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MINISTRY OF ENERGY AND MINERALS**

**SUSTAINABLE MANAGEMENT OF MINERAL
RESOURCES PROJECT (SMMRP)**

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Prepared by



Oxford Policy Management

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(ESRF) AND MTL Consulting Company Ltd**

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The aim of this study is to provide a baseline of economic and social data to measure the benefits from mining in four locations in Tanzania. We hope that by presenting a rigorous quantification of the benefits and impacts of mining the level of debate and quality of policy prescriptions can be dramatically improved. Angus Maddison from the University of Groningen, who sadly died on 24 April 2010, said that the essence of quantifying issues is that it makes the facts behind debates “more readily contestable and likely to be contested”. In recent years, a wealth of information has been produced on the positive and negative impacts of mining in Tanzania. Drawing on Angus Maddison’s advice we hope that in providing these quantitative and qualitative findings, and recommendations, other scholars and critics will be inspired to provide their own to this important debate.

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Executive summary

Mining's already dominant contribution to Tanzania's economy is set to increase in coming years. However, the strong national-level performance must not obscure the fact that, at a local level, the picture is far less positive. Many communities feel the arrival of large-scale mining has, on balance, brought more challenges than benefits. When mining revenues start to flow significantly in the next few years, the effects will become even more intense. This report calls for an integrated, multi-level response and sets out some of the milestones towards achieving this.

Tanzania is one of Africa's most mineral-rich countries and has experienced a boom over the last decade, with mining doubling its contribution to the country's high economic growth rates since 1998. One of the most hotly debated elements of the mineral sector – in an often polarised debate – is the level of taxation of large companies. Yet the overall tax-take from mining almost never arose in discussions with communities undertaken as part of this study. Instead, the subject that figured in almost all discussions was the availability of jobs or lack thereof. This discrepancy between the policy debate and the reality on the ground is symptomatic of the challenge facing the country's mineral sector. The missing element has been a clear and objective appraisal of mining's impacts, based on both quantitative and qualitative evidence.

This study aims to provide this substantive evidence by analysing the social and economic benefits from mining in selected regions, together with the perceptions of local communities regarding these benefits. Four large mines (three gold, one diamond) were chosen by the government to participate in the study.¹ In each case, we found that while the mines have, for the most part, made commendable efforts to act responsibly, the impacts of their efforts have been limited at best. While there is more the companies could be doing, the real challenges lie in the realm of institutional capacity and the country's governance framework.

Politically, Tanzania is a relatively stable country with a strong democratic tradition. One political party has governed the country since independence and, although recently the balance of power may have been shifting, there is currently limited domestic pressure for reform or improvements in governance. This has implications for the degree to which the economic and social benefits of mining can be enhanced.

Implicit in this comment is the fact that the way the mineral sector is governed is currently ineffective. Unlike other economic sectors, mining remains strongly controlled from the centre. However, because mining's impacts are most significant at a very local level, a centralised bureaucracy is not 'fit for purpose'. It also makes it difficult for mining to integrate with the rest of the economy, thus limiting the degree of employment and business created as a result of mining.

A common theme of the report is the lack of skills and resources at local levels of government. Combined with under-representation and historical policy inconsistency from central government, it has been difficult for companies to know how and where to align with local government with regard to development efforts. Companies have found themselves operating in a vacuum in the areas of health, education and infrastructure services. In the continuing absence of government capacity, communities have come to depend on the mines for these services, further undermining local government's ability and credibility.

¹ Geita Gold Mine, Mwadui diamond mine, Bulyanhulu and Buzwagi gold mines.

Meanwhile, management of revenues in general, and mineral revenues in particular, is problematic in the country for a number of reasons. For example, the Presidency – along with appointed regional and district commissioners – exercises considerable influence over funding, creating further ambiguity over where and how mining companies might best deploy their available social and economic development budgets. There have, however, been some improvements away from the highly discretionary nature of budget allocations and the associated personal power relations this entails, but there remains limited local authority to manage budgets effectively.

Applying the World Bank's governance indicators to Tanzania shows there have been improvements in the areas of 'Control of Corruption', 'Voice and Accountability', 'Political Stability' and 'Government Effectiveness' but deterioration in the areas of 'Rule of Law' and 'Regulatory Quality'. However, in several of these indicators the country started from a low base – in particular 'Control of Corruption' – and so the country is mid-ranking overall for its governance in relation to other African countries. The recent Tanzania Extractive Industries Transparency Initiative (TEITI) report initially found significant discrepancies between the amounts of tax paid by companies and the amount of revenues received by the government, underlining the urgent need for strong governance in the sector and ongoing issues of corruption. Revenues will come to be the largest and most visible contribution from mining in coming years. Missing out on even a small part of this critical benefit stream will be a huge loss for Tanzania.

The TEITI audit report published in February 2011 found that the combined tax payments from the entire mineral sector were around US\$ 100 million. This sum can be usefully contrasted with the US\$ 123 million procurement expenditure from just two of the mines examined in this study or the US\$ 75 million of wages paid by the four mines in 2009. The comparison highlights the fact that, while tax payments are an important economic benefit from mines, their role as purchasers of goods and services (including labour) is potentially even greater. None of the community respondents commented on the levels of tax being paid nationally but instead there was a sense of frustration regarding the lack of benefits arising from a local government levy (LGL) of US\$ 200,000 that is paid directly to local governments. Such findings highlight the gap between national policy and priorities and perceived benefits at a local level.

Turning to some of the local-level issues, the report finds that, for each of the mines, an overall majority of community respondents have negative perceptions of the benefits from mining, with respect to most of the benefit streams covered. However, it should be noted this finding was not across the board. There were huge variations in perceptions across the villages surveyed, due to the varying economic, social and geographic characteristics of these communities, and depending on age and gender.

Employment is the critical issue for local communities in Tanzania's mining regions. Modern mining's contribution to overall employment is relatively limited, with the total number of direct employees estimated to be around 10,000, out of a non-agricultural workforce of 3 million. The Tanzanian case is not atypical. The opportunities to create indirect jobs and enterprises along mining's supply chain are more significant and all four companies have made efforts to maximise local job creation, although with mixed results.

Communities generally do not feel the mines have provided good employment opportunities and benefits. Despite company figures showing relatively high levels of local procurement, definitions of 'local' vary and can include workers from areas extending well beyond surrounding villages. The work that is available tends to be short term and casual. Access to

employment is also made difficult by the use of English in job notices and there is an endemic problem of patronage.

Even where there were positive employment impacts in mining areas, these were not always due to the efforts of the mining companies. For example, local government representatives in Kahama pointed out that the relative economic success of the area was occurring independently of the presence of the mine, since people transporting goods to neighbouring countries use Kahama as a half-way stop. Furthermore, respondents from around Bulyanhulu argued that the main source of increased business opportunities came from selling to mining-company employees, rather than to the mining company itself. This was a common finding particularly amongst women and young people running small businesses, who tended to be more positive.

Where mining has created jobs, it has also led to increased incomes. In Mwendakulima, for example, near the Buzwagi mine, incomes have increased significantly in recent years because there are more mineworkers in the village, more community investment projects and the construction of the ward office, which provided short-term employment. However, people perceive that increased incomes have led to localised inflation for basic commodities, as well as for land. Those not benefitting from the mine have therefore found it difficult to pay their bills, with the greater costs compounded in some cases by in-migration and increased demand for goods, services and land.

Relating to this last point is the finding that the presence of large-scale mining has increased levels of inequality between those receiving benefits from the mines and those not receiving benefits. This has probably contributed to deterioration in social cohesion in some of the communities surveyed. For example, people receiving (relatively high-paying) jobs from the mine have more disposable income and some villagers complained of the creation of a new 'class' of people undertaking mining work. In the areas of health and education, where mines provided hospitals and schools, mine employees are well catered for because they can afford the services, whereas non-employees are prevented from accessing healthcare because of the costs.

The presence of mining has not been found to be uniformly negative at a local level, however, and the research clearly showed companies have implemented some successful employment-generation projects. For example, Buzwagi mine has run agricultural improvement projects, with a focus on bee keeping, which have been well received in the local communities. The project is part of African Barrick Gold's (ABG) livelihoods restoration efforts and is run in collaboration with the Mwendakulima Bee Keepers Cooperative (a local organisation with 60% of members from resettled households). At the Mwadui mine, villagers are employed as security guards, carpenters and masons, with priority given to members of the nearby Mwadui village. National survey data shows that, possibly as a result of large-scale mining, average incomes in the Mwanza and Shinyanga regions were respectively 110% and 130% higher by 2007 than they had been in 2001.

Companies have also undertaken a range of projects in the areas of health, education, small-business development, infrastructure development and the provision of water. In Mwadui and Maganzo, villagers explained that the cost of travelling from Kakola village to Kahama has reduced from TZS 5,000 to TZS 3,000, and the time has reduced from three hours to one.

There is also some evidence to suggest that the presence of mines may have been beneficial to health in some ways. While consumption of meat and milk fell in other parts of the country between 2001 and 2007, this was not the case in the two mining regions.

Similarly, demographic health data shows that mosquito nets are much more prevalent in mining regions than in other parts of the country, and that child nutritional status was better in mining regions than in other rural areas.

Nevertheless, on balance, the picture at a local level remains bleak. Managing local impacts requires a coordinated local, regional and national approach. Based on the findings of this study, we recommend eight areas of action in order to move forward effectively. The recommendations are explicitly aligned with the findings of the 2008 Bomani Report (Government of Tanzania).

Recommendation 1: Definition of roles and responsibilities

- Mining companies have certain core obligations covered in the general laws of the land but also in the specific Mining Development Agreements (MDAs). These specific obligations need to be transparent and publicised much more widely than now – certainly in the local areas – to reduce the lack of clarity and/or misunderstanding about where responsibilities actually lie.
- The primary responsibility for developing national and local infrastructure (roads, power, water, ports, schools, hospitals) clearly lies with government. At the same time, mining companies should be seen as development partners and engaged during development of local government development plans. The infrastructure contributions of mining companies should be fitted into this framework.

Recommendation 2: Enhancing capacity in local government

- The financial and technical capacity of local government, especially at the district council level, needs to be strengthened to capture the full potential social and economic benefits from mining.
- Weaknesses in local administration can sometimes be the indirect cause of tensions around mining. Communities are learning that, in the absence of local government representations, their best course of action may be to take matters into their own hands through public protests against companies. Mining companies should therefore welcome a better-informed and well-resourced local government as being in their interests.
- Any move to give district councils greater financial autonomy must be preceded by a step to first strengthen the technical capacities of those councils and enhance their levels of accountability. One way to achieve this would be by establishing a stronger link between the Ministry of Energy and Minerals (MEM), the Resident or Zonal Offices and the District Executive Director. Improved technical capacities could be concentrated by establishing a mining section under the District Executive Director. To improve linkages, the established mining section will work closely with MEM to enable coordination at the national level. Existing and new staff would need training in mining policy and legislation regarding land management, environmental management and possibly licensing for small-scale mining, which could generate some revenues to fund these activities.

Recommendation 3: Building economic growth poles around mining

- Many northern Tanzanian mines are in close geographical proximity. These locations create potential for an economic development strategy with mining at its

centre. The Southern Agricultural Growth Corridor of Tanzania (SAGCOT) provides a useful precedent for this kind of initiative.

- The impacts of large-scale mining are highly localised and unevenly distributed across villages around the mine. The government and companies can help to spread these impacts of increased trade and commerce more broadly by targeting investments in infrastructure that increase market access and reduce the transaction costs (travel time and cost) of trading between villages/towns.
- Since mining is now by far the largest single investment sector in Tanzania and looks set to grow further in the years ahead, an ambitious regional planning agenda could involve government (central and local), the mining companies, and leading donors.

Recommendation 4 – MoUs with local actors (companies, government and communities)

- Local governments and companies can develop memoranda of understanding (MoUs) to define their respective roles and responsibilities. Such MoUs could also include communities directly and provide for engagement and consultation mechanisms around social development projects.
- MoUs could serve as a much-needed instrument to communicate to communities that the long-term responsibility for social services lies with their local government. Companies themselves should have a strong incentive to broadcast their own commitments as widely as possible but without the present fear that they are then expected to become a substitute for regional government in the provision of public goods.
- Whatever the specific needs are of individual communities, companies will be better able to manage community expectations and indeed their needs if community-level programmes are developed in consultation and with the agreement of the local community. This could prevent inappropriate comparisons between communities being made. A related recommendation to mining companies is to apply a standardised approach to community engagement that ensures the participation of all relevant communities throughout the project life cycle.

Recommendation 5: Communication and transparency

- The local communities interviewed for this report were often poorly informed about the mine's activities and there were endemic concerns about unfair recruitment practices. Companies need to better coordinate their hiring of casual labour and ensure that information is available well in advance. Jobs are the number-one issue for communities and the government and companies cannot afford to get this key contribution wrong. Some current practices are reinforcing the divide between the 'haves' and the 'have-nots.'
- Social development programmes need to be communicated proactively and transparently to the affected communities. Better communication can help to manage expectations among local mining communities, where many share the perception that the changes and benefits from mining will be immediate and dramatic.

Recommendation 6: Education, training and local supplies

- More systematic training programmes are required, involving partnerships between mines, across different mining companies and with government. At present, the initiatives in this area seem to be quite limited and also relatively disconnected from each other. The mineral sector should be very well positioned to support training solutions more intensively, including the creation of a dedicated university or technical school, the strengthening of existing academic facilities, or a joint training initiative between the companies.
- Where technical training has been put in place, it seems to not be very well recognised by the communities that supposedly benefit from it. This suggests that either the facility does not (yet) benefit communities or that its role and functions need to be more effectively communicated.
- Beyond some programmes to support local farmers, this study found only limited evidence of more systematic supplier development programmes at the mines. However, potential exists for Buzwagi and Mwadui in particular could generate significant benefits for local communities by leveraging established ties with local suppliers. In designing supplier development or income restoration projects, companies should ensure they pay community suppliers a living wage (ideally based on bi-annual assessments of living costs in the area).

Recommendation 7: Information and surveys

- Mining companies, together with government and development partners, should initiate a more systematic programme of regular monitoring and surveys of the general social and economic conditions of the main mining regions in order to provide a sounder factual basis for designing future policies. This includes ensuring decent survey sizes for the Household Budget Surveys (HBS) run by the National Bureau of Statistics.

Recommendation 8: Partnerships as the organising framework for future progress

- Many organisations need to take on various roles and responsibilities in order to produce acceptable outcomes. The suggested way forward from the present situation is to fully and explicitly recognise the various partnerships that can be mobilised to achieve improvement. This study has highlighted several initiatives to deliver benefits to communities through partnerships.

Table of contents

Acknowledgements	i
Executive summary	ii
List of figures	xi
Abbreviations	xii
1. Introduction	1
1.1 Background	1
1.2 Framework for analysis	2
1.3 Outline of the report	3
2. Methodology and location of study	4
2.1 Desk study of mining-company data and other information	4
2.2 Field surveys	5
2.3 Pre-existing national surveys	6
2.4 Dissemination and feedback	7
2.5 Profiles of the mines and communities surveyed	7
3. Country context	13
3.1 A brief history of Tanzania	13
3.2 The Tanzanian economy	14
3.3 The role of mining in Tanzania's economy	16
3.4 Mineral sector governance and resource management	23
3.5 Institutional and governance relationships between central and local government in Tanzania	30
3.6 Summary and discussion	34
4. Effects of mining on regional social and economic indicators	36
4.1 National statistical sources comparing education, health and gender	36
4.2 Social and economic development of mining regions	43
4.3 Summary and discussion	48
5. Economic benefit streams and perceptions	50
5.1 Benefit stream: Taxes and official payments	50
5.2 Benefit stream: Employment and training	53
5.3 Benefit stream: Local content and supplier development	58
5.4 Income effects, market access and inflation	64
5.5 Benefit stream: Community investment/development projects	71
5.6 Summary and discussion	78
	viii

6.	Community engagement and social relations	84
6.1	Historical context	84
6.2	Mine-level community engagement processes	84
6.3	Community perceptions of mine-level engagement	87
6.4	The impact of the mine on social relations	92
6.5	Gender impacts of large-scale mining	94
6.6	Summary and discussion	97
7.	The net effect of community-level benefits and costs of mining	99
7.1	Summary of strengths, weaknesses, opportunities and challenges in managing benefits from mining	99
7.2	Discussion of net impact of mining on local communities	105
7.3	Summary and discussion	107
8.	Conclusion and key recommendations	109
8.1	Introduction	109
8.2	Strengths and weaknesses of current institutional arrangements	109
8.3	Recommendations	111
	References	121
	Annex A Community scorecard	123
	Annex B Governance indicators for Tanzania	125
	Annex C Information requests made to the companies	130
	Annex D Key performance indicators and baseline	132
	Annex E Ghana: A case study for decentralisation	135
	Annex F Terms of Reference for the consultants	138

List of tables

Table 3.1	Benefits flows from operations reported by companies in the TEITI (in US\$ million for 2008-2009)	28
Table 4.1	Educational attainment (women)	37
Table 4.2	Educational attainment (men)	37
Table 4.3	Literacy (2010)	38
Table 4.4	Occupation: Men (2010)	38
Table 4.5	Occupation: Women (2010)	39
Table 4.6	Nutritional status of children (2004-2005)	39
Table 4.7	Nutritional status of children (2010)	40
Table 4.8	Ownership of mosquito nets	41
Table 4.9	Knowledge of HIV prevention methods	41
Table 4.10	Nutritional status of women (2010)	42
Table 4.11	Experience of physical violence (2010)	42
Table 4.12	Degree of marital control exercised by husbands (2010)	43
Table 4.13	Household income	44
Table 4.14	Wage income as main source of cash	45
Table 4.15	Households facing food shortage always/often in the last year	45
Table 4.16	Number of days in the last week when meat was consumed	46
Table 4.17	Number of days in the last week when milk was consumed	46
Table 4.18	Number of days in the last week when beans were consumed	46
Table 4.19	Number of days in the last week when fish was consumed	47
Table 4.20	Number of days in the last week when eggs were consumed	47
Table 4.21	Households with access to private water source	47
Table 5.1	Fiscal contributions by mine	52
Table 5.2	Breakdown of employment by direct employees, 2004-2010	54
Table 5.3	Mwadui mine employee breakdown (2010)	54
Table 5.4	Training spend over time	55
Table 5.5	Detailed procurement statistics by mine	60
Table 5.6	Total and average net annual salaries over time	65
Table 5.7	Total and average net annual salaries for Tanzanians over time	65
Table 5.8	Spend on community programmes over time	72
Table 6.1	Community scorecard responses: Community opportunities to express views to the mining company	87
Table 7.1	Strengths, weaknesses, opportunities and challenges of current management of mining benefits	100

List of figures

Figure 1.1	Active mines in northern Tanzania	1
Figure 2.1	Location of GGM	8
Figure 2.2	Location of Bulyanhulu and Buzwagi mines	10
Figure 2.3	Location of Mwadui mine	11
Figure 3.1	Growth rates of GDP per capita, 1951 to 2010	15
Figure 3.2	FDI	17
Figure 3.3	Main Tanzania exports, 1999-2008	18
Figure 3.4	Breakdown of principal macroeconomic impacts	18
Figure 3.5	Capability, Accountability and Responsiveness Framework	24
Figure 3.6	World Bank governance indicators for Tanzania, 1996-2009	25
Figure 3.7	Local government system in Tanzania	31
Figure 5.1	Fiscal contributions by mine (2009)	51
Figure 5.2	Perceptions on employment opportunities from the mines	56
Figure 5.3	Perceptions regarding access to employment opportunities	57
Figure 5.4	Breakdown of expenditure by mine for national, regional and local suppliers	61
Figure 5.5	Perceptions of the effects of the mines on incomes	66
Figure 5.6	Perceptions of changes in incomes by gender	67
Figure 5.7	Perceptions of the effects of the Mwadui mine on income by village	67
Figure 5.8	Overall perceptions on access to markets and shops	69
Figure 5.9	Perceptions on access to markets/shops by mine (number of respondents)	70
Figure 5.10	Perceptions on changes in market access around Bulyanhulu	71
Figure 5.11	Perceptions on changes in the availability of health services by mine	75
Figure 5.12	Increased availability of health services around GGM	76
Figure 6.1	Community scorecard responses: Perceptions of mine responsiveness	88
Figure 6.2	Community scorecard response by village in Buzwagi: Responsiveness of mines	89
Figure 6.3	Community scorecard responses: Perceptions on local government capacity to represent communities	90
Figure 6.4	Community scorecard response: Satisfaction with level of involvement in decisions on the use of mining benefits	91
Figure 6.5	Community scorecard: Current social relations	92
Figure 6.6	Community scorecard: Changes in social relations since the introduction of large-scale mining	93
Figure B1	'Voice and Accountability': List of selected countries, 1996-2009	126
Figure B2	'Political Stability': List of selected countries, 1996-2009	126
Figure B3	'Government Effectiveness': List of selected countries, 1996-2009	127
Figure B4	'Regulatory Quality': List of selected countries, 1996-2009	128
Figure B5	'Rule of Law': List of selected countries, 1996-2009	129
Figure B6	'Control of Corruption': List of selected countries, 1996-2009	129

Abbreviations

ABG	African Barrick Gold
AMREF	African Medical and Research Foundation
ASM	Artisanal and Small-scale Mining
BoP	Balance of Payments
CCM	Chama Cha Mapinduzi
EIA	Environmental Impact Assessments
EMP	Environmental Management Plans
ESRF	Economic and Social Research Foundation
FCG	Finnish Consulting Group
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GGM	Geita Gold Mine
HBS	Household Budget Survey
HIV	Human Immunodeficiency Virus
ICMM	International Council on Mining and Metals
IFC	International Finance Corporation
IMTT	Integrated Mining Technical Training
LGAs	Local Government Authorities
LGL	Local Government Levy
LGRP	Local Government Reform Programme
MDA	Mining Development Agreement
MEM	Ministry of Energy and Minerals
MoU	Memoranda of Understanding
NGO	Non-Government Organisation
OPM	Oxford Policy Management
PMO-RLG	Prime Minister's Office Regional Administration and Local Government

***Tanzania Investments Benefits Study
(Sustainable Management of Minerals Resources Project)***

PPP	Public-Private Partnership
RAS	Regional Administrative Secretary
RER	Real Exchange Rate
SAGCOT	Southern Agricultural Growth Corridor of Tanzania
SEP	Stakeholder Engagement Plan
SGACA	Strategic Governance and Corruption Analysis
SMMRP	Sustainable Management of Minerals Resources Project
TDHS	Tanzania Demographics and Health Survey
TEITI	Tanzania Extractive Industries Transparency Initiative
THMIS	Tanzania HIV/Aids and Malaria Indicator Survey
WDC	Ward Development Committee

1. Introduction

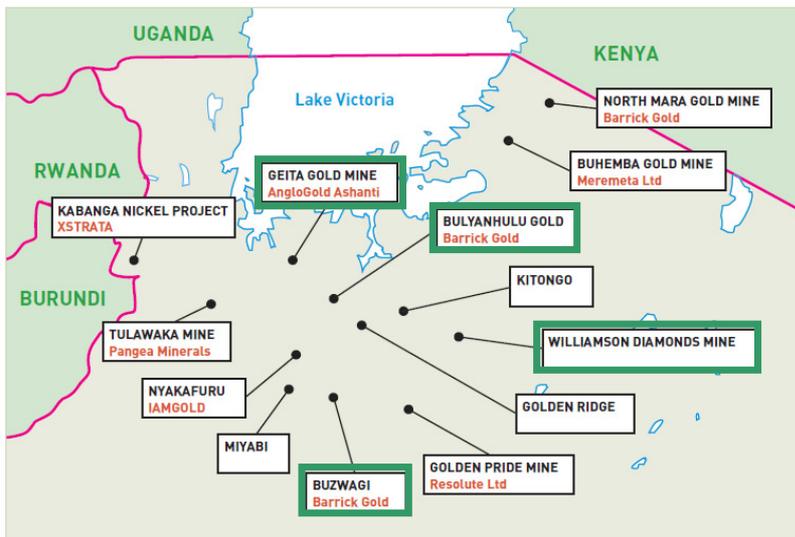
1.1 Background

This Investments Benefits Study was commissioned by the MEM under the World Bank's Sustainable Management of Mineral Resources Project (SMMRP) programme. It was awarded to Oxford Policy Management (OPM) and our two Tanzanian partners (the Economic and Social Research Foundation (ESRF) and MTL Consulting) on 11 August 2010.

The purpose of the study is to provide substantive evidence about the social and economic benefits received by a selection of communities (and the wider economy) in the mining regions of Shinyanga and Mwanza from investments in mining and, concurrently, how effectively these benefits are managed by communities, the companies and national/local governments. The methodology was explicitly designed to elicit the perceptions of the communities about the impact of large-scale mining, including the impact on local social and economic development.

Four large mining operations were selected by the MEM for inclusion in the study: GGM operated by AngloGold Ashanti; Mwadui Diamond Mine operated by Petra Diamonds; Bulyanhulu and Buzwagi, both operated by ABG. At the mine site, the communities chosen for interview in the study were selected by the research team based on the advice of local government officials and the community relations officers from the mines. The mines in the study are shown (together with other active and prospective mining operations) in Figure 1.1, highlighted with green borders.

Figure 1.1 Active and prospective mines in northern Tanzania



Source: ICMM (2009), 'Mining in Tanzania – What future can we expect?'

The initial findings of this study were presented in a workshop in Mwanza at the end of March 2011. We hope that the complete findings will be presented in further multi-stakeholder workshops later in 2011.

1.2 Framework for analysis

The methodology took as its base the ‘Mining: Partnerships for Development’ (MPD) toolkit as developed in 2005 by OPM for the International Council on Mining and Metals (ICMM) and subsequently revised by OPM in 2011.² In particular, the present study draws on the following modules of the MPD toolkit:

- Module 1 – Mining and the host economy
- Module 2 – The participating mining operations and their economic and social initiatives and partners
- Module 3 - Measuring the mining industry’s contribution to the host economy at the national level
- Module 4 - The proximate aspects of governance that help or hinder mining’s economic and social performance
- Module 5 – Measuring the participating mine’s positive and negative contributions to local communities

The main empirical chapters (4-6) are based on six priority areas identified in the toolkit, namely poverty reduction (Chapter 4), revenue management (chapters 5 and 6), local content (Chapter 5), social investment (Chapter 5), regional development planning (Chapter 6) and dispute resolution (Chapter 6). The methodology for the study is described in greater detail in Chapter 2.

The data used for this study are drawn from two sources. The first is **a desk study of the four selected mines**, covering community impacts from the perspective of company activities and policies (including employment, community development, local content and economic linkages, and taxation). These impacts and their management are **analysed using mine-level data provided by the four mining operations**. This data are mainly of an economic and quantitative nature, including statistics on employment, taxes paid, and economic data.³

The second is **a series of surveys of local communities** designed to capture local perceptions regarding the socioeconomic impacts of large mining operations. For these field studies, we used **community scorecards and focus group discussions in order to collect appropriate qualitative and quantitative data**. The results of these surveys also help to provide a baseline for assessing the changes that accrue during the period of the MEM SMMRP 2009/10–2013/14. These two main data sources were supplemented by the

² Both the initial and revised versions of the toolkit were developed by OPM on the basis of several previous case studies. For further information on OPM’s work in Extractive Industries, contact Mark Essex by email (mark.essex@opml.co.uk) or visit www.opml.co.uk.

³ The draft desk-study section of the report was distributed to the three participating companies in December 2010 based on data received to date. The document included highlighted sections where company data was outstanding or not clear. By displaying the data in a format aligned with the final desk-study report, OPM sought to encourage participating mining companies to provide further information or clarifications where possible.

selective use of results from a number of pre-existing national surveys and from administrative data covering the two target regions.

By examining the intersection between the mining companies' and the communities' perspectives on benefits, we seek to provide insights into the degree of coherence and incoherence and also into possible areas of contention. The study thereby helps to identify and prioritise the key issues needing greater attention from various parties in the future if there are to be larger, more sustainable, more equitable and more pro-poor benefits from large-scale mining. This objective is re-enforced in later chapters, when we bring together the various elements of the data and the findings to comment on the strengths, weaknesses, opportunities and challenges of the present arrangements and put forward recommendations for improvement, including possible new indicators that can be used to monitor and track effective delivery of benefits to local communities.

1.3 Outline of the report

The remainder of this report is structured as follows:

- Chapter 2: Description of methodology and profile of the four mines and host communities;
- Chapter 3: Country and historical context of mining;
- Chapter 4: Analysis of the impact of mining on regional social and economic indicators;
- Chapter 5: The economic and community benefits from mining and people's perceptions of these contributions;
- Chapter 6: Community engagement and social relations;
- Chapter 7: Analysis of the net impact of mining, including the strengths, weaknesses, opportunities and challenges of benefit streams, as well as overall community perceptions; and
- Chapter 8: Summary and recommendations.

2. Methodology and location of study

This chapter discusses the methodology for the study and the workshop's dissemination of interim findings, as well as introducing the communities and mining areas. It begins with a detailed discussion of the methodology, which combines data and evidence from three main sources:

1. A **desk-based economic and quantitative study**, using data and other information provided by the four mines and covering community impacts from the perspective of company activities and policies including employment, community development, local content and economic linkages, and taxation.
2. The results of a **series of field surveys** designed to capture the facts as well as local perceptions regarding the socioeconomic impacts of large mining operations from the community perspective. The field studies used a research design based on community scorecards and focus group discussions as the means to collect appropriate qualitative and quantitative data.
3. The two main data and information sources were **supplemented by additional pre-existing data from various national statistical surveys** that contained relevant information about mining-dependent regions, including Shinyanga and Mwanza. This present chapter describes the methodology in greater detail.

2.1 Desk study of mining-company data and other information

This part of the work was initiated by in-depth meetings with representatives of the four mines in August 2010 to explain the purposes of the project and the type of information required for the study. In order to limit the demands on companies, no use was made of a formal structured questionnaire. Instead, on the basis of the face-to-face meetings, each company agreed to provide data and other information. The guidelines included data on employment, wages paid, taxes paid, training costs, expenditures on community programmes and procurement, as well as relevant reports and briefings including environmental impact assessments (EIAs) and stakeholder engagement plans. The full list of requests is included in Annex C.

We received a generally good response to these requests but the varying degrees of management time that the companies were able to commit to this work did result in some information gaps. In some cases, the level of detail in the data has been insufficient to determine with confidence the benefits of mining activity at a disaggregated community level. For instance, data on total salaries was provided by some of the companies without disaggregating between local and expatriate employees. In addition, some company documentation has proved quite difficult to collect from the companies – specifically those materials that exist only in hard copy. These materials include some of the EIAs, Environmental Management Plans (EMPs), Mine Closure Plans, Stakeholder Engagement Plans, and Sustainability Reports. However, this matter has not been critical to the analysis thus far.

Where we saw gaps in the data and the documentation we went back to the companies for clarification and more detailed information requests. We provided initial drafts of our report on the desk-based work to each of the companies for their critical comment at two stages in the project. An early draft was provided to companies for comment in December 2010, and another draft was provided in July 2011.

2.2 Field surveys

The objective of the field study was to complement the desk study by gathering primary data on the perceptions of local communities regarding mineral sector benefits and the extent of participation by communities in the management of these benefits.

The field study was conducted in late 2010, immediately following the national elections. OPM staff helped ESRF to plan the field work and prepare the interview tools. These included a community scorecard instrument, a focus group discussion guide and a semi-structured interview guide.

The community scorecard approach was chosen as the main research technique through which to elicit quantitative and qualitative findings. In addition, semi-structured interviews were also conducted with individual community members and key informants. Semi-structured interviews at the local government level focused on collecting information on how community development funds are managed, the organisational structures, the number of projects and efficacy of spend, and other stakeholders working on social development in the region.

The scorecard approach is based on a short quantitative questionnaire (see Annex A), followed by a focus group discussion. The focus group is asked to discuss the same questions as are contained in the scorecard and agree amongst themselves on a quantitative scoring for each question. This approach was chosen for several reasons:

- A community scorecard approach is preferred to a more formal household survey due to the importance to the study of qualitative findings, i.e. **obtaining an in-depth understanding of the perceptions of communities** regarding what is working (and what is not) and how the perceptions differ between different groups of people within the communities (as some will be greater beneficiaries than others).
- This approach is also **considerably more cost effective and easier to administer** than a large formal survey. The latter would require a far larger sample but could still fail to provide us with the insights into the perceptions of the communities that detailed focus group discussions can give. Our methodological approach to the field-based survey allows for possible replication in future surveys.
- The approach of relying on both quantitative and qualitative techniques means that representative and in theory statistically reliable findings from the HBSs (see below) or various **secondary data can be matched with in-depth understanding of the nuanced insights** resulting from focus group discussions and semi-structured interviews.

The areas investigated included the perceived level of participation by communities in local economic development planning, the levels of satisfaction with the mine and its activities and the perceived employment, income and other benefits or impacts arising from its operation. Questions also examined whether there has been a gender dimension as to how benefits have been distributed within communities. During the first week of work in Geita, it was not possible to disaggregate groups within the community further than between women and men, although separate group discussions were held with community leaders so that differences in perceptions could be seen where they exist. Other groups that were subsequently factored in included mine employees and artisanal miners/gold processors.

2.3 Pre-existing national surveys

In addition, we used two sources of national statistical data to assess the demographic and socioeconomic status of Tanzania's mining regions. These two sets of surveys are discussed, in turn, below. The results of the surveys are discussed in Chapter 4.

2.3.1 Demographic surveys

To assess the education and health status of Tanzania's four mining regions (Shinyanga, Mwanza, Kagera, Mara), we used publicly available national survey data: the Tanzania Demographics and Health Survey (TDHS) (2004-2005 and 2010 waves) and the 2007-2008 Tanzania HIV/Aids and Malaria Indicator Survey (THMIS). Where possible, we have sought to compare the findings in the two rounds of the TDHS, and across the TDHS and THMIS (in cases where the two surveys contain the same indicators).

Data for these surveys were not available at greater disaggregation than regional levels. Even if the data were broken down by, for example, districts, the fact that each survey was based on a sample of individuals belonging to about 10,000 households throughout Tanzania means that samples would be too small at disaggregated levels to be treated with absolute confidence.

The objective of including these surveys was to provide an initial 'macro' view on the socioeconomic indicators in the mining regions, to be nuanced further and at more detailed levels in the subsequent sections of this report. Our analysis of the three demographic surveys illustrates clearly the **underdeveloped nature of the two mining regions and their continued high demand for infrastructure, educational and health services.**

2.3.2 HBS

To analyse income and expenditure for households in Shinyanga (Bulyanhulu and Buzwagi gold mines and Mwadui diamond mine) and Mwanza (GGM), we used the HBS and its successive rounds of enumeration. The aim was to analyse whether there had been any improvement in the socioeconomic situation (e.g. measures of poverty, health status etc.) in the mining-affected regions as compared with the rest of the country.⁴

The 2001/02 HBS was clearly the most appropriate base point, coinciding as it does with the early years of some of the main mines we reviewed. To assess whether socioeconomic conditions have improved in the Mwanza and Shinyanga regions, we compare two successive rounds of the HBS: 2001/02 and 2007. The mining operations that are the subject of this study started operating at different points in time (GGM began in 2000, ABG's Bulyanhulu in 2001, Williamson Diamonds began operating in the 1940s, and Buzwagi only entered production in 2009). Based on these mining operations, we decided to use the **2001/02 HBS as the most relevant baseline to analyse the key social and economic indicators in the Mwanza and Shinyanga regions** but not at district level within those two regions (see Section 4.3 for the reasons).

The 2001/02 statistics were compared to those for the 2007 round to **ascertain any change over the six-year period.** By following this methodology, in a further six years' time (or

⁴ The 'rest of the country' excludes Dar es Salaam to avoid the bias that would result from including this purely urban and relatively highly developed area.

whenever the next HBS is conducted), it will be relatively easy to obtain a further 'data-point' to analyse the evolving social and economic impact of mining.

Our analysis framework for this part of the methodology was **limited to those variables that are available in both rounds of the HBS** for meaningful comparison. A more detailed survey would have enabled us to comment more extensively on any changes in the socioeconomic conditions in the affected areas.

2.4 Dissemination and feedback

A workshop entitled 'Partnerships for Development in Mining: A Case Study of Large-Scale Gold and Diamond Mining in Tanzania' was held on 25 March 2011 at the Nyumbani Hotel in Mwanza, Tanzania. The objectives of the workshop were to:

- Highlight and discuss the evidence on the economic and social contribution of mining to Tanzania, including the perceptions of affected communities of the costs and benefits from large-scale mining; and
- Explore opportunities for collaboration and multi-stakeholder partnerships between companies, government, development agencies and civil society organisations, with the aim of enhancing mining's economic and social contribution.

The workshop was attended by around 70 people. These included senior government executives, mining-company staff and community representatives. Presentations covered an overview of the SMMRP, initial findings from the desk review, initial findings from field work, and the key partnership themes from the ICMM's Mining Partnerships for Development framework. Presentations were made in English with simultaneous translation into Kiswahili. A heated debate about the benefits from large-scale mining followed, mainly in Kiswahili. After participants had deliberated on the five partnership themes, they engaged in a two-stage voting exercise. The first stage of voting concluded that 'partnerships to enhance mining and local content' was the most important challenge for the sector in the coming 12 months. In the second stage, this theme was then further discussed and the participants put forward ideas to develop such a partnership strategy.

The results of the prioritisation vote are listed in order of importance, with the number of votes accrued indicated in brackets:

- Partnership to enhance mining and local content (procurement/local economy linkages) (38 votes)
- Partnerships to enhance mining and poverty reduction (33 votes)
- Partnership to improve mining and regional development planning (33 votes)
- Partnerships to address mining and dispute resolution (30 votes)
- Partnership to enhance mining and social investments (21 votes)

2.5 Profiles of the mines and communities surveyed

This section describes the four case-study mines covered by this study and their surrounding communities. Although the findings are largely based on census data from 2002, the data

show that the districts in which these mining companies operate have limited infrastructure development, with low levels of education and with most people earning their livelihoods through agriculture. It should be noted that within districts there could be significant difference in infrastructure, with areas around the large mines being the key beneficiaries. Nevertheless, data on limited educational attainment and skills imply a particular constraint on the ability of people from these communities to seek formal employment with the mine or to engage with opportunities to provide it with goods and services. **Unfortunately, this constraint is too often seen as a responsibility the mines themselves should address rather than being recognised as a public good to be provided by government.**

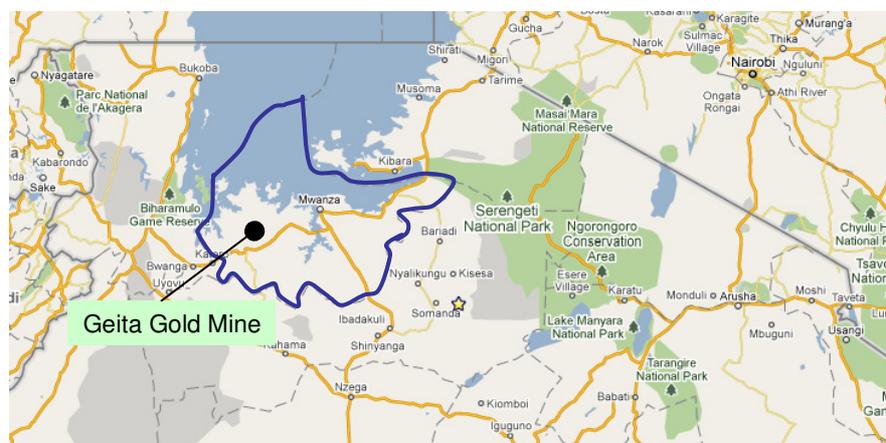
2.5.1 GGM (Mwanza region, Geita district)

GGM is an open-pit gold mine in the Geita district of Mwanza region. It is located 80km south-west of the town of Mwanza, 20km from Lake Victoria and 4km west of Geita Town. The mine is owned by AngloGold Ashanti and is a multi-pit operation with one processing plant located on site, which processes ore by conventional methods based on a Carbon-in-Leach circuit. It is the largest of AngloGold Ashanti's open-pit mines in Africa with annual production levels of around 300,000 ounces of gold. In 2004, the mine accounted for around a third of government revenue from large-scale mining (Lange 2006). Based on current production rates, the expected mine life of the current pits was seven years as of 2009.

GGM began production in 2000 and operates under a Special Mining Licence issued in 1999. The license covers 17,509 hectares of land, more than 70% of which falls inside the Geita Forest Reserve. The mine has experienced significant problems of both legal and illegal small-scale miners encroaching on the area of GGM's license.

Prior to 2004, the mine was managed as a joint venture between Ashanti and AngloGold, but the merger of the two companies in 2004 meant that the mine then became a wholly owned subsidiary of AngloGold Ashanti. The company experienced a number of production problems in 2006 and 2007 with high staff turnover and the collapse of one of the pit walls. Since 2008, the mine has undergone a process of redevelopment in an effort to increase production levels and profitability. The area has potential for underground mining but this has yet to be exploited.

Figure 2.1 Location of GGM



Source: Google Maps. Blue outline shows Mwanza region.

According to the 2002 Tanzania National Census, the Geita district had a population of 712,195. The largest town in Geita district is Geita Town, with a population of around

120,000 people. Geita district is similar to many others outside of Dar es Salaam in that there is minimal infrastructure, commercial activity or services in the area. According to the most recent census (from 2002), the area has slightly lower literacy rates than the national average, with rates of around 65% (compared to 72% across the country). The lake zone is a high HIV risk zone and this appears to be true for Geita too: a survey conducted by GGM and the international NGO AMREF in 2001 indicated that 16% of men and 18% of women were HIV positive. Tanzania suffers from a shortage of teachers and this appears to be a particular problem in Geita district due to the remoteness of the area. Teacher-pupil ratios are around 70:1 (in contrast to the national average of around 40:1) and transition rates from primary school to secondary school are very low at around 9%.

The field study covered six villages in the Geita area: Bugulula, Isamilo, Kalangala, Nyakabale, Nyamalembu and Nyawilimilwa. Among these villages, Kalangala has well-developed infrastructure and is a hub for small business (e.g. shops and bicycle repair outlets). It is located close to the centre of Geita Town.

The surveys included community members with different occupations, including small business owners, carpenters, vendors, government employees, and mine employees or casual labourers. Of the people interviewed across the villages, 79% were less than 46 years old and therefore considered to be part of the active labour force. About three-quarters of respondents in four villages cited farming as their main activity, followed by mining and small business activities.

2.5.2 Bulyanhulu and Buzwagi gold mines (Shinyanga region, Kahama district)

Bulyanhulu gold mine is situated in northwest Tanzania, in the Kahama district of Shinyanga. It is located 55km south of Lake Victoria and approximately 150km southwest of the city of Mwanza. The mine began production in 2001 and has an estimated closure date of 2037 based on measured reserves. Bulyanhulu produces concentrates containing gold, silver and copper sulphide ore, and exports these to international smelters for further processing. The process plant processes around 1.1 million tonnes of ore per year and is operational every day of the year. The mine is owned and managed by ABG and is one of four mines operated by them in Tanzania. The commencement of operations at the Bulyanhulu mine made Tanzania the third largest gold producer on the African continent. It produces around 249,000 ounces of gold per annum.

Buzwagi gold mine is also located in the Kahama district of Shinyanga. It is about 100km from Bulyanhulu and 6km south-east of Kahama Town (located between Kahama Town and Mwendakulima, along Isaka road). The mine is Tanzania's largest single open-pit mine and is also the second largest mining operation in the country. Buzwagi was acquired by ABG in 2000 as part of their acquisition of Pangea Goldfields Inc. The mine began production in 2009 with an estimated life-span of approximately 13 years based on proven and probable reserves. The mine consists of an open pit along with ore processing facilities, tailings storage facility, waste rock storage facility and water management and other ancillary facilities. The mill at the mine is designed to have a throughput capacity of 12,000 tonnes of ore per day and is capable of moving some 4.4 million tonnes of ore annually. Total production in 2009 was estimated at 189,000 ounces of gold from ore with an average grade of 2.2 grams per tonne.

Figure 2.2 Location of Bulyanhulu and Buzwagi mines



Source: Google Maps. Blue outline shows Shinyanga region.

According to the 2002 Tanzania National Census, the Kahama district had a population of 596,000, 88% of which lived in rural areas. It was estimated that over 85% of the population were engaged in subsistence agriculture and livestock rearing as their main source of income. The district is administratively divided into five divisions, which in turn are subdivided into 34 wards and a total of 211 villages. The area saw a large influx of migrants following the discovery of gold in the area in the 1970s. The closure of artisanal mining at Bulyanhulu in 1996 – to prepare for large-scale exploration and development – had a significant impact on the livelihoods of people in the area, resulting in reverse migration and falls in income. The arrival of large-scale mining was seen as displacing artisanal miners, leading to ongoing tensions between the company and parts of the local communities.

Bulyanhulu mine is surrounded by 28 villages, of which eight are located in close proximity to the mine. **The four villages surveyed for this study were Bushingwe, Kakola, Kakola No. 9 and Lwabakanga. Agriculture constitutes the main activity for respondents from each of these, ranging from 60% farmers in Kakola to 80% farmers in Kakola No. 9.**

Buzwagi mine is surrounded by three villages and interviews were conducted in **Mwendakulima, Chapulwa and Mwime**. Kahama is a transit town with a lot of economic activity and with the development of the Buzwagi mine has seen significant in-migration and new settlements in the town. Farming (either subsistence or as a small business) is the predominant activity, accounting for 82% of respondents in the villages around Buzwagi. In two of the villages around Buzwagi (Chapulwa and Mwime), all respondents cited farming as their main livelihood. In Mwendakulima, 62% were farmers, 31% of respondents relied on work in the mines as their main livelihood, and the remainder was a mix of small-scale business people and government employees.

2.5.3 Mwadui diamond mine (Shinyanga region, Kishapu district)

The Mwadui diamond mine is an open-pit mine located in Shinyanga, west of the town of Shinyanga in central Tanzania and 160km south of Mwanza. The mine is one of the oldest mines in the country, having been in operation since 1940, and was the first major diamond mine on the continent to become operational outside South Africa. During the last 70 years of operation, the mine has produced roughly 20 million carats of diamonds, around a third of the total resources available in the mine. The mine regularly produces large, high-quality diamonds and is also a source of rare pink diamonds.

The mine was initially developed by De Beers but was nationalised and managed by the government over the period 1975 to 1994, after which De Beers came back in. The mine changed ownership again in November 2008 with Petra Diamonds acquiring a 75% ownership share in the mine (for a cash consideration of US\$ 10 million from De Beers in 2009), with the Government of Tanzania retaining ownership of the remaining 25%.⁵

Figure 2.3 Location of Mwadui diamond mine



Source: Google Maps. Blue outline shows Shinyanga region.

Mwadui is the largest kimberlite pipe ever to have been mined economically, spanning 146 hectares. It is a large open-pit operation with mining activities comprising extraction from both the open pit and alluvial deposits. Expansion and refurbishment plans were approved in 2009 and are currently underway. The plans include reshaping the open pit for a higher extraction rate and the installation of an autogenous mill to enhance the diamond recovery system. These measures aim to increase profitability and extend the life of the mine by around 19 years.

Artisanal mining has been in existence in the area since the discovery of the kimberlite pipe in the early twentieth century and a substantial artisanal and small-scale mining (ASM) sector still exists alongside the large-scale mining operations. Small-scale informal diggings exist adjacent to the mine and it is estimated that around 10,000 people are involved in ASM in the area. According to the 2002 Tanzania National Census, the Kishapu district had a population of 240,000, of which 94% reside in rural areas. The area surrounding the mine relies heavily on subsistence agriculture and cattle-herding which, combined with the fact that the area is drought-prone, makes those living in the area particularly vulnerable to fluctuations in living standards. In particular, due to the frequency of drought, the Shinyanga region has been characterised by high levels of food insecurity, hunger and malnutrition. Apart from mining activities, few employment opportunities exist in the region. Whilst the village of Mwadui itself has relatively low unemployment rates – estimated at around 20% – the seven other villages in the area have unemployment rates of around 90%. Two villages (Mipa and Songwa) are particularly vulnerable, as the agricultural land in the village is mostly infertile.

