

Summary and Feedback from the Shared Use of Mining-Related Infrastructure Expert Workshop - November 2013

Background

In 2013, the VCC was awarded a grant from AusAID to develop an economically, legally and operationally rational framework to enable shared use of mining-related infrastructure (rail, ports, power, water, internet and telecommunications). A draft framework for each infrastructure type was presented at an expert workshop held at Columbia University on November 15, 2013. Thirty-one experts from academia, government, donor organizations and the private sector attended and provided feedback and recommendations. The workshop was generously sponsored by the [Natural Resource Charter](#) and the [Sustainable Development Solution Network](#).

At the workshop, there was a consensus among the experts that mining companies are more likely to share infrastructure that is less costly and less strategic. In relation to the infrastructure types examined, this means that mining companies are more likely to accept sharing Internet and Telecommunications (ICT) infrastructure, followed by Water and Power. Rail and Port infrastructure was considered to be the least amenable investments to shared-use models, given the vertically integrated logistic chains of mine-to-rail-to-port operations.

However, this does not mean that the most likely synergies associated with shared infrastructure have already been realized or that the enclave model (of dedicated infrastructure to the mine, without access or linkages to other parts of the economy) is a foregone conclusion with respect to rails and ports. It rather underscores the need for a continuous and in-depth conversation with relevant stakeholders on the topic, which the VCC is committed to carry on.

Feedback on Each Infrastructure Framework

Power: The VCC's framework for shared use highlights four types of power sourcing arrangements leading to synergies between the power and the mining sectors: 1) self-power-generating mines provide power to communities – either as a legal/contractual obligation, or as part of a voluntary/Corporate Social Responsibility (CSR) scheme; 2) self-generating mines, individually or collectively, sell excess power to the grid; 3) mines serve as an anchor customer to Independent Power Producers (IPPs) seeking financing; and 4) mines source from the grid and, in so doing, contribute to the strengthening of the grid and the public utility through various commercial arrangements.

The experts were of the view that the following issues need to be addressed when considering how to best facilitate power-mine synergies: 1) Assess the power demand and the willingness to pay of the community around the mine site, compare this with the costs involved in building and maintaining the distribution lines or a mini-grid, and determine what economically rational role the mining company should play in the rural electrification process around the mine site; 2) Determine ways to mitigate the political and commercial risks when miners have to partner with weak public utilities; 3) Assess whether and how the government can attract IPPs when a mine acts as an anchor demand in a weak investment climate; and 4) Devise a compensation scheme for the mining

company, : the company would only choose to participate in such arrangements if it is guaranteed a constant and reliable power supply at a cheaper price than exclusive self-generation and arrangements involving supply of power to communities necessitate monetary compensation to be sustainable.

If these issues are adequately addressed, mining companies may be amenable to partnership, especially given that sharing excess power will not interfere with its mining operations. An example of such a partnership is that of Bong Mines in Liberia which, prior to Liberia's civil war, used to provide diesel-based power to Liberia's power utility (LEC) during the dry months, in return for cheaper hydro-power from the LEC during Liberia's rainy season.

Water: Mining companies have two ways to diminish the water footprint and the competition for clean water sources with surrounding communities: First, by reducing the water contamination and pollution risk associated with mining activities, and second, by reducing the quantity of fresh water used in the mining production processes. It is in the second option that the scope for shared use lies: when mines are required—either because of an actual lack of fresh water resources, or due to limited water rights being allocated to them – to build additional water infrastructure to source their water from non-fresh water sources (such as desalinated sea water, treated waste water, water from dewatered mines, etc.).

The experts at the workshop agreed with the VCC's findings that the type of shared-use solution is very case specific, but that the potential can only be realized if strong environmental regulations are enacted, implemented and monitored, and if a system of strict water allocation rights is in place. Two interesting models from the United States were given: the first where farmers are co-owners and users of a jointly operated irrigation company, and the second where the reservoirs of hydroelectric dams are used for water supply purposes. Both models decrease competition for and reliance on water rights.

