Chamber of Mines of Zambia

ICMM
International Council
on Mining & Metals

InBrief

Enhancing mining's contribution to the Zambian economy and society

Mining: Partnerships for Development – Spotlight series 18
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Introduction

Mining creates many economic and social impacts (both positive and negative) in host countries: on foreign direct investment (FDI), export earnings, government revenues, household and national incomes (gross domestic product (GDP)) and employment. In low- and middle-income countries especially, two questions arise:

- **Why have some countries – but not others – leveraged their natural resource endowments to create a better life for their people?**
- **What specific policies and practices should government, the mining industry, local communities and development agencies adopt in pursuit of broader economic and social benefits as a consequence of mining, either individually or in partnership?**

ICMM's Mining: Partnerships for Development (MPD) work investigates these questions through a series of country case studies using the MPD Toolkit as a framework for analysis. The 2013/14 Zambia study covers the macroeconomic impacts of the copper mining sector, as well as the local-level impacts in the two main mining regions of Zambia, the Copperbelt and North-Western Province, using data from four large mining companies.[1]

The application of the MPD Toolkit in Zambia provides an independent baseline of facts to inform debate on enhancing mining's contribution to broad-based sustainable development. ICMM presented the draft findings of the study to a large group of stakeholders (with representatives from central and local government, state government agencies, companies, civil society organizations, academia and labour groups) in Lusaka at a one-day workshop in November 2013.

This "spotlight" provides a brief summary of the main findings of the study as well as the issues and opportunity areas identified during the workshop. These include:

- the need for reliable data to support a better-informed debate
- the scope for an improved investment climate in Zambia to support greater local content and job creation
- the elements of a policy to support a competitive world-class mining industry, which in turn can sustain growth and diversification
- the scope for more effective social investment by mining companies, with improved co-ordination between companies and with the priorities of local government.

This study focused its local-level work on a sample of four mining operations in Zambia: Konkola Copper Mines (KCM) and Mopani Copper Mines (Mopani) from the Copperbelt, and FQM Kansanshi mine and Barrick Lumwana mine from North-Western Province. This sample comprises the four largest mining companies in Zambia, which together account for 70 per cent of current copper production.

1 The report was prepared by a team from Oxford Policy Management: Alan Roe (team leader), Samantha Dodd, Olle Östensson, Mark Henstridge, Dan Haglund, Maja Jakobsen, Evelyn Dietsche and Caroline Slaven.

About Mining: Partnerships for Development

Some 50 countries are economically dependent on mining, and its employment and other benefits are critical for millions of the world's poorest people. Yet mineral wealth does not always result in positive economic growth locally or even nationally.

ICMM's Mining: Partnerships for Development (MPD) work supports the formal commitment by ICMM member companies to leverage the wealth of mining into broader economic and social development in the countries in which they operate.

In 2004, MPD's predecessor, the Resource Endowment initiative, in collaboration with UNCTAD and the World Bank Group and overseen by an international advisory body, began investigating why some countries were able to leverage mining into broader development benefits and some were not. Pilot country case studies of Chile, Peru, Tanzania and Ghana established that:

- the so-called "resource curse" (including an overvalued exchange rate that penalizes other exporters and import-competing industries) is a possible, but not an inevitable, consequence of a large, mineral export sector
- mining investments can catalyze broader economic and social development, reduce poverty and improve living standards
- companies alone cannot unlock the development benefits from mining – governance is key and multi-stakeholder partnerships can help fill capacity gaps by:
  - integrating mining with government development policy at national, regional and local levels
  - building capacity in government agencies, NGOs and other partners.

ICMM has progressively developed these findings into a standardized toolkit to systematically and objectively identify and implement development partnerships.

The toolkit identifies six priority themes for partnership:

1. mining and poverty reduction
2. mining and revenue management
3. mining and regional development planning
4. mining and social investment
5. mining and local content
6. mining and dispute resolution.

In 2011, ICMM revised, extended and republished the toolkit as the *Mining: Partnerships for Development Toolkit*. This latest version has been applied in Lao PDR and now in Brazil. The MPD Toolkit can be used by mine managers and those interested in promoting economic and social development (including host governments, development agencies and development-focused NGOs).

For more information, visit www.icmm.com/mpd or email us at info@icmm.com.

> **"The sector has gone through three main phases of ownership: first, private ownership under a colonial administration, then national ownership post-independence and finally reprivatization from the late 1990s."**

The context: mining in Zambia

The mining of copper, the most prevalent mineral resource in Zambia, has taken place for almost a century, and it has played a central role in Zambia's economic, social and political development.

