

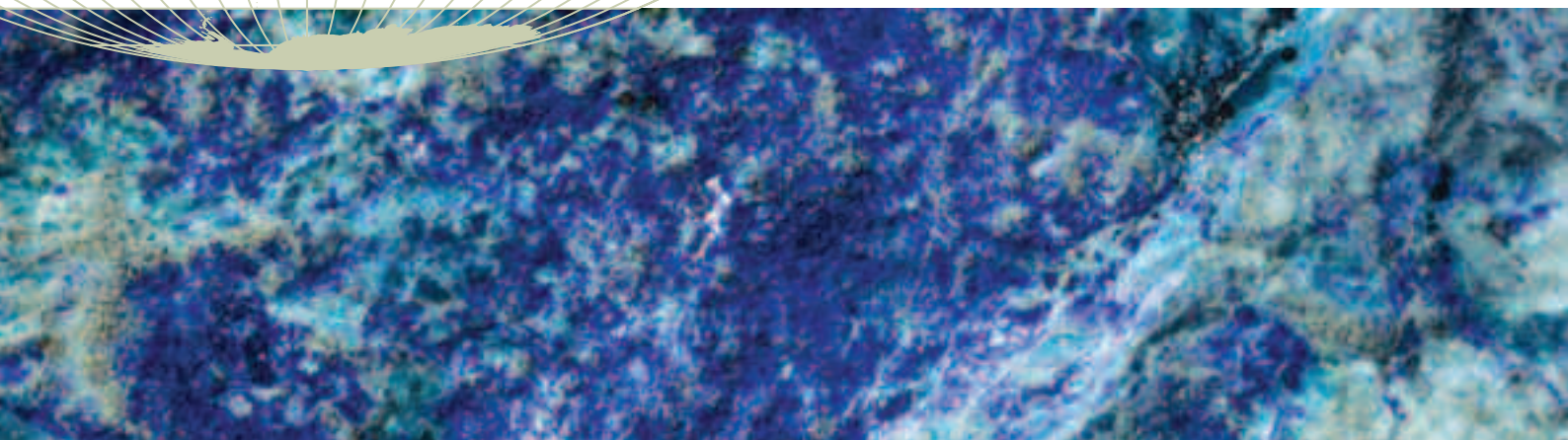


# Synthesis of four Country Case Studies

**The Challenge of Mineral Wealth:**  
using resource endowments to foster  
sustainable development

April 2006

Findings and  
recommendations



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# Preface

In the past five years, the economic, social and environmental dimensions of mining and minerals have been the subject of wide-ranging consultation, critical comment, research and analysis. The Mining Minerals and Sustainable Development Project (MMSD) and Extractive Industries Review (EIR) respond to the unprecedented focus of public attention on the sustainable development challenges for extractives in general and mining in particular.

In May 2004, ICMM<sup>1</sup> initiated its Resource Endowment<sup>2</sup> initiative<sup>3</sup> to better understand how large scale mining activity in low and middle income countries can enhance the socio-economic development of host countries. The initiative aims to isolate the drivers of development effectiveness in the mining and metals sector and to document the policy frameworks, operational practices, and partnership arrangements that deliver sustainable outcomes on the ground. This action-research project is being done together with UNCTAD and the World Bank Group. ICMM also consulted stakeholders such as mining companies, governments, donor agencies, labor and non-governmental organizations (NGOs).

Much of the 'resource curse' literature has focused on problems rather than solutions. Consequently it is not of much practical help in designing improved policy or filling gaps in knowledge. For example, how have apparently 'successful' countries avoided problems now so widely perceived? Can such outcomes be repeated in other developing economies endowed with an abundance of mineral resources? How should the main stakeholders work together to enhance positive socio-economic outcomes from mining investments?

To help bridge these gaps, some of the specific questions the Resource Endowment initiative attempts to address are:

- How the mining sector overall contributes to national development?
- What strategies have been effective in managing revenues generated by natural resources for sustainable development and poverty reduction?
- How an individual mining project contributes to development at national, regional and local levels?
- What are the practical and policy implications for mining companies, host country governments, development institutions, and NGOs?
- What might the distinct responsibilities of these development partners be to support implementation of findings and recommendations?

The three distinct phases of the initiative and related products are outlined below.

## Phase 1: Analytical Framework and Tools

The initial phase of the project concentrated on the development of an analytical framework focussing on governance processes, including the underlying factors and rules of the game that affect social and economic interactions and outcomes. These aspects were incorporated into a practical toolkit to assess local, regional and national socio-economic impacts of mining. The toolkit also deals with how mining operations impact on governance structures, institutions and policy changes at different levels of government. Phase 1 involved an extensive literature review, and a 'coarse-sift' comparative analysis of the relative economic and social well-being of 33 countries with a high dependence on minerals. Initial findings were critiqued in a multi-stakeholder workshop which helped to shape a revised approach.

## Phase 1 Published reports:

- Analytical Framework: Executive summary
- Resource Endowment Toolkit.

## Phase 1 Additional Online Resources:

- Analytical Framework: Main Report
- Literature Review
- November 2004 Workshop proceedings.

<sup>1</sup> The International Council on Mining and Metals.

<sup>2</sup> The Challenge of Mineral Wealth: using resource endowments to foster sustainable development.

<sup>3</sup> The initiative is managed by Kathryn McPhail, Principal, ICMM.

### Phase 2: Testing, Synthesis and Emerging Lessons

This involved applying the toolkit to two main and two comparator countries, Peru (with Chile as a comparator) and Ghana (with Tanzania as a comparator). In all four countries, mining had shown some evidence of having successfully contributed to economic and social improvements. The purpose was to test the toolkit, to assess whether it could be applied to a broader set of mining countries, and to propose refinements. The findings were reviewed by a second multi-stakeholder workshop which provided valuable feedback.

#### Phase 2 Published reports:

- Four country case study executive summaries
- Synthesis report of findings of the four case studies.

#### Phase 2 Additional Online Resources:

- Ghana, Tanzania, Peru and Chile country case studies
- October 2005 Workshop proceedings.

In addition, a number of other publications summarize the process or findings of both Phases 1 and 2, and signal ICMM's approach to Phase 3:

- A Spotlight series that summarizes key aspects of Phases 1 and 2 (The Prize; The Challenge; Ways Forward; and Process and Feedback)
- Resource Endowment Guide to Phases 1, 2 and 3.

### Phase 3: Action Learning through Partnerships

The activities of Phase 3 will include a number of 'pilot projects' in partnership with others to encourage uptake of the Phase 2 recommendations and, as a consequence, enhance the contribution of mining to social and economic development. Phase 3 will also focus on dissemination and outreach.

For the latest information on Phase 3, including details of pilot activities and partners visit [www.icmm.com](http://www.icmm.com)

'to better understand how large scale mining activity in low and middle income countries can enhance the socio-economic development of host countries.'

# Overview

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# 1. Overview

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## 1.1 Key Messages from Phase 1

The process of developing an *Analytical Framework* in Phase 1 identified several important messages about the impact of mining investments in low- and middle-income countries. These messages have been carried forward into the toolkit and so into the four case studies.

Above all, many of the critical propositions about mining from the literature of the past 10-15 years fail to explain the *differences* in outcomes between those countries that have suffered from the 'resource curse' and related ailments and those countries that did not. Natural resource endowments have undoubtedly contributed to long-term sustainable and broad-based socio-economic development at least in some countries<sup>1</sup>. But why did these countries avoid the problems that are now so widely perceived, and how can the dynamic forces that created these good outcomes

be repeated in some of today's developing economies?

A diagrammatic representation of this point for two of the most common issues associated with the 'resource curse' – the macroeconomic perspective and the rent seeking syndrome – is set out in Figures 1 and 2 respectively.

The two unanswered questions from these critical issues (as shown in the two diagrams) are mirrored in an equally important and unanswered point from the advocates of Corporate Social Responsibility initiatives. Why is it that companies that have adopted apparently highly socially responsible and high cost approaches to their mining investments in low-income countries – as many large mining companies have done – continue to confront widespread criticism of their behaviour from host country and international advocacy groups?

Figure 1: Macroeconomic Perspective

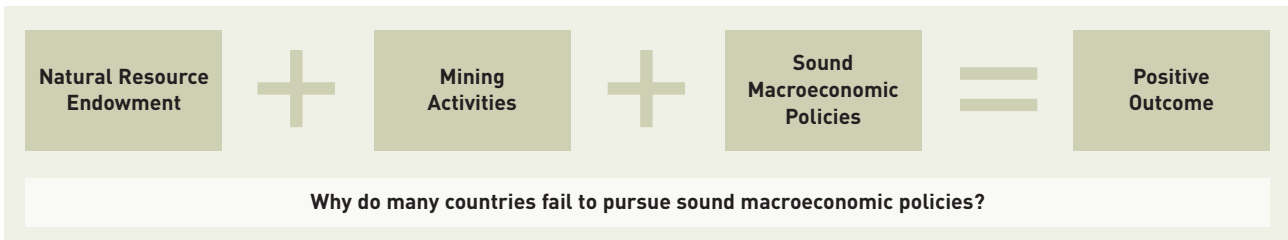


Figure 2: Rent-Seeking Perspective

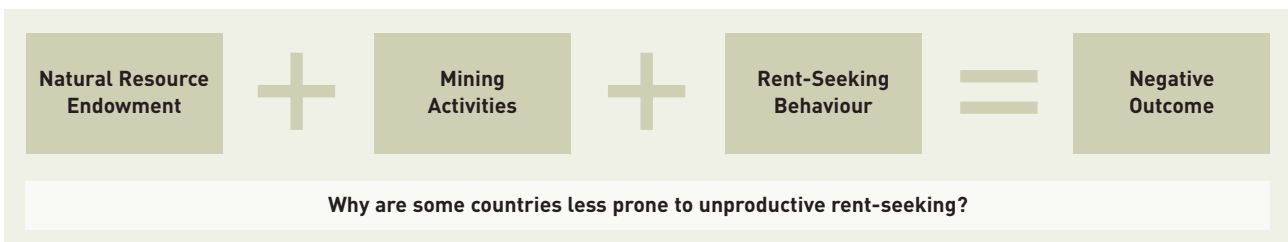
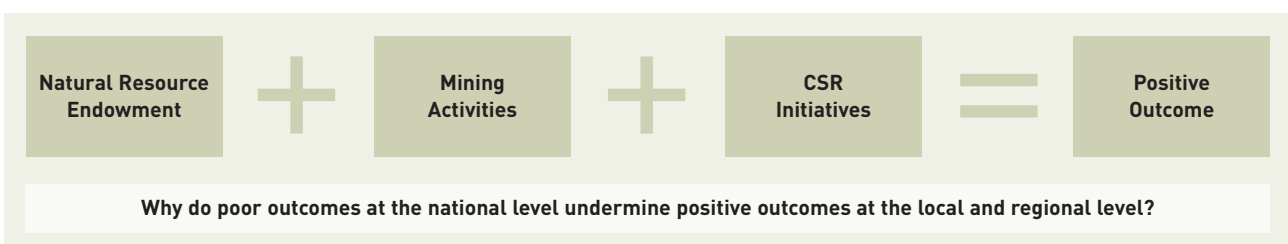


Figure 3: Corporate Social Responsibility Perspective



‘many of the critical propositions about mining from the literature of the past 10-15 years fail to explain the differences in outcomes’

For completeness, a simple representation of that point is also shown diagrammatically as Figure 3.

In the *Analytical Framework* developed in Phase 1 it was concluded that answers to such questions would need to make use of impact studies of mining that utilized both a micro (local) perspective and also a more macro (national) perspective.

It was also argued that the missing elements in each of the three approaches to assessing mining’s impacts (Figures 1 to 3) are associated with an incomplete specification of the *governance processes* in the host countries. In particular, all three approaches fail to probe sufficiently deeply into the nature of governance and, more importantly, into the underlying conditioning factors and rules of the game that affect social and economic interactions. Why is it that governance is supportive in some cases but not in others? To truly understand the development role of mining investments (and the potential pitfalls), it was thought to be necessary to explicitly incorporate this more detailed probing into the analysis. The economics and the political economy issues have to be assessed in tandem. Hence substantial detail pertaining to institutions and governance structures and to the various influences upon these has been incorporated as an essential element into both the *Analytical Framework* and the case study *Toolkit*<sup>2</sup>.

### 1.2 The October 2005 Workshop

During the final stages of preparation of this report, a stakeholder workshop was held in London as part of the process of testing the usefulness of the toolkit and the results that have been generated thus far. This event was attended by some fifty persons from host governments, donor agencies, relevant non-governmental organizations

(NGOs) and the mining community. Its agenda was established through a process of co-creation led by a sub-group of stakeholders who had volunteered themselves for this task<sup>3</sup>. A Summary Note of Proceedings is available as a separate document.

Most of the main insights from the workshop relate to the recommendations to governments, companies, donors and NGOs about how they can best head off ‘resource curse’ dangers. These insights are referred to selectively in the recommendations section of this present report (mainly Chapter 6). However, stakeholders also felt that the case study work to date may have underemphasised, or even ignored, issues that needed more in-depth attention in future work based on the toolkit. These areas include:

- The tax regimes for mining. These regimes are not described and analyzed in detail in any of the four case studies. But it was felt that they should be given fuller attention with particular emphasis on the ways in which tax credit arrangements might be used to try to encourage a higher level of company involvement in local capacity issues. This would complement the in-depth work done in all case studies on governance issues as well as on issues of revenue transparency.
- Land tenure structures condition many of the income and other effects that emanate from mining investment in predominantly low-income agrarian societies. Therefore the variations in such arrangements across countries need to be addressed more explicitly.
- Although several of the case studies do report in-depth survey results (attitude surveys and others) in local communities, some stakeholders argued for improved methodologies to measure the views of communities and civil society at large.
- Competition for water use can be a contentious issue in some cases and also needs more attention than it has received in the case studies to date.

<sup>1</sup> Whilst there is fairly compelling evidence of the presence of the ‘resource curse’, there are several countries that have managed to avoid it (Stevens, 2005; Sarraf and Jiwaji, 2001; Wright and Czelusta, 2003; Acemoglu et al., 2003). The most frequently cited cases are Australia, Botswana, Canada, Chile, Indonesia, Malaysia and Norway.

<sup>2</sup> In the *Resource Endowment Toolkit*, a 5 X 5 matrix provides the most concise summary of the issues that need to be explored.

<sup>3</sup> Carlos Aranda, Southern Peru; Leah Hibbin, CARE International; Paul Hollesen, AngloGold Ashanti; Rashad Kaldany, World Bank/IFC; Rob Lake, Henderson Global Investors (UK); Julie McCarthy, Open Society Institute; Marta Miranda, World Wildlife Fund US; Theodore Moran, Georgetown University; David Murray, Transparency International UK; Gordon Peeling, Mining Association of Canada; Alan Roe, Oxford Policy Management; Jonathan Samuel, Environmental Resources Management; Hugo Sintes, CARE International.

### 1.3 Outline of the Synthesis Report

This Synthesis Report provides a concise overview of the main findings that have emerged from the case studies to date.

- Chapter 2 describes the main features of the four countries, the nature of their mining histories and the target mine in each case.
- Chapter 3 first summarizes the record of economic and social outcomes that have been observed in these countries in the past 20-30 years. It then assesses the extent to which these outcomes can be explained by the mainstream arguments relating to the conduct of economic policy and to the readily defined measures of sound governance.
- Chapter 4 provides a parallel account of the micro level impacts – on incomes, employment, social provision etc – associated with the target mine.
- Chapter 5 then explores the gaps that need to be filled if better social and economic impacts are to be achieved. It does this by using some of the commonly-voiced criticisms of mining to tease out the reasons that allow broadly benign outcomes to co-exist with the ongoing problems.
- Chapter 6 then uses the analysis of the earlier sections to advance some preliminary ideas (for debate in the October 2005 workshop) to achieve improved outcomes in future. Among other things, this part of the analysis spells out the nature of the partnership roles that should be played by mining companies and host country governments, as well as the donors and NGOs that support them.
- Finally, Chapter 7 draws attention to the most important new insights from the study.

At the level of policy, the study confirms many things that are familiar, but has also identified new slants that suggest major changes in the ways in which the various players view the situation and their respective roles. The work broadly endorses the usefulness of the toolkit that was proposed in Phase 1, but also suggests a number of refinements to ensure its greater usefulness in future work along similar lines.

‘the analysis spells out the nature of the partnership roles that should be played by mining companies and host country governments, as well as the donors and NGOs that support them.’



# The Four Case Study Countries

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## 2. The Four Case Study Countries

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### 2.1 Economic and Social Development

The four countries chosen for in-depth study share a common dependence on mining activity as a major source of their livelihoods. But in other respects they show substantial differences that need to be borne closely in mind in making comparisons between them. The next paragraphs summarize the more important points.

**In economic terms**, Ghana and Tanzania are both very poor African countries with per capita incomes of only around \$350 and \$270 respectively. The Purchasing Power Parity (PPP) adjustments make these figures a bit higher but only raise Tanzanian income to a little over \$540 per annum – well under the \$2 per day definition of absolute poverty for the typical person – and the Ghanaian figure to less than \$2000 per annum. Chile and Peru are much more advanced middle-income countries with per capita incomes of \$4500 and \$2000 respectively (or in PPP terms \$9500 and \$4700). Both African countries have Millennium Development Goal targets for 2015 that are lower than the corresponding levels already achieved in some dimensions by the two Latin American economies. For example the Africa target for 2015 for under-5 mortality is 60 per thousand live births. Chile had a ratio below 15 and Peru one of 58 even before the end of the last millennium.

The wide differences in incomes per capita are mirrored in similarly wide differences in levels of **social development**. In relation to the UN's Human Development Index (HDI) for example, Tanzania and Ghana rank as 'low' HDI countries (162 and 131 respectively on the list of 177 countries for which data are available for 2003). By contrast Peru and Chile rank 85 and 43 respectively which puts Peru in the 'medium' HDI category and Chile in the 'high' HDI category, with life expectancy and literacy rates that compare reasonably well with some EU countries.

All four countries have **population sizes** of well over 10 million: a sharp contrast with the small mining economies of Africa such as Botswana and Namibia that might have been chosen as case studies. Aside from the economic importance of mining, they all have substantial proportions of their populations engaged in and dependent upon other non-mining activities. Many of the tensions that persist derive from this fact and especially from the competition for land between mining and traditional agricultural activities. The poorest

country, Tanzania, has the largest population with 35 million people and also the largest percentage of people dependent on agricultural production. The richest of the four countries, Chile, has the smallest population with 16 million and is also the most urbanized. Ghana and Peru are in between with population sizes of 22 million and 27 million respectively.

### Political Structures and Histories

Differences in various dimensions of politics and history are also profound across the four countries. Both Latin countries became politically independent in the early part of the 19th century and have had a wide experience of various forms of political organization since then including various constitutional reforms, experience with both multiparty parliamentary and presidential democracy, varying degrees of executive and legislative powers, and periods of military rule (including dictatorship) and multi party democracy. By contrast Ghana and Tanzania have been politically independent only since 1957 (Ghana) and 1961 (Tanzania), and have spent much of the intervening period evolving single party systems of politics into embryonic multi-party democracies. Tanzania achieved this only in 1995 and Ghana achieved it only three years earlier. In both cases the new systems are still bedding down.

Both Chile and Peru have emerged from periods of autocratic government only in the past 10-15 years: 1990 in the case of Chile when President Alwin Azocar replaced General Augusto Pinochet following the first democratic elections since 1970, and 2001 in the case of Peru when President Toledo took over following the collapse of the Fujimori regime. However, a fundamental difference between these two countries is that in historical perspective the Chilean system looks back to a much more stable democratic tradition, interrupted only by the Pinochet regime and a short spell of authoritarian rule in the early 1920s. Peru in contrast has been riddled with political instability, crises and coups resulting in frequent shifts between authoritarian and democratic rule. Ghana, in common with the Latin countries, suffered sustained periods of military dictatorship prior to its own return to constitutional rule in 2002, while Tanzania has enjoyed a somewhat more settled political record with significant continuity between its various administrations.

Common to all four countries is that they are now

'once economic policies provide a minimal structure that allows a reasonable prospect of commercial success then mining investment may occur, even when the normative quality and democratic legitimacy of governance is poor.'

governed by presidential democratic systems, where the powers of the executive tend to outweigh the ability of the legislature to hold the executive to account. However, administrative traditions, electoral rules and sub-national governance structures differ across all four countries. Undoubtedly, these differences condition the incentives of politicians, government officials, the electorate and private interest groups and affect public policy processes in complex ways.

All four countries have shared the experience of severe **macroeconomic mismanagement** in recent decades. For extended periods especially in the 1970s and 1980s they all maintained seriously distorted macroeconomic and structural policies – the antithesis of the so-called 'Washington Consensus' package. In the cases of both Chile and Ghana these damaging macro and structural policies started to be corrected successfully only in the mid-1980s. In Peru and Tanzania the correction had to wait until the 1990s. In three of the four cases, the correction of economic policies was presided over by political regimes that were seriously autocratic and in which abuses of basic human rights and other principles of good governance certainly featured as unpleasant accompaniments: Pinochet in Chile, Fujimori in Peru and Rawlings in Ghana.

From the viewpoint of this study, the co-existence in the case study countries for some years of improving macroeconomic and structural policies

with weak governance is an important part of the problem to be understood. Indeed it is the sort of combination with which mining companies considering new overseas investments frequently need to contend. The mining companies are unlikely to be attracted to countries where economic policies are grotesquely distorted. But once economic policies provide a minimal structure that allows a reasonable prospect of commercial success then mining investment may occur, even when the normative quality and democratic legitimacy of governance is poor. As some of the case studies demonstrate, new mining investment can be an important early source of private sector activity in economies that are recovering from extreme economic malfunction. However, the four case studies also show that macroeconomic success does not automatically guarantee trickle down mechanisms that reduce poverty and inequality. Correcting macroeconomic policies is a necessary but hardly a sufficient condition for more broad-based social development. Economic reforms at the central government level are no substitute for fundamental reforms and capacity building at the local and regional level. But in these circumstances, what should the companies' and donors' roles be in terms of economic and social development?

## 2.2 Mining's Role and History in these Countries

The exploitation of mineral wealth has a very long history in all four countries.

In the case of Ghana, European interest in gold mining dates back to the late fifteenth century and pre-dates the later dominant slave trade. Prior to the European interest, there is also evidence of a gold trade with North Africa. Gold has again been of commercial and export significance since the end of the 19th century, with artisanal (*galamsey*) mining providing a source of livelihoods for some on an ongoing basis. However, commercial mining suffered a major decline in the period from the early 1940s until the mid 1980s when the revival which is the main focus of the Ghana case study began in earnest: it is one important consequence of a systematic program of economic reform begun in 1983. Today the industry is dominated by foreign multinational companies albeit with some limited state ownership. Gold is easily the most important mined product.

In the case of Peru, the Inca civilization and gold and silver were important focal points for the

Spanish settlement in the 1500s. Lima was the geographical focal point for Spanish expansion and domination of western South America and the Caribbean. In modern times, state owned companies came to dominate the sector by the early 1980s. As in the case of Ghana, they presided over a period of relative decline of the sector – although Peru remained an important global source of many minerals. Today the industry is mainly privately owned and foreign multinational corporations dominate the sector. Peru is again rated as one of the world’s most important sources of key minerals: second in silver, third in zinc, fifth in copper and sixth in gold.

Chile’s history of mining also dates back to the period of Spanish colonial rule and the exploitation of precious minerals in the mid sixteenth century. A later boom in the sector – and especially in the Atacama region where the target mine for the case study is located – occurred in the 1860s when a use was found for sodium nitrate in the manufacture of explosive substances. But with the collapse of the market for nitrates after World War I, the Chilean economy also suffered a severe downturn. Foreign owned mining companies were nationalized at the beginning of the 1970s when the Allende government came to power. By the mid 1970s this was reversed following Pinochet’s military coup. Although Pinochet’s liberal economic reforms introduced in the second half of the 1970s had opened the way for new involvement of major foreign companies, significant new investment did not take place until after the resumption of a civilian government and the restoration of democracy at the end of the 1980s. The Escondida mine that is the subject of the case study began development in 1988.

In the case of Tanzania, East African coastal trade in gold has a very long history. In modern times, the most famous mine – the Williamson diamond mine, established by the Canadian geologist of the same name – began production in 1940. But this mine was nationalized during the wave of reforms associated with President Julius Nyerere’s assertion of a socialist economic policy after 1967. Other prospective mining investments were also deterred by that same anti-capitalist sentiment. But the general economic reforms of the 1990s, and the promulgation of significant new minerals legislation later in that decade, led to a radical change. Since then mining investment has boomed and new foreign direct investment, much of it

‘As the review of the results of the case studies will show, a frequent complaint of the critics of mining in the four case study countries is that companies are insufficiently taxed.’

linked to mining, has risen rapidly to attain a level of around \$300 million per annum. Gold mining has quickly surpassed diamond mining as the most important mining activity.

The **potential for commercial mining** has been and remains substantial in all four countries. Based on the latest Fraser Institute survey for 2004/05, the best practice ratings for the four countries and certain comparators are shown in Table 1. The data show the survey scores (the expert assessment of mining potential assuming ‘best practice’ policies – a score of one being the maximum) and the associated rankings of countries against 64 comparators in 2004/05. It can be seen that the industry specialists who responded to the survey rate both Peru and Chile very highly in terms of their pure potential. Ghana and Tanzania are ranked at about the half-way point in the distribution of mining locations which includes several advanced economies.

