the Congo are running considerable reputational risks – and compliance can also yield efficiency gains, for example by reducing the number of suppliers. Companies should see the Dodd–Frank Act as an opportunity to strengthen both their ethical standards and their efficiency, not as a threat to their commercial viability.

Forward-looking companies have already started to use their capacity for innovation to comply with the new legislation, including Apple, Dell, Hewlett-Packard, Motorola Solutions, Microsoft, Xerox, Intel and AT&T.

Artisanal mining: harnessing the potential, protecting rights

Artisanal mining continues to suffer from neglect, perverse policy design and, in some cases, outright hostility on the part of governments and the formal mining sector. This is counter-productive – it is bad for both efficiency and equity.

The combination of rural poverty and rising prices for minerals guarantees an increase in the size of the artisanal workforce. Failure to create the conditions for increased productivity in the artisanal sector will weaken a potential source of growth and jobs. And failure to address the challenges identified in Part I of this report, including human rights violations, child labour, unsafe working conditions and environmental pollution, would leave millions of Africa's most vulnerable citizens without effective protection.

The policy environment in many countries hinders the development of a more sustainable and safer artisanal mining sector, betraying a primary interest in large-scale formal sector mining and a lack of understanding of artisanal operations. Liberia provides an example. The mining code requires artisanal miners to purchase a licence that must be renewed annually.[232] This is already out of the reach of many artisanal miners. However, if the miners wish to hire earthmoving equipment they are required to apply for a more costly licence. This has the effect of trapping miners in a labour-intensive but low value-added activity (removing earth) and denying them an opportunity to develop mining sites. The practice of annual licence renewal is widespread and, in most countries, linked to cumbersome bureaucratic processes.

Formal legislation is often a weak guide to the real treatment of the artisanal mining sector. Ghana

legalized artisanal mining at the end of the 1980s, but the country's "galamsey", or small-scale miners, have limited rights of operation. In Mali, legislation recognizes artisanal mining but specifies that it should take place only in "artisanal gold mining corridors" (couloirs d'orpaillage). In reality, most artisanal mining sites lie outside these corridors, allowing child labour to flourish (see Part I).

These arrangements create strong disincentives for investment. Artisanal miners typically lack the capital needed to allow even rudimentary production efficiencies, which in turn keeps their earnings at subsistence level. The uncertainty surrounding licensing hampers efforts to change this picture. It discourages long-term planning and limits the potential for artisanal entrepreneurs to secure access to credit. As a result, artisanal mine owners tend to invest as little as possible in the construction of mines, resort to the cheapest available methods for excavation, and abandon mines once easy-to-find reserves have been excavated. These are all practices associated with poor health and environmental safety standards.

Access to markets is another concern. In much of Sub-Saharan Africa, artisanal miners are forced to operate in what amounts to a parallel economy, with "illicitly" mined diamonds sold to informal middle-men. The middle-men are linked in turn to mine owners, traders and sponsors who provide credit and inputs – such as tools and mercury – in return for their output, usually on highly unfavourable terms. The absence of transparent local markets for gold and diamonds, or for industrial base metals, places miners in a weak negotiating position. Many miners secure a small fraction of the value of their output, keeping them in poverty and holding back their efforts to accumulate savings for investment.

Complex as these problems may be, they are amenable to solutions. Acknowledging that artisanal mining creates employment and revenues, some governments are reforming old laws. Tanzania's 2009 Minerals Policy (and 2010 Mining Act) designated areas for artisanal mining and set out a framework for upgrading technology levels in the small-scale mining sector. One unlikely source for positive practice is the Central African Republic. Recognizing that over 90 per cent of diamond trading happens outside of the state sector through informal channels, the government has put in place incentives for artisanal miners to form cooperatives and to sell directly to government agencies, bypassing middlemen. The cooperatives benefit from a reduced tax rate on exports.[233] Some private companies are also demonstrating leadership (Box 14).

Wider partnerships between artisanal and large-scale mining are possible. Regulatory frameworks that have the effect of "criminalizing" artisanal production and marketing serve nobody's interest. Governments lose revenue as minerals are traded informally, often across borders. Companies lose out on opportunities to purchase potentially high-value exports. And artisanal miners lose out on a fair price that might lift them out of poverty. Artisanal miners will not sell through formal channels unless the price is competitive. But private companies and government agencies could do far more to create a competitive formal market. Large mining companies can contribute to safer

BOX 14: A partnership approach to artisanal mining in Ghana

Building on a model pioneered in Colombia through partnerships between mining companies, local government and artisanal miners, AngloGold Ashanti has developed a programme that aims to give artisanal miners legal mining rights on land in concession areas.[234] In return, the miners have to register and comply with some basic health, safety and environmental requirements.

Most of the property identified for disposal to small-scale operators is restricted to narrow high-grade veins or alluvial deposits, which are generally not of interest to the company in the short term. However, one of the key advantages of the approach is that it gives the operators a real, value-based, commercial interest in the property. In Ghana, AngloGold Ashanti is working with other mining companies, the Chamber of Mines and the National Minerals Commission to identify properties suitable for small-scale mining and to promote registration by miners. A similar programme is being developed in Tanzania.

While the AngloGold Ashanti initiative is motivated by a concern to prevent encroachment, this is a model that goes beyond old-style corporate social responsibility. The programmes are in their early stages and have not been subject to independent evaluation so it is not possible to determine their effectiveness, but their potential for wider application merits consideration.

and more productive small-scale mining by assisting artisanal miners to form cooperatives that can access land legally, sharing health and safety expertise, and introducing new technologies. Mining corporations benefit in turn by minimizing security risks, managing reputational risks and contributing to a "social licence to mine" by increasing community development opportunities.

Protecting children

Artisanal mining is one of the most hazardous forms of work in the world, yet child labour is common. Children who should be in school nurturing their minds, playing with friends and growing up in a safe environment are instead risking their lives down mine shafts and carrying heavy loads for a wage that seldom meets even their most basic nutritional needs. The problems do not end there. As we highlighted in Part I, millions of children – and adults – are exposed to dangerous chemicals, including mercury.

The plight of children in Africa's artisanal mines is one part of a wider problem. It is estimated that some 10 million children of primary school age in the region are working rather than attending school – one-third of the region's out-of-school population.[235] While most governments have strategies for ending child labour, few have put in place the policies or the financing mechanisms needed to achieve that goal, and child labour has drifted off the international development agenda. The desperate situation of children in Africa's mines is a reminder of why this has to change.

National and international action is also needed to combat the threat posed by mercury. As a result of several years of advocacy led by Human Rights Watch, in early 2013 more than 140 governments agreed on the text for the Minamata Convention, which could prompt more stringent regulation. Under the new treaty, governments are obligated to draw up action plans to ban the most harmful uses of mercury, promote methods to reduce mercury use in mining, seek to improve the health of miners, and take steps to protect children and women of childbearing age from exposure to mercury.

The bad news is that convention lacks teeth in many key areas.[236] No deadline has been set for ending the use of mercury in small-scale gold mining, and there is clear plan on how to phase it out. The treaty calls for protection of children, but it does not explicitly address the critical and widespread problem of child labour in small-scale mining. The one article in the convention, which would have provided specific provisions for health, was diluted because several key countries rejected mandatory language. Despite these flaws, the agreement of this new treaty is a positive development.

PART V

SHARED AGENDA FOR CHANGE THAT BENEFITS ALL

Recommendations for governments, regional organizations, the international community, civil society, and international companies.

Africa's natural resource wealth is an asset with the potential to lift millions of people out of poverty and build shared prosperity for the future. This report has identified some of the policies that could realize that potential by enabling Africa's people, governments, civil society, foreign investors and the wider international community to come together around a shared agenda for change.

