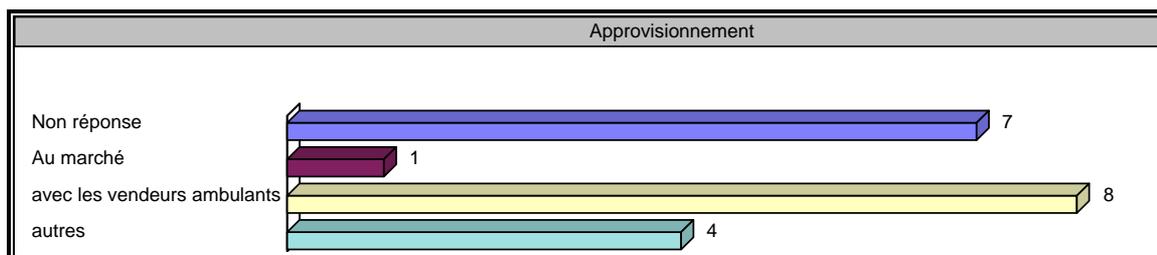


**Graph 2:** Sources of Mercury



The results of this survey show that most of mercury, or 40%, from street vendors who come from Bamako. Also note the existence of a local circuit but is very low 5%.

In general, the mercury used in Mali comes largely from neighboring countries and foreign buyers of gold. These buyers provide free miners to mercury with the promise to buy their products. Apart from that channel, the product is generally sold at an average price of 125 CFA francs per gram.

Panning for gold in Mali produced about 4 tons of gold per year. Since it takes 1 kg of mercury to extract 1 kg of handcrafted gold. Given the existence of certain areas of craft production that do not resort to the use of mercury, it is certain that a large quantity of this product is definitely used by miners.

## **2. The most common forms of mercury exposure in Mali:**

The population exposure to mercury in Mali is mainly due to gold mining (see photo 1 above).

In fact, artisanal mining of gold requires the use of mercury. The concentrate is mixed not only mercury but also, the amalgam is burned in the coal furnace and torch at the counters in the open air. Therefore, users are directly exposed during mixing and waste poured into the nature expose other members of the community. Similarly, the vapors produced during the burning of amalgam exposes the manipulators of traditional ovens and burners, but also the surrounding population through inhalation of gas containing mercury.

Finally, the garbage collectors (especially children) can come into contact with mercury in landfills because of the presence of biomedical waste containing the product.

## **3. Human activities release mercury into the environment:**

In Mali, the most common human activity that releases mercury into the environment is panning for gold. Indeed, mercury is added to the concentrate, rinsed in water. Subsequently, this mixture is filtered to separate water from ores. This waste liquid is then poured onto the ground. Thus, mercury can leach into the soil or if the activity is conducted with wells or if it is cast at a stream. To this end, the water may be contaminated with mercury, which can then be found in the food chain. Similarly, when the amalgam is burned in outdoor coal furnace or torch at the counters, the mercury molecules evaporate. To this end, the air in the middle can be

polluted by mercury and be inhaled by people.

Finally, certain medical devices, such as mercury thermometer, are sources of mercury pollution when they are defective. The waste from these facilities can release mercury in gas form, they are incinerated at the landfills.

#### **4. The data or information on the levels of release and exposure to mercury or registered at the national level**

Mali does not have yet a system of data collection on mercury releases. It is the same for the case of population exposure to mercury.

#### **5. The facts known or reported threats of mercury, the types of problems caused by mercury in the past to the population, environment, food and / or workers**

With an average production of 60 tons of gold per year and reserves estimated at 700 tons, Mali is ranked 3rd African gold producer after South Africa and Ghana. Gold commonly called "yellow metal" is currently the leading foreign exchange earner for Mali.

It should be noted that the extraction of gold in Mali has not been industrial. For a very long time, gold was mined in Mali traditional way. This mode of operation of the gold miners is practiced by using traditional methods of metal extraction with the mercury. The miners are mostly found in the three gold regions of Mali are:

- Kayes: The 1st administrative region of Mali with its famous gold mining industry Sadiola, Yatela, Tabakoto, Loulo, and beside them the gold placers and exploitation by dredges Kenieba (Head instead of circle) ;
- Koulikoro: 2nd administrative region of Mali with its semi-industrial mining in the circle Kangaba, but placer gold (Kokoyon and Dabala) and dredges along the Niger River, which traverses the region;
- Sikasso: 3rd Administrative Region of Mali's Syama mine industrial, Kalana Kodieran and Morila, but placer gold in Bougouni (Head instead of a circle), Yanfolila (Head instead of a circle) and in the circle of Massiogo Kadiolo .