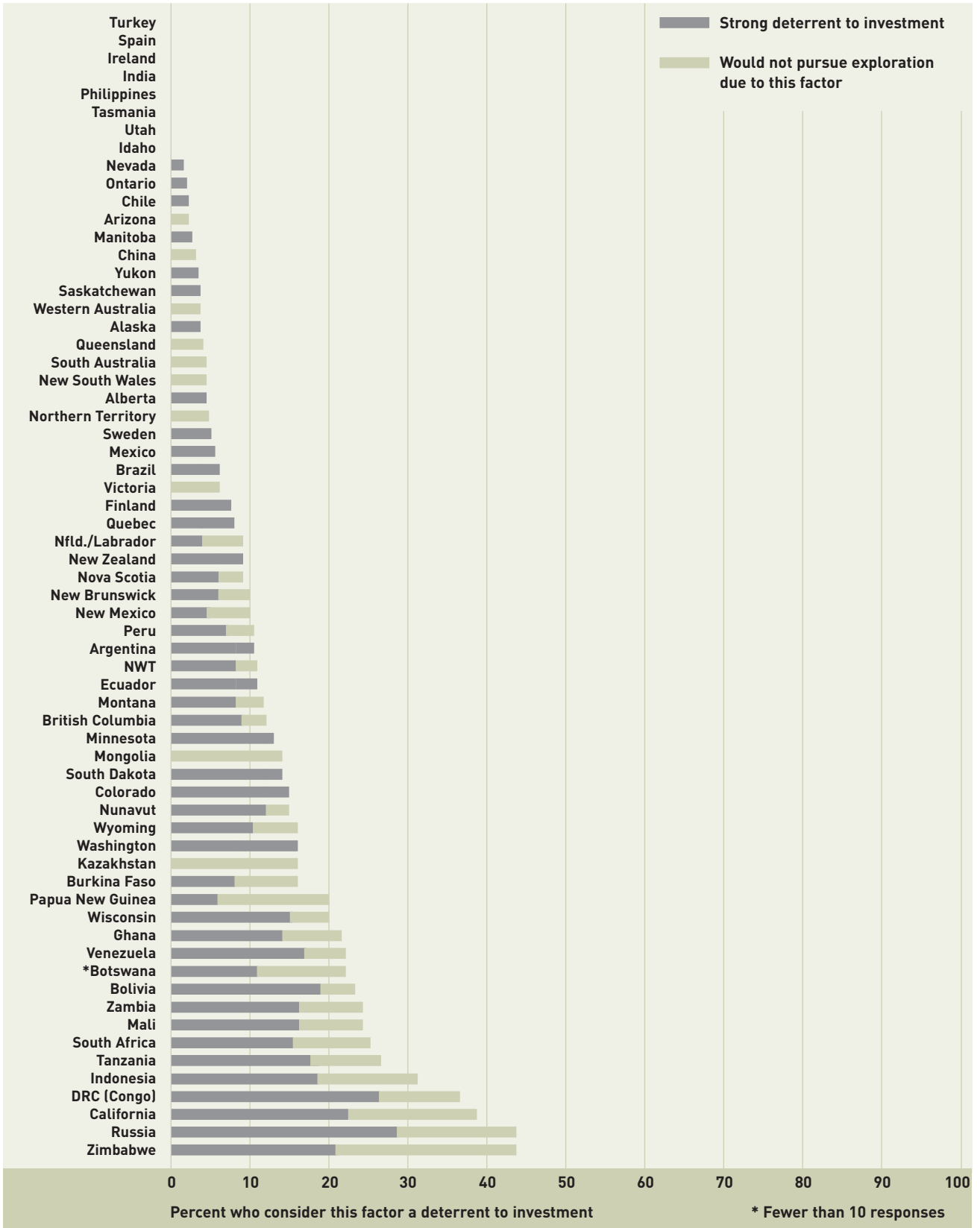
As the review of the results of the case studies will show, a frequent complaint of the critics of mining in the four case study countries is that companies are insufficiently taxed. However, the investments that they have already attracted and seek to attract in future need to be won in competition against a large number of alternative options that are available to the investors. Seen in this light there are significant variations between the four countries. Again the survey results from the Fraser Institute as summarized in Figure 4 can help us better understand this. The Figure shows that Chile is perceived to have a very favourable tax regime

**Table 1: The Fraser Institute Survey: Best Practice Mineral Potential Index<sup>4</sup>**

	Score			Rank		
	2005/2004	2004/2003	2003/2002	2005/2004	2004/2003	2003/2002
<b>Oceania</b>						
Indonesia	0.97	0.97	0.89	6 / 64	6 / 63	17 / 47
New Zealand	0.58	0.46	0.53	58 / 64	50 / 53	43 / 47
Papua New Guinea	0.96	*	0.83	9 / 64	*	26 / 47
Philippines	0.89	0.88	0.92	28 / 64	26 / 53	14 / 47
<b>Africa</b>						
Botswana	0.84	*	*	31 / 64	*	*
Burkina Faso	0.70	*	*	50 / 64	*	*
DRC (Congo)	0.90	0.88	*	26 / 64	27 / 53	*
Ghana	0.83	0.94	0.84	33 / 64	15 / 53	25 / 47
Mali	0.83	*	*	32 / 64	*	*
South Africa	0.91	0.93	0.93	23 / 64	19 / 53	13 / 47
Tanzania	0.81	*	*	35 / 64	*	*
Zambia	0.91	*	*	21 / 64	*	*
Zimbabwe	0.60	0.83	0.76	53 / 64	31 / 53	33 / 47
<b>Latin America</b>						
Argentina	0.93	0.95	1.00	16 / 64	12 / 53	1 / 47
Bolivia	0.72	0.88	0.86	46 / 64	28 / 53	21 / 47
Brazil	0.90	0.98	0.98	25 / 64	5 / 53	3 / 47
Chile	0.93	0.96	0.98	13 / 64	9 / 53	2 / 47
Ecuador	0.77	*	0.77	39 / 64	*	31 / 47
Mexico	0.91	0.93	0.91	19 / 64	18 / 53	15 / 47
Peru	0.96	0.98	0.97	7 / 64	4 / 53	6 / 47
Venezuela	0.76	0.81	0.82	42 / 64	32 / 53	28 / 47

<sup>4</sup> The survey was addressed to 1121 exploration, development and mining-related consultancies around the world. The response rate meant that organizations accounting for 15% of the total exploration spend of 2004 were included in the answers that were analyzed. The 'best practice' index assumes that the policy regime in each country is set at the standard of best practice in the industry. By thereby abstracting from the real world difference in policy regimes, the index provides an indication of the 'pure' mineral potential of the country.

Figure 4: The Fraser Institute Survey: Respondent's Assessment of Tax Regimes



with only a very small number of respondents regarding tax as a significant deterrent to investment. Peru has a slightly less good rating but in this case too only a small number (around 10%) regard tax as a major deterrent. However, the situation is starkly different in both of the two African economies. Both Tanzania and Ghana appear a very long way down the rankings on this particular issue, with 20-30% of all respondents regarding the tax regime as problematic.

Significantly, the new mineral legislation introduced in Ghana in 1986 and in Tanzania in 1998 has stimulated the large upsurges in mining investment seen in those two cases. But it is clear from Figure 4 that the tax dimensions of these countries' competitive position still represent a somewhat negative factor in the eyes of investors.

### 2.3 The Mines Reviewed in the Case Studies

#### Ghana – Obuasi Mine

The mine that has been studied in depth is the Obuasi gold mine owned by AngloGold Ashanti. Obuasi is the oldest mine in Ghana (with a history tracing to the 19th century). It is also the first deep mine to be developed in the country, although the company also operates some open pit sites in the same area of the Ashanti region. Open pit mining is more common in other regions of Ghana and especially in Western Region, the second main mining area of the country. With a level of gold production of around 400,000 ounces annually, Obuasi accounts for about 20% of all Ghana's gold production although this ratio is likely to fall as new mines open up in other regions.

The town of Obuasi where the mine is located is now a significant town of 150,000-200,000 persons. However, prior to the arrival of the mine, there was no significant population in the area. So in some sense Obuasi is a 'mining town' although its age – more than 100 years – means that it is a well established settlement rather than a temporary community. The long-established history of the mine means also that its links with the community as well as its reputation are deeply rooted. This is good in one sense but also means that the management has less opportunity to utilize newer approaches to community relations than do the other newer mines that form the basis of the other case studies: established practices are a part of the reality the company operates within. The location in Ashanti region means also that the mine is within reasonable proximity of other major areas of

settlements and communities: it is not a remote out-post.

#### Peru – Compania Minera Antamina

In contrast, the Antamina copper mine in Peru represents a major new investment. Antamina was completed only in 2001 at a cost of some \$2.3 billion. Production began later that same year. Four years later, the mine is already the seventh largest producer of copper and the third largest producer of zinc in the world. The mine is operated by La Compania Minera Antamina S.A. (CMA) and has four major shareholders, namely Falconbridge (33.75%); BHP Billiton (33.75%); Teck-Cominco (22.5%); and Mitsubishi Corp. (10%).

Antamina is located in the Ancash region of Peru that has a population of around 1.1 million (4% of the Peruvian total). The mining operation is based in the province of Huari which lies in the Andean mountains, approximately 285 km north of Lima. This is a densely populated region. In the mining area, the population has traditionally relied upon agriculture and there are relatively few private manufacturing businesses that can serve the needs of the mine. Since 2001, the mining contribution to GDP has risen to almost 17% of the total for the Ancash region – a huge jump from a very low base. The relative remoteness of the mine in terms of both physical distance and altitude means that it is somewhat more disconnected from mainstream communities than is the study mine in Ghana. But being much newer it has had good opportunities to apply more modern approaches to community relations than Obuasi.

#### Chile – Escondida

The target mine in Chile is also relatively new. The ore body at the Escondida copper mine was discovered in 1981. The decision to exploit this ore body was the first such decision in the post-Allende years and was a response to the early (but largely failed) liberalizing attempts of the Pinochet regime. The investment in question was and remains the largest single foreign mining investment in Chile. The construction of the facility only commenced in 1988 with the first ore being processed in 1990. The ownership of the mine now lies with BHP Billiton, the majority shareholder and operator of the mine, and with Rio Tinto, the Japanese Escondida Company and the International Finance Corporation (IFC), a subsidiary of the World Bank, as other major shareholders.

Escondida is located in the north of Chile in the Atacama Desert 170 km southeast of Antofagasta from whence the processed copper is exported. The mine, which is the world's largest producer of copper, is still undergoing a process of expansion. Production at the new Escondida del Norte open pit started late in 2005. In total some \$4 billion has been invested in the facility since 1988.

#### Tanzania – North Mara

The target mine in Tanzania is the North Mara gold mine, operated and wholly owned by Placer Dome Inc. (PDI) of Canada, which acquired it in 2003 from Afrika Mashariki Gold Mining (AMGM) company, a privately-owned Australian company which built the mine in 2001. PDI was taken over in January 2006 by another Canadian mining company, Barrick Gold Corporation, which also owns the Bulyanhulu and Tulawaka mines in Tanzania. North Mara is one of the five principal mines that have been started up in Tanzania by foreign investors since the reform of the mining legislation in 1998.

North Mara is situated in the Tarime District of Mara Region, some 100 km east of Lake Victoria and 20 km south of the Kenyan border. The mine consists of three open pit deposits with separate mining licenses, one of which is currently being mined. The mine was officially opened in September 2002. North Mara's updated 2005 production forecast was estimated at 245,000 ounces. Cash and total costs per ounce were estimated at \$310 and \$400 respectively. Proven and probable mineral reserves as of December 31, 2004 were estimated at 3.9 million ounces. Approved capital expenditure for 2005 was \$40 million. This was required to complete the transition to owner mining which will require additional loading, truck, and ancillary machinery capacity during 2005, and to fund the costs required to start the pit at Gokona.

#### Overview

Overall the target mines are all very large and certainly significant in their local economies. The mines in Ghana and Tanzania are both gold mines. Those in Peru and Chile are for copper and zinc (Peru). Obuasi in Ghana stands out from the others as being the only really old mine in the study and this affects both its location (a bit less remote and so more integrated with mainstream non-mining communities) and the likelihood that it would operate in a somewhat more conventional manner as regards its relationships with local

'the new mineral legislation introduced in Ghana in 1986 and in Tanzania in 1998 has stimulated the large upsurges in mining investment seen in those two cases. But it is clear from Figure 4 that the tax dimensions of these countries' competitive position still represent a somewhat negative factor in the eyes of investors.'

communities and partners. These contrasts need to be kept in mind as the discussion proceeds.



**Economic Impacts and  
Poverty Reduction:  
Outcomes and Causes**

3

# 3. Economic Impacts and Poverty Reduction: Outcomes and Causes

## 3.1 Growth Performance

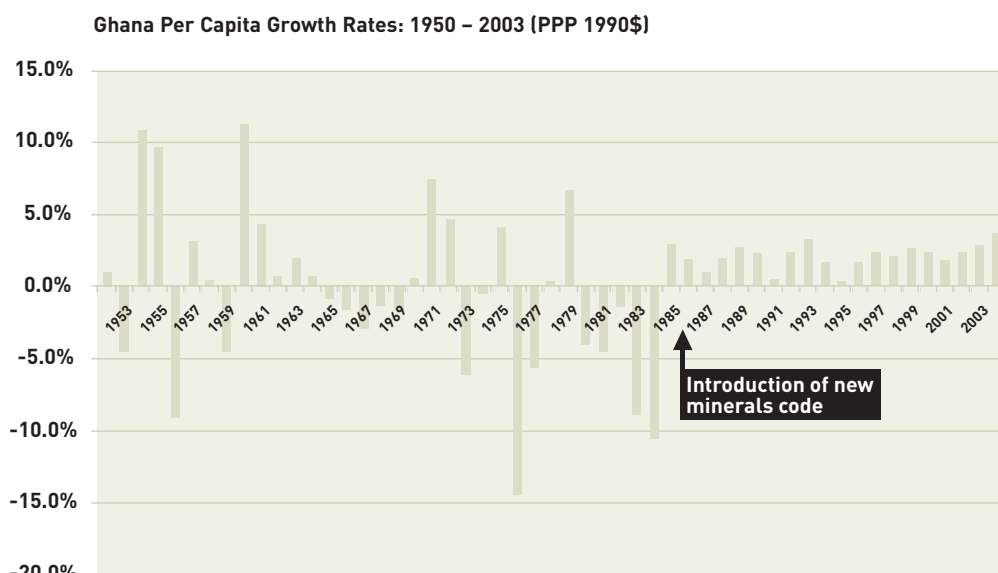
This section reviews the GDP growth and social development (including poverty alleviation) record of the four countries over the period of the past 20 years – most of the well-known empirical studies of the ‘resource curse’ base results on a period of about this length<sup>5</sup>. It also compares that growth record with the preceding decades using data over a 50-year period, to see how typical or otherwise the recent past has been in terms of growth. These data are then mapped against what has happened in the mining sector (in terms of the growth of investment, production and exports), to establish

the linkages between: (i) overall growth and social development; and (ii) mineral developments. Next, the changes in economic policy and governance that might have been associated with the observed improvements in performance are discussed. Finally, the implications of these findings for traditional ‘resource curse’ arguments are considered<sup>6</sup>.

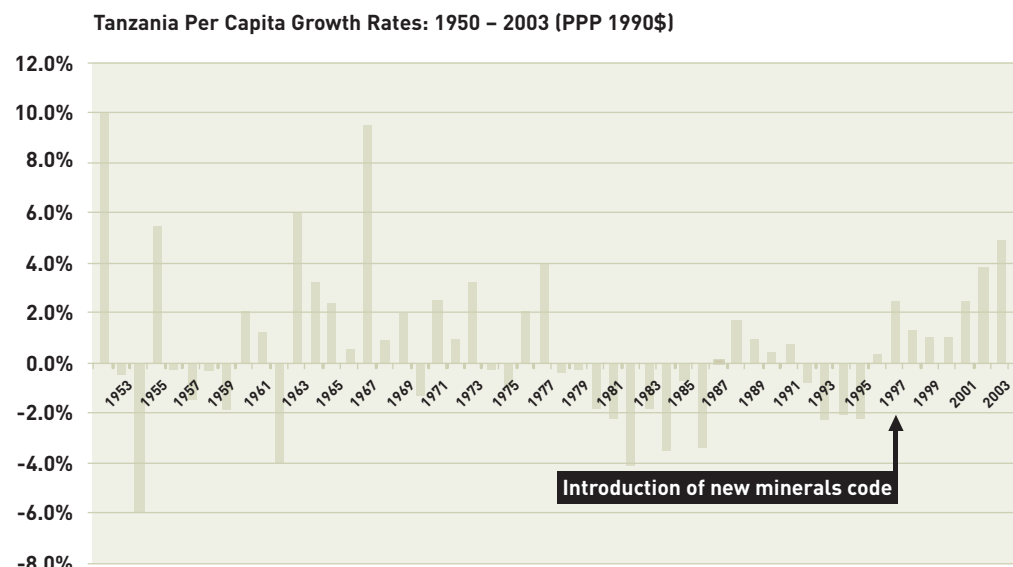
### Ghana and Tanzania

The recent economic history of Ghana is particularly dramatic (Figure 5). At Independence in 1957 it was one of the richest countries in Africa and also held large foreign exchange reserves. Over the next

Figure 5: GDP Growth in Ghana and Tanzania



Source: Groningen Growth and Development Centre

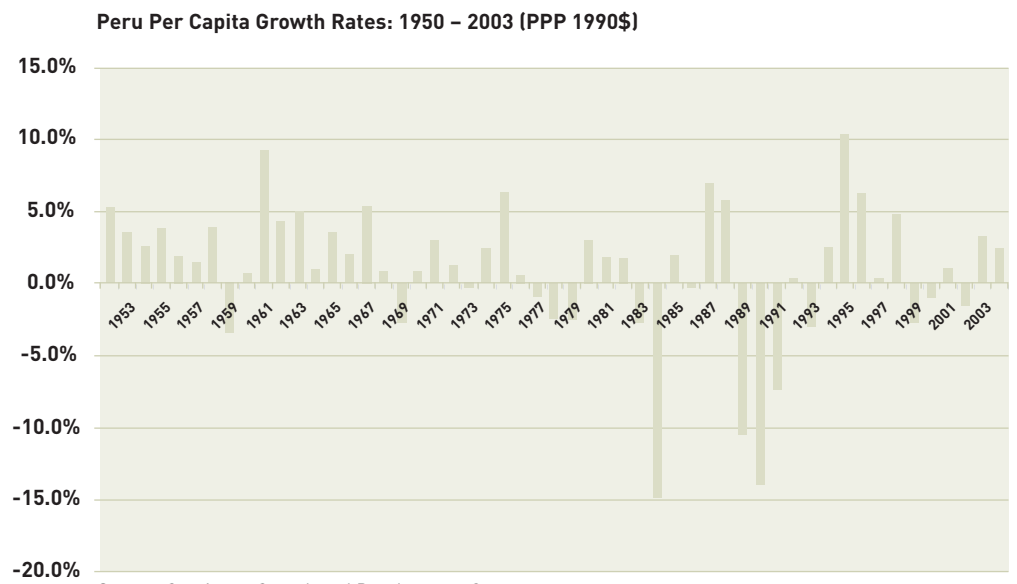


Source: Groningen Growth and Development Centre

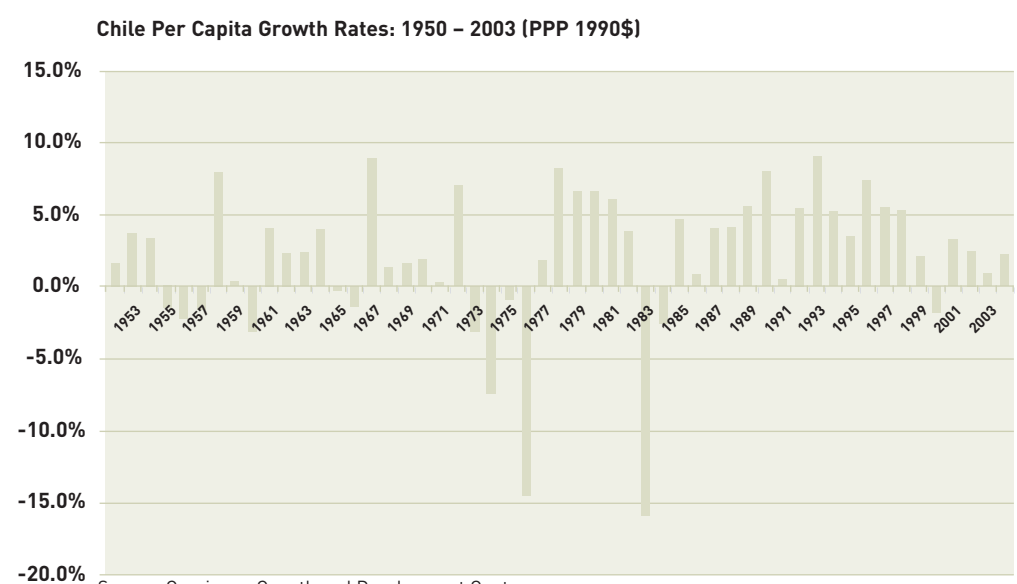
quarter of a century it suffered from extreme volatility and generally declining incomes per capita – the country became very much poorer, highly indebted and also lost its earlier income advantage over countries such as Botswana and Namibia. The decline during the period of the various military governments in the 1970s was particularly acute. However, the Economic Recovery Program (ERP) introduced in 1983, produced an unbroken period of positive per capita growth that has now extended for over 20 years. Ghana has performed significantly better than Sub-Saharan Africa in this more recent period.

Tanzania too has been a hugely unstable as well as a very poor economy. This instability was seen in the pre-Independence growth record before 1961 and it continued in the early years of Independence. Growth performance worsened further in the 1970s and 1980s as the flaws which many attributed to President Nyerere’s socialist policies became increasingly evident. Tanzania took much longer than Ghana to commit to economic reform. But these reforms when introduced in the second half of the 1990s have been broadly successful and have established a period of stable per capita growth in the past ten years. On average, over the period

Figure 6: GDP Growth in Peru and Chile



Source: Groningen Growth and Development Centre



Source: Groningen Growth and Development Centre

1980 to 2002 Tanzania has also done better in terms of growth than has Sub-Saharan Africa generally.

#### Peru and Chile

The growth records in Peru and Chile show substantially different patterns (Figure 6). Chile faced huge economic instabilities both in the early 1970s and the early 1980s. These were associated first with the Chicago-style shock therapy adopted in the early years of the Pinochet regime (leading to GDP falling by 24% between 1971 and 1975), and then by the severe 1981-83 recession that was the culmination of the failed liberalization experiment and severe exchange rate overvaluation of the earlier years.

This second crisis also forced the government to bail out banks and other parts of the private sector leading to a brief period of re-nationalization after the wholesale privatizations of the 1970s (when 472 out of 507 state enterprises were sold off very quickly by the Pinochet regime). But since then the growth rate of per capita incomes has been generally positive, albeit with significant year-to-year variations. This improvement has also been driven by a standard but better executed package of stabilization and structural reform policies.

By contrast Peru faced its most severe economic instability not during the leftist military regime in the 1970s, but during the democratic period in the 1980s and especially during the Alan Garcia populist regime from 1985. Peru's economic collapse in that period is similar to the corresponding collapse in Ghana during the 1970s. By 1990, the Peruvian economy had effectively collapsed at the macroeconomic level and government tax revenue (at only 6% of GDP) was not sufficient to cover even the government's payroll bill (Du Bois, interview 2005). After this collapse was halted by the reforms introduced by the Fujimori regime at the beginning of the 1990s, Peru has seen significant growth in a few years, albeit with a still high level of instability.

<sup>5</sup> For example, in the Sachs and Warner (1995) study the data period is 1970 to 1989.

<sup>6</sup> It is noted that comparisons with earlier periods are complicated by the fact that all of the case study countries have seen major mining investment in recent years. The impact of this investment on other sectors of the economies has not yet materialized fully. In addition, increased activity in the construction industry constitutes a major part of the impact during the investment phase, and this impact is difficult to quantify since it is often not evident how much of an expansion in the construction industry can be attributed to mining investment.

### 3.2 Linking GDP Growth with the Growth of Mining

The significance of this long record of undulating growth performance is to show that, even in the three countries with a long-established mining presence, mining companies have faced extended periods of weak performance in their host economies and policies that were broadly unfavourable to their own profitability and to further investment. In all four cases, the nationalization of mining company assets was an extreme element in the inhospitality that the companies encountered. The causes of these extended periods of economic mal-function and poor or negative growth were different in the different countries. But in each case the mining industry was invariably affected negatively by the general political and other forces.

#### Ghana

The inter-relationship between economic growth and the resurgence of mining activity since economic reforms were put in place is most clear in the Ghana case. The general economic reforms of the 1980s and 1990s started by the ERP included a new, investor friendly minerals code (promulgated in 1986). Since 1986 over \$5 billion has been invested in new mining projects – a huge contrast with the previous 40 years when no new mines were opened, and existing mines deteriorated. Although mining's share of GDP rose by only 1-2% to 5.5% by 1995, gold prices were generally low during this period, and this reduced the mining industry's statistical contribution to GDP<sup>7</sup>, since profits and consequently value added were low. At the same time, mineral exports rapidly overtook cocoa as the country's leading export earner – gold's share of total merchandise exports rose from 18% to a high of 34% (although reforms have also led to export recovery in the cocoa sector). Mining has also been by far the largest source of foreign direct investment into Ghana in this period, and has become a significant contributor to the government's budget, providing up to 17% of total tax revenue in the years after 1990.

Since mining was largely stagnant in Ghana in the years through Independence and up to the late 1980s, its performance in those years can reasonably be seen as symptomatic of the generally acute problems in the economy and certainly not a cause of them. But can it be said

<sup>7</sup> Value added is constituted by compensation to labor and capital and the latter is reduced by a lower gold price.

‘The economic policies and improved governance that have stimulated the general economic improvement have also been extremely important to the renaissance of the mining industry.’

that mining was a driver for, or catalyst of the post-1983 economic growth recovery that is shown so clearly in Figure 5? A direct cause and effect is difficult to prove categorically, although regression analysis does show a positive and significant coefficient on mining output in a GDP growth equation. What is more plausible is that the fortunes of mining have been closely linked with those of the economy at large. The economic policies and improved governance that have stimulated the general economic improvement have also been extremely important to the renaissance of the mining industry.

#### Tanzania

Similar propositions are also plausible in the Tanzanian case. Although economic reforms in Tanzania and the associated growth recovery came much later than in Ghana, these have been accompanied by a major investor-friendly reform of the mineral legislation (1998/99). In the context of broad based economic reforms this has helped to stimulate a large rise in foreign direct investment (FDI) and investment in mining. Over \$1.3 billion has been invested in the sector since 2000. From an extremely low base, FDI in Tanzania has now attained an annual average of 3% of GDP and mining investment is easily the largest component of this.