These policies offer pathways towards win-win scenarios. When governments strengthen disclosure standards and improve accountability, they improve their legitimacy in the eyes of their citizens. When foreign investors adopt more stringent disclosure standards and avoid irresponsible practices including tax evasion, they stand to gain from improved standing in the host countries – and from the avoidance of risks that could damage shareholder interests. If the international community comes together to tackle tax evasion, rich countries as well as poor will gain as the losses associated with aggressive tax planning diminish.

By the same token, when there is a deficit of trust there are no winners – and resource governance in Africa has long been blighted by a lack of trust. Millions of Africans have lost trust in the capacity and concern of their governments to manage what are public natural resource assets in the public interest. Governments and many of their citizens question the motives and practices of foreign investors, while the companies themselves often have little confidence in the governments that shape the policy environment in which they operate. Building trust is harder than changing policies – yet it is the ultimate condition for successful policy reform. Civil society organizations have played a central role in strengthening transparency and accountability and they often partner effectively with all key stakeholders groups highlighted below. Their role is fundamental to implementing most of the recommendations below.

Africa has never suffered from a "resource curse". What the region has suffered from is the curse of poor policies, weak governance and a failure to translate resource wealth into social and economic progress. The favourable market conditions created by global resource constraints provide no guarantee that the growth of extractive industries will lead to improvements in the lives of people. But if governments seize the moment and put in place the right policies, Africa's resource wealth could permanently transform the continent's prospects.

RECOMMENDATIONS FOR IMMEDIATE ACTION

Transparency and accountability

Adopt a global common standard for extractive transparency: All countries should embrace and enforce the project-by-project disclosure standards embodied in the US Dodd-Frank Act and comparable EU legislation, applying them to all extractive industry companies listed on their stock exchanges. It is vital that Australia, Canada and China, as major players in Africa, actively support the emerging global consensus on disclosure. It is time to go beyond the current patchwork of initiatives to a global common standard.

Realize the Africa Mining Vision: Adopt the Africa Mining Vision's framework for "transparent, equitable and optimal exploitation of mineral resources to underpin broad-based sustainable growth and socio-economic development" as the guiding principle for policy design. Immediately equip the African Minerals Development Centre with the technical, human and financial resources it needs to help governments develop national strategies. Implement the Africa Mining Vision at country level, including a strenghtened EITI provision.

Use the African Peer Review Mechanism: Assert African leadership in reforming the international architecture on transparency and accountability by implementing the African Peer Review Mechanism's codes and standards on extractive industry governance.

Distribution of benefits

Build a multilateral regime for tax transparency: The G8 should establish the architecture for a multilateral

regime that tackles unethical tax avoidance and closes down tax evasion. Companies registered in G8 countries should be required to publish a full list of their subsidiaries and information on global revenues, profits and taxes paid across different jurisdictions. Tax authorities, including tax authorities in Africa, should exchange information more systematically.

Economic transformation

Boost linkages, value addition and diversification: Add value by processing natural resources before export. Forge links between extractive industries and domestic suppliers and markets to contribute towards value addition. Structure incentives to favour foreign investors who build links with domestic suppliers, undertake local processing and support skills development. Use linkages to diversify national economies away from dependence on extraction.

Resource revenues and public spending

Ensure equity in public spending: Strengthen the national commitment to equity and put in place the foundation for inclusive growth**:** African governments should harness the potential for social transformation created by increased revenue flows. Finance generated by the development of minerals should be directed towards the investments in health, education and social protection needed to expand opportunity, and towards the infrastructure needed to sustain dynamic growth.

Social and environmental sustainability

Protect artisanal mining: Support artisanal mining, which is labour-intensive and provides precious jobs. The formal extractive sector and informal artisanal mining both stand to gain from constructive arrangements that recognize the rights of artisanal miners and protects the interests of all investors.

RECOMMENDATIONS FOR AFRICAN GOVERNMENTS

The key to successfully managing Africa's non-renewable resources is to develop with all stakeholders including civil society, coherent, long-term national strategies that convert temporary natural resource wealth into the permanent human capital that can expand opportunities across generations. Such strategies need five main components. They should forge an enduring contract between the government and its citizens by adhering to the highest standards of transparency and accountability. They should secure a fair share of resource revenues and distribute the benefits across society in a sustainable fashion, by not only spending more on basic services but also by putting in place the infrastructure and developing the skills that foster inclusive growth. They should progressively strengthen the linkages between the extractive sector and local markets, supporting entry into higher value-added areas of production and diversifying the economy away from a reliance on primary commodities. And they should protect societies, communities and the environment by assessing the potential impacts of extractive industry activities, through research, consultation and information sharing, with an emphasis on public disclosure and public engagement.

Governments need to provide civil society groups with the political space to for example, monitor contracts, concessions and licensing agreements in the extractive sector, and to remove restrictions on legitimate scrutiny.

TRANSPARENCY AND ACCOUNTABILITY *Put transparency and accountability of natural resources at the heart of the social contract between governments and people*	DISTRIBUTION OF BENEFITS *Secure for Africa's citizens a fair share of the wealth generated through natural resources*
Build on what has been achieved under the EITI and **adopt best-practice standards for the disclosure of contracts**, placing all extractive industry contracts online, translating them into relevant languages and facilitating national dialogue. Work towards early compliance with the EITI, support the strengthening of EITI disclosure standards and subject the operation of state companies, as well as foreign investors, to EITI standards.	Put in place **legislation that establishes clear fiscal policies, contractual arrangements and regulatory regimes**, creating a stable climate conducive to long-term investment by extractives companies, avoiding the development of "patchwork" regimes based on case-by-case negotiations and supporting wider strategies for inclusive growth and poverty reduction.
Require that any company bidding for a concession or licence fully and publicly disclose its **beneficial ownership**, with strong penalties for non-compliance.	Avoid generalized use of extensive **tax concessions** – such as tax holidays, reduced royalty fees and the waiving of corporation tax – but when projects demand extra capital because they involve high levels of commercial risk or technical difficulties, provide tax relief in the early years on a transparent basis and with full public disclosure.
Institute wherever possible a transparent system of **auctions and competitive bidding** for concessions and licences.	**Request renegotiation tax arrangements** under contracts that are out of line with international practice or generate windfall profits as a result of higher-than-expected export prices; continually reassess tax provisions in the light of international market conditions; consider indexing royalty levels to commodity prices as proposed by the African Development Bank; and introduce capital gains or windfall taxation for firms securing excessive profits on concession trading.
Provide **citizens** with a credible and transparent assessment of the revenues that will be generated by developing non-renewable resources; support an informed public dialogue about how natural resource wealth can contribute to development and stability, with the active engagement of civil society; and facilitate well-informed public scrutiny of government business.	Implement legislation on **transfer pricing** aimed at enforcing the "arms-length" principle; consider using administratively determined reference prices when insufficient information is available to assess whether companies are complying with the OECD's "arm's-length" principles; and establish specialized transfer pricing units to monitor profitability, reported prices on intra-company trade and reporting on profit in other jurisdictions, with an initial focus on companies operating through low-tax havens and offshore centres.
Adopt the practices set out in the **IMF's Code of Good Practices on Fiscal Transparency.**	Build the capacity to evaluate natural resource potential by drawing on the best possible **geological information** on the extent of natural resource reserves, and by analysing world market conditions and the potential costs of extraction and marketing.
Where there is evidence of systematic **undervaluation of concessions** and potentially illegal diversion of natural resource revenues, establish independent investigations, such as judicial enquiries that review the evidence through public hearings.	Avoid complex **"resources-for-infrastructure"** barter deals, many of which have been associated with very high implicit interest rates.