⁵ Petra Diamonds, Annual Report 2009.

This field work focused on four villages in relatively close proximity to the Mwadui mine: Idukilo, Ikonongo, Maganzo and Mwadui. The latter two are located in closest proximity to the mine and have the highest proportion of people employed in mine-related activities (in particular Mwadui). Residents of Idukilo and Ikonongo are almost entirely farmers, with livelihoods based on agriculture and cattle keeping. Idukilo is described as particularly poor, with limited infrastructure and dilapidated social facilities.

3. Country context

3.1 A brief history of Tanzania

Tanganyika became independent from British rule in 1961 and the following year Julius Nyerere was elected the first president of Tanganyika. In 1964 Tanganyika and Zanzibar united to form the country known as Tanzania and Julius Kambarage Nyerere became the first president of the United Republic of Tanzania.

Under President Nyerere, the country adopted socialist policies emphasizing self-reliance (Ujamaa), and in qualifying the policy the Arusha Declaration was introduced in 1967. The Ujamaa policy included a creation of collective socialism villages known in Swahili as Ujamaa villages. In the Ujamaa policy agriculture was defined as a major means of economy.

Under the Arusha Declaration nationalisation of the private owned business took place and the state took control of all major means of economy. In 1977 the two parties namely TANU (for Tanganyika) and ASP (For Zanzibar) also united to establish a single party CCM (Chama cha Mapinduzi) which is currently the ruling part in Tanzania. In 1992 Tanzania also adopted the multi-party system and in all multi-party elections since then the CCM has remained in power, having won the elections held in 1995, 2000, 2005 and 2010.

The mineral sector represented one type of investments that was affected by nationalisation policy. In 1970 the State Mining Corporation (STAMICO) was formed to take a role of supervising the minerals sector development and under STAMICO a number of mining operations were opened. However due to the nature of the activities which are capital intensive, a number of market regulations and restrictions, STAMICO failed to meet the challenges to sustain the business and a number of gold mines closed. The mines that remained operational were in need of government subside in order to run the industry smoothly. In late 80's STAMICO was making heavy losses and therefore the contribution of the industry to the GDP was diminishing by the year. Price regulations and restrictions in the market resulted in large shares of mineral production being smuggled out of the country. At the time of independence, the contribution of mining to Gross Domestic Product (GDP) was in the region of 3% to 4% but, by the 1980s, this had dropped to only around 1% (see Lange 2006).⁶

After a decade of protracted decline, **Tanzania embarked on a Structural Adjustment Programme** in 1986 that included a range of macroeconomic and public sector reforms in return for significantly increased foreign assistance. However, economic conditions failed to improve and the country continued to borrow from external sources to finance social programmes and a growing public sector. Tanzania thus became **increasingly dependent on debt financing**: by 1991, Tanzania's external debt had reached US\$ 6 billion, equivalent to 250% of GDP (compared to a Sub-Saharan average of 110% and a world average of around 40%). Debt service obligations accounted for some 60% of revenue from the export of goods and services in 1990-91 (Tanzanian Affairs 1993).

⁶ GDP is a measure of the market value of all final goods and services produced in a country within a given period.

In the early 1990's Tanzania started to change its policies and **move away from a centralized state command economy to a market based economy**, allowing the private sector to engage in the operations of different industries to boost the economy which was declining. It was only after 1995 that real progress was made towards a market-based economy. The process of privatisation (which had formally begun in 1993) accelerated, and by 2003 some 380 out of 410 parastatals had been privatised to foreign and (in some cases) local investors.⁷

Nevertheless, the ideological roots of *Ujamaa* socialism run deep and are still reflected in popular sentiment toward the foreign-controlled mineral sector. The last two elections have served to highlight the common notion – within government as well as the broader population – that the **contribution of the mineral sector to economic development would be greater if Tanzanian firms were given more control** over these investments. This is regardless of the fact that companies would face the same operational and commercial challenges, and serves to illustrate the limited understanding of the technical and economic aspects of modern large-scale mining.

To date there have been **no major issues with political instability in Tanzania** and the country has been widely commended for this fact. The CCM has enjoyed a significant majority in parliament (as high as 80%) until the 2010 elections, where it lost ground to recently strengthened opposition parties. An additional feature of Tanzania's political governance is an absence of serious ethnic conflicts, and a degree of national identity and integration that is comparatively high for Africa (Bertelsmann Stiftung Institute, 2010).

Although the incumbent party retained the presidency and its majority in the October 2010 elections, the defeat of many CCM members of parliament has begun a process of questioning and potential conflict within the party, with some of the post-independence leading figures losing influence to newer and younger members. Nevertheless, the political opposition parties remain subtly undermined by the government and underdeveloped in general. This lack of real effective oppositional political power in Tanzania is important, as it suggests **there is little domestic political pressure for reform or improvements in governance** and government. Still, the post-election situation is subtly different, with somewhat greater uncertainty about where the balance of real power may lie in the future.

3.2 The Tanzanian economy

In 2009, Tanzania had a GDP of US\$ 20.4 billion (constant prices) and a population of 41 million. The country remains **heavily dependent on Overseas Development Assistance**, with the Tanzanian budget being approximately 40% donor funded.

Tanzania's economy has grown rapidly in the last decade, with **real GDP growth averaging around 7%** between 2000 and 2008. Growth has been slower in the agricultural sector (at around 4%), which remains the largest contributor to GDP and main source of livelihoods for the majority of the population (IMF 2009). **Economic growth slowed in 2009 to around 4.5%** in the wake of the global financial crisis, which affected Tanzania through sharp falls in demand for some commodities, reduced income from tourism, and reduced foreign direct investment (FDI). Nonetheless, the decline in GDP growth was far lower in Tanzania than in many otherwise comparable economies.

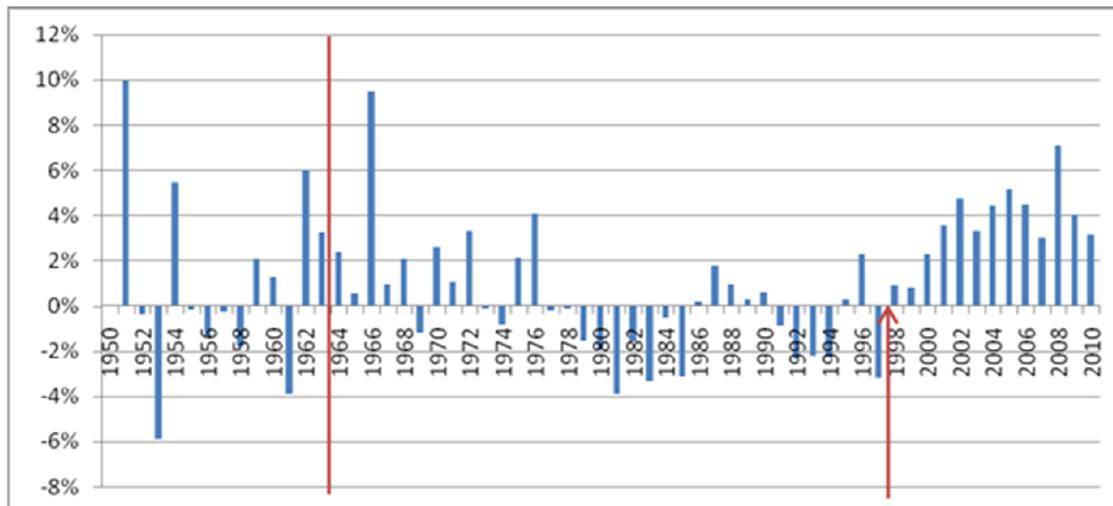
⁷ AFRODAD (2007), 'Tanzania's experience with privatisation policies: A case study'. African Forum and Network on Debt and Development.

The IMF attributes the relatively strong economic performance in the past decade to **sound macroeconomic policies and far-reaching structural reforms**, including privatisation and the increasing liberalisation of trade, foreign exchange, and capital markets. **Debt relief** obtained under the Highly-Indebted Poor Countries initiative – whereby Tanzania’s external debt was brought down to 34% of GDP – also gave the country much-needed leeway to expand borrowing to stimulate the economy during the financial crisis.

Despite high economic growth, **progress in reducing poverty has been limited**. The IMF cites data from the 2007 HBS showing that the incidence of poverty has declined only modestly since 2000-01 (from 36% of the population to 33%), implying an increase in the absolute number of Tanzanians living in poverty. Tanzania also continues to rank low in the UNDP’s Human Development Index (148 of 169 in 2010).

The growth rates of GDP *per capita* from 1951 to 2007 can be seen in Figure 3.1. The most striking aspect is the high level of instability experienced in Tanzania prior to 1998. The rate fluctuated widely, both during the colonial period (to the left of the first red line) and in the period from independence until the Mkapa reforms of the late 1990s (the mid-section between the two red lines). These periods saw a combination of high growth rates in some years, as well as successive periods of declining GDP *per capita*. The 1970s and 1980s experienced chronic instability, with declining GDP *per capita* in most years. After the Mkapa reforms, GDP *per capita* growth rates began to increase and this has since stabilised at rates of around 4% per annum, indicating sustained increases in living standards in the country.

Figure 3.1 Growth rates of GDP *per capita*, 1951 to 2010



Source: University of Groningen, Growth Centre (www.ggdc.net)

Tanzania’s mineral sector has experienced a boom that coincides with high and stable economic growth. **The mineral sector expanded rapidly following the mining policy reforms of 1998** (see red arrow in Figure 3.1). This included the commissioning of six large-scale gold mines at Geita, Bulyanhulu, North Mara, Nzega, Buhemba and Tulawaka, as well as the development of over a dozen mineral prospects of gold, nickel and uranium. As a result, annual gold production grew from one tonne per annum to 50 tonnes in 2008. This made the mineral sector the fastest-growing sector after tourism, almost doubling its contribution to GDP from 2% of GDP in 1998 to 3.5% of GDP in 2008, suggesting the contribution of mining to the sustained high growth rates since 1998.

3.3 The role of mining in Tanzania's economy

Tanzania is one of Africa's most mineral-rich countries, with vast amounts of gold, diamonds,⁸ gemstones and gas deposits. Prior to privatisation in the mid-1990s, exploitation of these resources was limited, but the 1998 Mining Act aimed to **incentivise private investment into mining**. This framework (including the 1999 Mining Regulations) was broadly successful in promoting investment, and between 1998 and 2005 Tanzania experienced a **mining exploration boom** where more than 50 foreign companies and over 250 local companies acquired mining and prospecting licenses (MEM 2005).

Due to the high costs and risks associated with mineral exploration, the sector is largely dominated by multinational companies. The largest are ABG, AngloGold Ashanti and Resolute Mining Limited.

The six largest gold mines currently operating in Tanzania are:

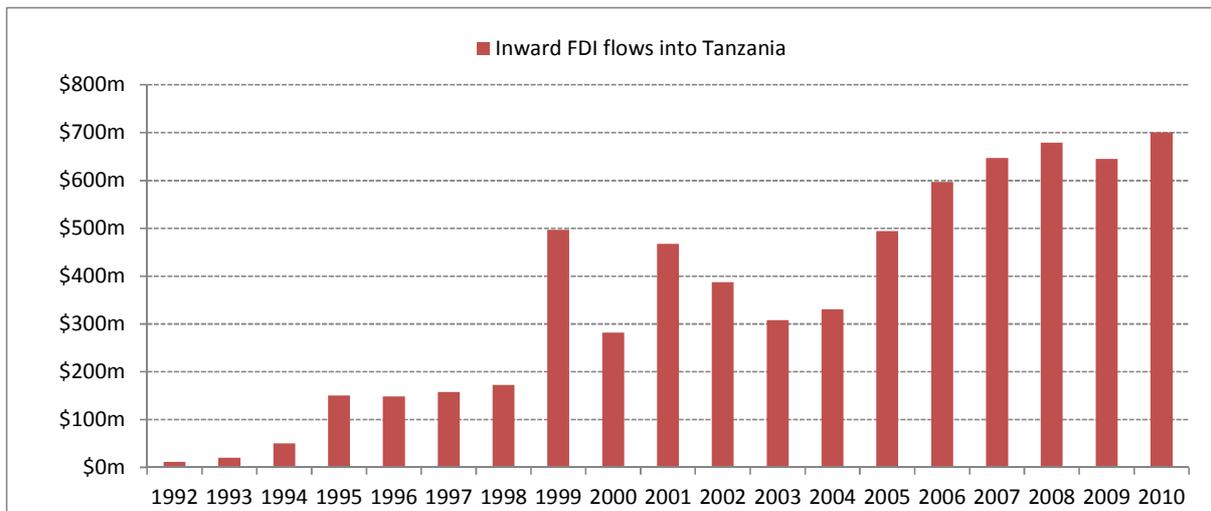
- Bulyanhulu gold mine, which started operations in 2000 and has a 14.6 million ounce resource;
- Buzwagi gold mine, which started operations in 2009 and has proven and probable gold reserves of 3.3 million ounces (as at year end 2008);
- GGM, which became operational in 2001 and has a 20 million ounce resource;
- Golden Pride in Nzega, which became operational in 1998 with a 2.8 million ounce resource;
- North Mara Mine, which became operational in 2001 with a 4.1 million ounce resource; and
- Tulawaka mine, which started production in 2005 with a 1.7 million ounce resource.

Tanzania is also a significant producer of diamonds and the bulk of these come from the Petra/Williamson Diamond mine at Mwadui, which has been operating since the 1940s. El Hillal Minerals Ltd also produces diamonds and is a Tanzanian company. Gemstones (tanzanite) are produced by the company TanzaniteOne (at Merelani in Arusha) and small-scale miners in almost equal measure. Other gemstones include rubies, sapphires, garnets, alexandrite, and emeralds. In addition to gold and diamonds, Tanzania possesses iron ore, nickel, copper and platinum.

It is quite clear that the boom in mining since the end of the 1990s accounts for the majority of Tanzania's recent growth in FDI, with mining investments representing 66% of FDI in 2008.

⁸ Over 300 kimberlite pipes have been identified, extending from Mwanza through Shinyanga to Tabora and Singida, a fifth of which are estimated to be diamondiferous.

Figure 3.2 FDI flows, 1992-2010



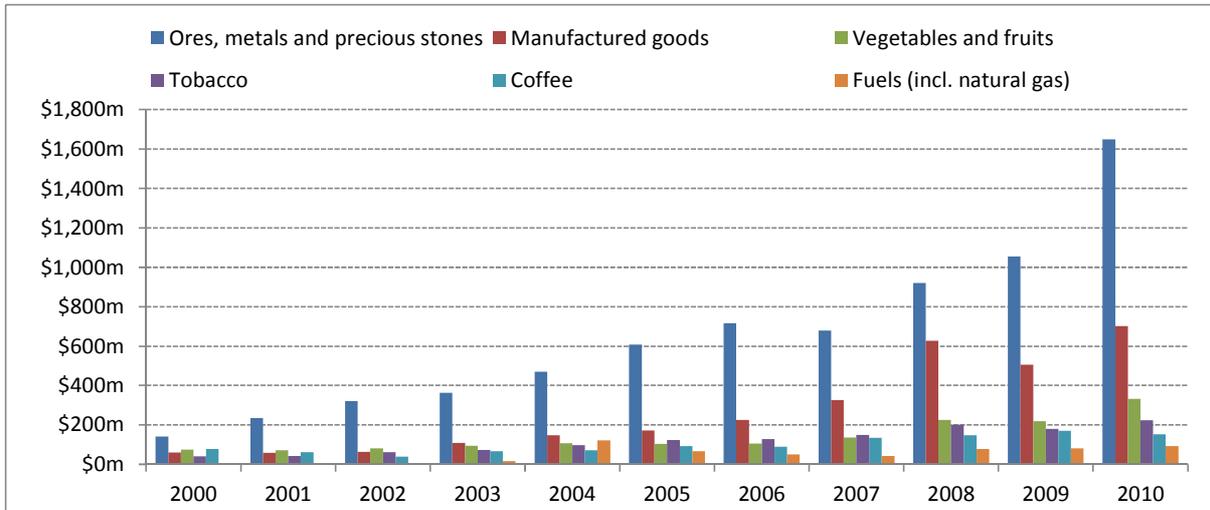
Source: UNCTADstat database.

The potential for growth in the sector is, however, hampered by a series of **institutional and structural weaknesses that weaken the investment climate**. The World Bank's 'Doing Business' rankings place Tanzania at 128 of 183 countries. Key areas of concern include a cumbersome regulatory climate (resulting in long waits for licenses and approvals, in particular for construction, where Tanzania ranks 179 out of 183), as well as unpredictable energy supply and inefficient procedures for imports and exports. In the Fraser Institute's global survey of mining executives, Tanzania ranks highly at 4th among 13 African countries on "mineral potential, assuming current regulations/land-use restrictions", indicating that companies find current policy frameworks relatively attractive. However, on the question of "Regulatory duplication and inconsistencies (including federal/provincial, federal/state, inter-departmental overlap)" the country does less well, ranking 7th out of 13.⁹

Gold has become **Tanzania's dominant export**, as illustrated in Figure 3.3 below. The country is now Africa's third largest gold producer, with gold exports of almost US\$ 900 million in 2008 (accounting for around 2% of global output – see USGS 2010). Since 1999, gold has rapidly outdistanced all other traditional export activities to become easily Tanzania's largest single export earner.

⁹ Fraser Institute Survey of Mining Companies 2010/11. Available at <http://www.fraserinstitute.org/research-news/research/display.aspx?id=17302>

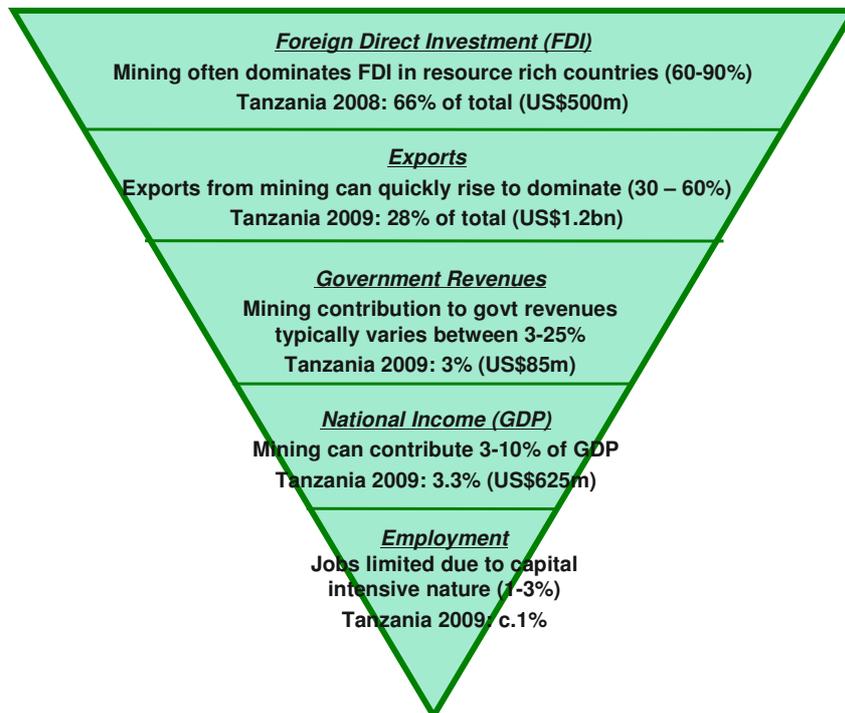
Figure 3.3 Main Tanzania exports, 2000-2010



Source: UNCTADstat database.

At the level of Tanzania’s macroeconomy, the main benefit streams associated with mining can be split into FDI, exports/foreign exchange generation, fiscal payments, GDP-enhancement and increased employment. Some of these macroeconomic benefits have quickly grown from a very low base in 2000 to become large to the point they dominate the contributions of all other productive sectors. Other benefits, while quite large in absolute terms, are relatively small compared to the contributions of other sectors of activity. The significant differences in the *relative* magnitudes of these various macroeconomic impacts are illustrated in Figure 3.4.

Figure 3.4 Breakdown of principal macroeconomic impacts



Source: Author calculations

It must of course be recognised that FDI and exports are inherently crude measures of economic benefits and certainly fail to capture the true extent of local benefits from FDI.¹⁰ **Tax revenues** constitute a benefit stream from mining **more directly linked and relevant to national economic development**. The contribution of mining to Tanzania's tax revenue has to date been limited: the main mining companies paid US\$ 85 million in the 2008/09 fiscal year, representing just 3% of overall fiscal receipts. However, mining investments anywhere in the world typically pay only modest amounts of tax in their early years, since investment costs are so high and depreciation charges typically cut into taxable profits for eight or more years irrespective of whether host governments offer tax holidays or not. In relation to this issue, the analysis conducted for the ICMM by OPM in 2009 showed quite clearly that the mineral sector's contribution to public revenue – based on currently active mining operations only – was set to grow rapidly as capital allowances are exhausted to a peak of about US\$ 280 million in 2017.¹¹

As regards the impact mining has on GDP and GDP growth, the sector is currently **contributing around 3-4% to GDP**, which compares with a target the government has set for 2025 of 10%.¹² This target does seem quite feasible and the significant **potential for further growth** is highlighted by estimates that only 4% of Tanzania's gold deposits are currently being exploited.

As was shown in Figure 3.4, large-scale mining's **contribution to overall employment** within a country is normally quite limited and that is indeed the current situation in Tanzania. Modern mining is an increasingly capital-intensive activity requiring specialised skills that may not be available within the host country. Even allowing for indirect employees (contractors), the total number of employment opportunities in Tanzania's formal mineral sector, assuming a multiplier of 1.9 (see section 5.4), add up to close to 20,000, which represents only a small proportion of the total formal-sector non-agriculture workforce of 3 million. However, there seems to be a more significant potential for the mineral sector to generate more jobs further down the value chain from local firms able to provide inputs into the industry. The challenge is that, as Tanzania is only a lightly industrialised country, this extra employment boost depends on the increasing availability of skills, as well as on a wide range of supportive government policies to promote more local industrial and agro-industrial activity and so increased local content.

3.3.1 The policy framework for mining

The **Mineral Sector Policy of 1997** sought to promote investment in Tanzania's mineral sector through a range of investor incentives. It also **emphasised the importance of community participation**, including by outlining requirements for social impact assessments, mining–community partnerships, and by encouraging mining companies to procure local inputs wherever possible. This policy was implemented through the **Mining Act of 1998 and Financial Laws (Miscellaneous Amendments) Act, 1997, which contained a range of fiscal incentives to encourage investments**, including 100% capital allowances,

¹⁰ FDI includes investment in capital equipment with limited alternative uses from, for example, mining activities. GDP – as a measure of value added in the economy – is completely silent on the distribution of this value added (most of which may be repatriated to the investor's home country).

¹¹ ICMM (2009), 'Mining in Tanzania: What future can we expect?' Available online.

¹² Goldstuck, A. & T. Hughes (2010), 'Securing a social license to operate? From stone age to new age mining in Tanzania'. SAIIA Research Report 7.

import duty reduction or exemptions (e.g. on fuel),¹³ as well as the right to transfer 100% of profits to overseas accounts. It also allowed 100% foreign private investments and provided for the minister responsible for mining to enter into development agreements with mining companies. These agreements, including clauses that stabilise fiscal conditions, are binding on the United Republic of Tanzania (SID 2009).

However, the Mining Act of 1998 and the subsequent Mining Regulations of 1999 **did not adequately address the pro-development policy statements** contained in the Mineral Sector Policy of 1997.¹⁴ The act did not include any requirements for local content, even when the relevant goods and services are produced locally, nor does it impose any conditions on other development objectives, such as training or value addition (Shivji 2007). This legislation also contained **weaknesses in that it granted excessive incentives to investors, and that did not effectively address the governance of mining licenses**, in particular with respect to monitoring and oversight of license holders. Although the mineral sector has seen rapid growth since the late 1990s the sector's contribution to GDP and to revenue has remained low as well as integration with other sectors of the economy. Many local stakeholders have therefore argued that the sector is **failing to deliver sufficient benefits to the country**. Critics target both the *levels* of benefits received (e.g. limited tax contribution, limited local procurement) as well as the *distribution* of benefits received (e.g. few jobs for immediate communities, discrimination in social services provided).¹⁵

To address these issues and **review the legal, regulatory and fiscal framework of the mineral sector**, several studies were conducted by external consultants and the government itself. The latter included the Mineral Policy Review Committee (the Kipokola Report) of 2004 and the 2008 Presidential Commission on the Mineral Sector (Government of Tanzania 2008). These reports highlighted a lack of government capacity to regulate and administer the sector as well as the limited development of small-scale mining in the last ten years. The Bomani Report recommended **increased royalties and fewer tax exemptions** for new investors, as well as improved procedures for repairing environmental damage. It also called for strengthened compensation practices, noting that the reality differed markedly from existing legal provisions (highlighting the vulnerability of communities who often lack any information about their rights to compensation and how to calculate it – see Government of Tanzania 2008: p. 27). However, the committee rejected a windfall tax on company profits, citing difficulties in implementation.

Following a review of the Mineral Policy of 1997, the MEM formulated a new policy in 2009 to build on earlier reforms. The Mineral Policy of 2009 (Government of Tanzania 2009) has many of the same objectives as the 1997 policy, but aims to address a number of challenges that have been identified in the sector (e.g. through the Kipokola and Bomani reports). More focus is given to promoting economic integration of the mineral sector with the rest of the economy, including the promotion of value-added activities. It also aims to increase the

¹³ It is understood that this is mainly to mitigate the extra costs mining companies face because of the poor availability of electricity from the grid and the consequent need to generate much of their own electricity.

¹⁴ One of the key policy objectives of the Mineral Sector Policy is 'to ensure that wealth generated from mining support sustainable economic and social development; to minimise or eliminate adverse social and environmental impact of mining activities'. See <http://www.tanzania.go.tz/mining.html>.

¹⁵ See FCG (2009), 'Ex-post Evaluation of Nordic Development Fund 277: Mineral Sector Development Technical Assistance Project, Tanzania. Prepared by Finnish Consulting Group (FCG), Final Draft Report August, 2009.

amount of revenue that government receives from the sector and allow for strategic government participation in mining projects. Development of small-scale mining is given more emphasis, as is the strengthening of the sector’s legal and regulatory framework in order to enhance government capacity for monitoring the industry. In line with the change in emphasis of the policy, fiscal and tax regulations for the sector were reviewed and a new Mining Act (2010) was enacted in April 2010 to guide the legal and regulatory framework for the sector (Government of Tanzania 2010) – see Box 3.1.¹⁶ The Act became operational on 1 November 2010.

Box 3.1 Key features of the Mining Act 2010

In the Mining Act 2010 royalties paid by companies have been altered both in terms of the method by which they are calculated and in terms of the rates applied. For the method of calculation, this is now levied on the gross value of minerals (at export or point of domestic delivery) rather than the net value (net back value) used in the past. Royalties levied on diamonds have remained at 5% but the rates for several other minerals have increased (see Table 3.1). Royalty remissions that were available for negative operating margins have also been eliminated.

Table 3.1 Changes in royalty rates in Mining Act (2010)

Royalty rates	Mining Act 1998	Mining Act 2010
Diamonds	5%	5%
Uranium	3%	5%
Gemstones	3%	5%
Metallic minerals (copper, gold, silver, platinum)	3%	4%
Other	3%	3%

Provisions have also been made to allow for government equity participation in selected large-scale mining projects. While the participation of the government in mining projects has to-date been on a case-by-case basis, the new Act provides for regulations granting the government a free carried equity interest, and provides for the size (percentage ownership) of national ownership to be set through negotiation. This reform is intended to enable government to participate more fully in the financing and conduct of future mining operations.

Provisions have been made to increase the participation of Tanzanian citizens in mining operations. Primary mining licences for small-scale mining continue to be reserved exclusively for Tanzanian citizens or corporate bodies under the exclusive control of Tanzanian citizens. Licences for gemstone mining (regardless of the size of the operations) have also been reserved for Tanzanian citizens, although the Act gives the Minister the authority to grant a licence for gemstone mining to applicants with non-Tanzanian participants as long as Tanzanian participants form at least 50% of the venture. This is intended to be done only for developments for which the Minister believes specialised skills, technology or a high level of investment will be needed.

Additionally, the Act includes the following changes to Tanzania’s mining framework:

- Although the Act does not prescribe it itself, the Act grants the Minister the power to prescribe

¹⁶ Over the decade leading up to the Mining Act (2010), fiscal laws have also been amended from time to time to reduce incentives provided to mining companies, e.g. removal of additional capital allowance on unredeemed capital expenditure, exemptions of fuel VAT etc. Some new tax measures were also introduced, e.g. ring-fencing and thin capitalisation.

a standard MDA for all projects exceeding US\$ 100 million.

- The Act gives the Minister the power to introduce regulations requiring companies to list on the local stock exchange as well as sell equity to Tanzanian citizens.
- The Act prescribes a higher degree of disclosure of reports and records from holders of mineral rights than the previous Act.
- The Act limits the number of prospecting licences per holder to a maximum of 20 if over 2,000 square kilometres.
- No MDAs will be issued for capital less than US\$ 100 million; MDAs will be reviewed after every 5 years.
- Special Mining Licence term requests are restricted to a maximum of the life of the ore body as given in the feasibility study or a lesser period (the 1998 Act allowed for terms of up to 25 years to be requested). Renewals can be requested for the either 25 years or the life of the ore body, whichever is less (the 1998 Act allowed for renewals of up to 25 years).
- Mining licences must have annual procurement plans with preferences for local services and products.
- Mining projects must provide compensation, relocation and resettlement plans, and must have implementation plans in place before commencement of the project.
- Granting of Primary Mining Licenses (PMLs) and mineral trading licences (Dealers Licences) have been decentralized, whereby PMLs and Dealer Licences are now issued at Zonal Mines Offices.

Source: Mining Act, 2010

3.3.2 Mining, property rights and land issues

Land rights have become one of the major issues of contention in the extractive industry in Tanzania, with the Bomani Report accusing the government of giving away large portions of land to mining companies and thereby displacing indigenous peoples (SID 2009). Whilst property rights are legally guaranteed in principle, corruption and inefficiency limit the government's capacity to enforce the law. Conflict over use of customary land has been **a major source of tension between local communities and mining companies** in Tanzania, particularly where local livelihoods depend on the use of such land.

Conflict over land for mining remains commonplace. The licensing process provides an extreme case, resulting in many 'grey' or ambiguous areas under which different stakeholders in the mineral sector are forced to transact. In particular, the licensing process suffers from institutional weaknesses in that large-scale mining licenses are applied for centrally, whereas small-scale licenses are applied for at local zonal mines offices of the Ministry of Energy and Minerals.¹⁷ This can result in overlaps between large- and small-scale

¹⁷ Goldstuck, A. and Tim Hughes (2010), 'Securing a Social Licence to Operate? From Stone Age to New Age Mining in Tanzania', SAIIA Governance of Africa's Resources Programme, Research Report 7, February 2010. Available online.

mining licenses as large mines applied for licenses on what they thought were fairly open areas. Under the law, holders of small-scale mining licenses should in principle be compensated by the larger mining license holder, but there is a lack of an effective and transparent land compensation procedure to resolve conflicts over licenses. Small-scale mining license holders are therefore rarely compensated, and have often resisted being removed from plots even when bought out.

The long-standing dispute over the Bulyanhulu concession is an extreme example of the difficulties faced by the sector in dealing with artisanal miners who do not have mining licenses. While holders of valid licenses should receive compensation the same does not apply for artisanal miners who have no legal basis for compensation. In Bulyanhulu, there was a long history of artisanal mining that was forcibly removed to make way for a large-scale mine.

3.4 Mineral sector governance and resource management

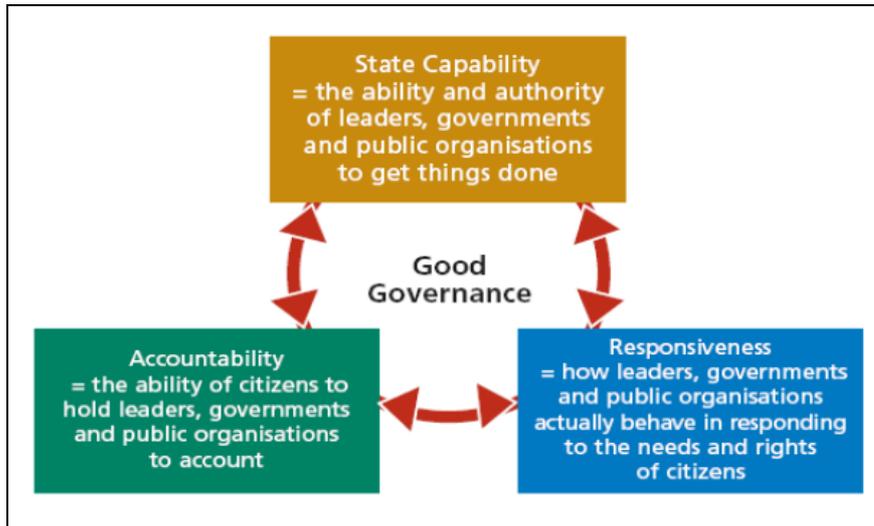
3.4.1 Why good governance of the mineral sector matters

This section discusses what we mean by governance, why it matters for Tanzania and the framework within which large-scale mining companies in Tanzania operate. The Capability, Accountability and Responsiveness Framework articulated in the UK Department for International Development's (DFID) White Paper in 2006 focuses on three overlapping elements which form a 'virtuous cycle of governance' as illustrated in Figure 3.5.¹⁸

- **Capability** is the extent to which leaders and governments are able to get things done, and to perform functions such as providing stability, regulation, trade/growth, effectiveness and security.
- **Accountability** describes the ability of citizens, civil society and the private sector to scrutinise public institutions and governments and hold them to account to ensure transparency, free media, rule of law and elections.
- **Responsiveness** refers to the extent to which public policies and institutions respond to the needs of citizens and uphold their rights, including human rights/liberties, access to basic public services, pro-poor policy, equality, regulation and corruption.

¹⁸ *Accountability Briefing Note*, 2008, London, DFID.

Figure 3.5 Capability, Accountability and Responsiveness Framework



To improve governance effectively, the SMMRP will need to work on improving all three aspects of the governance framework. This requires successfully identifying and engaging institutions with responsibilities for providing **capability** (e.g. policy and regulation from the MEM), **accountability** (e.g. from unions, the media and community and interest groups) and **responsiveness** (e.g. mechanisms for demanding accountability and redress, such as the TEITI, the National Assembly and broader legal system).

3.4.2 Governance indicators for Tanzania

A number of core governance features are monitored by the World Bank through their governance indicators programme. **These governance features have a direct influence on the overall benefits of mining projects to the country (employment, taxes, and local content opportunities). They also shape the contribution of mining indirectly by determining the ability of communities to make their voices heard and to seek remedy for perceived injustices.**

The World Bank publishes annual indicators from a variety of data sources measuring perceptions relating to six dimensions of governance for over 200 countries. These indicators allow for comparisons of governance both over time and across countries.¹⁹ Tanzania's governance has shown mixed results across the six indicators over time (see Figure 3.6). Encouragingly, Tanzania has improved in a number of areas since 1996. This improvement has been largest in the area of 'Control of Corruption', but the country has also shown moderate improvements over time in the areas of 'Voice and Accountability', 'Political Stability' and 'Government Effectiveness'.

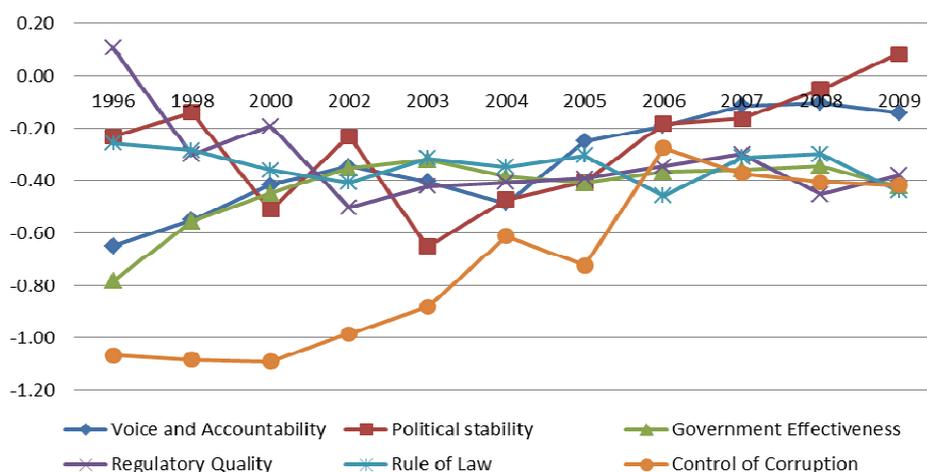
Tanzania has, however, also experienced deterioration in two indicators. This includes a small absolute and large relative (in relation to its international ranking) deterioration in 'Rule

¹⁹ Two indicators outline the processes by which governments are selected and monitored ('Voice and Accountability' and 'Political Stability'), two measure the capacity of government to effectively formulate and implement sound policies ('Government Effectiveness' and 'Regulatory Quality') and two look at the respect of citizens and the state for the institutions that govern economic and social interactions ('Rule of Law' and 'Control of Corruption').

of Law'. In the area of 'Regulatory Quality', Tanzania has performed least well, having experienced a large decline (in absolute terms as well as relative to other countries). While some of the improvements are encouraging, Tanzania nevertheless remains a mid-ranking performer in most of the areas in which it has shown an improvement both in relation to other countries in the Africa region and relative to the international dataset. Although 'Control of Corruption' has improved dramatically, Tanzania started from a very low base as one of the worst performers internationally and has therefore still not reached the level of mid-ranking performers on this particular indicator.

In terms of 'Regulatory Quality' and 'Rule of Law', Tanzania has dropped from being a mid-ranking country to one of the 'mid-to-low'-ranking countries. The absence of rankings closer to those of the better performing countries in the region (such as Botswana and South Africa) highlights the fact that the institutional and governance framework remains immature in several regards. Indeed, a 2010 report from the Bertelsmann Stiftung Institute (2010) refers to Tanzania's 'very low level of economic and social development, weak basic market economic structures, very poorly educated populace, scant civic traditions, inefficient state administrative system, and only moderately established 'rule of law'' as creating adverse conditions for business.

Figure 3.6 World Bank governance indicators for Tanzania, 1996-2009



Source: World Bank

3.4.3 Revenue management

The most visible and significant contribution to Tanzania from mining will come through the taxes, royalties and other levies paid by the mining companies. Translating this into positive development outcomes requires effective expenditure by government on goods and services. To this end, Tanzania's Public Finance Management system has undergone a number of reforms over recent years. These have included enhancements to the tax collection system, with revenues now about 25% of GDP. The **Public Expenditure and Financial Accountability Review** – supervised by the World Bank – indicates that Tanzania's recent record on budget performance and fiscal discipline is relatively strong. However, weaknesses remain, including those that relate to parliamentary oversight of the national budget, where it is suggested that the **Public Accounts Committee is weak** and susceptible to political interference. Although Tanzania has implemented an integrated financial management system, which is now being rolled out to district level, there are still

concerns with internal and external audits, including inefficient and ineffective payroll controls.

A matter that is very relevant in the context of mining's local impact is the fact that there is currently only **limited revenue collection and capacity at the district council level**. The 1982 Local Government Act provides for district governments to charge a service levy on mining activities to cover the costs incurred by them in providing social services to mine areas (for example, the repair of roads damaged by heavy trucks). However, most local governments fail to collect this, possibly due to lack of awareness or to collection and revenue management constraints.²⁰

Most funding for local government therefore comes from district-level budgets sourced in other ways, including transfers from central government that do not include any special local assignment of national mineral revenues – contrary to the situation in many other mining-dependent countries. There is also **significant year-on-year variance and so uncertainty over district-level budgets**, as well as in the funds actually received and the expenditures achieved. Certainly, the present system of local government finance does not support empowered and well-funded local authorities capable of addressing the local impacts arising from extractive projects. The local councils, for example, often have neither the financial nor other capacities to effectively partner mining companies in the delivery of social projects. Instead, the president and the appointed regional and **district commissioners and associated civil servants retain significant influence** by controlling some funds from the central government budget that they can use in their local areas on a largely discretionary basis.²¹ So, there is at best some ambiguity about how and with whom the mining companies might deploy their available social and economic development budgets.

In order to strengthen the revenue accountability of large oil, gas and mining companies and support the revenue collection efforts of the Tanzania Revenue Authority, **Tanzania has implemented the EITI**. This initiative – which sets standards for companies to publish what they pay and governments to report what they receive – is supported in Tanzania by a Multi-Donor Trust Fund, CIDA, NORAD, AfDB and the Government of Tanzania. The TEITI Commission Multi-Stakeholder Group is headed by Judge Mark Bomani and published the first report in 2011, showing considerable discrepancies between the amounts of tax claimed to have been paid by the companies and the amount claimed to have been received by government.²² The largest difference is thought to result from unauthorised claims on royalties received by the MEM but not passed onto consolidated revenue (US\$ 17 million)²³. The TEITI Secretariat and the Controller and Auditor General investigated the reported discrepancy, uncovering documentation that had not been submitted to the reconciler at the time. This resulted in the discrepancy falling from US\$ 36 million to around US\$ 0.5 million. This is an extremely alarming finding, as tax and royalty payments to government represent one of the largest benefits from large-scale mining to a host country. Capturing these

²⁰ SID (2009).

²¹ Much of the authority for these arrangements derives from the National Economic Empowerment Act of 2004, which also contained provisions for special local loan programmes from banks guaranteed by government.

²² Several NGOs and other non-state actors, including the media, are engaged actively in the debate regarding management of Tanzania's mineral wealth. The Revenue Watch Institute has recently started a Tanzania programme in response to what is perceived as pervasive lack of transparency in the extractive industries sector.

²³ See page 31 of the TEITI reconciliation report of 8 February 2011.

***Tanzania Investments Benefits Study
(Sustainable Management of Minerals Resources Project)***

benefits is critical to ensuring the government has resources to redistribute to affected communities and wider society through expenditures in the budget.

Box 3.2 Findings from the TEITI

The EITI aims to strengthen governance by improving transparency and accountability in the extractives sector. Tanzania has recently published the final report on the TEITI reconciliation for the period 1 July 2008 to 30 June 2009, with the reconciliation of material payments and receipts made to the Tanzanian government. The scope of the work was limited to the mining and gas sectors (it did not include oil) and covered nine mine operations and two gas fields.

The total benefits reported by the government amount to almost US\$ 100 million. The process was finalised on February 2011 and there were differences between the figures reported by government and the figures reported by companies that remained unresolved. On aggregate, the government initially reported US\$ 36 million less than companies, which is a significant proportion of benefits. The reconcilers noted in their final report that a significant portion of the discrepancy was due to (i) lack of training on how to fill the template and therefore there was confusion over what payments were to be reported; (ii) difficulties among government departments in retrieving data from manual system archives; and (iii) lack of awareness on the EITI requirements among the staff with responsibility for providing payment/revenues data.

Shortly following the publication of these alarming findings, the government committed to assign the Controller and Auditor General to examine the reported discrepancies in various payment transactions between mining companies and government agencies. The result was a dramatic fall in the reported discrepancy from US\$ 36 million to c.US\$ 0.5 million.

Table 3.2 shows the amount that each operation contributed to the total in descending order. The mines participating in this study are highlighted in bold.

Table 3.2 Benefits flows reported by companies in the TEITI (in US\$ million for 2008-2009)

	Operation	US\$ m
1	Bulyanhulu	25.14
2	GGM	19.12
3	North Mara Gold Mine	16.98
4	Buzwagi and Tulawaka	13.03
5	Resolute Tanzania Ltd	7.12
6	TPDC (gas field)	6.77
7	Mwadui Diamonds Mine	5.78
8	Artumas Group and Partners Ltd	2.22
9	Tanzanite One Mining Ltd	1.89
10	Pan African Energy Ltd (gas field)	1.22
11	El Hillal Minerals Ltd	0.18
	Total	99.46

Out of the total benefits, the sub-group of the four mines that participated in this study (Bulyanhulu, Buzwagi, GGM and Mwadui) plus Tulawaka²⁴ accounted for US\$ 63 million, i.e. almost two-thirds of the total contribution to the government from the mineral sector.

Source: Hart Group (2011), 'Reconciliation of payments made by the extractive companies to the Government', Final Report, Tanzania, 8 February 2011.

3.4.4 The importance of sound macroeconomic management

²⁴ Buzwagi and Tulawaka are both owned by Pangea Minerals Limited, so the contributions from these two mines are reported together in the TEITI.

The mechanisms through which the positive national-level impacts shown in Figure 3.4 translate into broader development outcomes do not function in an automatic manner. In particular, sound macroeconomic management is necessary to manage the extremely large inflows of foreign currency from exports. These exports are only partially offset by imports, and so have led to **Balance of Payments (BoP) surpluses** (from mining) which can **put upward pressures on the exchange rate**. Research conducted by OPM in Tanzania in 2009 forecast significant growth in mineral sector output, with exports projected to reach US\$ 1.4 billion in 2016. These expected increases in inflows of foreign currency were likely to be offset only partially by imports, leading to increasing BoP surpluses (from mining), averaging US\$ 1.2 billion over the period 2011-2016 and therefore equivalent to 4.7% of Tanzania's GDP.

Furthermore, the IMF has estimated that an increase in the BoP equivalent to 1% of GDP will lead to a 3.1% increase in the real exchange rate (RER) (Hobdari 2008). This suggests that even on the basis of the known expansion plans from the gold mining companies there will be upward pressure on the RER in the region of 14-15% by the years 2011-16.²⁵ The real impact of the mineral sector on RER appreciations may be significantly higher than this, given that forecasts are necessarily restricted to mines that are currently in operation, whereas high commodities prices and explicit government support are likely to herald **further expansion of the sector** in the coming years.

Although an appreciating RER is a macroeconomic phenomenon, it can nonetheless have **severe negative impacts on rural communities** – including those in the vicinity of the main mines. A stronger exchange rate can, for example, mean that the profitability of traditional export sectors (e.g. tea, coffee) may be undermined, leading possibly to greater unemployment and pressures on social services. It also makes local content more expensive for mining companies whose income (export proceeds) is in US\$, making it harder to justify local purchases. Hence, ongoing sound macroeconomic management is essential for mineral-rich countries to reduce the risk of negative impacts that can in turn undo many of the benefits we already see in Tanzania and that would otherwise be confidently expected to increase in the next five to 10 years (see Box 3.3).

Box 3.3 Macroeconomic management and the resource curse

The historical experience of many resource-rich developing countries shows that extracting minerals does not just cause problems for those living at the local mine-site level. It is also associated with low economic growth and development at the national level, a phenomenon known as the 'resource curse'. **Sound macroeconomic management is critical for ensuring resource wealth supports rather than hinders development.** Without sound macroeconomic policies many of the national benefits arising from mining unravel. **So how does this happen?**

First, **large receipts from mineral exports can put upward pressure on the RER.** This has the effect of making other export sectors less competitive, in particular in many developing countries that rely on exports of relatively commoditised products with little value added (where exporters are 'price takers' in the global markets). It also has the effect of reducing the competitiveness of any local firms producing for the domestic market. Since imported alternatives become more cost effective, thereby reducing the attraction of

²⁵ The RER is the purchasing power of a currency relative to another. The changes of the RER over time are informative on the evolution of the relative price of a unit of GDP in the foreign country in terms of GDP units of the domestic country.

companies to produce locally, the risk is that reduced competitiveness results in jobs being lost.

Second, the volatility of international market prices of minerals directly translates to **volatile export and tax revenues streams to government**, complicating the budgetary processes. Negative macroeconomic impacts are particularly likely if these ‘lumpy’ benefit streams are spent on consumption rather than investment. This is likely to result in domestic inflation that increases costs of living and hits the poorest in society hardest.