The package that has brought about the economic improvements has combined stronger macro and sectoral policies with increased private investment

– albeit in a narrow range of sectors. This has clearly been a major influence on the improved growth performance shown in Figure 5. Once again the mining resurgence, especially in terms of the rise of FDI and private productive investment, is an important part of this package but obviously not the sole cause of the improvements.

In both of these country cases, the results lead us to an important proposition about the role of mining in early stage private sector development in countries that have previously been seriously demoralized economically and extremely antagonistic to private and especially to foreign investment. Specifically, mining, and gold mining in particular, may be one of the first sectors that can sustain growth in a previously failing economy once some minimum package of economic and institutional reforms have taken place. Unlike many other productive sectors, gold mining needs quite a limited institutional and infrastructural base to be able to prosper. (This is not to recommend such a second-best package but merely to observe that it may be adequate to achieve some forward movement). Key requirements include for example security and property rights for the investors, a reasonably reliable commercial regime especially for international trade (including a competitive real exchange rate<sup>8</sup>) and taxation that is not punitive. Conversely, gold mining does not need: a robust domestic market, as the output is exported; nor a sophisticated transport, communications and distribution infrastructure, because gold is not perishable and can be flown to refineries (and often is for security reasons). What this also means is that initial reform packages may have been sufficient to boost mining activities, but may have fallen some way short of generating a conducive general environment for domestic investment including by small scale entrepreneurs.

#### Peru

It is more difficult to find similarly neat propositions about the mining – GDP link in the Peru case. However, there is one important similarity with the two African cases. In 1990 the underlying philosophy towards the private sector in Peru took a complete U-turn. This included radical reform of economic policies in many areas, but again including far more investor-friendly legislation for mining. The government endorsed

<sup>8</sup> For mining companies this is largely a question of the exchange rate at which they are allowed/required to convert foreign currency earnings in order to purchase necessary domestically supplied inputs.

this by privatizing some 90% of its own mining assets which had been acquired during the left-wing military regime of President Velasco from 1968. The change in investor sentiment was dramatic. The stagnation of the 1970s and 1980s – limited new investment and sector output sustained by the pre-1968 investments<sup>9</sup> – gave way to a very large new inflow with FDI volumes in the ten years after 1993 totalling some \$6.7 billion. As this investment has come on-stream, the sector's contribution to GDP has risen significantly: to around 7% of the total by 2003. The World Bank projects output growth at the rate of some 6.6% for the next few years.

The graphical evidence in Figure 6 fails to show such an obvious association between the renaissance of mining and the GDP growth recovery seen in Ghana and Tanzania. However, in the Peru case study an attempt has been made to assess what the Peruvian economy might have been like by 2003 in the absence of the mining recovery. These estimates based on growth rates from 1994 to 2003 should be regarded as indicative only<sup>10</sup>. But they suggest that in the absence of the mining recovery, per capita income would have been around 6.4% lower by 2003. These numbers ignore some of the complementary effects on growth in other sectors that arise from mining sector activity, and so if anything can be regarded as understating mining's contribution.

Similar estimates for Tanzania from a recent IMF research paper (Treichel, 2005) for the period 1996 to 2003 show a mining sector contribution of 0.3 percentage points out of an average GDP growth for that period of 4.8% (i.e. mining contributed over 6% of the total growth). This may seem modest, but seen in the context of a country that through the 1980s and early 1990s had more often seen economic decline (see Figure 5) it is far from trivial. Furthermore the period used by Treichel includes several years prior to the real take-off of new mining activity in the new millennium: so again, if anything it understates the mining sector contribution.

### Summary

There is no disputing the fact that a variety of criticisms are levelled at mining in all four country cases. However, the summary thus far in all four case studies suggests that when mining companies encounter favourable conditions for renewed investment and growth (to tap the potential shown in the Fraser Institute assessment), their activities can indeed potentially support improved overall GDP growth. It is difficult to establish a strong causal link from mining activity to growth of incomes, not least because mining is typically a relatively smaller part of GDP (5-8%) than it is of exports and foreign direct investment, because it is an export oriented capital intensive activity. However, in the years of economic malaise in the four countries, there is no evidence from any of the four cases that the poor macroeconomic performance could be attributed to the presence of mining. Equally, when mining investments enjoyed a revival after systematic economic reform programs, there is no evidence that that resurgence undermined general economic recovery. On the contrary mining was one important dimension of that recovery in all cases. The new mineral investment opportunities were tapped and the growth recoveries occurred at different times in each of the country cases. But the broadly positive relationship between the two is evident in most of the cases.

There are a number of reasons why different approaches might find evidence of greater negativity in outcomes than shows up in these case studies. For example, econometric studies of the 'resource curse' that did not correct for the time specificity involved – and instead enforced a common time period on all the countries – would be likely to find a less positive relationship. Similarly, the counterfactual – what might the countries have been like without mining – is hard to specify. Any counterfactual that abstracted from the extremely difficult pre-mining situation of all four countries might well find greater reasons to question mining's contribution. Finally, the manner in which certain issues have been resolved by the prevailing governance of the time give rise to important potential criticisms. This last point is one to which the case studies and this present report devoted considerable time.

<sup>9</sup> In fact output fell for extended periods. For example the value-added from mining in 1988 was 14 percent lower than it had been in 1980.

<sup>10</sup> It is recognized that only a refined computable general equilibrium model can offer the basis for doing this calculation 'properly'.

### 3.3 Social and Poverty Outcomes

All four case studies also looked beyond aggregate GDP growth – the main focus in much of the ‘resource curse’ literature – to also examine social impacts. Wherever possible the case studies examined appropriate survey and other data to assess the extent to which income gains at the national level have raised incomes and reduced poverty in the economies nationally but especially in mining areas.

The results suggest a mixed record of outcomes, which is not surprising given the variety of mechanisms through which these impacts can be transmitted. Mining may affect national levels of poverty strongly but indirectly through the fiscal linkage. Tax revenues from mining will strengthen central government budgets and may allow increased spending on poverty reduction programs. A positive net effect on government tax revenue on the order of 10-17%, as in Ghana, is obviously not negligible from this perspective, although there is of course no guarantee that the additional financial resources will actually be allocated to poverty reduction programs, nor that the programs will be effective. At the local level, consumption linkages, particularly spending by mining company employees on local goods and services, are by far the most important mechanism by which wealth ‘trickles down’, giving rise to new employment opportunities and leading to reduced poverty, as seen in the cases of mining regions studied in Chile especially. But certainly the effectiveness of the national and local transmission mechanisms varies considerably among the case study countries and regions.

The **Ghana** case study yields some strong results based on the Ghanaian Living Standards Surveys (GLSS) for 1991 and 1999. The overall context is one in which the incidence of income poverty has fallen from 52% of the population in 1990 to 40% in 1999 – but more than this in the mining districts. In Sub-Saharan Africa as a whole, poverty rates have remained broadly stagnant: 47.6% in 1990 and 46.4% in 1998<sup>11</sup>. Further relevant points include the following:

- A reduced national poverty headcount index in the ten year period (from 52% in 1992 to 40% in 1999<sup>(12)</sup>) suggests a strong link from the national

<sup>11</sup> Besley and Burgess, 2003.

<sup>12</sup> Mackay and Aryeetey (2004) using the GLSS data estimated the growth elasticity of poverty incidence for Ghana at 0.98, a figure that compares closely with the results for many other Sub-Saharan countries.

‘consumption linkages, particularly spending by mining company employees on local goods and services, are by far the most important mechanism by which wealth ‘trickles down’

income growth seen after the ERP to reductions in poverty.

- However, Ghana’s long-established regional (especially Northern) poverty and inequalities of incomes have persisted – so while mining has not caused this pattern, the generally improved policies that supported mining’s renaissance have not ameliorated it.
- The lowest absolute levels of poverty are now in families where the head of household is engaged in mining, followed by those engaged in transport and communication. Agricultural activities that provide livelihoods for most people still see higher levels of poverty.
- A household is less likely to be in poverty, if the head of household is in private formal employment. A distant second best employment is public sector employment – a big change from control-era of the 1970s. Food crop and subsistence farmers remain, as in 1991 the most likely group to face poverty. Unlike export based farmers, they have seen only a very modest improvement in the decade covered by the GLSS results.
- In the four of Ghana’s 110 Districts that account for most of the mining activity, poverty levels are generally lower than in other districts within the same region, as well as in the country as a whole. However, that poverty advantage is not general across all occupational groups in those four districts.
- Finally, results based on a recent 2003 Core Welfare Survey suggest that the main mining districts are doing generally better than the country as a whole in relation to issues such as

waste disposal, water and sanitation. This is especially true of the two most mining-dependent districts in Ghana.

These very positive results suggest that the strong growth (including the strong performance of mining as one of the leading sectors in the past 10-15 years) has fed down to help achieve the significant poverty alleviation that Ghana has seen both nationally and in some of its regions/districts. Unfortunately these results do not replicate in Tanzania.

In the **Tanzania** case study the available data suggest that the incidence of income poverty did not fall significantly between the early 1990s and 2000/01. This was the central finding of the first Poverty and Human Development Report<sup>13</sup>, using the results of a 2000/01 household survey<sup>14</sup>. Slight improvements in the incidence of income poverty, using either of the two official poverty lines (basic needs and food-based), may have occurred. However, it was only in Dar es Salaam that the measured change was statistically significant: the proportion of those in poverty falling from 28 to 18%. In the country at large the fall in 'basic needs poverty' was only from 38.6 to 35.7%. In part this limited gain may reflect the fact that the improved macro management of the economy (and the boom in mining) is relatively recent and did not really begin to affect growth in incomes even on the average until the late 1990s (i.e. the 2000 Tanzania Survey is very recent relative to that turnaround whereas in Ghana the corresponding survey enables us to assess a full decade of relatively impressive growth). But as in Ghana, the overall growth performance in Tanzania has been in sectors, including mining and tourism, where the link with the mass of (agricultural) poverty is fairly tenuous. Those engaged in the more rapidly growing sectors including mining may have seen the same improvements as in Ghana but there have not yet been enough of these – or enough indirect effects – to reduce poverty overall.

The **Chile** case is more strongly supportive of the proposition that large-scale mining can support poverty reduction and social improvements more generally. Region II of Chile where most mining is located has a population of 498,000 people. Since 1990 it has grown by almost a quarter with the growth concentrated in Antofagasta, the region's capital, which now has a population of 273,300 people. During the period of the rapid

expansion of mining since the early 1990s<sup>15</sup>, the region has also experienced rapid economic growth. By 2003, Region II had a GDP per capita of \$11,996, more than twice the per capita GDP of the country as a whole in spite of the very inhospitable natural conditions. The rate of growth in GDP per capita has also been significantly higher in Region II than in the country as a whole.

Given the high level of income and the significantly higher growth rate, it is not surprising that Region II has also achieved the largest reduction in the average rate of (income) poverty in the country, with the incidence of poverty being reduced by 60% in the fourteen years from 1990 to 2003, as compared to a lower but still impressive reduction of 41.4% in the country as a whole. According to survey data supplied by the Instituto Nacional de Estadísticas<sup>16</sup> (see Figure 7), by the year 2000 Region II had the lowest poverty rate in the country, at 10.9% of the population, compared to 20.6% for the country as a whole.

In Region II the favourable poverty reduction record has also translated into improved social welfare and better than national average performance in a number of other dimensions such as literacy (98.2%); education (11.2 years of schooling on average); and security in old age.

More comprehensive results on the social condition of the population are available both for the Human Development Indicator (HDI) variables developed by the UNDP and for a broader set of social indicators grouped together as a 'Human Security Index' by an academic research group in Chile. Studies for both 1998 and 2003 made a distinction between the 'objective' index of human security, which used quantifiable measurements of seven dimensions based on statistical data, and the 'subjective' index, which measured six dimensions based on the public's responses to survey questions. The UNDP study results show that Region II had the second highest objective index of human security, after Region XII, Magallanes, in the extreme south of the country. Region II scored particularly high in the

<sup>13</sup> United Republic of Tanzania, *Poverty and Human Development Report*, 2003.

<sup>14</sup> See National Bureau of Statistics, Household Budget Survey, 2002. Unfortunately this published summary of the survey does not provide any regional or district data of the type that was available for Ghana. United Republic of Tanzania, *Poverty and Human Development Report*, 2003.

<sup>15</sup> For a long time the Codelco's Chuquibambilla mine was the only large copper mine in Region II. It has been in operation since 1910. In the late 1980s, the Escondida mine became the first foreign owned mine in the region. Several others followed during the 1990s and early 2000s.

<sup>16</sup> www.ine.cl



Figure 7: Changes in Income Poverty in Chile by Region - 1990-2003



\* Región Metropolitana de Santiago

dimensions measuring education and security for old age. In the later repeat study by Ordhum (2004), which included calculation of the objective index in the four northernmost regions, Region II had the highest ranking for the objective index.

Recognising that Chile has by far the highest HDI rating and ranking of the four case study countries, these detailed results for Region II indicate that the presence of the dominant mining industry has, if anything, helped to improve further an already good absolute performance. In Chile as in Ghana the main remaining questions about the macro and social effects of mining relate to the counter-factual. Given the huge resources extracted from mining during the recovery years, could the gains in income and poverty alleviation have been even larger?

The **Peru** case provides yet another variant on the pattern exhibited by Ghana and Chile, albeit a disturbing one. The 2004 UNDP Report on Human Development in Peru emphasizes that inequality and poverty have remained Peru's greatest challenges. More than a half of the population continues to live in poverty and nearly a quarter suffer extreme poverty, including inadequate nutrition. Poverty also has a particular rural and thus an indigenous element. Extreme poverty affects more than half the rural population compared to less than 10% of the urban dwellers. Despite the impressive macroeconomic turnaround since 1990, this situation has not fundamentally changed in many decades. International observers have commented that the country has been unable to reduce social disparities, high poverty rates, and income and regional disparities, and that the present welfare system has been ill-suited to address this situation. Social exclusion seems deeply entrenched, and the recent successes in the mining industry do not seem to have changed this reality.

### Summary

The broadening out of the initial benefits of mining investments to benefit the host society more generally is a critical success factor of a mining-oriented development strategy. But the case studies show that it is not one that occurs automatically or without some 'appropriate' push from policy interventions. Thus, the crucial questions are: through which mechanisms have the social improvements in Chile and Ghana been realized; why were they not greater in Ghana; and what has hampered the corresponding gains in the cases of Peru and Tanzania; and through which trickle down (or other) mechanisms one can expect mining activities to contribute to general poverty reduction and redress income inequalities?

The case studies provide some evidence that the income gains (partly associated with a resurgence of mining activity) can definitely contribute to broadly generalized improvements in poverty levels and to social welfare more generally. They do not reveal any neat formula as to what the mechanisms of success have been. This conclusion emerged clearly from both the Ghana and the Chile cases, where the improved growth record has been of longer duration than is the case in either Tanzania or in Peru. Chile's poverty gains have clearly been linked to broad-based employment generation rather than to any redistributive strategy. The October 2005 workshop re-iterated the point that there has been no special tax treatment in that country that can explain the significant mining contribution to broad-based social improvement. Ghana's relative success is less easily characterized. The time period is too short to reach any strong conclusions for Tanzania and perhaps also for Peru. It is in any case clear that the detection of a positive relationship – even in the 'successful' mining countries – is only the first step in the analysis. Explanations and thus the lessons to be learned require much deeper probing. Chapter 5 provides some further elaboration and suggestions on this matter.

### 3.4 The Policy Drivers of the Growth Recoveries Mining Legislation and Property Rights

An important similarity in three of the four cases – Ghana, Tanzania and Peru – relates to the manner in which a fundamental reform of mineral legislation has been an accompaniment of, or a close sequel to, the launch of systematic policies of macroeconomic stabilization and structural adjustment (under IMF and World Bank guidance in

all cases). Left wing critics would see this as part of the capitalist agenda – liberalizing policies and investor-friendly sector legislation are both needed in order to generate profits for powerful multinationals.

On the other hand, a more narrowly technical assessment would see this combination of policy reforms as more logical. If a country has significant mineral potential, as all four of our countries do (see Table 1), and a severe shortage of good investment prospects for the private sector (to say nothing of a dearth of the institutions needed to foster broad based private sector development) then the active promotion of mineral investment can provide for early growth gains that are not easily found elsewhere. (Only Chile of the four countries has found it possible to achieve similar gains in, for example, the agricultural sector). Such a strategy does two things, it could be argued:

- It reduces the country's exposure to the intense international competition needed to attract foot-loose manufacturing and service-sector investments, and
- it avoids the immediate need to complete the institutional and policy package needed to become broadly attractive to new private sector investment (though again it is emphasized that no one would advocate an incomplete package of reforms as ideal) and enables this to be done over a longer period.

Chile is the possible exception to this package of policies since the major investor-friendly reforms of its mineral legislation came early in the Pinochet era in 1974 – well before the realized resurgence of large scale investment in the sector. Although this legislation has been subject to several changes since then, the legislation is widely regarded as generous to investors – a perception confirmed both by the Fraser Institute surveys (see Figure 4) and by other assessments<sup>17</sup>.

The mining company behaviour that has been revealed by the very rapid increase in new investment in the other three countries since the reform of their mineral legislation (in 1986, 1990 and 1998 for Ghana, Peru and Tanzania respectively) indicates that the tax regime is sufficiently generous given the large mineral potential in all three countries. The latest Fraser survey locates all three countries easily in the top

<sup>17</sup> Otto et al, 2000.

‘a fundamental reform of mineral legislation has been an accompaniment of, or a close sequel to, the launch of systematic policies of macroeconomic stabilization and structural adjustment’

30% of 64 countries ranked according to their mineral potential, but adjusted for the actual regulatory regime. Chile ranks second in this regard behind only the state of Nevada in the USA!

#### Macroeconomic Policies

What about the necessary **macroeconomic policies** – what is the minimum required package? The evidence from all four cases suggests that a critical standard factor in the turnarounds has been the ability to avoid the seriously uncompetitive commercial regimes and real exchange rates of the past. The other standard components of sound macroeconomic management – reasonable inflation stability and affordable fiscal deficits – indicate less clear-cut consistency across the three countries.

For example, the four countries differ in the extent of the inflation stability that they have achieved since their reform programs began. In Peru inflation has consistently been at or below 10% at least since 1995 (as compared to several thousand per cent at the end of the 1980s), while in Ghana rates as high as 30-50% have been seen in the past decade (as against rates that sometime exceeded 100% before reform began in 1983). Similarly, in both these cases and also in Tanzania, the IMF has been frequently critical about the size of fiscal deficits even after reforms were espoused and largely implemented. But in the face of these differences and problems, all four countries seem

to have avoided a major regression into the seriously over-valued exchange rates that they favoured (or slipped into) in the past. Major swings in prices have been matched in most cases by appropriate nominal devaluations. They have also sustained reasonably reliable commercial regimes.

This may also help to explain why Chile is an outlier in this regard and why it experienced a long lag between the introduction of investor-friendly legislation in the mid-1970s and the resurgence of mining investment in the late 1980s. It is well documented in the economics literature that the liberalization experiments of the 1970s – the so-called *tablita* approaches – led to massive overvaluation of the real exchange rate not only in Chile but also in Argentina and Uruguay<sup>18</sup>. The huge current account balance of payments deficits that resulted from the *tablita* experiments were financed for a time by equally large private sector inflows – mainly into real estate and non-traded investments<sup>19</sup>. But a collapse was inevitable and came in the period 1981-1983. Only after the associated crisis did the authorities in Chile begin to get their macro-policies right. Based on this exception, it seems reasonable to conclude that the favourable mineral legislation is a *necessary* condition, but not of itself *sufficient* to stimulate an economic recovery based on internationally tradable goods – including minerals – when the real exchange rate is seriously over-valued<sup>20</sup>.

#### Improved Governance

What do the studies say about the role of governance and public institutions? It is increasingly argued both by some of the authors of the econometric studies (e.g. Niemayer, 2004) and also by high-profile special studies – most recently the Extractive Industries Review (EIR) commissioned by the World Bank – that improved governance is critical to the realization of the full economic and social benefits of mining investments.

<sup>18</sup> Corbo and de Melo (1984), van Wijnbergen (1986).

<sup>19</sup> Although the profitability of internationally traded products was definitely compromised by this package, it is debatable whether this of itself was the only critical issue behind the reluctance of mining companies to invest at that time in response to the apparently favorable mining legislation. In addition, it is likely that the companies at that time doubted the long-term stability of the Pinochet regime. In addition, the 1970s and 1980s was a period when companies focused on the generally accepted safe havens such as Australia and Canada.

<sup>20</sup> Even in Ghana, 50% of procurement and all labor costs etc are local, so high local prices in comparison with international ones (which are affected by exchange rates) would have an impact on profitability and investment attractiveness.

Each of our four case studies has evaluated this proposition initially by reference to the six composite indicators of governance<sup>21</sup> that are now routinely assembled by the World Bank<sup>22</sup>. The results indicate that the economic recoveries achieved in all four countries at various dates from 1983 (Ghana) to 1996 (Tanzania) have been associated with improved governance in some of the dimensions measured by the World Bank indicators<sup>23</sup>. However, it is striking that:

- In only one case – Chile – have the governance scores become 'good'. In the other three cases they have merely improved; and
- In the other cases the improvement has covered some aspects of good governance but has by-passed several others that seem equally important (to individual welfare, social cohesion etc).

So, for example in the case of Ghana, the scores on the six governance indicators are estimated to have gone up by an average of 0.7 points (on a scale that runs from minus 2.5 (worse) to plus 2.5 (best) ) from the nadir of the military governments at the end of the 1970s to the second part of the 1990s when the indicators started to be formally produced. Nonetheless, by 2004 the scores still average only around zero. This is a considerably better score than for many other countries in the Sub-Saharan region but still far from being an indication of high quality governance – even 20 years after Ghana's turnaround began.

Similar observations can be made for Peru and Tanzania. In the Tanzanian case the eight year period from 1996 to 2004 shows significant improvements in government effectiveness, voice and accountability, the control of corruption and the rule of law, but also a deterioration in political stability and regulatory quality. In the Peruvian case we also see a significant improvement in two out of the six indicators – voice and accountability and political stability – but a deterioration for the other

four indicators. Table 2 gives the scores for all four countries for 1996 and 2004.

The contrasts between Chile and Peru are particularly large. Furthermore these large differences have persisted since the first recording of the indicators in 1996. Since then, in spite of its reasonably good economic performance, the indicators for Peru in several dimensions have worsened – the gap with Chile thereby becoming even wider. Voice and accountability have improved somewhat – the citizens generally have more say in how they are governed – but this has been associated with a deterioration in the effectiveness of government (see also Figure 8).

Figure 8 draws a closer comparison between Peru and Chile, which in addition to the World Bank Governance Indicators also take into account the UNU World Governance Survey (these add six further but over-lapping composite indicators). The analysis shows that the changes in Peru since the fall of Fujimori have resulted in more participation and trust of society in the political process (evidenced by the variables 'voice and accountability' and 'political society'), but weaknesses in the workings of the public service and administration and in the legal system continue to persist. Interestingly, the capacity of government to effectively formulate and implement sound policies (measured by 'government effectiveness' and 'regulatory quality') improved during the Fujimori regime – a regime that faced widespread criticism for its authoritarianism. But when that regime collapsed, the democratic transition resulted in a deterioration of governance in this dimension.

Comparing this with the Chile experience, it is entirely plausible to suggest that Chile's improvements in the working of the public service and the administration were achieved during the Pinochet government but that the participation and trust of society in the political process only improved after the transition to democracy in the early nineties. The important question could therefore be why Chile has not experienced a similar deterioration in the effectiveness of public service and administration to that seen in Peru.

<sup>21</sup> Daniel Kaufmann, one of the originators of these indicators, has recently argued that the (larger) margins of error associated with these indicators have declined and are now substantially lower than those associated with individual measures of phenomena such as corruption. See "Back to Basics - 10 Myths about Governance and Corruption", *Finance and Development*, September 2005.

<sup>22</sup> These are Voice and Accountability; Political Stability; Government Effectiveness; Regulatory Quality; Rule of Law; and Control of Corruption. They are scored from minus 2.5 to plus 2.5 against a wide range of indicators that together make up the six composites.

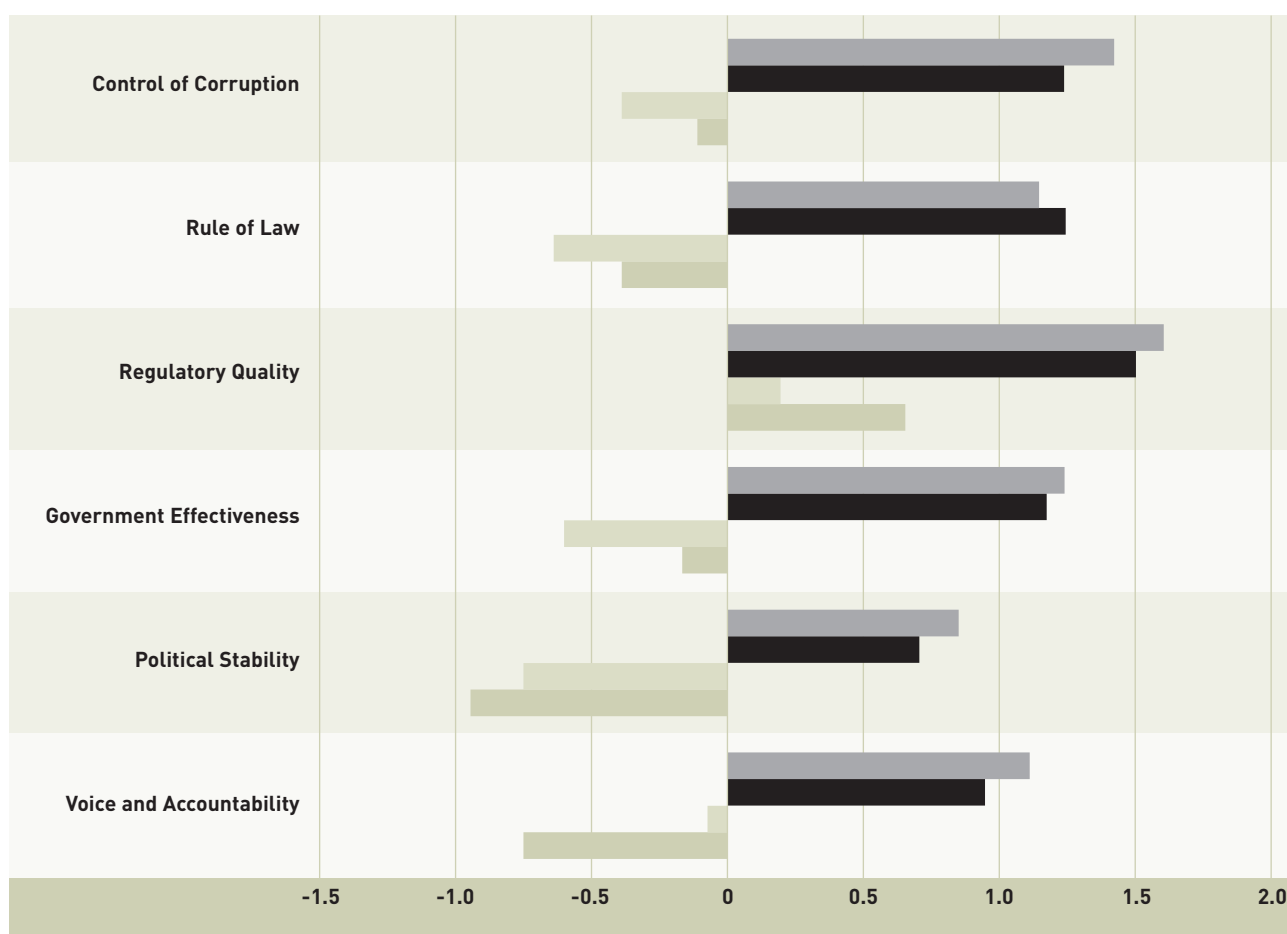
<sup>23</sup> These findings are supported in broad terms by the recent Economic Commission for Africa Report, *Striving for Good Governance in Africa*, that tracked four positive trends in the region: democratic transitions, political inclusiveness, voice and accountability, and economic management.