RESOURCE REVENUES AND PUBLIC SPENDING *Manage resource revenues through effective fiscal policies and spread the benefits through equitable public spending*	**ECONOMIC TRANSFORMATION** *Strengthen linkages between extractive industries and the local economy, support skills development and foster higher value-added production*	**SOCIAL AND ENVIRONMENTAL SUSTAINABILITY** *Manage social and environmental outcomes for increased impact at the community level*
Front-load spending to support consumption and investment in social and economic infrastructure, in order to eliminate endemic poverty and improve the quality and accessibility of basic services, while saving part of the increased revenue flow from natural resources to counteract commodity cycles.	Require **companies bidding for concessions and licences** to commit to procuring an appropriate proportion of products and services locally.	Adopt legislation requiring domestic and foreign companies operating in the natural resource sector to carry out due diligence in line with standards set by the OECD to **mitigate the risk of financing conflict and serious human rights violations**. Take active steps to reduce the risk of conflict in resource-rich areas, including the development of transparent and equitable revenue-sharing arrangements.
Establish a r**eference price for natural resources** based on a rolling average export price, with surpluses placed in a stabilization fund managed with clear rules for transfers to the budget in order to reduce the volatility of revenue.	Invest in **training** to strengthen skills and enhance the competitiveness of local firms, and require foreign investors to do likewise.	Build institutional capacity to undertake and analyse **social and environmental impact assessments (including gender analysis)**, and to monitor and enforce regulations. Enshrine in national constitutions and legal codes the protection of the environment and the rights of communities affected by extractive industry investments, including their rights to their property and to appropriate compensation.
Use resource revenue flows to **eliminate malnutrition**, the greatest barrier to Africa's social and economic progress, which blights the lives of 40 per cent of Africa's children.	Promote the development of **partnerships between foreign investors and local firms.**	Harness the potential of **artisanal mining** to support rural livelihoods and contribute to the development of sustainable natural resource development by introducing legislation that facilitates longer-term investment, including multi-year licensing, improved marketing arrangements and socially responsible production.
Seize the opportunity afforded by **increased revenue flows** to strengthen the quality and increase the accessibility of health and education systems through more efficient and equitable public spending, a greater focus on gender disparities, the withdrawal of user fees, targeted support for disadvantaged groups and areas, and the training of teachers and health workers; and scale up investments in social protection systems that reduce vulnerability and enhance productivity by strengthening the resilience of vulnerable households.	Structure incentives **to favour foreign investors that build links with domestic suppliers**, that undertake local processing, and that support skills development.	Recognize that many of the region's **out-of-school children** are working in hazardous condition in artisanal mines, and that national education strategies must do more to reach these children through targeted support, including cash transfers conditional on school attendance.
Develop **investment strategies** that ensure that as natural resource assets are depleted, equivalent productive assets in human capital and economic infrastructure are developed that will support sustained and inclusive growth.	Establish **sovereign wealth funds** governed by clearly defined and transparent legislative rules and clear reporting requirements.	Ratify the **Minamata Convention on Mercury** and set target dates for phasing out the use of mercury in artisanal and small-scale gold mining, through national strategies and the strengthening of national regulatory bodies.
Adopt **macro-economic and fiscal policies** that counteract "Dutch disease" by raising productivity, with an emphasis on removing infrastructural bottlenecks holding back growth in areas such as transport, power, water and sanitation, and smallholder agriculture.		

REGIONAL ORGANIZATIONS AND INITIATIVES

African governments face many natural resource management problems in common, including information gaps, power asymmetry in negotiations with foreign investors, weak capacity to enforce tax codes, and limited institutional capabilities. In recent years, African countries have developed a series of high-level initiatives that address these problems. These include several that that spell out policy pathways to industrialization and value addition, including the African Productive Capacity Initiative, the Action Plan for Accelerated Industrial Development of Africa (AIDA), and the Africa Mining Vision. The African Legal Support Facility (ALSF) initiated by the AfDB has helped African governments to strengthen their legal capacity in managing the natural resources sector.

The Africa Progress Panel endorses these initiatives, as well as related plans and strategies, while recognizing that it has often proven difficult to translate the frameworks and the principles that they set out into practical policies.

Capacity is at the heart of the problem. Many governments simply lack the technical capacity and information required to act. Regional organizations can make a difference and generate economies of scale by developing capacity to advise governments in this area. However, it is vital also, that regional bodies and governments engage constructively with civil society and the private sector, drawing on the skills and technical expertise of the companies directly involved in natural resource development.

TRANSPARENCY AND ACCOUNTABILITY	DISTRIBUTION OF BENEFITS	ECONOMIC TRANSFORMATION
Adopt the **Africa Mining Vision**'s framework for "transparent, equitable and optimal exploitation of mineral resources to underpin broad-based sustainable growth and socio-economic development" as the guiding principle for policy design.	Develop the **capacity of the African Development Bank and the UN Economic Commission for Africa** to support governments in developing natural resource regulatory regimes, and in negotiating concessions with foreign investors	Develop a **regional inventory of natural resources through geological mapping**, building on the foundations created by the African Minerals Geoscience Initiative.
Assert African leadership in reforming the international architecture on transparency and accountability by implementing the **African Peer Review Mechanism**'s codes and standards on extractive industry governance, including the monitoring of extractives-specific indicators and a separate chapter in the Country Review report.	Establish within the African Development Bank a specialized unit to **advise governments on the design and implementation of tax provisions** for the extractive sector.	Implement the **Action Plan for AIDA**, which details priorities for action at national, regional, continental and international levels to accelerate Africa's industrialization, including strategies to add value to natural resources and to invest resource revenues in industrialization.
Integrate strengthened EITI provisions in national laws and regional guidelines.	Strengthen the alignment of **regional policies, regulations** and standards to build cooperation and ensure that international competition for Africa's natural resources does not become a "race to the bottom", with less scrupulous foreign investors driving down standards to secure a competitive advantage.	Equip the **African Minerals Development Centre** with the technical, human and financial resources it needs to help governments develop national strategies.
		Deepen cooperation through the International Conference on the **Great Lakes Region Initiative** against the Illegal Exploitation of Natural Resources (RINR).
		Invest in initiatives that do more than transfer technical advice through consultants, in particular by emphasizing the importance of **transferring skills and building capacity**.

WIDER INTERNATIONAL COMMUNITY

Better natural resource management in Africa depends critically on international cooperation to prevent tax evasion and the illicit transfer of capital, strengthen disclosure standards and bolster the capacity of Africa's institutions.

Civil society groups in Africa and internationally play a key role in addressing issues such as tax evasion, environmental sustainability and the protection of human rights.