Source: ICMM Case Studies (available online)

3.5 Institutional and governance relationships between central and local government in Tanzania

This section outlines the formal institutional structure of local government and how central and local government interact in practice across government generally and in the mineral sector specifically. Often, the informal realities of the interaction between central and local government differ substantially from the formal institutional arrangements that are intended to govern relations between the two levels of government.

3.5.1 The evolution of the local government system in Tanzania

The local government system has undergone a series of reforms and reorganisation over time, leading to a complex system of multiple local government entities and parallel lines of reporting.

Elected councils were initially established in the colonial era. During the German colonial period, existing chiefdoms were abolished and the post of District Commissioner was established. The British colonial period built on the system by keeping the District Commissioner posts in rural areas but established urban local governments and reinstated chiefs. After World War II, a more formalised system of self-governing and democratic Local Government Authorities (LGAs) was created (PMO-RALG, 2011). These institutions initially remained after independence, with the number of elected district councils increasing over time. However, the poor performance of district councils and changes in policy direction by the government led to a dramatic restructuring of the system. In the **1970s, the government abolished the existing local authorities** as well as the institutions supporting them and replaced them with a **system of direct central government rule**. The ‘villagisation’ scheme implemented at this time saw the introduction of the **1975 Village Act, which introduced villages as the bottom rung of the government system**. Ruling party candidates were appointed as ‘Village Chair’ and ‘Village Secretary’. The central government took over responsibility for the provision and management of basic services, as well as the planning and implementation of development projects at the local level (Ngwinlizi, 2002).

Following the deterioration in service delivery that occurred after these reforms, the ruling party decided to revive the local government system (PMO-RALG, 2011). **Elected councils were brought back in 1982** as an add-on to the existing village system. In the **early 1990s, multi-party politics were introduced in Tanzania and local party branches were formally delinked from the local government system** but the institutional set-up remained unchanged. In **1999, the Local Government Reform Programme (LGRP)** was put in place to support the government’s policy of **decentralisation by devolution**. The programme aims to empower LGAs by giving them more autonomy and control over finances, planning and implementation of development projects. The intention is to improve service delivery and

make government more accountable and democratic by bringing it closer to the people. The first phase of the LGRP was completed in 2007 and saw some success in improving financial management capacity and the quality of human resources in local government. However, much remains to be done and the second phase began in 2010. (See Annex E Ghana case study for decentralisation).

3.5.2 Formal structure of local government system

The local government system in existence today is a consequence of the multiple reforms outlined above. The system currently consists of a number of government bodies at various geographical levels staffed with a mix of political appointees, administrative appointees and elected representatives. Figure 3.7 depicts each of the government bodies (in green) and the heads of the bodies (in blue) at each geographical level (from largest to smallest) according to whether they are staffed by political appointees, administrative appointees or elected representatives.

Figure 3.7 Local government system in Tanzania

Local Government System in Tanzania					
	Political appointees	Administrative appointees	Elected representatives		
National		Prime Minister's Office, Regional Administration and Local Government (PMO-RALG)	Parliament		
Regions	Regional Commissioner (RC)				
	Regional Administrative Secretary (RAS)				
	Office of the PMO-RALG				
Districts	District Commissioner (DC)	District Executive Director (DED)	Council Chair		
	Office of the DC	District Council	Full Council		
Divisions	Divisional Secretary (DS)				
	Office of the DS				
Wards		Ward Executive Officer (WEO)	Ward Councillor		
		Office of the WEO			
Villages/Mtaa		Village Executive Officer (VEO)	Village Chair	Assembly	Ward Development Committee (WDC)
			Village Council		
Kitongoji			Kitongoji Chair		

Source: Authors

At present, the sub-national government system consists of the following bodies at various levels (from the largest geographical area to the smallest):

- **National and regional levels**

At the **national level**, the Prime Minister's Office, Regional Administration and Local Government (**PMO-RALG**) is the central government ministry responsible for local government policy implementation and regional development. The PMO-RALG has offices in 21 regions of mainland Tanzania to assist and support local authorities. These offices are headed by a **Regional Commissioner**, a political appointee with similar influence to a minister, who is tasked with representing central government at the regional level. The Regional Commissioner is supported administratively by a Regional Administrative

Secretary, also appointed by the president. In reality, the Regional Commissioner is expected to implement the ruling party's manifesto.

- **District level**

At a **district** level, political roles become more overlapping and complicated. There are currently 161 LGAs in the country (PMO-RALG, 2011). There are three main bodies at district level: the **Office of the District Commissioner**, the **District Council** and the **Full Council**. The District Commissioner is the representative of the president at the district level and is a political appointee, responsible for the implementation of the ruling party manifesto. The District Commissioner is widely regarded as the most powerful district official with the full backing of the ruling party in the exercise of duties. The District Council is headed by a **District Executive Director**. The District Executive Director is the chief executive officer of the District Council and is required to report to both the council (on legislative matters) and the PMO-RALG (on professional and administrative matters). However, experience suggests that the District Executive Director is held accountable only by the PMO-RALG and not the council (UWAZI, 2011). The Full Council is headed by a **Council Chair**, who is the elected political leader at the LGA level. Formally, the Council Chair leads the planning and budgeting process of the district, although the operational powers of the Full Council are, in effect, fairly restricted and district executive directors have considerable authority over the Full Council. Members of Parliament are also members of Full Councils.

- **Division level**

The division (of which there are around 500 in the country) is the smallest geographical level at which central government is represented. Each office is headed by a Divisional Secretary, a political appointee appointed by the District Commissioner and given the power to enforce all by-laws issued by the District Commissioner.

- **Ward, village/*mtaa* and Kitongoji level**

All bodies below division level are administrative rather than political bodies. At the **ward** level, there are two formal positions: the **Ward Executive Officer** and the **Ward Councillor**. The ward is responsible for coordinating villages in the ward and is the constituency for electing councillors to the district councils. Each ward typically consists of around five villages. The Ward Executive Officer is an administrative appointee and is head of the **Office of the Ward Executive Officer** and secretary to the **Ward Development Committee (WDC)**. The Ward Councillor is an elected representative and is the Chair of the WDC. The WDC consists of Village Chairs, Village Executive Officers, the Ward Executive Officer and the Ward Councillor and is responsible for coordinating Ward budgets and implementing the policies of the District Council. At the **village** level (or '*mtaa*' in urban areas), there are two formal positions: the **Village Executive Officer**, an administrative appointee, and the **Village Chair**, an elected representative. **Village Councils** have the Village Executive Officer as a secretary and they consist of elected and special seat village councillors who elect the Village Chair. The **Village Assembly** consists of all village residents over the age of 18 and, formally, is the supreme authority on matters relating to village affairs. However, informally, the Village Council can bypass the Village Assembly fairly easily. In rural areas, the lowest level of local government is the **Kitongoji**, which function as constituencies in the villages. They are chaired by an elected **Kitongoji Chair**, who also serves as a Village Councillor.

3.5.3 Informal realities of local government power relationships

Local government is composed of a number of geographical layers, each with a variety of

organisational bodies headed by either political appointees, civil servants or elected representatives. The complexity of the system, along with the parallel lines of reporting contained within it, has led to ambiguity in the distribution of power between various bodies, which has allowed discretionary decision making in the system. While certain bodies are formally tasked with particular roles and authority, the informal distribution of power often differs in practice (Mmuya and Lemoyan, 2008).

For example, the three leading figures at the district level (Chair of the Full Council, District Executive Officer and District Commissioner) have levels of influence that differ from those formally given to them. The Chair of the Full Council is the elected representative and should lead the planning and budgeting process of the district, but the authority of the Full Council is fairly restricted in reality and it often ends up merely approving district plans and budgets. However, in instances where the Chair has strong personal connections with the leadership in the political party, the power of the Chair is considerably greater. The District Executive Director is an administrative appointee with a high degree of authority over the Full Council, both formally as the chief executive and informally through political connections to the PMO-RALG. However, power largely lies with the only political appointee at the district level, the District Commissioner, even though this is not formally instituted. As the official with the closest political connections and the backing of the ruling party, the District Commissioner is regarded as the most powerful official at this level of government in most districts. The District Commissioner is the only district official with the authority to issue by-laws which lower levels of local government are forced to implement (UWAZI, 2011). Discrepancies in the formal and informal system of governance are seen at other levels of local government too. While the Village Council is formally accountable to the Village Assembly (which consists of all adult residents of the village), in reality it is fairly easy for the Village Council to bypass the Village Assembly in its exercise of authority.

Within local government, political appointees (or those with close personal ties to the ruling party) retain the greatest amount of power. Those in elected positions appear to have the least amount of power in the system, which is directly in contrast to the objectives of the LGRP. Although the ruling political party formally delinked itself from the local government system in the 1990s, power informally remains with those most closely connected to the ruling party. The disconnection between formal and informal authority weakens local government institutions and makes them less accountable to the communities they serve.

Compounding the problems caused by ambiguity in power relations *within local government*, there also appears to be **a considerable amount of ambiguity in relation to the distribution of power between central and local government**. The formal position of central government is that of a policy of decentralisation. While some improvements have been made since 2004, informal authority relations between central and local government remain unclear. Fieldwork conducted in 2008 suggests that there is limited power sharing between central and local government, with central government officials overruling, derailing or altering decisions made by LGAs on a regular basis (Mmuya and Lemoyan, 2009). LGAs see themselves as appendages of the real governing authority, i.e. central government. Mmuya and Lemoyan (2009) argue that local government is characterised by a **'proclamations culture'**, whereby LGAs are merely conduits for top-down directives issued by central government and expect to be told what to do. They also argue that LGAs lack territorial and budget integrity and that local councils are dominated by an 'unholy triumvirate' of political leaders, senior civil servants and local businesses, who collude to maintain a system of systematic rent collection (Mmuya and Lemoyan, 2008).

There have, however, been some improvements in recent years towards a rule-based budgetary system and away from the highly discretionary nature that used to characterise

budget allocation across local government. Prior to 2004, the Minister of the PMO-RALG was granted significant discretion in the allocation of grants to LGAs, which resulted in highly uneven allocation of resources. This discretionary system has since been replaced with an objective, transparent and equitable formula-based system for allocating budgetary resources for recurrent expenditure, which has partly (though not wholly) redressed disparities in budgetary allocations across councils. Nevertheless, the actual exercise of power remains a mix of formal hierarchical rules and informal relationships.

3.5.4 Local government and the mineral sector

Although most sectors have undergone a process of decentralisation through the LGRP, the mineral sector remains an exception. In fact, the administration of mining largely continues to be run centrally from Dar es Salaam through the MEM. Although the MEM has a Department of Mineral Resources with eight Zonal Mines offices and 14 Resident Mines Offices in mining regions, administrative and fiscal authority is retained by central government. This adds an additional layer of complexity to the already complex governance relationships outlined above.

The centralised nature of mining-sector governance creates problems for the mining industry in terms of its interaction with other sectors of the economy, where administration has been decentralised. In particular, it affects the administrative support that can be offered to small-scale miners and affects district-level revenue generation from large-scale and small-scale mining activities. This is because no LGA with legitimate (formal or informal) power exists to influence these areas (Mwaipopo et al., 2004). Even in the one area in which LGAs have been granted the ability to collect revenue locally from the mineral sector (in the form of service levies), these have often not been collected. Where they have been collected, the revenue is collected at district headquarters, with villages in mining areas seeing little of the benefits of this revenue (SID, 2009).

At the local level, the communities that are most directly affected by mining typically have limited knowledge of the national-level benefit streams and have no real reasons to factor these into their own perceptions about the impacts of mining. Among other things, this tends to result in less pressure from local communities on national governments to improve local schools, roads and hospitals. Instead, there is typically a high and understandable level of expectations in the mining-affected communities that the mining companies themselves should provide social services in mining-affected areas. This type of perception and attitude is further fostered by Tanzania's present system of local government finance, which explicitly avoids favouring mining-affected communities with enhanced levels of central government transfers. The assumption here is that the 'wealth' mining brings to these community areas does not call for any additional supplementation from the national budget – even though this is where many of the negative impacts from mining occur, putting additional pressure on the provision of government services at the local level.

3.6 Summary and discussion

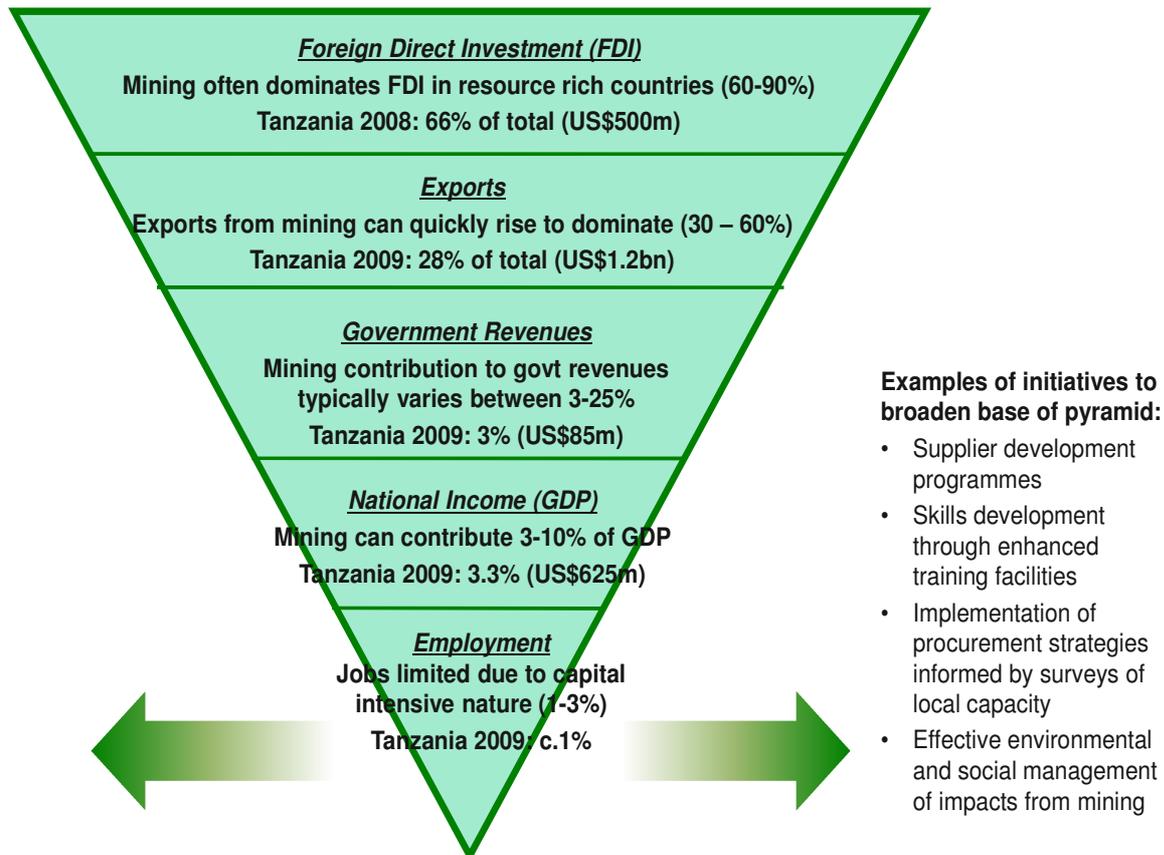
As shown in the inverted pyramid, mining in Tanzania has demonstrated in a relatively short period of time a **great potential to contribute numerous economic benefits at the national level**, particularly through attracting foreign capital and generating foreign currency from exports. **Government revenues** are also already significant at the national level, although the big pay-off in this area is expected to materialise only later in the mining life cycle after expenditure on construction and heavy equipment has been depreciated. This already-demonstrated potential and future benefit from existing mining projects is expected to receive a further boost if oil and gas exploratory projects begin to produce exports and

additional government revenue. However, for Tanzania to benefit fully from taxes and royalties generated from mining activity it will need to ensure that systems are put in place to prevent the losses initially identified by the discrepancies in the TEITI audit being avoided in future.

At the local level the results to date have been more mixed. Modern mining is by its very nature more likely to generate impacts at the national level. The impacts that matter most for local populations, including employment generation, are normally very limited when seen from the perspective of the overall economy of a country. At the same time, local communities are disproportionately affected by negative impacts from mining, including environmental impacts, often significant in-migration and disruptions to livelihood. This is particularly the case if artisanal (unlicensed) mining had previously been present in the area.

The main challenge facing by Tanzania as well as other mining countries is therefore to **broaden the base of the pyramid**. This can happen by integrating mining more closely into the economy, for example through building capabilities of local businesses to supply the mining companies, or by promoting higher value-added activities within the country (as recommended by the Bomani Report). Figure 3.8 illustrates some of the initiatives to broaden the base of the pyramid, which are further elaborated on in the following chapters.

Figure 3.8 Broadening the base of the inverted pyramid so as to increase the benefits to communities



4. Effects of mining on regional social and economic indicators

This chapter examines whether, on the basis of the contributions from mining described in the previous chapter, the social and economic situation of people living in Tanzania's mining regions has improved, worsened or stayed the same. In addition to the contributions of the large-scale mines, there are many factors that drive socioeconomic changes, including the work of the government, donors and NGOs active in these areas. For instance, Plan International have a number of programmes in Geita and Mwanza focusing on education, health, sanitation and promotion of child rights, as do AMREF focusing on HIV/Aids response for mobile populations. The following analysis nonetheless provides some insights into the areas where mining may affect social and economic conditions based on two public data sources:

- First, we use national statistical sources to compare demographics relating to education, health and gender for the mining-dependent regions (Kagera, Mara, Mwanza and Shinyanga) with that of other parts of the country.
- Second, we use HBSs to examine whether there has been any improvement over time in the socioeconomic situation of people living in Mwanza and Shinyanga. We compare these two mining-affected regions with the national average.

4.1 National statistical sources comparing education, health and gender

In assessing the social and economic development of mining regions, and the possible role of the mineral sector in driving these developments, we first look at broad national demographic surveys covering all four mining-dependent regions. The objective is to get some indications of how mining may have affected development in these regions, comparing them with other rural parts of the country.

We present statistics from the TDHS (2004-2005 and 2010) and from the 2007-2008 THMIS. In the first section, we specifically look at three groups of indicators: Education and occupation, Health and Gender. Indicator estimates are reported for seven regions: the four main mining-dependent regions (Shinyanga, Kagera, Mwanza, and Mara), urban and rural regions, and Dar es Salaam.

The most disaggregated level at which data in these surveys is available is for Tanzania's regions. More disaggregated data would have cast greater light on specific, localised impacts of mining investment in these four regions. Nevertheless, given the impacts attributable to large-scale mining, we believe that this data gives some guidance on the social and economic impacts of mining, which can be probed further in subsequent more granular levels of analysis in this and subsequent chapters.

Where possible, we have compared findings between the two waves of the TDHS, as well as between the TDHS and the THMIS (i.e. where the same indicator was used in both surveys). Baseline data for these indicators from the period would have allowed us to better assess changes in the social condition of people living in mining-dependent regions (e.g. since large-scale mining began taking on greater prominence around 2000-2001). Unfortunately, we did not have access to demographics and health data in a comparable form for years prior to 2004.

4.1.1 Education and employment

Tables 4.1 and 4.2 show that levels of educational attainment and literacy in the four mining-dependent regions are similar to those in other rural areas of Tanzania. Striking gains have been made in educational attainment between the 2007-2008 and the 2010 surveys, in particular in the mining-dependent regions in terms of the percentage of individuals with some secondary education. Both men and women experienced these gains, yet men have systematically displayed higher levels of both educational attainment and literacy than women.

Interestingly, however, the percentage of individuals with no education did not decrease in every mining region between 2007-2008 and 2010. For women, this percentage decreased in Shinyanga, Kagera and Mara yet increased in Mwanza; for men, it decreased in Shinyanga and Mara yet increased in Kagera and Mwanza. This suggests that the increased economic activity in Mwanza, in the wake of large-scale mining investment, may be leading to greater inequalities, with more people completely lacking education as well as more people completing secondary education.

Table 4.1 Educational attainment (women)

Percent distribution of women age 15-49 by highest level of schooling attended or completed, and median grade completed

Region	Highest level of schooling								Total	Median years completed	
	No education		Some primary		Completed primary		Secondary				
	2007-8	2010	2007-8	2010	2007-8	2010	2007-8	2010	All Years	2007-8	2010
	Urban	9.2	7.7	10.6	9.3	59.0	50.8	21.1		32.2	100
Rural	25.5	23.7	18.2	16.7	50.7	49.7	5.5	9.9	100	N/A	6.2
Dar es Salaam	7.3	6.9	5.0	7.2	65.1	48.7	22.6	37.2	100	N/A	6.8
Shinyanga	29.5	27.6	18.1	19.5	49.5	44.4	2.9	8.6	100	N/A	6.1
Kagera	25.4	22.7	19.9	21.2	50.3	44.9	4.4	11.2	100	N/A	6.1
Mwanza	19.7	20.0	24.6	23.6	49.4	42.3	6.4	14.1	100	N/A	6.2
Mara	13.2	12.7	18.3	12.3	60.5	66.5	8.0	8.5	100	N/A	6.4

Source: Authors

Table 4.2 Educational attainment (men)

Percent distribution of men age 15-49 by highest level of schooling attended or completed, and median grade completed

Region	Highest level of schooling								Total	Median years completed	
	No education		Some primary		Completed primary		Secondary				
	2007-8	2010	2007-8	2010	2007-8	2010	2007-8	2010	All years	2007-8	2010
	Urban	4.7	2.9	12.4	9.3	50.0	45.5	32.9		42.3	100
Rural	14.2	11.9	25.1	21.6	52.1	50.9	8.7	15.6	100	N/A	6.3
Dar es Salaam	2.1	0.8	8.3	6.7	47.0	47.6	42.6	44.9	100	N/A	7.0
Shinyanga	19.3	11.7	21.7	19.4	50.9	54.3	8.1	14.6	100	N/A	6.4
Kagera	13.3	19.4	25.8	18.8	47.1	41.2	13.7	20.6	100	N/A	6.3
Mwanza	11.3	14.0	32.4	21.7	47.9	42.7	8.4	21.5	100	N/A	6.3
Mara	5.1	0.4	22.1	24.4	59.0	53.9	13.8	21.3	100	N/A	6.4

Source: Authors

Data in the literacy table show that illiteracy remains more prevalent in the four mining-dependent regions and other rural areas compared to Tanzania's urban areas. To illustrate, the percentage of illiterate men in Kagera is almost ten times higher than the percentage in Dar es Salaam.

Table 4.3 Literacy (2010)²⁶

Percent distribution of men and women age 15-49 by level of schooling attended and level of literacy, and percentage literate

Region	Post-primary, secondary school, or higher		No schooling or primary school						Total*		Percentage literate	
	Male	Female	Can read a whole sentence		Can read part of a sentence		Cannot read at all		Both Genders	Male	Female	
			Male	Female	Male	Female	Male	Female				
Urban	46.7	34.8	43.8	48.6	3.6	4.1	5.5	12.1	100	94.1	87.5	
Rural	16.7	10.4	53.4	49.9	7.5	5.8	22.2	33.5	100	77.6	66.1	
Dar es Salaam	51.1	40.4	41.2	45.3	4.0	3.3	3.8	11.0	100	96.2	89.0	
Shinyanga	18.3	9.4	46.5	43.1	10.8	7.2	24.3	40.3	100	75.7	59.7	
Kagera	20.6	11.9	42.0	54.2	6.5	1.6	30.9	31.7	100	69.1	67.6	
Mwanza	22.3	15.6	45.5	45.6	4.7	5.8	27.5	32.8	100	72.5	67.0	
Mara	22.3	8.5	64.2	59.6	3.1	5.3	10.5	26.6	100	89.5	73.4	

*includes negligible percentages of blind/visually impaired and missing

Source: Authors

Tables 4.4 and 4.5 assess the distribution of individuals in various occupations by region for men and women, respectively. In the four mining-dependent regions, as in other rural areas of Tanzania, the majority of employed individuals have agricultural occupations, a trend which is even more pronounced for women. The percentage of men employed in agriculture is lower in mining-dependent regions than in other rural regions, which suggests men are getting jobs from mining-related activities. In addition, the percentage of men employed in professional/technical/managerial positions is higher in mining-dependent regions than other rural regions. With the exception of Mwanza, the percentage of women employed in agriculture is similar to the national rural average.

Table 4.4 Occupation: Men (2010)

Percent distribution of men age 15-49 employed in the 12 months preceding the survey by occupation

Region	Professional/technical/managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Domestic service	Agriculture	Missing	Total
Urban	10.8	0.9	11.5	28.6	25.1	2.9	18.2	2.0	100
Rural	2.3	0.1	2.5	7.4	9.3	0.4	77.6	0.4	100
Dar es Salaam	13.6	0.9	10.9	31.0	31.0	5.8	6.8	0.0	100
Shinyanga	3.4	1.2	3.6	7.5	7.0	0.0	77.3	0.0	100
Kagera	4.1	0.0	3.3	10.1	18.2	0.0	64.3	0.0	100
Mwanza	7.5	0.4	6.7	8.2	8.5	0.0	68.7	0.0	100
Mara	3.2	0.0	6.8	5.9	14.8	0.0	69.4	0.0	100

Source: Authors

²⁶ In this table, the sample of males in the Mara region consists of only 86 individuals.

Table 4.5 Occupation: Women (2010)

Percent distribution of women age 15-49 employed in the 12 months preceding the survey by occupation									
Region	Professional/ technical/ managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Domestic service	Agriculture	Missing	Total
Urban	6.9	1.8	8.8	12.8	41.0	9.2	19.0	0.5	100
Rural	1.0	0.0	1.7	2.5	8.6	1.1	84.6	0.3	100
Dar es Salaam	8.0	2.9	9.7	10.9	51.0	13.1	3.6	0.7	100
Shinyanga	1.0	0.0	3.4	3.4	5.4	0.5	86.3	0.0	100
Kagera	0.2	0.3	1.0	3.3	9.5	1.2	84.5	0.0	100
Mwanza	2.9	0.8	2.2	6.9	9.5	1.9	75.7	0.0	100
Mara	1.1	0.0	2.7	2.9	6.4	0.9	86.0	0.0	100

Source: Authors

4.1.2 Health

Now, we present various health indicators, including health outcomes for children, ownership of mosquito nets, and knowledge of HIV prevention methods, by region.

From tables 4.6 and 4.7, we see that children in Shinyanga have the best anthropometrics of nutritional status overall in 2010, even in comparison with other rural regions. This is a new development, as the 2004-2005 data indicated children in Mwanza had the best anthropometrics. In 2004-2005, with the exception of Kagera, all mining-dependent regions demonstrated better child nutritional outcomes than other rural regions in Tanzania, which suggests that children may have been benefitting from living in mining areas.

Table 4.6 Nutritional status of children (2004-2005)

Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age

Region	Height-for-age			Weight-for-height				Weight-for-age			
	Percent below -3 SD	Percent below -2 SD	Mean Z-score (SD)	Percent below -3 SD	Percent below -2 SD	Percent above +2 SD	Mean Z-score (SD)	Percent below -3 SD	Percent below -2 SD	Percent above +2 SD	Mean Z-score (SD)
	Urban	7.3	26.0	N/A	0.4	2.9	N/A	N/A	2.1	17.3	N/A
Rural	14.3	40.9	N/A	0.3	2.9	N/A	N/A	4.1	23.0	N/A	N/A
Dar es Salaam	1.9	16.9	N/A	0.5	4.1	N/A	N/A	0.9	14.3	N/A	N/A
Shinyanga	14.2	37.4	N/A	0.5	1.9	N/A	N/A	4.0	19.3	N/A	N/A
Kagera	11.7	37.3	N/A	0.3	3.6	N/A	N/A	4.1	25.4	N/A	N/A
Mwanza	6.5	30.6	N/A	0.3	2.3	N/A	N/A	1.9	12.8	N/A	N/A
Mara	16.5	38.7	N/A	0.0	0.8	N/A	N/A	3.2	16.7	N/A	N/A

Source: Authors

Note: SD = standard deviation (statistical measure of variance around the mean value).

Table 4.7 Nutritional status of children (2010)

Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age

Region	Height-for-age			Weight-for-height				Weight-for-age			
	Percent below -3 SD	Percent below -2 SD	Mean Z-score (SD)	Percent below -3 SD	Percent below -2 SD	Percent above +2 SD	Mean Z-score (SD)	Percent below -3 SD	Percent below -2 SD	Percent above +2 SD	Mean Z-score (SD)
	Urban	11.7	32.1	-1.3	0.7	4.4	6.0	0.1	2.1	11.1	1.0
Rural	17.8	44.7	-1.8	1.2	4.6	4.9	0.0	4.1	16.7	0.6	-1.0
Dar es Salaam	6.9	18.8	-0.9	1.7	6.8	4.6	-0.2	0.5	11.8	1.8	-0.6
Shinyanga	11.9	43.3	-1.7	0.6	2.5	5.9	0.2	2.5	10.1	0.7	-0.8
Kagera	16.3	43.6	-1.8	1.9	5.0	3.1	0.0	5.4	17.1	0.3	-1.0
Mwanza	16.3	38.7	-1.7	1.3	3.9	5.0	0.2	3.1	11.4	0.6	-0.8
Mara	9.5	31.0	-1.4	1.6	5.0	5.9	0.1	2.6	11.9	1.0	-0.8

Source: Authors

Table 4.8 shows that households in mining-dependent regions are more likely to possess mosquito nets and possess more mosquito nets on average than households in other rural regions. The number of nets has increased substantially between the 2007-2008 and 2010 surveys for all rural regions on average, with a higher-than-average increase in mining regions.

The most likely reason for this finding is that the lake zone of Tanzania is a malaria hot spot and none more so than in the Kagera region, which saw the most dramatic increase in mosquito net use between 2007/08 and 2010. A number of studies have linked this to banana farming in the area, rice paddies and water catchments that drain from and into the Lake Victoria, which all provide good breeding conditions for mosquitoes. The government has conducted a number of bed net distribution programmes across the lake zone, as well as indoor residual spraying in Kagera, Mwanza and Mara regions. In addition, ABG has also made significant contributions distributing bed nets to communities and employees. Taken together this has clearly helped increase the number of bed nets. In time it would be interesting to see if this results in driving down malaria prevalence.²⁷

²⁷ ABG recently conducted a Health Impact Assessment in Shinyanga and Kahama which showed very low malaria prevalence rates in these two areas. They suspect that the most plausible explanation of this finding is a general tendency in rural clinics to over-report malaria cases in national level surveys. Because of the lack of access to diagnostic services most clinicians administer malaria medication based on clinical symptoms rather than laboratory diagnosis. As a result there are probably a high number of 'false positives'. This finding would also be true for other (non-mining) regions but in malaria-prone areas such as the lake zone where mining is concentrated the tendency to diagnose malaria (based purely on symptoms) is probably higher. The danger of this is that it presumably leaves large numbers of people misdiagnosed and thus untreated for the illnesses they actually have.

Table 4.8 Ownership of mosquito nets

Percentage of households with at least one and more than one mosquito net (treated or untreated) or insecticide-treated net (ITN), and the average number of nets per household

Region	Any type of mosquito net						Insecticide-treated mosquito nets (ITNs)					
	Percentage with at least one		Percentage with more than one		Average number of nets per household		Percentage with at least one		Percentage with more than one		Average number of ITNs per household	
	2007-8	2010	2007-8	2010	2007-8	2010	2007-8	2010	2007-8	2010	2007-8	2010
Urban	78.6	84.0	47.2	54.0	1.6	1.9	59.2	64.9	31.6	34.9	1.1	1.3
Rural	48.9	71.4	26.5	47.2	0.9	1.5	32.6	63.0	14.6	37.6	0.6	1.2
Dar es Salaam	89.4	85.8	54.8	46.6	1.9	1.8	70.7	61.9	37.3	25.5	1.3	1.1
Shinyanga	55.6	92.9	29.6	75.0	1.1	2.4	37.8	84.6	17.2	65.6	0.6	2.0
Kagera	49.4	75.8	25.6	50.9	0.9	1.6	29.5	67.6	13.5	42.2	0.5	1.3
Mwanza	76.0	90.8	48.9	69.3	1.6	2.3	48.4	78.7	28.1	53.2	1.0	1.7
Mara	76.5	92.3	47.1	72.5	1.6	2.4	56.5	84.3	23.4	58.3	1.0	1.8

Source: Authors

Table 4.9 indicates that between the 2007-2008 and the 2010 surveys knowledge of HIV prevention increased overall. Individuals in urban regions are generally better informed of HIV prevention methods than individuals in rural regions. Women in Kagera are better informed of HIV prevention methods than women in other rural parts of Tanzania. Percentages for other mining-dependent regions are comparable to national rural averages.

Table 4.9 Knowledge of HIV prevention methods²⁸

Percentage of women and men age 15-49 who, in response to prompted questions, say that people can reduce the risk of getting the AIDS virus by using condoms every time they have sexual intercourse and by having one sex partner who is not infected and who has no other partners

Region	Women						Men					
	Percentage who say HIV can be prevented by:						Percentage who say HIV can be prevented by:					
	Using condoms		Limiting sexual intercourse to one uninfected partner		Using condoms and limiting sexual intercourse to one uninfected partner		Using condoms		Limiting sexual intercourse to one uninfected partner		Using condoms and limiting sexual intercourse to one uninfected partner	
	2007-8	2010	2007-8	2010	2007-8	2010	2007-8	2010	2007-8	2010	2007-8	2010
Urban	74.5	78.9	89.3	93.5	70.5	76.0	73.5	77.2	91.5	92.9	70.1	73.4
Rural	66.5	75.4	79.1	84.7	58.2	69.2	77.2	75.2	85.0	88.8	69.7	69.1
Dar es Salaam	76.6	80.7	91.1	94.4	73.1	77.3	69.1	74.6	92.5	92.1	66.2	70.2
Shinyanga	67.6	80.5	62.9	74.1	49.2	66.8	76.1	79.1	78.9	89.4	64.6	72.2
Kagera	67.9	85.5	79.7	91.6	60.0	81.0	72.8	69.0	75.9	91.9	60.6	64.7
Mwanza	64.0	58.1	79.4	72.8	55.6	49.6	79.9	77.8	75.7	92.3	65.6	71.3
Mara	72.1	76.1	80.4	80.4	63.6	65.2	78.2	80.5	84.9	82.9	70.8	69.3

Source: Authors

4.1.3 Gender

Finally, we look at the role of gender in various regions in Tanzania. The table below depicts the nutritional status of women who participated in the 2010 survey. The average BMI of

²⁸ In this table, the sample of males in the Mara region in the 2010 survey consists of only 86 individuals.

women in mining-dependent regions is similar to that of women in other rural regions. More women in rural regions tend to fall within the range of healthy BMIs. Unhealthy women in rural regions are most likely to suffer from malnourishment, whereas unhealthy women in urban regions are most likely to suffer from obesity. According to the table, women in the four mining-dependent regions are taller on average than women in other parts of the country, urban and rural, which could perhaps be explained by better nutrition or by the predominance of ethnic groups with different genetic make-ups in these regions.

Table 4.10 Nutritional status of women (2010)

Among women age 15-49, the percentage with height under 145 cm, mean body mass index (BMI), and the percentages with specific BMI levels

Region	Height	Body Mass Index							
	Percentage below 145 cm	Mean Body Mass Index (BMI)	18.5-24.9 (total normal)	<18.5 (total thin)	17.0-18.4 (mildly thin)	<17 (moderately and severely thin)	≥ 25.0 (total over-weight or obese)	25.0-29.9 (overweight)	≥30.0 (obese)
Urban	3.4	24.2	56.0	7.8	6.6	1.2	36.2	23.0	13.2
Rural	3.4	21.9	72.3	12.8	10.0	2.8	14.9	11.8	3.1
Dar es Salaam	3.2	25.1	49.6	5.9	5.1	0.7	44.6	28.1	16.4
Shinyanga	1.2	21.8	72.7	13.2	11.4	1.8	14.1	11.8	2.3
Kagera	2.9	21.7	76.2	12.4	8.4	4.0	11.4	9.7	1.7
Mwanza	1.6	22.3	71.4	10.0	8.3	1.8	18.6	13.9	4.7
Mara	0.5	21.7	75.1	13.8	11.0	2.8	11.1	8.4	2.7

Source: Authors

Table 4.11 demonstrates that women in three of the four mining-dependent regions experience markedly higher levels of physical violence than women in other regions. Only in Shinyanga do the percentages describing physical violence fall below national averages. Apart from Shinyanga, the mining-dependent regions are more violent than urban areas (as well as other rural areas).

Table 4.11 Experience of physical violence (2010)

Percentage of women age 15-49 who have ever experienced physical violence since age 15 and percentage who have experienced physical violence during the 12 months preceding the survey

Region	Percentage who have ever experienced physical violence since age 15	Percentage who have experienced physical violence in the past 12 months			Number of women
		Often	Sometimes	Often or sometimes	
Urban	35.7	7.5	22.6	30.1	2,003
Rural	39.9	10.2	24.0	34.2	5,045
Dar es Salaam	31.8	7.4	16.4	23.8	592
Shinyanga	26.2	6.2	10.0	16.2	561
Kagera	49.4	17.8	29.1	46.9	408
Mwanza	43.6	9.5	32.3	41.8	576
Mara	66.4	21.8	35.7	57.5	267

Source: Authors

From Table 4.12, it is clear that men in Dar es Salaam are much more likely to exhibit controlling behaviours than men in other regions of Tanzania. In comparison with other rural regions, however, the mining-dependent regions are more likely to experience high levels of

marital control exercised by husbands. This finding holds true in all mining-dependent regions other than Shinyanga, where men are apparently less dominating than in any other region.

Table 4.12 Degree of marital control exercised by husbands (2010)

Percentage of ever-married women age 15-49 whose husband/partner ever demonstrates specific types of controlling behaviors									
Percentage of women whose husband:									
Region	Is jealous or angry if she talks to other men	Frequently accuses her of being unfaithful	Does not			Insists on knowing where she is at all times	Does not trust her with any money	Displays 3 or more of the specific behaviours	Displays none of the specific behaviours
			permit her to meet her female friends	Tries to limit her contact with her family	meet her female friends				
Urban	70.3	32.7	23.9	21.7	58.1	18.0	39.3	17.7	
Rural	64.2	31.8	18.9	16.9	45.5	14.6	33.6	24.9	
Dar es Salaam	72.6	45.7	29.2	32.5	65.4	27.2	48.4	14.6	
Shinyanga	47.9	31.5	18.3	15.6	37.2	7.0	31.5	43.9	
Kagera	65.8	33.0	21.7	15.7	51.8	18.2	36.3	22.5	
Mwanza	67.4	31.3	22.5	22.9	54.0	20.2	40.9	19.5	
Mara	75.9	38.7	23.0	21.3	45.2	15.3	38.0	15.4	

Source: Authors

4.2 Social and economic development of mining regions

To assess whether socioeconomic conditions have improved in the Mwanza and Shinyanga regions, we compare two successive rounds of the HBS. The mining operations that are the subject of this study started operating at different times (GGM began in 2000, ABG's Bulyanhulu in 2001, Williamson Diamonds began operating in the 1940s, and Buzwagi only entered production in 2009. Based on these mining operations, we use the **2001/02 HBS as the most relevant baseline to analyse the key social and economic indicators in the Mwanza and Shinyanga regions**. The 2001/02 statistics are compared to those for the 2007 round to ascertain any change over the six-year period.

We report indicator estimates for three regions: Mwanza (GGM), Shinyanga (Bulyanhulu and Buzwagi gold mines and Mwadui diamond mine) and the rest of the country for the two time periods. The 'rest of the country' excludes Dar es Salaam to avoid the bias that would result from including this purely urban and relatively highly developed area.

Our framework for comparison was **limited to variables available in both rounds of the HBS**. A more detailed survey would have enabled us to comment more extensively on any changes in socioeconomic conditions. Moreover, as we rely on a sample (and not a census) the estimates take into account the effect of sampling.²⁹ The 2001/02 survey was based on a sample size of around 22,000. However, the 2007 HBS sample size was 10,466 for the whole country. The effect of this is that the statistical reliability of data at more disaggregated

²⁹ To determine whether there are statistically significant differences between the indicators as measured in 2001/2 and 2007, we calculate **95% confidence intervals for each of the estimates from the two surveys**. Where there is an overlap in the confidence intervals, we cannot say the differences we observe are attributable to 'true' differences in population means. A non-overlap of confidence intervals suggests there could be a significant difference in the estimate between the two time periods. This is further confirmed by calculating the confidence intervals for the difference/change in the sample estimates of a variable between the two HBS rounds, and checking if these include 0. In cases where they do not, we can safely say the difference/change is in fact significant.

levels from the 2007 HBS will be lower than was the case in 2001/02. Given that the statistical reliability of any tabulations at the district level would be limited, we focus on Tanzania's regions, where the sample size is sufficient to generate useful findings.³⁰ The results presented are weighted estimates to take into account the sampling design. We also report the percentage change in the estimate over the two rounds of the HBS.

Despite our concerns about the reliability of the data due to the small sample size, we believe that this is the **only methodologically consistent way to get insights into how the social and economic situation has changed in the two regions** (Mwanza and Shinyanga) between 2001 and 2007.

In this study, we specifically look at three groups of socioeconomic indicators: income and type of employment; household food consumption and adequacy; and type of water source (as an example of civic amenities).

4.2.1 Income and type of employment

First, we examine the changes in reported household incomes. These are not real income changes (as price data were not available) but are adequate for comparing the two mining regions with the rest of the country between the years 2001/02 and 2007.

It is clear from Table 4.13 that, while incomes in the rest of the country increased by about 94%, Mwanza and Shinyanga saw increases over this period that were considerably higher (110% and 130% respectively).

Table 4.13 Household income

Region	Mean Household Income				Statistically significant Y/N
	2001	2007	Change	% Change	
Shinyanga	9,398	21,638	12,240	130.2	Y
Mwanza	10,206	21,446	11,240	110.1	Y
Rest of Tanzania	10,750	20,865	10,115	94.1	Y

Source: Authors

In addition to incomes alone, we also test to see if there has been any significant change in the level of formal employment. This is measured by comparing the proportion of people for whom wage income is the main source of cash.

³⁰ Although regional breakdowns of the 2007 HBS survey are not included in the published survey, OPM staff members worked on the 2007 survey and are intimately familiar with the underlying data. We have used this underlying data to compile data for key indicators at the regional level. To this end, we made a formal request to the NBS on 22 September 2010 to use this data. In e-mail correspondence with the NBS during mid-December we were informed that because much of the HBS data is now held on their website, our using the data is not a problem.

Table 4.14 shows that, while the proportion of households for which wages are the main source of cash income increased for the whole country by about 5%, the increase was much more dramatic in the case of Mwanza (15%). In 2001, Mwanza had a lower proportion of households with wages as the main source of cash, but has now seen a significant increase to 19%. The small change reported for Shinyanga is not significant.

Table 4.14 Wage income as main source of cash

Proportion of households with Wage as main source of cash					
Region	2001	2007	Change	% Change	Statistically significant Y/N
Shinyanga	0.0472	0.0842	0.04	78.3	N
Mwanza	0.0469	0.1928	0.15	311.0	Y
Rest of Tanzania	0.0715	0.1263	0.05	76.5	Y

Source: Authors

4.2.2 Household food consumption and adequacy

In a context of high poverty and malnutrition, household food consumption is sensitive to changes in income levels. As we have seen, incomes have risen over the six-year period. We now examine whether any significant changes have been observed in household food adequacy and in the consumption of specific categories of food items.

Table 4.15 presents the proportion of households who reported facing a food shortage always or often in the last 12 months. None of the changes in proportions is statistically significant, indicating that there has been no significant change.

Table 4.15 Households facing food shortage always/often in the last year

Region	2001	2007	Change	% Change	Statistically significant Y/N
Shinyanga	0.3256	0.4901	0.1645	50.5	N
Mwanza	0.1563	0.1861	0.0298	19.1	N
Rest of Tanzania	0.1635	0.1745	0.0111	6.8	N

Source: Authors

We now look at the consumption of various food items in terms of the number of days the items were consumed in a seven-day recall period. Table 4.16 shows the average number of days a household reported consuming meat in the week preceding the survey. **While the average number of weekly days in which meat was consumed went down for the rest of the country by 30%, interestingly no significant reduction was observed in the two mining-intensive regions.**

Table 4.16 Number of days in the last week when meat was consumed

Region	2001	2007	Change	% Change	Statistically significant Y/N
Shinyanga	1.19	0.92	-0.27	-22.4	N
Mwanza	1.17	0.93	-0.24	-20.9	N
Rest of Tanzania	1.36	0.95	-0.41	-30.0	Y

Source: Authors

Table 4.17 shows the average number of days in the preceding week when milk was consumed. **As in the case of meat, while there was a reduction in the number of days/week that milk was consumed for the rest of the country (from 1.75 to 1.24), the reduction of the average number of days noted for Shinyanga and Mwanza were not significant.**

Table 4.17 Number of days in the last week when milk was consumed

Region	2001	2007	Change	% Change	Statistically significant Y/N
Shinyanga	2.53	2.09	-0.44	-17.3	N
Mwanza	2.58	1.69	-0.89	-34.5	N
Rest of Tanzania	1.75	1.24	-0.51	-29.2	Y

Source: Authors

We now look at any changes in the average number of days that beans, fish and eggs were consumed. The three tables show that, while there are changes in the average number of days (in the preceding week) that beans, fish and eggs were consumed as seen by changes in simple averages, **these changes were not significant and it is therefore not possible to say that there were any improvements or otherwise in the consumption of these items for either of the two regions, or for the rest of the country.**

Table 4.18 Number of days in the last week when beans were consumed

Region	2001	2007	Change	% Change	Statistically significant Y/N
Shinyanga	1.89	2.41	0.52	27.65	N
Mwanza	1.79	1.88	0.09	5.14	N
Rest of Tanzania	3.03	2.74	-0.29	-9.67	N

Source: Authors

Table 4.19 Number of days in the last week when fish was consumed

Region	2001	2007	Change	% Change	Statistically significant Y/N
Shinyanga	1.18	1.37	0.19	16.5	N
Mwanza	3.36	4.05	0.69	20.7	N
Rest of Tanzania	1.93	1.91	-0.02	-1.3	N

Source: Authors

Table 4.20 Number of days in the last week when eggs were consumed

Region	2001	2007	Change	% Change	Statistically significant Y/N
Shinyanga	0.10	0.11	0.01	9.1	N
Mwanza	0.14	0.24	0.10	73.5	N
Rest of Tanzania	0.33	0.25	-0.08	-24.1	N

Source: Authors

4.2.3 Type of water source

Finally, we look at the proportion of households with access to a private water source inside or outside the house, to identify any changes in this important aspect of civic amenities.³¹ **Table 4.21 shows that at the provincial level there was no significant change in the proportion of households with access to a private water source.**

Table 4.21 Households with access to private water source

Region	2001	2007	Change	% Change	Statistically significant Y/N
Shinyanga	0.0351	0.0388	0.0036	10.4	N
Mwanza	0.0544	0.0698	0.0154	28.3	N
Rest of Tanzania	0.0798	0.0738	-0.0060	-7.5	N

Source: Authors

³¹ We thank staff at ABG for pointing out that recent studies have shown that while water access is a problem, water quality is a far more critical issue. They noted numerous instances of community water sources having bacterial infections due to cross contamination from poor sanitation.

4.3 Summary and discussion

This chapter first looked at the broader cross-section of Tanzania's regions, in particular how the four mining regions compare with other parts of the country. This section used the TDHS (2004-2005 and 2010) and the 2007-2008 THMIS. The second part of this chapter used two consecutive waves of the HBS to look at changes in socioeconomic development indicators between 2001 and 2007 in Mwanza and Shinyanga. On the whole, the available data is not as comprehensive as we would like, being limited to data at the regional level (because the limited sample size at the district level would make such indicators statistically unreliable). Our results suggest progress in some areas, but also a number of ambiguities.