Table 2: Governance Indicators Compared – 1996 and 2004

Indicator	Peru (96)	Peru (04)	Chile (96)	Chile (04)	Tanzania (96)	Tanzania (04)	Ghana (96)	Ghana (04)
Voice and Accountability	-0.73	-0.04	0.93	1.09	-0.77	-0.35	-0.35	0.39
Political Stability	-0.90	-0.68	0.75	0.89	0.02	-0.38	-0.10	-0.06
Government Effectiveness	-0.18	-0.58	1.20	1.27	-1.18	-0.37	-0.07	0.17
Regulatory Quality	0.65	0.17	1.52	1.62	-0.52	-0.55	-0.14	-0.28
Rule of Law	-0.35	-0.63	1.26	1.16	-0.70	-0.49	-0.12	-0.16
Control of Corruption	-0.10	-0.35	1.28	1.44	-1.03	-0.57	-0.47	-0.17

Key: a score of -2.5 is the worst, with a score of +2.5 being the best

Figure 8: Governance in Peru and Chile



Source: World Bank

Key

- Peru 2004
- Peru 1996
- Chile 2004
- Chile 1996

### Summary

Only in the case of Chile can one say that there is a consistently good score across all six indicators (as of 2004). It is clear that good economic performance does not automatically lead to a generally better quality of governance. Nor has 'good governance' in all of its dimensions preceded the mineral recoveries. There also appear to be tradeoffs between the different dimensions of governance. Because the time series for governance indicators is still very short, it is extremely difficult to draw any conclusions regarding how countries can manage such trade-off to achieve improvements in all aspects of governance.

However, a number of general propositions do emerge from the case study review of the role of governance as measured by conventional indicators:

- The improvements in governance necessary to underpin the economic recoveries seen in three of the four countries has been quite limited relative to what an objective observer might regard as the benchmarks of good practice<sup>24</sup>. Chile is now an outlier in this regard but may not have been when its mining and economic recovery began.
- The economic, social and even the poverty gains from the associated policies – even if these include only incomplete governance reforms – have been quite significant in at least some of the countries. This suggests that even relatively minor differences in governance may yield significant results in terms of exploiting more fully the potential benefits of mineral revenues. In these cases, while the remaining shortcomings of the governance arrangements cannot be ignored, the improvements in living standards may be more important.
- Improved governance, even in the success cases, emerged as an evolutionary process that can extend over a very long period of time once some minimal political and economic stability is established: Ghana is a prime example. Ghana certainly did not have 'good' governance in all, or even most dimensions when its successful economic and mining recovery got underway in the mid-1980s. That recovery, and the enhanced prosperity that has accompanied it, can plausibly

be argued to be a part of the dynamic that has allowed better governance gradually to emerge. The same applies to Chile.

- Generalizing the previous point, it is highly unlikely that failed or even weak states can expect to see 'good' governance happen or be imposed overnight particularly if there are no economic improvements to strengthen the arms of the reformers. Improving governance is a difficult and complex political process for which it is unlikely that one generic blueprint exists.

In terms of the content and scope of the conventional governance indicators the four country case studies have shown that currently no distinction is made between the various vertical tiers of government (national, regional, provincial, district). They shed little light on how the weaknesses in public authority – that three of the four countries still suffer – are changing if at all at local levels. Thus governance indicators to date, shed little light on how public authority reaches down the various vertical tiers and affects the interactions between local public and private organizations, and citizens.

This last point is critically important for a proper understanding of the local impacts of large-scale mining investments. By their very nature, these investments are extremely 'local' in nature (almost all of Ghana's mining is located in just 4 of 110 districts and much of Chile's is in Region II). But the minimal governance improvements needed to justify these investments commercially are likely to be implemented at the 'national' level. So countries such as Peru and Ghana with reasonable economic policies may be able to operate for extended periods with major gaps in their governance capabilities that may compromise the local if not the national benefits of such investments. It is argued below that many remaining problems with mining can be traced to these gaps.

<sup>24</sup> Furthermore those minimal improvements might even leave in place the high level of authoritarianism seen in both Ghana (Flt Lt Rawlings in 1983) and Peru (Fujimori in 1990) that proved necessary to drag both of these countries back from the brink of their economic meltdowns.

### 3.5 Conclusions: Implications for the 'Resource Curse'

In the analysis so far, the countries chosen as examples of successes have indeed been confirmed as successes up to a point. The mining resurgence in each of the four cases has not made things worse, and has in some ways helped to make things better. While this has some implications for the 'resource curse' debate – see Box 1 (e.g. by confirming that its propositions cannot be generalized to all countries, and that the component ills of the 'curse' are avoidable<sup>25</sup>), the focus of this study is not primarily to establish the existence of success stories, but rather to draw lessons from them to improve the situation elsewhere.

#### Box 1: The Resource Curse – In Brief?

**Most proponents of the resource curse propositions invoke one or more of the following component arguments:**

- Large earnings from mineral resources can lead to the Dutch disease phenomenon involving exchange rate overvaluation and so to decline in the competitiveness of manufactures and other (non-mineral) tradable activities.
- Dependence on such earnings are problematic if the prices of the minerals in question are volatile in the short term or subject to sustained decline in the long term.
- The presence of mineral wealth can encourage governments to adopt misguided industrial policies that offer protectionist barriers to support otherwise uncompetitive new activities.
- An economy blessed with abundant but depletable natural resources may over-consume. One reason is that incomes in the short term may fail to account properly for the depletion (depreciation) of the nation's capital thereby resulting in consumption levels that are unsustainable – the correction when it comes is inherently damaging to livelihoods.
- Some countries blessed with natural resources may be more prone to poor governance and in some cases will experience a 'predatory' state characterized by corruption, political conflict, and inequalities largely created by state actions.

**These arguments together can lead to the broader conclusion that notwithstanding the short term gains from large-scale mining activity, the long term effects may be low or even adverse. This is because the presence of mining can create incentives (in the private sector and the governing authorities) that are inimical to the creation of both the appropriate economic institutions and the impulses to modernization that are normally associated with sustainable development.**

As noted in the *Analytical Framework*, the recent literature has adopted the distinction articulated by Richard Auty<sup>26</sup> between 'internal' and 'external' explanations for the poor performance of some natural-resource-intensive economies. The external explanations include long-term declines in the terms of trade, the volatility of export revenues that can also destabilize the public finances and the Dutch disease phenomenon involving the decline in the competitiveness of manufacturing and other non-mineral tradable activities. The internal explanations lay the blame on 'bad' policies that can exacerbate the external effects. Chief amongst these are 'misguided' industrial policies offering protectionist barriers to support uncompetitive new activities in the economy<sup>27</sup>. Then there are a variety of important political-economy effects.

The four country case studies do not conclude that these tendencies are all absent. Rather, the long term (50 year) comparisons that have been made suggest that the resurgence of mining activity in recent years in all cases has been accompanied by smaller problems in most of these areas than in the years when mining was stagnant or in decline – see Box 2. For example in Peru and Ghana, Dutch disease problems at the national level seem to have been avoided and exchange rate policy movements have largely compensated for inflationary changes, taking one year with the next (since the mid-1980s and the early 1990s respectively). This represents a major improvement on the earlier years. It is true that neither economy has seen a really big surge in non-mining tradable investment nor output, that would evidence a truly competitive real exchange rate for manufactures and other tradables. But at the same time, the growth of non-mineral tradable GDP has been positive in real terms in all four countries in the relevant time periods and higher than that of their regional comparators in all but one case (Peru). Chile, after the macro disasters of the late 1970s, has seen a rapid growth of non-mineral GDP and a very clear diversification of its manufacturing to accompany the resurgence of mining investments. Some instability in revenue flows has persisted in some countries but the revenue/GDP proportion

<sup>25</sup> See the Literature Review for fuller details to elaborate Box 1.

<sup>26</sup> Auty, R. (2001). "Why resource endowments can undermine economic development: concepts and case studies", Paper Prepared for the BP-Amoco Seminar, Lincoln College Oxford University, November 28-29.

<sup>27</sup> We do not here consider the issue of depletion and over-consumption that was referred to in the *Analytical Framework* because we did not assemble any relevant information.

has been so much higher (25% + of GDP) especially in Peru and Ghana where the pre-reform levels of only 5-6% of GDP effectively eliminated effective government, that these instabilities have been absorbed with much greater ease. This is less clear-cut in the case of Tanzania. Local manifestations of the Dutch disease phenomenon have probably been the bigger problem in at least some of the countries.

This section has also assessed the political economy aspects of the 'resource curse' that were also surveyed in the Literature Review. The observation of the countries' performance with respect to standard governance indicators, shows mixed results. But they certainly do not show in any case that the mining recovery worsened governance in any systematic manner.

Chile now achieves high scores on all governance indicators, and the other three countries have also shown some improvements over time. But governance indicators alone tell very little about the underlying political processes that have brought these results about and the possible short-term trade-offs between different aspects of governance. The indicators measure the outcome of complex policy processes, whose underlying mechanics too often remain unknown and under-explored. The systematic collection of governance indicators most importantly contributes to identifying and narrowing gaps in understanding. But to stop there and merely assume that the countries and their governments can simply change the rules by which their economies and societies are governed independently of broader political-economic developments would be insufficient and unhelpful. Hence the further thoughts on this matter later in this report (mainly Chapter 5).

#### Box 2: Keeping the Resource Curse in Check

The type of shock usually associated with mining is the positive price or volume shock, where the challenge to macroeconomic policy is to avoid appreciation of the real exchange rate resulting from excess liquidity in the form of mineral export receipts. It would be tempting to conclude from the fact that the case study governments all appear to have mastered this challenge that the methods for doing so have now been integrated into the standard toolkit of economic policy. However, there are reasons for believing that such a conclusion could be over-optimistic.

First, during the period on which the case studies have focused, metals prices were generally low, thus posing little problem for the governments concerned in the way of price shocks. Second, export volumes were generally growing but the amount of foreign exchange retained in the host economies was generally lower than it is likely to be later, once loans have been paid off and equipment depreciated. Accordingly, the capacity of the countries to avoid Dutch disease type phenomena has so far been subjected to a weaker test than they may face later. Certainly it would be wrong to be complacent about this, particularly in the case of countries with less diversified export economies and notably Tanzania and Ghana.

For similar reasons it may also be argued that the case study economies provide only a partial test as far as the contribution of mining to development and poverty reduction is concerned. At the national level, one of the main contributions by mining is an indirect one, through the tax payments that mining companies make and the use of those tax payments by governments in poverty reduction and other programs. However, all of the case study countries have recently passed through periods of significant mining investment. Tax payments from these investments have so far been relatively small. There are two reasons for this. First, metal prices have been at historically low levels during the past decade. The massive price rises in 2004 changed the situation radically and are leading to increased tax payments. However, those revenue flows have yet to be converted into development expenditures. Second, most modern mining taxation regimes allow companies to deduct depreciation from taxes at an accelerated rate. Thereby, companies recover their initial investment rapidly. Often, it is also assumed that the tax rate applied on profits is higher than it might be otherwise, this being the implicit *quid pro quo* accepted by the companies in return for having the assurance of recovering costs early.

Since all four case study countries are likely to experience considerable increases in government tax revenues from mining in years to come, the full challenge of the resource curse may lie ahead. Equally, for the time being, there is only an incomplete basis for studying how effectively tax payments have been recycled into development.



# Economic and Social Contribution of the Target Mines

# 4

## 4. Economic and Social Contribution of the Target Mines

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### 4.1 Introduction

In this section of the synthesis, the discussion moves from the national/sub-national debate surrounding mining-related social and economic outcomes, to the more local level of the vicinity of the target mines within the case-study countries. More specifically, it reviews observed patterns of:

- Employment (including direct, indirect and induced) and dependency;
- Broader economic impacts, in terms of procurement, enhanced human capital and the contribution to government revenues of the host economy;
- Social and community impacts, in terms of infrastructure provision and local socio-economic development trends.

As outlined at the beginning of Chapter 2, while the

four case-study countries share a common level of dependence on mining, they are substantially different in many other respects. These differences present a significant analytical challenge in attempting to comment on emerging patterns or causality. For example, if no clear patterns emerge, is this directly related to the disparate nature of the operating environments? Similarly, if clear patterns do emerge, does this suggest that the operational context is of secondary importance relative to the primary influence of mining?

Section 2.3 described some of the key differences between the four case study countries and introduced the corresponding target mines. Some brief additional social context is summarized in Table 3 for ease of comparison and this is briefly discussed below.

**Table 3: Social context of the target mines**

	Ghana - Obuasi (Gold)	Tanzania - North Mara (Gold)	Peru – Antamina (Copper-silver)	Chile – Escondida (Copper)
<b>Physical context</b>	Tropical lowland environment	Tropical lowland environment	Andean environment (4300 m.a.s.l)	Andean environment (3050 m.a.s.l)
<b>Proximity of communities to mining</b>	Obuasi essentially a mining town	Several villages in close proximity to the mine, in densely populated agricultural area	Some local villages but 'community' is fairly dispersed: although a major town is nearby	No 'local' communities. Nearest town is Antofagasta (170 km)
<b>Tradition of mining</b>	Long tradition of mining (over 500 years)	Artisanal and small-scale mining (ASM) ongoing for some time, but industrial mining is recent	Although lengthy tradition of ASM, Pierina (1998) and Antamina (2001) projects mark arrival of mining on industrial scale	Long tradition of mining (dominant economic activity for over 150 years) – few if any 'local' populations
<b>Prevailing attitudes locally - Mining and social cohesion</b>	Attitudes shaped by co-dependency – generally positive and supportive of mining, but high demands on the company for social support that it cannot always fulfil	Broadly supportive, but some hostility to mine based on 'prior claims' of ASMs to some prospect areas	Mining in Peru is has become politically charged, both locally and nationally	Attitudes generally positive; concerns include potential for a 'copper crash', income disparities and effects on prices, and limited tax returns to region

Source: Field work data

### Physical context

The main distinction is between the tropical lowland mines of Ghana and Tanzania and the Andean higher-altitude mines of Peru and Chile. Altitude may seem like a crude distinguishing factor, but it has a profound influence on the social and economic characteristics of communities living at broadly similar latitudes. Lowland tropical communities live in more productive environments with greater opportunities for agricultural surplus, which in turn is a determinant of broader economic potential. Population densities are also generally higher. In contrast, the economies of Andean communities are constrained by lower productivity (a combination of soil, water and altitude/temperature constraints). Escondida, although over 1000m lower than Antamina is within the Atacama and extremely dry – the harsh climatic conditions result in even lower population densities than at Antamina.

### Proximity of communities to mining

The proximity of neighboring communities to the target mine sites varies widely, and this in turn influences community attitudes towards mining. In the case of Ghana, the development of the town of Obuasi and AngloGold Ashanti's Obuasi mine have been interlinked for over a century. In Tanzania, there are several villages in the vicinity of the North Mara mine site, and some households have had to be relocated as a consequence of the development of the mine. In Peru, communities are more dispersed in the vicinity of the Antamina project, although mine construction also required some resettlement of local people. [Huaraz, which is quite close, has more than 100,000 people]. At Escondida, the harsh climatic conditions and water scarcity are such that the nearest settled population of Antofagasta is some 170km distant.

### Tradition of mining

The communities in the vicinity of the target mine sites are all familiar with mining to some degree, but this ranges from the industrial to the artisanal. In Obuasi, industrial mining has been integral to the history (and will be to the future) of Obuasi. At Escondida in Chile, communities are too remote for the mine to be visible – figuratively or literally although the local population is very familiar with mining and has been so for more than 150 years. In Tanzania communities have experience of small scale and artisanal mining, but have not experienced industrial mining until quite recently. In Peru communities recall negative experiences with large

and medium scale mining from the period prior to the nationalization of the mining industry, and also thereafter when state-owned companies exploited the assets of previously private investments and some private companies exhibited disregard for good environmental practices.

### Attitudes - Mining and Social Cohesion

The attitudes towards mining vary greatly and the case studies sought to identify these by combining information from a variety of existing and new surveys of local communities. The reasons are too complex to tease out in this synthesis report in any detail. Here is a brief summary of some key points:

- In Ghana, local attitudes towards mining are generally positive according to the interviews conducted during that case study – despite the often expressed desire for the mine to 'do more' – reflecting the co-dependency between the existence and future of both mining and community.
- Communities in Tanzania are broadly supportive of North Mara<sup>28</sup>, but hostility certainly exists based on 'prior claims' of artisanal and small-scale miners (ASMs) to certain prospect areas.
- In Peru, the question of whether mining should take place and under what circumstances has become highly politicized, and the discussion now focuses on the extent to which communities should deserve a say in (or in the extreme a power of veto over) how mining develops<sup>29</sup>. While Antamina has not been immune from actions that stem from this situation, it has not been subject to some of the more extreme incidents that have affected other mining operations in Peru.
- In Chile, the generally positive attitudes to mining in general and Escondida in particular, reflect a far less politically charged environment than in neighbouring Peru, which in turn reflects a more stable political environment (see Chapter 3). It also reflects the unusual situation whereby the nearest community of Antofagasta (some 170km distant) benefits substantially from the presence of the mine, with few if any of the potential negative impacts associated with proximity to mines.

<sup>28</sup> UDSM Consultancy Bureau and URS Sustainable Development, Social Baseline Study and Impact Assessment of the North Mara Mine, prepared for Placer Dome and issued July 2005, and also surveys of various stakeholders conducted for the case study in August 2005.

<sup>29</sup> In this context it is worth noting a conclusion reached by Gavin Wright and Jesse Czelusta that if minerals are conceived of as fixed stock and mineral abundance as a pure "windfall" unconnected to past investment, then the problem becomes one of sharing out the bounty rather than one of creating more bounty based on the resources. Wright and Czelusta (2003).

#### 4.2 Incomes and Employment: Direct and Indirect

A summary of the data on incomes and employment for the four target mines is presented in Table 4. The disparate characteristics of the mines (e.g. in terms of the types of minerals, size of the operation, etc.) and their wider economic context (e.g. diversity of the local/regional economies) makes it difficult to draw many conclusions in terms of emerging patterns or causality.

One common characteristic of all four mines is that they employ large numbers of people. Despite the highly mechanized nature of modern industrial mining, the absolute numbers of people employed (either directly or indirectly) are substantial. This is particularly true at Obuasi in Ghana, where the economy of the town (population 150,000 – 200,000) is almost entirely dependent on the mines. Employment at Obuasi seems to be high relative particularly to the corresponding numbers at North Mara. However, this may be partly explained by the type of mining and the geology – deep, hard rock mines being particularly labor intensive.

The relationship between employment and induced employment is also markedly different at Obuasi than it is in the other target mines. This probably

reflects differing approaches to calculating induced employment at the various mine sites and the particular difficulties of obtaining direct evidence in the case of the Ghana study. Although that case study revealed little evidence of formal non-mining employment of any significance in Obuasi, there was clear evidence of informal entrepreneurial activity focused on consumer and personal services. Something must be fuelling this demand and mining is the only apparent candidate.

Another striking employment characteristic is the generally low numbers of expatriate staff, which is in marked contrast to some of the more critical perceptions of job allocations within the mining sector. At Antamina, which employed the largest percentage of expatriate staff by a considerable margin, the numbers of expatriate staff have halved in the past 5 years – and just 2.5% of head office staff are now expatriate.

Equally striking is the still low percentage of females employed within the sector, which was highest in Chile at just 3.7%. These gross numbers mask some higher numbers at the local level – for example, 12% of staff at the Antamina mine (and 22% at its port facility) are women. Nonetheless, there is little doubt that the industry remains

**Table 4: Employment information for the target mines (numbers or percentages in brackets)**

	Ghana	Tanzania	Peru	Chile
Employees	5955 (89%)	498 (43%)	1402 (51%)	2810 (55%)
Contractors	718 (11%)	660 (57%)	1336 (49%)	2345 (45%)
Total	6673	1158	2738	5155
Indirect employment	1000 - 5000 <sup>2</sup>	724	1540 <sup>2</sup>	2345 <sup>2</sup>
Estimated induced employment	20,000 – 50,000 <sup>3</sup>	n.a.	4500 - 6800	8500 - 12900
Dependents: Employee/total	The estimate is at least five per worker	Tanzania mean household size: 4.9, Mara 5.9, NMM 6.73 – average estimate: 6	n.a.	8183/35700
Expatriate/Domestic	0.3/97.7 (%)	17.1/82.9	8/92 (%)	1/99 (%)
Female/Male <sup>1</sup>	0.7/97.3 (%)	9.6/90.4 employees only	1.5/98.5 (%)	3.7/96.3 (%)
Local/Regional/Nat.	n.a.	n.a.	15.1/1.7/83.2 (%)	0/77/23 <sup>4</sup>

#### Notes

1 These figures mask the generally higher rates of female employees in office environments.

2 This includes permanent contract employees located at these mine sites.

3 These are estimates prepared by the consulting team in the absence of available data. This is why a range rather than a point estimate is provided. See the Ghana case study report for an explanation of the derivation of the estimates.

4 The 77% could arguably be considered local as they are based in the nearest town (Antofagasta – 170km).

**Table 5: Broader economic information for the target mines (\$million or percentages in brackets)**

	Ghana	Tanzania	Peru	Chile
<b>Domestic procurement (\$m/%)</b>	52 (47%)	63 (46%)	176.4 (77.7%)	392.7 (81%)
<b>Procurement (total, \$m/year)</b>	110	137	229	483
<b>Contribution to IRS (\$m)</b>	15.6	7.5	19.5	423
<b>Value added/ Retained value</b>	n.a.	n.a.	245.5/227	2662/1744
<b>Mining sector contribution to GDP and exports</b>	5.2% and 34%	3.2% and 40%	7.6% and 50%	3.5% and 42%

Source: Information and calculations from case studies

largely male dominated, although some change in this situation was noted at some sites (for example at Obuasi). The gender dimension of employment is also being very positively influenced by some of the actions of Placer Dome in Tanzania.

In the cases of all four mines the case study interviews indicated that employment in the mine is regarded as a relatively attractive form of employment as it is better paid and offers better fringe benefits (eg housing, education and healthcare). The broader impacts of this and other factors are explored in section 4.4.

#### 4.3 Broader Economic Impacts

A summary of the data illustrating the broader economic impacts of the four target mines is given in Table 5. Despite the disparate characteristics of the mines noted above, some features are noteworthy. Firstly, the value of procurement from each of the four mines is substantial (ranging from \$110m to \$483m per year. Secondly, the percentage of domestic procurement varies widely, from a high of approximately 80% for Peru and Chile to a low of about 47% for Ghana. This disparity most likely reflects a host of factors, including:

- Varying levels of mining-related economic infrastructure in-country;
- Differing levels of private-sector engagement and government intervention in support of (and private-sector engagement in) the development of such infrastructure;
- Disparities in corporate policies/practices relating to domestic (local/regional/national) procurement;
- Corporate practices with respect to outsourcing; a high proportion of domestic procurement may simply mean that everything that can be outsourced has been.

The contribution of the target mines to their respective internal revenue services also varies markedly, reflecting both the variable tax regimes outlined in Chapter 3 and widely varying levels of profitability. For example, Obuasi recorded no profits in 2004 compared to Escondida, which paid \$423m in taxes, almost 75% of which was accounted for by supplemental taxes on dividends to proprietary firms.

#### 4.4 Social Investment Impacts

In addition to their direct contributions to output, employment, government revenues and exports, the four target mines have also adopted a range of corporate policies relating to social investment and have supported a diverse range of related investments in social and economic infrastructure. It is important to recognize that these policies and practices involve varying degrees of 'structure' and partnering arrangements with local communities. The differentiating factors include:

- Nature of company commitment generally to sustainable social investments;
- Length of operation of the mine;
- Extent of government involvement in the running of the mine (either historical or current);
- Proximity of local communities; and
- Prevailing attitudes towards and demands made of mining companies (as outlined in section 4.1).

The importance of these factors varies between the four target mines, as outlined within the individual case studies. The main features are summarized in Table 6.