TRANSPARENCY AND ACCOUNTABILITY	DISTRIBUTION OF BENEFITS	ECONOMIC TRANSFORMATION	SOCIAL AND ENVIRONMENTAL SUSTAINABILITY
The G8 should adopt at its 2013 summit in the United Kingdom a **framework that commits each country to full disclosure** through a national public registry of the beneficial ownership of registered companies, with a commitment to create such registries before the 2014 G8 summit.	G8 governments should demand that all offshore jurisdictions establish **beneficial ownership registries**, with strong penalties applied to companies registered in, or linked to, jurisdictions that fail to comply.	Donors and regional and international institutions should make a concerted and sustained effort to **build the capacity** of African governments to manage natural resources, including by: increasing aid and technical support for social and environmental impact assessments; supporting the development of natural resource inventories; enhancing technical and financial support for revenue authorities in dealing with cross-border taxation issues such as trade mispricing, including through a US$50 million pooled financing facility.	Donors should provide governments with interim funding and technical support develop and implement credible national plans for phasing out the use of **mercury**, working through bilateral programmes, regional bodies and the Global Environment Facility.
G8 and other OECD jurisdictions with weak disclosure standards in **commodity trading, finance and company registration** – including Switzerland, the United Kingdom, the United States and Japan – should enact legislation that strengthens regulation.	The G8 and G20 should establish more robust rules and monitoring arrangements on **transfer pricing** and the transfer of reported profits to low-tax jurisdictions, with a view to establishing an international convention in 2014. These rules should include a transparent listing by extractive industry companies of the prices associated with their import and export activities. OECD and G8 countries should also recognize that in African countries lacking technical capacity and resources for monitoring, using benchmarks and formulae – as Brazil, China and India do – may be a more effective way to curtail transfer pricing than applying the "arms-length" principle.	The **International Tax Dialogue** should move beyond information sharing and provide enhanced practical support to Africa through the African Tax Administration Forum.	The Global Partnership for Education should provide technical and financial support aimed at getting all children out of hazardous employment in **artisanal mining** and into school by 2015, working through national education strategies.
All countries should adopt and enforce the **project-by-project disclosure standards** of the US Dodd-Frank Act and comparable EU legislation, applying them to all extractive industry companies listed on their stock exchanges. These standards should also include commodity trading. It is vital that Australia, Canada and China, as major players in Africa, be the next countries to actively support this emerging global consensus. The end result should be a **global common standard** for all countries.	The European Union should strengthen its **anti-money laundering** directive and company registration rules to require all companies registered across member-state jurisdictions to disclose their beneficial owners and active directors in a public, national registry. EU member governments should rigorously implement the EU Accounting and Transparency Directives, while strengthening legislation to prevent illicit capital flows and curtail the activities of shell companies, including more stringent penalties and more rigorous regulation.		
EITI standards should be strengthened to include project-by-project reporting standards, disclosure of the beneficial owner ship of all companies bidding for concessions and licences, strengthened reporting on the part of state companies, and full transparency across the extractive value chain, as well as disclosure of the import and export prices used in intra-company trading, in order to combat transfer pricing.	The G8 should establish the architecture for a **multilateral regime that facilitates tax transparency** and closes down opportunities for tax evasion. Companies registered in the G8 should be required to publish a full list of their subsidiaries and information on global revenues, profits and taxes paid across different jurisdictions. Tax authorities should promote the automatic exchange of information with each other, and with tax authorities in Africa.		
The World Bank, the International Finance Corporation and the IMF should strengthen their policies on access to information so that citizens of all countries have access to a wider range of evidence on social and environmental impact assessments, and on activities that led to the suspension of loans.	Parliamentary and legislative oversight bodies such as the United Kingdom's International Development Select Committee and the US Senate's Permanent Subcommittee on Investigations should urgently review evidence of systemic **undervaluation in concession trading** in appropriate countries. Judicial authorities should investigate potential malpractice on the part of companies registered on their respective stock exchanges and the possible involvement of national banks as conduits for illicit funds.		

INTERNATIONAL COMPANIES

TRANSPARENCY AND ACCOUNTABILITY	DISTRIBUTION OF BENEFITS	ECONOMIC TRANSFORMATION	SOCIAL AND ENVIRONMENTAL SUSTAINABILITY
Protect shareholder interests by requesting independent audit companies to investigate whether in the course of acquiring licences and concessions, companies may have derived benefits from practices that might violate laws on bribery and other forms of corruption –whether undertaken by their own employees or by partners in specific deals – and publicly disclose the evidence collected.	Avoid using **offshore centres, shell companies and low-tax havens**.	Engage with governments and donors to **build government capacity**, transfer skills and set technical standards.	Raise standards in all areas of corporate responsibility, including health and safety, asset security, human rights, governance, and environmental and social impact management, committing to international **best practice standards** of operating where local standards are lower than these.
Follow best practice standards on **transparency and disclose information** on a project-by-project basis, building on existing initiatives, including the EITI; companies that are not partners of the EITI should seek membership. End legal action against the US Dodd-Frank legislation and cease advocacy aimed at diluting Section 1504 and comparable EU legislation.	Participate in international initiatives to combat **transfer pricing** by providing lists of prices for intra-company transactions.	**Procure products and services locally** through transparent contracting and supplier development programmes.	Recognize that the formal extractive sector and informal **artisanal mining** both stand to gain from constructive arrangements that recognize the rights of artisanal miners within a balanced regime that protects the interests of all investors.
Provide leadership in **raising revenue transparency and disclosure standards** by making data publicly accessible.		Use the opportunity created by mandatory reporting to strengthen **supply-chain management in conflict-affected regions**, as required under Section 1502 of the Dodd-Frank legislation.	
		Provide technical and financial support for the monitoring of trade in conflict commodities through the **Great Lakes Regional Initiative** against the Illegal Exploitation of Natural Resources.	

ANNEXES

ANNEX 1

Estimated losses to the Democratic Republic of the Congo on five concession deals between 2010 and 2012

Over the past decade, the Democratic Republic of the Congo (DRC) has privatized a wide range of assets previously held by state-owned companies. Estimating the profit or loss on the sale of mineral concessions and licences is inherently difficult. Information on the potential market value of the resources is often lacking because of commercial secrecy and inadequate geological information. The complex "bundling" of assets presents another layer of difficulty.

In investigating concession sales, we adopted strict criteria to determine which deals to analyse. Selection was made contingent on timing (only deals agreed after 2010 were included), and the availability of either an onward sale price for the concession (to indicate the gap between the payment received by the government and the payment subsequently received by the concession holder) or the availability of independent market valuations. Applying these criteria, we identified five major concession deals between 2010 and 2012.

Under these deals, the DRC sold copper and cobalt assets to offshore companies linked to an offshore-registered holding company called Fleurette. No details are available of the beneficial ownership structure of the companies concerned. Glencore and the Eurasian Natural Resources Corporation (ENRC) subsequently purchased assets acquired by offshore concession holders – both are FTSE100 companies listed on the London Stock Exchange. Our assessment focuses solely on the economics of the concession sales. It does not consider the legality or the legitimacy of the deals in question. Where assets secured by offshore companies were resold at a publicly declared price, the profit secured is calculated as the difference between the onward sale price and the price paid by the same company to secure the initial concession. In two of the five cases – Kansuki and Mutanda – there was no onward sale. In the absence of this benchmark, we use evidence from independent commercial market valuations. Specifically, we estimate the imputed loss as the average of commercial valuations of the asset minus the price at which the offshore firm bought the asset.

It should be emphasized that the total losses estimated for the five deals is almost certainly an underestimate of the real level of losses. Several major deals have not been taken into account, either due to a lack of data or because the original sale of the concession to offshore companies occurred before 2010. Other post-2010 deals involving concessions in oil and gold have not been included because data was considered inadequate. These include the allocation in May 2010 of exploration licences for two blocks in Lake Albert (northeastern DRC) sold to offshore companies registered in the British Virgin Islands. Our calculations do not include losses associated with tax and royalty payments foregone as a result of the seizure and transfer of assets from established mining companies. These losses may be of a considerable order of magnitude.

Despite these omissions, our assessment points to considerable losses to the state and state mining entities. Taking the five deals together, we estimate the losses from the five deals at US$1.36 billion. Assets were sold on average at one sixth of their commercial market value. Expressed differently, offshore trading companies were able to secure a return of US$1.63 billion on assets purchased for US$275.5 million – an average margin of 512 per cent.

