

## **Electronics Industry Citizenship Coalition (EICC) & Global e-Sustainability Initiative (GeSI) Joint Study on Metal Extraction**

The member companies of EICC and GeSI commissioned a study on the sources of metals used in electronic products as well as the environmental, human rights and labor conditions associated with the extraction of these metals.

The mission of the EICC and the GeSI supply chain working group is to improve working conditions in the global electronics supply chain. While the mining of metals can be many layers removed from the final product in the electronics supply chain, EICC and GeSI member companies are concerned about allegations of poor conditions in the supply chain for these materials.

The intent of this research is to evaluate the usage of these metals by the electronics industry as well as improve the understanding of the sources, the supply chain and the conditions under which metals are mined. The study examined these issues for tin, cobalt, palladium, gold, copper and aluminum.

Electronics is a broad category of products encompassing small handheld devices, mobile phones, laptop and desktop computers, printers, music players, TVs, automotive electronics, household electronics, white goods and other devices. The metal content of these devices is highly variable from product to product and even from brand to brand. Due to this inherent variability, this study is based on general industry estimates.

The study has estimated that the electronics industry consumes a maximum of 36% of tin, 25% of cobalt, 15% of palladium, 9% of gold, 2% of copper, and 1% of aluminum currently produced. The supply of these metals comes from both mining and recycling, and these sources may be mixed together within the global supply of a particular metal.

These metals are traded globally either directly between parties or through global commodity exchanges. Given both the patterns of international trade and the likelihood of mixing different flows of metal around the world, the ability to trace the metal used in a particular product to the original source is difficult, if not impossible in some cases.

The supply chain is further complicated where metals are mined in numerous countries and the proportion of small scale or “artisanal” mining is high. For example, gold is mined in more than 40 countries and about 25% of global production comes from small-scale mining. Approximately 50% of tin is mined in small-scale operations. Small-scale mining is characterized by manual extraction with simple tools and equipment, and little or no management controls. Often this kind of mining is undertaken by those living in poverty and is frequently an illegal or informal activity within a national economy.

Depending on the location and scale of mining activities, social and environmental impacts can vary substantially. Environmental concerns related to metal mining and processing can include land degradation, water and air pollution, greenhouse gas emissions and natural resource depletion. Social concerns include labor and human rights violations, corruption, native land rights issues, disruption of traditional communities and health and safety issues.

Artisanal mining is particularly prone to serious concerns related to local environmental pollution, social issues like child labor, and poor worker health and safety. On the other hand, small-scale mining, especially when formalized by the government, provides an opportunity for local employment and wealth creation.

None of the current membership of EICC and GeSI are directly involved in the purchase of raw materials from the mining sector. The mining, refining and sale of raw metal represents one of the earliest stages in the supply chain of electronics products which are complex and made of numerous materials. Thus, the member companies of EICC and GeSI have no direct purchasing relationships with mining companies. Due to this, the electronics industry's ability to address social and environmental concerns at raw material level could be strengthened by investigating options to work alongside other major end-use sectors.

Notwithstanding these challenges, the members of EICC and GeSI are concerned about allegations of poor conditions in the supply chain of metals used in electronics products. For example, there are a number of existing multi-stakeholder initiatives on social and environmental conditions in the mining industry that may constitute effective venues for these discussions. The EICC and GeSI are exploring possible collaboration with one or more of these initiatives. As part of the development of the report, EICC and GeSI member companies interacted with some of the initiatives focused on the mining industry and plan to continue this dialogue as part of future work.

Effective initiatives on the social and environmental conditions associated with the mining of metals must involve all stakeholders including the companies involved in mining, the local NGOs who have raised concerns about poor practices, workers and trade unions involved in mining, other industrial sectors who purchase and use metals, the governments and multi-government organizations with jurisdiction over these issues and the end users.

The study report is expected to be released publicly approximately June 20<sup>th</sup>, 2008, and will be available on both the EICC ([www.eicc.info](http://www.eicc.info)) and GeSI ([www.gesi.org](http://www.gesi.org)) websites.

For further information, contact EICC (Maliek van Laar at +1-202-962-3930), or GeSI (Joan Sherlock, [info@gesi.org](mailto:info@gesi.org), +1-650-948-2544).