The results on levels and changes in health and education status are available only for relatively short periods – from 2007 in most cases – from the two main surveys that address these matters.³² In terms of **education**, the results suggest that, from a starting point of 2007-08, Mwanza had similar levels of educational attainment to that seen in other rural areas of Tanzania – however, these similarities were not consistent across all indicators or with respect to the attainment levels of males versus females. It is significant that striking gains have been seen in many of the indicators of educational attainment in the period from 2007 through 2010 but again with some ambiguity in the results. For example, Mwanza and Shinyanga have seen increases in the percentages of people with secondary education as their highest level of attainment from 8.4% to 21.5% and from 8.1% to 14.6%, respectively. These ratios are slightly better than the average seen across all rural areas. At the same time, however, the percentages having no formal education have risen slightly in Mwanza and Kagera, while they have fallen in Shinyanga and Mara.

There was some evidence of **greater inequalities in mining regions compared to other rural regions**, with the former displaying a higher proportion of people with no education as well as a higher proportion of people with high (completed secondary) education. It is possible that, as a result of the mines, more educated people have moved to the regions.

Some similar ambiguities apply in the case of the indicators for **health and nutrition**. For example, by 2010 the percentages of children with nutritional status below one or two standard deviations of normal was lower than the average for all rural areas in all four of the mine-affected regions. However, the magnitudes of these percentages were no better than in 2004-05. Far more positive are the results showing that, in all four mining-affected regions, there was a very large increase from 2007-08 in the percentages of households owning mosquito nets, with these areas actually having a higher average ownership of such nets than in rural areas generally, and three out of four having higher ownership on average even than urban areas of Tanzania (see Table 4.8). There were similarly large gains in the awareness in the four mining-affected areas about HIV prevention. These two sets of results together strongly suggest a positive effect from the presence of the mining companies.

Furthermore, it is clear that the gains in **average incomes** in Mwanza and Shinyanga between 2001 and 2007 were significantly higher than in the rest of the country, with increases of 110% and 130% respectively. This meant that, by 2007, mean income was higher in both regions than in the rest of Tanzania (excluding Dar es Salaam). Further, in that same period, Mwanza saw a dramatic increase in its involvement in the formal economy, as measured by the proportion of its households with wage income as their main source of income (by 2007 this had reached 19% versus only 5% in 2001). This same change was not

³² The TDHS (2005-05 and 2010) and the THMIS (2007-08).

seen in Shinyanga. This merits further exploration, as there could potentially be certain factors retarding the net formalisation of the economy in Shinyanga.

With respect to **food consumption**, it is interesting that, while the average days of consumption of meat and milk reduced in the rest of the country, the mining regions do not show any significant changes in consumption of these items. It appears that the immediate improvements in household income, and to a lesser extent the formalisation of the economy, have perhaps helped prevent reductions in the frequency of consumption of meat and milk. Access to improved civic amenities, as measured by the share of households with access to a private water source, has not responded to the general improvements in income levels that are visible for all three geographical units.

The demographics data analysed in this chapter also indicate that **mining has various important gender-differentiated impacts**, including on the composition of employment. The percentage of men working in the agricultural sector in mining regions is low in comparison with other rural areas, which suggests men gain employment through mining activities. This finding does not extend to women in mining regions, however. With the exception of Mwanza, the percentage of women employed in the agricultural sector in mining regions is comparable to the national average for all rural regions. In comparison to other parts of Tanzania, women in mining-dependent regions other than Shinyanga suffer disproportionately from violence and male dominance. We can speculate that violence against women in Kagera, Mwanza, and Mara could be the result of social tensions due to unequal distribution of benefits from mining, in-migration, or social displacement. To explore this hypothesis, we would need access to more detailed and disaggregated data.

5. Economic benefit streams and perceptions

This chapter provides an analysis of the main benefit streams reported by the mining companies themselves. **The discussion of these benefits is juxtaposed with the comments from residents of the communities around the mines regarding these benefit streams as obtained from the quantitative and qualitative data from the field surveys.** These comments in turn involve community perceptions about the benefits in question and the manner in which these are managed. The benefits discussed here are mainly economic in nature and cover the following areas:

- Taxes and official payments;
- Employment and training;
- Local content and supplier development;
- Income effects, access to markets and inflation; and
- Community investment and development projects.

Where available, data are presented for the period from 2004 (the first year in which data exists for more than one mine) to 2010. It should be noted that in some cases the level of detail in the data provided in the first round of engagement with companies has been **insufficient to determine with confidence the benefits of mining activity at a disaggregated community level.**³³ For example, data on total salaries were sometimes provided by the companies without disaggregating between national and expatriate employees. Data on expenditures and management of community programmes (including health, education and infrastructure projects) were generally provided in aggregate form, giving limited insight into the disparate projects undertaken in this area. In these instances, **we have contacted companies to provide missing data** to enable us to ‘plug the gaps’.

5.1 Benefit stream: Taxes and official payments

Mining can potentially make a significant contribution to local as well as national development through the payment of taxes and other government levies, and is typically the headline topic when mining is discussed domestically and internationally. The extent to which revenues captured by central – and in some cases local – government are channelled to the level of local communities around the mine will depend on government priorities and the institutions in place to effect this transfer. In addition, whilst local expectations of development windfalls are often at their highest during the early years of construction and commissioning of a new mine, the tax payments themselves are often delayed as a result of capital allowances and other incentives used to attract investors. This can and does result in adverse perceptions of large-scale mining projects.

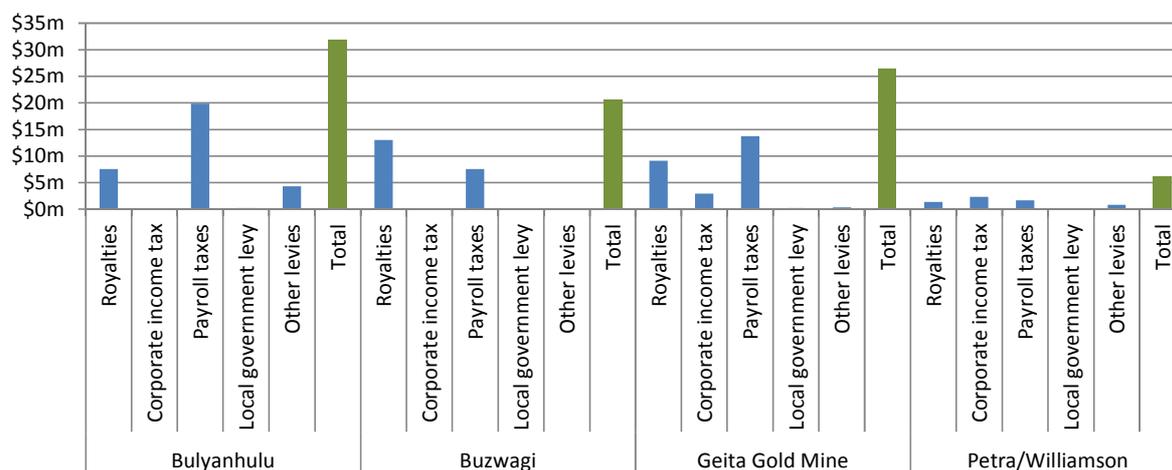
³³ This was a risk we identified in our Technical Proposal when we stated ‘it should be noted that because some companies are unlikely to keep the data that we will need at a disaggregated community level there is likely to be a mismatch between the community level survey analysis and the numerical data provided by the companies for the “net impact” analysis’.

Large-scale mining has the potential to generate significant benefits for the host economy through taxes, fees and other charges to government. The contribution of mining in this regard is subject to issues around the timing of such payments. Resource-rich but economically poor countries such as Tanzania commonly offer a range of incentives to foreign investors, including tax exemptions and capital allowances, with the result that some payments (in particular corporate income tax) **begin flowing long after the company has begun operations**. A recent study by OPM of the Tanzanian mineral sector found that, whereas tax payments over a project's life cycle may be significant, these are spread out over the later years of operation that extend well beyond the planning horizons for most governments.³⁴ To ensure that some of the value of extracted natural resources is captured by government from the early days of operation, **mineral royalties are charged on the value of production**. Other 'early' government revenue comes from corporate and personal income taxes levied on contractors and workers, respectively.

Although some decentralisation reforms have taken place in Tanzania, fiscal management of the mineral sector is still highly centralised. District and local governments do not directly levy and collect any significant taxes. Rather, central government collects taxes and provides funds to local government through revenue-sharing mechanisms. **However, when mines are located in remote rural areas the public funds captured by central government may not – in the absence of effective governance arrangements – make their way to the mining communities**. To ensure that some fiscal payments are in fact captured at the local level, the Tanzanian government levies an **LGL** on the mines of US\$ 200,000 per annum.

Figure 5.1 illustrates the fiscal contributions of the mines under study. It shows that payroll taxes in particular constitute a large share of the overall taxes paid, ranging from 30% to 60% in 2009.

Figure 5.1 Fiscal contributions by mine (2009)



Source: Company data.

Notes: Petra/Williams (Mwadui mine) reports 'Taxes from audit and investigation' for 2009 (about US\$ 1.6 million) which are included in the 'Corporate income tax' line. Withholding taxes for Petra/Williams and GGM are assumed to relate to management service contracts with foreign parties, included under 'Corporate income tax'. 'Other

³⁴ ICMM (2009), 'Mining in Tanzania: What future can we expect?'. Paper prepared by OPM under the Resource Endowments initiative.

levies' includes fuel levy, import duties, and (for Petra/Williams) payments to Tanzania Diamond Sorting Office (TANSORT).

Table 5.1 illustrates the fiscal contributions of the mines under study over a number of years. It shows that **royalties and payroll taxes have so far been their largest contributions to fiscal revenues**. Over time, it would be expected that corporate income taxes start to feature as a larger component of the overall fiscal contribution to government.

Table 5.1 Fiscal contributions by mine

Fiscal contributions (US\$ million)		2004	2005	2006	2007	2008	2009	2010
Bulyanhulu	Royalties	n/a	n/a	n/a	5.2	5.8	7.6	n/a
	Corporate income tax	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Payroll taxes	n/a	n/a	n/a	21.2	17.3	19.8	n/a
	Local government levy	n/a	n/a	n/a	0.2	0.2	0.2	n/a
	Other levies	n/a	n/a	n/a	0.2	1.6	4.3	n/a
	<i>Total</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>26.9</i>	<i>24.9</i>	<i>31.9</i>	<i>n/a</i>
Buzwagi	Royalties	n/a	n/a	n/a	n/a	n/a	13.0	n/a
	Corporate income tax	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Payroll taxes	n/a	n/a	n/a	0.2	6.7	7.5	n/a
	Local government levy	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Other levies	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	<i>Total</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>0.2</i>	<i>6.7</i>	<i>20.5</i>	<i>n/a</i>
Geita Gold Mine	Royalties	n/a	n/a	n/a	n/a	n/a	9.1	9.1
	Corporate income tax	n/a	n/a	n/a	n/a	n/a	2.9	2.9
	Payroll taxes	n/a	n/a	n/a	n/a	n/a	13.7	13.7
	Local government levy	n/a	n/a	n/a	n/a	n/a	0.2	0.2
	Other levies	n/a	n/a	n/a	n/a	n/a	0.3	0.3
	<i>Total</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>26.3</i>	<i>26.3</i>
Petra/ Williamson	Royalties	1.4	1.2	0.9	1.2	1.0	1.4	n/a
	Corporate income tax	0.7	1.1	0.5	1.7	0.4	2.3	n/a
	Payroll taxes	1.3	1.4	2.2	2.4	1.5	1.7	n/a
	Local government levy	n/a	n/a	n/a	n/a	0.1	0.0	n/a
	Other levies	1.1	0.8	0.8	1.0	0.7	0.8	n/a
	<i>Total</i>	<i>4.4</i>	<i>4.4</i>	<i>4.4</i>	<i>6.2</i>	<i>3.7</i>	<i>6.2</i>	<i>n/a</i>

Source: Company data.

Notes: Petra/Williams reports 'Taxes from audit and investigation' for 2007 (approx. US\$ 1 million) and 2009 (approx. US\$ 1.6 million) which are included in the 'Corporate income tax' line. Withholding taxes for Petra/Williams and GGM are assumed to relate to management service contracts with foreign parties, included under 'Corporate income tax'. 'Other levies' includes fuel levy, import duties, and (for Petra/Williams) payments to TANSORT.

5.1.1 Perceptions on taxes and official payments

Whilst district government representatives argued that various taxes and official payments (e.g. royalty fees, license fees, the LGL, and fees for explosives and magazines processing) are channelled into the development agendas of the region and local council offices, local respondents in communities did not see very clear direct benefits from taxes paid. It is only the LGL which is intended to go directly to communities directly affected by mining, and it is not clear that even this limited payment (US\$ 200,000 a year) is always paid (e.g. mine-level data does not show a LGL paid for either **Mwadui** or **Buzwagi** (possibly because Mwadui is being refurbished and because Buzwagi is a recently opened mine)).

Among most respondents there was also generally limited understanding of how the LGL is used. There was also significant suspicion among community members that the LGL was not effectively channelled into community projects. Villagers around **Bulyanhulu**, for instance,

complained about the lack of transparency concerning the LGL paid by the mine to municipals or the district councils. This information appeared to be inaccessible even to village leaders, as one noted:

We don't know how much money the mine pays and how our district [councils] use them ... the money doesn't come back to our villages to improve our services while we are most affected by the mining activities.

This village leader further explained that weak implementing capacity at the local government level can lead to tensions within the village and mistrust between community members and village leaders: many community members suspect that the funds do reach the villages, but are then appropriated by the village leaders, resulting in mistrust of village leaders.

5.2 Benefit stream: Employment and training

One of the most visible economic impacts of any mining operation on its host community is the employment generated through the creation of jobs within the mining operation in the exploration, construction, mining and closure/rehabilitation phases, including the employment of those contractors who work exclusively for the mines. Much of this employment benefit can be expected to be of long duration.

Specifically, the four mines under review here have life spans that range from seven years for GGM to 70 years for the Mwadui mine. Additional indirect jobs are also created among providers of goods and services to the mine. These may include those jobs created through the building of roads to reach the mine, the construction of new homes for miners and their families, and the businesses required to service workers at the mine (security, catering etc.). However, despite these opportunities, employment from modern mines will always be small due to the high use of capital-intensive rather than labour-intensive technology that is both safer and more cost effective.

5.2.1 Mine-level data on direct employment

The first step in analysing the benefits to local communities of the employment generated by the selected mines is to assess the overall numbers of jobs created. Table 5.2 shows the number of employees in each mine for each year. In 2007 and 2008, all four mines together provided employment for around 6,000 people. Company data for other years is not complete across all four mines but can be expected to be similar or higher depending on periods of construction.

Table 5.2 Breakdown of employment by direct employees, 2004-2010

Direct employees		2004	2005	2006	2007	2008	2009	2010
Bulyanhulu	National	n/a	n/a	n/a	1,107	1,674	1,929	n/a
	Expatriate	n/a	n/a	n/a	123	186	214	n/a
	Total	n/a	n/a	n/a	1,230	1,860	2,143	n/a
	<i>Local as % of Nat'l</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
Buzwagi	National	n/a	n/a	n/a	407	415	597	n/a
	Expatriate	n/a	n/a	n/a	45	46	66	n/a
	Total	n/a	n/a	n/a	452	461	663	n/a
	<i>Local as % of Nat'l</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
Geita	National	2,282	2,678	3,064	3,243	2,911	n/a	n/a
	Expatriate	160	173	216	178	193	n/a	n/a
	Total	2,442	2,851	3,280	3,421	3,104	n/a	n/a
	<i>Local as % of Nat'l</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
Petra/ Williamson	National	616	668	615	687	661	632	583
	Expatriate	8	8	9	8	7	6	8
	Total	624	676	624	695	668	638	591
	<i>Local as % of Nat'l</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
Grand total	3,066	3,527	3,904	5,798	6,093	3,444	591	

Source: Company data and authors' calculations.

Note: Data from Bulyanhulu and Buzwagi do not distinguish between expatriates and Tanzanian employees. We assume that 10% of employees at these two mines are expatriates (based on a prior OPM study).³⁵

To assess the extent to which employment opportunities benefit people residing in the local communities, **a further level of disaggregation is required** to split employees into 'national' and 'local'. Unfortunately, this data was available only for Mwadui, which collects data on where these workers came from in terms of local villages, the district, other parts of Tanzania and overseas (see Table 5.3). Such information forms an important part of any assessment of 'local' benefits of mining, since salaries going to members of the local community are more likely to have **local multiplier effects through additional rounds of spending** within the community.

Mwadui also provided a detailed breakdown of whether employees were directly employed or contractors. Their data shows that, between 2004 and 2010, the mine employed seven contractors for every 10 direct employees.

Table 5.3 Mwadui employee breakdown (2010)

	Direct	Contractor	Totals
Local villages	81	262	343
Larger district	59	97	156
National	443	91	534
Expats	8	4	12
Totals	591	454	1,045

Source: Company data.

A deeper understanding of how direct employment affects local communities would have benefited from a longer set of employment data to compare employment over time. In addition, to understand how the mix of foreign and national employees is evolving, and the extent to which managerial skills are being transferred to Tanzanians, one can look at the

³⁵ ICMM (2009), 'Mining in Tanzania: What future can we expect?'. Paper prepared by OPM under the Resource Endowments initiative.

extent of **localisation strategies** (i.e. medium- to long-term plans to increase the proportion of Tanzanians in managerial positions). Experience across Tanzanian gold mining more generally based on earlier OPM studies has suggested a small and declining share of expatriate employment in total employment but a much higher average wage rate for expatriates, which results in the share of total wages being very much higher than the share of expatriates in employment.

Bulyanhulu launched a localisation strategy in 2009, under which it aimed to reduce the number of expatriates from about 200 to about 20 by 2015. The company set out to spend US\$ 4.5 million per year to train local employees to step up to their new roles, combined with a programme to send some of the more talented employees abroad to work and gain experience in other ABG operations.³⁶ The information provided to us was not sufficient to determine whether this initiative was being implemented as planned, nor whether any of the other mines had any formal localisation strategies in place.

The mines all seem to make specific efforts to provide employment opportunities to local communities, but their methods differ. For instance, in Bulyanhulu all employment from the surrounding villages is administered through the IBUKA cooperative. In Buzwagi, the mine has a formal agreement with ward/village-level government in Mwendakulima, Mwime and Chapulwa to employ 70 security guards per ward to work in rotation to guard the mine perimeter fence (these contracts are maintained solely by the Village Executives). At the Mwadui diamond mine, local community members are given preference in casual and/or unskilled labour opportunities, with village leaders being asked to confirm the residency of applicants. At GGM they had initially agreed to employ unskilled young people from Bugulula village but in the event this did not happen. We were not able to find out the reasons why this did not happen.

5.2.2 Mine-level data on training

In addition to their salaries, employees can often benefit from working for the mines through training and skills development. Such training can range from process and compliance training (e.g. environmental and health and safety inductions that the mines require all employees to pass through) to development of transferable skills.

The data provided by the companies under study have so far been very limited, as illustrated in Table 5.4.

Table 5.4 Training spend over time

Training spend (in US\$)	2004	2005	2006	2007	2008	2009	2010
Bulyanhulu	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Buzwagi	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Geita Gold Mine	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Petra/Williamson	24,182	17,728	20,125	70,000	39,409	3,441	n/a

Source: Company data and authors' calculations.

Among the mines surveyed, only **Petra/Williamson Diamonds (Mwagui mine)** provided quantified measures of funds spent on training. These averaged **US\$ 39,000 a year**

³⁶ AllAfrica (27 July 2009), 'Tanzania: Bulyanhulu to Start Phasing Out Expatriates'.
<http://allafrica.com/stories/200907271318.html>

between 2003 and 2008 (equating to about US\$ 60 per employee) but varied significantly from year to year, despite employee numbers remaining fairly constant.

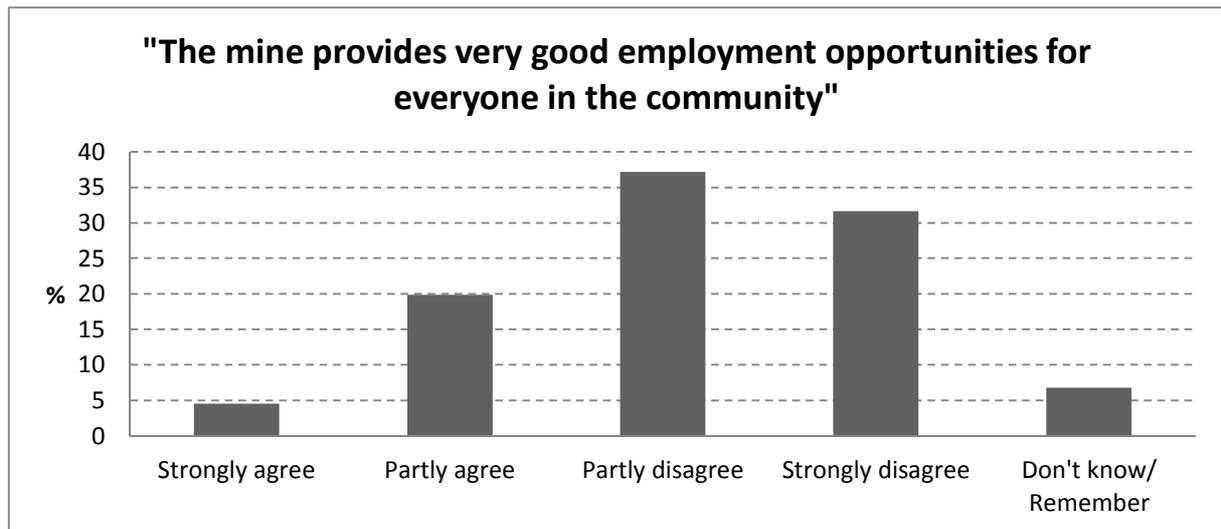
GGM aims to adhere to national government targets of employing no more than 5% expatriates and has created a mining engineering training centre to address the skills shortages faced by the mine and the country more generally. No further information (throughput rates, skills developed etc.) was available regarding this initiative.

ABG recognises broad shortages of skills as a detriment to greater local procurement and local employment. The company has provided funding for the national Integrated Mining Technical Training (IMTT) programme which commenced in 2008 with the aim of developing mining-related skills. The IMTT is a joint project of the Tanzanian Chamber of Minerals and Energy and the Tanzanian government. ABG provides sponsorships to young people living near its operations to attend IMTT, linking successful completion of the programme to possible employment.

5.2.3 Perceptions on employment and training

Despite the significant numbers of jobs directly created by the four mines (see Table 5.2) and localisation strategies, Figure 5.2 shows people within local communities do not generally feel that the mines have provided good employment opportunities and benefits.

Figure 5.2 Perceptions on employment opportunities from the mines

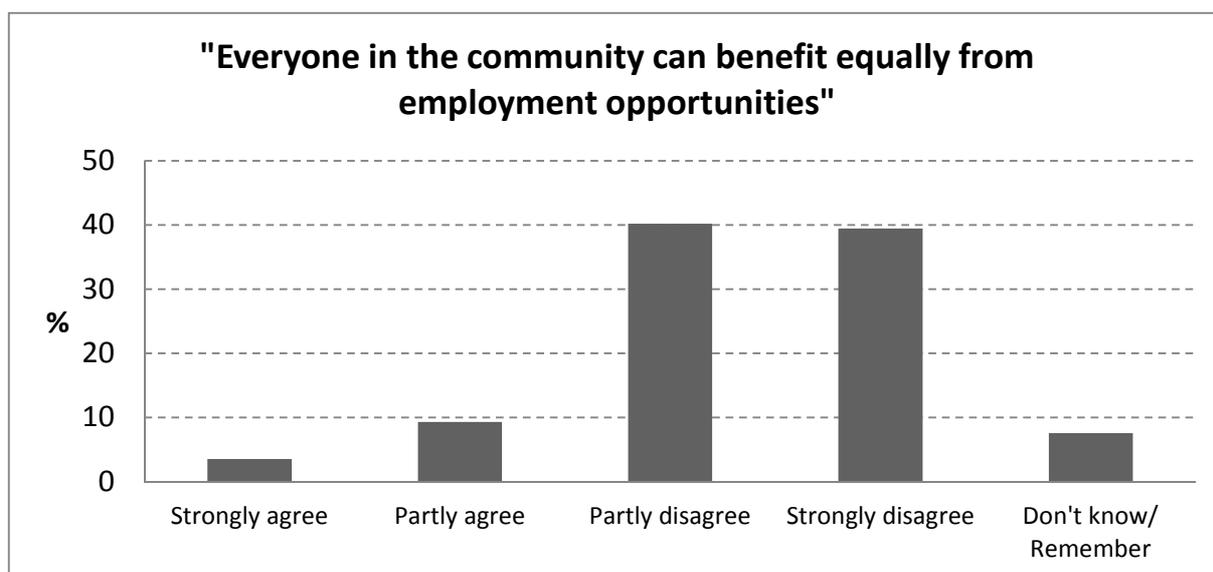


Source: Authors

One factor underlying these findings is a perception that most employment opportunities are taken either by foreigners or by Tanzanians from other regions. Table 5.2 and the evidence from earlier studies suggest foreigners account for only up to 10% of total employment in large-scale mining, and much less in GGM (averaging around 6%) and **Mwadui** (averaging around 1.25%). Disaggregated data showing the regional origin (within Tanzania and other African countries) of employees is not generally available. One exception is for Mwadui, and their data supports the perception that most employment opportunities do **not** in fact go to local people: in 2010, 75% went to Tanzanians from outside the district, 10% to people from the larger district and only 14% to people from local villages.

Our field work found that where local villagers are employed by the mines, the jobs tend to be casual, short term and/or low skilled. For instance, local people in communities around the **Bulyanhulu** mine were mainly employed as traditional security workers (*Sungu Sungu*), farm workers and cleaners, with few as middle-level officers. This was also the case elsewhere: women respondents in Bugulula, near Geita, explained that temporary employment (lasting one to two months) is available to a few people but the salaries are shared with the officials who gave them access to the opportunity. In addition to perceiving limited employment opportunities, there is also an even stronger general perception that not everyone in a community can benefit equally from those job opportunities that are available. Figure 5.3 provides the evidence of this long-held perception:

Figure 5.3 Perceptions regarding access to employment opportunities



Source: Authors

This inequality can be seen both between different villages and within individual villages. For instance, amongst three communities around **Buzwagi**, respondents in Mwendakulima were more than twice as likely to agree (39% agreed) that the mine provides good employment opportunities compared to the other two villages. At **Mwadui**, most of the people employed in the mine are from nearby the village of Mwadui, where it is thought that about a third of village residents are employed by the mine. Beyond Mwadui, however, community perceptions – particularly among young people – are that there are very few opportunities.

In Geita, Kalangala (located close to Geita Town) was the village where most respondents stated their main economic activity was working at **GGM**. In four other villages (Bugulula, Isamilo, Nyawalimila and Nyakabale), none of the respondents worked for the mines. Whilst this could imply that villages nearer the mine benefit more than those further away, this does not seem to be supported elsewhere. In particular, amongst the communities around **Bulyanhulu**, for instance, higher proportions of respondents in Kakola and Kakola No. 9 – the two villages closest to the mine – disagreed that the mine provided good employment opportunities than was the case in other villages. This suggests there is no simple correlation between community proximity to the mine and employment opportunities and that a more complex situation exists.

Within individual communities, there is also a complex picture regarding who benefits most or at all from the employment opportunities. Respondents across the four mines cited a number of issues affecting equitable access to employment opportunities. These included the complaint that access to information about jobs was limited due to language barriers and unrealistic timeframes. **In Geita, for instance, respondents explained that some posters announcing vacancies were in English only and that they were only displayed one day before the deadline for applications, although the job required many documents that could not feasibly be prepared by villagers within one day.**

When formal agreements or arrangements between mines and local communities or governments are in place, there were different perceptions about how these were implemented and the benefits that could be gained. Village leaders, who are often charged with implementing the arrangements, perceived that they were fairly implemented but this was not the general perception amongst other respondents, and other **complaints about the information failures relate to the need to know the 'right people'**. **For instance, respondents in communities around GGM, Bulyanhulu and Buzwagi argued that it was impossible to know about upcoming vacancies if one did not have a relative or friend working in the mine.** Village leaders also tend to favour relatives when they have some responsibility for the selection processes. Around **GGM** and **Bulyanhulu**, respondents also explained that, when village leaders are responsible for selecting employees, in addition to having connections, these jobs are only available to those who can afford to pay a '*kitu kidogo*' (bribe).

In some cases, formal agreements between mines and local communities lead to a proportion of an employee's salary being used by the community. In Nyakabale, near GGM, some people were employed as *Sungu Sungu* to the mine, but 10% of the salary goes to the village. Other respondents suggested much higher proportions of salaries being deducted from employees: for example, from a salary of TZS 120,000, a group of GGM mine employees suggested that the village gets TZS 40,000 and the individual gets TZS 80,000. In the case of Bulyanhulu, the IBUKA cooperative takes a management fee of 20% of the monthly salary wage bill of all employees from the communities around the mine. Discussions with villagers suggested concerns that someone has to be an IBUKA member to benefit and that originally the management fee went to each village around the mine but now goes to the IBUKA cooperative.

5.3 Benefit stream: Local content and supplier development

Money spent by mining operations on procurement of goods and services from the domestic economy can often be considerable. It is one of the most important ways in which the benefits from mining can filter through to the local economy. Procurement by the mines can also play a major role in boosting local production and promoting the development of new industries and service sectors. Importantly, a distinction must be made between international firms that appear to be 'local' by virtue of a registration in Tanzania and firms that are owned by Tanzanians (henceforth 'indigenous' firms).

Some company initiatives are simultaneously intended to generate economic benefits and satisfy company demand for goods and services. When a company undertakes income restoration projects to replace income for people displaced by mining (including artisanal miners), they often target their interventions in areas where the mine can provide a ready market for the produce. Such community employment initiatives are discussed here under local content, since they are perceived, ultimately, by communities in much the same way: as a source of jobs and income.

5.3.1 Mine-level data on local and national procurement spend

The Tanzanian mineral sector has significant potential to act as a catalyst for local business development due to the demand it generates for goods and services. In 2009, ABG and Mwadui between them spent close to US\$ 110 million on goods and services in Tanzania. By 2010, with the development of ABG's new Buzwagi mine, the two mines alone spent around US\$ 123 million in Tanzania. It is clear that the mining companies for which data were available do spend a significant share of their overall procurement expenditure on goods and services procured from within Tanzania.³⁷ Table 5.5 shows that reported total 'domestic' (locally registered) procurement in 2009 ranged from 44% (Bulyanhulu) to 82% (Buzwagi) and 85% (Mwadui). Unfortunately, no data was provided on procurement by GGM.

The distinction between 'domestic' and 'imported' goods/services is a rather crude way of assessing the benefits that accrue to local economic actors, however, since many international supply companies tend to register subsidiary offices in their target markets. It is therefore useful to break down 'domestic' procurement data into *Domestic (locally registered)* and *Domestic ('indigenous')*. Table 5.5 shows that, in 2009, reported domestic 'indigenous' procurement ranged from 23% at Mwadui to 31% at Buzwagi. This information was not available for GGM. The table also shows that, although domestic procurement at Bulyanhulu has remained fairly constant (at just under half of total procurement), the **share of total procurement from 'indigenous' (Tanzanian) suppliers grew rapidly** from 17% in 2008 to 29% in 2010.

³⁷ Data on procurement spend obtained for this study do not distinguish between capital expenditure (e.g. on new developments) and operating expenditure (costs associated with ongoing operations (e.g. spare parts and other consumables)).

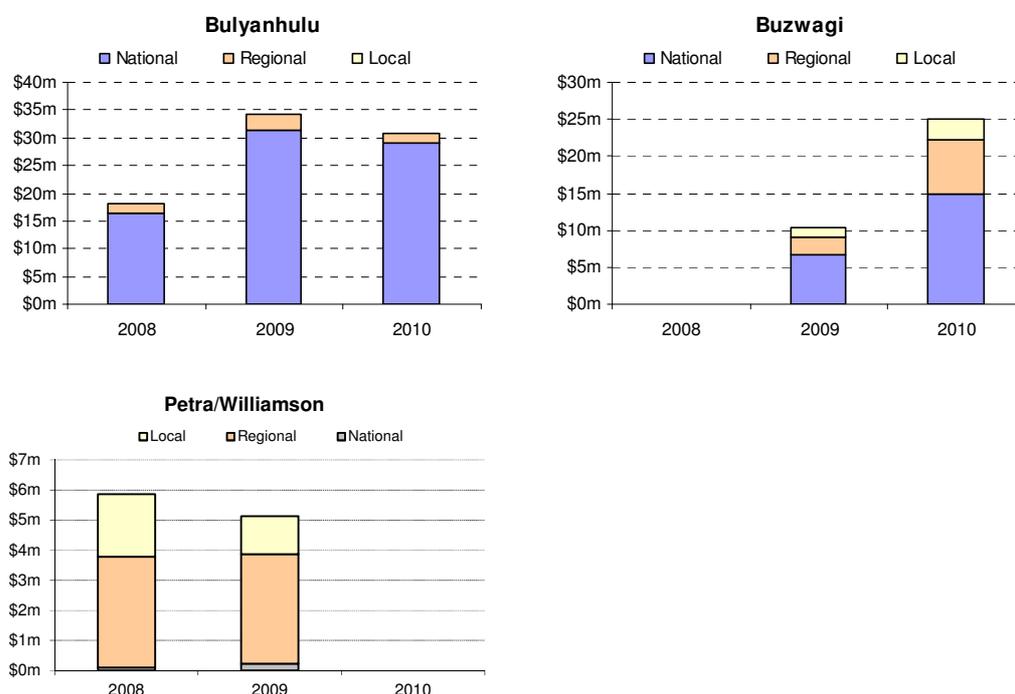
Table 5.5 Detailed procurement statistics by mine

Procurement by mine (US\$ million)		2004	2005	2006	2007	2008	2009	2010
Bulyanhulu	Imported from Africa	n/a	n/a	n/a	n/a	21.3	31.1	25.9
	Imp. from rest of world	n/a	n/a	n/a	n/a	34.1	45.3	31.1
	<i>Total imports</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>55.5</i>	<i>76.4</i>	<i>57.1</i>
	Domestic 'indigenous'	n/a	n/a	n/a	n/a	18.0	34.3	30.9
	Domestically reg'd	n/a	n/a	n/a	n/a	34.2	25.8	19.5
	<i>Total dom. procured</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>52.2</i>	<i>60.1</i>	<i>50.3</i>
	Indigenous' (% of tot.)					17%	25%	29%
Domest. reg'd (% of tot.)					32%	19%	18%	
Buzwagi	Imported from Africa	n/a	n/a	n/a	n/a	n/a	1.1	4.9
	Imp. from rest of world	n/a	n/a	n/a	n/a	n/a	4.9	34.9
	<i>Total imports</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>6.0</i>	<i>39.8</i>
	Domestic 'indigenous'	n/a	n/a	n/a	n/a	n/a	10.3	25.1
	Domestically reg'd	n/a	n/a	n/a	n/a	n/a	17.5	47.5
	<i>Total dom. procured</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>27.9</i>	<i>72.6</i>
	Indigenous' (% of tot.)						31%	22%
Domest. reg'd (% of tot.)						52%	42%	
Petra/ Williamson	Imported from Africa	n/a						
	Imp. from rest of world	n/a						
	<i>Total imports</i>	<i>5.7</i>	<i>6.6</i>	<i>8.1</i>	<i>7.5</i>	<i>2.3</i>	<i>3.4</i>	<i>n/a</i>
	Domestic 'indigenous'	n/a	n/a	n/a	n/a	5.9	5.1	n/a
	Domestically reg'd	n/a	n/a	n/a	n/a	11.3	14.0	n/a
	<i>Total dom. procured</i>	<i>18.3</i>	<i>17.2</i>	<i>17.9</i>	<i>29.9</i>	<i>17.2</i>	<i>19.2</i>	<i>n/a</i>
	Indigenous' (% of tot.)					30%	23%	
Domest. reg'd (% of tot.)					58%	62%		

Source: Company data and authors' calculations

Although procurement from indigenous supplier companies generates benefits to the domestic economy, it may have limited impacts on the local economy if such suppliers are based in the capital or other far-away cities. Three of the mining companies provide useful data on the value of contracts captured by truly 'local' suppliers, based in communities around the mine. This data casts light on the benefits that accrue to local communities and shows that **Buzwagi** rather than **Bulyanhulu** has been successful in drawing in truly local suppliers (accounting for 12% of total indigenous procurement at the mine). **Mwadui** appears to be significantly more 'localised' than the two ABG-owned mines, with the vast majority of supplies being classified as either regional or local. Some caution is required, however, in interpreting these results, given the different possible definitions of what constitutes regional and local.

Figure 5.4 Breakdown of expenditure by mine for national, regional and local suppliers



Source: Company data

Individual mining company mentoring and training programmes are unlikely to be as efficient as ones built on broader and more cooperative platforms comprising other key stakeholders such as government, donors and communities. There is experience elsewhere in Africa on nurturing small and medium enterprises (SMEs) in mining clusters through supplier development programmes with involvement by the International Finance Corporation (IFC) or other third parties (Angola, Zambia, South Africa and some west African countries). These programmes usually commence with an assessment of suppliers (local, regional and national) through gap analysis to prioritise sectors and capabilities and direct resources. This is then followed by training and mentoring in technical, business, production, management and marketing skills to strengthen the delivery capacity of the enterprise.

Useful lessons exist for Tanzania, such as the three-year IFC-facilitated Copperbelt SME Supplier Development programme. These include the importance of creating a sustainable mining company cooperative platform so as to prevent a vacuum emerging after withdrawal of the support. Involvement from the beginning of an umbrella group such as a Chamber of Minerals and Energy may be the preferred route to secure the long-term commitment of companies. This model is being pursued in Ghana through a supply manager sub-committee within the Chamber. Forced cooperation will undoubtedly be strengthened by the Ghanaian Mineral Commission intending to make local business develop programmes mandatory within mining companies.³⁸

³⁸ Our thanks to Philip Cook for these insights on Ghana.

To date, the absolute and relative amounts of donor funding that have been available to the country have been extremely high. In addition to the World Bank, there are several active donors supporting the mineral sector in Tanzania. Various mining-related initiatives exist that support artisanal mining, environmental management and institutional capacity building. Donors include Germany, UNIDO, the EU and Denmark. In the energy sector, donors also include JICA and donors such as Sweden, Germany and the EU are involved in various initiatives to develop rural energy services and promote adoption of new energy technologies. In the area of social development, international NGOs such as AMREF and Plan International are actively involved in mining regions.

5.3.2 Community perceptions on local content

Community surveys around **GGM** provided a mixed picture regarding demand generated by the mine for locally produced goods and services. Some respondents from communities around GGM voiced concerns (in particular leaders and others from Nyamalembu village) that locals have little or no access to supply contracts with the mine. Only a few tenders are captured by companies based in the local area around Geita, with a couple of examples (tenders for supply of vegetables and cleaning) mentioned as given to businesses in Nyakabale village. There was a general sense that most of the goods and services are bought outside the local areas (even very basic goods that were locally available).

Mine management at **Bulyanhulu** lamented the lack of ability/skills of the local population to respond to the genuine business opportunities created by the mine. They argued that local government capacity should be developed so that local government can better assist villagers in this respect. Local businesses were described by mine representatives as not serious (lack of documentation and established processes) and preferring to act as middlemen.

All parties (mining-company representatives as well as community representatives) agreed that the market benefits were not significant. Respondents from around **Bulyanhulu** argued that the main impact on increased business opportunities come from selling to mining-company employees rather than to the mining company itself. There was also a consensus that the mining company needed to provide more capacity-building initiatives and more information on how to trade with the mine.

Residents in the three villages around **Buzwagi** complain that the mine does not purchase commodities directly from the villages. The canteen at the **Mwadui** mine procures a large share of its agricultural produce from local communities, including vegetables, milk and rice. It was noted that the cattle keepers cannot satisfy the mine's demand for milk, so the mine has to look further afield for suppliers.

5.3.3 Community perceptions on supplier development programmes and income-generation initiatives

Mining companies can participate in the development of local economic activity by **actively supporting local businesses in developing their technical and/or financial capacities and abilities to deliver timely supplies of sufficient quality**. Doing so can serve the dual objectives of securing popular support for the mining company (to the extent it is seen as contributing to the local economy) and reducing lead times and promoting greater predictability in procurement practices. An additional motivation is to generate alternative sources of income for communities, in particular where traditional sources of income (e.g. ASM) have been displaced by the arrival of large-scale mining.

At a basic level, this involves providing local businesses with information on what the company is looking for and how would-be suppliers can register and engage with the mine. **For example, ABG has held information seminars in host communities to explain which business opportunities exist, as well as the process required to become a supplier to the mines.** To date, however, these initiatives appear to have had limited effects, as illustrated by ABG's breakdown of spend on 'indigenous' suppliers at Bulyanhulu and Buzwagi mines (see Figure 5.4). Although respondents agreed there were community benefits from being able to sell goods and services, in particular agricultural crops, they argued that community members were still not well informed about opportunities.

GGM engages some 250 individuals from the surrounding communities on temporary employment through 'village contracts' to provide services in property security, rehabilitation and housekeeping. The company also reportedly engaged in a project to provide financial assistance to local farmers (mainly in Nyakabale village), to allow them to improve production and supply the mining company. However, the initiative collapsed, the project was closed and the mining personnel started to procure vegetables from other areas. A second initiative at GGM – to employ unskilled casual labour – has resulted in allegations among community members that **GGM** was failing to honour agreements with communities. Some respondents referred to an agreement whereby the company committed to employ unskilled workers from Bugulula at a salary of TZS 150,000, but instead they were paid between TZS 30,000 and TZS 120,000.

At Bulyanhulu, the company helped form a community cooperative called IBUKA, with over 5,000 members from 12 villages who benefit from the income they generate from the labour and business services they provide to the mine. Bulyanhulu mine management was quoted as saying that the company spends over TZS 120 million (US\$ 93,000) per month on wages for villagers near the mine, and the cooperative retains a management fee equal to 20% of this value. Some respondents expressed dissatisfaction with this arrangement, claiming that, before IBUKA was formed, the 20% 'recruitment fee' for casual community labour would be paid, on a proportional basis, to the villages from which employees were drawn. Village leaders noted that they had relied on these management fees for their village development projects because funds from local government were so limited. They argued that the change to the structure had been abrupt, affecting many plans the village had.

Bulyanhulu also manages a jatropha farm intended to be handed to IBUKA. The farm acts as a field school for villagers. Focus groups highlighted some suspicion that the intention for establishment of the farm was not capacity building but rather to protect the land from small-scale mining activities.

Without the proper incentives in place, well-intentioned local supplier development initiatives can easily fail: the UWABU cooperative (supported by **Bulyanhulu** mine) gave seeds and training to about 200 farmers as well as a ready market in the mine. Initially, farmers obtained up to TZS 200,000 per month (US\$ 126). However, these funds were not reinvested but rather spent on consumption, which forced the cooperative to stop producing and instead buy produce from other non-cooperative farmers, so that the cooperative eventually collapsed.

Buzwagi mine has a community employment programme aimed at creating 300 jobs for young people in Mwime and other surrounding villages. Buzwagi mine management have entered into a formal agreement with the governing councils of the three villages to supply 70 (or 90) security guards per village, who work in shifts guarding the fence of the mining license area. These contracts are maintained by the village leaders (or councils). Individuals

are given basic training and provided with uniforms and simple safety equipment. **The mine management confirm that the *Sungu Sungu* programme has been successful, resulting in reduced theft of fencing material and poles. Respondents argued that the salary (of TZS 90,000 per month) was too low to support their livelihoods, and that the work was too dangerous to not include health insurance benefits.**

Buzwagi mine has sought to identify and share best practices in farming with local communities, including bee keeping. This includes a 15-acre demonstration project where villagers can learn horticultural farm practices. There were many small-scale miners residing in Mwime (the village closest to Buzwagi mine) when ABG arrived, and the company's bee-keeping capacity-building project was a strategic intervention supposed to help re-train those who had previously been small-scale miners or subsistence farmers in new income-generating activities. **The project was well received, given that bee keeping was a traditional activity within these villages. Buzwagi has partnered with an NGO called SHIDEPHA which manages the project and directly interacts with community members.** Because this is a recent initiative, it was not possible to confirm its impacts in this study.

At the **Mwadui** mine, local villagers are employed as security guards to help guard the mine facilities, as well as in carpentry and masonry jobs. Priority is given to members of the nearby Mwadui village. The process uses village leaders as gatekeepers. Villagers are also allowed to collect firewood from areas the company is clearing for mining, for their own use or for resale. As the distances are large, the mine provides transport.

5.4 Income effects, market access and inflation

In addition to direct employment producing goods and services for the mines, the benefits of large-scale mining on local communities can include expanded markets for goods and services due to demand from the mines, as well as second-round spending of salaries in the local economy. Such broader effects can lead to induced employment that can far outweigh the number of direct employees from the community. However, increased spending activity within a small local economy can also lead to localised inflation. This is particularly the case where transaction costs are high, i.e. where most community members lack the means to travel to neighbouring areas with lower prices.

5.4.1 Mine-level data on salaries paid

The salaries paid to employees constitutes a benefit stream in their own right, but also have wider benefits for surrounding communities to the extent that spending of these salaries generates demand for goods and services. To quantify the impact of salaries paid to employees on economic activity in the wider community, Table 5.6 shows the **total net payments made to direct employees** (both national and expatriate) at the four mines.³⁹ In 2009, ABG's Bulyanhulu was the largest contributor, where direct employees took home US\$ 35 million in salaries. Unfortunately, no data has been made available regarding salaries paid to employees of companies supplying goods and services to the mines – mining companies typically exercise **little systematic oversight of salaries paid by contractors.**

³⁹ Gross salaries can be inferred from PAYE taxes reported (with PAYE assumed to be 23% of Gross Pay, as per Barrick data). We assume the companies pay a 20% contribution to NSSF/PPF pensions schemes, 10% of which is deducted from gross salaries. The total wages received by employees are thus 100%-23%-10%=67% of gross salaries.

Table 5.6 Total and average net annual salaries over time

Net direct salaries (in US\$)		2004	2005	2006	2007	2008	2009	2010
Bulyanhulu	Net salaries paid	n/a	n/a	n/a	35.0m	26.8m	33.6m	n/a
	Avg salary (in '000)	n/a	n/a	n/a	28.4	14.4	15.7	n/a
Buzwagi	Net salaries paid	n/a	n/a	n/a	0.3m	5.4m	8.6m	n/a
	Avg salary (in '000)	n/a	n/a	n/a	0.6	11.7	13.0	n/a
Geita Gold Mine	Net salaries paid	n/a	n/a	n/a	n/a	n/a	23.4m	23.4m
	Avg salary (in '000)	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Petra/ Williamson	Net salaries paid	4.5m	4.8m	6.9m	7.7m	8.7m	8.2m	n/a
	Avg salary (in '000)	7.3	7.1	11.1	11.0	13.0	12.8	n/a

Source: Company data and authors' calculations

Note: Buzwagi salaries paid in 2007 is low due to it being the early stages of construction.

Average net salaries (for direct employees) ranged from US\$ 12,800 per year (Mwadui) to US\$ 15,700 per year (Bulyanhulu). However, these averages mask the high variation in salaries, where expatriate salaries tend to be significantly higher. A greater share of expatriate salaries is likely to be spent abroad, with more limited benefits to the domestic economy. The more interesting statistics in assessing benefits to Tanzania from these foreign mining companies are therefore the **total and average salary payments to Tanzanian employees**, as displayed in Table 5.7.