Table A: FIVE MAJOR CONCESSION DEALS IN THE DEMOCRATIC REPUBLIC OF THE CONGO (2010-2012)

THE CONCESSION DEALS AND ASSETS TRADED	BACKGROUND	PRICE PAID TO THE STATE/ STATE MINING COMPANIES (US$)	DATE OF ONWARD SALE	PRICE PAID BY FINAL BUYER, OR ESTIMATED COMMERCIAL VALUE (US$)	ESTIMATED LOSS TO THE DRC/ STATE MINING COMPANIES (US$)
Sale of 70% of Kolwezi and the entirety of Comide (copper mines) by the state mining company Gécamines[1] Comide: The first 80% of Comide (later adjusted to 75%) was sold between 2002 and 2006.[2] Available evidence suggests that a signature bonus of $3.5 million was paid.[3] The remaining 25% was transferred to the British Virgin Islands-registered company Straker in June 2011 at no cost to Straker.[4]	**Kolwezi: Gécamines** sold the Kolwezi mining licence to the **Highwind Group** (comprising four companies registered in the British Virgin Islands) in January 2010[5] in exchange for a $60 million signature bonus.[6] The bonus was paid for by **ENRC** under an August 2010 deal.[7]	**$63.5 million** ($60 million for the Kolwezi signature bonus and $3.5 million as the signature bonus for Comide)	Staged in two phases: 20 August 2010 and 23 December 2012.	**$685.75 million** ENRC bought Camrose – the parent company of the Highwind Group – and Straker. The total cash paid comprises the 70% share of the Kolwezi licence and 100% of the Comide licence.[8] (ENRC also provided a $400 million loan and a $155 million loan guarantee.)[9]	**$622.25 million**
Sale of Gécamines' 50% share of SMKK to **Emerald Star** Emerald Star is a company registered in the *British Virgin Islands*[10]	**SMKK:** Gécamines share was sold on 1 February 2010	**$15 million**[11]	June 2010 from Emerald Star to ENRC[12]	**$75 million**[13]	**$60 million**
Sale of the entirety of the Sodifor joint venture (comprising the Frontier and Lonshi copper mines), by the state mining company Sodimico. The sale was followed by an acquisition and resale of the Frontier licence by the DRC government *First 70 per cent of Sodifor sold to* ***Fortune Ahead Ltd*** *(registered in Hong Kong). Remaining 30 per cent sold to* ***Sandro Resources Ltd and Garetto Holdings Ltd*** *(both registered in the British Virgin Islands)*	Sodifor: Sodimico sold the first 70% of Sodifor on 20 June 2010 for $30 million. Remaining 30% sold on 28 March 2011 for an additional $30 million.[14]	**$60 million** Total paid by the offshore companies for Sodifor ($30 million for the first 70%, and $30 million in the second 30%) in 2010-11. In 2012 the Frontier mining licence alone was sold back to the government for $80 million.[15]	After buying back the Frontier licence from Sodifor, the government then sold it on to ENRC in a deal announced 31 July 2012.	**$103 million (Frontier and Lonshi combined)**[16] The state lost at least $20 million through the sale of Sodifor to offshore companies.[17] An extra $23 million imputed loss for Lonshi is included, derived from average commercial valuations.[18]	**$43 million**
Sale of Gécamines' 25% residual stake in Kansuki to Biko Invest Corp (registered in the British Virgin Islands)	28 March 2011[19]	**$17 million**[20]	Not sold on	**$133 million** Based on average of commercial valuations.[21]	**$116 million**
Gécamines' residual 20% stake in Mutanda to Rowny Assets Ltd (registered in the British Virgin Islands)	28 March 2011[22]	**$120 million**[23]	Not sold on	**$633.6 million** Based on average of commercial valuations:[24]	**$513.6 million**
TOTAL		**$275.5 million**		**$1.63 billion**	**$1.355 billion**

