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Shared-use mining infrastructure in sub-Saharan Africa: challenges and opportunities

The IBA's recent Conference, Investing in Africa: Opportunities for Businesses and the Lawyers Who Counsel Them, held in New York on 24–26 June 2015, highlighted the growing challenges and opportunities related to infrastructure needed for major mining projects in sub-Saharan Africa. The mining sector, which remains critical to many economies in the region, is being hampered by the lack of adequate transport, power and other infrastructure, as was underscored by participants in the 'Trends in the Mining Sector' panel. In the current depressed commodity price environment, large investments in infrastructure required to develop major, 'world-class' deposits is difficult to justify, causing many important projects to be delayed or cancelled. At the same time, the World Bank has identified a funding gap of US$31bn (or 5.1 per cent of GDP) annually to meet the wider-infrastructure needs of sub-Saharan Africa's growing population and economy. In this context, host governments, mining companies, and their legal advisors are actively considering opportunities and challenges associated with the shared-use of mining infrastructure.

Shared-use infrastructure: what is it and why is it an opportunity?

Many types of infrastructure, including railways, ports, power generation plants, power transmission lines, water treatment facilities and ICT equipment, are amenable to shared use by multiple mining operations and, potentially, other sectors and local communities. Through sharing, the initial investment in infrastructure can be spread across multiple users, thereby lowering costs for each. In addition, where existing public infrastructure is inadequate to meet consumer/industrial demand, mining firms can provide the necessary offtake guarantees to facilitate the financing of an expansion or upgrade of that infrastructure, or the mining firm can itself invest in the infrastructure to reliably service the mine. In both instances, the incremental cost of building new or expanding existing infrastructure to meet the needs of a new mine is typically much lower than constructing duplicate infrastructure. Indeed, the cost of duplicating some types of infrastructure (eg, railways and ports) can be prohibitive, which usually justifies their regulation as 'natural monopolies'.

While infrastructure sharing is common (and, indeed, the norm) in most OECD countries, this is not the case in sub-Saharan Africa (with the exception of South Africa) and other developing regions. Historically, mining firms have sought to mitigate political, operational and other risks in frontier countries by securing full control over, and exclusive rights to use, critical infrastructure, and have been willing to incur significant additional up-front costs in order to achieve this. The question of whether or not this approach has benefitted host countries (which has been hotly debated in recent years) has been rendered moot by current market conditions. Capital constraints within major mining firms mean they are much less willing or able to pursue this 'enclave' approach to mining. The challenge now facing host governments in sub-Saharan Africa is to develop appropriate legal and regulatory frameworks for infrastructure that address the legitimate concerns of major mining firms, while enabling broad-based economic development through efficient and effective shared-use arrangements.

From the perspective of host governments in sub-Saharan Africa, it is essential that investments in the exploitation of non-renewable minerals lead to diversified and sustainable economic growth. Sharing of essential infrastructure is one of the most viable ways that mining activity can

support the establishment of industries that will survive long after a country's mineral resources are fully exhausted. For example, a railway corridor and port facility can support large-scale and sustainable investments in agriculture and forestry by providing reliable access to foreign markets. A power plant constructed for a mine can be used to supply low-cost electricity to local communities or the nation's grid, improving living standards and supporting the development of SMEs. Similarly, a national or regional power or water utility that is upgraded and its transmission and distribution network extended, to service mining demand will benefit other users with more extensive and reliable supply. The traditional enclave approach to mine development has in the past meant that large investments in infrastructure were uncoordinated with national growth/development plans. Thus, host countries have often missed opportunities for mining-related infrastructure to address gaps in their nation's physical infrastructure. Governments should, therefore, carefully consider at an early stage whether and how mining infrastructure can play a central role in achieving their countries' development goals.

Why has it not yet taken off?

Sub-Saharan African has seen some limited examples of shared-use arrangements in the context of power, water and ICT infrastructure. However, very little progress has been made in shared-use solutions for railway and port facilities, although limited contractual provision for this has been made in some countries including Liberia, Cameroon and Mozambique. Encouragingly, plans for the massive Simandou project in the Republic of Guinea (which remains on the drawing board, and has been repeatedly delayed) contemplate construction of a major new railway line and an associated port near the capital of Conakry for transporting the project's iron ore; these facilities will also be made available for use by other mining and non-mining users, including passengers and agri-businesses.

