The Philippines

Ga'ang mining area, Balbalan municipality, Kalinga province

For further information:, please visit www.bantoxics.org or e-mail: info@bantoxics.org

A close-knit tribal region in the northern Philippines converts from whole ore amalgamation to Hg-free gold mining

Favorable conditions on the ground:

- Strong social cohesion- tight-knit community of workers and managers with long-term outlook
- Clear leadership by the local tribal association through Hg usage prohibition
- Very high local Hg prices- sold at $728 USD per kg (world market price around $50 USD per kg)
- Local NGO intervention- BAN Toxics had a good understanding of the local context and was able to bring the Hg-free alternative to the Ga'ang area in a manner that helped the community embrace the process.

Previous mercury process:

The Ga'ang community used a whole ore amalgamation process, which involved minimally concentrating the coarse gold but losing a great deal of fine gold to the wash water. The washed ore was then amalgamated with large quantities of Hg.

Intervention by Local NGO Ban Toxics: *Enhanced gravity with direct smelting A.K.A. Benguet method*

With the new Hg-free set up, coarse gold is still separated with an initial wash but the wash water is then flowed over a carpet-lined secondary sluice to capture finer gold. In addition, tailings from this process are retained in a pond to be reprocessed or discharged into the river. The resulting concentrate is panned by hand, and then directly smelted to about 14 to 16 karat gold.

Outcomes:

This Hg-free alternative attracted powerful community support because it

- allowed the operation to be more profitable by eliminating the cost of Hg and providing higher gold yield and better quality.
- created more efficient, well-run, and profitable operations; and
- led to better health and economic outcomes for workers and the community

Reasons for success

The initial concentration of gold in the ore was relatively high (about 1 g gold per 50 kg ore), making it feasible to apply rudimentary (but effective) gravity-only techniques to further concentrate the ore to a level high enough to be smelted.

BAN Toxics! provided education on the use of Hg-free techniques, emphasizing enhanced gravity methods. They pioneered the miner-to-miner training methodology by teaming up with local miners in Benguet province, who had already converted successfully and profitably to Hg-free methods, to help demonstrate the techniques.

BAN Toxics worked with existing tribal structures to mainstream the Hg issue. They engaged tribal elders to bring systemic change in the community by changing tribal policy on Hg to popularizing the issue during tribal festivities and meetings.

Profile created by: Natural Resources Defense Council (NRDC)