Of the four target mines, both North Mara and Escondida have had a stated commitment to mining within a sustainable development framework from the outset, (for North Mara, from the PDI takeover, six months after operations commenced). This has been reflected in social investments in line with

Table 6: Social investment policies and initiatives and challenges of the target mines

	Ghana	Tanzania	Peru	Chile
<b>Policy on sustainable development issues</b>	Limited historically, but recent merger (AngloGold Ashanti) marks increasingly structured approach	Placer Dome corporate policies on sustainability in line with ICMM principles, now apply (PDI acquired mine 6 months after opening)	Sustainability policy in place from the outset, and foundation established in 2002	None initially, but Escondida is developing increasingly structured approach (e.g. foundation in 1996)
<b>Social investment initiatives by company</b>	Many and varied. Company is the <i>de facto</i> provider of much social and economic infrastructure	Some pre-date Placer Dome, but increasingly structured approach applied on social and economic aspects	Made by Antamina and Ancash Foundation in line with strategic priorities	A mix of environment (locally) and social initiatives, focusing on Chile's Region II (San Pedro de Atacama and Antofagasta)
<b>Company community conflicts</b>	Relate mainly to anxieties about land issues. Some relate to expectations for funding community related projects. Recurring conflicts with ASMs	Some hostility to mine based on 'prior claims' of ASMs to some prospect areas	Mining in Peru is politically charged, locally and nationally	Few of note. Beneficiaries of social investment mostly remote from any potential adverse impacts
<b>Engagement of external advocacy groups</b>	No formal process for engagement, but numerous informal contacts	National NGO (LEAT) filed suit on behalf of 5 villages claiming breaches of their mining rights	National NGO has supported claims of threats to downstream fishing interests	None

Source: Field work data

reasonably well-defined strategic priorities<sup>31</sup>. By contrast, in the case of Obuasi, the long history of mining (and former state ownership of the mine) has meant that sustainable development concerns have featured in the company's formal social investment strategy only relatively recently. Nevertheless, Obuasi has engaged in a wide range of social initiatives over the years, and has become the *de facto* provider of a great deal of social and to a lesser extent economic infrastructure. The mine has also invested heavily in environmental improvements in the last two decades. Significantly much of its early support to economic development has been national in nature rather than local – possibly a reflection of the early stage lack of a suitable local framework for such support. Escondida has also been integrating sustainable development principles into its strategic engagement with the wider communities of Antofagasta and San Pedro de Atacama in recent years. This in turn is reflected in its more recent social investment initiatives.

<sup>31</sup> See for example the individual case study reports and corporate social and environmental reports.

Table 6 also includes brief notes on company/community conflicts. It is clear that prevailing attitudes towards a company can in turn influence demands for social infrastructure. In practice, such demands are often couched in the language of 'compensation'. Some company officials describe what they see as a potentially destructive dynamic – companies conceding to at least some of the demands without establishing with the community either whether compensation is justified or whether it is their formal responsibility to pay it. This in turn creates an incentive for additional compensation claims when future problems present themselves. While the external observer may see the claims of local communities as crystal clear, the realities on the ground are notoriously difficult to sort out in all sectors and not just in mining. This dynamic seems to be more relevant in the Peruvian and Tanzanian project contexts, than in Ghana or Chile. In both Peru and Tanzania in particular, national NGOs (and sometimes international NGOs) have in turn provided strong support for the communities' claims for 'compensation'.

#### 4.5 Comparing the Overall Social and Community ‘Project Impacts’

The social and community impacts of the target mines are in part a function of the direct impacts of mining on incomes and employment – typically quite strong – as well as the broader economic impacts discussed in sections 4.2 and 4.3. They are also fundamentally influenced by, and cannot be entirely unbundled from, national policies for mining revenue redistribution (discussed in Chapter 5), and the effect these have on regional/local level government investments in social infrastructure. The overall social and economic impacts of the target mines are summarized in Table 7.

One aggregate indication of overall project impacts is to consider the extent to which mining has influenced poverty indicators locally. Results from

other studies suggest that the local impacts of the direct contribution of mining can be quite large relative both to the national impact and certainly relative to the community spend of the companies<sup>32</sup>. This result seems to have a parallel in Ghana as evidenced by the lower levels of poverty in the mining regions and districts of the country relative to their non-mining counterparts. In addition, the lowest levels of absolute poverty are found in households where the head is employed in mining. Chile exhibits a similar pattern, whereby Region II (where the economy is dominated by mining) has experienced per capita GDP growth of twice the national average in the past 15 years, and poverty rates that are now half the national average. This pattern is not repeated in Peru. Despite substantial (20% approx.) increases in mining output within the

<sup>32</sup> See for example di Boscio (2004).

**Table 7: Overall social and economic impacts of the target mines**

	Ghana	Tanzania	Peru	Chile
<b>Links between mining poverty indicators</b>	Mining regions and districts have generally lower poverty levels than non-mining regions and districts. The lowest absolute levels of poverty in Ghana are in households where the head is engaged in mining	Performance of mining regions in general and Mara in particular for poverty indicators varies around national averages. For this and other reasons, national government makes no special contribution to mining areas	Not possible to ascertain whether mining improved or undermined regional HDI relative to national average	GDP per capita of Region II is more than twice the national average (\$11,996 compared to \$5,216). Region II has lowest poverty rates in Chile (10.9% or just over half the national)
<b>Status of economic development and diversification</b>	Limited ‘local’ procurement and much of the support for economic diversification has mainly been at the national level	Too early for PDI local procurement and small business enterprise policies to show effects. Local businesses stimulated by local spend. Regional and national suppliers benefiting	The limited size of the economy and young age of the mine mean that it is premature to assess definitively. The initiatives take time to have an impact	Significant local procurement, resulting from deliberate targeting and fostering of suppliers, combined with efforts to enhance capacities and competitiveness of suppliers through cooperative program with them
<b>Status of social infrastructure and sustainability</b>	Company support for social infrastructure dating back to state ownership has created some aspects of a dependency culture and has arguably harmed the prospects for post-closure sustainability of local economies at present	Steady growth of company-assisted improvements to social infrastructure. Participatory policy for new projects works towards sustainability. Increased communications infrastructure boosting local social as well as economic development	Company investments have been made in community infrastructure adjacent to the mine in order to improve the long term sustainability of the communities	Company investments in infrastructure (e.g. education and health) within Region II via a Foundation, with increasing emphasis on partnering for sustainability

Source: Field work data

Ancash region (where Antamina is located) and the Cajamarca region (both over a 12 year period), the corresponding improvement in the Human Development Index (HDI) in both cases was about average for all regions of Peru. The factors which may explain this disparity are discussed further in Chapter 5.

The status of supply chain development is also mixed for the four target mines. At Obuasi, the limited local procurement is notable, despite a long history of mining. The recent resurgence in investment within the mining sector in Ghana offers the prospect for strengthening the domestic mining supply chain by mining firms on a collective basis. Anglo-Gold Ashanti has played a pivotal role in some economic diversification initiatives in the past, but these have often been undertaken at the national level and away from Obuasi. In Tanzania also, the relatively undeveloped ability for the local market to supply sophisticated mining supplies has meant that almost half of supplies continue to be sourced internationally. In Chile, the very high level of domestic procurement is indicative of a more highly developed mining supply sector, which is consistent with the central role of mining in the Chilean economy. In this respect, the similarly high levels of domestic procurement in Peru are encouraging, and suggest that local procurement policies are having an impact.

With respect to economic diversification – and the long-term sustainability of mining communities when mines close – the picture is somewhat discouraging, except in the case of Chile. In the case of Chile's Region II, a concerted effort to reduce direct dependence on mining is supported by both the mining industry and the government and may have contributed to the impressive growth of non-mining economic activity, although much of this activity would probably not be viable in the absence of mining. Elsewhere, the case studies reveal little evidence at present of consistent planning by mining firms in partnership with the other stakeholders, including local, national and international development agencies, to consider a future after mining (although it is stressed that the futures of the four mines studied appears secure for next decade or two).

In part, the lack of diversification in most of the case study countries and areas may be a reflection of a lack of guidance and available techniques to assess whether mining communities are viable

after local mines shut, and how the closure process should be managed. Ideally, such issues should be considered with local and national governments during the planning phase for new mines, and updated regularly thereafter. In particular, assessments need to be made concerning whether mining companies have a role in supporting local economic diversification and helping to design the framework for productive post-mining uses. One very difficult aspect of this is whether the mine expects to be (and whether the host authorities and communities expect it to be), a long term presence in the locality. An alternative is that both parties anticipate it to be a purely temporary settlement and act accordingly.

The mines studied showed different characteristics in this respect. Antamina in Peru is perhaps a clear example where the mine community arguably could still be regarded as temporary, whilst Obuasi in Ghana, given its history and current size, is clearly treated as a permanent settlement.

Finally, in the view of the consultant teams, the sustainability of the social infrastructure developed either partially or primarily by the target mining companies is weakest in Ghana and Peru, albeit for different reasons. In Ghana, AngloGold Ashanti faces a significant challenge in making the transition from an expected provider of social infrastructure and services to partnering with other organizations on a more sustainable basis. In Peru, Antamina faces a significant challenge of finding effective development partners to work with to enhance the sustainability of social infrastructure – faced with a government that is either unwilling or unable to exert authority over agreed corporate-community commitments.



**Understanding the  
Routes to Enhanced  
Outcomes**

**5**

# 5. Understanding the Routes to Enhanced Outcomes

40

## 5.1 The Problematic Issues

The previous sections of this report have summarized the economic and social benefits that have accrued from the very large investments made by mining companies in the past 10-15 years in all four chosen 'success case' countries. Despite these benefits the case studies have also revealed various unresolved issues<sup>33</sup>. These issues will be examined in further detail in this section before certain lessons for the mining industry are drawn in Chapter 6.

The six most problematic issues featuring across the four case studies are the following:

- The adequacy/fairness of the tax regime for mining in the host country.
- The revenue allocation system. Does this constrain or support the efficient and effective use of public resources, including those generated by mining?
- Conflicts over land use and property rights.
- Environmental damage and concerns.
- Conflicts between large-scale and artisanal mining.
- Dealing with prospective mine closures.

The next few paragraphs first describe these six most problematic issues for the four case study countries. Then the rest of the Chapter analyzes the possible reasons for these issues to arise. It does this by making explicit use of the (revised) governance Taxonomy of the *Resource Endowment Toolkit* as developed in Phase 1 of the project. Against this background it summarizes key points in order to guide the discussion about how the economic and social impact of mining could be further improved.

### Adequacy of the Tax Regime

It seems well understood by the countries that actively seek international investment in mining that internationally 'competitive' if not necessarily low taxes are critical to attracting and retaining FDI. Nonetheless, vigorous debate on the adequacy of the tax regime has featured in at least two out of the four case studies. It is a concern mainly at the national level (Could government collect more funds, for example to provide essential public goods and services that support entrepreneurship?). But it also impinges on the allocation of government revenue across different

<sup>33</sup> It is emphasized that these issues do not relate particularly to the four specific mines reviewed in section 4, but to mining in the countries more generally.

public sector entities and tiers of government (Could there be more to redistribute?).

Recent years have seen a heated debate in the **Chilean** Congress, particularly over the adequacy of the level of tax payments for foreign companies. The Fraser Institute survey results (Figure 4) shows that the tax regime in Chile is indeed one of the most generous in the world. Some argue that tax levels are too low, given the very large amounts of value-added, exports and FDI that have been involved in recent years. From 1991-2003 the ten largest foreign owned companies paid a total of \$2,136 million in tax, or an average of \$164 million per annum (del Pino et al, 2005). In comparison the state-owned company Codelco paid an average of \$746 million per annum over the same period<sup>34</sup>.

Criticism over the adequacy of the tax regime has also been documented in Ghana. The World Bank's October 2003 OED Report notes that although mining's contribution to direct tax revenue averaged 12% of total government tax revenues in the previous few years, actual tax payments in 2001 amounted to \$32 million only. For an industry turning over in excess of \$600 million per annum, this is arguably a small contribution. Of the \$32 million, more than half arise from a 3% royalty levied on gold production. Furthermore, turnover has risen in the most recent years. One of the active NGO observers (FIAN) puts forth a simpler argument: Before the reforms of the 1986 mining law the tax rates were 50-55% – today the rates are only 35%. However, this criticism ignores Ghana's comparative competitive position (illustrated in Figure 4), which suggests that significantly higher tax or royalty rates could undermine the competitive attractiveness of Ghana for mining investment and production: and so lower tax yields<sup>35</sup>.

In the other two case study countries, the adequacy of the tax regime does not feature as prominently

<sup>34</sup> Of the ten foreign companies only Escondida paid taxes throughout the period. Two other companies paid taxes for the first time in 2003. Five others had not started to pay tax because they started up late and were still benefiting from the provision for accelerated depreciation. The issue appears to be on the way to at least a partial resolution since after much lobbying, proposals were approved by Chile's Chamber of Deputies in April 2005 to increase the tax take (mainly by way of a special tax of 4-5% on operating (gross) profits). These measures are estimated to add \$400 million to government revenues over the period 2006-2010. Together with the unwinding of the start-up depreciation allowances, del Pino (2005) estimates that the tax take from the ten foreign majors will rise to \$871 million per annum over the same period.

<sup>35</sup> If this proposition was true in 2003 it must have been even truer in 1986, when the basic fiscal arrangements for mining were put in place and when Ghana's economy was still seriously malfunctioning.

‘Large fiscal revenues from mining can provide significant leverage with respect to poverty reduction spending, particularly since mining normally entails very modest government expenditure.’

an issue. In the case of **Peru**, mining companies contribute just over 5% of total domestic taxes, but about 30% of total income tax collections. The tax take is expected to increase as new projects come on-stream and depreciation allowances unwind. Recent developments have included the introduction of a mining royalty for the benefit of regional governments and there is political debate about whether tax exemptions granted by previous governments should be re-negotiated.

In Tanzania, critics of the mining industry claim that the industry pays only a 3% royalty on gold and there is little recognition of any other taxation and revenue payments. Few people know anything about the overall mineral taxation regime and there is a widespread view that large-scale mining results in large profits for foreign companies and little contribution to the host economy.

#### Revenue Allocation

While mining’s contribution to the total tax-take is one important dimension of a country’s benefits from resource extraction, the allocation of revenue between different government entities and different vertical tiers of government attracts as much if not more attention. Large fiscal revenues from mining can provide significant leverage with respect to poverty reduction spending, particularly since mining normally entails very modest government expenditure. The allocation of revenue is also a source of great debate and tensions, particularly

between central and sub-national political actors. Legal stipulations and government practices for revenue reallocation and public financial management systems vary greatly across the four countries. These allocations in turn condition the impact of public spending on economic and social development and thus the impact of mining revenue.

From the public finance perspective **Tanzania** pursues the most purist approach. The Tanzanian government treats all its mineral revenues as part of the national resource envelope. It does not entertain any explicit policy to transfer any part of revenue back to those areas that are directly impacted by mining. Thus, there is no hypothecation of particular revenues for specific purposes and all government spending is subject to central government’s resource allocation strategies and public financial management principles. Since there are many other regions far poorer than those in which mining takes place, the Tanzanian authorities take the view that the country’s expenditure needs ought to be assessed against this national background. As Tanzania’s local government authorities evolve, it is perhaps not so certain that this position will be upheld so purely in the future. Specifically, there may be some recognition that new mining investments often create local problems and opportunities, which local government authorities have some responsibility to solve or realize (for example, increased public service levels to accommodate labor migration, or maximise local economic opportunities that arise because of the presence of mining activities)<sup>36</sup>. However, these arguments still do not require the hypothecation of mining revenue. They could also be dealt with through an efficient public financial management system, where predictable and adequate flows of funds are allocated to those sub-national entities that have and can deal with the particular issues at stake.

Contrary to the Tanzanian practice, **Ghana** has created a specific fund (the Minerals Development Fund or MDF) designed in part to provide for the redistribution of some earmarked portion of mineral taxation back to communities affected by

<sup>36</sup> It is important to distinguish these points from the responsibilities of mining companies to deal with direct/indirect impacts of mining: e.g. control of groundwater contamination, re-settlement of displaced populations in an acceptable manner, etc. In reality, the dividing line is hard to draw. For example, who is responsible when a mining company rehabilitates mine tailings only to find that artisanal miners rapidly engage in informal mining on the same land?

mining. It is the explicit mandate of this Fund "to compensate for any detrimental effects mining might have in their areas of operation and to support development in the local communities". However, a case study finding has been that the MDF – in the view of the consultant teams – works far less well than intended. It may have even created its own problems, by raising expectations in local communities that have subsequently not been met. The 2003 World Bank's OED Report stresses that MDF inadequacies have led to serious failures to address a variety of local problems, including for example the absence of practical mechanisms to create alternative job opportunities for unemployed or displaced workers<sup>37</sup>. The Ghanaian experience shows that even where mining revenue is earmarked to directly mitigate the negative effects of mining, such hypothecation does not work if administrative systems do not support the efficient and effective use of the directed funds.

In **Peru** there is a mechanism, the *Canon Minero*, which directly redistributes mining revenue collected by central government to sub-national governments. In recent years the rules applicable to this mechanism have been subject to various changes, partly in reaction to politically necessary efforts to push for greater decentralization of government, and partly to demonstrate to sub-national governments the virtues of accepting mining operations in their jurisdictions. These changes have also reflected the various political forces that have exercised influence over how public revenue is shared. Communities affected by mining and mining companies themselves have lobbied for greater transfers back to mining regions. On the spending side the Peru case study has also exposed severe weaknesses, in the view of the consultant teams, in administrative and public financial management capacity at the regional and local level. These weaknesses, it is argued, have compromised the use of resources to support economic and social development, irrespective of whether these resources have arisen from mining or from other economic activities.

The situation in Peru is not unlike that in Ghana. In both cases aggregate fiscal management has improved since the countries adopted major

<sup>37</sup> In this context, the OED report refers also to attacks by unemployed local youths, in 2001, on local traditional chiefs including looting and destruction of palaces in two towns in Wassa, where most of the field-work for their report was carried out.

'Competition for land between agriculture and large-scale mining is a serious political and economic issue in those mining countries where mineral and metal resources are not located in remote areas.'

macroeconomic reforms. Economic recovery has very much focused attention on central government reforms, but without complementary investment in local institutional, administrative and, quite importantly, political capacity. The country case studies emphasize that decentralization processes can fundamentally change political dynamics within and between government organizations, and not least with respect to accountability relationships between executive decision makers, legislative representatives and the electorate. The debate is not only about whether decentralization and hypothecation are good or bad. It also involves questions about which institutional solutions can best serve to strike a positive balance between different political interests and the administrative capacity to utilise allocated funds in an economically and socially beneficial way.

The Ghana study has shown, in the view of the consultant teams, why the political incentives underlying the redistributive rules of the MDF are unlikely to result in public spending that can be considered efficient and effective. In the Peruvian case, there is currently no certainty that higher intergovernmental transfers from the *Canon Minero* (as well as regional government's receipt of the newly introduced mining royalty) will deliver real and more benefits to broader segments of society. Neither is it guaranteed that spending will enhance economic opportunities for the large number of Peruvians living in poverty, unless local

administrative and financial management capacity is improved considerably. The possibility is clearly that more political pressure will provoke populist policy decisions, including iterative re-negotiations of *Canon Minero* and other tax rules, and continued pressure on mining companies to contribute directly to local communities and local government entities.

Finally the **Chilean** case is particularly important in this context. Chile has so far had only modest tax payments from private mining companies. Therefore, such payments are not what in this case have made for a positive impact of the mining industry: a point that was strongly emphasized by both mining and government stakeholders during the October 2005 workshop. Although Region II shows the most dramatic reduction in poverty, there is no indication that this has happened because the region retained or received large sums of revenue generated from taxing the mining industry. Instead, what appears to be key in Chile is how other economic sectors have benefited from the presence of mining and have delivered inputs to mining and associated economic activities. In other words it is the production and employment generation associated with mining and not the redistributive measures that have delivered the high pay-off to mining.

#### Conflicts over land use

Competition for land between agriculture and large-scale (especially surface) mining is a serious political and economic issue in those mining countries where mineral and metal resources are not located in remote areas. This is the case for Ghana, Tanzania and also Peru. The poorest families in those countries are typically agriculturalists or pastoralists, often dependent significantly on subsistence production. For them livelihoods and income situations have often improved little despite macroeconomic recovery. This even applies to mining districts in Ghana where otherwise poverty gains have been impressive. Only Chile of the four case countries has shown broad-based improvements in poverty reduction not primarily through redistributive policies but rather through the creation of alternative employment opportunities.

Conflicts over land use are an issue that hinges on contentious property rights. Local communities may not always concur with central government decisions over the property rights granted to

(foreign) mining companies. Contention may arise because formal property rights are inconsistent with traditional claims (for example in communal farming areas), or simply because local community representatives have not been (sufficiently) involved in policy decision-making processes that have affected 'their' land. Weakly governed countries may use clumsy methods to enforce the displacement and resettlement of populations to which they commit in their agreements with the large companies.

In the case of **Peru** property rights have been contested, not least because government policy decisions have sometimes been perceived to lack political legitimacy. In **Ghana** NGOs have argued that many concessions in Wassa West (Western Region) and elsewhere are far too large – up to 150 sq kms – and that as a consequence the livelihoods of thousands of rural households can be impacted negatively. Mining companies seem to have generally complied reliably with agreements on land re-settlement, but perceived flaws in implementation have sometimes been damaging. Although the 1986 Minerals law attempts to balance the interests of farmers and mining companies, in practice there have been many uncertainties that have provoked conflicts<sup>38</sup>.

With new mines established in the past 5 to 7 years, **Tanzania** has also not been spared from serious conflicts over land use. Modern corporate approaches to community relations and corporate social responsibility were either absent at crucial times or were not sufficient to settle fundamental differences over land use rights. Where the interests of large companies appear incompatible with those of small-scale entrepreneurs, clear and accepted governance structures, decision-making processes and communication channels are vital to balance these interests and to achieve enforceable compromises. Tanzania in the mid-1990s when the major controversies arose seemed not to have

<sup>38</sup> The World Bank OED report provides an example of the displacement of 20,000 rural people from 14 villages that took place in the late 1990s when the new GFGL surface mine at Tarkwa was opened. The resettlement, they argue, was conducted carefully and at very high costs to the company. However, compensation naturally benefited those families who could show that they were losing houses, crops or other specific property. It did not much help single young persons who owned no property. Nor did it help many sharecroppers who lost access to land that they previously cultivated. Another example quoted by the FoodFirst Information and Action Network (FIAN) concerns the Iduadriem-Mine of Ghana Australian Goldfields involving a 20% IFC stake. Their paper complains that this investment resulted in the destruction of villages and the loss of access to clean drinking water for some. Only after protests by the Wassa Association of Communities Affected by Mining (WACAM) and others, was an action plan to help the victims put in place.

adequate structures in place to address the major issues satisfactorily. This situation persists into 2006 with eruptions of conflict between artisanal and small-scale miners and large mines over access to prospective ground. Often, the artisanal miners have no legal licences to mine, but cannot understand why they are denied access to land which appears to be lying fallow when they have no other means of income.

#### Environmental Damage and Concerns

From a historical perspective, mining operations have created significant environmental damage in both more advanced and developing countries. For example O'Brien (1993) stresses the very substantial water pollution and other damage that arose from **Chile's** mining operations in the early part of the 20th century. Today the practices of multinational companies and improvements in national regulatory frameworks provide for a much more sensitive and managed approach to mining's environmental externalities. But environmental damage and concerns in communities still exist. The **Peru** case study stresses that environmental concerns are often a result of so-called 'legacy issues' or 'orphaned mines', where state-owned or private companies closed down mines in the past and left environmental damage unresolved. Technical challenges also remain, for example solutions to air pollution associated with copper smelting are technically very demanding. As recently as 1994, **Chile's** Codelco had to shut down the huge Chuquibambilla mine for an extended period, because of alleged environmental violations and excessive fumes. It is only in the relatively recent past that Chile has instated coherent national policies to address environmental issues.

All case study countries have seen significant improvements in environmental legislation in recent years. But the main challenges remain with the implementation and supervision of high standards. It is from this angle that environmental issues remain a prime target of criticism of mining companies – whether individual criticisms are merited or not, certainly these issues remain live as far as public perception is concerned. In **Ghana** international mining companies are still reported to violate environmental standards, although these violations are often viewed as a legacy of old technologies, which are being phased out. The FIAN paper cites three cyanide spills in internationally owned mines in 2001. It is alleged that victim communities have not been properly

compensated for suffering loss of water amenity and illness. The major contemporary concerns are associated with the very large increase in surface mining activity and related requirements for rehabilitation. Ghana's Mining Commission has now imposed tough standards of rehabilitation on mined-out areas. When mining was mainly an underground activity this issue did not arise. Multinational mining companies argue that they are bearing a disproportionate burden of enforcement relative to domestic firms, because they are proactively trying to comply and also pay fines<sup>39</sup>.

#### Tensions with Artisanal Mining

Linked to both conflicts over land rights and environmental damage is the tension between large-scale capital-intensive mining and artisanal miners, involving thousands of mainly young males. The driving force behind this tension is often high (youth) unemployment due to lack of alternative economic opportunities. The informal mining sector has a high absorptive capacity for unskilled labor and with a low import content it makes a big contribution to the sector's overall net foreign exchange earnings. This is especially the case for **Ghana's** *galamsey* mining. On the other hand informal mining is also responsible for significant environmental degradation<sup>40</sup>.

There have also been high profile cases of the forcible ejection of artisanal miners from concession areas held by mining companies and claims of serious injury from these actions in some cases, for example in **Tanzania**. Whether the individual allegations are substantiated or not, the large international companies tread a fine line between, on the one hand providing technical help to any artisanal mining that is legal and, on the other dealing with incursions of the illegal operators onto their concessions. Similarly the degradation of rehabilitated mined-out areas by illegal activity has been a bone of contention where the companies have sometimes borne the brunt of criticism. In general the mining companies are

<sup>39</sup> For discussion of the proposed Integrated Strategy that emerged from the Extractive Industries Review, see Liebenenthal et al (2003).

<sup>40</sup> The OED report notes that there are thousands of abandoned pits in mineral-rich areas in need of restoration. The stock of such degraded land increase every year and there is every prospect that the scale of artisanal mining, and the damage associated with it, will increase further in future. Additionally the working practices are extremely harmful to the participating miners. This is because few if any precautions are taken against the inhalation of the dust particles that arise from the crushing of the rock, nor in the handling of the highly toxic mercury that is used to separate gold from the ore. Furthermore, much of the artisanal mining occurs in unsupported and unsafe mine shafts: the risk of injury and death is high. Child labor is reported as "not uncommon".

reluctant to give help and support to the artisanal activities in their concession areas, but there are a few examples of where such responsibility is taken on at least in part.