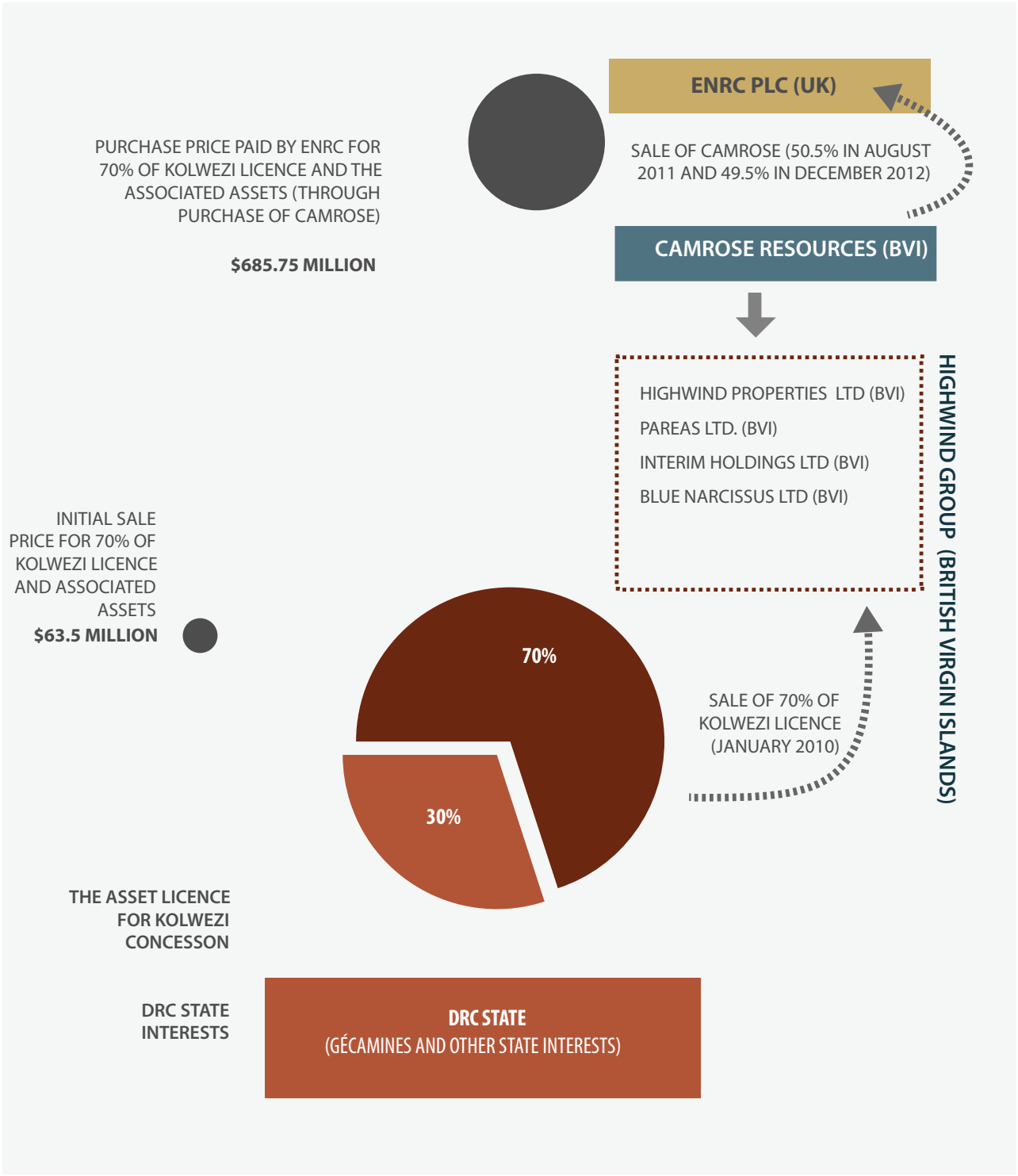
1. It should be noted that, as part of this deal, ENRC also obtained from Camrose 63.7% of the Toronto-listed Africo Resources Limited, which owned "a 75% interest in the exploitation licence for the Kalukundi property in the Kolwezi District of Katanga Province" (ENRC press release "Acquisition of 50.5% of the Shares of Camrose Resources Limited," 20 August 2010, available at http://www.enrc.com/sites/enrc.g3dbuild.com/files/presentations/CamroseAnn2.pdf, last accessed 22 March 2013.). However, the Africo deal has been excluded from these calculations, given that Camrose had previously purchased the asset for $100 million from a private party, rather than the state or any state-owned enterprise. It is also worth noting that the $100 million that Camrose paid for its Africo stake was funded with a loan from a separate company, and that this loan was then repaid from an additional $400 million loan that was part of the 20 August 2010 deal – thus the original owners of Camrose ended up incurring no costs in their purchase of Africo.
2. Chapter 11 of Volume 2 of the November 2007 Rapport des travaux document emanating from the Commission de revisitation des contrats miniers states that under the original joint venture contract for Comide from February 2002, the DRC government had 39%, Gécamines had 20% and a company called the Congo Investment Corporation (or Cico) held the remaining 41% (Commission de Revisitation des contrats miniers, Republique Democratique du Congo Ministere des Mines, Rapport des travaux, Vol. 2, Partenariats Conclus Par La Gécamines, 106-107, Nov. 2007, available at http://www.congomines.org/wp-content/uploads/2011/10/CommissionRevisitation-2007-TOME2-Gecamines.pdf, last accessed 21 March 2013). In the following years – it is not entirely clear when – the DRC government disappeared from the joint venture and Cico was replaced by the company Simplex, a company associated with Mr Gertler (Id. at 108). Simplex's share in the company was then reduced from 80% to 75%. A representative of Mr Dan Gertler has said that Simplex obtained the 80% stake in Comide in 2006. An explanation of Simplex's involvement in the Comide concession by Mr Gertler's representatives can be found on the Global Witness website: see "Additional responses by Dan Gertler to Global Witness", May 2012 (http://www.globalwitness.org/sites/default/files/library/Additional%20responses%20by%20Dan%20Gertler%20to%20Global%20Witness.pdf, last accessed 22 March 2013).
3. An official document from the DRC's renegotiation committee, published on the Carter Center website and dated 15 December 2008, states that a signature bonus of $3.5 million was to be paid for Comide (http://www.congomines.org/wp-content/uploads/2011/10/PV-Dec-2008-COMIDE.pdf, last accessed 21 March 2013) . The summary states: "Documents reprenant les principales modifications du contrat Congolaise des Mines et de Developpement (COMIDE) suite à la revisitation et renégociation des contrats miniers. Ces documents visaient à préparer les éventuels avenants au contrat et ne constituent donc pas l'accord final entre les partenaires. L'avenant de la renégociation, conclu le 13.01.2009, n'est pas disponible." [Translation: Documents that state the main modifications to the Comide contract following the revisitation and renegotiations of mining contracts. These documents aimed to prepare eventual amendments to the contract and thus do not constitute the final agreement between the partners. The amendment resulting from the renegotiation, concluded 13/1/09, is not available.] In November 2012 the DRC mining and finance ministries published a statement outlining the history of the Comide concession but this gave no figures for the original sales price of the 75/80% of Comide; see http://www.congomines.org/wp-content/uploads/2012/12/G3-Comide-2012-Clarification-Vente-dactif-Gecamines.pdf, last accessed 22 March 2013). The sale of Comide has generated a great amount of controversy. The IMF ended a three-year loan programme with the final three tranches unpaid in December 2012, citing the DRC authorities' failure to publish contract details relating to the subsequent sale of Gécamines' 25% remaining stake in Comide as the reason for cutting off the loan.
4. The news of the cession of Gécamines' remaining 25% stake in Comide was reported by Bloomberg news agency in a piece of 28 May 2012: "Congo May Have Violated IMF Deal With Mining Asset Sale" (http://www.bloomberg.com/news/2012-05-28/congo-may-have-violated-imf-deal-with-mining-asset-sale.html, last accessed 22 March 2013). The minutes of the Comide board meeting of 29 June 2011, where the decision was taken to cede the 25% stake in the company to Straker, can be found on the Carter Center's Congo Mines website at http://www.congomines.org/wp-content/uploads/2012/12/G3-Comide-2011-PV-Cession-Actifs-Gecamines-a-Straker.pdf, last accessed 22 March 2013). The November 2012 mining and finance ministry statement, cited above, says in its point 16: "La cession des parts de Gécamines dans COMIDE Sprl n'a aucune implication financière." (The ceding of Gécamines' shares in Comide has no financial implication.). Gécamines reiterated in a 13 March 2013 statement that Straker made no payment for its 25% stake in Comide, saying "Les parts sociales auxquelles Gécamines a renoncé ont été cédées sans aucune contrepartie financière, à Straker International Corporation" [Translation: The shares which Gécamines renounced were ceded for no financial cost to Straker International Corporation] (http://www.gecamines.cd/news_13_03_13.php, last accessed 22 March 2013).
5. According to a court judgment in the British Virgin Islands (BVIHC (COM) 2010/0125, page 3) the Highwind Group signed its contract on the "same day" as Gécamines cancelled First Quantum's licence over Kolwezi. The date is given as 7 January 2010. The contract between Gécamines and the Highwind Group, dated January 2010, is available at http://mines-rdc.cd/fr/documents/contrat_gcm_highwind.pdf (last accessed 22 March 2013).
6. The $60 million signature bonus ("Pas de Porte") is documented on page 21 of Highwind contract with Gécamines, available at http://mines-rdc.cd/fr/documents/contrat_gcm_highwind.pdf (last accessed 22 March 2013).
7. A 14 June 2010 preliminary agreement between ENRC and Camrose states that ENRC's promised $400 million loan to Camrose included $60 million to "satisfy the pas de porte payment [signature bonus] obligations of the Highwind Group". The leaked preliminary agreement is entitled "Letter of intent regarding the sale of shares in Camrose Resources Ltd". The breakdown of the $400 million loan is given on page 5, where it is further stated that $20 million of the loan is for payment of the capitalisation of the Metalkol joint venture (originally formed by the Highwind Group and Gécamines in January 2010). Thus all of the Highwind Group's acquisition costs were paid for by ENRC months after the transaction.
8. ENRC pledged $175 million cash (excluding loans) in a deal on 20 August 2010 and a further $550 million cash in a deal approved by shareholders on 23 December 2012, giving a total of $725 million. The value of the Africo shares (US$39.25 million, on the basis of Toronto Stock Exchange data from the day of the deal) has been excluded from our calculations, giving the total of $685.75 million. It is worth noting that the average of commercial valuations for 70% of Kolwezi is $1.53 billion, while there is no known commercial valuation of Comide.