Copper mining takes place in two main areas of the country: Copperbelt Province and North-Western Province. The sector has gone through three main phases of ownership: first, private ownership under a colonial administration, then national ownership post-independence and finally reprivatization from the late 1990s. These changes have had important consequences for investment in, and production of, copper, as well as for the provision of public goods and social services in mining areas.

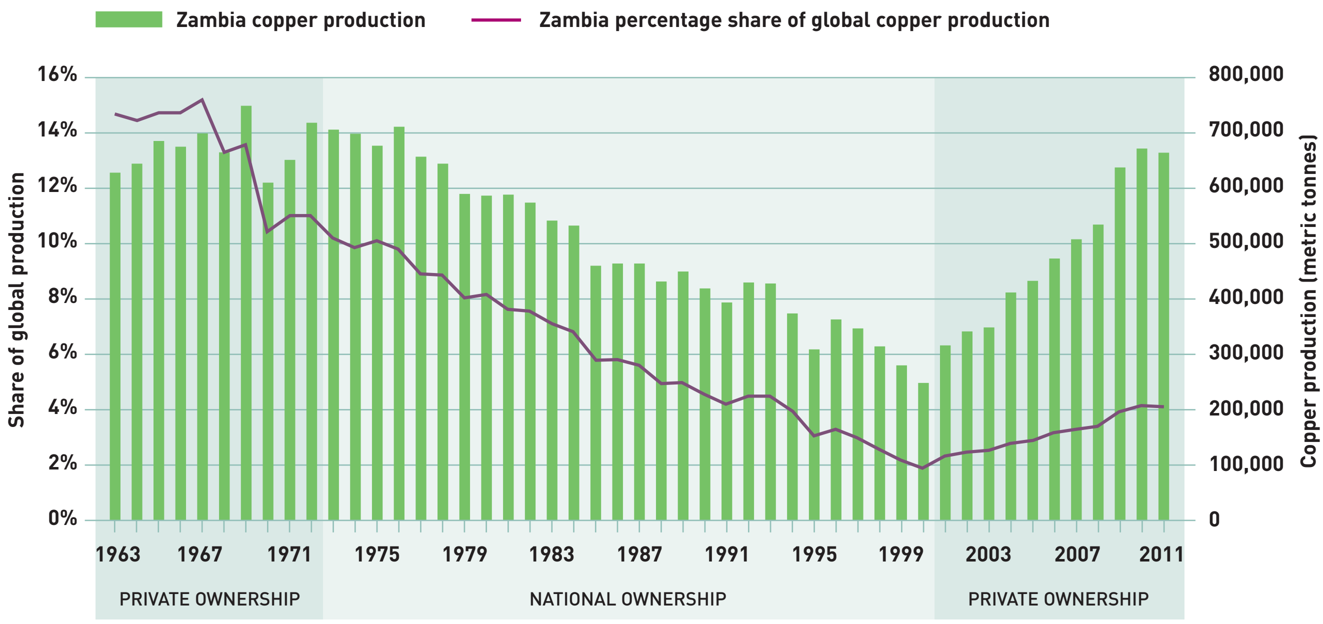
Figure 1 shows Zambia's copper production and share of the global market across these three phases. In the 1960s, production levels were high and Zambia produced up to 15 per cent of the world's copper. Copper production fell dramatically both in absolute terms and as a percentage of global production during the period of nationalization and reached its lowest levels in the late 1990s, just before privatization took place. Production increased dramatically post-privatization, rebounding close to levels last seen in the early 1970s.

These changes in production were a consequence of both international and domestic factors. The copper price entered a protracted slump during the 1970s and 1980s (the period of national ownership) and rebounded in the early 2000s (during privatization). However, domestic factors also played an important role in shaping investment and production patterns. During nationalization, a state-owned company – Zambian Consolidated Copper Mines (ZCCM) – was set up and tasked with running the sector.

In addition to operating mines, ZCCM was also expected to provide public goods and social services to mine workers and their communities. Falling income due to the copper price slump, compounded by costs of social obligations, led to large ZCCM losses and little investment in the sector. When the industry was privatized, foreign investors were given favourable terms through mineral development agreements (DAs) to encourage investment in a sector characterized by years of underinvestment and low productivity. This led to a surge in new investment and the opening of several large mines in North-Western Province. Privatization also resulted in a deterioration in social services in mining regions: while new investors agreed to take over some of the former social responsibilities of ZCCM, most were handed over to local government, who did not have the capacity or finance for increased service delivery.