In other regions of Mali, gold mining is practiced sporadically along the rivers and with varying success.

Artisanal gold miners involve about 200,000 each year. This operating system of the gold present economic issues important to actors. This is explained by the fact that artisanal mining produces nearly 4 tons of gold worth about fifty two billion (52 billion FCFA).

- By cons, these actors are exposed to the same effects and impacts from the use of mercury in the production chain. Mercury is a toxic metal (nerve), exposure to mercury can cause diseases known "hydrargisme". It is also believed to cause Alzheimer's disease.

Panning for gold in Mali requires landowners called "headman" and the owners of placer called "Damantigui". At Placer, social organization revolves around the association leaders called "Tonboloma". It notes the presence of several socio-professional layers: craftsmen, tradesmen - Carriers, fetishists and marabouts. The work great burden on women and children. The placer gold drain most prominent foreigners from neighboring countries. Thus, all communities of the gold zones and beyond are discussed. But the most vulnerable are women and children. They work

surface at the farm scale. Their work is concentrated mainly around the mine, the pounding and washing the ore

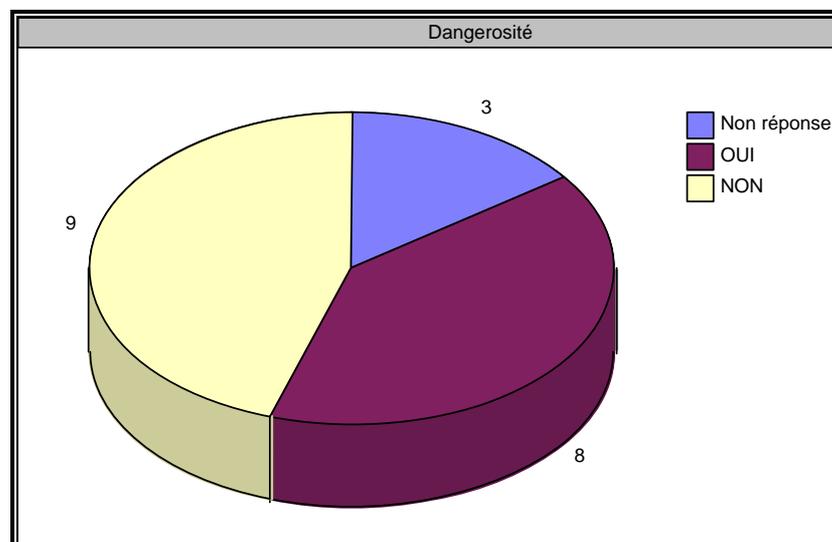


Pounding and washing of ore

Moreover, it is sad to note that users have no idea of the effects and impacts of the product. This survey shows that:

The following graph illustrates the results obtained to the question "Do you know that mercury is a hazardous to health and the environment? .

**Graph 3:** Knowledge of the hazards to the use of mercury by miners



The analysis of results allows the conclusion that only 40% of the 20 surveyed are aware of the dangers of mercury use.

And to the question "If yes, what are the dangers?" 40% of respondents, who answered yes, reported respiratory problems, stomach aches, digestive

disturbances, pollution of waters.

It is important to note that the risks of mercury use in gold mining are enormous traditional (see photos below):

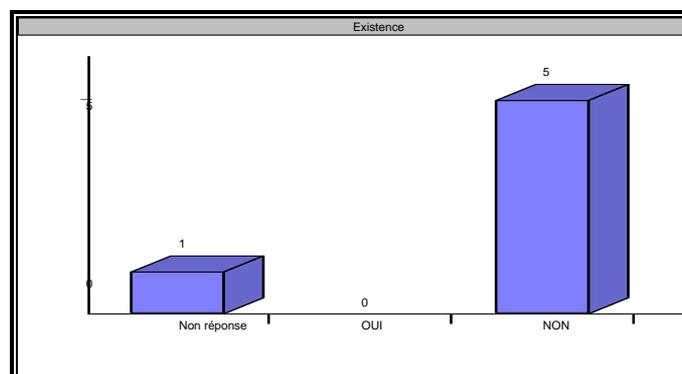


**Manipulation of the amalgam with bare hands and infiltration of wash water in the soil**

## 6. The laws regulating the management of mercury in Mali:

In Mali, there is no legislation specifically regulating the management of mercury. As chemical, it is generally managed by the Law 01-020 on pollution and nuisance. This deficiency is also known by the actors on the ground, as evidenced by the survey results reported in the graph below.

**Graph 4:** Existence of laws regulating the sector



With this graph, 100% of respondents say there is no legislation governing the use of mercury in Mali.