9. See ENRC press release"Acquisition of 50.5% of the Shares of Camrose Resources Limited," 20 August 2010, available at http://www.enrc.com/sites/enrc.g3dbuild.com/files/presentations/CamroseAnn2.pdf, last accessed 22 March 2013. Note that a portion of the $400 million loan was intended to repay an earlier $100 million loan Camrose had received from a third party for its earlier acquisition of Africo Resources.
10. See contract (contrat de cession des parts) between Gécamines and Emerald Star of 1 February 2010, published on the Ministry of Mines website (http://mines-rdc.cd/fr/documents/contrat_cession_parts_gcm_smkk_fev_2010.pdf, last accessed 22 March 2013). The sale price of $15 million is specified in article 4.1.
11. Id.
12. ENRC's 2010 preliminary results, available at http://www.enrc.com/system/files/press/23-03-11%20Announcement%20of%202010%20Preliminary%20Results.pdf, last accessed 22 March 2013.
13. Id.
14. The contract covering the first 70% can be found on the DRC Ministry of Mines website at http://mines-rdc.cd/fr/documents/Contrat_convention_sodifor.pdf. The contract covering the sale price for the remaining 30% can also be found on the ministry's website, at http://mines-rdc.cd/fr/documents/accord_prix_achat_sodimico_sandro_garetto.pdf.
15. DRC Ministry of Budget document seen by Global Witness, listing payments by the state in 2012, month-by-month. Under transferts et autres interventions, Sodifor is specifically named as receiving 74.688 billion Congolese francs, which is equivalent to $80 million. The payment appears to be reflected in a Banque Centrale du Congo report for the week of 7 December 2012: Condensé hebodomidaire d'informations statistiques, no. 49/2012. Page 25 lists a payment for August 2012 labelled as autres (http://www.bcc.cd/downloads/pub/condinfostat/cond_n_49_7dec2012.pdf, last accessed 22 March 2013).
16. This US$103 million is a sum of the price paid by the DRC for buying back the Frontier licence plus the extra $23 million that the offshore companies could theoretically receive for selling on Lonshi (see footnote below for more detail).
17. Note that the $60 million received by Sodimico in 2010-2011 included more than just the Frontier licence. For the purposes of this minimum loss analysis, we have not sought to disaggregate the $60 million paid to Sodimico across the Frontier licence and other assets. Instead, we attribute the $60 million price solely to the Frontier licence and consider the $20 million loss as having been made in relation to that asset alone. Accordingly, we assume that nothing was paid for the Lonshi mine and other licences. Had the $60 million been disaggregated in these calculations, the estimated loss for Frontier may have ended up being higher but the estimated for Lonshi would have been lower, thus yielding the same result.
18. Lonshi was worth 22.5% of the value of Frontier, based on the averages of commercial valuations from 2010. According to a 17 August 2011 Bloomberg piece, Oriel Securities in September 2010 valued Frontier at $1.4 billion and Lonshi at $250 million (Congolese State Miner Sells Stake in Former First Quantum Mines, http://www.bloomberg.com/news/2011-08-17/congolese-state-miner-sodimico-sells-stake-in-former-first-quantum-mines.html). A July 2010 report by Numis valued 100 % of Lonshi at $392 million and 95 % of Frontier at $1.568 billion (which would put 100 % at $1.65 billion). However, the Frontier valuations also include a factory. A technical report by First Quantum, filed with Canadian regulations on 21 December 2006, puts the cost of the factory at $115.8 million. Subtracting this factory cost estimate from the Frontier valuations yields a rough adjusted valuation for the Frontier mine of approximately $1.284 billion under the Oriel valuation and $1.535 billion under the Numis valuation. Accordingly these adjusted valuations yield a ratio of the value of the Lonshi mine to the value of the Frontier mine of about 19.5% based on the Oriel estimates and 25.5% based on the Numis estimates. The average of these two ratios is approximately 22.5%. We have applied this ratio to the actual sale price of the Frontier mine to derive an implicit "theoretical" sale price of the Lonshi mine. On the basis of the 2012 ENRC purchase price for the Frontier licence (which permits use and exploitation of the Frontier mine) of $101.5 million, the 22.5% ratio implies a theoretical sale price of Lonshi at $22.842 million. Since we have already subtracted the $60 million received by Sodimico for the sale of Sodifor in our accounting of the value lost for Frontier (see the previous footnote), our methodology requires us to assume that there is no payment received by the state or state-owned enterprises for transferring the Lonshi asset to offshore companies (to avoid double-counting). Accordingly, the theoretical sale price of $22.842 million is also the theoretical loss to the DRC in its disposition of the Lonshi asset (rounded above to $23 million).
19. See contract for the sale of 25% of Kansuki by Gécamines to Biko Invest Corp of 28 March 2011, published on the DRC's Ministry of Mines website: http://mines-rdc.cd/fr/documents/contrat_cession_parts_sociales_biko.pdf (last accessed 1 March 2013).
20. See contract for Kansuki, referred to above.
21. A Deutsche Bank valuation published 6 June 2011 put a 37.5 per stake held by the Swiss commodities firm Glencore in Kansuki at $313 million – extrapolating from this would give a value of $209 million for a 25% stake (the report can be viewed at http://www.scribd.com/doc/57254342/Db-Glencore-Initiation, last accessed 1 March 2013). Later that month, Liberum Capital valued Glencore's stake in Kansuki at $86 million, which would put a 25% share at $57.25 million ("Glencore: unapologetically unique", 29 June 2011). The average of the two extrapolated valutions for the 25% stake is $133.125 million. It should be noted that a January 2013 Bank of America Merrill Lynch report a much higher valuation for Kansuki was given, putting Glencore's 37.5% stake at $692 million, from which one could extrapolate that a 25% stake would be worth $461 million (report entitled "European Metals & Mining – Glencore/Xstrata: merger update, and detailed pro-forma estimates").
22. See contract on the DRC's Ministry of Mines website: http://mines-rdc.cd/fr/documents/contrat_cession_parts_sociales_rowny.pdf, last accessed 1 March 2013.
23. See contract for Mutanda on the DRC's Ministry of Mines website, referenced above.
24. Based on a 6 June 2011 report from Deutsche Bank (http://www.scribd.com/doc/57254342/Db-Glencore-Initiation, last accessed 9 April 2013) and a 29 June 2011 report from Liberum Capital ("Glencore: unapologetically unique"), Glencore's 40% stake at the time would be worth $1.251 billion and $1.93 billion, respectively, meaning that Gécamines'

20% stake would be worth $625.5 million or $965 million. Additionally, the 20% stake in Mutanda would be worth: $353 million on the basis of a Nomura Equity Research briefing of May 2011 (Figure 34, page 22, valuing 40% of Mutanda at $706 million); approximately $375 million on the basis of a graph published in a December 2011 research note by BMO Capital Markets; and $849 million on the basis of figures presented in the 4 May 2011 Golder Associates "Minerals Expert's Report: Mutanda" included in Glencore's May 2011 IPO prospectus, once royalties are taken into account. (Regarding the Golder Associates valuation, the report notes on page 7 that "[t]he valuation was done at a discount rate of 10%, base date 1 January 2011. The net present value (NPV) of Mutanda is USD 3 089 million. The net present value (NPV) of Glencore's investment in Mutanda is USD 1 318 million.") Glencore International PLC, "Prospectus", May 2011. It should be noted that in September 2011 Gécamines responded to queries from the IMF with a public letter, saying: "Gécamines Sarl a évalué ses parts sociales dans MUMI Sprl à 137 millions de dollars américains, bien au-delà de la valorisation qu'en a faite BNP Paribas, en avril 2010, soit 108 millions de dollars américains, dans une approche « basée sur un escompte des flux de trésorerie »." (Translation: "Gécamines Sarl valued its shares in MUMI SPRL [Mutanda Mining] at $137 million, far more than the valuation BNP Paribas did in April 2010 of $108 million in an approach based on a discounted cash flow.") (http://www.congomines.org/wp-content/uploads/2011/11/GCM-2011-ResponseFMIVenteMumi.pdf) The letter gives the impression that Mutanda alone was sold for $137 million – whereas in fact this sales tag was for Kansuki and Mutanda combined. Regarding the reference to a BNP valuation of $108 million for Mutanda (see Michael J. Kavanagh and Franz Wild, "Gécamines of Congo Defends Sale of Stake in Glencore Mines", Bloomberg 13 October 2011). We have difficulty accepting the BNP Paribas valuation that Gécamines cites as credible, given that: neither Gécamines nor any other party has published the valuation nor even any details relating to it; and that it differs so widely from the other five valuations obtained by Global Witness, some of which were received in printed form, along with details of the calculations. In an e-mail of 16 May 2012, BNP Paribas wrote: "BNP Paribas was mandated on September 2, 2009 by Gécamines to review certain assets of the company. A report was delivered on April 2, 2010. We want to underline that our review was not a 'Fairness Opinion'. It was also not done in the context of an asset sale negotiation. After the report was delivered, BNP Paribas did not perform any further work on that matter for Gécamines. We understand from public sources that Gécamines sold some of its assets 18 months later, around the end of 2011, under a different chairmanship. BNP Paribas was not involved in any of these asset sales. Our methodology, which included forecasts for the period and data provided by the company at the time (i.e. dating prior to Q1 2010), was the methodology in use in the profession. We are very sorry but BNP Paribas is linked by confidentiality clauses with its client, that's why we can not provide you with further information." The January 2013 Bank of America Merrill Lynch report referenced above – and not included in our calculation of average values, as it was published nearly two years after the sale to Rowny – gave a valuation of $2.876 billion for 60% of Mutanda, which would put a 20% stake at $959 million. This recent valuation reinforces the impression that the BNP Paribas valuation Gécamines cites was far too low. Overall, the average of commercial valuations for Mutanda is calculated as follows, relying on the Deutsche Bank, Liberum, Nomura Equity, BMO Capital Markets, and Glencore/Golder Associates valuations only: (625.5 + 965 + 353 + 375 + 849)/5 = 633.6.