Zambian mining today is characterized by high costs and low productivity in Copperbelt Province. Since 2008, several policy changes, such as changes in foreign exchange regulations, have put the industry under additional pressure, making some mines vulnerable to changes in their economic circumstances.

Figure 1: Zambia copper production and share of the global market through phases of mine ownership (1963–2011)



Source: International Copper Study Group (ICSG) from 1996 onwards (*Copper Bulletin* March 2012 and April 2013; *Yearbook* 2006; *Statistical Yearbook* 2008), US Geological Survey annual mineral reports 1963–95.

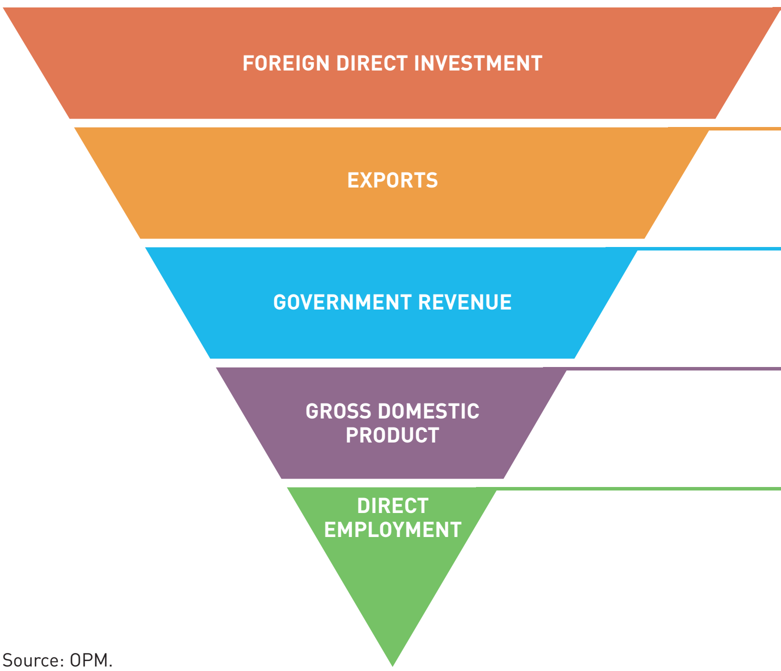
National-level and local-level impacts of mining

Mining activities have important impacts on host countries at the national level and in local areas near to where mining activities take place. The study looked at the contributions at both levels and the key findings are outlined briefly below.

National-level contributions
At a national level, the Zambian economy is dependent on mining. Zambia exhibits the inverted pyramid pattern of macroeconomic contributions that have been found in earlier MPD Toolkit applications, but shows higher levels of dependence in all areas (see Figure 2).

Some of these contributions have changed dramatically in recent years. This is particularly true for the sector's contribution to government revenue where large increases have occurred (see Table 1). In 2012, almost one-third (32 per cent) of all tax revenue received by the government was from mining sector taxes.[2] This represents a dramatic change from earlier years, where as recently as 2008 the contribution of tax revenue from mining was around 16 per cent of total tax revenue. Zambia is now one of the countries with the highest contributions to tax revenue from mining.[3] The sector also accounts for 86 per cent of FDI and 80 per cent of exports, both contributions having increased in recent years.

Figure 2: The national contributions of mining (2012)



	Typical share in low- and middle-income mineral-driven countries	Zambia
Foreign direct investment	60%–90%	86%
Exports	30%–60%	80%
Government revenue	3%–20%	>25%
Gross domestic product	3%–10%	>12%
Direct employment	1%	1.7%

Source: OPM.

Table 1: Mining taxes as a share of GDP (2008 and 2012)

Year	GDP (Kw billion)	Total taxes collected (Kw billion)	Mining taxes collected (Kw billion)	Mining taxes (% GDP)	Mining taxes (% total tax)
2008	54,839	9,670	1,541	2.81%	16%
2012	111,049	20,723	6,619	5.96%	32%

Source: ZRA.

2 This includes the pay-as-you-earn (PAYE) contributions made by the sector. Excluding PAYE, the sector contributes 25 per cent of government revenue.

3 A comparison of Zambia in 2012 with the average for other mineral economies over the previous 10 years indicates that Zambia was second only to Botswana in the share of mining taxes in total tax revenue.

