Alianza por la Minería Responsable

Fairmined® gold and mercury use by artisanal miners?

ARM's position: no contradiction

The Alliance for Responsible Mining (ARM) is a pioneering global initiative with the mission to set standards for responsible artisanal and small-scale mining (ASM), enable and support producers to supply "Fairmined" certified metals and minerals to the market through economically fair supply chains, and contribute to the transformation of ASM into a socially and environmentally responsible activity while at the same time improving the quality of life of marginalized artisanal miners, their families and their communities.

In 2006 ARM set up a Technical Committee tasked with drafting a set of standards and criteria, Standard Zero for Fair Trade Artisanal Gold and Associated Silver and Platinum. Between them the Committee's institutional and individual members possess expertise on aspects of ASM and fair trade including certification and chain of custody, strengthening of ASM producer organizations, occupational health and safety issues, mercury abatement, environmental management, gender issues, child labour issues, decent labour issues, emergency preparedness and response, cleaner production, public policy and formalization of ASM, ecological restoration, governance, sustainable livelihoods, and issues related to marketing.

One of the very first challenges facing the Technical Committee for Standard Zero was the criteria for certifiable gold. Should gold produced in compliance with Standard Zero be a "chemical-free" product (similar to "organic" produce) or should it be fairly traded, aiming to secure progressive improvement in the conditions of production? Should mercury use be banned completely and ARM work only with "mercury-free" artisanal miners or should the Technical Committee draw up rules aimed at minimizing mercury loss and reducing the environmental impact of artisanal mining?

Given what is now known about mercury toxicity and the trend towards a "zero mercury" strategy, this was not an easy decision. Although mercury-free artisanal gold was expected to enjoy high prestige and market acceptance and communicate a clear message to artisanal miners, for many artisanal miners amalgamation is the only technology they are familiar with or available to them, and it is the miners themselves who as a result of their daily contact with mercury are the population group most exposed to health and environmental risk and urgently needing support.

After taking all of the Technical Committee's deliberations into account, ARM has adopted a policy position that it believes offers artisanal miners maximum developmental benefit. The ten different aspects of ARM's policy on mercury use for the production of Fairmined® certified gold can be summarized as follows.

1. ARM and mercury

Mercury toxicity is a well-known phenomenon and serious global issue. ARM considers it essential, and the only ethical option, to support and work with all global initiatives to achieve a dramatic reduction in mercury pollution and reduced mercury use.

"ARM is highly aware of all the environmental risks associated with mercury and supports all global efforts to reduce mercury pollution and use"

2. ARM and large and medium-scale mining

Over the last hundred years the mining sector has become divided and highly polarized between the large-scale industrialized mining sector and the millions of artisanal miners who continue to engage in mineral extraction activities in conditions similar to those that prevailed throughout the mining industry a century ago. The industrial mining sector has made significant efforts to improve the living standards and working conditions of its employees and labour force but most of the millions of artisanal miners and their families in Latin America, Asia and Africa still live in conditions of extreme poverty.

ARM's policy is not to encourage further polarization of the large-scale industrial and small-scale artisanal sectors but is nevertheless clearly pro-poor.

"ARM recognizes the efforts and achievements of the industrial mining sector in the area of corporate social responsibility but sees its role as being to improve the livelihood opportunities of the millions of poor artisanal miners and their families left behind in the development of the mining industry"

3. ARM and artisanal and small-scale mining

Artisanal mining today uses technologies that are broadly similar to those used by the today's industrialized mining sector less than a hundred years ago. Given the socio-economic constraints of poverty and a lack of access to information about alternatives, seen from the viewpoint of the artisanal miners the technology they use is the best technology available. Objectively some of these technologies are just as damaging to the environment today as they were when they were formerly used by today's industrialized mining sector.

ARM's policy is neither to defend nor reject the use of these technologies but to try to avoid repetition of the same mistakes.

"ARM recognizes the efforts and achievements of artisanal miners in applying best available technology to the limited extent possible but sees its role as being to help the artisanal mining sector avoid repeating the same mistakes as those made decades previously by the mining industry"

4. Promotion of mercury-free artisanal mining

Amalgamation is often regarded by artisanal miners as the best available gold ore processing technology. Amalgamation should not be used when gold recovery without mercury is reasonably practicable (for example free coarse gold is easily recoverable using gravimetric concentration). In most cases gold recovery without mercury is lower than it is using amalgamation. Given their general poverty, artisanal miners need to be compensated for the economic impact of the loss of income associated with the decision not to use amalgamation.

ARM's policy is to encourage and actively promote mercury-free artisanal mining through the provision of a "fairtrade ecological premium".

"ARM actively promotes mercury-free artisanal mining as the best available technology. Within the context of a fair-trade approach it is considered "fair" to compensate artisanal miners for lower gold recovery through an additional fairtrade ecological premium for mercury-free gold production"

5. Non-exclusion of artisanal miners using amalgamation

In many cases amalgamation is the only gold recovery technology available to artisanal miners. This applies to the average artisanal miner, who is poor. Working individually or in small teams as members of an artisanal miners' organization the miner lacks the funds needed to invest in advanced technologies such as cyanidation. He/she needs to sell their gold on a daily or weekly basis in order to buy food and clothing and

pay for medical treatment and their children's education.