Some experts explained that water, as a public good, invites more opportunities for public-private partnership solutions and financing options than the other types of infrastructure. This is especially the case in a context of water scarcity, as the mining company does not want to be perceived as competing for the water resource with the local community.

Rail & Ports: In this sector, the VCC underscored the importance of adapting any proposal for shared use to the economic development potential of the pit-to-port rail corridor. The rail-to-port logistics chain is of such strategic importance to the viability of a mining operation that governments need to balance requests for shared- or multi-use access with its impact on the mining company's operations and its related tax revenues (though it should be noted that given the difficulty many host governments face in tax collection, the trade-off may be reduced). While the experts agreed that many successful mining projects are vertically integrated and thus were not optimistic about the potential for shared use in the context of this infrastructure, they mentioned certain key points to consider when seeking to regulate or implement shared use:

1. When granting a rail concession, governments should make sure to retain the ownership of rights of way (or servitudes) to ensure that economies of scope can be leveraged. The railway line, for example, could be used for electricity transmission or distribution lines and/or ICT cabling;
2. The "first mover" mining company will require some form of compensation such as founder rights, access holidays (which should be time-bound), or ownership of the operations under a haulage model. Such additional rights can ensure that shared use is both feasible and beneficial to both the first mover, who would otherwise resist shared use models, and the

host country. Regulations are required to implement such a scheme, which is generally difficult to achieve even in developed countries such as Australia.

3. A more promising solution to avoid the duplication of parallel lines is when moderately sized mines co-invest and form a Special Purpose Vehicle (SPV) under a multi-user access regime.
4. The experts were skeptical in relation to multi-purpose access to rail infrastructure, especially when it comes to transporting agriculture commodities: the additional logistical costs and loss in efficiency of the corridor makes it more appealing for mining companies to build an all-weather road alongside its railway line. This alternative should be considered by host governments when negotiating with mining companies.

Internet and Telecommunications: The VCC highlighted the considerable potential for sustainable synergies from leveraging the economies of scope attached with the right of way and civil works of mine-related power lines, railway lines, and/or pipelines by laying fiber optic cables alongside them. Experts discussed that this is likely to happen organically, because a business case is easily made for sharing such right of ways; the capital costs associated with the installation of such ICT infrastructure is much lower than with the other infrastructure types, and the marginal cost of adding ICT infrastructure is so low that mining companies are unlikely to be reluctant to engage in such an undertaking, not least to preserve their social license to operate. The VCC reminded participants that lack of planning and poorly drafted or overly rigid regulations governing the sector can be a major hindrance to the realization of such synergies.

The experts considered the following points to apply to all infrastructure types examined:

- 1) Shared use only makes sense if there are significant economies of scale or scope so that extra capacity is inexpensive and there is a substantive market for that marginal low-cost capacity.
- 2) The government can incentivize shared use on mining related infrastructure by requiring a separation of ownership between the mine and the infrastructure. However, user-concessions (whereby the miner-user also owns the infrastructure) also have their advantages, as they allow for lower hurdle rates in politically risky environments, making the infrastructure project less costly for both the owners and users. Nevertheless in the case of user-concessions, a strong regulatory system is needed to guarantee shared use and ensure that the infrastructure is designed with additional capacity to accommodate such shared use.
- 3) All user concessions should be granted on a Build–Operate–Transfer (BOT) basis so that after a contractual period of 15-30 years, the infrastructure is transferred to the host government. At the end of this term, other industrial and non-industrial demands would have finally materialized, and the government will be able to make the project attractive for bidding by third-party infrastructure concessionaires.
- 4) All miners should be required to bid on infrastructure plans in addition to the typical bidding criteria for a mine.

The feedback received during the expert workshop is currently being integrated in the draft frameworks. In early 2014, the VCC will hold two seminars in Africa to disseminate the findings.

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