> "In 2012, almost one-third (32 per cent) of all tax revenue received by the government was from mining sector taxes. This represents a dramatic change from earlier years."

However, other areas of macroeconomic contribution are less clear. There is considerable uncertainty about the data on the total level of production in the country and the sector's contributions to national income (GDP). Several international data sources suggest that the official Bank of Zambia figures overstate production levels.[4] With regards to the GDP contribution of the sector, the 2013 official data, which is in the process of being revised, understates the GDP contribution of mining. The unofficial estimate from the Zambian toolkit application is that the sector contributes at least 12 per cent of GDP. In contrast, the current official data suggests it is less than 3 per cent in constant prices and around 8 per cent in current prices.

Projections provided by four of the largest mining companies in Zambia indicate that the future contributions of mining are likely to increase. These projections are based on already approved investment programs, and imply an increase in production to 2016, and roughly a doubling in government revenue contributions.

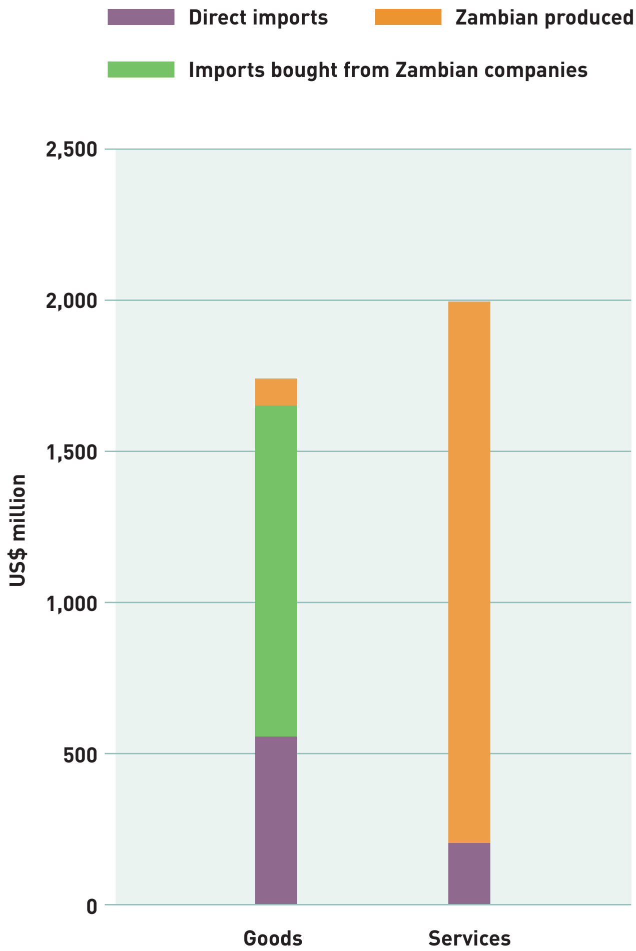
Local-level contributions

At the local level, mines contribute to the areas in which they operate through two main channels: through commercial activities (employing and training people and procuring goods and services), and through social investments. The study looks at these contributions for the four largest mining companies in Zambia and compares data from the Living Conditions Monitoring Survey (LCMS)[5] in mining districts versus non-mining districts in the Copperbelt and North-Western Province.

Mining plays a vital role in generating employment in and around mining districts. Together the four mining companies employed 56,300 people in 2012, almost all of whom are Zambian (98–99 per cent). Expatriate employment was lower than in other MPD case studies, apart from Chile. For every job created directly by mines, between two and four additional jobs are created in Zambia through "indirect"[6] and "induced"[7] employment linkages, which amounts to an additional 110,000 to 220,000 jobs. Mines also contribute towards human capital development through investment in training and support to trade schools. In 2012, the four mines spent over US$5 million on training.

In terms of procurement, the four mining companies in our sample spend US$3 billion on goods and services each year, of which US$1.6 billion is on services and US$1.4 billion on goods. While almost all services are procured from Zambian businesses and provided by Zambian nationals, very few of the goods procured are manufactured in Zambia. Procurement data shows that the majority of goods are procured from Zambian businesses but most are supplied by local agents or subsidiaries of foreign companies that import goods from elsewhere. The difficult business environment has undermined the competitiveness of manufacturing in Zambia, and has had a corresponding impact on local procurement. Figure 3 extrapolates the information from the four mining companies to estimate total industry procurement, and gives an indication of how much is produced in Zambia, how much is directly imported by mining companies and how much is imported by Zambian companies.