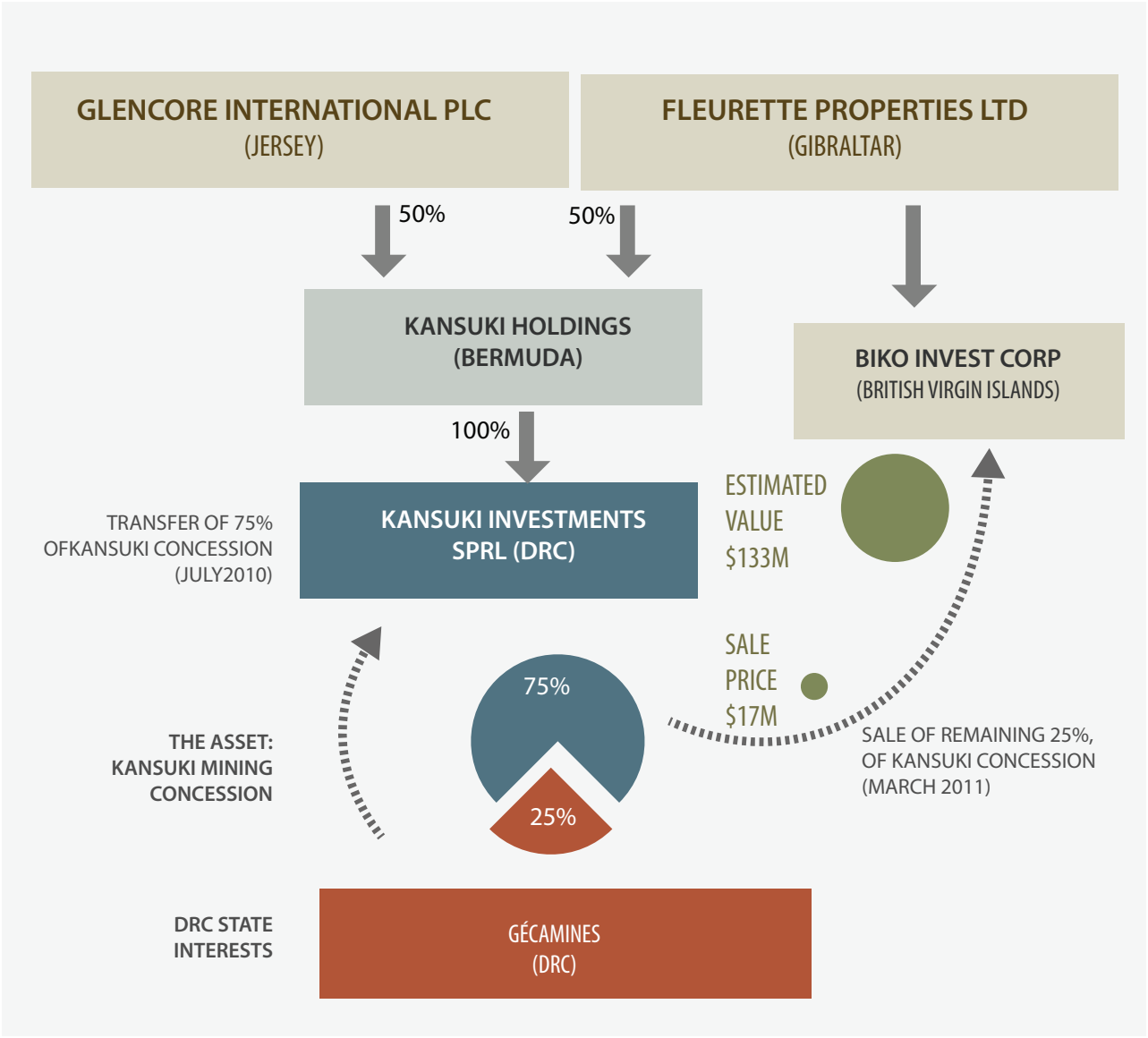
ANNEX 2

KOLWEZI PROJECT



Source: Company documentation cited in Annex 1

KANSUKI PROJECT



Source: Company documentation cited in Annex 1

LIST OF ACRONYMS

AfDB	African Development Bank
AIDA	Accelerated Industrial Development of Africa
AMV	Africa Mining Vision
APP	Africa Progress Panel
APR	Africa Progress Report
APRM	African Peer Review Mechanism
AU	African Union
CEMAC	Economic and Monetary Community of Central Africa
CONAMA	Coalition of NGOs Against Mining in Atewa
CNPC	China National Petroleum Corporation
DAC	Development Assistance Committee
DRC	Democratic Republic of the Congo
ECA	Excess Crude Account
ECOWAS	Economic Community of West African States
EIA	Environmental Impact Assessment
EITI	Extractive Industries Transparency Initiative
EPA	Environmental Protection Agency
EPA-SL	Environmental Protection Agency of Sierra Leone
ERNC	Eurasian Natural Resources Corporation
EU	European Union
EXIM	Export–Import Bank
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GNI	Gross National Income
HDI	Human Development Index
HRW	Human Rights Watch
ICMM	International Council on Mining and Metals
IEA	International Energy Agency
IFC	International Finance Corporation
IMF	International Monetary Fund
KPCS	Kimberley Process Certification Scheme
LRC	Liberia Revenue Code
MCM	Mopani Copper Mine
MDG	Millennium Development Goal
MSF	Médecins sans frontières
NNPC	Nigerian National Petroleum Corporation
NPRS	National Poverty Reduction Strategy
NRC	Natural Resource Charter
OBI	Open Budget Index
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PIAC	Public Interest and Accountability Committee
PRMA	Petroleum Revenue Management Act
RGI	Resource Governance Index
RINR	Regional Initiative against the Illegal Exploitation of Natural Resources
SADC	Southern African Development Community
SEC	Securities and Exchange Commission
SIA	Social Impact Assessment
SNPC	Société Nationale des Pétroles du Congo
SSA	Sub-Saharan Africa
SWF	Sovereign Wealth Fund
UNEP	UN Environment Programme
UNESCO	UN Educational, Scientific and Cultural Organization
WEF	World Economic Forum
WHO	World Health Organization
ZMDC	Zimbabwe Mining Development Corporation

LIST OF BOXES

LIST OF FIGURES

NOTES

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114. On the additional US$50 million payment, see page 21 of ENRC Africa Holdings Limited Financial Statements for the year ended March 31, 2010, filed at UK Companies House.
115. According to a court judgment in the British Virgin Islands (BVIHC (COM) 2010/0125, page 3) the Highwind Group signed its contract on the "same day" as Gécamines cancelled First Quantum's licence over Kolwezi. The contract between Gécamines and the Highwind Group, dated January 2010, is available at http://mines-rdc.cd/fr/documents/contrat_gcm_highwind.pdf (last accessed May 29, 2012).
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Africa Progress Panel
P.O. Box 157
1211 Geneva 20
Switzerland

info@africaprogresspanel.org
www.africaprogresspanel.org

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