



Trip Report

Participatory Rapid Appraisal of Mining, Marketing and Governance Issues in Antananarivo, Toliara and Ilakaka

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Participatory Rapid Appraisal of Mining, Marketing and Governance Issues in Antananarivo, Toliara and Ilakaka

July 15-August 4, 2005

The purpose of this trip was to lead a participatory rapid appraisal (PRA) of mining, marketing and governance issues in Antananarivo, Toliara and Ilakaka, and to train BAMEX partners in PRA methodology. It is part of an effort to create the knowledge base and network of working relationships necessary to realize BAMEX's vision of enhancing the contribution of artisanal and small-scale mining to sustainable development, through promotion of good governance, combating corruption, protecting the environment and raising the standards of performance for all actors in the sector.

Working closely with policy advisors comprising relevant government officials, the private sector, and Project for Management of Mineral Resources (hereafter referred to by its French acronym PGRM), the PRA methodology involved a small interdisciplinary team reviewing the literature and then conducting group and individual interviews, town meetings, and an in-depth analysis of the sector's and stakeholders' needs, challenges, short-medium-long-term goals, supply chain, seller/buyer relations, market entry obstacles, and policy reform considerations. The focus was on governance, the legal and regulatory framework, marketing of gemstones, and the operations of- and constraints facing gem mining and trading firms. Based on this information, policy reform and market strategies are proposed. After consulting with their respective home-office colleagues, the team recommended solutions and potential policy reforms to be implemented in next steps.

In addition to the PRA team work, Phillips met with a group of visiting Singaporean investors to encourage investments in infrastructure necessary for mining to succeed and with the local procurement manager for QMM mining. QMM will be launching a multi-billion dollar investment in ilmenite mining in the Fort Dauphin area and maximizing local procurement is an important component in a successful investment. To the extent that procurement is local, production and commerce are stimulated (mainly through small enterprises), poverty is alleviated in the currently peripheral southern provinces, and local value-added to the economy increases substantially. Maximizing local procurement distributes the revenues of big mining more widely in the economy, alleviating the inflation and concentration of revenues in a few hands that can be unfortunate side-effects of big mining investments.

Team Mobilization

The PRA began with meetings with policy-makers at the Ministry of Energy and Minerals and that Ministry's Project for Management of Mineral Resources. There Jean-Louis Rabeharisoa of Solutions, Inc. and Lucie Phillips were able to recruit two excellent additional team members, Gérard Rakototafika, who is responsible for policy development in the Ministry and Serge Tahiry Ramanantsoa, a lawyer responsible for the decentralization component of the PGRM. This team composition met the requirements of PRA methodology for a small multidisciplinary team of experienced professionals.

Methodology

The PRA methodology is an economical method for getting in-depth insights for analyzing sectors and developing appropriate strategies for assistance. It gets senior researchers into the field to learn first-hand about the issues and processes the information in a matter of weeks instead of the years that survey research can involve. On the other hand, it is used to gather qualitative rather than quantifiable results. The first step a PRA team takes is to review the data and written literature. For the current PRA the team did this while also reading methodological articles about PRAs and the specific tools that researchers have perfected to make field work produce more than the superficial results that often come from a less structured "field trip." From the wide variety of tools available for PRAs, we selected the following as most relevant and practicable for the sapphire zone PRA.

Review of the Literature and Data Collection

The review of the literature covered the items in the bibliography that Solutions, Inc. is preparing. In addition the team sought maps of mining claims in the Ilakaka area and the most recent data on exports from the Ministry. The Mining Cadastre Office sold us the data on claims, but the Ministry was not planning to tabulate exports until the end of the year. It had recorded only five shipments through August 2005.

Active Listening

The team learned and practiced active listening techniques in which only open questions are asked and note-taking is reserved for after the interview. Also conducting group interviews in which the team agree a set of topics ahead of time and pass the floor from one to another seamlessly. These skills are the basis for both key informant and group interviews in PRA methodology.

Focus Groups

The team conducted two focus groups, one of established gem dealers using the Gare Mines weekend markets and one of street sellers in Antananarivo.