There are many reasons why shared-use mining infrastructure is yet to fully realised in sub-Saharan Africa. *Mining firms*, which have traditionally used their ownership and/or control of infrastructure to gain competitive advantage, have been slow to embrace the new reality. *Host governments*, who must play a role in brokering shared infrastructure solutions, often lack the skills needed to integrate proposed mining investments into their infrastructure master plans, or to impose and enforce shared-use infrastructure solutions. *Project lenders*, who are active in sub-Saharan Africa have been slow to adapt their lending practices to accommodate infrastructure sharing, which requires innovative commercial and legal structures and carries a different risk profile than the enclave mining model. Finally, while numerous reports promoting the concept of shared use have been published by *development finance and supra-national institutions*, these institutions could do more to support host governments in implementing solutions on a project-by-project basis and to promote the evolution of accepted shared-use norms (as they have done, for example, in the area of environmental protection).

What are the current prospects for shared-use infrastructure in sub-Saharan Africa?

As has been well documented, Chinese mining and other firms have been actively pursuing 'resource for infrastructure' (R4I) transactions on the African Continent. This represents a competitive threat to Western mining groups, who find that they are not able simply to 'sit-out' the current commodity price slump. In order to retain their mineral rights and future growth prospects, they must be creative in their approach to essential infrastructure. Mining groups are, therefore, increasingly open to participating in well-structured shared infrastructure solutions. At the same time, host governments in sub-Saharan Africa are under increasing pressure from communities and donors alike to achieve greater economic 'linkages' from mining projects that promote tangible and sustainable development gains. They are also more aware of the risks associated with the enclave model, in which a 'first mover' mining firm effectively acquires unregulated monopoly power over other mineral resources in the same region (leading to undeveloped, stranded deposits) and has little incentive to encourage the development of new industries or economic opportunities. In light of the foregoing, the prospects for shared-use infrastructure solutions in sub-Saharan Africa have never been better.

One possible shared-use model, which is attracting attention and debate, involves the development, financing, construction, and

operation and maintenance of infrastructure by an independent entity that benefits from long-term, 'take-or-pay' contracts conferring rights to use it. Thus, the infrastructure project is made economically viable through agreements with creditworthy, long-term users (eg, mining firms). By ensuring management of the infrastructure by an experienced, independent operator, the legitimate concerns of mining firms concerning the long-term reliability and efficiency of critical facilities can be addressed, and conflict of interest concerns arising in the context of enclave mining can be largely avoided.

Remaining challenges

When implementing a shared-use infrastructure model, including one based on an 'independent' operator, a range of issues related to ownership, financing, construction, operation, maintenance and regulation arise. In the context of sub-Saharan Africa, a number of significant challenges remain to be addressed, including the following:

Government capacity

How can the capacity of host governments to plan and prepare for, negotiate or broker, and regulate shared infrastructure solutions be improved, or their institutional weaknesses mitigated?

Can appropriate institutions be identified or created to ensure that access rules and tariffs are fair and equitable, and resolve disputes when they arise?

To the extent passengers and SMEs are permitted to use infrastructure, is the host government able to subsidise tariffs to ensure affordable access?

Concerns of the first-mover mining project(s)

How will a first-mover mining project be fairly rewarded for its risk-taking, and can unfair free-riding by its competitors be prevented?

How can any efficiency losses or risks associated with permitting non-mining users access to critical infrastructure be addressed/mitigated?

Concerns of other users

If infrastructure is to be operated/controlled by a first mover mining firm, how can conflict of interest concerns be addressed to the satisfaction of other potential users (particularly where local regulatory capacity is perceived to be weak)?

Timing issues

As negotiating and implementing shared-use infrastructure arrangements for a mining project is a complex exercise, how can solutions be implemented without unreasonably delaying much-needed mining investment?

Conclusion

Shared use infrastructure presents an opportunity to achieve 'win-win' solutions in which mining projects benefit from lower costs and a greater number of stakeholders are able to benefit from mining investment in the longer term. Share-use solutions are, however, complex and challenging, particularly in the context of sub-Saharan Africa. In the current environment, mining firms and host governments, working together with their legal advisors, have a strong incentive to find an appropriate path forward.