#### Preparing for Mine Closure

Prospective mining closures are a source of considerable community anxiety. The case studies have seen this most clearly in Ghana, where a number of closures have happened in recent years and have been the source of much difficulty. Mining companies in Peru are also conscious of the social and economic impact that mine closure will have on the local community. Some companies are actively trying to prepare for this, both in terms of environmental rehabilitation (e.g. reforestation and pastoral use) and in terms of social sustainability of community projects supported by the mining industry. The indication from Ghana is that effective structures are not in place to anticipate closures sufficiently early and to develop economic programs to minimize their disruptive effects. This was also an area of work that the October 2005 workshop defined as a priority for future action in other country contexts.

#### 5.2 Governance Structures: Causes and Solutions

The six issues discussed above are linked to a variety of causes. Certainly, it would be an oversimplification to associate them with any single factor or to pass general judgements on government policies, company practices and community concerns. However, the four case studies have all shown that the risks that these issues pose for the success of mining, (particularly with respect to conflicts with communities) hinge on the institutions and structures through which central government mediates between different political and administrative entities, business interests and community concerns, either successfully or unsuccessfully<sup>41</sup>.

In this context, Chapter 3 has stressed that much of the ongoing debate on the economic and social benefits of mining investments now focuses on the quality of governance. In recent years, all four case study countries have seen improvements in governance indicators as measured by the World Bank. However, the case studies also show that it

<sup>41</sup> Some of the issues are about revenue distribution broadly conceived (e.g. compensation for resource rent and for ground damage, the rent distribution as between different tiers of government and the payments necessarily made by companies to secure their explicit and implicit licenses to operate). We have not used this here but the approach is discussed in McPhail (2002).

‘Today the practices of multinational companies and improvements in national regulatory frameworks provide for a much more sensitive and managed approach to mining’s environmental externalities.’

is difficult to imply that there is a clear linear progression along which governments improve their governance from bad to good. Nor is it the case that it is solely up to central government to improve the quality of governance. Sometimes political dynamics appear to require trade-offs between one aspect (or level) of governance and another, and there is more than one way in which such trade-offs are struck in practice. It is also clear that the sort of political developments through which countries like Chile have achieved high scores on governance indicators in later years, would not have earned them good scores in earlier years.

In the cases of Ghana, Peru and Tanzania still low (2004) scores on the quality of governance<sup>42</sup> depict clear ongoing weaknesses in governance structures. These are in turn related to the political and social challenges that those countries are facing in mediating between different interest groups, building national consensus and overcoming collective action problems that restrain economic and social development. Case studies have shown that many of these challenges are faced at the sub-national (often the very local) level. They have also shown that in the context of successful macroeconomic recovery programs, public sector and financial management reforms have paid insufficient attention to this level.

<sup>42</sup> World Bank governance indicators.

Table 8: Problematic Issues

	Ghana	Tanzania	Peru	Chile
<b>Adequacy of the Tax Regime</b>	Calls by local NGOs that mining is under-taxed compared to tax regime applicable in earlier decades	Little local knowledge of actual tax regime leads to claims that foreign companies make large profits and pay little tax	Recent introduction of mining royalty for the benefit of regional government and discussion on re-negotiation of tax exemptions granted earlier	Recent debate in Chilean Congress whether foreign mining companies are under-taxed
<b>Allocation of Resources</b>	Some mining revenue re-allocated through Minerals Development Fund, but practical results are disappointing. Administrative and public financial management at the sub-national level is insufficient	Central government does not hypothecate any mining revenue to sub-national levels. Public financial management at sub-national level is not strong, but has been steadily improving since the introduction of a decentralization process in the late 1990s	Reallocation of substantial amounts of mining revenue through Canon Minero to sub-national mining areas. Politicization of redistribution principles without guarantee that better results will be achieved. Local administrative and financial management capacity is weak	n.a.
<b>Conflicts over land use/rights</b>	Local complaints that areas covered by mining concessions are too large and threaten local communities' livelihoods. Conflicts with agricultural/pastoral land use and resettlement	Conflicts with agriculture and pastoral land use. Questions of resettlements. Also conflicts with artisanal miners over access to land not being actively used by mining companies	Mining legislation conflicts with traditional claims over land/mountains. Some conflict with agriculture/pastoral land use	Less likely that land conflicts arise due to location of mining in desert areas although limited conflicts have occurred in other parts of the country
<b>Environmental damage and anxiety</b>	Environmental abuse mainly in the past, thus environmental legacies. Improvements in legislation and practices in recent years	Not a major current priority except for occasional sensational accusations of poisoned mine water being released with bad effects	Environmental legacies and various past incidences of environmental abuse. Improved legislation, but problems with enforcement of regulation	Environmental legacies and various past incidences of environmental abuse. Improved legislation
<b>Artisanal mining</b>	Conflicts with <i>galamsey</i> mining, both linked to contentious property rights and also the negative environmental impact of such mining	Conflicts with artisanal mining, to the extent of forceful removal of informal miners from concession areas	n.a.	Insignificant, small scale mining tends to be partly mechanized
<b>Mine closure</b>	No concept for mine closure and economic and social sustainability thereafter	Not an issue at present, as the sector is very young	Some encouraging thinking on environmental and social sustainability after mine closure for new mines. Unclear government policies to support this	Not an issue at the moment

Source: Field work data



Aggregate governance indicators do not distinguish between different tiers of government and thus shed little light on how weaknesses in public authority reach down the vertical government chain and impact on the overall quality of the governance system<sup>43</sup>.

Table 8 briefly summarized the six problematic issues across the four case studies. The remainder of this Chapter then analyzes these issues by applying the (revised) governance taxonomy of the *Resource Endowment Toolkit*. The emphasis lies in building our understanding by exploring the similarities and differences in institutions and governance structures across the four countries.

The revised governance taxonomy of the Resource Endowment Toolkit is presented in a complementary report to this Synthesis Report. The taxonomy involves two main axes. The first of these identifies certain critical cross-cutting areas of governance, namely:

- The Legal and Regulatory Framework
- The Political-Administrative System
- The Fiscal Regime and Economic Policies
- Social Cohesion and basic Public Service Delivery
- Private Sector Development

All six problematic issues as shown in Table 8 cut across more than one of these five areas of governance. However, there may be a pattern of affinity. For example, whether the tax regime and the resources allocation systems are adequate or not are questions that are posed at the center of government. They affect both the Legislature's approval of fiscal legislation and the public finance system governing the actual use of public funds. There are also links to social cohesion, basic public service delivery and private sector development. But these links are indirect and mediated from top-down through the country's political-administrative system.

Similarly, the questions on conflicts over land, environmental damage, artisanal mining and mine closure are of more immediate local concern,

placing a stronger emphasis on local government action. They impact more directly on the livelihoods and economic opportunities of those living in the vicinity of mining activities. But again they relate to the key areas of governance as listed above – social cohesion, basic public service delivery and private sector development. New mining activities create many local challenges. Population numbers are likely to increase, giving rise to a need for new infrastructure to meet the extra demands on housing, water supply and sanitation. Mining, and especially open-pit mining, produces physical damage however carefully it is conducted. Large numbers of people are likely to be displaced from traditional economic activities, including agriculture and pastoral land use. Mines also have a finite life, requiring local communities to use today's prosperity (based on mining) to build economic capacity that can mitigate the loss of livelihoods and other benefits once the mines close. The link to central government is indirect, mediated from bottom-up through the country's political-administrative and its legal and regulatory system.

The second axis of the taxonomy specifies the following five higher-level characteristics of efficient governance:

- State Strength: legitimate and capable state authority at all levels of government. This includes a government whose policy decisions are credible and broadly accepted, and an administrative apparatus that can implement these policies;
- Limits to State Strength: institutional checks and balances that support the legitimacy of government and the professionalism of the administrative apparatus and guard against the abuse of state power at all levels of government;
- Compatibility of formal and informal institutions, rights and rules;
- Legitimacy of formal economic institutions supporting a stable economy;
- Technical capacity: of the public sector, the civil service and policy decision makers at all levels of government.

The discussion in the next few paragraphs brings together relevant issues from the two axes of the taxonomy.

<sup>43</sup> This point is also stressed by Kaufmann, Kraay and Mastruzzi (2005): Governance Matters IV: Governance Indicators for 1996-2004, World Bank, 2005. Kaufmann, Kraay and Mastruzzi find that while there is a strong link between a country's score on governance indicators and increased per capita income "these aggregate indicators need to be complemented by in depth, in country, governance diagnostics based on micro surveys of households, firms and public officials. There is need to stress reforms in transparency, altering incentives to institutions to focus on prevention and deterrence, and working more closely with other key actors, including the heretofore neglected private sector".

### Formal economic institutions and technical capacity

First, there is one clear area of commonality across all four countries: With economic recovery all four countries have been able to put in place formal economy institutions and aggregate fiscal regimes that guard the essential requirements of a stable economy. This includes broadly sound macroeconomic policies, reasonably low inflation, stable exchange rates and aggregate fiscal sustainability. Technical capacity has been improved in key organizations, such as central banks, and ministries of finance, and also in specialist agencies targeted at governing particular aspects of the economy (e.g. utilities). Government entities that govern the mining sector and manage mining concessions have generally also been strengthened. On the other hand while technical capacity has improved at the central government level, capacity building has not necessarily been achieved to the same extent at the sub-national level. Most noticeably this applies to fiscal management, general public administration and local level political decision-making processes.

In the case of **Ghana** the analysis of the local public finance system suggests to the consultants that the system is less well equipped than it could be to deal with the issues raised by the presence of significant mining activities, although at the national level the reforms of public budget management have been impressive. These improvements have not extended to the local level, where the prospective increase of the number of surface mines will pose significant challenges in the next few years.

Problems with the mitigation of local challenges associated with mining arise in part from the Mineral Development Fund (MDF), the notional key instrument to respond to problems caused by mining. First, it releases funds on a relatively small scale and second, in an unpredictable fashion<sup>44</sup>. As a result local action is less good than it might be in relation to conflicts over land use, environmental damage or the creation of alternative economic opportunities. In this situation, mining companies often feel the obligation to provide services to fill shortfalls through additional, but discretionary contributions (to schools, hospitals etc).

<sup>44</sup> The rather diffuse allocation formula for mining royalties does not provide enough resources to effectively address the purpose for which the MDF was first set up. Some parts of the allocations also serve to support the trappings and lifestyle of some leaders of traditional stools rather than being used to help the local communities.

But the inadequacies of the MDF would not matter quite so much if the general system of local finance and public administration could provide a firmer basis for government responsiveness to community concerns and for local financial self-sufficiency. Local political, administrative and financial systems provide relatively poor basic services, even where the local (mining) communities are hosting industries generating several hundreds of millions of dollars of income every single year: the scruffy appearance of Tarkwa and Obuasi is frequently mentioned. The problem is often that local funding comes through a variety of grant sources, which depend on a chain of centralized decisions (by government and donors), which are insufficiently responsive to local needs.

For example, **Ghana's** Heavily Indebted Poor Countries (HIPC) Fund covers very substantial amounts and should explicitly be targeted to 'poverty alleviation'. They also have 'environmental sustainability' as an important subsidiary objective. However, there seem to be no mechanisms in the *Ghana Poverty Reduction Strategy (GPRS)* to connect these funds in any reliable manner to the special needs of communities affected by mining. In the most recent *GPRS Annual Progress Report* it is difficult to find any mention of mining as an issue<sup>45</sup>.

The **Peru** study also observes that the reforms of the 1990s clearly improved technical capacity in key economic institutions and semi-autonomous specialist agencies. However, the consultant team felt that administrative and financial management systems in the districts, provinces and regions still leave much to be desired. Political change at the onset of the 21st century has set in motion a decentralization process, which has changed the political dynamics within and between Peruvian government organizations and with respect to vertical accountability between the electorate, the Congress and the Executive. This shift of the power balance has facilitated greater lobbying of Congress by local regions, provinces and districts. However, as local capacity remains weak, much of this lobbying seems unfortunately to be poorly informed by strategic thinking about priorities. The decentralization process has been left somewhat incomplete. Halfway decisions have created a confused picture concerning the overlap

<sup>45</sup> That Report acknowledged that the Districts found HIPC funds timely and useful for development because they are readily available in District HIPC accounts so that projects can be executed rapidly and contractors paid promptly. However, it also acknowledges that the whole process could be significantly enhanced to increase the developmental impacts.

‘without stronger administrative and financial management capacities at the local level, the developmental impact of reallocated funds remains unsatisfactory.’

of responsibilities between central government agencies, in particular sector ministries, and regional government. Where responsibilities have been transferred, they often lack adequate and predictable funding.

Some aspects of the redistributive system of the *Canon Minero* show similarities to the Ghanaian situation. As noted earlier the *Canon Minero* is progressively placing more revenues at the disposal of sub-national governments, but the capacity to handle these funds has not been developed as fully as it might have been. Local expectations regarding higher spending are raised, but the predictability and certainty of these flows is not guaranteed. Neither is there much evidence of systematic improvements to local capacity to design and implement social and economic development strategies to use these funds effectively. The incompleteness of this process leaves much space for a populist call for re-allocation and for serious backlashes of public opinion when expectations are disappointed.

In summary, in Ghana and Peru the lack of technical capacity at the sub-national level impinges indirectly on the problematic questions around the allocation of resources, including those arising from mining investments. In both countries institutional mechanisms (MDF and *Canon Minero*) have been established which are in theory designed to compensate affected communities for the additional challenges that they might face because of the presence of mines. But without stronger administrative and financial management capacities at the local level, the developmental

impact of reallocated funds remains unsatisfactory. This in turn heightens communities’ anxieties about the impact of mining operations on their livelihoods and employment opportunities.

It is entirely plausible to assume that in its relatively recent past **Chile** has also lacked technical capacity at the sub-national level. However, it comes out very clearly in the Chile study that the significant poverty reduction has taken place through increased employment opportunities and not through redistributive measures. Sub-national revenue distribution (as in Ghana’s MDF or Peru’s *Canon Minero*) does not feature as the key channel to achieving a more positive socio-economic outcome. Yet Chile is the most successful of the four cases, and this argues that the revenue re-distributions should possibly be de-emphasized in the longer-term. In the short-term a strong emphasis on such redistributive arrangements seems mainly motivated by the short-term desire to ‘show’ one’s contributions to unsatisfied local communities, with the unintended consequence of sometimes undermining longer-term objectives. **Tanzania**, as a relative newcomer, currently faces similar challenges, not least in the context of a decentralization program that seeks to build greater local government authority. However, there are differences in the other three aspects of efficient governance that could also explain why problematic issues affect the four countries in different ways.

#### State strength, its limits and the compatibility of institutions and rules

This section argues that apart from Chile, the case study countries all grapple in one way or another with the problem of state strength and limits to state strength and with the associated compatibility of institutions, rights and rules. Since the transition to a civil government in 1990 Chile has achieved an apparently sound balance between the different aspects of efficient government, and this has allowed the country to achieve easily the highest scores on the World Bank’s governance indicators. Social and political conditions in Peru and Ghana still need further efforts to improve the overall efficiency of governance structures, and this is also the case in Tanzania. However, Tanzania’s tight party organization and internal party accountability could set somewhat more favourable conditions to strike the balance in the future.

<sup>46</sup> ‘Necessary’, that is, given the chaos in governance that preceded Rawling’s assumption of power.

In Ghana, the early stages of the Rawlings reforms in 1983 were inherently (and probably necessarily<sup>46</sup>) centralizing in nature given the failed state that preceded them for much of the 1970s. A strong state was built at the center of government and key reform decisions were relatively easily made by a limited set of actors. However, centralizing tendencies have persisted as poverty and the management of large HIPC funds have acquired more influence since the late 1990s. Donor programs have tended to put emphasis on improving political and administrative capacity and accountability initially at the center.

Today the Ghanaian state still seems to face difficulties extending public authority down the vertical line to local government entities. Regions do not possess regional government authority and at the level of districts and municipalities, authority overlaps with traditional stools. Neither of these entities seems to the consultant team to have adequate formal powers, capacity or resources fully to address local economic and social concerns. The focus on central government also applies to the emergence of a more democratic system. Whilst the electorate has been given a more genuine voice in national elections, it has gained less influence over the decisions of local political power holders. So while the Ghanaian state may exercise a strong presence in the capital and other urban centers, it is less effective at local level. In these circumstances it seems that local communities where mines operate continue to see mining companies – rather than local government – as their dominant development partner, for finance, management and technical support.

**Tanzania** is in a somewhat different and also a more favourable situation in that traditional political structures have been dismantled and no longer compete significantly with local government authorities. Since the introduction of the decentralization process in the late 1990s these arrangements have also been subject to various local-level capacity building initiatives. A recent study funded by the Department for International Development (DfID) finds that the strong remains of the former one-party structure represent an important source for holding local government officials to account. This continues to provide a mechanism to exercise government authority but

<sup>47</sup> DfID (2005) Understanding Patterns of Accountability in Tanzania, Final Synthesis Report (unpublished document: OPM, Chr. Michelsen Institute and REPOA).

‘Where rights are affected, the issue of adequate compensation for losing them is crucial, particularly if resettlement is required.’

also to limit executive strength countering the potential abuse of power<sup>47</sup>.

The situation in **Peru** is again not dissimilar to that in Ghana. The political-administrative system has supported a strong executive with the ability to reform and change economic and other policies from the center, but often to the detriment of political legitimacy. Certainly this was the situation through the 1990s when Peru’s economic turnaround was achieved. The Fujimori government implemented change (successfully in many respects) not through an efficient administrative apparatus, but through central authoritarian rule, and as advised at the time, through the creation of semi-autonomous government agencies that function as islands of efficiency against the background of an otherwise unreformed public sector. During the more recent periods of democratic rule, governance in some dimensions seems to the consultant team to have deteriorated. In the absence of efficient institutions and governance structures, there has arguably been plenty of space for short-term populist demands to compete with and often override coherent long-term development perspectives. In the Fujimori years it would appear that central government strength counterbalanced generally weak state authority and legitimacy until the abuses of executive power became manifest and put pressure on political reform to return once more to a civil government. It is noticeable that the most vigorous push in state capacity building beyond the borders of the capital, Lima, took place during the period of the leftist military regime in the late 60s and 70s.

In the case of **Chile** contemporary successes are shaded by a very different political history in the 1970s and 1980s. Many economic and administrative reforms were initiated and implemented under the rule of the Pinochet government that applied coercion and abandoned many principles of good governance when opposition arose. Many of the benefits of these reforms (e.g. agricultural reforms) were not reaped immediately, but only once political confrontations had somewhat settled. The country's economic success gathered strength after the transition to democracy. The particular institutions and political processes through which the country has since been governed by different coalition governments are known to have contributed to improved national consensus-building around diverging interests. These arrangements have certainly included institutional limits to state strength. They have re-established civil government but have also prevented the politicization of policy decisions. Economic success has led to a parallel improvement of living standards, mainly through the creation of employment opportunities. By the mid 1990s Chile's scores on governance indicators had improved to an already remarkable level. Those scores were almost certainly far less impressive a decade earlier when the mining recovery began<sup>48</sup>.

In **Tanzania** the balance between state strengths and limits to that strength may not function as ideally as in Chile, but it would appear that the checks and balances that are exercised within the organization of the ruling government party could serve as a safeguard against an economically destructive decision.

The question of whether governance structures achieve a successful balance between state strength and limits to state strength at all levels of government impinges also on the compatibility of institutions, rights and rules. Unless coercive measures are used governments can always expect

to face challenges in implementing policies that are not deemed to be legitimate. Thus, although formal institutions, rights and rules may make perfect economic and legal sense, if there is not a general buy-in to their legitimacy they are likely to be contested or overridden by more powerful informal arrangements. This proposition is clearly centrally important in relation to conflicts over land use/rights, conflicts with artisanal mining and environmental concerns. It has been demonstrated in the case studies of **Peru, Ghana** and to a lesser extent **Tanzania**. In Chile the country endured an extended period of authoritarian rule that enforced unpopular policy changes through coercive means, reaping the full economic and social fruits only when the transition to democracy had succeeded. A difficult question is to what extent the conditions for that particular economic success are replicable in other mining countries. In particular, how can they be obtained without the negative aspect of coercive government authority?

The Peruvian case study quite strikingly noted that all the significant changes in mining legislation had come about by executive decree. In the other country cases those same decisions were similarly highly centralized. This was readily justified at the time in all cases. However, problems can obviously arise when internally weak states lack positive authority and legitimacy to enforce such rights, but also if they do not guarantee adequate compensation and alternative economic opportunities (for those who lose land and other resources). To simulate alternative economic opportunities requires state strength in terms of the ability to enforce complementary reforms, which at first may also be unpopular with particular constituencies (e.g. agricultural land reforms or redistribution of rents from licensing). In turn compensating for the consequences of such measures requires limits to state strength, such as legal certainty over entitlements.

Where rights are affected, the issue of adequate compensation for losing them is crucial, particularly if resettlement is required. Where alternative economic opportunities are not credibly in sight, conflicts are also most likely to emerge. These challenges require adequate capacity to analysis, anticipate and plan in the relevant local (not central) authorities. It also calls for an assured revenue stream to finance the demands placed upon the communities by the presence of mining as well as coherent and accepted strategies to

<sup>48</sup> Also in **Peru and Ghana** it appears to be fundamentally difficult to establish governance structures and policy processes that manage to mediate between different political, economic and social interests groups and to overcome collective action problems. In this context the question around the adequacy of the tax system takes on a different tone than it does in **Chile**. In the case of Chile the country's well-engaged legislature is discussing whether a different balance could be struck between competitive incentives for the industry (which according to the Fraser index are very favorable) and the country's sovereign right to tax economic activities for the purpose of funding public spending. While this rethink may not serve the interests of the industry, there is less of a risk that the debate will be politically exploited and undermine the financial viability of the industry. Arguably, in Ghana and Peru this risk is greater.

accommodate to change.

It is a particular problem if state authority is so weak that it is absent. This has transpired in the **Peru** study regarding the widely acclaimed 'Dialogue Table', which initially had been considered a good example of how to resolve conflicts around land issues<sup>49</sup>. State authority is vital to overcome collective action problems, such as the one illustrated by this example. The Ghanaian malfunctioning of the MDF shows a similar dilemma linked to overlapping authorities of local government authorities with that of traditional stools: neither of the two serving as a decisive institutional focal point to resolve differing interests between business and communities.

### Summary

The four case studies illustrate that the amounts of resources received by either central government or sub-national government entities are only part of the story of why the major identified problems with mining arise and then fail to get resolved. A particular mechanism of funds allocation is no guarantee that local communities receive actual benefits from those funds. To the contrary it can also lead to heightened expectations that cause the politicization of policy decisions when disappointment unfolds. This in turn can make it even more difficult to establish constructive and strategic consensus about how government entities, companies and communities should work together to employ the revenue and economic opportunities that mining operations generate for the achievement of sustainable development goals.

Although this section has concentrated on capacity issues at the level of government, the October 2005 workshop participants drew attention to some parallel capacity problems in influential donor agencies such as the World Bank as well as in the companies themselves.

<sup>49</sup> Communities and BHP Billiton have signed an agreement in which the latter committed to return to the communities land equivalent to the amount of territory that was expropriated by the state and acquired by the company, plus an additional 25 to 50% of land depending on the quality of the land. It also most importantly provided for an annual contribution to local development projects on the part of the company of 3% of annual pre-tax profits or a minimum of \$1.5 million. In spite of this agreement, new conflicts and demands soon arose, with over 2000 people storming administrative buildings demanding that the \$1.5 million annual investment in social infrastructure agreed in 2003 should be increased to \$20 million.

### 5.3 Sequencing and Targeting of Governance Reforms

The four case study countries have all achieved a successful resurgence of their mining industries in the past 10-20 years. This has been associated with, and certainly concurrent with much better general economic performance and, in at least two cases, with substantial improvements in the poverty and social welfare profile for the country as a whole, especially in the mining-affected regions. However, the case studies have also shown that the governance structures and institutional deepening necessary to extend the benefits to a broad spectrum of society and eliminate the main negative effects have in most cases been left incomplete. In particular, regional and local governments have not been equipped with adequate sources of finance, with reasonable degrees of democratic legitimacy bestowed by their local populations, and with the necessary technical and management capabilities to evaluate and implement solutions to address specific local problems where these have arisen.

Two important inferences can be drawn. Firstly, attracting mining investments can help reforming governments of erstwhile weak states to kick-start macroeconomic performance and income growth. (In fact they may be amongst the few available options for this critical task, since such states invariably face problems attracting other sources of FDI, for which longer-term and deeper institutional changes may be needed). Secondly, however, such an approach needs eventually to be matched by full governance reform if all the potential social benefits from mining are to be realized, and all the potential downsides to be mitigated.

Although there is both good and bad news in these results, the thesis that the case studies collectively suggest is that mining investments in countries with proven mineral capacity represent a potential 'early win' for reforming governments of erstwhile weak states that have committed their countries to accept higher levels of private sector activity in order to build incomes. The counter proposition that such states have the luxury of choosing from a wide range of productive sector activities for their early new investment is readily rejected. That would require a far larger gamut of economic policy, governance and institutional reforms than can feasibly be delivered by weak (albeit reforming) administrations.

‘mining investments can help reforming governments of erstwhile weak states to kick-start macroeconomic performance and income growth.’

**Chile** has achieved the broadest improvement in governance structures and institutions of all four countries. Arguably, that country had the advantage of returning to a comparatively long democratic history once the deep political difficulties of the 1970s and 1980s had been resolved. The implementation of substantial agricultural reforms also helped Chile to significantly diversify its productive base. To date **Peru, Ghana** and **Tanzania** have struggled to show similar results. However, if mining can be made into a viable commercial proposition with only a minimal package of economic and governance reforms (as the evidence from Ghana, Peru and Tanzania would suggest) then there is an obvious need to be alert to the problems that will arise because important aspects of governance cannot be instantly put into place. The aim is not to ignore these aspects but to actively try to put them in place, as the economic benefits of mining activities unfold.