Field Mapping and Censuses

We also studied field methods for mapping and firm censuses. We used GPS to locate mine sites. Unfortunately they cannot be matched to the claims map because the Cadastre Office considers the algorithm linking its map to the 1980 world standard as "confidential."



Wealth Ranking

We studied Barbara Grandin's method for wealth ranking and used it to group dealers into major players, medium-level dealers and minor/inactive dealers. Then we interviewed dealers in each group to see whether they faced different constraints and opportunities.

Feedback

The PRA involves sharing information through regular feedback at three levels: 1) within the team, 2) with participants through town meetings and presentation/discussion of the findings, and 3) with policy-makers through presentation/discussion of findings and recommendations.

Calendar of Activities

July 15-22 Antananarivo:

- Meetings with BAMEX and policy-makers in the Ministry of Energy and Minerals, including the PGRM, the regional mines directorate, the mining cadastre office, mining statistics, etc.
- Training in PRA methods and conduct of focus groups and key informant interviews

July 23-25 Toliara

- Interviews with provincial officials and mining sector actors (mine owners, exporters, jewelers, dealers in rough and cut stones)
- Attended auction of multi-ton blocks of labradorite and gathered information on its value-chain

July 26-31 Ilakaka (also Sakaraha, Ranohira and Ihosy)

- Meetings with officials, town meeting
- Rapid field census of businesses in Ilakaka and Sakaraha
- PRA interviews and observations of every type of mining activity
- Town meeting Saturday to debrief officials and mining sector participants

August 1-2 Toliara

- Preparing report

August 3 Return from Toliara to Antananarivo, arriving 9 pm

August 4 Antananarivo: Workshop of Policy-makers to discuss results

Findings

Legal Background

The legal framework for the sector assumes that mining is conducted by claim holders, of which there are four types:

For Formal Mining Companies:

- Exploration permits—any size
- Standard Mining permits—any size

For Small-scale miners (individuals, of either Malagasy or foreign citizenship)

- Exploration permits, in carrés 2.5 km x 2.5 km
- Mining permits, same size, valid for eight years if license fees paid annually

Fiscal obligations for mining firms and dealers include:

- Administrative fees for permits, 95,000,000 FM (\$95) per year per carré
- Royalties (redevances minières), 2% of first sale price
- Excise tax of 25% on domestic sales



Income/corporate tax on profits

The new Mining Code was passed by parliament while the team was in the field. The major recent revisions are:

- Maintaining the principle of first come first served in distribution of permits [There had been pressure for centralized allocation and various preferences.]
- Reducing delays in granting of standard mining permits
- Reducing the size of a small-scale plot from 2.500 m to 625 m per side, or 1/16th the former size. Current permit holders are grandfathered for the life of the present permit. License fees (frais administratifs), now 95,000 FM per year per carré will be 25,000 FM per carré x 16, or FM 400,000 (ca. \$40) for the same area.
- Require reported results to correspond to the geology [To prevent claim holders selling Laissez passers for gold, for example, while holding a gemstone area permit]
- Create DSTM system, allowing foreign buyers to buy and export legally without establishing a local company, provided they pay slightly higher royalties
- Allow dealers holding gems that lack an LP1 to export legally by paying royalties on their purchase price and obtaining an LP3.
- Organized competition for permits in areas formerly temporarily reserved for geological or environmental study.
- Upon renewal or change in type of permit, reduce claim by half if activity has not begun.
- Define a legal status for artisanal miner groups.
- Ensure better recovery and distribution of royalties by allowing communes to collect 1.6 percent of value at first sale and central government 0.4 percent.
- Collect royalties at the time of first sale through a stamp system [to be defined].
- Penalize non-payment of royalties with fines, potentially loss of permit [currently lost only if mining administrative fees not paid.]
- Create a system of distribution for mining administrative fees and royalties.
- Create a Mining Policy
- Adjust fines [upwards].