Figure 3: Mining company procurement (2012)



Source: Company data, OPM's calculations and Kasanga 2012.

4 In response to this, the Zambia Revenue Authority (ZRA) has set up the Mineral Value Chain Monitoring Project to independently assess and verify production figures in Zambia.

5 The Living Conditions Monitoring Survey is a household survey carried out by the Central Statistical Office to measure living conditions in Zambia.

6 That is, spending on local supplies.

7 That is, through mining employees spending their relatively high incomes.

The four mining companies spent just under US$70 million in social investment in 2012. This is between 10 and 16 per cent of pre-tax profits for Copperbelt mining companies, while North-Western Province mining companies' social investment is in line with other country case studies as a percentage of pre-tax profits. The approaches to planning and implementing social investment projects vary across different companies.

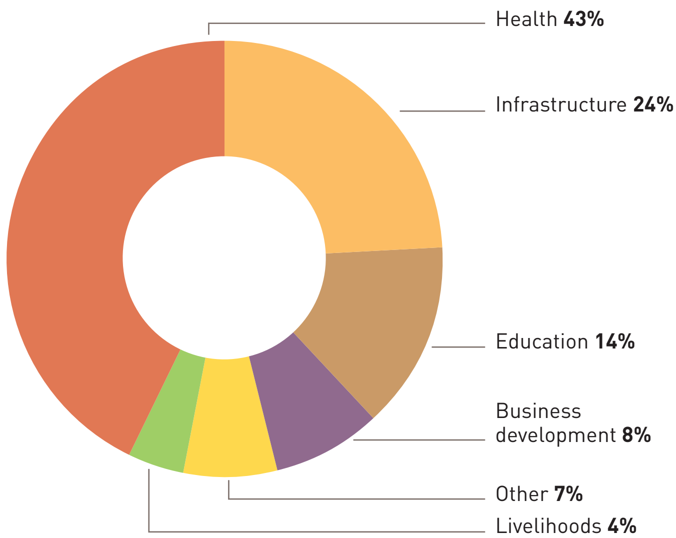
The largest proportion of social investment spending (see Figure 4) was on health (43 per cent) followed by infrastructure (24 per cent). The high levels of expenditure on health are partly a result of the high costs of running the hospitals and health clinics that Copperbelt mines took over from ZCCM. Despite this, high levels of mistrust exist in local communities, and perceptions of companies remain negative.

Local social and economic development indicators, in particular from LCMS data, confirm that there are large differences in living standards between Copperbelt and North-Western Provinces, as well as between mining and non-mining districts within these provinces.

With a longer history of mining, the Copperbelt is relatively developed, has an urbanized population, high rates of formal employment and the highest Human Development Index (HDI)[8] score in Zambia. By contrast, the relatively new mining area of North-Western Province is one of the least developed parts of Zambia, with low rates of urbanization and formal employment.

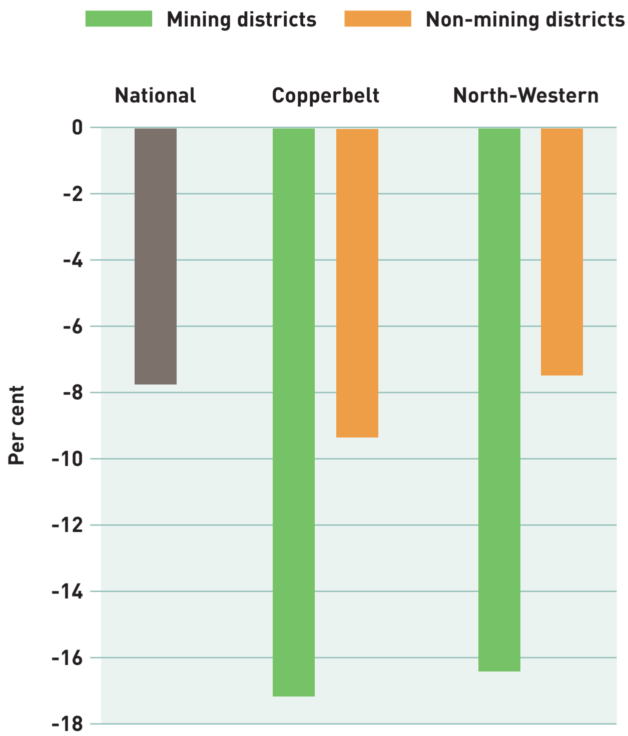
Despite these differences, both provinces have experienced faster growth in real per capita income, and larger reductions in self-assessed poverty, than the country as a whole since the mining sector was privatized (see Figure 5). North-Western Province mining districts have also experienced higher levels of population growth and larger increases in secondary school attendance.