The evidence in general suggests that centralizing governments (such as those of Fujimori, Rawlings, Pinochet) are unlikely to give much ‘voice’ let alone real influence to the public at large except on an *ad hoc* basis – i.e. favouring particular supporters, factions or ethnic groups. In **Chile** many of the crucial reforms were enforced under the authoritarian Pinochet government. But since democracy has been restored governance structures and political processes have evolved to achieve policy outcomes that now balance diverging interests and overcome potentially destructive collective action dilemmas. In **Peru** it is less obvious that the country’s governance is evolving in

a similarly benign manner. The decentralization process has involved significant shifts of power away from a previously stronger central executive, but there is not much evidence that capacity at the lower tiers of government and the quality of the legislature’s decision making process have improved. With a less fortunate democratic history to look back to, current governance structures in Peru still seem to the consultants to leave much room for populist ad hoc decisions substituting for true strategic decisions. In Ghana, the political dynamic still seems to the consultants to leave too much authority at the center and to under-represent the needs of local government: again local development strategies suffer. The **Tanzanian** experience provides an interesting contrast as accountability of central government down the vertical chain to the local level appears to be exercised via a still-strong and unifying party structure. (See Tanzania accountability study as cited earlier).

#### 5.4 The Conditions for Enhanced Outcomes

This synthesis report does not claim that all the problems and criticisms of mining in ‘successful’ countries would be neatly resolved if the missing elements of governance and institutions were to be remedied: even if there were some simple way to address them. But it seems fairly clear that some of these problems could largely be resolved. This perspective raises doubts about some of the apparently straightforward solutions that others have suggested to redress the problems associated with mining.

For example, one recommendation that is commonly heard is to ensure that local communities receive sufficient benefits from extractive industry projects (presumably meaning benefits over and above employment, procurement, and the direct income gains that always arise from mining). Such a recommendation easily leads to the idea of explicit revenue sharing with local communities, and to the requirement that mining companies engage in consent processes with local communities etc. But the analysis from the four case studies suggests not only that some of this is far too prescriptive, but that it also ignores the key point that in the absence of local government capacity which has the support of local populations and is also able to mobilize reasonable technical competence, the outcomes of such recommendations are at best unpredictable (*vide* Peru). Some such recommendations also imply a

presumption in favour of hypothecating some portion of minerals revenues. However, as we have seen, two of the four case study countries have rejected such an approach for what appears to be an entirely legitimate reason, namely that host mining communities are relatively prosperous and that public funds would be better spent elsewhere. In one case in particular, namely Chile, there are no special tax regimes lying behind the broad based economic and social successes of the mining regions.

To put the point in a different way, the case studies suggest above all that there are no simple 'governance' solutions. Centralized government may be inevitable and also defensible in the early stages of the reform of weak states. The improved governance that is relatively easy to enforce via donor conditionality is almost certain to be centralising in nature. Some of the more difficult steps may require long evolutionary processes rather than 'big-bang' decisions and enforcement. But even if excessive centralization is avoided, local government may not be representative of the community, and the community and its legitimate 'representatives' may be genuinely difficult to identify. Moreover, the community changes over time and so do its values and aspirations. Mining investments will likely insert themselves into the country while various aspects of the country's governance are incomplete or unsatisfactory. But if, as demonstrated in these four cases, economic and social benefits are available nonetheless, the challenge for all parties is to design the actions that will make the most of this second-best situation, and not reject the gains that can be achieved. It is this contingent policy formulation that is the subject of Chapter 6.

'This synthesis report does not claim that all the problems and criticisms of mining in 'successful' countries would be neatly resolved if the missing elements of governance and institutions were to be remedied: even if there were some simple way to address them. But it seems fairly clear that some of these problems could largely be resolved.'



**Implications for  
Companies, Governments  
and Donors**

6

# 6. Implications for Companies, Governments and Donors

56

## 6.1 Introduction

After the completion of three of the four case study reports, the study teams sought collectively to distil the main implications that emerged for the key policy-makers – governments, companies and donors. Although the insights obviously differ across the four cases, there is sufficient commonality to present them as a set of pointers for possible future actions that are likely to apply to a variety of mining countries. It is emphasized that none of the three parties listed are likely to be able to unilaterally mobilize the various actions that together can enhance the socio-economic impact of mining. In most cases partnerships of various types are called for.

This Chapter is organized by theme beginning with local economic development. A convenient summary of the ideas that have been worked out is provided in Table 9 at the end of this Chapter. It is emphasized that all these ideas emerge from the consultant case studies and are not necessarily shared fully by the ICMM. They are presented at this stage for discussion in order that they can be progressively refined as a set of possible guidelines for future policies.

## 6.2 Mining and Local Economic Development Companies

The analysis of the case studies and especially the residual problems encountered in even successful cases, suggest that the boundaries of corporate actions in host countries need to be broadened relative to what is currently done in some of the cases. This broadening starts from the proposition recently advanced by Ian Davis of McKinsey and Co, echoing ideas that can be found in a few much earlier company policy statements<sup>50</sup>. He argued that in countries where the rule of law and the provision of basic public services are absent or incomplete, a narrow view of corporate responsibility (such as the “business of business is business”) can be positively unhelpful. A narrow view that keeps the companies focused only on their own business and their formal legal agreements is likely to leave them facing a variety of criticisms (fair and unfair) of the type that are summarized in Chapter 5. Getting ahead of these events with clear corporate arrangements to head them off (and not just mitigate them when they

happen) seems to have both business and political justifications. The October 2005 workshop also broadly endorsed the view that companies need to be more ‘futuristic’ in their approaches to local communities.

From the viewpoint of the risk analysis conducted by the companies, there is a need to extend present practice regarding commercial and political risk to better understand governance risks. This arises because of the gaps in the institutional and governance structures of host countries that the companies may be expected to fill. This extension calls in turn for a clear *ex ante* definition of the implicit social contract under which the company presence in the local economy is admitted, and not just of the formal legal contract that will typically be struck with central/national government. Arriving at this definition of what is expected of the companies is not easy and there can never be blue-prints given the differences in country circumstances. But it will certainly call for a very clear knowledge of the regional, local and community governance structures that operate with any authority (and legitimacy) in the areas of both the direct impact and the wider influence of the mining investment. The capacity of these various levels of government to engage in potential partnerships with the mine will need to be assessed, as will the nature of the communication that can be employed to foster such partnerships. Alliances with parts of government that lack legitimacy may be a source of future problems and as such should be approached with great caution.

Once the capacity (and limitations) of the main local governance organizations is clear, some forward looking arrangements to design and manage the company relationship with each of them is also called for. These arrangements need to articulate clearly the limits of what all parties can and will deliver in any given time frame (how often they will meet, how much they commit to spend on certain objectives, etc). Transparency will then be critical to ensure that the package of agreements is fully communicated to the various stakeholders. The ideal would be a high level of company confidence that anything they agree has the support of the community at large and not just their supposed representatives.

This will necessitate an early stage assessment (with local bodies and intended beneficiaries) of the constraints and opportunities for economic

<sup>50</sup> Examples include Titus Salt and the Cadburys. Sir Ernest Oppenheimer, founder of Anglo, said pre-war “The aim of this group is, and will remain, to make profits for our shareholders, but to do it in such a way as to make a real and lasting contribution to the communities in which we operate.”

‘From the viewpoint of the risk analysis conducted by the companies, there is a need to extend present practice regarding commercial and political risk to better understand governance risks.’

development and diversification in the area in addition to mining. This assessment should be a joint effort, preferably involving other mining companies in the same area as well as the governmental and donor bodies. Where no regional development plans exist, serious discussions should be held about the further institutional reforms that might be necessary to establish these or, where plans do exist but are unsuited to address the challenges created by mining, to improve their relevance and quality. In all cases this will involve dialogue with all levels of government and also with donor agencies.

The October 2005 workshop also added the point that even well-managed mining companies sometimes employ local staffs that are insufficiently tactful and respectful of local needs and clumsy in their approaches.

There is no suggestion that mining companies should actually undertake regional economic planning – but they can take responsibility to lobby for, and later technically support, its introduction or improvement. There is a growing body of experience around the world about how this can be done effectively, and some donors and NGOs have performed effectively in support of well-developed plans. The logic here is that any support – financial and technical – that the mining companies can themselves offer in relation to new development projects will be far more effective if these are embodied in a coherent and broadly accepted strategy. The October 2005 workshop

drew attention to one important example namely, to the effectiveness of Chile’s ‘Executive Cluster’ approach to bringing together different stakeholders to identify partnership arrangements, procurement opportunities etc.

It is also recognized that the suggestions made here have important cost implications and also that these costs will vary depending on specific country situations. There is no intention to propose a ‘one-size fits-all’ approach. Equally it is known that some companies have started to think along similar lines to those set out here – the suggestions, in other words, are not wholly new.

Finally, in this context, the companies should include their established approaches to enhancing local procurement of goods and services – as is done in for example both Chile and Peru. The building of a sustainable domestic supply chain (national, regional and local) will be far more straightforward if this is developed in the context of an overall vision and strategy for local economic and business development.

#### Governments

It is clear from our case studies that governance in some low- and middle-income countries needs ideally to include more reliable and sustained arrangements for the properly sequenced<sup>51</sup> decentralization of fiscal authority to local and regional governments. Decentralization will always be a difficult political issue, but the insights from three of our four case studies suggest that greater decentralization, accompanied crucially by the necessary improvements in local government capacity, would be positive in terms of the enhancement of the impacts of mining projects. The timing and arrangements to build necessary local capacities will need careful identification in any particular country and this report does not presume to define a general guideline about these matters. Governments will need to work closely with donor agencies for technical support in building capacity where none presently exists or where it is weak.

<sup>51</sup> Sequencing is critical since decentralization from top-down without bottom-up political and administrative capacity building can be disastrous. Many decentralization programs have stressed fiscal decentralization at a point in time when central government control was too weak to even monitor the use of earmarked grants sent out to sub-national governments. In such cases fiscal centralization is almost a prerequisite for fiscal decentralization at a later stage. Many specialist transfer funds appear to suffer from exactly the same problem.

Once the broad strategy is defined, it ought to be much easier to define both the desirability and the precise scope and modalities of specialized transfer funds (such as the MDF and the *Canon Minero*) designed in part to compensate local communities for the presence of mining in their areas (i.e. compensation beyond that for which the companies accept the direct responsibility in their formal agreements). In particular the role of such special funds should be clearly specified (e.g. are they really for compensation or also/instead for 'development'). Either way, they will work better if they are regarded as specialized auxiliary sources of funds to top up those funds that decentralization provides to the localities in their own right. The funds and their disbursement mechanisms also need to provide a predictable and reliable revenue stream to regional and local authorities to enable them to function as effective development partners.

In the short term the companies and the government will need to work with whatever structures are already in place when the mining investment occurs. But for the medium and longer term, serious thought should be given to the establishment of 'Local/Regional Development Agencies' to coordinate and help realize the economic and social opportunities, and build longer-term sustainable institutions<sup>52</sup>. This would likely need to work on a far broader geographical and administrative scale than some of the existing planning units in some countries (e.g. regions not districts). Again there are good examples from around the world of how such agencies can interact with mainstream central and local government.

#### Donors

The donors have played an important and unique role in all four case study countries in helping to establish the economic policy and industry regulatory environments that can foster the resurgence of mining. They need to continue to play this role as in the past.

In addition there are other traditional donor roles that can play a key part in enhancing the impacts both economic and social. For example, donors should continue to support public sector capacity building and transparent/robust public expenditure management at all tiers of government. This report

<sup>52</sup> Again there is an important sequencing issue. It is more important to build and strengthen administrative capacity within existing organizations rather than to build new institutions without improving the former.

has argued that the balance needs to be shifted towards greater attention to the regional and local tiers of government. Donors ought to recognize that they can become part of the problem if their insistence on very tight controls on expenditures centrally results in less rather than more decentralization to empower local communities. A longer-term agenda is to build reasonable planning, financial and implementation capacity at local levels, but this does not take away from its importance. In situations where local capacity constraints may initially undermine the potential realization of economic and social opportunities, donors should also be willing to develop new funding and support programs to bring 'rapid-reaction' capacity to bear. This capacity could of course interact with the other ideas already developed to help achieve faster progress at local levels (e.g. technical support to any Local or Regional Development Agency).

The case studies have suggested that effective mining development (with good developmental and social impacts) can emerge from incomplete second-best packages of economic policy and institutional reform: this is not to recommend second-best approaches but merely to observe that they can achieve worth-while gains. Donors are encouraged to try to internalize this idea and assess the consequences for the early stage priorities – especially as regard the reforms of governance – and the matters that can be left until a little later.

### 6.3 Mining, Poverty Reduction and Social Improvement

#### Government and Donors

Here the agenda seem to start more logically with the government and the donors. Both parties are encouraged to take real account of the more obvious linkages between their mainstream poverty reduction agendas targeted at the achievement of the Millennium Development Goals (MDGs) and the agenda, especially for poorer families, in mining regions. Many of the ongoing difficulties in mining areas relate to the difficulties faced by marginalized groups – small-scale farmers in Ghana and Tanzania – once mining extends its scope. Even in the more successful mining areas of Ghana, we still find less successful groups where poverty levels have reduced little if at all. And yet the two agendas of the donor organizations – poverty reduction strategy support and mining sector support – rarely seem to intersect

significantly. Although the anti-poverty strategies invariably refer to 'private sector and SME development' the actions involved seem to have little connection to the specific needs and potential of mining areas. Nor do these strategies relate in any very obvious ways to the type of initiatives for local economic development that are discussed above.

So it would seem eminently sensible for both government and donors to ensure that a strong alignment exists between, on the one hand, mining and economic development initiatives of government (including locally elected government) and donors, and on the other hand poverty alleviation initiatives in general. The availability in the local areas of mining companies, whose corporate social responsibility (CSR) commitments will invariably include budgets for both social and development spending, should make this task easier to carry through effectively. But again it needs a tripartite partnership if it is to get off the ground. NGOs might also be brought into the debate about the precise nature of the poverty problems and the appropriate modalities for solutions – as indeed they are now for the mainstream Poverty Reduction Strategy Papers (PRSP). However, within the NGO community it can be noted that churches and other faith groups are often the most trusted civil society representatives. The latter point has been confirmed by the recent Tanzania accountability study and also by surveys undertaken in Peru.

#### Companies

Companies investing in very poor countries should recognize in all their planning that the alleviation of (local) poverty will be seen as one part of their implicit contract to operate, even if it is not incorporated in the formal legal agreements. Hence they should try to become well acquainted with the specific poverty and social problems of their areas of impact and influence: for example, what is the evolving status of the MDG variables? They should also engage at the highest levels possible in the national and local debates about the improvements that are needed and targeted. Their own CSR spending should treat the effects on the social indicators in their areas as important factors to be regularly monitored and communicated to senior management. Wherever possible the development programs discussed earlier and worked out with local stakeholders should explicitly articulate the MDG type gains that might be realized.

'However, within the NGO community it can be noted that churches and other faith groups are often the most trusted civil society representatives.'

Some companies probably need to be more explicitly aware also of the unintended negative effects of some policies. Perhaps the most important is the possibility of a local version of Dutch disease as incomes for mining and some other workers go up, but prices for other families go up commensurately without these families enjoying the corresponding income gains. This is best addressed in the context of broad-based and company-supported development strategies that can in principle incorporate such factors.

#### 6.4 Social Investment and Compensation Companies

The companies and their regulators need to make it very clear what are the areas of disruption to local communities for which they are formally and legally required to provide compensation. In addition, companies should also seek to identify, through stakeholder consultation, other areas where there may be expectations that companies will 'step in'. Again this is a part of identifying their 'implicit contract to operate'. Even where these expectations are unreasonable, or relate to problems not caused by mining activities, companies are better off by being fore-warned about them. The case studies suggest that even those stakeholder expectations that are unreasonable still need to be carefully understood if operations are not to be adversely affected.

If a productive dialogue with local and regional communities can be established (as suggested above) then there is a greater chance that social investments can be tailored to meet these community needs and expectations, and thus have a greater chance of being regarded as a positive demonstration of company commitment to local

communities. But the companies need to be very clear in that dialogue about the distinction between 'compensation' for any harm done and 'social investment' that is a voluntary contribution to the community's agreed development agenda.

One area for companies to avoid if at all possible is *ad hoc*, opportunistic responses to particular complaints to try to 'buy-off' the objections. This can be avoided by a clear and up-front participation in local strategy formulation where there is trust built between sides. But this comment would not rule out one-off programmatic investments with a high rate of social return (e.g. malaria control, AIDS prevention or education programs, etc.) that are not associated with complaints against the company. It is in any case to be expected that such issues would arise naturally in any process of jointly defining local strategy and priorities.

#### Governments

Governments both local and national need to remain very aware of, if not directly involved in any social investments undertaken by the mining companies. Above all, government agencies have to be the 'nagging voice' that points out the ongoing recurrent costs of such facilities and forces all parties to define the long-term sustainability strategies for the services once the mining operations have closed. This is likely to be done better if local governments have true empowerment as well as some realistic budget of their own that they can insert into the provision of the services alongside the contributions of companies. For each service the financing and other roles of all parties need to be clearly spelled out as do the arrangements for long-term sustainability.

The government parties also need to be active at the local and regional level to help establish or facilitate coherent planning and policy implementation. This must allow balanced partnership between companies, local government agencies and community organizations including NGOs. It could also include the introduction of 'high-capacity' short-term interventions to strengthen the work of Local Development Agencies (as suggested earlier).

#### Donors

Donors could be important partners in this part of the agenda both in supporting the definition of the

'Donors could be important partners in this part of the agenda both in supporting the definition of the priority social needs and in providing supporting finance to some of them'

priority social needs and in providing supporting finance to some of them – consistent with broader national priorities for health. For example, donors are often well placed to provide a broad overview of needs and priorities and to help in the development of national master plans for the improvement of provision in a particular sector such as primary health care. Both local governments and companies providing social investment need at the very least to be aware of these overviews and priorities.

### 6.5 Dispute Resolution and Transparent Communication

#### Companies

The logic of the preceding paragraphs is that mining companies can expect a significant pay-off (in both a business sense and a political sense) from organizing their engagement with local communities as a core component of the management strategies of significant operations (as opposed to a peripheral activity or public relations add-on). The large up-front investment in identifying the potential government and community partners and mapping out the likely social and other issues of significance in the mining area, can be seen as an investment with a future pay-off in terms of far lower social and other conflict with those communities.

Even with good practice in the areas already discussed however, conflicts will inevitably arise and will need to be addressed. When they do the

following suggestions are relevant:

- Make available and publicize ways in which communities can express concerns to mining companies, and make these confidential if necessary,
- Integrate credible dispute resolution mechanisms from the early stage of development of the mine's development and start-up,
- Link dispute resolution to local trusted and legitimate institutions (where possible) to enhance credibility. Do not rely exclusively on national institutions especially where the governance gaps are significant or where national institutions command limited respect,
- Structure all communication arrangements to support the broadest possible base of participatory development, with frequent face to face discussions and a broad stakeholder base, and
- Engage in open and regular dialogue to communicate a balanced perspective on the contribution of mining to economic and social development (e.g. with government, donors, and communities).

#### Governments and Donors

The national government has the ultimate responsibility for ensuring that disputes, when they arise, are handled with due process. Government can help in this by adopting international best practices where they exist (for example, World Bank guidance on resettlement of communities), and for disseminating relevant information to all affected parties in a structured manner. If local and regional governments are truly involved as respected partners in the routine dialogue between the various stakeholders, they also have a responsibility for confirming all the agreements that were entered in to by those processes.

#### Donors

The donors probably have a smaller role here but can use their good offices to bolster the actions of government as just listed. Above all they should help to ensure that there is 'space' to identify, document and resolve disputes within legitimate political institutions. Donors also have a role in developing capacity in dispute prevention and resolution techniques, for example through the preparation of guidance documents and provision of training.

## 6.6 Artisanal and Small-Scale Mining (ASM)

### Government and Donors

This is one of the most difficult and contentious issues encountered in two of the case studies – Tanzania and Ghana. But solutions need to be sought if the broader sentiments about mining's performance are not to be coloured as negatively as now by this issue in these and similar countries.

The main responsibility must lie with governments. In particular they need to be proactive in providing effective institutional and policy frameworks for managing ASM and migrant workforces, in support of poverty alleviation. The objective should be to draw as much as possible of ASM into a legal framework that provides reasonable regulatory standards (e.g. for health and safety) while recognizing the powerful motivation that drives many thousands of young men and women to seek income through this route. This suggests a variety of creative mechanisms (e.g. small scale mining companies/cooperatives) and work with private sector to realize opportunities.

Donors can and should help by advising governments about possible alternative arrangements to best integrate artisanal and small scale mining activities into more formal systems and into national and regional development plans.

### Companies

Companies need to play a supporting role in order both to do what they can to ameliorate the situation faced by ASM and also to limit the negative impacts that ASM can have on their own reputations and also operations. In particular, they should seek to work cooperatively with artisanal and small scale miners in tandem with government initiatives. At the stage of starting a new investment, the companies need to be fully aware of the basis on which they are provided with a 'clean title' to land in their operating license and understand that this could be contentious to some previous incumbents of the land – including artisanal miners. Diplomatic handling of the disputed issues at this stage can avoid the far more damaging legal squabbles later on. Once mining is underway they might consider fostering growth of organized small-scale mining companies/cooperatives to work on more marginal (for large-scale companies) deposits, and provide capacity and technology support as well as seed funding as a part of their overall contribution to local economic development.

### 6.7 Moving Towards Implementation

The October 2005 workshop was extremely helpful in identifying some of the elements that might be needed to move these ideas closer to practical implementation. It was argued that much of what is proposed is already being put into action by the relevant stakeholders at least in some country cases. Hence the issue is not to start afresh but to re-inforce and communicate good practice more widely across countries and companies.

There was a broad agreement that the process needs to be articulated on at least three levels, namely: International (with organizations such as ICMM and the World Bank playing key leadership roles); the National level (with closer cooperation between chambers of mines and organizations such as social development funds); and at the regional/district level. International organizations such as the World Bank need to examine their own abilities to integrate their own different activities more effectively (for example, a stronger link between their mining sector and the broader policies to achieve the MDGs), and to build stronger capacity to facilitate the recommendations that they themselves make to governments and companies. The mining companies need to examine their own abilities to work with relevant communities on the ground, with particular attention to how different companies in the same country might act together more effectively to achieve sound community outcomes. The national and local level actions need to be linked more explicitly to other non-mining sectors so as to strengthen supply chains and help to enhance both the local infrastructure benefits of mining and the levels of entrepreneurial activity. Finally, it was argued that there is a much larger potential role for improved education and communication (about the effects of mining, attitudes towards it etc), so as to achieve greater buy-in from more affected parties.

### 6.8 Summary of Recommendations

A summary of the recommendations presented above is given in Table 9.

‘The mining companies need to examine their own abilities to work with relevant communities on the ground, with particular attention to how different companies in the same country might act together more effectively to achieve sound community outcomes.’