The Reality

Mining

The actors in the sapphire mining zone studied include the following:

- Informal miners (est. 50,000 in entire sapphire zone from Sakaraha through Ranohira. Women estimated about 30 percent of the active population, 10 percent of diggers.)
- Mine-, town- and long-distance brokers, known as “businessman”—a few thousand. Women about 10 percent of brokers.
- Shops owned by buyers (mostly Sri Lankan, a few Thai and an occasional European or American, 35 active sapphires shops in Sakaraha, 120 in Andoha’Ilakaka, of which 60 open year-round, a few dozen in neighboring villages). Saw no women shop owners.



- Claim holders (140 holders have 694 carrés in Toliara Province, of which 54 reside in Toliara, the rest mainly in Antananarivo. Data NA for Fianarantsoa Province, which has the larger sapphire area). Women estimated 10 percent.
- Local authorities (Women estimated <5 percent):
 - Provincial governor and assembly in Toliara and Fianarantsoa
 - Regional heads of x newly created regions
 - District Prefects (and offices where one pays taxes) in Sakaraha and Ihosy
 - Six to eight communes where sapphires found, mayor of each
 - Deputy mayor in Andoha'Ilakaka reports to mayor of Ranohira
 - Pilot BAM with two local assessors, trained by PGRM

The changes in the law reflect government response to some of the problems that the PRA team noted in the field. Foremost of these is the fact that very few small claim-holders are actively organizing mining on their claims. The team, armed with a complete list of hundreds of claim holders, was able to locate only one small claim-holder in the entire sapphire zone for an interview.

This is important because the efforts to formalize the sector through administrative provisions rest on the presumption that an active mine claim-holder is financing, mining, selling and accounting for his production. To effectively manage the mine sites, one would have to fence them. No one has done that. Part of the reason is that these are relatively shallow, widespread alluvial deposits, and any one area is soon mined out. Apparently the revenues do not justify the capital expenditure for fencing. This is common throughout the world in colored gem mining. In practice, Malagasy claim holders are generally absentee speculators, enjoying some rent from the sale of laissez-passers and hoping to sell to an investor if significant deposits are found by informal miners.

Another cause of informal mining is the practice of formal companies keeping claims to large areas while they have the means to exploit only a tiny portion of their claim. On the areas of their claims that they were not actively exploiting, some companies were found to allow informal miners to mine, either in exchange for a share of the production or simply in hopes of being allowed to mine in peace on the active area. At least one company apparently did both, on different areas.

