

16 Field vignette

Sapphire mining, water, and maternal health in Madagascar

Lynda Lawson

Before mining the river water was so clear you could see a needle in it—now I have three worms.
(Woman from Ilakaka south western Madagascar)

The above comments illustrate the close relationship between unregulated artisanal mining, water, and the health of a community. Some twenty years ago sapphires were discovered in south-west Madagascar near Ilakaka. Ilakaka with its formally crystal-clear stream had always been a favorite stop on the Route Nationale Sept, the highway that takes travelers from the capital of Antananarivo to the south. This tiny hamlet and its river was transformed by an influx of many thousands of miners in a just a few months and the rush continued along streams and river beds and the alluvial plains across the south-west around Sakaraha. At every stage of the sapphire rush—from the initial influx during the rush period to the quiet abandoned sites, women and their children are present: many are in the water sieving and washing gravel, others are providing services and, in some cases, selling the smaller stones. My research has investigated the impact of this activity on the daily lives of women. Detailed life histories were elicited from more than twenty women and each time the centrality of water in their work and health was evident.

In south-west Madagascar most sapphires are recovered from alluvial gravel deposits in ancient river beds. These are reached by underground tunnels and mostly by young male miners. The gem bearing gravel is transported—either by hand or in a cart or truck from the mine to a source of water, usually the river where the gravel is sieved. Women panning for gold are also present but to date there is no evidence of the use of mercury. Although no chemicals are used in the either gold panning or sapphire sieving, there are high levels of water turbidity from years of disturbance both to the river bed and further upstream where some are using light machinery for dredging and digging, generating large amounts of tailings. This can have devastating consequences for agriculture such as in 2016 when heavy rains flooded tailings onto rice fields and duck farms.

In the absence of any toilets or washing facilities, the river is used for all sanitation and most drinking water.

Siveran (Sieving)

Siveran involves washing the stones and shaking them in a sieve to locate sapphires which are heavier and are therefore found under the gravel. It is often done by women and children. Women may be sieving fresh gravel that has been brought down to the river from the quarries, but men usually have the first turn at this then women will dig up the tailings in the river bed and sieve again—this is called *tay siva*—“pooh mining.” Sieving is best in the bright morning light making it easier to identify the stones, women typically work in the water from seven to three o’clock. Children help their mother with spotting sapphires. The sieves are made of solid wood that is usually water logged, they are heavy and the action of moving the stones back and forth in the water takes strength and skill.

Water and sapphire mining health impacts

We are sick because as you see, we stay in the water all day and the water gets inside our bodies, but we have no choice because if we find a sapphire, it can make a life.

We are extremely exhausted, if you work too hard we have back aches and bloody stools.¹

In almost all interviews, when women were asked about water and their health, they reported stomach pains, intestinal problems, back aches, severe skin irritation, and worms. Many women reported miscarriages and losing children or young



Figure 16.1 South-west Madagascar, children accompany their family to the river to sieve.

Photo: Lynda Lawson



Figure 16.2 Women digging gravel from the river bed to sieve for sapphire.

Photo: Lynda Lawson

relatives to fever and malaria. The local doctor confirmed that women suffer from a wide range of illnesses especially urinary tract and genital infections.

All people on site are sick they drink water from the river we have stomach aches and it makes bloody stools.

Sapphires are found in remote areas without infrastructure. There are few wells and women and children are forced to drink from the river; they cannot boil the water but try to drink the clear water from the top not the red muddy water below.

Despite considerable mineral wealth in these mining areas and the many thousands of informal miners working there, local government struggles to regulate the sector in any way. Infrastructure for water and sanitation is almost non-existent and the intensity of the mining activity is impacting streams and river and community health. Water is at the heart of the survival of these communities and women and children are often those primarily responsible for the collection and use of water. They are thus directly impacted by the negative impacts of resource extraction on water quality. It is thus vital to consult with and strengthen women's participation in water management.



Figure 16.3 Mother and child sieving for sapphires in south-west Madagascar

Photo: Lynda Lawson

Note

- 1 These comments come from women sapphire sievers at Ankaboke near Sakaraha, December 4, 2015.