Mining Certification Evaluation Project

Project Summary

The Mining Certification Evaluation Project (MCEP) was a time-limited, multi-sector research project aimed at evaluating whether independent third party certification of environmental, social and economic performance could be applied to the mining sector. Rather than attempting to design a certification system, its aim was to assess whether such a system was feasible and offer findings and lessons to companies, NGOs, and other interested parties.

The focus was on the metals mining sector rather than energy minerals or construction material—and on large, industrial-scale mines, rather than artisanal or small-scale mining (ASM.)

MCEP was regionally based; it originated out of Australia and initially focused on the Asia-Pacific region. However, as it involved multi-national mining companies, it also included sites outside of the region. The focus of the program was on a) developing environmental and social principles and criteria, b) testing those criteria at selected sites and c) evaluating the key governance considerations for a certification system.

Project Description

MCEP was organized as a multi-sector working group comprised of representatives from the mining industry; environmental and social NGOs; unions; governments; academia; the financial sector; and certifiers. Specific participants included BHP Billiton, CSIRO, Newmont, Placer Dome, Rio Tinto, WMC, Oxfam/Community Aid Abroad and WWF. The project was managed by WWF-Australia on behalf of the working group.

The project sought to evaluate whether independent third party certification of environmental, social, and economic performance could be applied to the mining sector. The project also sought to develop a set of principles and criteria for environmental and social performance applicable to mine sites, develop measurable and auditable on-the-ground performance standards, and test their applicability at mine sites through site-based trials.

To develop the principles and criteria the project fostered "a structured and focused debate amongst key stakeholders on issues of environmental and social performance" in the mining sector. The project issued a series of reports, detailing stakeholder views on the issues, identifying points of agreement and conflict. The program was organized to be both a test of potential methodologies and interest.

The project sought to examine a range of issues from the social and environmental impacts of mining, to the role government can play (both as watchdog and in some cases a project partner), and the issues related to the supply chain from mine to product. Key research questions included:

- Can principles and criteria for acceptable social and environmental performance by mine sites be developed that meet the expectations of the various stakeholders?
- Can an audit protocol be designed and implemented to test the performance of mine sites against these criteria, in a manner that is practical and cost-effective?
- If so, can the protocol be utilized in a variety of ecological, socio-economic and cultural settings, both within Australia and internationally?

A final report was issued in January of 2006. Major findings are listed below:

- The field trials indicated that, on the whole, an assessment process that is practical, cost-effective, and can be used in a variety of mine site settings, should be achievable.
- Each field trial highlighted areas for improvement in the assessment process.
- Issues that require further consideration include:
    - Balancing the degree of assurance against excessive time on site;
    - Weighing up the advantages and disadvantages of a scoring system; and
    - Establishing whether to utilize global standards or regional/site standards.
- The potential value of certification as a reputation benefit was understood by participating mine sites, but interest lay more in practical outcomes for the site itself, such as guidance for improving performance or rationalizing existing initiatives.
- Overall, the MCEP trials attested to the difficult balance between a standard that can be universally applied and is adaptable to diverse operating circumstances, but that still offers sufficient detail and robustness to serve an assurance function.

The resulting report provides a useful basis for contemplating next steps in the development of a certification system.

Nature of Supply Chain, Products and Issues

Jewelry typically accounts for 70% or more of annual demand for gold, with electronics and dental accounting for approximately 11%. The percentage used in electronics has been growing in recent years.

Gold is unusual in that it plays an economic role as a store of value—creating market and demand dynamics that are different for gold than for metals that are treated as pure commodities. For Example, large above-ground stocks of gold are held by governments and investors.

Silver is more akin to a pure commodity; however there are very few silver mines in the world—most silver today is a byproduct produced when other metals, such as gold or copper, are the target.

Large-scale industrial sources are typically highly formalized, mechanized, technologically advanced, and capital-intensive. While these sources are therefore relatively easy to identify,

metals generally lose track-ability as they move through processing and into the economy. This "loss" can occur in the refining process, in the marketplace (as metals are traded or exchanged), and/or in the manufacturing process as metals are combined or become parts of components or subcomponents of products utilized in consumer products, industrial processes or construction.

In some instances, there may be an ability to create a focused supply chain effort, for example a manufacturer could utilize a specific, marked metal as it leaves a smelter. If a particular smelter processes inflow from a specific mining operation in a separate batch, then a chain of custody is possible (i.e., it can be tracked into, and throughout, the refining process and the manufacturing process). However batch processing, and subsequent chain of custody, is likely to add significant costs to the supply chain. It is worth noting the volumetric approach followed by the Forest Stewardship Council for wood pulp and paper products, i.e. a given volume or percentage of total volume of "certified" input to a pulp mill or paper mill can allow for the same volume or percentage of total volume of "certified" output, rather than tracing specific molecules of cellulose or batches of wood.

While gold jewelry is a coherent product (i.e., it is comprised of metal), jewelry is not comprised of 100% gold. Gold is blended with other metals to produce a final product with a karat grading or rating. For example 24 carat gold contains 99.99% pure gold, and 9 carat gold contains 37.5% pure gold. Therefore, when it comes to a particular piece of jewelry, gold track-ability does not address the source or provenance of the non-gold metals.