Figure 4: Composition of social investments made by all four mines (2012)



Source: Data collected from the four mining companies in the sample.

Figure 5: Reductions in self-assessed poverty levels between 1998 and 2010



Source: LCMS 1998 and 2010.

8 Created by the UN, the HDI is a composite index of per capita income, life expectancy and educational attainment.

“The quality of the data on which both government and the mines rely on to guide decisions is poor. This has affected the quality of the debate on mining.”

Implications of main findings

The findings from the study establish a baseline of facts about the contributions of mining in Zambia. They also help identify areas in which action by one or more stakeholders could help enhance the positive contributions of mining. The implications of the main findings in the report relate to better data, greater scope for local content, policy that would support a competitive world-class mining sector and the opportunity for more effective social investment programs.

Data

The quality of the data on which both government and the mines rely on to guide decisions is poor. This has affected the quality of the debate on mining, as well as the quality of policy decisions made by government.

Both mining companies and government could play key roles in addressing this problem. In June 2013, the Chamber of Mines and the government committed to work together to address the quality and availability of data on the sector. The problem is already being partly addressed by the government-appointed ZRA Mineral Value Chain Monitoring Project which is assessing industry production figures.

A single data template could be created by government and used to collect data from the industry. This will allow for greater consistency in data and will also make it quicker and easier to compile information. The objective should be a single set of publicly available data.

Various organizations could support this process: the Ministry of Mines, Energy and Water Development and the Chamber of Mines could help guide the interpretation of this data; the ZRA could provide an authoritative update on the status of tax payments using ZRA data and publish data on a regular basis; and the Chamber of Mines could engage more actively with government agencies and produce a regular mining bulletin.

Industrialization and local content

The mining industry can contribute towards industrialization through the development of supply chains, but this will have to be supported in a number of ways. At the macroeconomic level, fiscal and monetary policy should avoid exchange rate overvaluation to guard against “Dutch Disease” effects, which could reduce the competitiveness of non-mining sectors of the economy.

The capacity of local suppliers can be built by actions taken by both mining companies and government. While some mines have supplier development programs and put resources towards nurturing local supplier capabilities, there is a limit to what mines can do in the absence of a supportive business environment for private investment. Local suppliers are faced with significant barriers to growth and a difficult investment climate – including high costs for finance, electricity, land and labour. Government efforts to address these barriers could significantly improve the chances of success of supplier development programs.

A competitive world class mining industry

The competitive position of the Zambian mining industry is fragile. Recent policy changes have put additional pressure on the high-cost, low-productivity parts of the industry. Much of the economy of Zambia relies on mining: the sector offers a foundation for economic growth and diversification. Ensuring that the industry remains competitive is key to securing growth.

Stability in the policy environment and the consistent application of a regulatory regime will improve the attraction of Zambia for investment. A systematic assessment of the ad hoc policy measures that have been introduced in Zambia since 2008 could be a first step both in stabilizing the policy environment and in assessing which measures are damaging the competitiveness of the industry without generating significant benefits for government.

The mining industry could also make a collective contribution towards enhanced competitiveness. This could be done through supporting government with better information and data, contributing towards skills development of government officials and adopting a more co-operative approach towards skills development through the Chamber of Mines in collaboration with government.

Social investment and partnerships

Mines spend a lot on social investments, but with mixed results and residual suspicion from local communities.
To improve social investment performance:

- More systematic monitoring of the outcomes of social investments against a baseline of data is needed. Regular surveys and more effective means of communication with local communities could form part of enhanced monitoring and help to rebuild trust.
- Better co-ordination is needed: between mining companies themselves and with other stakeholders, such as local government, development agencies and NGOs.
- Mining companies could better align their social investment programs with the district-level development plans and poverty reduction strategies. This will, however, require sufficient capacity at local government level, which is currently lacking. Mines could potentially redirect some of their efforts towards supporting capacity in areas such as budgeting and planning.

InBrief

The International Council on Mining and Metals (ICMM) was established in 2001 to improve sustainable development performance in the mining and metals industry. Today, it brings together many of the world's largest mining and metals companies as well as national and regional mining associations and global commodity associations. Our vision is one of leading companies working together and with others to strengthen the contribution of mining, minerals and metals to sustainable development.

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Front cover image courtesy of Chibuluma Mines Plc.

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