**Table 9: Summary of Recommendations to Enhance the Impacts of Mining**

Companies	(Host) Government	Donors/Development Organizations/ Voluntary Sector
<b>C1 Mining and economic development</b>	<b>G1 Mining and economic development</b>	<b>D1 Mining and economic development</b>
<ul style="list-style-type: none"> <li>• Support the Extractive Industries Transparency Initiative (EITI).</li> <li>• Extend conventional risk analyses to take account of (and support where practical) capacity weaknesses at different levels of government for economic development planning and management.</li> <li>• Assess constraints and opportunities for economic development and diversification at an early stage, and incorporate business development initiatives, including reinforcing the management and technical skills of potential suppliers and other businesses into feasibility studies</li> <li>• Focus procurement on building a sustainable domestic supply chain (national, regional and local). Consider introducing policies of active prioritization of local, regional and national companies.</li> <li>• For economies with a broad base of mining activity, engage in collective action with other mining companies to support the growth of sustainable enterprises to meet critical demands of the sector.</li> <li>• Link mining infrastructure development to regional development plans to support longer-term economic diversification.</li> </ul>	<ul style="list-style-type: none"> <li>• Adopt the EITI.</li> <li>• Define policy for whether redistribution of mining revenues to host areas should take place and on what basis (e.g. compensation or development). If yes, ensure that disbursement mechanisms provide a predictable revenue stream to regional and local authorities to enable them to function as effective development partners.</li> <li>• Support participatory planning to identify opportunities for economic diversification – if this is not possible, identify contingencies for mine closure.</li> <li>• Adopt a participatory approach to regional development planning (including private sector), and ensure that infrastructure provision is balanced by human resources development.</li> <li>• Specify inputs, impacts and expected outcomes for sub-national spending of mining revenues, and clearly allocate responsibilities.</li> <li>• Consider the establishment of Local/Regional Development Agency for specified time period (5-10 years) to maximize realization of economic and social opportunities, and build longer-term sustainable institutions by end of tenure.</li> </ul>	<ul style="list-style-type: none"> <li>• Explicitly recognize that mining has the potential to ‘jump start’ private sector commercial investment in states undergoing economic re-structuring (and where economic infrastructure may be limited).</li> <li>• Help implement sound investment climate and good macro and micro policies to maximize contribution of mining to economic development.</li> <li>• Support public sector capacity building and transparent/robust public expenditures management at all tiers of government. [Note: with possible ‘mortgaging’ of future mining revenues in support of effective expenditure management.]</li> <li>• For situations where local capacity constraints may undermine the potential realization of economic and social opportunities, develop innovative funding and support programs to bring ‘rapid-reaction’ capacity expertise to bear (e.g. pool of expertise to act as Local/Regional Development Agency).</li> </ul>
<b>C2 Mining and Poverty Reduction</b>	<b>G2 Mining and Poverty Reduction</b>	<b>D2 Mining and Poverty Reduction</b>
<ul style="list-style-type: none"> <li>• Implement sustainable development principles with explicit focus on poverty reduction potential.</li> <li>• Participate in national development dialogues (e.g. PRSPs) to identify opportunities for mining to contribute to poverty reduction.</li> <li>• Engage in capacity building around achievement of specific MDGs.</li> </ul>	<ul style="list-style-type: none"> <li>• Explicitly recognize the mining sector’s potential contribution to poverty-reduction, and integrate into planning, monitoring and implementing poverty reduction efforts.</li> <li>• Link sector policy to strategic planning and resource allocation mechanisms, e.g. PRSP, HIPC, Country Assistance Strategy (CAS)</li> <li>• Ensure strong alignment exists between the mining and economic development initiatives of government, and its poverty alleviation initiatives.</li> </ul>	<ul style="list-style-type: none"> <li>• Address sustainable development implications of mining within collaborative policy decision-making processes and initiatives, such as PRSP, HIPC, CAS, etc.</li> <li>• Engage at various levels of government to ensure that opportunities provided by ‘predictable’ mining revenues are linked to MDG attainment.</li> <li>• Ensure NGOs are involved in building and delivering social investment capacity.</li> </ul>

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Table 9: Summary of Recommendations to Enhance the Impacts of Mining *continued*

Companies	(Host) Government	Donors/Development Organizations/ Voluntary Sector
<b>C3 Social Investment and Compensation</b>	<b>G3 Social Investment and Compensation</b>	<b>D3 Social Investment and Compensation</b>
<ul style="list-style-type: none"> <li>Engage in participatory processes to identify negative local 'impacts' and avoid, mitigate or compensate. Make clear distinction between impacts and social investment.</li> <li>Engage in participatory processes to identify social investment needs or priorities – and partner for sustainability.</li> <li>Assess existing infrastructure and delivery mechanisms/organizations as basis for determining more sustainable social investment opportunities.</li> <li>Avoid short term opportunistic 'investments' (e.g. to 'buy-off' local objections) which can undermine medium term development outcomes. However, do not rule out 'one-off' or programmatic investments with a high rate of social return (e.g. malaria control, AIDS prevention or education programs, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Clearly define policy on expectations of companies with respect to compensation and facilitate partnership approaches for social investment.</li> <li>Build capacity at the local and regional level for coherent planning and policy implementation to allow balanced partnership between companies, local government agencies and community organizations (e.g. including introducing 'high-capacity' short term interventions such as Local Development Agencies (see G1 above).</li> <li>Plan for longer-term sustainability of company or NGO supported social infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>Engage in participatory processes to identify social investment needs and priorities.</li> <li>Partner on community-focussed social investment initiatives (NGOs) and engage as honest broker where necessary (donors) in support of effective partnerships.</li> <li>Provide loans (guaranteed against the subsequent flow of mining revenue) to support rational development of social infrastructure.</li> </ul>
<b>C4 Dispute Resolution and Communication</b>	<b>G4 Dispute Resolution and Communication</b>	<b>D4 Dispute Resolution and Communication</b>
<ul style="list-style-type: none"> <li>Integrate credible dispute resolution mechanisms from the early stage of development.</li> <li>Link dispute resolution to local trusted institutions (where possible) to enhance credibility.</li> <li>Structure communication to support participatory development, with a broad stakeholder base.</li> <li>Engage in open dialogue to communicate a balanced perspective on the contribution of mining to economic and social development (e.g. with government, donors, and communities).</li> </ul>	<ul style="list-style-type: none"> <li>Assume leadership in resolving conflicts related to mining and create mechanism to resolve disputes within legitimate political institutions.</li> <li>Avoid short-term 'fixes' that undermine longer term planning for economic development and poverty alleviation.</li> <li>Adopt international best practice for resettlement (e.g. World Bank guidance, particularly where governments 'clear' sites for companies).</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that there is 'space' to identify, document and resolve disputes within legitimate political institutions.</li> <li>Support all parties to achieve a balance between the rights of affected groups and individuals (accounting for vulnerabilities) with the broader potential for economic development and poverty alleviation.</li> </ul>
<b>C5 Artisanal and small scale mining (ASM)</b>	<b>G5 Artisanal and small scale mining</b>	<b>D5 Artisanal and small scale mining</b>
<ul style="list-style-type: none"> <li>Work cooperatively with artisanal and small scale miners in tandem with government initiatives. Consider fostering growth of organized small-scale mining companies/cooperatives to work on more marginal (for large-scale companies) deposits, with capacity/technology support and seed funding.</li> </ul>	<ul style="list-style-type: none"> <li>Be proactive in providing effective institutional and policy frameworks for managing ASM and migrant workforce, in support of poverty alleviation. Use creative mechanisms (e.g. small scale mining companies/cooperatives) and work with private sector to realize opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>Help government integrate artisanal and small scale mining activities into national and regional development plans. Advise governments on how best to formalize ASM activities.</li> </ul>

# Main Conclusions

7

# 7. Main Conclusions

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## 7.1 Introduction

This report has synthesized the results of four country case studies designed to throw light on the nature of the economic and social impacts of mining in developing countries. The four countries were explicitly chosen (in Phase 1 of the initiative) as being amongst the more successful of the 33 identified mining-dependent economies in the period from 1980-2002. The assessment that led to the choice of these countries was based on a mix of growth indicators (GDP and non-mineral GDP) as well as social and poverty indicators. The October workshop recognized the need to re-inforce the results achieved to date by undertaking a small number of further strategically chosen cases.

All four countries had earlier – pre-1980 – histories of serious macroeconomic mismanagement combined with obvious deficiencies of governance. The co-existence in the case study countries of improving macroeconomic and structural policies with still weak governance is an important part of the story of this report. Indeed it is the sort of combination with which mining companies considering new overseas investments frequently need to contend. The four case studies provide ample evidence of the difficulties to which this can give rise.

Since all four case study countries were relatively successful when compared with fellow mining countries in that same period, the purpose of the studies was not to prove that mining can make a successful contribution to economic and social development. Rather the purpose was to try to understand better the nature and components of 'success', the key elements in helping to bring it about, and the steps needed to enhance success further. This understanding in turn was expected to throw light on the appropriate policies for governments, companies and donors to adopt in other countries in order to enhance the prospects of successful socio-economic outcomes. By contrast with many studies of the 'resource curse', the aim was also to take a broad social and economic view of 'success' and not assess this narrowly against the objective of GDP growth.

## 7.2 Context to Conclusions

**Growth: Mining can, under the right conditions, support growth recoveries**

Even though this was not a purpose of this project, the four case studies certainly suggest that when mining companies encounter favourable conditions for renewed investment and growth (to tap the undoubted mining potential of the host countries) their activities can indeed support improved GDP growth – and at the very least not hold it back. It is difficult to establish a strong causal link from mining activity to growth of incomes, not least because mining is typically a relatively smaller part of GDP (5-8%) than it is of exports and foreign direct investment. However, in the years of economic malaise in the four countries, there is no evidence that their poor macroeconomic performance could be attributed primarily to the presence of mining. Equally, when mining investments enjoyed a resurgence after systematic economic reform programs, there is no evidence that the resurgence of mining undermined the general economic recoveries that all four countries achieved. On the contrary, mining investments in all cases were amongst the early new productive investments that triggered growth.

Why would some of the 'resource curse' literature show different results? The obvious answer is that the present study merely examines four 'success' cases and there are certainly mining countries that have failed to achieve similar successes: the dividing line between success and failure for erstwhile failing economies is clearly a very narrow one. But another very important point is that the resurgence of mining and the associated improvements in growth came at different dates in the four countries: from 1986 in Ghana to the late 1990s in the case of Tanzania. Most of the econometric studies of the 'resource curse' problem enforce a common time period on all the countries studied – typically around 20 years. Such an approach will almost inevitably miss some of the differentiation in the timing of policy changes and outcomes in different country cases.

**Poverty and Social Welfare: Benefits from mining, but with some ambiguities**

The four case studies also provide evidence that the income gains (partly associated with a resurgence of mining activity) can certainly contribute to improvements in poverty levels and to social welfare more generally. This effect comes from both the direct local spend of the companies

‘deep improvements in governance are achieved in an evolutionary manner over longer periods of time with new gains often emerging in response to certain things initially going wrong.’

and also the indirect effects of that spend both locally and nationally. This conclusion emerged clearly from both the Ghana and the Chile cases, where the improved growth record has been of longer duration than in the other two cases and where the poverty improvements have been statistically more substantial. In the Chile case the employment generation that complemented that from mining played a key role in this impressive improvement: redistributive policies were less crucial. The time periods since the resurgence of mining are too short to reach similarly strong conclusions for Tanzania and Peru. In both these cases there are genuine doubts about the poverty and social gains that may eventually be realized. In these and also in the Ghana case there is also a major counter-factual question. Specifically, how much better could the social outcomes have been given somewhat different policies, practices and institutions? In all cases the growth gains narrowly associated with mining are assessed in the range of 0.3 to 0.5% extra per annum: good, but could they have been better?

In the Ghana and the Chile cases, the poverty and related social indicators have become significantly stronger on average in mining-dependent parts of the country than in most of the rest of those economies. But this does not preclude the fact that some segments of society in mining regions are gaining relatively little, or maybe even losing, because of the presence of the mining activity – some agriculturalists in Ghana for example. The four studies all show that there are some

strong direct income generating benefits for some local people. However, the indirect effects that could extend the benefits to the communities generally are not guaranteed. The mechanisms of trickle-down that can enable mining activities to contribute to general poverty reduction and help redress income inequalities do not arise automatically and inevitably – they need help from the policies of both the companies and the governments.

### 7.3 Issues and Main Conclusions

*The Drivers of Success: A three part package*

In three of the four cases – Ghana, Tanzania and Peru – a fundamental reform of mineral legislation has been the first key ingredient of the successful resurgence of mining and has also been a close (in time) sequel to the launch of systematic policies of macroeconomic stabilization and structural adjustment. The more investor-friendly mineral legislation represents the first part of the success package and the macroeconomic stabilizing reforms represent the second. In the case of Chile the gap in time between these two components was considerable – from around 1975 until after the 1982 macroeconomic crisis. The major new investments in mining were also delayed until the mid- or late-1980s – Escondida being a major example – suggesting that favourable legislation alone is not sufficient if the macroeconomic as well as the political situation remains seriously unstable.

How strong do the improvements in these two areas need to be? Critics of mining argue that the mining legislation has increasingly been slanted in favour of international mining companies and against the interests of the countries. The impression is sometimes given that the fiscal benefits of mining in particular are far too small. This proposition may have some substance in the case of the arguably very favourable tax regime in Chile where tax revenues so far have been low but will increase substantially in the future as companies recover their investment and exhaust depreciation possibilities. However all four countries need to be aware of the competitive difficulties of attracting FDI into difficult operating environments and of the part that is played in this by a ‘competitive’ tax regime. In this context it is particularly significant that in the two poorest countries in this study – Tanzania and Ghana – the objective assessment from investors is that these countries’ tax regimes represent a significant

deterrent to investment relative to the similar regimes of countries that compete for the same investments (see Figure 4). It would seem that the setting of the right legislative framework – including the tax regime – is a matter of balance with these two poorer countries achieving their ‘success’ with arrangements that are not perceived to be as attractive as they might be!

A similar proposition emerges about the quality and completeness of the macroeconomic reforms that have helped achieve the economic turnaround in all four economies. There is great variability across the four in terms of the inflation stability achieved, the size and stability of fiscal deficits, and the quality of monetary policy management over time. But all four countries have done enough to persuade external monitors – such as the IMF – and investors that they are genuinely committed to a reasonable standard of economic stability and will work hard to avoid regression into the chronic instabilities of earlier years. This commitment has been evidenced most obviously by the avoidance of the seriously over-valued exchange rates of the past. Major swings in prices since reforms began have been matched in most cases by appropriate nominal devaluations. The four countries have also sustained reasonably reliable commercial regimes that give investors confidence that payments and receipts in foreign currency – a key factor in commercial mining – will not be associated with unreasonably high risks.

The third element in the success package is governance. Significantly, and relative to the international benchmarks of ‘good governance’, the four countries seem to have needed only quite modest gains relative to their previous situations in order to trigger their mining recoveries. Only in the case of Chile can one say that there is a consistently good score across all six (World Bank) indicators of governance (as of 2004) and such a score was not present in the 1980s when the mining revival in Chile began. More generally ‘good governance’ in all of its dimensions has not been a necessary precondition for such revivals. However, some components of improved governance such as the establishment of stronger and more effective executive power have been present in all cases – and also necessary in order to achieve the gains in policy performance referred to above. Beyond that there appear to be significant trade-offs between the different dimensions of governance: for example, more executive power possibly meaning

an initial decline in voice and the accountability of the authorities in some cases.

Another important conclusion is that deep improvements in governance are achieved in an evolutionary manner over longer periods of time with new gains often emerging in response to certain things initially going wrong. The dynamic is probably one in which economic success based on modest initial improvements can help to foster the constituencies for deeper gains as time goes by. But the transition is not guaranteed to be free of dissent and dispute.

#### Company Policies: A key role but with great variability

The four studies looked in depth at the manner in which the international mining companies play their part in the local economies. This revealed both the substantial contribution of the companies to the overall successes of their host countries, but also the wide variability of approaches and outcomes across the four cases.

Differences in direct employment are largely a function of different types of mining activity and also the vintages of equipment currently in use. Although mining in all cases is highly capital intensive, the contribution of all four mines to local employment in absolute terms is significant and economically important. Variations in indirect levels of employment are of greater significance and reflect mainly the different local procurement arrangements of the different mines. In Ghana the relatively limited local procurement is notable, despite a long history of mining. In Chile, the higher level of domestic procurement is indicative of a more highly developed mining supply sector, which is consistent with the central – and long-established – role of mining in the Chilean economy. The similarly high levels of domestic procurement in Peru evidence the same and also confirm – as in the case of Chile – that pro-active company procurement policies can have an important impact.

In addition to their direct contributions to output and employment (as well as government revenues and exports), all four target mines have also adopted a range of corporate policies relating to social investment and have supported a diverse range of related investments in social and economic infrastructure. Significantly, these policies and practices involve varying degrees of

'structure' and partnering arrangements with local communities. As well as having different strengths, these varying approaches also involve different challenges in different contexts. For example, the long-established AngloGold Ashanti mine in Ghana faces a major challenge in making the transition from being an expected major provider of local social infrastructure and services to more modern approaches involving significant partnering with government and other organizations on a more sustainable basis. In Peru, the much newer Antamina mine faces the different challenge of finding effective development partners – faced with local government arrangements that make it hard to fix agreed corporate-community commitments. The general message is that companies need a high degree of flexibility to accommodate to different structures and institutional arrangements in different places.

The record on support to local economic development and economic diversification – including the long-term sustainability of mining communities when mines close – is somewhat disappointing. Both the mining companies and the authorities in host countries still have some way to go in developing effective ways to address this. The case studies reveal much investment in interesting individual projects but little evidence of consistent planning by mining firms and other stakeholders (including local and national governments) to consider a future for local economies after mining. This is an area above all where improvements could be made and corporate involvements could be more strategic: a point that was broadly endorsed by the London workshop in October 2005.

#### The contentious issues and unresolved weaknesses of governance

The closer examination of the key components of governance (Chapter 5) provides a number of insights about how mining generates its benefits for host economies. But it also shows how these benefits can be improved and how the more contentious issues relating to large-scale mining can prospectively be understood and addressed better.

The central point is that many of the institutions and structures of developing economies are weak or incomplete. In two of the four cases – Ghana in the 1970s and Peru the 1980s – those weaknesses were initially extreme. The countries were close to being 'failed states' before their reforms began.

'The particular and unusual slant that the case studies have taken on the question of mineral resources and socio-economic development help to suggest a number of changes of policy and approach for all major categories of stakeholder – companies, governments and donors.'

When reform begins in such countries, there are few available choices about the types of investment that can be attracted to support the early-stage recovery of living standards. Most new private investments – and certainly those from abroad – will call for a depth in the policy and institutional reforms that are likely to exceed the capacities of the reform teams. If valuable mineral resources are available, new mining investments can and do provide a potential early-stage means to enhance productive activity and produce higher incomes. The minimum package of reforms – of legislation, economic policy and governance – and the new infrastructure necessary to attract mining investments are important but are not prohibitively difficult for thin administrations to achieve. Together with policies that offer improved profitability to established activities (e.g. cocoa in Ghana) such investments can provide quick economic and welfare gains upon which a reforming government can build.

The problem is that at the initial recovery stage, the economy of such countries still remains weak both institutionally and in terms of its supporting

systems of governance and infrastructure (Ghana in the late 1980s and Peru and Tanzania in the mid-1990s). Longer-term economic success will depend on the initial gains in income, stability etc being used to help catalyze broader-based developments including some that will call for much deeper improvements in governance and the institutions that underpin successful economic performance. If and when these are achieved, many of the mainstream criticisms of mining's role in low-income countries can be addressed better: e.g. by stronger, more democratically-responsive local authorities in the affected areas and also by more diversity in investment and the creation of wider economic opportunities. But if the situation becomes frozen in the early stages of recovery then either the whole recovery itself will be reversed, or the criticisms of mining's role will continue.

The four 'success' cases demonstrate a wide spectrum of experience in this regard. All four countries have achieved the initial gains in incomes to which significant new mining investments have made an important contribution (typically around 0.3-0.5% of extra growth each year). However, Chile is the only one of the four that seems to have moved on from the initial economic recovery to largely complete the governance and institutional reforms started in the 1970s. Ghana has also moved on from that stage. But although it has not experienced serious Dutch disease problems, it has not had anything like the same success as Chile in diversifying its economy and deepening the early-stage reforms of governance. Peru has encountered great difficulties in deepening its governance reforms. In Tanzania, with a stronger starting point of governance in some respects, there has been insufficient time since reform began to assess whether this deepening process can and will be achieved.

The analysis in the separate case studies provides insights into the weaknesses that still persist in each case and how these weaknesses relate to the highly-publicized criticisms of mining in each country. There is no single 'governance' solution that can put all this right (and responsible corporate behaviour is also obviously important in this respect). Externally imposed conditionality would be almost impossible to define given the complexity of most of the situations and, in any case would be unlikely to work given the variety of

conflicting interests that impact most of the contentious issues. However, in most cases the broad direction, if not the detail, of further reform is reasonably clear.

By their very nature, mining investments are extremely local in nature. But the minimal governance improvements needed to justify these investments commercially are likely to be implemented at the national level. This was certainly the case in all four case study countries. So countries such as Peru and Ghana with reasonable economic policies may be able to operate for extended periods with major gaps in their governance capabilities that may compromise the local if not the national benefits of such investments. It would seem to follow that the necessary deepening of governance reforms must involve the strengthening of technical capacity, including the human capital that is part of this, and the greater empowerment of local governments in general, but particularly in geographical areas when major new investments such as mining are likely to occur. However, decentralization in the context of already weak government authority may make things even more complicated, and so it would be wrong to advocate a standard solution for all country cases. After all, Chile seems to have emerged as the most successful of the four cases without any very explicit redistributive procedure favouring particular local areas.

It can be noted that similar problems would need to be faced if low-income countries were attracting major car assembly or chemical plants as their initial, post-reform, investments. But of course this does not happen – mining has special features, as mentioned above, and it is this that puts it in the spotlight of attention in such countries!

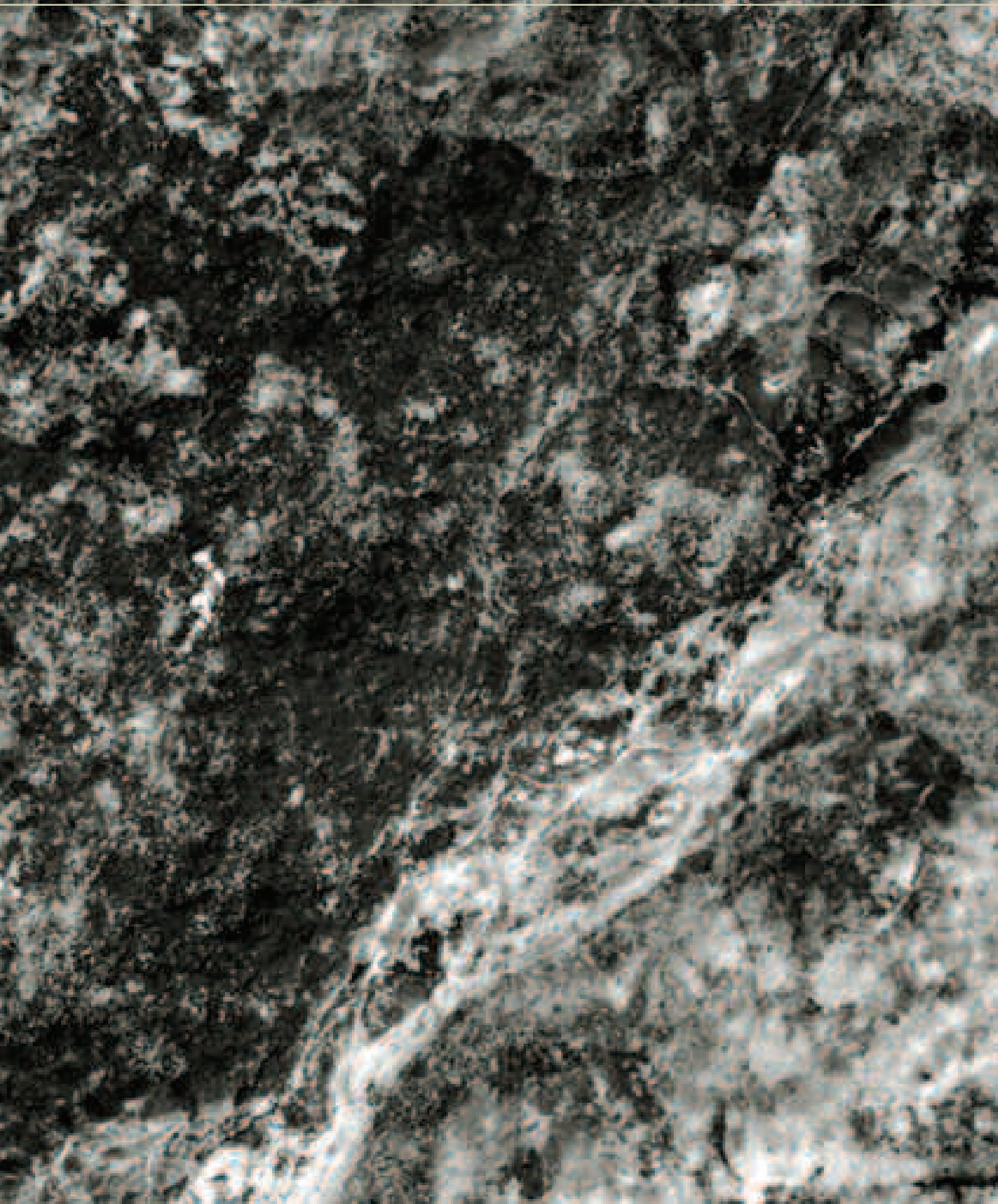
#### The policy agenda for companies, governments and donors

The particular and unusual slant that the case studies have taken on the question of mineral resources and socio-economic development help to suggest a number of changes of policy and approach for all major categories of stakeholder – companies, governments and donors. These are spelled out in detail in the matrix of Table 9. They also formed the main focus of the stakeholder discussions that were held in London in October 2005. A separate Summary Note of Proceedings captures the main points that were made during that event.



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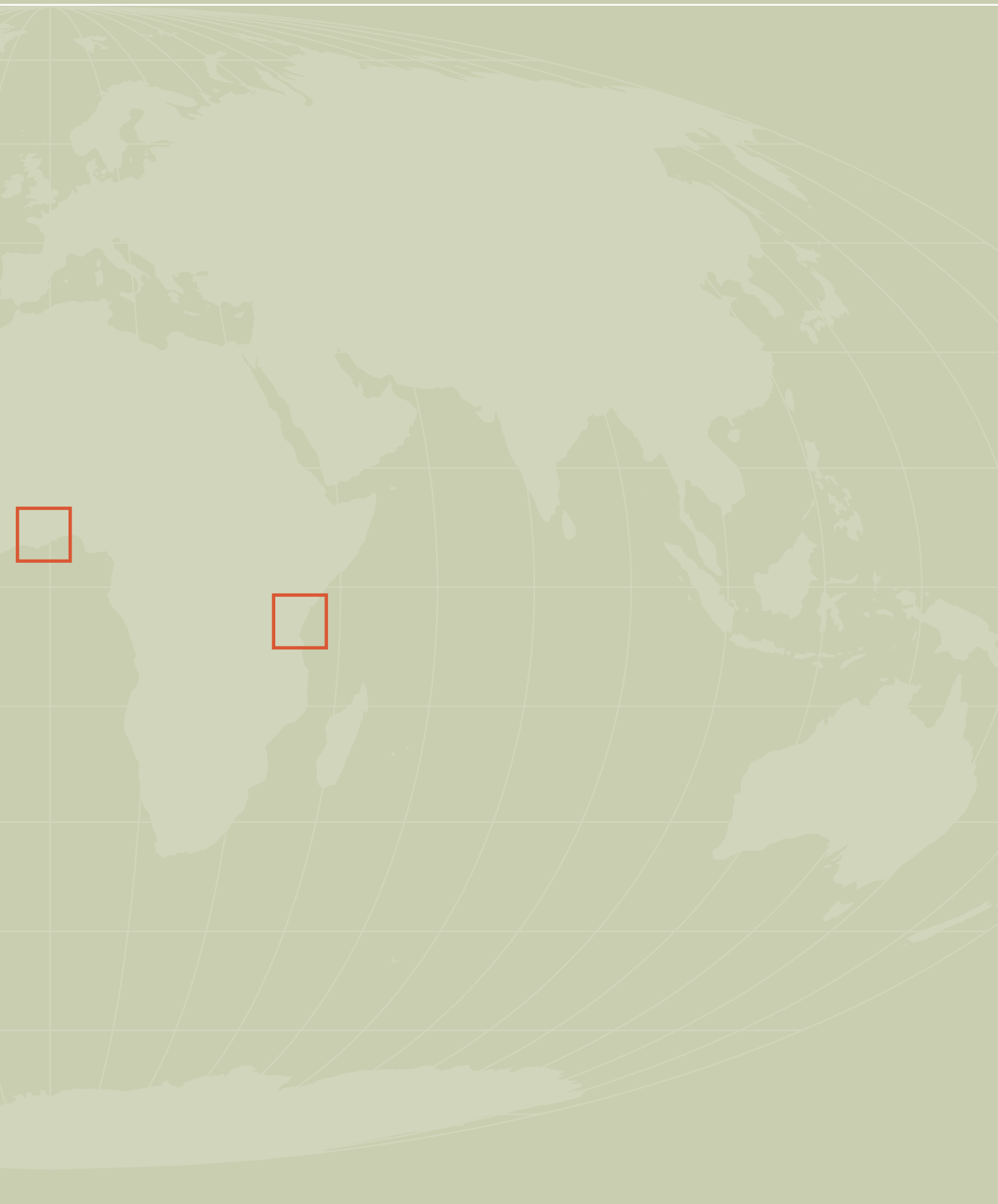
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