Table 5.7 Total and average net annual salaries for Tanzanians over time

Net direct salaries (in US\$)		2004	2005	2006	2007	2008	2009	2010
Bulyanhulu	Net salaries paid	n/a	n/a	n/a	35.0m	26.8m	33.6m	n/a
	Avg salary (in '000)	n/a	n/a	n/a	28.4	14.4	15.7	n/a
Buzwagi	Net salaries paid	n/a	n/a	n/a	0.3m	5.4m	8.6m	n/a
	Avg salary (in '000)	n/a	n/a	n/a	0.6	11.7	13.0	n/a
Geita Gold Mine	Net salaries paid	n/a	n/a	n/a	n/a	n/a	23.4m	23.4m
	Avg salary (in '000)	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Petra/ Williamson	Net salaries paid	4.5m	4.8m	6.9m	7.7m	8.7m	8.2m	n/a
	Avg salary (in '000)	7.3	7.1	11.1	11.0	13.0	12.8	n/a

Source: Company data and authors' calculations

The table shows that Bulyanhulu and Buzwagi together spent US\$ 15.1 million on salaries for Tanzanian employees in 2009, **comprising 37% of the total wage bill**. During the field research, Bulyanhulu staff reported spending over TZS 120 million per month on wages that go to local village residents. This equates to around US\$ 93,000 per year, or just under 1% of the 2009 total net salaries paid to Tanzanians. GGM and Mwadui did not provide this data, although Lange (2006) found that the majority of mineworkers at GGM received around US\$ 2,200 per year (including allowances) in 2004.⁴⁰

The limited data on salaries and business opportunities captured by people living in the local area complicates the estimation of multiplier effects generated from additional rounds of spending in the economy. The ICMM Mining: Partnerships for Development Toolkit refers to two studies – a World Bank study which finds a multipliers range of 1.65 to 2.50 (World Bank 2002) and a second study recommending a multiplier of 1.25 to 2.37 (Schrodde & Hronsky 2006). Adopting a conservative multiplier of 1.9, due to the limited availability of human and financial capital in Tanzania, would imply that the mineral sector in Tanzania is creating close to 20,000 employment opportunities. This is based on the estimated 10,000 people formally

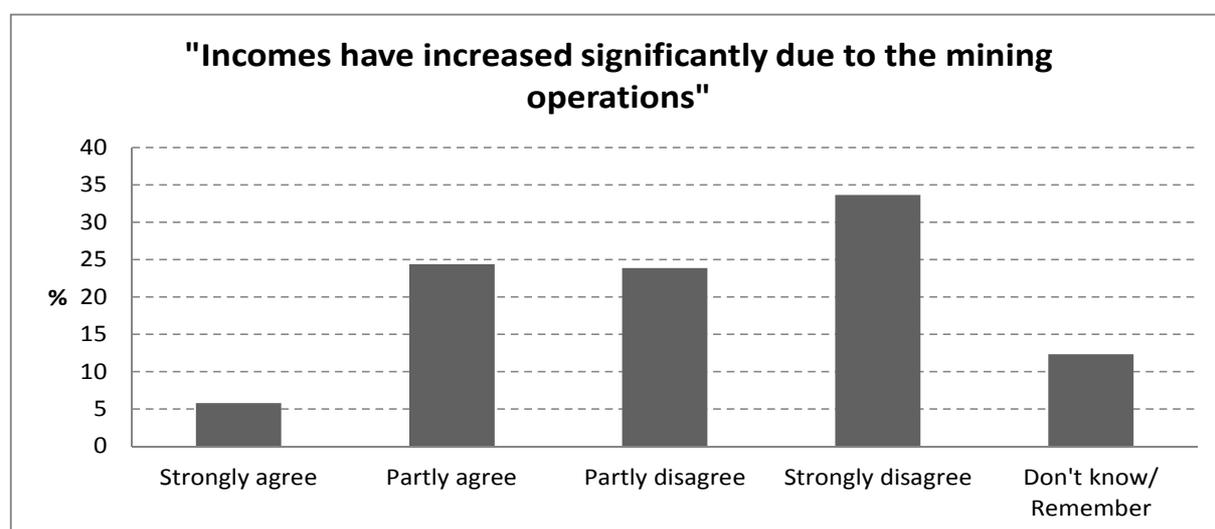
⁴⁰ Both GGM and Mwadui provided breakdowns of expatriate and local staff, but without splitting salaries between these two groups.

employed in large-scale mining. However, it tells us nothing about how these job opportunities are distributed between the national, regional and local levels.

5.4.2 Perceptions on income benefits and opportunities

Across the respondents in the field survey, under a third of respondents agreed that incomes had increased significantly due to the mining operations (of which only around 5% strongly agreed). This is not perhaps surprising if the figure for salaries paid to local residents in Bulyanhulu is representative of other mines. In Bulyanhulu, some respondents explained that they had better income-earning opportunities when small-scale mines dominated. This was because many people were informally employed in small-scale mining activities but fewer are employed in large-scale mines, hence the net effect has been to reduce local employment opportunities and other sources of income.

Figure 5.5 Perceptions of the effects of the mines on incomes



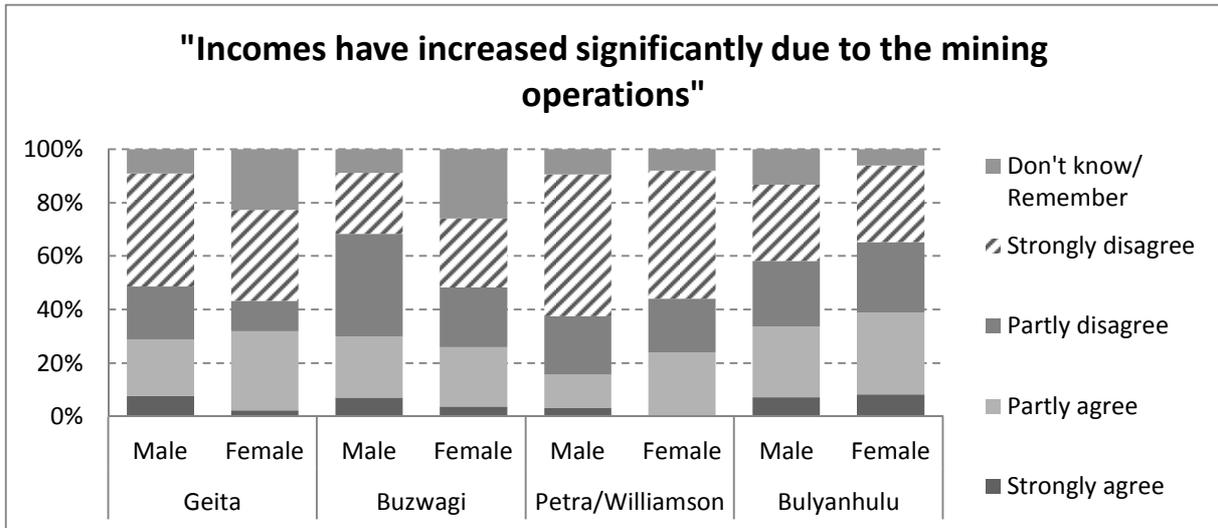
Source: Authors

Whilst this was the overall perception across the mines, there were some differences between the villages around each mine and between different social groups within villages. Men tended to strongly agree that incomes had increased more often than women (except in Bulyanhulu), although women generally agreed more broadly that incomes had increased (except in Buzwagi). Women were also less likely to know or express their views.

In interviews with communities around **GGM**, among those who agreed that mining had increased incomes, men tended to note that job opportunities contributed to household incomes, whilst women emphasised opportunities to grow their small businesses.⁴¹ This indicates that more opportunities for direct employment in mining operations are available to men than women. Overall, however, there was also a prevalent view that most people now had less money than when ASM was more active in the area. Respondents explained that even people who did not mine benefited by providing services to ASM miners (e.g. brokering, supplies).

⁴¹ One woman, for example, noted how her fruit business had expanded due to the mine, enabling her to build a house and expand into a larger shop.

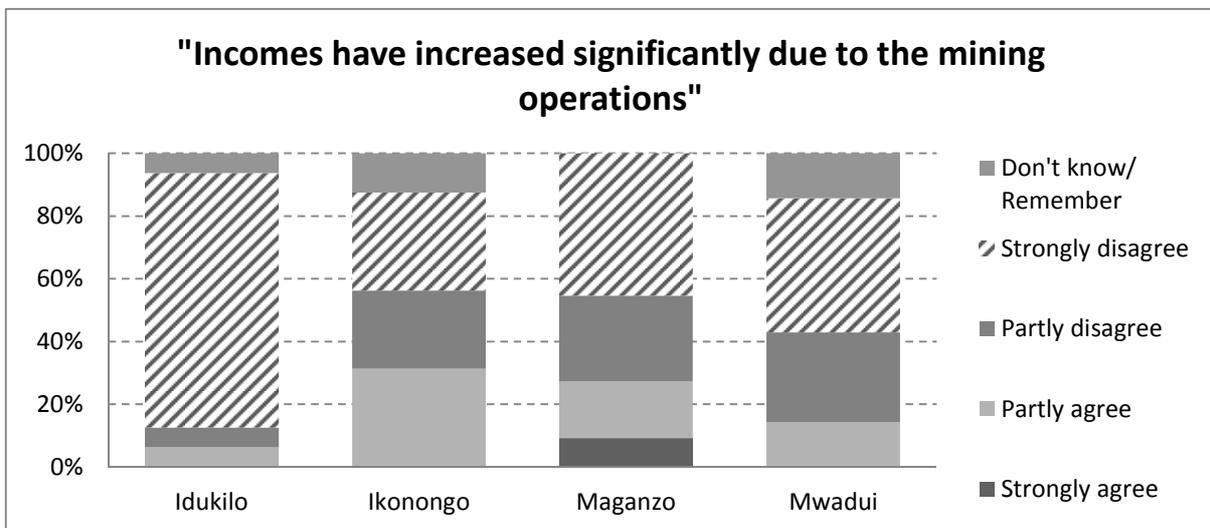
Figure 5.6 Perceptions of changes in incomes by gender



Source: Authors

Differences in perceptions between communities could also be seen. Around the **Mwadui** mine, for example, very few respondents in Idukilo perceived that incomes had increased as they had seen little benefit either from employment or increased business opportunities. Respondents in other villages were more likely to agree that incomes had increased, particularly in Ikonongo and Maganzo. Whilst Mwadui benefits *directly* because most of the mine workers are based there, Maganzo has become a business centre where people from different villages, towns and regions engage in different economic activities. Consequently, it benefits *indirectly* from increased incomes in other villages, as mine workers from Mwadui go to Maganzo to spend their salaries on goods and services (for domestic or commercial use). Other villages, however, are not so well connected to main economic hubs and to one another. This limits movements of people and goods, in particular during rainy season (when costs for transport also increase significantly).

Figure 5.7 Perceptions of the effects of the Mwadui mine on income by village



Source: Authors

In the communities around **Buzwagi**, just over a quarter of all respondents agreed that incomes had increased significantly due to the mine. Respondents in Mwendakulima were most likely to agree that incomes had increased due to mining compared to Mwime or Chapulwa. Whilst the difference is not huge, it reflects the higher number of mineworkers in the village, that more community investment projects have been executed in this village (including the bee-keeping group initiative and the construction of the ward offices which provided short-term employment for some), and the number of women who cook for the *Sungu Sungu*. Respondents in Mwime and Chapulwa villages complained that the only employment available is the allocation of 90 rotational guards, but this only benefits the fortunate 90 households and not the whole community. However, as much as these opportunities added to their incomes, the remuneration levels were not perceived to be very satisfactory. The TZS 90,000 per month was considered too little to meet their monthly expenditures.

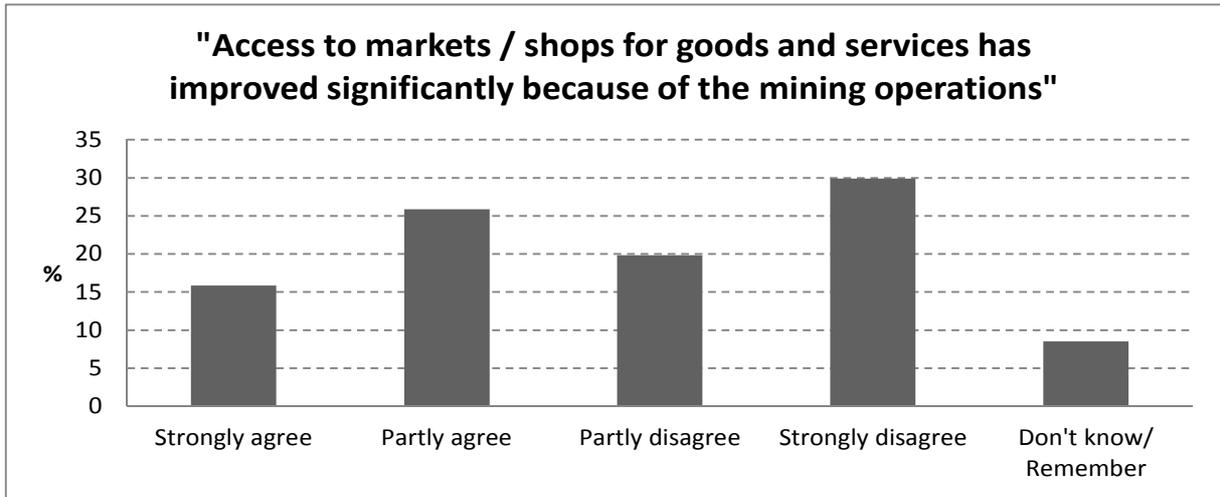
However, although increased economic activity in some locations (e.g. Maganzo near the **Mwadui** mine) has benefitted those actively engaged in trading, it has also resulted in increased prices for many basic commodities. This has had negative impacts, in particular for people who do not benefit from income-earning opportunities in the mine or for contractors (e.g. the majority of farmers in villages). In communities around **GGM**, many small business owners have seen their incomes increase, although this has attracted competition which has – together with price inflation – put downward pressure on profit margins. In the village of Isamilo, for instance, it was noted that high demand for goods and services is not met by the village market, leading to price increases and/or shortages. Respondents around **Bulyanhulu** complained of the increased cost of living due to increased demand for goods and services due to in-migration and increased populations, which offset other benefits from the mine.

As well as having inflationary impacts on goods and services, mining operations can also have impacts on the price of land. Village leaders from Bugarama, Kakola and Kakola No. 9 (in close proximity to the **Bulyanhulu** mine) argued that the arrival of large-scale mining has resulted in increased value of land surrounding the mine, by reducing supply of land (as more land is being used by ABG) and increasing demand (following immigration to take advantage of perceived opportunities). This has resulted in increased land conflicts between the mine and ASM miners or between the mine and farmers.

5.4.3 Perceptions on access to markets, transportation times and transportation costs

Overall, there was no clear finding within the four communities on whether the mining operations had resulted in increased or decreased access to markets and shops. However, compared with other perceptions of benefits, responses were more positive and a significant number agreed the mine had increased access to markets and shops. This would imply that a large number of people are seeing some benefits from selling goods and services to the mines either directly or indirectly.

Figure 5.8 Overall perceptions on access to markets and shops

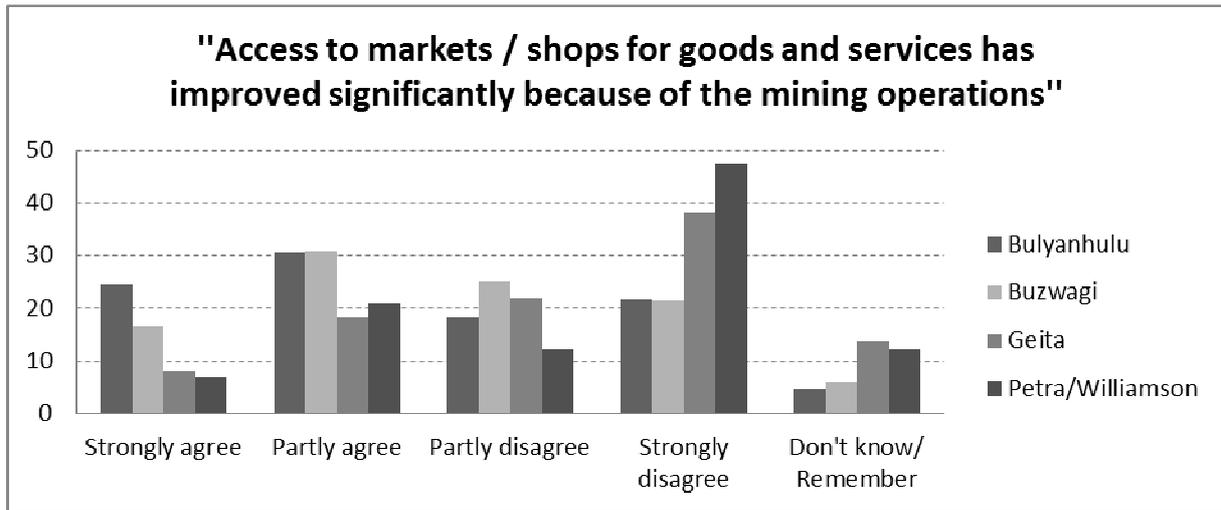


Source: Authors

Perceptions at each individual mine varied significantly, with respondents around Bulyanhulu and Buzwagi perceiving increased access more strongly than in GGM or Mwadui (see Figure 5.9). However, within the specific communities there were also significant differences in perception between individual communities and different social groups around each mine.

For instance, in Geita there were significant differences between Bugulula, where very few agreed access had improved, and Nyamalembo, where over half of respondents agreed. Respondents in Bugulula also generally perceived little improvement in either times or costs of transportation. However, this was also the case in Nyamalembo, where respondents in fact perceived that re-routing of roads meant longer distances and times for them (also reported in Nyawilimilwa and Nyakabale), although they still more strongly perceived access to markets had increased than in other villages. In Nyawilimilwa, respondents explained that transport costs had increased from TZS 2,000 to TZS 3,000, despite the proximity to Geita Town. These findings appear to indicate a lack of direct correlation between transportation times, costs and access to markets, with a range of other factors also having an influence.

Figure 5.9 Perceptions on access to markets/shops by mine (number of respondents)



Source: Authors

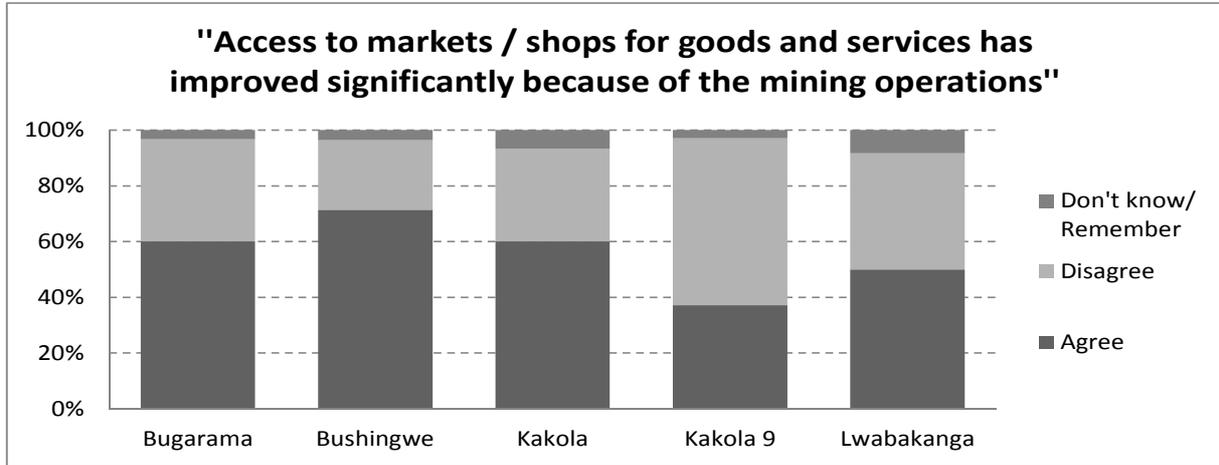
Some female respondents from communities around **GGM** also explained the uneven benefits of growing markets. They showed concern over slowly losing their markets, either through increased competition in general (due to more trader in-migration) or because higher demand has made it worthwhile for better-capitalised males to come and set up larger shops, with such larger outlets being preferred by mine workers. Female respondents from Nyakabale village, in particular, bitterly complained about such competition from other villages.

Around the **Mwadui** mine, respondents in Mwadui and Maganzo villages agreed the mine had reduced transportation costs much more than in Idukilo and Ikonongo. These different perceptions can be explained by the physical location of these villages: for example, the proximity to the road has allowed Maganzo to become a trading hub, enabling it to cost-effectively provide a range of goods and services to the mine, including raw materials and foodstuffs. Some respondents also explained that Maganzo's rise as a trading hub is also having positive indirect benefits on other villages, which can now get many goods and services in Maganzo rather than having to travel further (to Shinyanga Town). Mwadui is located in close proximity to the Mwadui mine, thereby drawing the maximum benefit of shared infrastructure (i.e. most likely to benefit even from commercially driven investments in infrastructure).

Around Bulyanhulu, where overall perceptions were the most positive in terms of increased access to markets, there were also differences between communities (see Figure 5.10). These findings suggest a lack of direct correlation between proximity to the mine and market access and are therefore contrary to the findings around Mwadui. For instance, answers from Kakola and Kakola No. 9 – both close to the mine – differed significantly: respondents in Kakola were almost twice as likely to agree that access to markets had increased compared to respondents from Kakola No. 9. Respondents explained that the mine had constructed many roads and some were frequently repaired and passable throughout the year, meaning travel times from Kakola to Kahama, Mwanza and between villages were reduced. In terms of transport cost, villagers explained that the cost from Kakola village to Kahama has gone down from TZS 5,000 before to TZS 3,000 now. The mine also provides transport from the mine, through Kakola village to Bugarama, for both workers and villagers:

We now spend almost one hour travelling to Kahama Town where we used to spend three or more hours.

Figure 5.10 Perceptions on changes in market access around Bulyanhulu



Source: Authors

Local government representatives in Kahama Town pointed out that the boom in economic activities there was occurring independently of the **Buzwagi** mine, as people transporting goods to other countries (Zambia, Burundi, Rwanda) use it as a half-way stop. This highlights the difficulties in attributing increased (or decreased) economic activity to a single mining project.

Despite benefits being recognised in some areas, respondents also often perceived that roads constructed by the company were primarily for the company’s commercial use rather than for the benefit of communities. Respondents noted that some such roads are, at times, closed off to the public (e.g. when salaries are being transported to the bank, or when the mine is transporting gold to the airstrip) or are not maintained. One village leader from Kakola No.9 queried:

... if the roads were really built for the villagers’ benefit, why are many roads not used by the mine workers in a worse condition?

5.5 Benefit stream: Community investment/development projects

The positive and negative impacts of a mining operation on local communities can also be documented in the provision of economic and social community services. These include activities such as building and/or maintaining schools, roads, hospitals, clinics, police stations and administrative buildings.

Social investment can also include programmes to support livelihoods, such as through providing microfinance through partnerships with NGOs or supporting capacity development for small businesses. Various modalities for engaging with communities and delivering these services exist, and range from community development funds provided to local governments to direct engagement with village/community leaders. Key questions include whether companies have clearly allocated budgets and mechanisms for engaging, in a participatory and sustainable manner, with communities. This section reviews the mine-level data,

followed by a discussion that focuses in detail on community perceptions around social investment under three categories: health, education and infrastructure.

5.5.1 Mine-level data on community investment spending

The information provided to us regarding community programmes varied across the mines under study:

Table 5.8 Spend on community programmes over time

Community progr. (in US\$ million)	2004	2005	2006	2007	2008	2009	2010
Bulyanhulu	n/a	n/a	n/a	0.8	0.7	1.4	n/a
Buzwagi	n/a	n/a	n/a	n/a	n/a	0.2	n/a
Geita Gold Mine	n/a	n/a	n/a	n/a	0.4	1.1	n/a
Petra/Williamson	0.5	0.5	0.6	1.0	0.8	1.0	n/a

Source: Company data and authors' calculations

More detailed data in this area was limited and not presented in a format that would lend itself to cross-company comparisons.

At **GGM**, total community spend in 2009 amounted to US \$1.1 million (up from US\$ 0.4 million in 2008). These funds were allocated to a feasibility study for a Geita Town water project, support for a mining-related technical training centre, completion of a community clinic and contributions to a regional educational fund.⁴² The company has contributed to infrastructure in the broader region, having built and rehabilitated a number of roads in the area and has a policy in place to procure goods locally wherever possible. Respondents around **GGM** noted that the mine is also supporting a water-supply project for Nyakabale village.

At the **Bulyanhulu mine**, community spend (US\$ 1.4 million in 2009) appears focused on health, education and infrastructure projects, including:

- Construction in 2002 of a water pipeline from Lake Victoria which supplies water to the mine as well as around 30,000 people in surrounding communities (accessible through wells installed in the villages);
- Collaboration with TANESCO to bring electricity to the town of Kakola (thereby reducing the town's reliance on expensive diesel generators);
- Partnership with CARE International Tanzania to provide primary schooling; and
- An agricultural development programme (purchasing local inputs to the mine's catering services from a network of 200 farmers).

Unfortunately, ABG's Bulyanhulu Mine Responsibility Report 2009 does not provide any quantitative guidance as to the cost of these projects nor attempt to quantify the benefits generated (e.g. changes in the number of people with access to potable drinking water,

⁴² AngloGold Ashanti 2009, Sustainability Review: Supplementary Information (p. 29). Available online.

reductions in water-borne diseases, rises in income as a result of more affordable power supply, and distribution of access to this power supply).⁴³

For ABG's new **Buzwagi mine**, information on the mine's total community spend of US\$ 200,000 was only available for 2009 and with limited detail on how this money was spent (with the exception of the community employment projects aimed at creating about 300 jobs, including around 90 *Sungu Sungu*).

At **Mwadui**, the company spent about US\$ 1 million on community projects in 2009. In general, respondents around the mine – and in particular around Mwadui village – noted significant contributions in the areas of water, health and education facilities, and road infrastructure. Nevertheless, there was a perception that benefits were greater in the past compared to their involvement in recent years. This could partly reflect the current renovation activities and resulting limited production at the mine.

The management at Mwadui mine has made a commitment to spend 2% of revenue on community programmes by 2014, essentially treating funding for community programmes as a royalty payment. The benefit of this approach is that the budgetary allocation for these programmes can be made before other claims on the company, making it more likely to be paid (assuming this objective is enshrined in the company's internal governance frameworks). However, potential drawbacks do exist; the most notable is sustainability risks to projects in the advent of a sharp fall in commodities prices as witnessed in 2008, or if the firm faces production shortfalls due to technical challenges.

Because of the age of the mine, Mwadui operate a 'mine village' model, where housing as well as comprehensive social services are provided – in immediate proximity to the mine – by the company to its workers. This area includes various shops and other commercial services. The mine also employs the wives of mine workers in jobs sorting diamonds. Community projects at Mwadui include:

- Health programmes, including the maintenance of the Mwadui Hospital (with 2,600 patients in the first half of 2009), which is completely funded by Mwadui mine at about US\$ 500,000 per year;
- Education programmes – Mwadui Primary School provides primary education to around 400 children, and in 2010 was allocated US\$ 85,000 for an upgrade;
- Small-business development programme (whereby over 100 small businesses are provided with free property for their operations);
- Programme for the provision of potable water to outside communities;
- Environmental programmes;
- Community infrastructure development (bridges, roads and Shinyanga Airport); and
- Various discretionary items, including support for community policing and security (amounting to US\$ 66,000 between April 2009 and December 2010).

⁴³ Barrick 2009, Bulyanhulu Mine Responsibility Report. Available online.

Non-salary financial benefits at Mwadui include free housing, subsidised electrical power, free water supply, free education for children up to standard VII, subsidised medical treatment, transport for shift workers, educational fund-reimbursable interest-free staff loans, training, leave allowances, and a death fund for the family of deceased staff, as well as a 'thirteenth cheque'. The company also provides a car allowance to subsidise fuel for managers, foremen and directors, and emergency leave of 10 days a year (details on such non-salary benefits for workers were not available at the other mines under study).

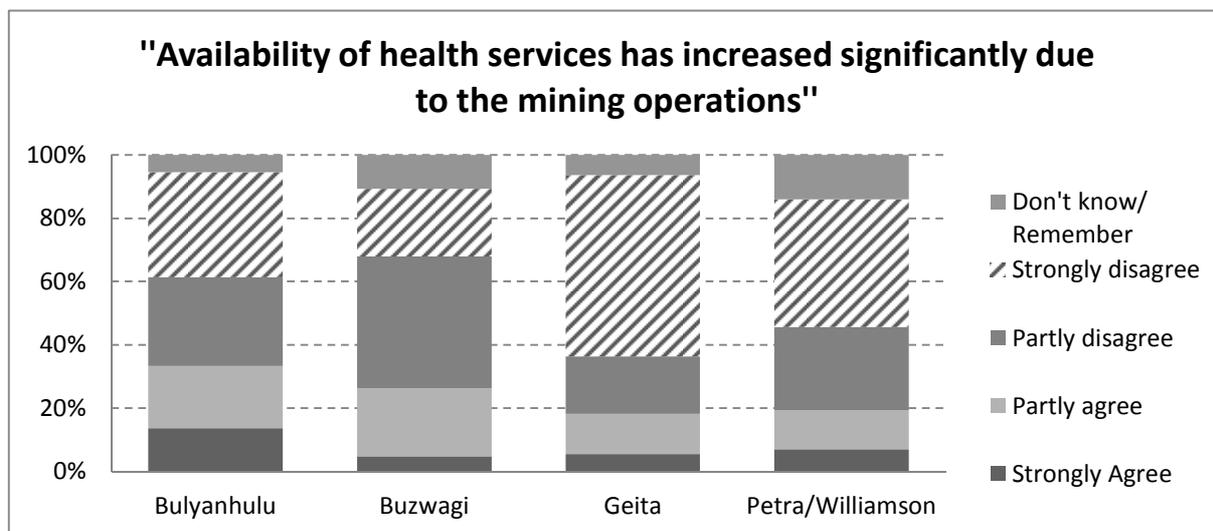
The **Mwadui** mine operates some innovative infrastructure initiatives, including providing clean and safe water for nearby communities. Rather than transporting water to one or more communities, the mine provides water-collection points on the edge of the mine area, where community members can collect water. There was a common perception among community members around the mine that it should also consider renovating and maintaining the community access roads. These are in a poor state, reducing commercial access between villages. Focus groups indicated that this claim was based on a sense of reciprocity, or moral obligation on the mine, to make community investments commensurate with the profits they were thought to be generating.

5.5.2 Perceptions on health services and infrastructure

Significant investments have been made in various health services and infrastructure across the four mines. In some cases this is mainly focused on facilities for employees, which local residents can also use when needed, whilst in others they are primarily for community or local use. For instance, the **Bulyanhulu** mine has a hospital within the mining compound and has constructed a dispensary at Bugarama village serving all communities around the mine. Services include spraying against mosquitoes and distributing bed nets (malaria prevention), training on HIV prevention, and HIV/Aids testing and counselling. Local government is responsible for providing staff, but the mining company maintains facilities and supplies medicines. **Mwadui** operates a modern health centre, located in the Mwadui area, which serves Mwadui as well as residents from nearby villages. The mining company funds the actual facilities, the staff, and the consumables. Mine workers and their families enjoy free treatment, and others are charged a minimal fee (e.g. admission to the hospital is TZS 5,000 per night).

Despite these examples, across the four mines, respondents generally disagreed that the availability of health services had increased as a result of the mine (see Figure 5.11). Reasons for this varied. In **Bulyanhulu**, for example, despite the investment, respondents explained that the dispensary in Bugarama did not have enough drugs, that there were too few staff, and that the quality of services were poor. There was a perception that even though the health service might be better at the mine hospital, services there were too expensive (the high cost of health care was consistently raised as an issue by respondents around each of the mines). In the area around Bulyanhulu, when people want affordable care/medicines they have to travel as far as Kahama Town. The fact that villagers are willing to incur these transaction costs indicates that there is a significant gap between the cost of health services at the mine and those in Kahama Town.

Figure 5.11 Perceptions on changes in the availability of health services by mine



Source: Authors

Respondents around the **Mwadui mine** acknowledged that the health services provided were of a very high quality, even though the costs were considered to be moderately high for any non-mine workers. Nevertheless, most also disagreed that availability of health services had increased. A concern raised was the perceived discrimination whereby the hospital favours mine workers and their dependents (respondents felt that treatment of non-mine workers was not given priority). Staff at the hospital confirmed that priority is given to mine workers, since the mine want them to recover quickly so they can get back to work. They argued, however, that they always prioritise those with serious illnesses who require urgent treatment. Moreover, in the case of serious conditions, Mwadui funds a transfer to a better-equipped hospital, regardless of whether the person is a mine worker or not.

Almost two-thirds of respondents around **Buzwagi** saw no benefit from the mine in terms of increased access to health care. Although respondents did, in general, appreciate Buzwagi's HIV/Aids awareness campaigns, existing hospital facilities were described as dilapidated and relatively far from the villages. Buzwagi's Community Liaison Officer confirmed that the mine had plans to develop a health care facility within the next five years and people were aware of this through 'the grapevine' (rather than through a concerted communication strategy). As one respondent noted:

They have started constructing the ward office so at least we can protect ourselves from the rain, no one can lie to us about the construction ... we have hope that the hospital rumour could also be true.

Around individual mines, perceptions also varied widely between communities. In some instances, this appears to be clearly linked to investments being made in particular communities and not in others (e.g. around Geita and Buzwagi); however, in other instances this is less clear (e.g. around Bulyanhulu).

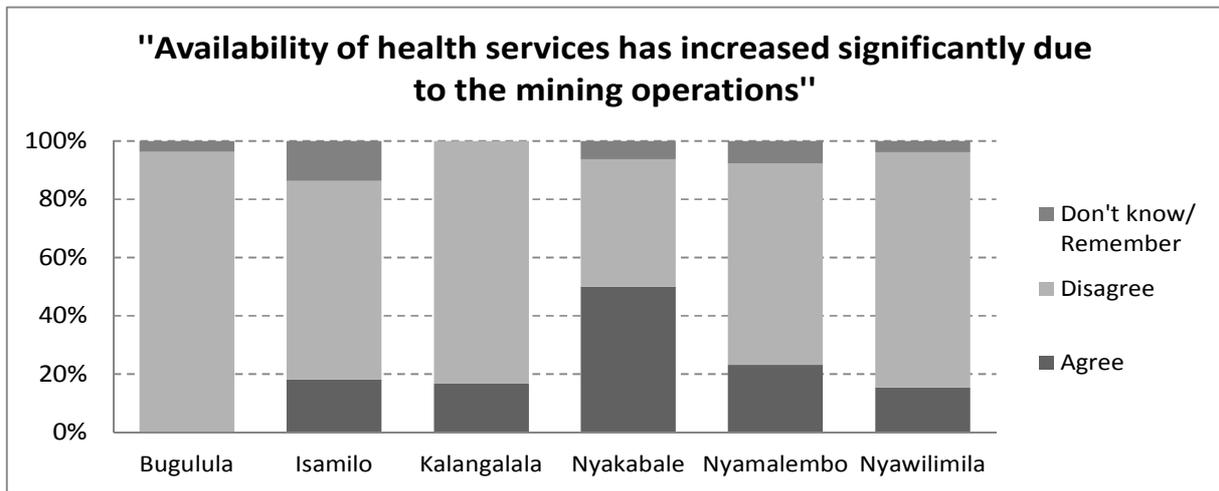
In Buzwagi, for instance, perceptions on whether availability of health facilities had increased significantly due to the mining operations differed markedly between the villages. Respondents from Mwime were twice as likely as respondents from Mwendakulima to agree,

and five times as likely as respondents from Chapulwa to agree. This can be explained with reference to a dispensary in Mwime rehabilitated by the mine.

Around Geita, despite respondents disagreeing that the availability of health services had increased due to the mine, **GGM** has supported health services in surrounding communities in a variety of ways and to varying degrees. However, respondents suggest that this support has focused on Nyakabale village, where GGM has committed to constructing a health centre. This links with the much stronger perception of increased availability of health services here compared to other villages (see Figure 5.12). It should be noted, however, that these benefits are contested by some Nyakabale villagers due to delays to the project. One respondent noted:

The mine has promised to construct a health centre and we agreed with the mine management that the community contribute labour to the construction. The community is ready for volunteering but when we asked the mine for financial support they only give us promises.

Figure 5.12 Increased availability of health services around GGM



Source: Authors

Among the other five villages around Geita, some respondents explained that they saw **health services as the responsibility of the mining company** (rather than the government), lamenting the absence of commitment from GGM.

In addition to availability, respondents also highlighted a number of factors which affected the quality of care. These are primarily the responsibility of government but in many instances were perceived to be failures of the companies. They included lack of medicines, lack of workers, and lack of equipment to care for pregnant women. Community members noted they have requested support with medicines and funding from GGM (as well as government), but that responses have been disappointing. Some respondents noted that, when faced with shortages of medicines, villagers will – when they hear of a medicine delivery – walk for miles to neighbouring communities. It was reported that such shortages had led to fights among people scrambling for medicine.

5.5.3 Perceptions on education services and infrastructure

Respondents across the communities recognised the importance of education, particularly as the lack of it was seen as a constraint on benefiting from employment opportunities in the mine (as was the case in Buzwagi, for instance). In Buzwagi, respondents explained particular constraints:

**When employment opportunities come, our children are required to send their applications online when they don't have access to computers or knowledge to use them ... other opportunities request English language skills but with their education they have no chance in competing with others who may be at the same level but know how to speak English.
(Focus group participant, Mwendakulima village)**

As with the health sector, the mining companies are funding and supporting education investments across all four mine sites. Whilst this support was recognised in some areas, perceptions within communities around the mines were again mixed regarding the actual benefits from the investments made. Cost was raised as an issue affecting access to education even when availability of facilities is improved.

Around Bulyanhulu, for instance, respondents noted that the mine has brought some positive change in attitudes toward education, arguing that in the past young people would drop out of education as they could make a living through small-scale mining (which was seen as difficult nowadays). The mine management stated that the mine had constructed primary and secondary schools in some villages, and that they sponsor students at various universities and vocational colleges, accept field students, and have trained more than 600 farmers in modern farming methods. There were also some reports that **Bulyanhulu** was planning to build a vocational education college for young people in villages around the mine. Community officers argued that, based on the number of fourth and sixth form graduates, education in the area had improved. Overall, however, despite the positive changes, access to education was nevertheless seen by most respondents as insufficient. It was typically seen as more the responsibility of the mines to provide than government.

Around Geita, respondents acknowledged **GGM's** support in the area of education through, for instance, constructing classrooms in some villages. However, perceptions on the benefits from increased access to education were again mixed. Some respondents compared GGM's education support programme to that of ABG, noting that at its Nyamongo mine ABG is sponsoring some children from surrounding communities but that GGM does not have an equivalent project. Respondents also stressed that Kagu Secondary School was built by community effort, in contrast to what they saw as GGM's claim to have built it.

Although **Buzwagi** has only recently started producing gold, respondents perceived that the mine had already contributed to several infrastructure and economic development projects, including the Mwendakulima Ward Offices, renovation of the Mwendakulima and Masengo secondary schools, and the Isamabadulu Primary School. The mine has also fully sponsored the Shama Boarding School. Despite the mine contributing to the financing, construction and establishment of some four schools in surrounding communities, respondents state that they cannot afford to send their children to these schools. This compels them to enrol their children at 'ward schools' which often have a 1-to-100 teacher-to-pupil ratio (reducing the quality of education).

The story is similar at the **Mwadui** mine, where there are two primary schools located within the mining license area. Mwadui mine is funding the Mwadui A primary school which caters

to children of mine employees. A second Mwadui B primary school is funded by an Anglican Church NGO (with some support from Mwadui). The former has a higher teacher-student ratio and better facilities. Mwadui A is not officially restricted to children of mine employees, but is seen as too expensive for non-mine workers.

5.6 Summary and discussion

5.6.1 Taxes

The discussion of the main economic findings can usefully start with the various tax and other government revenues generated by the mining industry. This is not because this is necessarily the most important aspect of mining's contribution, but because taxation is the headline topic that invariably emerges when the contribution of mining is discussed. Mining's contributions both to total government revenue and to GDP has so far been at around 3%. Even though 3% of total revenue and GDP both represent very large *absolute* numbers, there has for some time been a strong sentiment in Tanzania that the mining companies need to pay more money to government.⁴⁴

Despite this public fixation on the tax question, there are two main reasons for somewhat downplaying the overall significance of the *levels* of taxes and royalties paid by mineral companies in the past. First, these amounts are certain to increase radically in the next few years even if there are no further increases in tax and royalty rates. This is because the depreciation allowances for corporation tax will soon unwind and result in very large increases in the tax-take from corporation taxes, as well as possible new revenue streams from oil and gas activities.⁴⁵

The results of this present study show there is a very considerable problem about **the ways in which mineral tax revenues are used** in Tanzania at the present time – a problem that is reflected in the perceptions of ordinary Tanzanians in the areas where mining takes place.⁴⁶ Above all, this study has highlighted an acute awareness among community members that there are limited tax benefits reaching the communities. This complaint includes not only the big ticket national taxes but also small local imposts such as the LGL, which is meant to go directly to local governments for spending in communities around the mine. As was noted above, village leaders argue that weak implementing capacity at the local government level can lead to tensions within the village and mistrust between community members and village leaders. Some community members suspect that the funds do actually reach the villages but

⁴⁴ In the Bomani Report, there were no fewer than 96 recommendations about how to enhance the contribution of the mineral sector, but the ones that commanded by far the most public attention related to the three recommendations pertaining narrowly to proposed increases in royalty rates or the manner in which royalties might be calculated (see Sections 2.3 and 2.5 of the Bomani Report).

⁴⁵ Previous work by OPM has shown that the first of these factors alone is likely to boost government revenues from mining by a factor of three – far more than can be expected from the royalty increase that was gazetted on 1 November 2010. Once these increases begin to come on stream, the issue of how the revenues get used for the benefit of the country should and probably will start to figure much more prominently in public debate.

⁴⁶ A relevant point in this context relates to the missing revenues. As was noted in Chapter 3, the evidence from the initial TEITI report in 2011 indicates there are very substantial discrepancies between the amounts of tax and royalty paid by the companies and the amounts acknowledged in government accounting: in short, some significant revenues are going missing.

are then appropriated by the village leaders, resulting in mistrust of village leaders. For example, community members from around **Bulyanhulu** mine voiced suspicions that this levy was channelled to the village leader and not used for development projects.

At the intermediate level of taxation the situation is similar. There is a mismatch between the assertion of district government representatives who argue that various taxes and official payments (e.g. royalty fees, license fees, a district development levy etc.) are in fact channelled into the development agendas of the region and local council offices, and local respondents in communities, who once again failed to see very clear direct benefits from taxes paid.

Since these local communities see no direct benefit to themselves from this source, they have no real reasons to factor these into their own perceptions about the impacts of mining as reported in our field surveys. Indeed, where there is knowledge about the large absolute amounts paid nationally, the local criticisms of present arrangements seem just as likely to point the finger of blame for inadequate local schools, roads and hospitals at mining companies as at the government.

This type of perception and attitude is further fostered by Tanzania's present system of local government finance, which explicitly avoids compensating mining-affected regions and communities with increased central government support. The assumption is that the 'wealth' mining brings to these community areas is such that it does not call for any additional supplementation from the national budget – even though this is where many of the negative impacts from mining occur. To deal with these impacts puts additional pressure on the provision of government services at the local level. Our results show that mineral wealth *per se* does not automatically improve health and educational outcomes: an additional stimulus from government and other programmes is needed to ensure it does.

To summarise, while there may be ongoing issues about the level of taxes and royalties paid by the mining companies, there is an even bigger set of issues about the channelling and use of such revenues to local and community areas. The above examples highlight the importance to the effective use of mineral resources of ensuring that the local governments have better and sufficient capacity to implement projects, as well as the responsibility/accountability to communicate more effectively around the uses of these funds. Some of the socioeconomic weaknesses of the mine-affected regions (see Chapter 4) could be addressed more rapidly if these governance issues were resolved.

5.6.2 Employment and training

We know that several thousand new jobs have been created in the mine-affected regions (see the 2008 data in Table 5.2), which in some cases has led to a very significant increase in the percentage share of formal-sector wage jobs in total economic activity. However, the data obtained from mining companies regarding the number of jobs captured by local communities (as opposed to Tanzanians from elsewhere) was unfortunately very limited.

Data from **Mwadui** – the only mine providing a breakdown between local and non-local Tanzanians employed by the company – shows that local employees constitute only 14% of all direct employees, but 58% of the contractors. The latter types of jobs are likely to consist of short-term, low-skilled employment with limited or no benefits (e.g. health insurance) compared to directly employed positions. As contractors, they are also much more likely to be laid off in the event of a slowdown in mine production than direct employees. This potentially increases the vulnerability of local communities to the fortunes of the mines.

In spite of the slightly improved educational attainments seen in Mwanza and Shinyanga since the large mines began their operations, the *absolute levels* of those educational and associated skill attainments remain very low, with only some 20% or fewer having achieved secondary level education. There was a common perception among community members surveyed that the relative lack of education and skills makes it difficult for local workers to compete for the relatively few available direct jobs. The skill shortages can also account in part for the widespread irritation about the ‘excessive’ numbers of jobs going to non-locals. This appears to be a **systemic** problem linked to the mining companies’ commitment to engage Tanzanians but their inability to find enough sufficiently qualified workers in the immediate vicinities of their own operations. Other problems with employment are more **process-related** and could presumably be remedied more easily. These relate above all to the various informational failures that seem to surround the recruitment processes of the main mines, including the insider favouritism commonly mentioned in focus groups.

Mining companies’ training initiatives could improve skills that are locally available, in particular if some degree of training support targets members of the immediate local communities. Here the evidence from the present study is mixed. It is very clear that the mining companies do have well-resourced and carefully designed training arrangements already in place in at least some cases. The mining companies operate with a number of different models in order to meet their localisation targets and also with commitments to spend significant sums on their training agenda. What has not been fully clarified by the study – due to limited performance data made available by the mines – is the effectiveness of these activities in cost–benefit terms. What is clear is that the training schemes have so far failed to satisfy the host communities either in terms of the number of new jobs the training has made possible, or in terms of the proportion of those jobs that have accrued to local workers narrowly defined.

Any attempts at improving the outcomes would benefit from the mining companies’ coordination with government-led efforts to achieve further major improvements in general educational attainment in the mine-affected regions. In addition, the potential for a cross-company training initiative (e.g. a regional mining school) to generate economies of scale of benefit to all companies in the area could usefully be explored.

5.6.3 Local content

Bulyanhulu, Buzwagi and Mwadui on average currently import around half of their inputs and procure the other half domestically.⁴⁷ Of the domestic share, just under half accrues to Tanzanian companies with Tanzanian owners, where more of the rents are likely to be re-spent in the domestic economy. However, the proportion of this captured by truly ‘local’ suppliers, operating in communities and towns around the mine site, is typically only a fraction.

In some cases, mine management as well as communities recognise this but cannot do much more given the limited quantities of product locally available. However, in some of the mines there has been a significant increase over time in both the absolute amounts and the relative shares of local procurement. For example, our data suggest that **Buzwagi** (but less so **Bulyanhulu**) has been successful in drawing in truly local suppliers (accounting for 12% of total ‘indigenous’ procurement at Buzwagi, but less than 1% at Bulyanhulu). **Mwadui** appears to be the most ‘localised’ of the three mines, with the vast majority of indigenous

⁴⁷ No data on local content were made available for GGM.

supplies being classified as either regional or local. Local suppliers captured 24% of 'indigenous' supplies in 2009, or about 5-7% of total procurement, reflecting the firm's 'mining town' community development model. The problem of generalising individual success stories is broadly the same as that which applies to local employment – appropriate local suppliers need to be encouraged and then fostered. Currently this is not happening on anything like the scale necessary to radically improve outcomes across the board.

The communities recognised the limited market opportunities generated by the mine, but at the same time acknowledged they did not have the skills to produce those goods and services to the quality standards required by the mine. In principle, both the demand for skills and for local supplies could be nurtured through more and better government and/or donor-funded training programmes and supplier development programmes. Some of the mines are already showing what is possible, even in unpropitious situations where the support from other actors is relatively limited. International experience also demonstrates the large potential for effective policy interventions in this area. However, in the absence of such a strengthening of efforts, local perceptions are likely to remain that companies are not doing enough with respect to capacity-building initiatives and provision of information on how to trade with the mine.