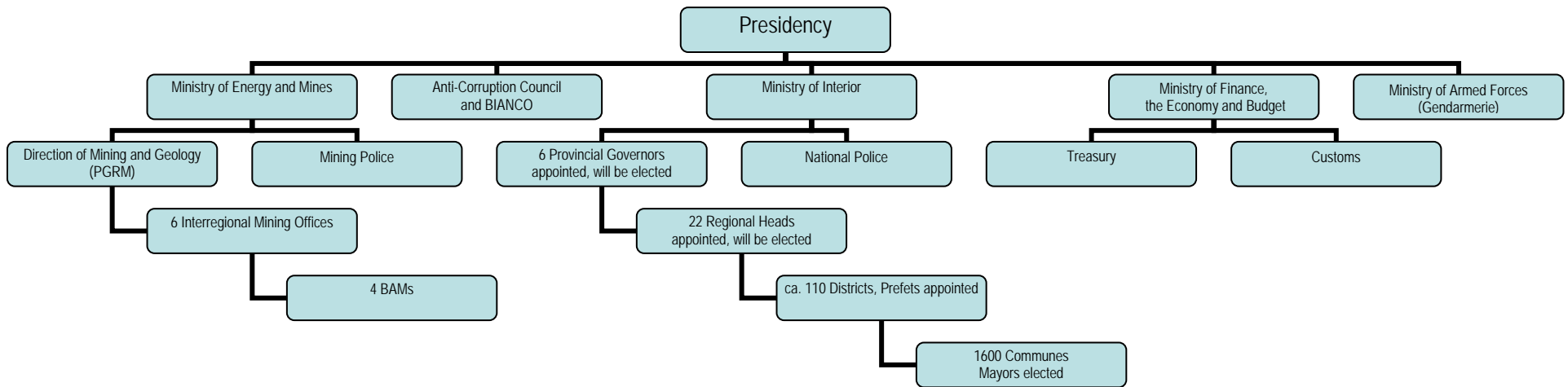
Mining in protected areas

A serious concern in mining areas is invasion of conservation areas. The National Parks of Isalo and Zum share the same territory with sapphire mining. Farther north the rich ruby deposits in Andilomene are reportedly entirely within a forested area that may become a national forest. The Ihosy Park appears to be protecting its territory effectively, but there was a report that a mining company had paid ANGAP, the parks authority, for years for the right to mine in the park. When it stopped mining and stopped paying, the practice came to light. Illegal miners were also invading Zum at night while the PRA was conducted. The fact that they had to go in at night at least attests to enforcement of the rules during daylight. The government's commitment to increase its environmentally





Chart 1. Madagascar Mining Administration, Law & Order, and Fiscal Authorities





INTERNATIONAL BUSINESS INITIATIVES

Global Technology, Local Solutions

protected areas has confused the situation, and is likely to continue doing so during the multi-year period needed to mark out new reserves.

Marketing

Stones are sold at the mine site to a “businessman” (who may well be a woman) or carried into town to be bid on by one of the shops. Miners, businessmen and everyone involved in marketing gemstones badly want better information on market prices and how to evaluate stones.

At the shops a mid-level buyer or a small shop owner sits behind a grate all day and evening rapidly receiving stones, one by one or in small packets, examining them with a jeweler’s light and either handing them back or making an offer. With a hand sign the offer accepts the money or takes back the stone(s) and moves on. Few words are exchanged. So the shop owner does not know where the stone came from. No receipts are given and no registers seem to be being made, despite the requirement for one. The few shops that make a register probably do it after periodically sorting the stones.

Dealers come from Sri Lanka or Thailand with their buying capital, stay three to six months, and then return home for a month to sell and visit family. Groups sell for one another on rotation, so that one who is traveling may carry the stones of several friends.

Once a quarter or so, a prominent European buyer arrives by helicopter and buys everything that anyone has for sale, regardless of quality. By taking the junk, he attracts long lines of sellers, and also gets the prized stones. His son stays in town between visits.

Processing a parcel for export involves the following steps:

- Dealers who buy in Ilakaka can have the new BAM record their declaration of value and emit an “ordre de virement” (payment voucher), but then
- Dealers have to travel to Ranohira to pay royalties to the commune
- and to Ihosy to pay the central government royalties.
- Parcels are “sealed” in Ilakaka for the trip to Tana. This is supposed to prevent police and gendarmes from opening/seizing it en route, but that is not always the case.
- In Tana dealers reported hiring a facilitator to process the export.
- Parcels are reopened and evaluated at the Guichet Unique, first by the laboratory of the MEM, using one list of price standards, then by Customs, using a different list of price standards. Often they do not agree. In that case the dealer must either pay a bribe or start over, as the whole process is supposed to be completed within 24 hours before traveling/exporting
- An easier alternative is simply to pocket the stones and pay a bribe at the airport during departure.

Problems reported by participants in the sector focused particularly on lack of infrastructure:

- Electricity, water and telephone service spotty and expensive
- Banking services not available
- Schools and health facilities are improving, mainly through local initiatives
- Security: More police and gendarmes present and respond faster now than Ilakaka (but not Ranohira) has cell-phone service, but also selling arms to locals—problems of cattle rustling, robbery and more rarely murder, as well as increasing corruption of local officials

Analysis

Formalization of mining and marketing

In the absence of control by a claim holder at the mine site, many of the current and new administrative provisions for accounting for production and paying royalties and distributing them equitably are not quite feasible. The following are the main reasons:

- Buyers do not know the origins of most of the stones that they buy and do not record purchase prices. Each stone has a unique price—standards are just starting points from which one marks up or down for color, clarity and weight.
- So officials can only rarely verify prices.
- Mayors of communes do not know the varieties and values of mining production within their commune. They do not have mining cadastre maps of their area. They have only their personal vehicles with which to get around—and transportation to mine sites is arduous and costly. No one else in the administration is any better equipped to reach mine sites.
- No one can accurately estimate what royalties should be, much less what proportion of the 1.6 percent royalty collected in a zonal mining office properly belongs to which commune in the area.
- Under the current pilot system, the commune where the assessors (pilot BAM) work gets all of the royalties—which, according to the terms of the law are due to the commune from which the stones are mined. The assessors work in Andoha’Ilakaka, which used to belong to Ilakaka commune. Last year the wealthy Andoha’Ilakaka was detached from Ilakaka and made part of Ranohira, much to the dismay of Ilakaka. A few years ago, when a “comptoire” was organized by a local association in Andoha’Ilakaka, the revenues flowed to Ilakaka. In between, for a couple of years, they mostly stayed in provincial headquarters. Conclusion: the communes need a system for allocating mining royalties.
- The highest value large stones disappear into invisible exports. Exporters export in parcels only the medium quality, modest sized stones. The best that assessors can do is to have a general idea of the value of a parcel.

On the other hand, when a really good stone sells, people talk. The seller will often testify to what he got. So for some high-value stones, it is possible to know the price at first sale sometimes. Also assessors could have a fairly good idea of the volume of parcels that



major shops should be declaring if they mixed with the population and observed transactions.

Informal miners, unable to get mining rights, dominate actual production. Foreign buyers finance production as well as marketing of gemstones. These two groups are the actual engines of production for a sector that employs an estimated 500,000 people in Madagascar, mainly rural poor. The sector reduces poverty, offers employment to unemployed and often landless youth, adds significant value to the national economy and generates foreign exchange--despite its informal practices. As the team realized the importance of these factors, they framed recommendations that were practical, feasible and oriented towards gradual formalization.

In sum, small-scale mining can make a major contribution to poverty reduction and economic growth in Madagascar, as it is a major employer of young unemployed and landless young men. The current informal nature of the sector is due largely to the lack of administrative resources in the relatively isolated rural areas where much mining takes place. Where local authorities have little capacity to oversee the sector, buyers and miners have worked out fairly effective systems for keeping the sector going:

- “Sponsorship” to fund mining and ensure a supply of stones to buyers
- Work-groups with defined membership and a chain of command mining each area and exploring new ones

The major defects in the system are:

- Absentee claim-holders who do not mine create a managerial void
- Dispersed administrative services (see Organizational Chart, p. 6) require people wanting to work within a legal framework to travel to several points, often far apart, to accomplish simple administrative tasks:
 - Obtain a birth certificate
 - Obtain a national ID card
 - For foreigners, obtain a visa and register a company
 - Evaluate an export shipment
 - Pay taxes and royalties
- Lack of banking services and volatile nature of mining income create a milieu in which security is a constant concern

In the long run, an active mine claim holder can best administer mining at the basic level, so it is important that the law create incentives to do so. One such incentive is increased administrative fees, as the more it costs to hold onto a speculative plot, the less incentive for speculation and the more incentive to get the plot producing. We do not recommend draconian police measures to formalize the artisanal and small-scale mining, as they typically provide ample opportunities for official abuse and fail to produce lasting benefits. Police dragnets and pressures on foreign buyers are more likely to kill the trade (and employment, value-added, poverty reduction, etc) than to transform it overnight.

BAMs also have a key role to play, and it needs to transcend both geographic administrative boundaries and the mandate of different ministries. While the BAMs are to



be created by the MEM, they need to be authorized to receive payments (Treasury, Ministry of Finance, the Economy and the Budget), and to distribute them to local officials (Ministry of the Interior). For stones that are exported directly from the mine, the markets values that BAMs attest to accurately reflect prices in their area should be those assessed on export, subject only to verification by the Guichet Unique in Antananarivo. If good statistics are kept on exports and monitored by MEM and customs, any price collusion that creeps into practice at a BAM should become apparent fairly quickly.