ARM's pro-poor policy does not ignore the needs of artisanal miners who have no alternative to the use of amalgamation. Although mercury is toxic and ARM supports all efforts to reduce mercury use, the goal of reduced mercury use must not be pursued without regard to the most basic needs of people living in extreme poverty or the violation of human rights as the cost of good intentions.

"In seeking to balance the overall goal of mercury reduction against the human right of artisanal miners and their families to satisfy their basic needs, ARM is committed to a pro-poor policy that does not exclude artisanal miners who have no option but to use amalgamation"

6. Mercury emission reduction is essential

In most artisanal mines using amalgamation, the process has been refined over years of trial and error to maximize gold recovery. When mercury was inexpensive, recommended precautions and measures to optimize the amalgamation process by minimizing mercury loss were not always implemented; consequently there is enormous potential for environmental improvement through reduced mercury use and mercury pollution.

ARM's support for responsible artisanal mining includes powerful incentives for artisanal miners to improve their environmental performance by reducing mercury use, linking proactive and responsible measures by artisanal miners to reduce mercury loss to eligibility to participate in a fair trade supply chain for their product.

"ARM contributes proactively to the reduction of global mercury pollution. Artisanal miners wishing to participate in the fair trade supply chain for gold must progressively reduce their mercury loss and optimize their operations with a view to more environmentally responsible performance."

7. Use of cleaner technologies is essential

The greatest loss of mercury in the amalgamation process occurs when whole ore amalgamation is carried out without using a mercury recovery device (retort or similar equipment) during amalgam decomposition.

ARM's support for responsible artisanal mining requires artisanal miners to use a concentration process (gravimetry, flotation, hand-sorting, etc.) prior to amalgamation, and makes the use of retorts or other mercury recovery devices during amalgam decomposition obligatory. Both requirements ensure that mercury emissions are drastically reduced and both can be implemented without jeopardizing the human right of artisanal miners and their families to satisfy their basic needs.

"ARM requires artisanal miners who wish to participate in the fair trade supply chain for gold to adopt mercury-free pre-concentration processes prior to amalgamation and to use mercury recovery devices (retorts or similar) during amalgam decomposition. As this can be achieved through inexpensive responsible mining practices, protection of health and environment can be ensured without jeopardizing the minimum income of poor artisanal miners' families."

8. Replacement of amalgamation by more advanced processes

Amalgamation is a speedy process that can be carried out by individuals, while cyanide leaching is a slow process that usually requires substantial investment in the construction of a processing plant. The large-scale mining sector replaced amalgamation by leaching some decades ago, eliminating mercury use from its gold processing operations. Artisanal miners in many countries have proved that amalgamation can be replaced by leaching at their level of production if they organize, obtain the necessary finance to invest and start using small processing plants for processing mineral ore. As cyanide can be detoxified and is even biodegradable with exposure to

UV light and oxygen, leaching is considered much more environmentally friendly than mercury amalgamation using an element that is toxic and persistent. An even more environmentally friendly option where feasible is direct smelting.

As well as the producer organization's freedom to decide how to use the fair-trade premium, ARM's approach offers the artisanal miner a unique opportunity to invest in more advanced technology, including more efficient, environmentally friendly mineral processing technologies such as leaching.

ARM encourages artisanal mining to replace amalgamation with more advanced processing technologies (direct smelting, leaching, etc.) with a view to becoming zero-mercury operations. For many producer organizations a fair price and a fair-trade premium can provide a unique opportunity to obtain the funds needed to invest in more eco-efficient technologies." "

9. Promotion of cyanide-free artisanal mining

Cyanide leaching is "state of the art" gold ore processing technology. As far as the environmental and health risks of leaching are concerned, ARM considers that all measures, procedures and precautions considered generally "safe" by the mining industry should be mandatory for responsible artisanal miners. This includes all measures for recovering mercury from leaching operations used to process mineral ore containing natural traces of mercury or amalgamation tailings.

ARM's environmental standards for responsible artisanal mining go one step further. While leaching is preferable to amalgamation as a "mercury-free" technology, the most environmentally sustainable option is mercury-free and cyanide-free gold production. As mercury- and cyanide-free processing technologies may have lower gold recovery rates (and so reduce the earnings of poor artisanal miners), ARM proposes compensating them through an "ecological premium" for cyanide-free produced gold.

"ARM favours leaching over amalgamation as the environmentally superior technology, but actively promotes cyanide-free gold processing. In the context of a fair-trade approach it is considered "fair" for artisanal miners to be compensated for lower gold recovery through an additional ecological premium for cyanide-free produced gold"

10. Fairmined® and fair traded gold – A responsible hand-made product

Artisanal mining accounts for 10-20% of world gold production. Artisanal mining is regarded as a high risk activity from a human health and environment perspective but is also recognized as being the only means for millions of people to escape the poverty trap. Artisanal mines participating in the fair-trade supply chain for gold have the opportunity to differentiate themselves from the generic artisanal mining sector:

"Fairmined® gold, produced and traded in full compliance with the requirements of ARM's fair trade standard, combines the characteristics of a product that contributes to poverty alleviation and social development, with those of a hand-made product obtained in an operation in which every gram of gold is processed in a responsible manner and taking special care to reduce environmental impact."

Alliance for Responsible Mining - ARM
ARM Series on Responsible ASM, No. 2
Calle 32B Sur No.44A 61
PBX: 574-332 47 11
Envigado, Colombia
http://www.communitymining.org

© ARM 2009