

Mercury management on small scale gold mining: designing a strategy for a National Action Plan in Brazil

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I. Mercury management on small scale gold mining: designing a strategy for a National Action Plan in Brazil

Roadmap

This presentation is structured in two parts: the first part deals with gold mining scenario in Brazil, where data on the producing will be presented as well as gold production, mining titles and licenses, legal aspects and organization of the activity; the second part presents the ongoing actions and strategies in the management of mercury in gold mining on a small scale in Brazil.

Gold mining scenario in Brazil

Regions of gold production

The main sources of gold are located in north, southeast and northeast of Brazil, in geological environments related to greenstone belts, metavolcanosedimentary belts, and volcanic rocks (epithermal and porphyry mineralization) of Archean and Paleoproterozoic ages – we are talking about rocks with more than two billion years. While the small scale mining areas are confined to the Northern region, particularly in the states of Mato Grosso, Pará, Rondonia and Amapá, large mining companies, that are responsible for the most of the country's gold production, are located in the Southeast, Midwest and Northeast regions, respectively in Minas Gerais, Goiás and Bahia states'.

Gold mining presents a long tradition in the Amazon's region. It became part of the regional economy since the eighteenth century. In the current phase, the mining activity began in 1958 with the discovery of a lot of mines along of the Tapajós' River region in the state of Pará and since then has been responsible for a production about 700 (seven hundred) tons of gold.

Industrial gold production x small-scale gold production

Beginning in 1978 the Brazilian's gold production had two stages: 1) from 1978 to 1992 when prevailed small-scale production; and 2) from 1992 until now has been marked by the predominance of extractive industry of large scale.

Just for the record, in 1991 the small-scale gold mining were responsible for 55 (fifty five)

tons of gold while large companies were responsible for 34 (thirty four) tons.

In 2013 took place a reversion: large companies were accounted for 85% (eighty five per cent) or 67.9 (sixty seven point nine) tons of the production of 79.5 (seventy nine point five) tons of gold, while small scale gold mining were responsible for 15% (fifteen percent) or 11.6 (eleven point six) tons.

Legal Issues: small scale mining licence and mine concessions

Regarding to mineral concessions, it is highlighted the distinction between the titles granted to mining companies, which are regulated by the authorization and concession and those assigned to the Small-Scale Mining License (Permissão de Lavra Garimpeira - PLG). The small-scale mining license was introduced by Law nº 7,805/89 (seven thousand eight hundred five) in order to simplify procedures for the mining permit on a small scale. The law regulates the activities of extraction of mineral substances in small-scale alluvial, eluvial and colluvial form.

According to the map the small scale gold mining prevails in the Amazon region. In this map, licenses granted are shown as red dots, and licenses requirements as blue dots and mining concessions as yellow dots.

Currently, there are 1337 (thirteen thirty seven) Small Scale Mining Licenses granted by the Federal Government. Of this total, three states concentrate the majority of the titles: Mato Grosso with 54% (fifty four per cent) of permissions, Pará and Rondônia with 39% (thirty nine per cent) to 5% (five per cent). However, the Pará state has the largest population of miners, and a wider range of expressions of interest in new areas, which are characterized by the distribution license requirements to the federal government. In this respect, it should be noted a growing trend for new mining areas in the northwest of the Amazonas state.

Since 2006, with the creation of a set of Protected Areas (PAs) by the federal government in the Tapajós region, part of the areas explored by gold mining activity was left with a series of use restrictions, just because they are overlapped by these PAs. After the creation of these protected areas, none small-scale mining license was granted within them. However, it is noteworthy that in regions such as the Tapajos, where there is a set of protected areas with high restrictions, specific rules and specific management, the question of illegality becomes more problematic. Moreover, besides the fact of mines already exist in relation to protected areas, they overlap a mining province strongly devoted to the precious metal deposits. These elements are potential ingredients for territorial disputes.

19 II. Strategies for reduction of mercury in Small Scale Gold Mining

Organization: the big challenge.

20 Small mining enterprises have traditionally found it **difficult** to comply with legal requirements in the matter of mining law, environmental licenses and health and safety at work. Though there may be other reasons for the failure to comply with the legal and labour requirements governing mining, which should be targeted by rigorous regulatory action, there are three key reasons for the **difficulties** encountered by small businesses:

1. poor technological and management training;
2. **difficulties** of access to information, whether technological or related to the market;
3. **difficulties** in obtaining appropriate credit facilities.

21 Given the investment needed to small businesses, working in partnership through cooperatives may be the best, if not the only solution. In the case of the Brazilian small-scale mining (including metals and non-metals), there are 87 duly registered mining cooperatives in the Brazilian Cooperative Organization System and currently operational. They comprise around 87.000 of registered cooperative members in cooperatives. In short, organizing small-scale mining in cooperatives is consistent with:

1. Article 175 of the Brazilian Constitution, which gives priority to mining by cooperatives;
2. the government's policy of promoting a solidarity economy;
3. MME supports programs for small mineral producers.

22 In the mining sector, the organization of cooperative work differs in a number of ways from other economic sectors. Indeed, such differences can even be found within the sector, since the environmental impact, health and safety problems, labor issues and mining law depend on the region and the differences between small enterprises. The differences between small enterprises show that there is no fixed pattern for the functioning of mining cooperatives. Moreover, this underpins the idea that capacity building of the small producers in the basic concepts of working together allows themselves to identify the most appropriate model for their mining cooperative.

23 Which strategies can be designed to achieve the formalization of ASGM?

1. As part of these strategies, the Brazilian government worked in partnership with the private stakeholders and legislators in drafting a law which would regulate the purchase, sale and transport of gold. This Law is nº 12,844/2013 and should provide: encouraging the legalization of activity; immediate access to the market, avoiding intermediation; improvement of market regulation; minimize the negative effects of illegal activity; and tracking the gold source.

2. Regarding the organization of cooperatives, the Secretary of Geology of MME concluded a cooperation agreement with the Organization of Brazilian Cooperatives (OCB) in search of shared actions, aiming aggregation of knowledge, quality of life, value and better legal and institutional representation of the mining miners on small scale mining.
3. The Brazilian Government formalized a loan from the International Bank for Reconstruction and Development – IBRD – aiming to select consulting companies in order to perform the Socioeconomic and Environmental Diagnosis of Small Scale Mining in Brazil. The products developed in the scope of this hiring process should provide: greater knowledge on small scale mining; better governability in the industry; initiatives to improve environmental and technical performance and socioeconomic development; establishment of more effective partnerships; acceptable revenue through productive mining practices to strengthen the local infrastructure and services; development of better practices; knowledge about the impact generated by inadequate mining practices.
4. In January 2014 the Ministry of Mines and Energy has established an Inter-Ministerial Working Group to link and add the efforts of government in order to guide the formulation and implementation of joint activities and greater integration between the parties to the performance of its duties to the region of the Tapajós, to formalize the small-scale mining. The group includes the participation of ministries, besides governmental and private organization: Minister of Mines and Energy (coordinating), Minister of Defense, Minister of Health and Minister of Planning and Budget, in addition to the National Department of Mineral Production, The Brazilian Development Bank and the Brazilian Cooperative Organization - OCB. The group should incorporate in 2015 (twenty fifteen) Ministry of Environment and National Gold Association, the latter representing companies, institutions and professionals linked to the gold markets.

Ministry of Environmental actions

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