With respect to local procurement the research was not able to identify significant mining company initiatives for strengthening local and regional supplier capabilities, other than some in horticultural and mine services. Yet the three mining companies represented in the study all have valuable experience in aspects of supplier development in Tanzania. These range from individual company purchasing department policies to involvement in the inter-industry private sector initiative.⁴⁸ From a local, regional and national development perspective a substantial coordination failure seems to exist that prevents linkage development and therefore the optimisation of the substantial development benefits available from mining through the mining cluster. This failure can only be overcome through a commitment to collaboration between the companies themselves, most usefully facilitated by an outside agent. The SMMRP, IFC or Tanzanian Chamber of Minerals and Energy could be the means to engage parties in such a programme to improve supplier development.

5.6.4 Income effects, access to markets and inflation

We have so far considered three of the more direct ways mining can transmit its benefits to local communities – by generating government revenue, through direct employment and through the local procurement of goods and services. However, the impacts of mining can also occur in broader and more diffuse ways, through indirect and induced impacts that may be generated through second- and third-order multiplier effects, with salaries and profit captured by employees and suppliers being re-spent within the local economy. These indirect and induced effects in principle can generate broad-based economic activity and income gains.⁴⁹ Analyses of the net impact of mining on overall levels of income in local communities are significantly confused by the different situations that had existed prior to the arrival of large-scale international mining. In particular, in the vicinities around **Bulyanhulu** and **GGM**, where substantial ASM had previously occurred, our respondents expressed

⁴⁸ Thanks to Philip Cook for these insights: <http://www.psi.org/tanzania>

⁴⁹ It should be noted, however, that in a highly agrarian society such as that of Tanzania the *ex-ante* expectation would be one involving relatively low multiplier effects either from inter-industry transactions or from wage expenditures on local goods and services.

serious doubt as to whether the large mine had increased overall economic activity and access to markets:

When we had small-scale mining dominating the mining activities, we had many businesses, restaurants, shops, food sellers and many people migrated to our villages for business and mining, so how can we say that these mining investors have brought all these changes? (Village leader from Kakola, near Bulyanhulu)

For indirect and induced income and employment to materialise, it is necessary for there to be both demand (from local firms who have revenues from selling directly to the mines and mine worker salaries) as well as supply capacity. We have already seen from our earlier discussion in this chapter that both of these ingredients are presently quite limited. Furthermore, the problems of limited demand and supply are compounded where there are also costly systems of transportation between potential buyers (e.g. mine workers) and potential sellers. Weaknesses in this type of area could easily make it too costly at the margin for many locals to compete even when they otherwise *do* have the capacity to supply.

The study found most respondents felt there had not been much change in access to, or cost of, transportation. The exception was around **GGM**, where company initiatives had considerably reduced the travelling time to the nearest big town. Against this type of positive outcome, it was also found that other villages have been inconvenienced and had seen their transaction costs increase (e.g. due to intermittent closure of some roads to accommodate mining activities).

Overall, the current capacity limitations have so far conspired with the high transaction cost (partly due to weak infrastructure) to greatly limit the multiplier benefits that might otherwise accrue from such large mines.

A further and again rather negative result is that in situations such as that seen in the main Tanzanian mining regions where the increased demand for certain goods and services fails to be met, an upward pressure on prices – especially of more immobile goods and services such as housing – can quickly ensue. This is particularly a problem where access to markets and supply responses are limited or slow, leading to more localised, rapid and disruptive inflation. This highlights the importance of community investment in infrastructure, to be coordinated with central government to maximise its impact.

A specific comment from the villagers close to **GGM** was that, in times of scarcity (due to rising demand generated by the mine), they purchase more of their supplies from the main town – Geita – which further undermines some businesses in the smaller villages closer to the mine. So, when markets cannot respond, economic activity is in some danger of being transferred to other locations (e.g. larger towns).

5.6.5 Community investment (health, education, infrastructure)

The findings reveal that the mining companies all engage in a range of health, education and some other community projects. These activities all have some development impacts and the companies deserve credit for their various initiatives. Furthermore, the evidence from national statistical data suggests that some of those initiatives may be very effective (e.g. anti-malarial campaigns).

Nonetheless, many community members complain of limited information about the projects and also about the too-small or unfair distribution of local employment opportunities. Focus

groups perceive that companies could further enhance the benefits to local communities in various ways, including through greater community involvement in the implementation of such projects. It is difficult to assess the objective merits of these sorts of comments. Some clearly derive from the problems linked to the systemic supply constraints (e.g. of appropriately skilled labour) at local level commented on above. Other comments might possibly be side-stepped by noting that even extensive local consultation – of the type that some of the companies certainly employ – can never be enough to fully satisfy everyone.

However, other and more specific concerns have been raised in the areas of health and education and shared infrastructure. In some mining regions, the lack of government-run schools has encouraged the companies to step in to fill a void. For example, in the area of the **Buzwagi** mine the company has financed the construction and establishment of some four schools in surrounding communities. However, when the villagers were asked about these schools, some stated they could not afford to send their children to these schools. Instead, they send them to 'ward schools' with very poor 1-to-100 teacher-pupil ratios. Similar challenges exist in the provision of health services, with facilities sponsored by mining companies not being accessible to many community members. Similarly, there is a sense among communities that roads were built by the mines for their own purposes rather than to benefit communities. Even when new infrastructure has been shared, some argue that the benefits have been unevenly distributed, with some communities benefiting (e.g. those in close proximity to the mine) and others experiencing disruptions (e.g. **GGM** shutting down the roads when they are shipping out their gold production).

The dilemma here is that the problems pointed to by community respondents and their implied solution to these problems clearly associate mining companies with responsibility for social service provision – rather than highlighting the underlying dearth of reasonable quality schooling provided by the national educational system or reasonable roads provided by national and regional government. Analysis of community perceptions on these issues raises in stark form the question of where the responsibilities of the mining companies for the provision of community facilities begin and end. It is once again not immediately obvious that the negative perceptions that persist are best addressed by using reforms to mineral policy alone.

6. Community engagement and social relations

A quantitative assessment of employment, expenditure, taxes and other spending on projects in the local community can only give a first impression on the impact (positive or negative) of mining on the community. Equally important are the processes whereby such initiatives are managed, how they are distributed across communities, and the ability of local communities to participate in and contribute to the decisions that affect them. As a representative of local communities and custodian of longer-term regional development plans, local government has a key role to play in community-engagement processes, and can help to broker and manage the mine's engagement with communities.

This chapter first discusses the historical context of stakeholder relations in the Tanzanian mineral sector, in particular between large-scale and small-scale miners. It then discusses the mine-level engagement processes each mine has put in place. This is followed by a discussion on community perceptions of these processes, focusing on four accountability relations: (1) opportunities for communities to express their views to mining companies; (2) the responsiveness of mines to these views; (3) the ability of local government to represent communities; and (4) the levels of community involvement in decision making. The chapter then looks at the role of mining in social relations, between and within villages, as well as the gender-differentiated impacts highlighted by this study. It concludes with a summary discussion on the challenges of creating participatory and equitable local governance institutions.

6.1 Historical context

Tanzania's history of conflict between ASM (licensed) and large-scale mining casts a shadow over relations between different stakeholders in the sector. Some of these conflicts arose due to the weaknesses in coordination across different policy actors. Political statements made without proper consultation among responsible actors has usually led to increasing tensions between ASM communities and the big mining companies.⁵⁰ Tensions between large mining companies and artisanal miners remain, as evidenced by recent deadly clashes between artisanal miners and mine company security forces at Barrick's North Mara mine.⁵¹ Governance structures at the local government level lack adequate capacity in relation to the mineral sector, which currently has no local government representation at the district level. This, combined with central government inconsistency in policy direction in the past, has had a negative impact on stakeholder interaction and made cooperation difficult.

6.2 Mine-level community-engagement processes

Each of the four mines differs in its approach to community engagement and social relations, largely due to a lack of a formal government framework for coordinating community development. At present, the government appears to have only two guiding principles in relation to the expected relationship between mines and communities. First, companies are expected to pay the US\$ 200,000 LGL annually to local authorities to support local

⁵⁰ Goldstuck, A. & T. Hughes (2010), 'Securing a social license to operate? From stone age to new age mining in Tanzania'. SAIIA Research Report 7.

⁵¹ See Reuters (17 May 2011), 'African Barrick says 7 killed in attack on mine'. <http://www.reuters.com/article/2011/05/17/tanzania-attack-idUSLDE74G1F920110517>

development and, second, companies are expected to integrate development plans with local government development plans rather than creating parallel development projects.

The mineral sector remains centrally managed, with little representation at the district level. As a result, district councils do not include mining in their annual development plans, complicating interactions between the mine, government and communities. Although mines attempt to align community development projects with local government development plans (as stipulated), the disconnect that exists between local government and the mineral sector makes alignment with local government plans more difficult to achieve than it would be within a clear framework. Apart from the two guiding principles mentioned above, no formal framework exists for community-level interaction, which has led to the following multiplicity of approaches for engaging with communities across mines.

6.2.1 GGM

Unfortunately, no information was obtained on **GGM**'s mine-level processes of engagement, complicating an assessment of how well these support the management of benefits at the community level. Information obtained from stakeholder consultations, however, suggests that village executive officers act as the main liaison between the mining company and the village community. They are elected among village residents to lead village committees (on specific issue areas such as health, education and water).

6.2.2 Bulyanhulu

At **Bulyanhulu**, **ABG** has a fairly extensive community-engagement plan in place with an established community relations team of 19 employees and 37 village facilitators (of which 19 village facilitators are for education and 18 for community development). These people engaged in community engagement address issues of impact assessment, stakeholder engagement, community investment and local content/employment opportunities. The overall approach is to develop community investment programmes through partnership with government and to ensure programmes are consistent with government's own priorities and development plans. **ABG** reports that community engagement at its Tanzanian sites includes the following features:

- Established formal grievance procedure;
- Training of community members as village liaison officers to facilitate two-way information flows, located within 'liaison centres' within mining communities;
- Liaison with local government and development partners in implementation of community development programmes; and
- As a member of ICMM, **ABG** undergoes a third-party assurance of its compliance with ICMM principles, including stakeholder interviews at selected mine sites.⁵²

⁵² See <http://www.icmm.com/our-work/sustainable-development-framework>.

6.2.3 Buzwagi

Community engagement at **Buzwagi** is governed by ABG's community-engagement policies. Mine-level engagement takes place through three channels at different levels of government: directly through central government (through formal MoUs); through district planning offices implementing district development plans; and through local ward offices. It is at the ward level that grass-root communication takes place and there are two forums through which village issues relating to mine-level interactions are discussed. These are the Village Development Committee, which meets on a monthly basis, and the WDC, which meets on a quarterly basis.

6.2.4 Mwadui

Mwadui shows clear evidence of a formal site-specific stakeholder engagement framework (see Box 6.1), including a Stakeholder Engagement Plan (SEP) based on a staged model, a set of underlying principles, stakeholder analysis, and a grievance procedure under which aggrieved persons must submit – in writing – their complaints. Mwadui's stakeholder analysis in particular helps management identify key local development potentials and constraints. This includes the finding that some of the eight communities surrounding the mine (including Mwadui) are particularly vulnerable due to infertile land.

Representatives of the mine engage with villagers through committees that meet on a monthly basis to discuss issues of development, compensation, dispute settlement etc. In the case of more urgent issues (e.g. in cases of claims of harassment or vandalism), *ad hoc* meetings are held. In this engagement, the village is represented by a Village Relation Committee (including the village chairman, the village secretary and other key individuals).

Box 6.1 Community-engagement practices at Mwadui

Mwadui has established procedures for regular meetings with the Shinyanga municipal, regional and district authorities to discuss and address environmental and other issues.

Within its Department of Environment, the company has a full-time Environmental Rehabilitation Officer responsible for consultations with neighbouring communities on environmental issues, including regular awareness campaigns regarding protection of biodiversity in semi-arid environments. Progress reports on meeting the provisions of the Environmental and Social Action Plan are to be made available to the communities on at least an annual basis.

The Human Resources Manager is responsible for consultations with the district, regional and national authorities, and Mwadui expects to meet with government agencies on a regular basis. At these meetings, it is expected that, in addition to provision of general project updates, environmental issues will be discussed and decisions made regarding specific follow-up and/or corrective action.

Village representatives from the eight villages nearest the mine meet with the company quarterly and are paid an allowance for attending meetings. This stakeholder engagement process was formalised in September 2010 through the SEP, including appointment of a full-time community liaison officer and the formalisation of a grievance procedure. The SEP commits the firm to enhance quality of life for employees and communities, to minimise environmental impacts and to engage with communities in an active and transparent manner. It covers about 10 items of community engagement but with limited detail around

costings. The company has committed to support this plan with US\$ 120,000 during the construction phase, followed by a target of 2% of revenue by 2014.

Source: IFC project documentation and company communications

6.3 Community perceptions of mine-level engagement

Although each mine has a slightly different framework for organising community-level engagement, there were a number of themes that emerged from the community scorecards across the mines assessed.

6.3.1 Consultation with communities

Respondents in most communities confirmed the mine supports opportunities for consultation between villagers and mine representatives, indicating that the consultation structures each of the mines have in place are operational and that both villagers and village leaders are aware of the opportunities available for consultation. Table 6.1 indicates the responses to the statement '*Anyone in the community can easily express their views to the mining company*'. The highest levels of agreement were seen in Bulyanhulu and Buzwagi, whereas GGM and Mwadui had the higher levels of disagreement.

Table 6.1 Community scorecard responses: Community opportunities to express views to the mining company

'Anyone in the community can easily express their views to the mining company'				
%	Agree	Disagree	Don't know	Total
Geita	19	72.7	8.2	100
Bulyanhulu	48.3	47	4.8	100
Buzwagi	57.2	32.1	10.7	100
Williamson	22.9	64.9	12.3	100

Source: Authors

Although Geita and Mwadui had the highest levels of disagreement, discussions with respondents in these two regions revealed that this related more to the level of *influence* expressing their views had rather than the availability of *opportunities* for expressing their views. For example, community members around **GGM** confirmed that consultations and opportunities to express concerns to the mine were quite regular and village leaders (e.g. in Nyakabale and Nyawilimilwa) confirmed that they had been involved in discussions with mining companies regarding community projects. In **Mwadui**, community members also confirmed that consultations take place on a regular basis with monthly community meetings and additional *ad hoc* meetings held to discuss issues affecting the mine and community.

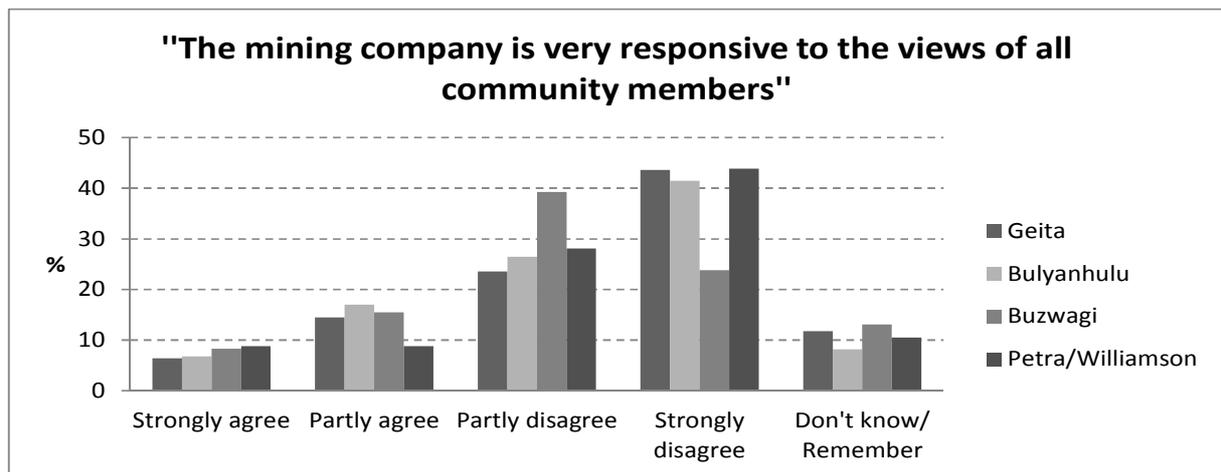
Bulyanhulu and Buzwagi had higher levels of agreement with the statement. According to interviews with mine management at **Bulyanhulu** the company consults village leaders before establishing any project in the villages. They claimed that, in most cases, villagers select projects according to their priorities (which are normally discussed and set at the village general meetings). Respondents in villages around Bulyanhulu confirmed that the mine had supported forums for discussions and that mine representatives normally attended village government meetings. The mining company also entertains visits by village leaders to

allow them to express issues or requests on behalf of the village. In terms of broader involvement of communities (beyond village leaders), some villagers are involved in decision making through the village general meetings. In **Buzwagi**, respondents noted that communities are involved in consultations, including those around development projects.

6.3.2 Lack of feedback and responsiveness results in low levels of participation in consultations

Although opportunities for consultation exist, a consistent finding in most communities was a perception of **a lack of responsiveness on the part of mines to the views of community members**. The high levels of disagreement to the statement ‘*The mining company is very responsive to the views of all community members*’ can be seen in Figure 6.1 for each of the mines. Large percentages of respondents ‘strongly disagree’ with the statement in all four mining areas. Respondents in Bulyanhulu and Buzwagi had slightly higher levels of agreement with the statement than Geita and Mwadui, but even in these two areas the level of agreement was less than a quarter of respondents.

Figure 6.1 Community scorecard responses: Perceptions of mine responsiveness



Source: Authors

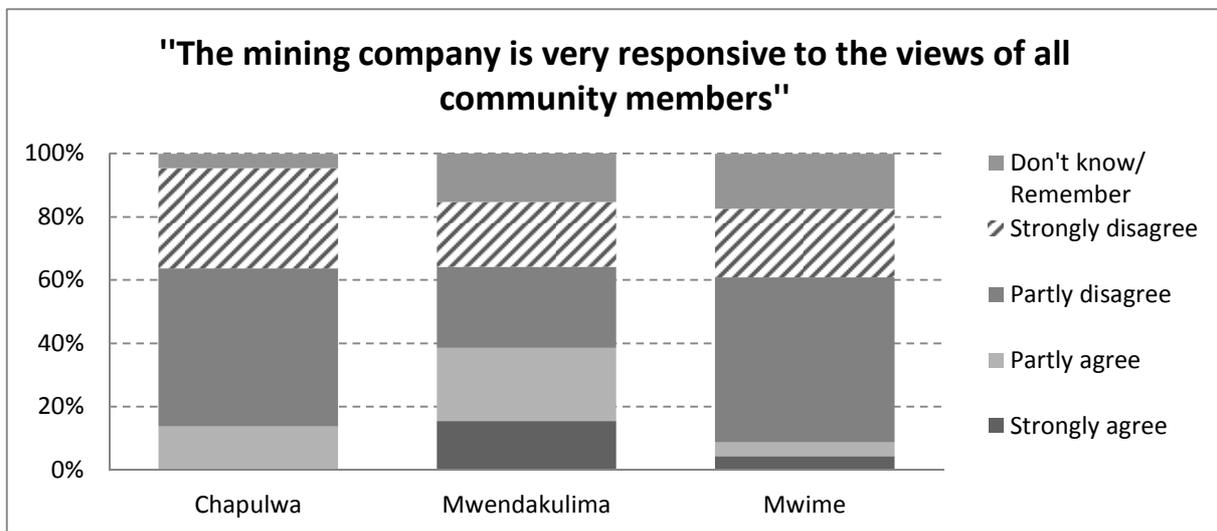
Villagers in all mining regions felt that, while consultation takes place in communities, they were frustrated by a **lack of feedback** from village leaders and mines and felt their views and ideas are largely ignored. They therefore felt there was little benefit in attending the meetings that aim to allow community members to participate in decisions made in relation to community development projects. Village leaders in all mining communities confirmed the **low levels of attendance at village meetings** and recognised that this inevitably reduced villagers’ awareness of development projects and village affairs.

In **GGM**, community members (not leaders) who had participated in open meetings felt the mining company was particularly unresponsive to their requests relating to the development of education or health facilities. They also felt that they were given limited feedback from village executive officers after meetings with the mining company. In **Bulyanhulu** and **Buzwagi**, villagers felt that, although communities are often involved in consultations, including around development projects, there is little follow-up and people feel their development ideas are ignored. This has resulted in the low levels of participation in

consultations. Feedback from **Mwadui** also confirmed villagers' frustrations with the perceived lack of response to their participation in monthly village meetings.

In each of the mining regions, levels of agreement in relation to mining companies' responsiveness varied widely across villages. A breakdown by village in **Buzwagi** is given in Figure 6.2. Villagers in Mwendakulima, which is seen to be a preferred target for ABG's community development projects, showed the highest levels of agreement (40%) in relation to the perceived responsiveness of the mine. In contrast, only 8% of respondents in Mwime agreed with this statement. A similar result was found in villages around **GGM**, with one village (Kalangala) showing much higher levels of agreement (50%) with the statement, while respondents in another village (Bugulula) all disagreed that the mine was responsive to their views. Responses from villages around **Bulyanhulu** and **Geita** showed similar dynamics.

Figure 6.2 Community scorecard response by village in Buzwagi: Responsiveness of mines



Source: Authors

Interviews with **Bulyanhulu** mine management revealed that, although the company seeks to listen to villagers and attend to their genuine concerns, the **demands from villages are often unrealistic**. This is further compounded by villages demanding the same as others received. Because the different villages are in constant communication with each other, statements such as this are common:

If you give one village ten bags of cement or stacks of iron sheet, other villages will know and bring their requests... anything you provide in one village will attract more requests from others, so we just can't fulfil all the requests. Inevitably this leads to complaints by other villages which did not get the same (Mine Manager).

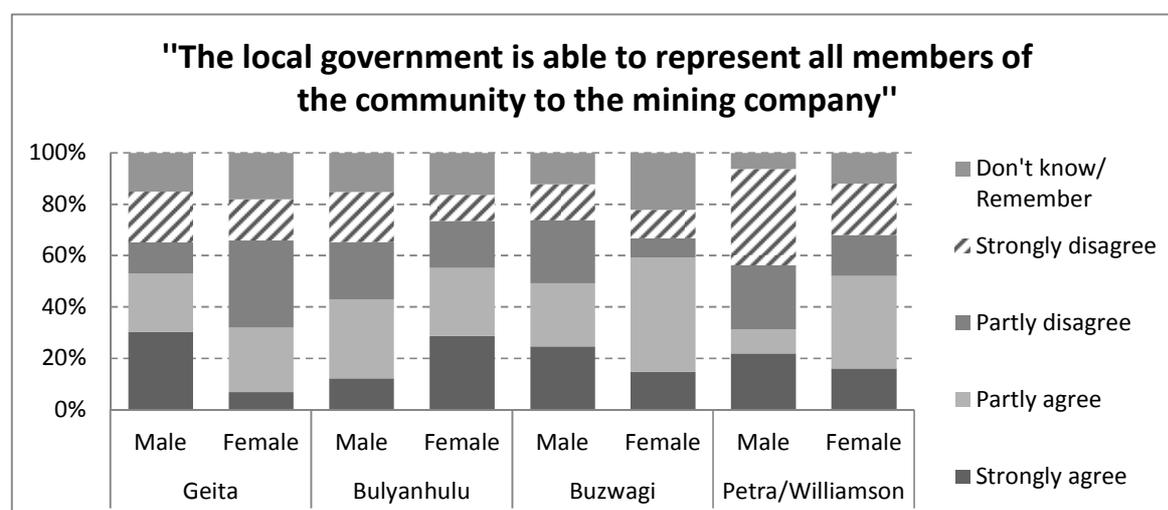
To illustrate, some villagers from Lwabakanga complained of an absence of water and electricity facilities such as have been provided by the mine in other villages in close proximity to the mine (e.g. Kakola and Kakola No. 9).

6.3.3 Communities have confidence in local government capacity to represent their interests

One of the only areas with **relatively high levels of agreement** across all mining regions was in relation to **local government's capacity to represent all members of the community** to the mining company. Levels of agreement ranged from 40% to 53% of respondents in mining regions. Apart from Mwadui (where respondents noted that the lack of education and negotiation skills among local government representatives reduces their ability to bargain effectively with the mining company and secure greater benefits for communities), respondents were more likely to agree than to disagree with the statement *'The local government is able to represent all members of the community to the mining company'*.

Figure 6.3 indicates the community scorecard responses for each of the mining regions disaggregated according to gender. With the exception of Geita, females in each of the regions were more likely than males to have a positive view of local government's representation capacity. This finding appears to indicate that women do not feel marginalised in local government representation. An interesting finding is that women in **Bulyanhulu** were more likely to agree (55%) than to disagree (28%) with the statement, but they also felt that they were left out of development projects as there were no projects directly targeting women's empowerment. This seems to indicate that they have faith in local government taking their issues forward to the mines even though they seldom see them translated into concrete projects and benefits.

Figure 6.3 Community scorecard responses: Perceptions on local government capacity to represent communities



Source: Authors

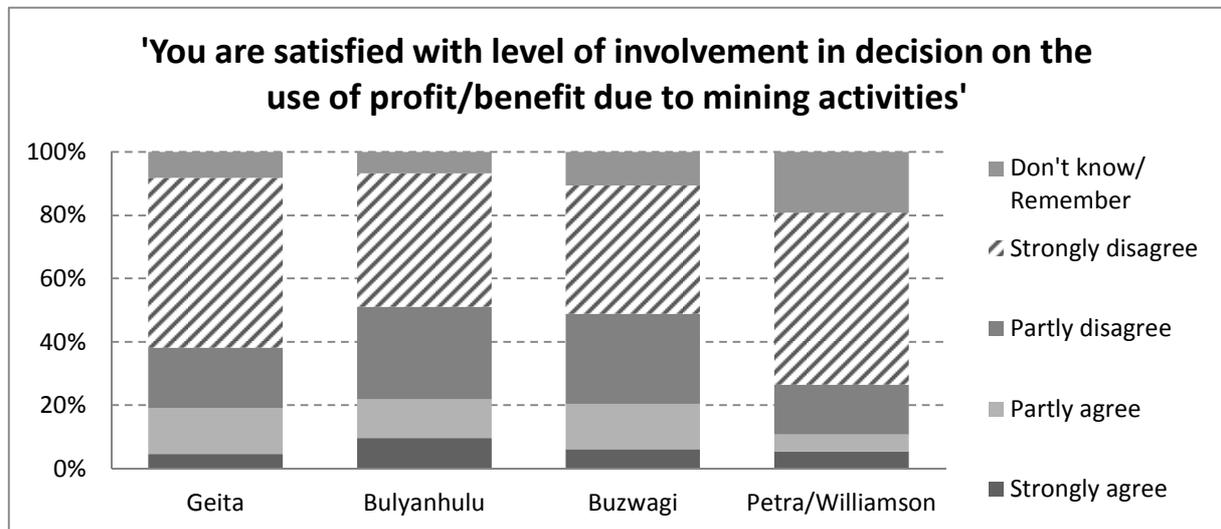
Perceptions of local government's representation abilities varied across villages in each of the regions. In **Bulyanhulu**, a striking result was seen in Lwabakanga, where perceptions of benefits from large-scale mining were generally more favourable than in surrounding villages, but 29% of respondents did not know whether the local government effectively represented their village. This may be due to a sense among community members that the local government is largely powerless to affect change and that benefits are more likely to come directly from the mine (leading to a disinterest in local government representation). In **Buzwagi**, however, the results suggested that the village where the most obvious development projects have been taking place (Mwendakulima) also had high levels of agreement that local government is able to represent the community (54%). The benefits

seen in this village are perceived as more closely aligned with local government’s capacity for community representation.

6.3.4 Communities do not feel that they have enough involvement in the use of profit/benefits from mines

Responses to the statement ‘You are satisfied with the level of involvement in decisions on the use of profit/benefits due to mining activities’ are shown in Figure 6.4. As seen in the figure, all mining regions showed a high level of disagreement (ranging from 69% in Buzwagi to 73% in Geita), with the majority of respondents strongly disagreeing with the statement. Both village leaders and villagers felt that they had not been involved enough in decisions pertaining to the use of mining profits/benefits.

Figure 6.4 Community scorecard response: Satisfaction with level of involvement in decisions on the use of mining benefits



Source: Authors

In **GGM**, **village leaders** explained that they had been involved in discussions with mining companies regarding development projects, but **were not satisfied with their level of involvement in the processes of project design, planning and implementation**, expressing a concern that the mining company did not take them seriously. They also noted that this involvement is limited to selected projects. The limited involvement in implementation is reflected in the low agreement with the statement that community members were actively involved in working on projects with the mine: overall, 20% agreed and 73% disagreed. Disagreement was highest in Bugulula (78%) and Kalangala (83%), whereas agreement with the statement that community members were involved was highest in Nyakabale (44%) and Isamilo (32%).

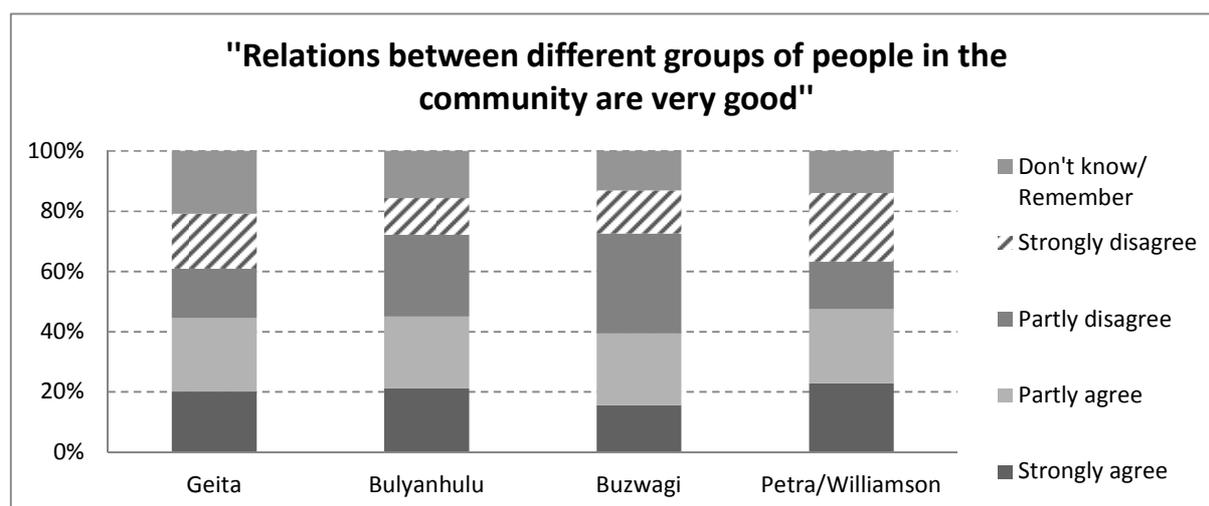
In **Buzwagi**, villagers felt that they are not given much say in determining how local government spent funds intended for those affected by the introduction of large-scale mining. When the mine began operations, local government was given the responsibility of managing the Mwime trust fund, a fund intended to restore income for small-scale miners displaced by

Buzwagi’s mining license.⁵³ Many respondents feel they have limited participation in deciding how the fund money is used. They complained of a lack of information and expressed concern that the money would be misused by the local authority.

6.4 The impact of the mine on social relations

Respondents were asked to assess two statements relating to social relations in villages. The first related to the current state of social relations between people in the community and the second to changes in these relations since the introduction of large-scale mining. A relatively large proportion of respondents in all mining regions answered ‘don’t know’ in response to the statement ‘*Relations between different groups in the community are very good*’. This seems to indicate that respondents either had difficulty in interpreting the question or were unable to assess the quality of social relations at the community level. With the **exception of Buzwagi, all other mining regions were more likely to agree than to disagree that community relations were very good**. Agreement was highest for those in regions around Mwadui mine, where 47% of respondents agreed with the statement and only 39% disagreed. By contrast, Buzwagi had the highest level of disagreement, with 48% of respondents disagreeing with the statement and only 39% agreeing.

Figure 6.5 Community scorecard: Current social relations

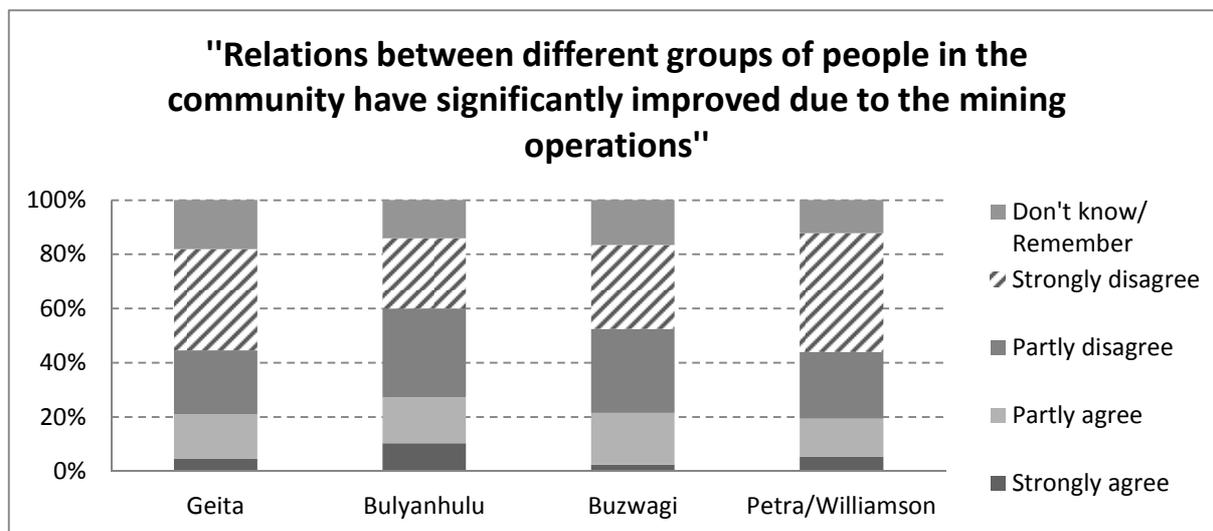


Source: Authors

Responses to the statement ‘*Relations between different groups of people in the community have significantly improved due to the mining operations*’ showed far higher levels of disagreement in all mining regions, as can be seen in Figure 6.6. The percentage of people disagreeing with the statement ranged from 59% in Bulyanhulu to 69% in Mwadui. **Across all mining regions, there seems to be a widely held perception that community relations have not improved as a result of the introduction of mining operations.** In fact, discussions seemed to suggest that communities perceived there to have been a deterioration in community relations since the introduction of mining operations.

⁵³ In part to restore income for the large number of small-scale miners displaced by Buzwagi’s mining license, the mine set up a legal contract with the local government to establish a TZS 60 million trust fund to manage economic activities for the villagers in Mwime.

Figure 6.6 Community scorecard: Changes in social relations since the introduction of large-scale mining



Source: Authors

A number of reasons were given for the perceived deterioration in community relations in villages as a result of the introduction of mining operations. The perceived social discord was thought to be predominantly *within villages* but some responses also suggested a deterioration in relations *between villages* and *between the mine and villagers*.

Within villages, a number of explanations were given by respondents relating to why the introduction of mining had resulted in increased social discord. In **Bulyanhulu**, villagers felt that the introduction of **mining had created social classes that had previously not existed**. This has created divisions between those employed by the mine (with higher incomes and social status) and the rest of the community (made up predominantly of farmers with lower incomes and social status). One villager from Bugamara stated that:

Those who are employed have higher incomes... as a result they cannot mix with us and even during our funeral ceremonies the mine workers don't attend.

Additional tensions occur as a result of the cost of health services in the community, as mine workers with fixed incomes are able to afford health care while much of the rest of the community cannot. In Bulyanhulu, the villages situated closest to the mines showed the highest levels of disagreement that social relations had improved, with many disagreeing strongly. In **GGM**, the village with the least amount of agreement with the statement (Nyawilimilwa) explained that tensions had increased as a result of mine watchmen (local villagers employed by the mine) confiscating cattle from villagers if they graze in the mine license area. This is a result of the ambiguity that exists in relation to **land rights** in Tanzania as outlined in Section 3.3.2 and indicates that the tension this creates not only affects the relationship between mines and communities but also **causes tensions within communities between villagers working for the mine and those who are not**.

At the **Mwadui** and **Bulyanhulu** mines, respondents believed that crime had increased as a result of the introduction of mining. Many believed the **increased theft, burglaries and**

killings to be a result of immigrants arriving in search of work turning to crime when unable to find employment. One village leader from Lwabakanga stated that:

The trust that existed in the past between the villagers is no longer there.

Examples of increased tension *between villages* were given by villagers around **Buzwagi** mine. These villages had traditionally enjoyed a high level of social cohesion, but they felt tensions between villages had increased as a result of the unequal distribution of benefits received from the mine. Mwime and Chapula villagers felt they had been excluded from the benefits of the mine, with most community investment, including infrastructure, being concentrated in Mwendakulima. These two villages showed high levels of disagreement with the statement, with 68% disagreeing in Chapulwa and 74% disagreeing in Mwime. As one focus group participant put it:

You will find that the residents of Mwime village, who are the owners of the land where the mine is situated, have not benefitted at all. It is the people of Mwendakulima and the people who have settled in Kahama that have benefitted.

Although villagers near **Buzwagi** believed unequal distribution of resources between villages had led to increased tensions, the findings at **Mwadui** differed. An important insight that arose from surveys of villages around the Mwadui mine was that greater benefits are associated with greater social discord. For example, over half of respondents (56%) from Idukilo, widely seen as the village benefiting least (distance, limited community investment, limited economic opportunities), agreed with the statement that social relations were very good. In Mwadui, where an estimated third of the residents benefit from employment opportunities related to the mine, only 43% agreed with this statement. This may be because villages experiencing fewer benefits are also less likely to experience the associated tensions that these bring.

Around the **Mwadui** mine, villagers felt that relations *between villagers and the mine* were also strained as a result of increased crime. A 'new tribe' known as the Wahabesha has been created since the introduction of mining operations and villagers believe that they are responsible for stealing alluvial deposits and worsening relations with the mine.

6.5 Gender impacts of large-scale mining

The introduction of large-scale mining to an area has an impact on members of surrounding communities in ways that differ according to one's gender. These gender-differentiated impacts can be seen in a number of areas, including in terms of the impact of mining activities on employment (both directly and indirectly), the costs of living in communities near mines, the availability of social services (particularly health and education) and levels of violence against women.

The most obvious gender-differentiated impact of large-scale mining can be seen in terms of direct employment, with **most direct job opportunities going to men**. This is partly because some mining jobs require a certain level of physical strength but also because men tend to have better access to education and therefore have more of the skills necessary for higher-level positions. Findings from the four mining companies confirm that it is predominantly men benefitting from direct job creation in mining areas in Tanzania. Data from the TDHS 2010 (see Chapter 4) also confirm the occupational impact of mining on surrounding communities. In comparison to other rural areas in Tanzania, lower percentages of men in communities near to large-scale mining activities are involved in agricultural

occupations, which suggests men have found work in areas either directly or indirectly related to mining. In contrast, the percentages of women involved in agricultural work in mining areas do not differ much from other rural areas in Tanzania.⁵⁴

In terms of indirect job creation in the mining areas assessed, the impact on women has not been straightforward. When asked about income-generating opportunities, female participants in focus groups were more likely than men to focus on the benefits of increased markets for micro-enterprises. However, not all women (even within the same community) felt they had benefited from the increases in economic activity in the area. While **some women found they were able to expand and invest in their businesses, other women experienced a decline in income as a result of increased competition**. For example, in Geita one woman was able to significantly expand her fruit-selling business as a result of the introduction of large-scale mining as she was able to sell fruit to mine employees. However, others felt that they had lost competitiveness and market share as a result of an influx of men with financial resources better able to establish larger outlets and charge lower prices for their goods. They felt that these establishments were squeezing women-owned micro-enterprises out of the market. This problem is closely associated with issues surrounding the lack of access to finance for female entrepreneurs. Those able to access financial resources are able to invest in and expand their businesses in response to increased market opportunities. Unfortunately, it is often women who have the lowest levels of access to finance⁵⁵ and female-owned micro-enterprises experience greater difficulty in responding to competitive pressures.

Increased economic activity in mining regions also has other impacts on women in the community. One consequence of increased economic activity in mining regions is **inflation and the associated rises in the cost of living** that this brings. This is a problem for many community members who do not benefit from direct employment, as well as those faced with increased competitive pressures in their business activities. However, **women are often faced with an additional burden in the form of having to manage households and look after family members with resources that do not stretch as far as they used to**. Focus group participants from villages around Bulyanhulu and Geita mines in particular emphasised the negative impacts of inflationary pressures upon their households, a burden disproportionately borne by women.

Educational investments are important for communities in rural areas where access to education is typically very low but they are particularly important for women, who tend to have lower levels of educational attainment than men throughout the entire country.⁵⁶ This is a particular issue for women in rural areas, where only 10% of women have a secondary level of education in contrast to 16% of men (2010 TDHS). An encouraging sign is that **some mining regions (Kagera and Mwanza) display higher levels of female educational attainment** than the average rural area in Tanzania. However, these percentages are still low in comparison to men in both regions. Additionally, some of the other mining areas (such as Shinyanga and Mara) display lower levels of educational attainment even in comparison

⁵⁴ In rural areas, 78% of men are in agricultural occupations in contrast to 64% in Kagera, 69% in Mwanza, 69% in Mara and 77% in Shinyanga (four of the major mining regions in the country).

⁵⁵ Although statutory law in Tanzania grants men and women equal rights, many rural areas still follow customary law. In customary law, women are not able to own property and hence are left without collateral, which restricts their access to credit.

⁵⁶ This is true even in the most developed urban area in Tanzania. In Dar es Salaam, 45% of men have a secondary-level education in contrast to only 37% of women.

to the low levels found in other rural regions. Despite company-level information indicating a significant level of investment in education as well as community leaders confirming that the quality of education has increased over time, community perceptions differ as to whether they have seen any benefits from the increased access to education that the introduction of large-scale mining has brought.

Access to and quality of healthcare also has important gender implications. This relates both to access for women specifically (as they are likely to have greater healthcare needs when pregnant and due to higher HIV prevalence among females) and for the rest of the community (as women carry a disproportional share of the care burden when family members are sick). All of the mining companies assessed have invested in some form of healthcare infrastructure in surrounding areas.

Access to these facilities differs according to:

- The area in which individuals live (e.g. one village near GGM, Nyakabale, has experienced an increase in health services due to the construction of a health centre, while other villages in the surrounding area complain of a continued lack of access);
- An individual's employment status in relation to the mine (some hospitals are free for employees and their families while others are for the use of all community members); and
- The socioeconomic status of an individual (in some mine-subsidised health centres a small fee is charged for services, but even the subsidised rate is too high for poorer members in the community).

Views on whether communities felt that mining activities had increased access to and the quality of health care differed across the villages assessed, with surprisingly large numbers disagreeing that they had seen any benefits. Evidence from the 2010 TDHS, however, seems to suggest that access to healthcare is better in mining areas in comparison to other rural areas. Children in these areas have better anthropometric measurements in comparison to other rural areas and ownership of mosquito nets is higher. Focus group participants seemed to agree that HIV/Aids awareness and education campaigns, many of which are sponsored by mining companies, have been successful in educating members of the community on how to prevent the spread of the disease, something also likely to benefit women (who are more susceptible to infection than men).

Some community members from villages around Bulyanhulu (in Shinyanga) believed that the introduction of large-scale mining has had a **positive effect on attitudes towards women** due to the increase in the number of civil society organisations based in the area. Evidence from the 2010 TDHS seems to confirm this, as **violence against women and the degree of marital control exercised by husbands in Shinyanga is markedly lower than other regions in Tanzania, even in comparison to Dar es Salaam. However, this does not appear to be the case in Mwanza, which has higher levels both of violence and degrees of marital control exercised by husbands than other rural areas in Tanzania.**

This finding is interesting in that it suggests that the introduction of large-scale mining to an area has the potential to result in increased violence against women (as a result of increased levels of prostitution and the introduction of new social norms and community structures), but that these negative impacts can be mitigated against via appropriate civil society programmes aimed at raising awareness. Although Shinyanga appears to have more development projects benefiting women, even in this region women expressed

dissatisfaction with the lack of development projects targeting issues of women's empowerment and access to finance, which seems to suggest they have little influence over the allocation of funding for development projects run by mining companies.

6.6 Summary and discussion

The centralised nature of governance relationships in the mineral sector in Tanzania has complicated community engagement processes and consequently limited the benefits communities receive from mining operations. **With no formal framework for coordinating community development, each mine has developed its own framework.** Communities in all mining regions confirm that **opportunities for consultation with the mine do exist**, both for community representatives (i.e. village leadership) and for the community at large. However, this does not seem to have translated into positive perceptions of the level of participation afforded to communities in mining regions. In all mining regions, communities are frustrated by the level of involvement they have in relation to the use of profits or benefits accruing from mining operations (whether managed by the mine or by local government).

Communities in general feel they do not receive enough feedback from consultations and that mines are largely unresponsive to their views and requests, while mines feel that the demands from communities are too large for the resources available for community development. Both villagers and village leadership feel they are not taken seriously by mines, decreasing incentives for participation in consultations. As a result, **community attendance at forums for consultation is low** in all mining regions assessed. Village leaders feel this decreases awareness of development projects taking place in the community. Village leaders also feel they have limited participation in the implementation of development projects. This, combined with the lack of community participation in consultations, has led **to limited sense of ownership of projects in communities.**

A further problem relates to capacity at local government level. Although respondents from villages around three of the mines (Geita, Bulyanhulu and Buzwagi) were more likely to agree than to disagree that local government is able to represent their interests, evidence suggests that **local government capacity is in fact fairly limited.** This is not only in relation to representation of community interests but also in terms of capacity for planning and implementation of development projects and management of funds flowing from mining operations. District councils and communities often depend on mines to initiate and manage community development projects. The success of these projects has in many cases been contingent upon continued management by the mine, with several projects collapsing when handed back to communities. The limited capacity of local government and communities is likely to be a contributing factor to the lack of perceived responsiveness of mines to those in the community. While this is a limitation at present it also creates a potential opportunity. Projects that aim to enhance community and local government capacity have greater chances of success, as well as having positive short- and long-term effects in communities.⁵⁷

This lack of ownership results from several problems that compound each other and make positive community engagement more difficult to achieve. **The centralised nature of mining-sector governance creates disconnection between local governments and mines.** The mineral sector is not included in local government's annual development plans

⁵⁷ An example is that of a successful farming project in Bulyanhulu where villagers were trained in vegetable farming while being given a guaranteed market for their produce. A similar project in Geita failed because no training was provided to villagers.

even though mines are in theory expected to feed into local government plans. **Greater coordination between local government and mine-level plans within a formal governance relationship would benefit both mines and surrounding communities.**⁵⁸ A clear framework within which to structure community engagement and decisions around the use of benefits would better align development projects with local government and community priorities and would also help manage expectations of benefits from mining by formally stipulating respective responsibilities.

The lack of a formal governance framework and the limited capacity at local government level have also made it more difficult to manage the increased social discord that mining operations create within and between villages. Much of the tensions created relate to **increases in inequalities between individuals and between villages.**

Focus groups indicated that large-scale mining may **exacerbate land conflicts** even in the absence of direct overlaps between mining licenses: village leaders from villages around **Bulyanhulu** mine argued that prices for land surrounding the mine had increased following the arrival of large-scale mining, due to reduced supply. They argued this was driving increased conflicts, not only between small-scale and large-scale mining, but also between miners and farmers. Findings from the **GGM** survey show that communities may proactively engage with mining companies to protect or promote their interests, including through demonstrations. This suggests that companies ignore calls for greater participation at their peril as such demonstrations can easily get out of hand. This highlights the value of having a well-resourced local government to act as intermediary.