Once in the economy, gold is easily malleable. In other words even "marked" gold can be re-melted and remixed and therefore lose provenance. For example, jewelry that is certified from a particular source could be re-melted and lose its provenance.

While the description above is based on gold, a similar analysis applies to most other metals. The primary difference is the technology and/or chemicals used to process ore and capture the target mineral. Most other issues are similar with regard to environmental and social impacts and potential benefits.

While large-scale mines are easy to identify and monitor, small-scale or artisanal mines present different issues and challenges.

Most large-scale gold mines utilize cyanide as a processing chemical, to leach gold from crushed ore. Development of large-scale gold mining can also raise issues related to indigenous rights, effective community participation in decision-making, mining's contribution to sustainable economic development, mining in conflict zones and conflict over natural resources, and other issues (MMSD, Newmont CRR, ICMM, Enough, NDG, Make IT Fair, Global Witness report.) Recent research has also focused on the contribution that mining can make to sustainable economic development and related challenges (ICMM, Oxfam.)

Analysis

Supply Chain Complexity–Steps *(Complex)*

The supply chain is highly complex with regard to material flow for all metals from large-scale operations. There is generally an inability to track or maintain provenance—as the materials mix in processing, trading and/or manufacturing. Therefore, this is a valid comparison to EICC-GeSI target minerals.

Formalization of Sector *(Formal)*

The supply chain for participating companies is highly formal but can vary due to the capacity and nature of host governments. Generally speaking, the participating companies work from the premise that even where government capacity is weak they will operate in a fairly formal manner in regard to compliance, reporting, payments, etc. EICC-GeSI target minerals (cobalt, tantalum, and tin) are likely to originate from sources that are both highly formalized and informal—with greater social and environmental challenges in the informal sector.

Material Processing, Coherence *(Mixed)*

Metals are typically mixed in processing, fabrication and trading—this is true for all EICC-GeSI target minerals. Therefore any outcomes from MCEP are likely to be useful for metals used by the electronics sector.

Significance in Product Composition *(Varied %)*

Metals in an electronics product are typically parts of or ingredients in subcomponents or used to connect components. Each metal typically represents a fraction of the product. Jewelry products, such as gold and diamonds, typically represent a visible and significant portion of the consumer product. MCEP reviewed all types of metals mining and its findings are therefore relevant to EICC-GeSI.

Issue/Source Geography *(Regionally Relevant)*

MCEP is certainly regionally relevant. While it was Asia-Pacific focused, many of its findings extend globally. It would have clearly been more relevant on some issues if the regional coverage included Africa.

Stage of Development, Maturity *(Completed)*

This was designed as a time-limited research project. It was completed in 2006.

Nature of Governance *(Multi-Sector, Regional)*

This was a time-specific research project so there is no ongoing governance. While it was operational, the project had multi-sector governance—although the governance was concentrated in the Asia-Pacific region.

Standards Breadth or Focus *(Multi-Issue: Environmental and Social Objectives)*

The mine site criteria addressed a range of social and environmental issues. Less progress was made on some, more challenging, standards and criteria – for example free, prior and informed consent. No provision was made to push to agreement or closure on issues due to the time limits imposed on the project.

Nature of Standards/Program Development *(Multi-Sector)*

All key sectors had a role in the development of the projects, therefore its findings, although limited in some ways, are seen as credible.

It should be noted that the project was only able to make initial progress on some of the more challenging environmental and social issues such as those related to community engagement, participation and consent. So while the standards and criteria were deemed useful for a research project and trials, key provisions are likely to lack broader, international support from key stakeholders.

Approach to Verification *(Third Party/Combination)*

Six field trials were conducted as part of the MCEP research: four in Australia, one in New Zealand and one in Brazil. Audit teams for each site comprised of an independent Team Leader who was a professional auditor, the MCEP Project Officer, and independent consultants and/or staff from other operations of the parent company of the mine site being assessed.

Key Findings

The MCEP project demonstrated a degree of interest, and willingness, among stakeholders in the potential for site based certification against social and environmental criteria. It did not resolve some of the more challenging issues in a manner that was satisfactory to key stakeholders. And it did not tackle supply chain complexity in a manner that is likely to be useful to metals used in electronics. Issues like how to create or ensure supply chain integrity were not addressed by this project.

MCEP was focused on the large-scale mining sector. It is therefore more likely to offer guidance in regard to social and environmental issues and supply chain issues with regard to large-scale mines for target EICC/GeSI metals; rather than the ASM sector in regions like the eastern DRC. However, to the extent that a supply chain initiative is developed with companies with large-scale operations, there are likely to be important findings from the MCEP project.

The information that is likely to be of most interest relates to the draft standards and criteria. These could be reviewed, along with other criteria from other initiatives, and potentially allow EICC/GeSI companies to initiate a supply chain trial or project without having to begin with a multi-year negotiation process.

The site based trials may provide useful data to any mining company participating in an initiative with EICC/GeSI companies as to how to effectively and efficiently undertake a site based audit.

Due to the regional nature of the project one cannot automatically assume broad support from stakeholders outside the region—with regard to MCEP findings. If any findings from MCEP were utilized they should be vetted with key stakeholders.