This chapter has highlighted a series of **gender-differentiated impacts of large-scale mining.** This discussion enhanced the theme of this report that the impacts of mining are complex and varied, affecting different people in different ways. We have shown, for example, that employment with mining companies is typically captured by men rather than women, but that women who own micro-businesses may benefit to a greater extent from increased incomes in the local economy. This impact is not linear, however, as when incomes increase even further our study indicates that larger shops are set up, which are traditionally managed by men and which out-compete women-run micro-businesses. The inflation highlighted by most communities similarly disproportionately affects women, as managers of household expenditures. Finally, health initiatives conducted by the mines may benefit women more, in particular the relatively effective HIV/Aids programmes cited by several respondents, as women have a higher incidence of infection than men.

⁵⁸ Villagers around Bulyanhulu were aware of the limitations of the current system. They complained that their villages had no binding contracts with the mine to enforce their agreements and contrasted this with the binding contracts that exist at central government level.

7. The net effect of community-level benefits and costs of mining

Based on the findings presented in earlier chapters of this report, this chapter summarises the various impacts of large-scale mining on local communities. The first section presents a tabular summary of the strengths, weaknesses, opportunities and challenges associated with the various ways to enhance the economic and social impacts of mining.

Recognising that these impacts will vary not only between mines but also between communities and often also *within* communities (e.g. differentiated by gender), this section seeks to draw out the main insights across the four mines – including best and worst practices regarding management of micro-level impacts (which all occur to various extents across surveyed communities). It provides insights into what has worked (and what has not) for the mineral sector and informs the recommendations presented in the next chapter.

The second section presents a discussion of the net effect of mining on local communities, broken down by the four case-study mines. In line with recommendations in the ICMM toolkit, this discussion is presented as a discursive summary drawing on the main quantitative and qualitative findings.⁵⁹ This discussion focuses on the net impact as *perceived* by communities rather than a formal cost–benefit assessment derived from mining, which would be impossible to quantify. In the absence of baseline data on the social and economic condition before large-scale mining arrived, an analysis of perceptions of net impacts illuminates how mining has changed things according to the people who live there.

7.1 Summary of strengths, weaknesses, opportunities and challenges in managing benefits from mining

This section takes the form of a tabular representation of the strengths, weaknesses, opportunities and challenges of the main categories of potential benefits. It also highlights recommendations for how to enhance strengths (benefits) and mitigate weaknesses (costs).

⁵⁹ ICMM (2011), 'Mining: Partnerships for Development Toolkit'. Available at www.icmm.com.

Tanzania Investments Benefits Study
(Sustainable Management of Minerals Resources Project)

Table 7.1 Strengths, weaknesses, opportunities and challenges of current management of mining benefits

	Strengths	Weaknesses	Opportunities and recommendations (in bold)	Challenges
Direct and indirect taxes	<ul style="list-style-type: none"> •Potentially powerful means for the capture and equitable distribution of rents from the mineral sector. •Politically sensitive benefit stream around which broad cross-sections of society can rally (see Bomani Report). •Expected to increase markedly following exhaustion of loss carry-forwards. 	<ul style="list-style-type: none"> •Centralised nature of Tanzanian mining governance, coupled with view among policy-makers that mining communities are already 'benefiting' from mining, means limited trickle down of fiscal revenues. •Level of direct transfers to local government through the LGL is small. 	<ul style="list-style-type: none"> •Enhance transparency around central-to-local fiscal flows, for example through TEITI. •Improve transparency around development budgeting to address complaints among communities on poor availability of information. 	<ul style="list-style-type: none"> •Limited capacity of local government to implement development projects. •Lack of transparency in how LGL is used leads to suspicion that these funds are used to fund chief's 'pet projects', or not channelled to development projects at all (undermining legitimacy of local government).
Employment	<ul style="list-style-type: none"> •Permanent employment generates sustainable income, often with additional benefits (health, education, training) provided by the mine. 	<ul style="list-style-type: none"> •Low levels of skills/education prevent most locals from accessing permanent jobs in the mines – such jobs are captured by non-local Tanzanians. •Employment for locals therefore mainly consists of unskilled and temporary positions (see statistics provided by Mwadui). •The mineral sector in general exhibits a strong gender bias, whereby mining jobs tend to be taken by men, thus reinforcing the image of mining as a 'male activity'. 	<ul style="list-style-type: none"> •Strong recognition among villagers that the way to access permanent jobs in the mine is through education and up-skilling. •Mining companies should take advantage of local demand for capacity building through joint initiatives with government and NGOs, for example through mining schools (see Barrick's support for IMTT training programme or Geita's mining engineering centre). 	<ul style="list-style-type: none"> •The significant benefits for the 'lucky few' can lead to emergence of social classes with resulting social tensions (see Bulyanhulu). •Mwadui's 'mining town' model concentrates employment benefits in one village, resulting in in-migration and social tensions.

Tanzania Investments Benefits Study
(Sustainable Management of Minerals Resources Project)

	Strengths	Weaknesses	Opportunities and recommendations (in bold)	Challenges
Training benefits	<ul style="list-style-type: none"> • Training and education improve the economic resilience of communities (by facilitating access to alternative livelihoods, including provision of goods/services to the mine). • Innovative mining initiatives can combine employment generation with training and technology transfer (see the Buzwagi bee-keeping project), particularly when closely coordinated with the mines. 	<ul style="list-style-type: none"> • In-house training for employees may be significant, but targets formal employees, few of whom are from local communities. • Limited reporting by companies prevents detailed evaluation of training activities in this study. • Limited knowledge among communities regarding the existing training initiatives, such as Barrick's IMTT or GGM's mining engineering centre. 	<ul style="list-style-type: none"> • Community respondents realised the importance of training if they were to take advantage of opportunities provided by the mine – strong local support for participating in capacity-building initiatives. • Training initiatives should be carefully planned by mining companies in consultation with other actors that can support implementation (community groups, local government, donors) and may have particularly strong benefits if located close to the mines. 	<ul style="list-style-type: none"> • Varying but generally low levels of education among communities requires careful consideration as to which capacity-development activities can be absorbed and which activities can promote income generation. • This understanding should be improved through detailed socioeconomic surveys of local communities.
Indirect and induced employment	<ul style="list-style-type: none"> • Significant employment may be generated indirectly, either through casual labour used in contract work, through one-off mining projects such as community investment (indirect employment) or through successive rounds of spending of salaries in the local economy (induced employment). • Induced employment impacts effectively help to spread the benefits of mining more widely and boost acceptance of a mining project among local communities, thereby reducing the incidence of theft, intrusions etc. 	<ul style="list-style-type: none"> • Many mines source casual labour for smaller projects in un-transparent and inequitable ways, often using the village leader as 'gatekeeper' for such jobs – however, village chiefs tend to award jobs to relatives, friends or those who can afford to pay a bribe. • Mining companies may not pay a living wage to community employees (e.g. <i>Sungu Sungu</i>), nor benefits commensurate with the risks (e.g. health insurance) (see GGM and Bulyanhulu villages). 	<ul style="list-style-type: none"> • Increase transparency through improved dissemination of upcoming job opportunities – this constitutes a possible 'easy win' for mining companies. • Increase provision of microfinance to strengthen the capacity for small businesses to respond to market opportunities. 	<ul style="list-style-type: none"> • Companies should carefully assess the local political economy in approaching the issue of local-level governance, and ensure village chief incentives are aligned with the objective of more equitable distribution of community jobs and projects. • The net induced impact of large-scale mining will be limited where large-scale mining has displaced other broad sources of economic activity (e.g. ASM).

Tanzania Investments Benefits Study
(Sustainable Management of Minerals Resources Project)

	Strengths	Weaknesses	Opportunities and recommendations (in bold)	Challenges
Local content and multiplier effects	<ul style="list-style-type: none"> • Mine procurement has the potential to generate significant demand for commodities that might be supplied by local communities. • Community development initiatives can usefully be combined with local content, for example building the capacity of the community to produce foodstuffs for which the mine then provides a captive market (see Buzwagi). • Close integration with nearby communities can facilitate local procurement (e.g. at Mwadui). 	<ul style="list-style-type: none"> • Key issue is the lack of supply capacity to respond to demand generated from the mines – with the result that only a small amount of overall procurement is captured by local firms • At Mwadui, which has the highest share of truly 'local' procurement (based on its 'mine town' model), local suppliers captured only 5% of total procurement (US\$ 1.3 million) in 2009 – followed by Buzwagi where 3% of total procurement in 2010 was captured locally. 	<ul style="list-style-type: none"> • Targeted supplier development initiatives can enhance the ability of communities to benefit from mining company demand for goods and services, but such initiatives must be framed within understanding of local levels of education and skills (to ensure transfer of suitable technology/skills). • Limited transparency around procurement opportunities often mentioned as a problem – improving transparency constitutes an easy win for companies seeking to improve community relations. • Substantial opportunities to learn from IFC programmes successfully run in other countries that focus on empowering local entrepreneurs. 	<ul style="list-style-type: none"> • Strengthening of local capacity must start from a 'low base' (most community members are unskilled and rely on agricultural livelihoods). • Limited capacity for community groups to 'take over' initiatives such as cooperatives funded/launched by the mine. • More long-term institutional and financial support is necessary to ensure the sustainability of such initiatives (see Buly's failed UWABU cooperative).
Access to markets	<ul style="list-style-type: none"> • Large-scale mining can generate significant aggregate demand. • Mining companies can maximise the uptake of this demand in the local economy through effective procurement policies and capacity-building initiatives, developed in close coordination with local government. 	<ul style="list-style-type: none"> • Evidence of markets expanding through greater demand as well as via improved infrastructure (usually shared with the mine). However, sharp distinction between 'winners' and 'losers' among neighbouring communities depending on their geographical location and skills base. 	<ul style="list-style-type: none"> • Regular socioeconomic surveys should be used to monitor price levels and available skills in different locations, to inform capacity-building initiatives that effectively target areas of greatest demand (from the mine as well as wider local economy). • Infrastructure should be designed to alleviate bottlenecks in trade between villages/areas, in coordination with local government. 	<ul style="list-style-type: none"> • When local markets are unable to respond to increased demand, shortages can ensue leading to localised and highly disruptive price inflation (the burden of which is disproportionately borne by women managing households). • Shortages in smaller local (village) markets result in economic activity shifting to larger towns (e.g. Geita Town).

Tanzania Investments Benefits Study
(Sustainable Management of Minerals Resources Project)

	Strengths	Weaknesses	Opportunities and recommendations (in bold)	Challenges
Infrastructure	<ul style="list-style-type: none"> • Ability to use mining infrastructure (roads) has potential to dramatically reduce transport costs and further broaden access to markets (e.g. GGM, Bulyanhulu). • Reduced transportation costs enable micro-enterprises to better respond to demand generated from the mines. 	<ul style="list-style-type: none"> • Location matters: infrastructure will benefit some villages but not others, causing increased inequality between local groups. • Benefits coupled with constraints, such as the mining company blocking the road at certain times and cutting off communities from each other (e.g. at GGM). • Common perception that mining companies are disingenuous in stating that roads are 'for the community'. 	<ul style="list-style-type: none"> • Mining companies have experience/resources to implement infrastructure projects and should partner with local government in development of road network. • Mining companies should enhance communication around closure of roads to reduce negative impacts on communities. 	<ul style="list-style-type: none"> • Key challenge is to promote greater integration between economic centres without excluding certain villages. • A detailed understanding of the economic and social situation of villages (e.g. through community surveys) could inform the optimal location of infrastructure projects. • Communities learning that public or even violent protests can yield results (e.g. GGM put in place transport services following protests against GGM's closure of community road between Nyakabale and Magu).
Community development programmes (health, education)	<ul style="list-style-type: none"> • All mines had investments in health and education services (e.g. GGM's health centre in Nyakabale) – however, these services are not evenly distributed among communities around the mine. • Demographic survey data indicates that mining regions have better access to health care vs. other rural areas, and mining companies are seen as successful (particularly regarding HIV/Aids campaigns). 	<ul style="list-style-type: none"> • Location of infrastructure decided in consultation with village leaders often unaccountable to their constituents. • Limited affordability/access to most community members (particularly those not directly employed by the mine) to attend mining-sponsored hospitals or schools. 	<ul style="list-style-type: none"> • Although local government was perceived to be weak, respondents indicated faith in the ability of local government to represent them in coordinating community programmes with the mines. • Mining companies should promote greater transparency in deciding on and implementing community projects, including use of labour. • Opportunities exist to partner with NGOs and aid agencies operating in this area (e.g. Plan International) to leverage existing knowledge of community development. 	<ul style="list-style-type: none"> • Due to Tanzania's centralised governance framework for mining, district councils do not include mining in annual development plans, complicating coordination between mines and local government. • The responsibility for providing health and education is frequently perceived to lie with mining companies rather than local government.

Tanzania Investments Benefits Study
(Sustainable Management of Minerals Resources Project)

	Strengths	Weaknesses	Opportunities and recommendations (in bold)	Challenges
Environmental and social externalities (e.g. social stability)	<ul style="list-style-type: none"> •Low marginal cost for the mining company to provide water or power supply to adjacent communities (e.g. GGM's provision of water to Nyakabale, Bulyanhulu initiatives, and Mwadui's provision of water collection points at edge of mining area). •Surveyed companies all maintain EMPs, outlining processes used and their environmental impacts. 	<ul style="list-style-type: none"> •Environmental impacts mainly negative (e.g. land use, air and water pollution, poisoning of livestock, damage from explosions) – often many small nuisances that add up and cause resentment. •In-migration into mining communities in search of employment, increasing crime rates. •Limited awareness among local communities of EMPs, in particular the regular and timely updates of these documents. 	<ul style="list-style-type: none"> •Mining companies should strengthen communication around road closures and explosions, as well as ensure adequate compensation (possibly involving the local government as intermediary). •Mining companies can generate short-term benefits for communities, for example by allowing community members to collect firewood on areas designated for future mine development (However, this requires effective strategy to avoid community over-reliance on particular areas). 	<ul style="list-style-type: none"> •Disproportionate impact on nearby villages in close proximity to mining operations. •Increased scarcity of land drives up costs, leading to increase in land conflicts of varying types (ASM and large-scale mining, and between community members) (see Bulyanhulu). •Communities compare themselves to each other – development projects must pay attention to issues of inter-village equity.
Governance and representation (directly between communities and the mine, as well as through local government representation)	<ul style="list-style-type: none"> •Community respondents do not have faith in the intentions of local government to represent them fairly. •Communities recognise attempts by mining companies to engage in planning of community projects (especially Bulyanhulu and Buzwagi). 	<ul style="list-style-type: none"> •Mining companies seen as allowing communities to voice opinions but seen as unresponsive to these, leading to frustration among villagers. •Even when communities are involved in decision making, they are largely excluded from discussions around implementation (e.g. at GGM). 	<ul style="list-style-type: none"> •Mining companies should promote more equitable governance at the village level by supporting a more representative 'village council' rather than just dealing with one village leader (e.g. the Village Relation Committee which Mwadui deals with on such matters, comprising village leader and other key individuals). 	<ul style="list-style-type: none"> •Lack of responsiveness of mines leads to a vicious circle – mines hold consultations, but when perceived to not take on board community inputs, community members feel discouraged and stop participating. •When governance is weak, community members may take matters into their own hands through public protests (e.g. GGM, Bulyanhulu).

Source: Authors

7.2 Discussion of net impact of mining on local communities

This section seeks to draw together the perceptions of the overall (net) impact of mining in the communities surveyed, organised by mine. It illustrates that, for each of the mines, the majority of respondents have negative perceptions of the benefits from mining with respect to most of the benefit streams covered. It also demonstrates the huge variations in perceptions across the villages surveyed, due to the varying economic, social and geographic characteristics of these villages.

7.2.1 Geita Gold Mine

Overall, 25% of surveyed community members (across the six villages around GGM) said they had seen significant benefits to their communities from mining activities. Respondents acknowledged benefits from mining including road and social service infrastructure provided by the mine. The majority of respondents, however, shared the perception voiced in focus groups that social services such as health dispensary, secondary school and road infrastructure were not of a good standard and that they received little support from the mining company.

Positive perceptions were highest in Kalangala, the only village where a majority (67%) of respondents reported having seen positive benefits from the mine. In all other villages, the majority of respondents disagreed with the statement that the mine had brought significant positive benefits (ranging from 54% disagreement in Nyamalembo to 96% disagreement in Bugulula).

The net impact on local commerce and incomes also varied among the villages. Agreement with the statement that incomes had increased significantly due to mining ranged from 22% in Bugulula to 38% in Nyamalembo. Respondents from Nyawilimilwa village complained that the mine was reluctant to procure from micro-enterprises in this village, meaning these villagers have to travel further to Geita Town to sell their goods.

For many people living in villages around GGM, the mining operations are actually believed to have brought more challenges and difficulties in terms of getting regular income. Inflation was widely reported to have increased due to mining activities, causing falls in real incomes to the communities under study. It was argued that demand for commodities has increased more quickly than availability or production of some commodities (e.g. sugar). The influx of foreigners and non-locals was also alleged to increase commodity price speculation by many local merchants.

Respondents around GGM also highlight the role of unrealistic expectations in shaping overall perceptions of net benefits from mining. Expectations may have been unrealistic because local populations have limited understanding of modern mining. However, mining investors themselves play some role in drumming up such expectations – as one respondent noted, **‘we were promised we’d be fully compensated; construction of a good primary school, construction of a good quality road and improvement in health services’**. Moreover, responses highlight that, in any assessment of net benefits brought by the mine, people will compare their situation with that which preceded the arrival of large-scale mining, when the area around GGM benefited from a booming trade in small-scale mining.

7.2.2 Bulyanhulu

Villagers around Bulyanhulu overall disagreed with the statement that large-scale mining had brought significant benefits: 35% of respondents agreed that mining had brought significant

benefits to the communities, whilst 60% of respondents disagreed. These perceptions varied significantly between the villages. Among Bushingwe and Lwabakanga respondents there was almost as much agreement with this statement as there was disagreement. In contrast, in Kakola and Kakola No. 9, 73% and 77% respectively felt that the mining company had not brought significant benefits. The survey data indicate this is an emotive subject that almost everybody has a view on – only 5% of respondents said they did not know (i.e. failed to either agree or disagree).

Negative perceptions on overall benefits from mining reflect the comparison to a time before the arrival of large-scale mining when small-scale mining had provided informal jobs – directly or indirectly – for many people. In addition, findings from Bulyanhulu highlight the role of subjective notions of fairness in shaping people’s perceptions of the net impacts of mining. Communities often feel that mining companies should be morally obliged to provide benefits commensurate with the worth of the assets they are taking out of the ground. This view is illustrated by one respondent from Kakola No. 9:

If you compared what the mining investors provide in our communities and what they take from us in terms of gold and other minerals... comparatively the mine benefits more.

The case of Bulyanhulu shows there is no direct correlation between proximity to the mine and level of benefits: the two towns of Kakola and Kakola No. 9 are in close proximity to the mine but were also least likely to agree with statements of improved benefits (7% and 9%, respectively). The reason appears to be that these towns – which are also the poorest villages of those surveyed around Bulyanhulu – have insufficient education and skill levels to access the job and product markets created by the mine.

7.2.3 Buzwagi

In communities around Buzwagi mine, 38% of respondents agreed that mining had brought significant benefits overall. Respondents were least likely to agree in Mwime (22% in agreement), followed by Chapulwa (36% in agreement) and Mwendakulima (49% in agreement). Just over a quarter of respondents agreed incomes had increased significantly due to the mine but the three villages varied in their agreement with this statement. In Mwendakulima, almost half (49%) agreed with this statement, but the level of agreement was lower in the other two villages (in Mwime, 74% of respondents disagreed with the statement). These responses reflect greater community investments in Mwendakulima, which has benefitted from initiatives such as the bee-keeping group and construction of new ward offices.

The unequal distribution of benefits was highlighted in the question on whether the mine provided good employment opportunities for community members, where 39% of respondents in Mwendakulima agreed with this statement, more than double the percentage agreement in Mwime and three times that of Chapulwa.

Buzwagi has been successful in drawing in local suppliers, spending US\$ 3 million on local procurement in 2010 (or 12% of its ‘Tanzanian’ procurement). These benefits also appear to have been concentrated in Mwendakulima, where 36% of respondents agree with the statement that incomes have increased significantly due to mining operations (compared to 26% and 19% at Mwime and Chapulwa, respectively).

Although Buzwagi has only recently started producing gold, respondents perceived that the mine had already contributed to several infrastructure and economic development projects,

including the Mwendakulima Ward Offices, renovation of the Mwendakulima and Masengo secondary schools, and the Isamabadulu Primary School (as well as sponsoring the Shama Boarding School in the area). However, respondents state they cannot afford to send their children to these schools. This compels them to enrol their children at 'ward schools' with very high teacher-to-pupil ratios.

Almost two-thirds of respondents around Buzwagi disagreed they had seen significant benefits from increased access to health care (although focus groups indicated appreciation for Buzwagi's HIV/Aids campaigns). Responses varied between villages and, in contrast to perceptions of other benefit streams, villagers from Mwime were more positive towards this statement (indeed, they were more than twice as likely as other villagers to agree with this statement). This can be explained by Buzwagi's decision to rehabilitate a medical dispensary in this village.

7.2.4 Mwadui

Among respondents from communities around Mwadui, 25% agreed with the statement that mining had brought significant benefits (ranging from 14% in Mwadui to 31% in Ikonongo). The low score is surprising given that Mwadui respondents were widely seen as benefiting more from mining, providing most of the labour and with most community development projects taking place in this village. This can be explained with reference to the higher expectations among Mwadui residents due to several decades of high social service provision by the Mwadui mine.

Mwadui was the only mine that provided a breakdown of the origin of employees, showing that members of the local community constituted 14% of Tanzanian permanent employees, but 58% of its contractors (generating a total of 343 jobs for community members). Mwadui – located in the mining licence area of Mwadui – benefits more than other villages from employment opportunities (as well as from supplier opportunities and shared infrastructure) and had the highest agreement with the statement that the mine provided good employment opportunities to the community (36% agreement). The importance of proximity to the mine is also illustrated in the question of whether transportation times had reduced significantly due to the presence of the mine, with 36% of respondents from Mwadui agreeing they had. On the other hand, all respondents from the other three villages disagreed with the statement or declined to answer.

Perceptions of the net impact on social relationships between groups within the community – and whether these had improved since the advent of large-scale mining – also varied considerably. Here, it seemed that Mwadui's ability to benefit from jobs and procurement opportunities resulted in a third of respondents agreeing with this statement. At the other end of the scale, in the village of Idukilo, 100% of respondents disagreed.

7.3 Summary and discussion

This chapter has shown that the net impact on a particular community will be a 'messy' picture of clear benefits in some areas and increased social or economic costs in others. The discussion also showed that well-intentioned initiatives by the mine can easily fail when effective governance arrangements are not in place (either with respect to direct dealings with communities or regarding the local government's capacity to coordinate and support development projects).

The second section of this chapter looked at the net impact on communities around each mine from the perspective of community members. It outlined the uneven distribution of

benefits and costs of mining across communities around the mine and the danger of grouping these economically and socially diverse villages into any homogenous class of 'mining community'. This more subjective assessment of the 'net impact' of mining highlights the importance of solid baseline socioeconomic data that can help us to assess the opportunity cost of mining (which, for many communities, included lost income from ASM).

There is little doubt that the failure of large-scale mining in Tanzania to enhance development outcomes in a way that is meaningful, sustainable and equitable requires more than piecemeal initiatives by the companies. Although such initiatives can have real value under the right circumstances, a key problem is that they are often undertaken in relative isolation from other government and non-government actors. In addition, more holistic changes in the overall institutional framework are required to use Tanzania's mineral wealth to improve the economic and social situation of affected communities. Recommendations are provided in the following chapter.

8. Conclusion and key recommendations

8.1 Introduction

The objective of this final chapter is to suggest ways in which the benefits from mining might be enhanced in the future, in part to address some of the negative perceptions about mining emerging from communities. This chapter moves from the more micro-level strengths and weaknesses of the present system to highlight a few critical policy issues. Doing so also enables us to connect some of these ideas to the recommendations of the Bomani Report.⁶⁰

8.2 Strengths and weaknesses of current institutional arrangements

8.2.1 Strengths

There are four particular strengths that are usefully flagged at the outset.

Responsible mining companies

All three companies operate according to international standards; they all maintain strong commitments to improving local employment at their mines and all have relatively clearly defined community-engagement policies and consultative procedures. The statistical evidence indicates that large-scale mining has contributed to increasing the incidence of formal employment quite significantly (especially in Mwanza) and appears to have played an important part in improving income levels and the education and health status of the populations in some dimensions (such as malaria eradication).

Strong tradition of local-level governance and participation

Tanzania is an open and democratic society with a tradition of active democratic participation at the local level. It has avoided the deep-rooted centralised and debilitating autocracy of some states and the present system provides some degree of voice even to the lowest levels of the governance system. This strength is evident both in the manner in which decisions are made in the main political party and also in the increasing decentralisation and autonomy of local governments. It is important to recognise that these evolving arrangements provide a sound foundation for the interactions between mining companies and governments at the local level.

Active and committed donors

For many years, Tanzania has been one of the donor community's most favoured countries. It has access to high-level financial as well as technical support from many donors and international NGOs. This is a reflection both of its need (very low incomes and poor education and health status) but also of its ability to commit to the types of macro and micro reforms favoured by development partners. Donors have been both willing and able to assist in many dimensions of the country's social and economic development and seem likely to do so in future.

⁶⁰ Although it should be noted that the terms of reference for this assignment do not require attention to all of the important matters raised by the Bomani Report.

An expanding mining industry

Tanzania can expect to see a much expanded level of activity in mining and possibly oil and gas exploitation in the years ahead. Although modern mining has been significant in Tanzania for only a decade and is already the major export industry, all indications are that it will become very much more important than it is today over the decade to 2020. One consequence of this growth will be that much larger mineral revenues will become available to government, bringing the opportunities – as well as challenges and weaknesses – of present arrangements into even sharper relief.

8.2.2 Weaknesses

Against these strengths there are a number of systemic weaknesses that account for some of the unsatisfactory outcomes this study has documented. Six in particular are usefully flagged.

Low levels of human capital and limited skills base

Tanzania remains a predominantly agrarian society in which the level of educational attainment is extremely low and the availability of workers with strong and industrially relevant skills is very limited. Improvements have been made but the task of building the human capital base to a level capable of meeting the needs of capital-intensive activities such as large-scale mining will require decades. In large measure, this explains why, while the mining companies are committed to increasing local employment, the local communities tend to be disappointed that too few jobs come their way.

Limited industrialisation

The agrarian focus of economic activity in Tanzania also means the levels of industrial activity in the country remain very low, with even much of the local agricultural processing in the country not being done to an industrial scale. This radically reduces the ability of local businesses to set up to supply the mining companies. Therefore – in spite of strong commitments on their part to increase local procurement – mining companies' ability to turn this commitment into larger levels of actual local purchases has often proved limited.

Weak communication processes

Inadequate communication was a persistent and cross-cutting issue in the study. The failure of companies to communicate effectively around employment, social development and other impacts of mining on the lives of people in surrounding communities risks misaligning community expectations with the actual activities of mining. Failures to address these issues often result in disputes, complaints and even escalating violence.

Weak infrastructure

Tanzania has a huge infrastructure deficit, understood as the gap between the actual availability of roads, power supply, water, ports etc. and the amounts needed to provide a reasonable level of service to both the industry and the individuals in the economy. This point was given central prominence in the Bomani Report. Infrastructure weaknesses and arguments over access to those parts of infrastructure provided by the mining companies have figured prominently in the complaints voiced by local communities. However, these complaints need to be seen in the context of a systemic national weakness (as the Bomani Report does) and not wholly attributed to isolated failings by particular mining operations or weak local governments.

Fiscal arrangements not focused on the pro-poor use of mineral revenues

Tanzania, unlike many mineral-dependent economies, has not yet articulated particularly strong arrangements about how mineral revenues should be used or redistributed. Government has maintained a largely hands-off approach as regards the redistribution of some mineral revenues back to the mining-dependent regions. Some modest and explicit redistributions would go some way toward mitigating some of the local difficulties that the presence of mining can cause. Our findings also suggest that appropriately targeted transfers (e.g. in support of capacity-building programmes) could help local government and communities better exploit more of the potential opportunities from large-scale mining, thereby enhancing the indirect and induced economic benefits.

Limited capacities in local government

Although the Tanzanian system of local governance and its inclusiveness is a strength, the actual delivery capacities at some levels of local government are poor. Local authorities dealing with the challenges of absorbing multi-million dollar investments from mining companies will need substantially different and stronger capacities than will other local authorities. One critical aspect of the Tanzanian system is that it seems to lack the ability to organise economic planning across a number of district councils. Capturing the full benefits of mineral development often calls for decisions and spending on a more extended spatial level than is possible for any one district council (e.g. a road system to link two or more mines and their local communities). This capacity problem needs to be addressed.

8.3 Recommendations

Recommendation 1: Definition of roles and responsibilities

Many of the difficulties around mining stem from lack of clarity and/or misunderstandings about where responsibilities actually lie for different actors and activities. The following can be seen as leading examples of areas where improvements are called for.

- a) There are certain core obligations for mining companies covered in the general laws of the land but also in the specific MDAs. **These specific obligations under MDAs should be transparent and publicised much more widely than now – certainly in the local areas.**
- b) The responsibility for issuing and monitoring mineral licenses clearly lies with government. However, as was noted in the Bomani Report (Section 2.3), there is currently ambiguity about where exactly in government that responsibility should lie. **Our recommendation for greater clarity in this regard could avoid some of the land-use disputes that have bedevilled some of the large mines included in this study.**
- c) **Through its new PPP programme, the government is currently enacting specific and detailed plans whereby much future infrastructure will be built, and in some cases managed, using various PPP arrangements. The infrastructure contributions of the mineral companies should be fitted into this framework so as to allow them and government to be held to account for the delivery (or not) on their commitments.**

- d) **If mining companies develop facilities that provide benefits for the community at large then their responsibility should always be seen as a joint responsibility with various arms of government.**⁶¹ At present, there is very little clarity about who is responsible for what. The era of ‘mining towns’ has long gone and the responsibilities of government should be recognised and acted upon.

Recommendation 2: Enhancing capacity in local government

The relationship between central government and local government matters hugely for enhancing the potential social and economic benefits from mining at the local level. At present, however, the necessary synergy between local government and mining companies is often (but not always) quite weak for a variety of related reasons. One of these is inadequate financial and technical capacity, especially at the district council level. The limited financial capacity arises from limited revenue-raising powers at local levels, which in turn result in local and district governments depending almost entirely on the central government for funding to enable them to provide public services to communities around the mine. The absence of technical capacity means that some decisions better devolved to local areas are in fact retained centrally by policy-makers at the MEM in Dar es Salaam.⁶² However, that in turn can and does result in coordination failures; for example, it has been suggested that the positions of zonal MEM offices are not always aligned and coordinated with central offices in conflicts over mining licenses, but rather side with local small-scale miners when these miners refuse to move away from mining areas.

Local government capacity matters because weaknesses in local administration can sometimes be the indirect cause of tensions around mining. This study has shown that communities are learning that, in the absence of local government representation, their best course of action may be to take matters into their own hands through public protests.⁶³ More broadly, the combination of limited responsiveness by the mining company and limited accountability of village leaders can lead to reduced interest in village affairs.⁶⁴ This line of reasoning points to the broad proposition that mine companies have a direct interest in supporting stronger and more accountable local governments to represent villagers.

- a) As was found to be the case in Ghana,⁶⁵ the move to give district councils greater financial autonomy (via more self-collected transfers or larger formula-based transfers from the centre) must be preceded by a step to first strengthen the technical

⁶¹ This study has identified a number of good examples of good practice in this area. One is the health dispensary in the village of Bugarama, constructed by the Bulyanhulu mine. In this particular case, the mining company provides funding and helps with the procurement of medicines and materials, whilst the local government provides the staff.

⁶² Although the Ministry has a Department of Mineral Resources with eight zonal offices and 14 district offices in mining regions, most administrative and fiscal authority is retained by central government (see also Section 3.4).

⁶³ For example, when GGM closed a community road between Nyakabale village and Magu town – to develop a new open pit – communities demonstrated and the company responded by setting up a bus service for transport to Geita Town.

⁶⁴ For example, ordinary community members say that they do not know whether it is GGM or village leaders who are not delivering on what they see as promises of community development.

⁶⁵ ICMM (2007), ‘Resource Endowment initiative: Ghana Country Case Study’. Available at <http://www.icmm.com/document/301>

capacities of those councils and enhance their levels of accountability. **Such a step would benefit local governance generally in Tanzania but would be of particular help to those local authorities that face the challenge of dealing with mining.** We recognise explicitly that this type of Ghana-style reform would need to be carried out across all the districts of Tanzania and not just for mining-affected districts and that it would also take time and call for significant donor support. However, given the likely longer-term role of mining in the Tanzanian economy, it would be a reform that could pay handsome dividends.

- b) **District councils need greater financial autonomy, which must be preceded by a step to first strengthen the technical capacities of those councils and enhance their levels of accountability.** One way to achieve this would be through establishing a stronger link between the Ministry of Energy and Minerals (MEM), the Resident or Zonal Offices and the District Executive Director (DED). Improved technical capacities could be concentrated by establishing a mining section under the DED. This new office should be staffed with public servants explicitly trained to manage ASM issues. To improve linkages, the established mining section will work closely with MEM, to enable coordination at the national level. Existing and new staff would need training in mining policy and legislation regarding land management, environmental management and possibly licensing for small-scale mining which could generate some revenues to fund these activities. This recommendation hinges on the commitment of MEM to recognise the weaknesses identified and agree to work with the Regional Administration and Local Government (RALG) in identifying how ASM activities could be more effectively supported and managed at district level.
- c) Mining companies should welcome initiatives promoting a better informed and well-resourced local government. Where social service provision by local government is limited, the communities in their catchment areas increasingly come to rely on the mine instead, creating a culture of dependency. **Mining policy should aim to empower and incentivise local authorities to engage with mining companies, who can feed back information about company plans and constraints into regional government development plans.** Stronger local capacities are needed before this becomes possible.

Recommendation 3: Building economic growth poles around mining

Beyond the need to build general capacity in local government as indicated above, there is the much bigger challenge of whether and how the huge mining investments in Tanzania might be used to help create new economic growth poles in the main mining areas of the country. The relatively close geographic proximity of many of Tanzania's mines points to the potential for a regional economic development strategy with mining at its centre. At present, however, and as argued by the Bomani Report, the **'lack of a strategy to integrate the growing mining industry with the rest of the economy denies the country benefits that could accrue from such linkages/integration'** (Section 2.12).

- a) The impacts of large-scale mining are highly localised and unevenly distributed across villages around the mine.⁶⁶ The risk is that villages can easily be marginalised

⁶⁶ Villages closer to the mine generally have an advantage in terms of marketing agricultural produce to the mine and its workers. Villages and towns that are closer to main roads also have the advantage of being able to procure inputs and cost-effectively supply the mine. Other villages, with poor

and result in social tensions. More needs to be done in order to spread the benefits widely, such that a more proactive, coordinated and informed approach is called for. **Companies can help to spread these impacts of increased trade and commerce more broadly by targeting investments in infrastructure that increase market access and reduce the transaction costs (travel time, cost) of trading between villages/towns.** Addressing such transaction costs can have added benefits by improving the ability of communities to respond to local business opportunities arising from mining. Several of the companies surveyed have funded infrastructure projects that do have an impact on communities in terms of transportation cost, but the impacts on communities are highly uneven.

The Bomani Report had a number of suggestions to address the problems it identified. One was to ensure more active and explicit strategies to extend TANESCO services to all mining operations and for a more strategic intervention headed by a proposed new Minerals Authority. This authority would ensure the other infrastructure services that work closely with mining (roads, railways, ports, electricity and water) would be strengthened, **‘so as to tap on the immense benefits that the growing mining industry provides’** (Section 2.12). A second idea was to ask the government in partnership with mining investors to ‘plan and monitor development of mining townships as opposed to the current haphazard approach’. This second recommendation was based on the assessment of the Bomani Commission that **‘the government failure to plan and monitor development of mining towns that result from the existence of mining operations has resulted into unplanned townships which lack social services and in places where social services exists they are not adequate to support the population’** (Section 2.1).

- b) Our own suggestion is that both of these ideas from the Bomani Report be combined into a more ambitious regional planning agenda involving government (central and local), the mining companies, and leading donors. **The recommendation would be to create a longer-term development vision for a widely demarcated region (far wider than the catchment area of any single mine).**
- c) **Mining’s existing and growing prominence in the Tanzanian economy makes it a natural industry to serve as a focal point for a regional development initiative and should be considered in line with some of the features of the SAGCOT design.**⁶⁷ Furthermore, it is a model that could build on the experiences gradually being accumulated in Mozambique and elsewhere in Africa of the somewhat

infrastructure linking them to the wide markets, are mostly unable to see any benefits from increased levels of economic activity due to the mine.

⁶⁷ The proposed SAGCOT initiated in 2010 is already a useful precedent for this type or larger spatial development planning in Tanzania. The Investment Blueprint for SAGCOT states that Tanzania’s southern corridor (which links the port of Dar es Salaam to Malawi, Zambia and the Democratic Republic of Congo) ‘benefits from good ‘backbone’ infrastructure including road, rail and power and passes through some of the richest farmland in Africa. The area could become a globally important producer of crops and livestock. Currently the agricultural potential is largely dormant with the majority of the rural population remains poor and food insecure’. Building the SAGCOT Investment Blueprint describes how SAGCOT will build on Tanzania’s *Kilimo Kwanza* (‘Agriculture First’ strategy), with the aim of catalysing US\$ 2.1 billion of private investment over a 20-year period, alongside public sector grants and loans of US\$ 1.3 billion.

narrower concept of mining clusters as the focal points for local economic development.⁶⁸

Recommendation 4 – MoUs between companies, local government and committees

Insofar as mining companies accept additional obligations to, for example, provide infrastructure and health and education services for local communities, these should be thought of explicitly as joint responsibilities with district councils and other levels of government. This recommendation resonates with the view contained in the Bomani Report that **‘despite the fact that investors have no legal obligation to contribute towards the communities, it would be prudent for them to be involved in the District Consultative Council so that they are informed of the development and services priorities needed in the district’**. The report calls for investors ‘to work closer with the communities in terms of provision of social services so as to promote harmonious relations’ (Bomani Report, Section 2.7). The following recommendations are put forward in agreement with the basic idea from the Bomani Report and in order to provide more specificity:

- (a) Once local governments are strengthened in a way that enables them to deal on a more equal partnership basis with the large mining companies, **the two sides should consider formalising arrangements through MoUs to define their respective roles and responsibilities in the development of their areas**. Such MoUs would not replace the centrally negotiated MDAs but would provide a locally sensitised complement to the MDA by spelling out the various activities each party would commit to undertake and the funds and other resources they would bring to bear. The simple example of the health dispensary at Bugarama provides a prototype of the sort of arrangement that could be multiplied many times over once local authorities have greater capacities. Treating all community members in this way has given the company a reputation for fairness, but such examples at present seem to be relatively isolated.
- (b) **The joint commitments made in the MoUs should also provide an important public document giving all interested parties greater clarity about who was responsible for what**. MoUs could serve as a much-needed instrument to communicate to communities that the long-term responsibility for social services lies with their local government. As Lange has concluded, corruption at the local government levels is enabled in part by the limited general knowledge among the public regarding the nature of contributions and benefit-sharing arrangements with the mine. She argues that this makes it in the interest of companies to ‘publicise all payments, taxes and royalties in a form and language that is comprehensible to the average citizen’ (Lange 2006).
- (c) The evidence that communities readily compare themselves against each other, and that greater perceived benefits in one area can create social tensions, points to the need for a systematic and formalised approach to community spending.⁶⁹

⁶⁸ See, for example, Economic Commission for Africa, Minerals Cluster Policy Study in Africa Pilot Studies of South Africa and Mozambique, 2004

⁶⁹ As noted above, respondents sometimes compared the community development programmes between different mines (e.g. comparing GGM’s education support programme to that of ABG, noting that at its Nyamongo mine it is sponsoring some children from surrounding communities).

Formal arrangements with local government should be structured in a way that reduces the risk of discretionary community investment approaches that communities perceive as unfair. MoUs with government should promote the following key features of an effective and participatory community investment programme:

- Clearly delineated responsibilities for project implementation and follow-up;
- Defined responsibilities within the company and government, with clear contact points for communities at the government as well as mining-company level;
- Mechanisms to ensure the allocation of funds is participatory and avoids capture by key individuals within the community while empowering the community at large; and
- Widely recognised grievance procedures for community members.

Recommendation 5: Communication and transparency

This study has revealed chronic failures of communication at many levels. The local communities with whom we interacted are often poorly informed.⁷⁰ It is understood that the mining companies may need to avoid inflated expectations about their activities by not actively communicating too many project details to communities too soon. However, such an approach easily backfires by creating distrust and making communities reliant on rumours that are often ill-founded or incorrect. Findings from this study indicate there can be relatively easy and low-cost wins for the companies in particular (but also local governments as their status in partnerships gradually deepens) if they commit to more proactive communication strategies that confer a sense of ownership in community projects.

- a) **Better communication can help to manage expectations among local mining communities, where many share a perception that the changes and benefits from mining will be immediate and dramatic.**⁷¹
- b) This recommendation can be extended also to the concerns raised about unfair recruitment practices, some of which can be traced back again to poor communication.
- c) Our findings also suggest that the ‘outsourcing’ of recruitment to village leaders is often associated with corruption and patronage. To mitigate against this risk, **companies should support the strengthening of institutions at the local level, for example by requiring a deal with counterparties at the village level**

⁷⁰ For example, at Buzwagi, the Community Liaison Officer of the company confirmed that Buzwagi has plans to develop a health care facility within the next five years. However, the community members who were surveyed claimed they were only aware of these plans ‘through the grapevine’ and ‘hope that the hospital rumour could be true’.

⁷¹ Moreover, the evidence shows that communities already compare mining companies’ social investment practices, thereby pointing to the need for more transparency and management of expectations.

which comprise more than a single village leader. Care would need to be taken to understand the micro-level political economy of village affairs, in order to align the incentives of village leaders with mining-company objectives.

- d) In addition, **many other small things can be done to improve communication. This can include posting simple notices of meetings between village representatives and the mining company and ensuring that sufficient time is given for job applicants to arrange their papers.**⁷²
- e) A further application of the recommendation would cover some of the issues of taxation. There was very little sense among the communities surveyed that benefits were effectively channelled to the communities through taxes via the central government. There was also very little understanding of the inter-temporal phasing of benefits from mining, such as the reduced spending during years of development and expansion. **Better communication and engagement with local communities and their representatives around the staged nature of mining – like the consultations OPM undertook for the ICMM in Tanzania,**⁷³ **but focused on local community stakeholders – should be considered to help redress such problems.**

Recommendation 6: Education, training and local supplies

The basic weakness of low education levels and limited skills development hampers the pace at which the more skilled jobs can get assigned to local workers and also the degree to which mining companies can procure goods and services locally. A training component is a critical complement to the more mandatory approach to local content taken in the Bomani Report, where Section 2.6 includes the recommendation under argument 12 that **'Agreements should stipulate clearly that investors should procure locally produced goods and services as long as they meet quality specifications'**.

More and better technical training is clearly called for to build on the gradually improving general levels of education. This problem needs to be addressed by using more systematic training programmes involving partnerships between mines, across different mining companies and with government. At present, the initiatives in this area seem to be quite limited and also relatively disconnected from each other. It was something of a surprise result that, where technical training has been put in place, it seems not very well recognised by the communities that supposedly benefit from it.⁷⁴ This is particularly important given the recognition among communities that better skills hold the key to greater participation in the benefits of mining.

⁷² The mining company must work together with its community to ensure these initiatives are implemented, in recognition that it is in the interest of village leaders (as 'brokers') to not be fully open and transparent about, for example, job opportunities in order to avoid creating opportunities for rent-seeking.

⁷³ ICMM (2010), 'Mining in Tanzania – What future can we expect?'

⁷⁴ To illustrate, the GGM initiative to support the establishment of a mining technical training centre, which forms part of its community investment programme, was not mentioned by any of the villagers surveyed. This suggests that either the facility does not (yet) convey significant local community level benefits, or that its role and functions are not communicated effectively enough.

- a) As explained above, communities' negative perceptions around the topic of job creation do derive in part at least from communication failures.⁷⁵ **Mining companies are therefore advised to develop improved communications strategies that can at least highlight the number of workers they use, the skills requirements and the training available.**
- b) The topic of appropriate training capacity for the long term is an important one which needs more in-depth consideration than this present study has been resourced to provide. **But there are various possible solutions including developing a dedicated capacity such as the University of Mines and Technology in Ghana, which now exports students to other countries; strengthening the capacities of technical training facilities such as the Mineral Resources Institute in Dodoma and the mining and drilling technology training centre in Mbeya Region; and for enhancing – and hopefully coordinating – training efforts by the companies themselves, building on existing initiatives such as Barrick's support for the IMTT in Moshi.** In considering these matters, local and central government officials need to decide also whether the narrow localisation of jobs is a key objective or whether it is 'jobs for Tanzanians', irrespective of which part of the country they come from, that is important. This decision will determine where larger and broad-based training facilities might best be located.
- c) Beyond some programmes to support local farmers, this study found only limited evidence of more systematic supplier development programmes at the mines. Mines with more significant local procurement (e.g. Buzwagi and Mwadui) could generate significant benefits to local communities by developing established ties with local suppliers. **Companies should be prepared to take on board ideas and encourage entrepreneurship within communities, recognising that investing in supplier development programmes can yield real dividends at a much broader level through induced employment created as people re-spend salaries in the local economy.**
- d) In developing supplier development or income restoration projects, companies should ensure they pay community suppliers a living wage based on assessments of living costs in the area. Such projects also require careful attention to questions of equitable access. Questions of equity surrounding such programmes could be addressed through partnership with local government, which could manage registration for such programmes and transparently allocate opportunities among applicants.

Recommendation 7: Information and surveys

This study has shown clearly that the local impacts of mining are intricately linked to the economic and social context of the area before the mine arrived.⁷⁶ Understanding this local context through robust economic and social impact assessments is therefore critical for a

⁷⁵ Around GGM, for example, there was a widespread view that most jobs get taken by non-locals.

⁷⁶ Inflation in the area around GGM, for example, appears to not have increased significantly due to the high number of artisanal miners in the area even before the advent of large-scale mining. Similarly, whilst the town of Kahama near Buzwagi has experienced something of a boom in economic activity, local government representatives argued this was due to the increase in commerce along the route on which the town finds itself (transportation to Zambia, Burundi, Rwanda).

company seeking to enhance its community interventions, whilst carrying important policy implications.

- a) **Mining companies, together with government and development partners, should initiate a more systematic programme of regular monitoring and surveys of the general social and economic conditions of the main mining regions in order to provide a sounder factual basis for designing future policies.** Detailed and regular socioeconomic surveys can help both companies and policy-makers understand the extent to which communities are able to respond, for example, to the demands for particular skills. If local skills do not match the mine's requirements, mining operations will invariably result in inward migration, often exceeding in numbers the total of jobs on offer. This in turn can result in additional pressure on local environmental and social services, as well as tensions within the community. Such studies could also include disaggregated price-level surveys within local areas, reflecting the findings that localised price inflation is a key issue for many communities.
- b) The existing availability of skills and productive capacity needs to be clearly understood in order to maximise the impact of shorter- as well as longer-term capacity-development initiatives. Existing skill levels and the impact of training programmes on these skill levels need to be monitored and evaluated in the context of the gap between the present and future needs of the mining industry. For this and other reasons, **we recommend the companies participate – perhaps in partnership with the National Bureau of Statistics – in producing baseline and then follow-up biennial surveys to track broader social and economic development indicators of communities, including their skill levels.** For the purposes of measuring the success of the SMMRP, Annex D provides a baseline for some of the key performance indicators that could be re-visited in a few years.
- c) Better information on the local skills base should also be integrated with any supplier development or income restoration projects, where **care should be taken in identifying what skills are out there and what can most cost-effectively be developed to serve an actual market (the Bomani Report recognises that local suppliers to mines must be expected to meet reasonable quality standards).** This identification could also be generated as part of annual or semi-annual surveys to track broader social and economic development indicators.

Recommendation 8: Partnerships as the organising framework for future progress

Although this last recommendation overlaps with some earlier ones, its inclusion as a key recommendation in its own right is justified. As is clear from our earlier discussion and also from the work of the Bomani Commission, many players need to take on various roles and responsibilities in order to produce acceptable levels of outcomes. The fact that some players do not yet understand their roles fully or are not delivering on their main responsibilities can account for the somewhat disappointing outcomes, as well as the negative perceptions of outcomes. The suggested way forward from the present situation is to fully and explicitly recognise the various partnerships that can be mobilised to achieve improvement.

- a) This study has shed light on various cases where such partnership approaches have failed, which can provide lessons for the future. **The broader recommendation is**

therefore for greater and more explicit commitment to develop such partnerships. Policy-makers, donor partners and companies should endeavour to understand relevant stakeholders' interests and incentives, in order to build on their relative strengths and weaknesses.

- b) **Donors can play a key role in many such partnerships and should actively engage with the mining companies.** Many donors are already actively involved with mining, either directly (usually through the MEM) or indirectly by working on social development issues in mining regions. There is an opportunity for these donor initiatives to be more closely integrated with the activities (and impacts) of the mineral sector.
- c) A related recommendation for mining companies is to **apply a standardised approach to community engagement that ensures the participation of the community throughout the project life cycle.** This will require improved follow-ups from such engagement, including communicating next steps, the timeline for project implementation and the extent of community labour that could be used (to manage expectations). Involving communities at this early stage and giving them a sense of ownership in community projects could enhance the sustainability of such projects.

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Annex A Community scorecard

This annex presents the community scorecard used to survey community perceptions of the benefits (and costs) of mining.

Community scorecard

Respondent information

District:	
Ward:	
Community:	
Sex:	
Age:	
Ethnicity:	
Occupation:	

For each of the following statements, please say how much you agree or disagree using the following scale:

1= **strongly agree**

2= **partly agree**

3= **partly disagree**

4= **strongly disagree**

9= **don't know / not sure**

- | | | | | | | | | | | | |
|---|---|--|--|--|--|--|--|--|--|--|--|
| <ol style="list-style-type: none"> 1 The mining operations have had very positive benefits for all the communities near the mine 2 The mine provides very good employment opportunities for people in this community 3 Everyone in the community can benefit equally from these employment opportunities 4 Incomes have increased significantly due to the mining operations 5 Transport costs have decreased significantly due to investments by the mining operations 6 Transportation times have reduced significantly due to investments by the mining operations 7 Access to markets / shops for goods and services has improved significantly because of the mining operations 8 Availability of health services has increased significantly due to the mining operations 9 Availability of education services has increased significantly due to the mining operations 10 Everyone in the community benefits equally from the mine | <table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr><td style="height: 25px;"></td></tr> </table> | | | | | | | | | | |
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Annex B Governance indicators for Tanzania

This section discusses the broader institutional framework within which foreign mining companies in Tanzania operate. These institutions, which are monitored by the World Bank through their governance indicators programme, have a *direct* influence on the overall benefits of mining projects to the country (employment, taxes, local content opportunities). They also shape the contribution of mining *indirectly* by determining the ability of communities to make their voices heard and to seek remedy for perceived injustices. The World Bank creates annual indicators from a variety of data sources measuring perceptions on six dimensions of governance for over 200 countries, allowing for comparisons of governance over time and across countries. These indicators include: ‘Voice and Accountability’, ‘Political Stability’, ‘Government Effectiveness’, ‘Regulatory Quality’, ‘Rule of Law’ and ‘Control of Corruption’.

The scores⁷⁷ for each of these indicators from 1996 to 2009 are outlined below for Tanzania. The scores are compared graphically with four comparator countries: Kenya (a more economically advanced neighbouring country), Nigeria (a resource-rich west African country), Botswana (a resource-rich country with a record of good management of natural resources) and South Africa (the most economically developed country in Africa).

‘Voice and Accountability’ and ‘Political Stability’

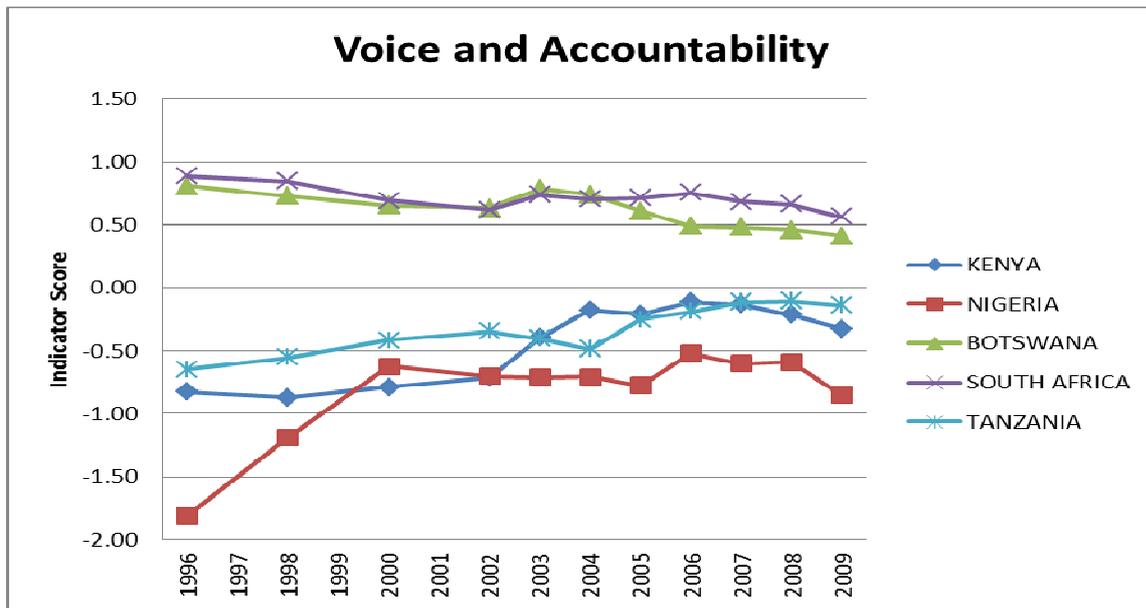
These two measures look at the process by which governments are selected, monitored and replaced. ‘**Voice and Accountability**’ captures perceptions of the extent to which a country’s citizens are able to participate in selecting their government as well as freedom of expression, association and the media. It therefore gives a good indication of the openness of the political process in the country. Figure B1 shows the indicator score for ‘Voice and Accountability’ from 1996 to 2009 for Tanzania and the four comparator countries. The score for Tanzania has **shown a moderate improvement over this period of time, but it still performs well below the top performers in the region**. Tanzania outperforms Nigeria substantially and scores just above Kenya on this measure of governance. In comparison to the full international dataset, Tanzania is a mid-ranking performer, ranking at around 56th of 100. This does, however, represent a fairly large *relative* improvement over time as Tanzania ranked 69th in 1996.

Figure B2 shows the indicator score for ‘**Political Stability**’ from 1996 to 2009 for Tanzania and the comparator countries. This indicator captures perceptions of the likelihood of the government being destabilised or overthrown by violent or unconstitutional means, including the use of politically motivated violence and terrorism. This indicator showed **an initial deterioration until 2003 but has consistently improved since then, leaving it with an overall moderate improvement** over this time period. Tanzania significantly outperforms Kenya and Nigeria, is roughly on par with South Africa and underperforms in relation to Botswana. Internationally, Tanzania is again a mid-ranking performer ranking 52nd of 100⁷⁸, but this again represents an improvement from an initial ranking of 58.

⁷⁷ As the scores are assumed to have a normal distribution, the scores lie on a range from -2.5 to 2.5 with higher numbers indicating better governance and lower numbers representing worse governance.

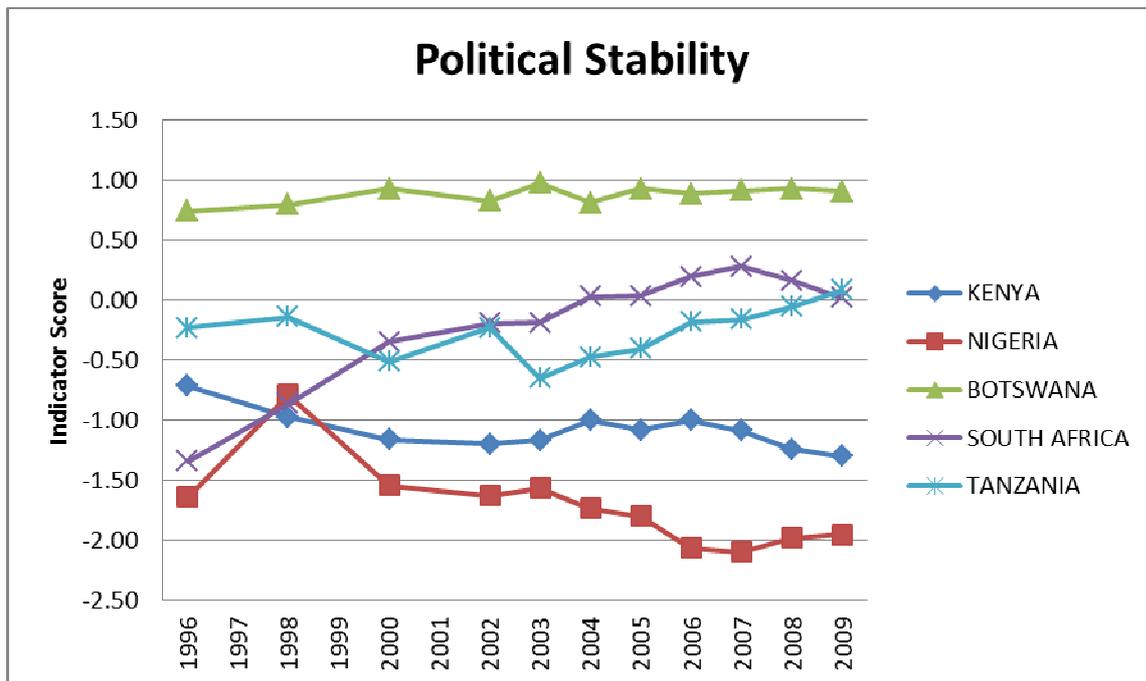
⁷⁸ Although there are over 200 countries in the sample, countries are ranked according to percentiles, with ‘1’ being allocated to the top performer/s and ‘100’ being allocated to those with the worst governance score.

Figure B1 'Voice and Accountability': List of selected countries, 1996-2009



Source: World Bank

Figure B2 'Political Stability': List of selected countries, 1996-2009



Source: World Bank

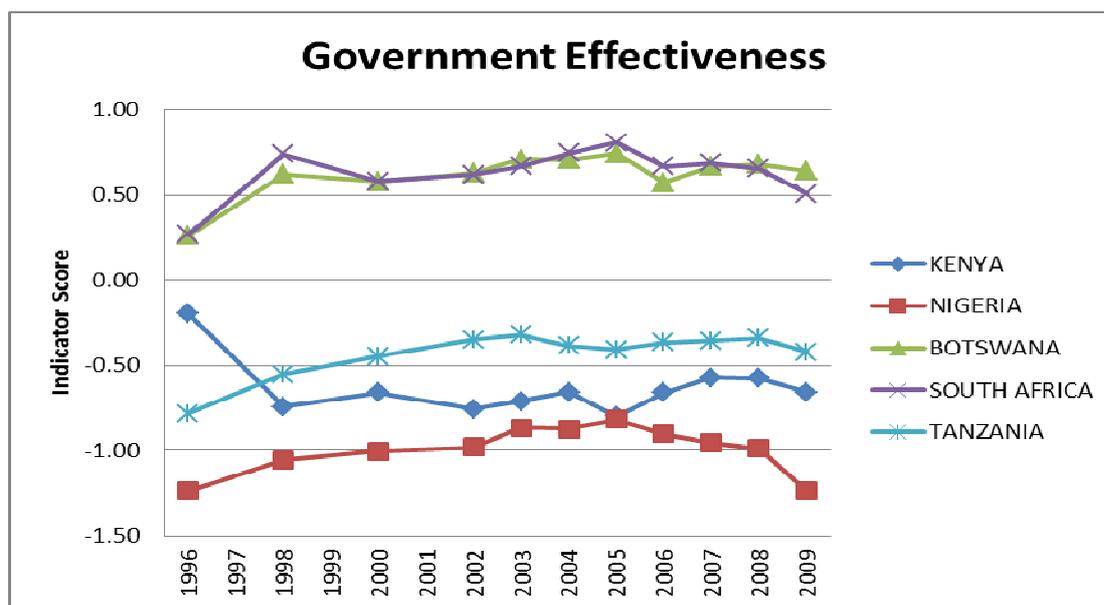
'Government Effectiveness' and 'Regulatory Quality'

These two indicators assess the capacity of government to effectively formulate and implement sound policies. Scores for '**Government Effectiveness**' in Tanzania and comparator countries are indicated in Figure B3. This indicator captures perceptions of the

quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation and the credibility of the government's commitment to such policies. Tanzania is once again a mid-ranking country on this indicator both in reference to the comparator countries and internationally. In relation to the comparator countries, it significantly underperforms in comparison to South Africa and Botswana, performs marginally better than Kenya and outperforms Nigeria quite substantially. While the indicator **improved a great deal from 1996 to 2003**, it has since **shown little change**. **Relative to the international dataset, Tanzania's rank has improved marginally over this time period**, from 58th to 52nd place.

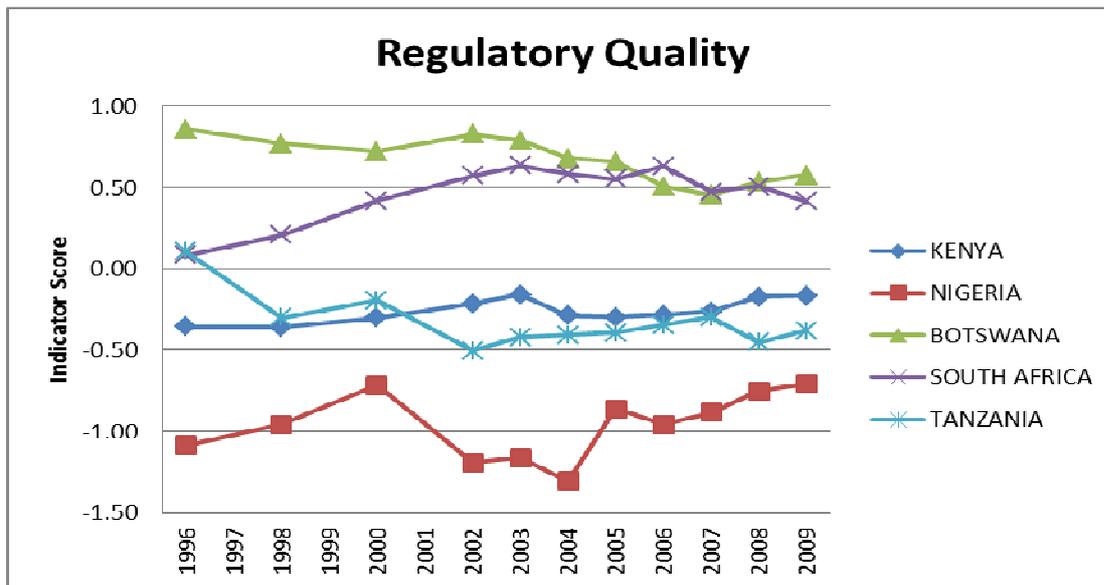
Figure B4 shows scores for 'Regulatory Quality' in Tanzania and comparator countries from 1996 to 2009. This indicator captures perceptions of the ability of government to formulate and implement sound policies and regulations that permit and promote private-sector development. This is a particularly important governance indicator in relation to mining operations in a country. Unfortunately, it is in the area of 'Regulatory Quality' that **Tanzania has performed least well and shown the greatest deterioration**. Amongst the chosen comparator countries, it outperforms only Nigeria. Kenya performs marginally better than Tanzania, and South Africa and Botswana perform significantly better than Tanzania. This indicator has shown a large deterioration over time both absolutely (as seen in the graph) and relative to both the comparator countries and the international dataset, having slipped from 53rd place to 62nd.

Figure B3 'Government Effectiveness': List of selected countries, 1996-2009



Source: World Bank

Figure B4 ‘Regulatory Quality’: List of selected countries, 1996-2009



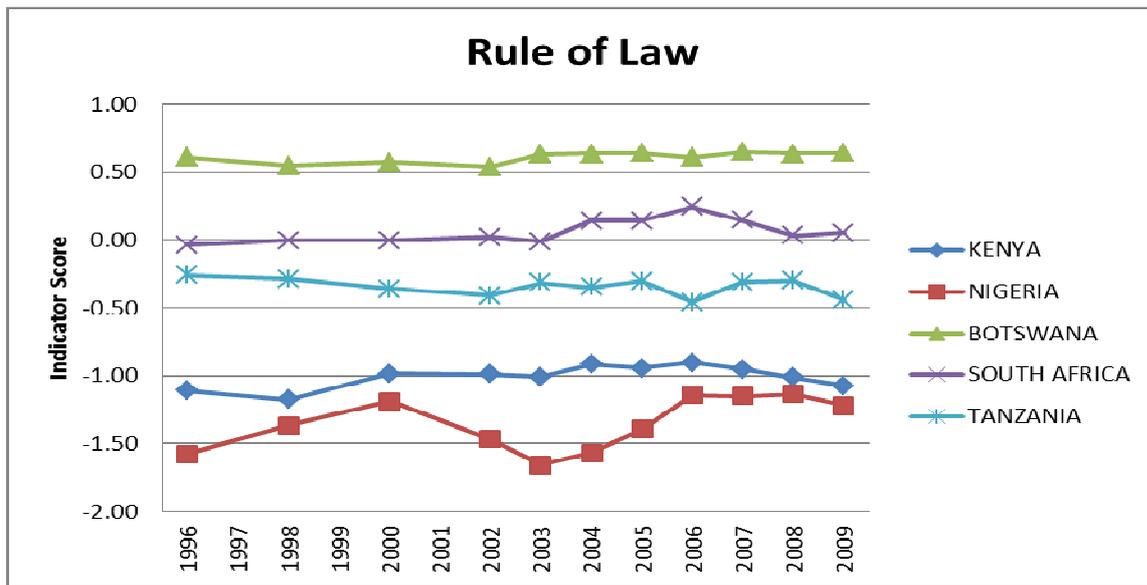
Source: World Bank

‘Rule of Law’ and ‘Control of Corruption’

These two indicators measure respect of citizens and the state for the institutions that govern economic and social interactions among them. Scores for ‘Rule of law’ are indicated in Figure B5. This indicator measures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police and the courts, as well as the likelihood of crime and violence. Tanzania has seen **a slight deterioration in the absolute value of this indicator over this time period** and has remained a mid-ranking performer in relation to the comparator countries (well above Kenya and Nigeria but below South Africa and well below Botswana). **Relative to the international dataset, however, it has fallen quite significantly from 52nd place to 60th.**

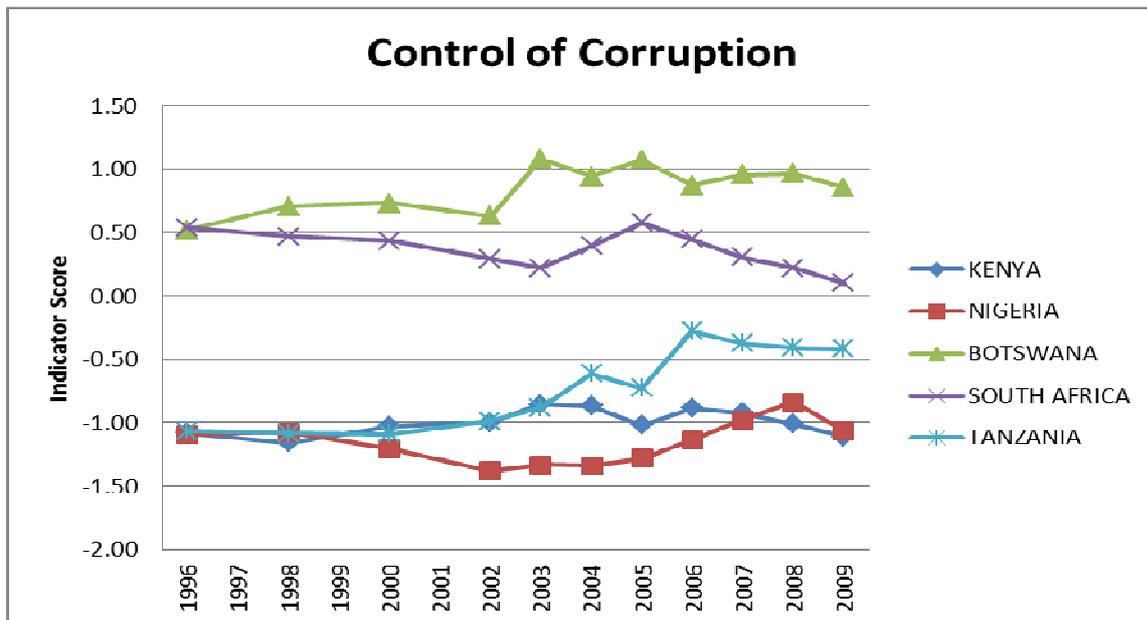
Scores for ‘Control of corruption’ are indicated in Figure B6. This indicator captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as ‘capture’ of the state by elites and private interests. This is **the area in which Tanzania is perceived to have experienced the greatest improvement** absolutely as well as relative to the international dataset and the comparator countries shown in the figure. In 1996, Tanzania’s score was the same as that of Kenya and Nigeria and was significantly below South Africa and Botswana. **The absolute score of this indicator has shown a great deal of improvement over time** and in relative terms Tanzania has moved from being one of the bottom performers (ranking 84th) to being closer to the mid-ranking countries (ranking 60th). While this indicator has shown much improvement, Tanzania nevertheless has a great deal further to go. Much of the improvement of this indicator is a result of several major corruption cases against high-level public officials in recent years. While this indicates a reduction in the ‘grand forms of corruption’, smaller-scale corruption in the public sector remains widespread and continues to restrict development in the country.

Figure B5 'Rule of Law': List of selected countries, 1996-2009



Source: World Bank

Figure B6 'Control of Corruption': List of selected countries, 1996-2009



Source: World Bank

Annex C Information requests made to the companies

The following text reproduces the requests made to companies at the outset of this study, following face-to-face meetings with company representatives in August 2010.

Documents requested:

a) Copies of (a) the initial (pre-operations) Environmental Impact Assessments (EIA) for both mines, which we think would have been conducted sometime in the late 1990s or early part of this century; and (b) the most recent update of this EIA. It is understood that the EIAs will normally include (a) some form of stakeholder mapping, (b) a social baseline survey of impacted communities and (c) an impact assessment for those communities. If your EIAs do not contain this type of information but it is available from other company documents perhaps you could advise us and also supply at least some of these other documents. Some parts of these EIAs will be more relevant to the current project than others. We are more than happy to have an e-mail exchange on this to minimise the volume of materials that you need to send. This type of information will be invaluable in creating an initial basis for the socioeconomic description of the communities and the detailed design of the field work.

b) Copies of Environmental Management Plans (EMPs) as required under the Environmental Management Act of 2004 and/ any associated and recent Environmental Audit Reports. Again let us consult by e-mail to establish which among the documents you may have will be the most relevant.

c) SEPs – where available, i.e. documents describing the principles, plans and practices for linking the mine with community and other local representatives for the purposes of communicating company plans (e.g. for new productive activities and new building), deciding on community priorities and mechanisms for the design and delivery of local economic, social and community support and for dealing with environmental damage and other contentious matters.

d) Sustainability Reports or similar recent documents that provide reasonable descriptive detail on the specific programmes that the company is providing (or supporting if they are mainly provided by government, an NGO or an aid donor) to develop the longer-term capacities of local communities through (a) improved educational and health services; (b) enhanced income-generating opportunities; and (c) new infrastructure that can be utilised, partly at least, by the local communities as well as by the mines.

e) Copies of any *ad hoc* reports that relate to the company efforts to support the local communities. These could include the submission documents that some companies have prepared in connection with the Presidential Awards for Excellence in Environmental Management in Mining.

Data requested:

Additionally, the consultancy team requests data on the following for each of the mines. If possible this should be provided for a time period of (up to) the previous 10 years.

f) Employment – numbers of direct local and expatriate employees, plus contract workers working mainly for the mine.

- g) Total wages paid and/or some indications of the wage and benefit rates paid to specific categories of workers.
- h) Payments of taxes, fees and other charges to government with a disaggregation where possible of (a) different types of taxes and (b) different levels of government.
- i) Training costs incurred with some indication of the volume of training activities of different types that have been delivered.
- j) Annual expenditures on Community Programmes of various types with a disaggregation where possible between (i) compensation payments (ii) social programmes such as school and health programmes (iii) infrastructure that can be used at least in part by the local communities even if it is built mainly for the use of the mine and (iv) income-generating activities including outlays designed to increase the scale of local procurement of goods and services by the mine itself.
- k) Procurement spending (financial data and statements of company policies) on Tanzanian goods and services.

Annex D Key performance indicators and baseline

Key performance indicators

The key performance indicators designed to measure the socioeconomic impacts of the project as outlined in the Project Appraisal Document are:

- Percentage increase of household income levels in selected ASM communities; and
- Percentage of citizens in participating communities who consider their views have been taken into account in the local economic development strategic planning process (perception survey).

Baseline findings from December 2010

Baseline findings from a community scorecard instrument: 398 respondents across the four mine sites.

Indicator: Percentage increase of household income levels in selected ASM communities

This is not a direct measure of the indicator, which would require a more complex survey, but the perceptions of respondents regarding whether '**incomes have increased significantly due to the mining operations**' are:

	TOTAL	%
Strongly agree	23	5.78
Partly agree	97	24.37
Partly disagree	95	23.87
Strongly disagree	134	33.67
Don't know / remember	49	12.31
TOTAL	398	100

Overall, approximately 30% of respondents agreed that incomes had increased significantly due to mining operations, 58% disagreed and 12% were unsure or did not know.

Indicator: Percentage of citizens in participating communities who consider that their views have been taken into account in the local economic development strategic planning process.

The community-level research looked at three questions relevant to this: level of involvement in decision making regarding the use or management of mining benefits; satisfaction with

that level of involvement; and perceptions on the degree of community participation in the process of local economic development planning.

The perceptions of individuals on whether they are **'very active in deciding how the benefits from mining are used or managed'** are:

	TOTAL	%
Strongly agree	17	4.27
Partly agree	31	7.79
Partly disagree	101	25.38
Strongly disagree	175	43.97
Don't know / remember	74	18.59
TOTAL	398	100.00

Overall, approximately 12% of respondents agreed that they were very active in deciding how the benefits from mining are used and managed, 69% disagreed and 19% were unsure or did not know.

The perceptions of individuals on whether they are **'very satisfied with the level of involvement you have had so far in deciding how benefits from mines are used or managed'** are:

	TOTAL	%
Strongly agree	27	6.78
Partly agree	49	12.31
Partly disagree	97	24.37
Strongly disagree	186	46.73
Don't know / remember	39	9.80
TOTAL	398	100.00

Overall, approximately 19% of respondents agreed that they were very satisfied with their level of involvement so far in deciding how benefits from mining are used or managed, 71% disagreed and 10% were unsure or did not know.

The perceptions of individuals on **the degree of community participation in the process of local economic development planning** are:

**Tanzania Investments Benefits Study
(Sustainable Management of Minerals Resources Project)**

	TOTAL	%
Community members are not informed about what is happening in local development planning and projects	83	20.85
Community members are just told what is going to happen in local development plans and projects	35	8.79
Community members are asked their views about local development plans and projects but these are ignored	108	27.14
Community members are asked their views and able to influence what happens in local development plans and projects	42	10.55
The community, the local government and the mining company control local development plans and projects equally	27	6.78
Development planning and projects are fully controlled by the community	17	4.27
There are no projects in this community	86	21.61
TOTAL	398	100

Annex E Ghana: A case study for decentralisation⁷⁹

Confronted with the challenge of resurrecting a deteriorating gold mining industry, the Ghanaian government implemented a number of policies in the 1990s designed at creating an attractive environment to encourage mining investment. This included introducing various procedures to hand a greater degree of power to local districts in certain decision-making processes. While challenges remain, for Ghana decentralisation has been seen to spread development skills more widely throughout society and provided substantial employment to rural communities, including through reforms and support to ASM.

Prior to reform, Ghana faced several shortcomings in the local government system, including:

- a) A dual hierarchy whereby central and local governments functioned in parallel;
- b) Lack of decision-making capacity at local government levels;
- c) Divorced planning and implementation;
- d) Encroachment on local governments' responsibilities and rights by central government;
- e) Inadequate provision of financial resources from central to local government;
- f) Lack of participation of the citizenry in their own development due to the stifling of local initiatives by central government.⁸⁰

Problems faced in effectively managing and encouraging ASM in Ghana were symptomatic of these shortcomings. To this end, government recognised that the mineral sector's potential to stimulate local development processes required a less centrally controlled approach. The Provisional National Defence Council provided legal backing for the establishment of District Assemblies in each of the country's 110 districts. This helped 'openness and involvement of the people in the process of decision-making (and was seen as) the most effective way for enforcing accountability and... ensuring popular supervision at the district level'.⁸¹

The decentralisation programme sought to explicitly:

- a) Devolve political and state power to promote participatory democracy within local institutions;
- b) Devolve administration, development planning and implementation to a district level;
- c) Introduce fiscal decentralisation to give District Assemblies control over a greater proportion of their revenues;
- d) Establish a national development planning strategy to integrate and coordinate development planning in all sectors;
- e) Promote transparency and accountability;

⁷⁹ Excerpts adapted from "Structural Adjustment and Subsistence Industry: Artisanal Gold Mining in Ghana" by Gavin Hilson and Clive Potter. *Development and Change*, Vol. 36 Issue 1, pp. 105-131

⁸⁰ Tetty, W., Pupilampu, K.P, and Berman, B.J. (2003) *Critical Perspectives in Politics and Socio-Economic Development in Ghana*, African social Studies Series.

⁸¹ Republic of Ghana, Outline of the decentralisation plan of the Provisional National Defence Council (Information Services Department, Accra, 1982), p.6.

- f) Improve communication between the various levels of government and the citizenry;
and
- g) Create access to communal resources for all communities.⁸²

Central government assigned deliberative, legislative and executive functions to District Assemblies and assigned them responsibility for the overall development of their district. This included responsibilities for the development of basic infrastructure, the promotion of productive activity, security maintenance, municipal works and services provision and the development and management of human settlements and the environment.⁸³ In addition, the law prescribed additional revenue sources to enhance financial resources to the District Assemblies. The system is designed ultimately to abolish the distinction between local and central government agencies with the hope of transferring human and material capital to rural areas.⁸⁴

During this reformation period, the Government of Ghana aimed to support ASM by establishing a legal framework to modernise, regulate, control and set-up an administrative framework to regulate mining in the country. The decentralisation of government brought decision making to a level where events take place, helped strengthen the democratic process, and laid the foundations for autonomous institutions of governance within the structure of a National State.

In addition, the government actively engaged in the launch of an ambitious programme aimed at improving the organisation of existing artisanal and small-scale gold mining operations, and future projects. Using World Bank monies, representatives from government, with assistance from the German technical cooperation organisation GTZ, undertook extensive geo-prospecting for the purpose of demarcating land plots to registered small-scale mining parties. They then oversaw the construction of seven district support centres, intended to provide decentralised support to grassroots mining parties, provided equipment for operators, and further refined sector-specific policies and regulations.⁸⁵

Despite the efforts made to legalise small-scale mining, challenges remain for the Ghanaian government and although numerous Ghanaians have been drawn to artisanal gold mining to escape poverty, few have actually registered. The problem does not appear to be an unwillingness on the part of the artisanal mine operators to engage in the registration process and become law-abiding citizens — rather it is due to the cumulative actions of the Ghanaian government, which make it difficult to operate within the newly established legal framework. They also have difficulties readily mobilising the funds needed to obtain a licence and securing productive land plots.

⁸² Tetty et al (2003)

⁸³ Republic of Ghana, Local Government Law (PNDC Law 207) (Ghana Publishing Corporation, Tema, 1988), pp. 4-6.

⁸⁴ Crook, R.C., Manor, J. (1998), *Democracy and Decentralization in South Asia and West Asia: Participation, Accountability and Performance*, University Press: Cambridge

⁸⁵ World Bank (1995) 'Staff Appraisal Report, Republic of Ghana, Mineral sector Development and Environmental Project'. World Bank Report No 13881-GH, Industry and Energy Operations, West Central Africa Department, Africa Region. Washington, DC: The World Bank.

Looking beyond Ghana we see similar problems where, despite efforts to implement appropriate regulations and simplified registration systems for operators⁸⁶, in the majority of cases the process of securing a licence to mine on a small scale is associated with excessive paperwork, costly procedures, and lengthy waiting periods. The expense and delay in registering operations, combined with the complexity of administrative procedures and the inappropriateness of regulations, have long deterred ASM practitioners from legalising their enterprises.⁸⁷ Thus, if small-scale miners are to be encouraged to operate legally, 'legislation must be (at least) even-handed in allowing small-scale miners access to suitable land for prospecting and mining activities [and] must be "user friendly" as far as the issuing of permits and the granting of licenses are concerned — permits that provide clear security of tenure for a reasonable period so that small-scale mining can become established'.⁸⁸

⁸⁶ Suttill, K. R. (1995), 'Round-Table on Artisanal Mining Charts the Road Forward: For a Start, Give them Legal Mining Title', *Engaging and Mining Journal*, 196(7): pp. 40-42.

⁸⁷ Maldonado, C. (1995), 'The Informal Sector: Legalization or Laissez-Faire?', *International Labour Review*, 134(5): pp. 705-25.

⁸⁸ Jennings, N.S. (1998), 'Child Labour in Small-scale Mining: Examples from Niger, Peru and Philippines'. ILO Working Paper 137. Geneva: IOL.

Annex F Terms of Reference for the consultants

Terms of Reference For Conducting Investments Benefit Study Under the Sustainable Management of Mineral Resources Project, Tanzania, IDA CREDIT 4584-TA

Background

Tanzania's mining industry has experienced a boom in both mineral exploration and mining activities during the past 12 years. Notable developments include the commissioning of six large-scale gold mines at Nzega, Geita, Bulyanhulu, North Mara, Tulawaka and Buzwagi. During this period, more than 15 mineral prospects of gold, nickel, and uranium have also been developed to various stages of exploration. This has resulted in an increase of the country's annual gold production from less than one ton per annum in 1998 to about 50 tons in 2008, making Tanzania the third largest gold producer in Africa, and making the mining industry the second fastest growing sector of Tanzania's economy after tourism. Despite the increase in mining production, its share in both GDP and government revenue has remained relatively small compared to its growth. The share of minerals in GDP averaged about 3 percent over 2000-2008 while its contribution to government revenue is 1.5 percent. Nevertheless, mining export accounts for up to 48 percent of merchandise export, and up to 24 percent of total exports. Furthermore, the cumulative total FDI in the mining industry during the past 10 years has exceeded US\$ 2.5 billion and employed around 1 percent of wage earners.

Despite these achievements, there have been several complaints and concerns along the following lines:

- The nation does not benefit substantially from the mineral sector because of generous tax exemptions;
- There is no strong administrative and monitoring capacity of the mining activities;
- Social services provided by mining companies to surrounding communities are voluntary and discriminatory;
- Compensation to people displaced by mine development is not adequate;
- The Government favours foreign companies at the expense of its nationals;
- Mining companies utilize mergers and acquisitions to evade paying taxes;
- The Government does not facilitate transformation of small-scale miners;
- Nuisance taxes, bureaucracy and hostile/cumbersome tax administration affect the growth of legal/formal mining business;
- Contribution of the mineral sector to the economy is low compared to the high rate of growth of the sector;
- Inadequate integration of the mineral sector in the economy;
- Inadequate improvement of artisanal and small-scale miners in areas of entrepreneurship, technology, marketing, health, safety, and environment;

- Inadequate Government capacity to regulate and control the mineral sector;
- Inadequate local beneficiation and value addition of mineral products;
- Lack of strategic Government participation in mineral sector projects to stimulate integration of mining in the national economy.

These challenges prompted the Government to embark on review of the policies, and legal and fiscal frameworks for the mineral sector. The following have been completed:

- The Kipokola Committee was commissioned in 2004 to review Tanzania's Mineral Policy;
- The Government negotiating committee was formed in 2007 to review existing mining development agreements with mining companies to achieve a win-win situation;
- The Bomani Commission was formed in 2008 to further scrutinize the Mineral Policy and legal, regulatory, and fiscal framework for the mineral sector.

Following these extensive policy reviews, MEM is currently finalising a new Mineral Policy of 2009 and a new Mining Act and its regulations. The new mineral policy will seek to encourage mining companies to maximise positive effects of their operations by increasing corporate social responsibilities; and strengthen the involvement and participation of local communities in mining projects. Some of the strategies that may be put in place include:

- (i) Require local communities and mining companies to establish harmonious relationship;
- (ii) Require mining companies to involve local communities in mining projects development;
- (iii) Require mining companies to pay statutory levy to the local government authorities to improve relationship between mining companies and the surrounding communities;
- (iv) Encourage mining companies to participate in local authorities' development programmes/projects;
- (v) Require mining companies to address post-mine liability issues in their mining development proposals, including measures for post-mine closure; and
- (vi) Collaborating with stakeholders to oversee the implementation of social and economic aspects based on EIA.

In realising the positive impact that could arise from proper management of benefit streams from mining, the Sustainable Management of Mineral Resources Project will implement activities that are aimed at promoting sustainable management of benefit streams by doing the following:

- i. Conducting a baseline benefits study on the management of benefit streams from mining; and

- ii. Promoting and strengthening frameworks for strategic planning and strengthening economic linkages between large-scale mines, district councils and local communities

It is recognised that not all the benefits of mining operations are known or appreciated. Through documenting the current level of benefits it is hoped to improve understanding; identify gaps obstacles, and recommend improvements for delivering benefits to mining communities and the broader economy; and provide a baseline for measurement of improvement.

SMMRP Overview

The Sustainable Management of Mineral Resources Project (SMMRP) is financed by an IDA Credit of US\$50 million equivalent, with US\$5 million equivalent co-financing from the Government that will be implemented beginning the financial year 2009/2010. The development objective of the proposed Project is to improve the socio-economic impacts of mining for Tanzania and Tanzanians, and Government capacity to manage the mineral sector and enhance local and foreign investments

The project will be implemented through three technical components described below.

- A. Improve the Benefits of the Mineral Sector for Tanzania by addressing Small-scale and Artisanal Mining, linkage of the mineral sector with local economies and development of human resource for the mineral sector. The activities will include baseline studies and sector analysis in all 21 regions of the country (including a Strategic Environmental Assessment); strengthen provision of extension services in all 8 Mining Zones, establishment of centres of excellence in each mining zone; piloting the integration of mineral sector into strategic development planning at District level in the Lake Zone; promote human resources development for the minerals sector by promoting establishment of a framework to implement sector skills planning, administer learnerships, apprenticeship and maintain the quality of standards, qualifications and learning provision for the sector.
- B. Strengthen Governance and Transparency in the Mineral Sector by supporting policy and legal review, and focused public awareness campaigns; strengthen institutional capacity of the MEM to manage the mineral sector and its linkage with other government institutions such as District Authorities, Tanzania Revenue Authority, National Environmental Management Council, Departments of Lands , Forestry and Wildlife; strengthening the Mining Cadastral Information Management System to better manage licensing of mineral rights in a transparent and accountable manner; and improve environmental and social management in collaboration with District Authorities. The project will also support the Extractive Industry Transparency Initiative in Tanzania.
- C. Stimulate Mineral Sector Investment through upgrading of geologic information; strengthening the Information and Promotion Unit at the Ministry of Energy and Minerals and to improve public awareness and promotion of the mineral sector. The project will also support strategic assessment of the State Mining Corporation (STAMICO) and its future in the Minerals sector.

Goals for Conducting Investment Benefit Studies

The Investment benefits study aims at collecting baseline data regarding the level of economic and socio-economic and management of benefit streams from mining in Tanzania. A study of three mines will complement a previous study that focused on similar issues at Geita and Mirerani in 2004 and the ICMM Resource Endowment Initiative study of the North Mara Mine in 2006. The study is expected to highlight key players in the management of benefit streams, existing impacts, opportunities, and challenges for managing benefit streams in the study areas and to uncover governance issues as well. The findings will inform the project on how best to implement other activities under SMMRP, in particular the local economic development sub-component and will also provide indicators for monitoring and evaluation.

Study Area

The benefit study will be conducted in the following areas

- Geita (involving Geita Gold Mining Ltd, Geita District Council and the surrounding villages, in particular in the Nyankumbu Ward,
- Bulyanhulu & Buzwagi (involving Barrick Gold Tanzania, Kahama District Council and the surrounding villages directly benefitting from the operations); and
- Mwadui-Involving Williamson Diamond Mine, Kishapu District Council and the surrounding villages directly benefitting from the operations

Overall Objective, Scope and Methodology

The study aims at establishing governance issues, existing impacts; benefits, community participation; opportunities strategy to exploit opportunities to increase benefits; and strategies to strengthen management of benefit streams from mining. The study will provide a baseline of economic and socio-economic data that can be used to measure changes in future benefits and provide input into the MEM communication strategy and policy development. Underlying conflicts, misunderstandings and expectations will also be highlighted. The information collected from the study will be used to guide the implementation of activities under local economic development and communication sub-components. Community involvement would capture public perception about their involvement in local economic development planning. The methodology should make use of the ICMM Resource Endowment Initiative approach for the documenting of benefits levels and types.

Scope of the study

A Governance

1. Carry out a survey of relevant governance issues in relation with management of benefit streams from mining in the selected districts, mines and mining communities, documenting all influencing factors
2. Conduct a gap analysis between known best examples regarding management of benefits from mining with the selected districts and at central government level
3. Conduct a 10 year time series of social services development in the districts and the number of projects, by district, supported by mining companies and other donors (NGOs/etc) over the period.

B Communities

1. Conduct a social baseline survey and document perception levels (percentage) of community involvement in strategic planning and by location/district
2. Document capacities and setbacks in initiating and running community development projects from miners, district councils and from communities.
3. Document existing framework for coordinating community development projects by location/district
4. Document conflicts, misunderstandings, expectations and other underlying issues working against harmonious co-existence by location and social groupings (ASM/ villagers/politicians/government leaders/etc).
5. Document demographic information on the local community, local businesses, social infrastructure and services and basic health statistics (from existing health statistic sources)

C Exploration and Mining operators

1. Inventory of exploration and mining activities and associated general socio-economic data by district
2. Document socio-economic impacts to the communities in which Large scale mines operate by type, by social groupings (who benefits and why?) and by location; and highlight perceived impacts. Impacts to include livelihoods, community relations, education, health, infrastructure, and community development
3. Document relationships between different categories of mining and associated factors.

D Economic Data

1. Amount of taxes and royalties paid (by type) and to whom
2. Employment statistics – directly and indirectly by the operation, and general employment data
3. Non-mine infrastructure and mine infrastructure shared with the community provided by the operation.
4. Community development expenditure and donations
5. Local goods and services purchased by the operation.

Methodology: The consultants shall:

- Review Existing Literature, including previous studies/reports and other existing literature concerning LSM in Tanzania and its impacts; the Kipokola and Bomani reports; and any other relevant reports.
- Conduct field work/surveys to collect information described in sections A-D above

- Analyse the information collected from the field surveys as follows.
 - Assess Strengths, Weaknesses, Opportunities and Challenges (SWOC) on Government, local communities and miners regarding sustainable management of benefit streams in their respective districts.
 - Conduct a simple cost-benefit analysis of mining projects on the selected communities
- Prepare final report, including recommendations for improvement of benefits and capacity building both at local and at National level

Key Deliverables:

Inception Report. Within two weeks of contract signing, the Consultant shall submit to the Project Manager an inception report describing the methodology to be employed in pursuing the assignment; propounding steps/actions to be taken towards achieving desired goals. The inception report will be reviewed and approved by the PTC and the World Bank prior to commencement of the assignment.

Progressive reports. The Consultant's assignment shall be accomplished within four months to implement the agreed actions detailed in the action report. This will include periodic (weekly) reporting to the Project Manager. All reporting shall be reviewed to ensure that it is satisfactory to MEM and the World Bank. In this regard, the Consultant shall provide summary of progress accomplished and outstanding issues.

Draft Final Report. The Consultant shall within one month prior to submission of the final report prepare a draft final report for review and comments by MEM and WB.

Final Report. The Consultant shall prepare a final report, which shall include:

- Executive Summary
- Summary of Recommendations
- Main text of the report to include:
 - Methodology used
 - Sector/ Ministry background
 - Overview of studied mining communities and large scale mines

A summary of findings with respect to the core issues in the study to cover governance and transparency issues, assessment of existing impacts on communities, and assessment of community participation, hindrances and the recorded perception levels.

- Recommendations for strengthening benefit streams management in Tanzania, including training requirements.

Annexes to include

- List of locations and districts consulted

- Minutes of meetings/consultations

Reporting Schedule:

The Consultant shall prepare and submit in monthly bases a summary of progress of the Project and the ultimately way-forward during the regular meetings of the PTC. The following is an indicative timeframe for accomplishments of relevant reports:

Inception report submitted	Within 2 weeks
Monthly report to MEM on review progress and findings	First week of each preceding month
Submission of Draft Final products and Report	Twelve weeks after the inception report
Submission of Final products and Report	Two weeks after the draft report

Key Staff and Required Skills:

- A Senior Researcher with a degree in social sciences (Sociology), Economics or Law and with vast experience of at least 10 years in similar tasks-(Team Leader)
- A mining expert
- An assistant researcher.

(i) Qualification of the Team leader:

The Team Leader (TL) shall be responsible for proper conduct and practical operation of the entire study; and shall be the principal contact point between the Consultant and the Client (MEM). The TL shall be highly qualified with extensive experience in socio-economic analysis, field surveys, policy level functions and governance issues, mining laws and other related laws. The TL shall hold at least a post graduate degree in sociology, economics or equivalent qualification; with a minimum of ten (10) years of working experience in related assignments. The expert must be experienced in social surveys using the participatory approach

(ii) Qualification of the Mining expert:

The TL should be assisted by a mining expert, holder of a degree in either Mining Engineering, Geoscience or Mineral Processing with a minimum of five (5) years of field experience in related assignments.

(iii) Qualification of a Research Assistant:

The TL shall be supported by a research assistant, holder of a degree in social studies, economics or equivalent qualification; with a minimum of three (3) years of working experience in related assignments. The expert must be experienced in the mineral sector.

Duration:

The core team of Consultant's personnel will be allocated a total of six man-months to complete the assignment. The assignment shall be completed within four (4) months from the date of signing of the contract.

Administrative Arrangements:

The Consultant shall liaise with the Manager of the SMMRP on all technical matters pertaining to the implementation of the Assignment. In execution of the assignment, the consultant will be assisted by Assistant Commissioner for Mineral Economics and Trade and Head of Environmental Management Unit who will assist the consultant to organise meetings and provide guidance and reference material that may be required by the consultant.

Support to be provided by the Ministry

The Ministry will provide the Consultant with the following:-

- i) Access to all available information and data that is relevant to the assignment, including in-depth review of the mineral sector report of 2004, previous benefits studies, the mineral policy, and details about the organisation structure and functions of the Ministry.
- ii) Access to all the relevant offices of the Ministry and their staff, and to other Ministries and Government agencies.
- iii) Appropriately qualified staff to assist in implementing the assignment, in particular the Head of Mineral Economics and Trading section at MEM and ZMOs and RMOs for respective areas of study.