The roles of the multiple law and order groups empowered to operate in mining areas needs to be defined and coordinated. The Mining Police (MEM), Gendarmerie (Armed Forces Ministry), National Police (Ministry of Interior) and BIANCO could well conflict in practice in the field. In addition to those national-level forces, there are communal police and the mixed troops of the Sub-Prefecture. Where mining areas border on protected areas, an additional force, ANGAP enters the picture. While security overall seemed to be improving, the sale of arms to locals by members of the armed forces was alarming to many citizens. It was also reported that, in some cases, individuals in the various forces are competing for a piece of the action rather than focusing on protecting lawful business.

Value Chain

Developing the value chain is a delicate policy balancing act. Officials and development projects hope to contribute to the process, but there is not always unanimity about which interventions are most appropriate. It is important to analyze exactly **where** in the value chain **how much value** added and **how much employment** are generated for each dollar of investment. It is essential to **know the market and the competition** for each level on the chain.

Currently employment is concentrated in mining itself (est. 500,000). The local economy gains value-added from the incomes of the miners and often from a second sale by brokers or among dealers, at which the mine price roughly doubles. The money exchanged at the mine level circulates in the local and national economy at a high velocity. Much of it is consumed rapidly. Some is invested--in cattle, guns (to protect the cattle), taxis and other small businesses, brokers' operating capital, etc.

Malagasy want to get into processing of gems, believing that it would generate more local value added. Steps have already been taken to train trainers and students in gemology, and the faceting and polishing of gems. Some 1-2 percent of sapphire material is gem quality. The first step in processing most sapphires and rubies, however, is usually heat treatment. Thailand dominates that process, and it normally takes place before the gems are faceted. That gives Thailand and neighboring China a comparative advantage in faceting of sapphires and rubies. These two areas also dominate the industrial production of sapphire and ruby jewelry. Competition in classic colored gem jewelry is so intense that sapphire rings and bracelets that would have sold for thousands of dollars 25 years ago are now sold by Wal-Mart and other mass marketers for \$25 or less.



Given this structure of processing, two options are suggested. 1) Heat treatment skills and equipment need to be developed. Malagasy should be sent to study heat treatment in Thai gem schools. 2) Hand-made jewelry using decorative stones and clouded/included waste gem material is an easier market in which to develop jewelry-making skills and ultimately export comparative advantage.

Recommendations

Formalize the sector progressively, taking care not to drive away most buyers or miners

1) Make it easy for miners and dealers to comply with procedures. Convenience appears to be at least as great a factor as cost driving both groups to ignore some aspects of the law at present.

As an example, miners used to have a diggers card (that then cost FM 5000 per year). This is a good system, as it is easier to maintain law and order where people carry some identification. BAMs could emit these. At present few people have identification because they would have to go to their provincial capital to get a national ID card, probably with some record of birth. These are young men, some are far from home, and requiring a national ID card places a great administrative burden on many of them.

2) Create a **rapid response unit**, comprising mining cadastre, mining technical assistance, rapid environmental assessment/training, and mining police. Such a unit should be on site within 72 hours when a mining rush starts. During that early period it is relatively easy to peg claims, set parameters and rules about environmental impacts and hygiene, inform land owners and miners of their respective legal rights and obligations, inform local authorities of their rights and responsibilities, in short, impose some order on the situation. If that has been done at the beginning, it is reasonable to enforce the rules and one can expect greater voluntary compliance. If there is no such rapid response, then once groups have staked out their territories by force or other means and established their own procedures, it is much harder to impose change.

3) Give BAMs a mandate over an entire zone and the means to understand and exercise some administrative functions throughout the entire zone. In this case the zone includes parts of two provinces, several regions and districts, and about a dozen communes. If the BAM works in only one commune at a time, as the current pilot BAM does, many other local authorities are dispossessed of their share royalty revenue. Two BAMs are proposed for the current sapphire zone, apparently because it extends into two provinces. Yet the MEM's resources are quite limited (only 15 mining engineers, for example, and 22 regions). It would be a better use of resources to have the Andoha'Ilakaka BAM cover the entire zone and place the BAM currently proposed for Sakaraha in another mining area in central or northern Madagascar.

Both BAMs and Commune authorities need two basic maps of their area to allow them to oversee mining activities.

- One is the permit map, which also shows protected conservation area boundaries, and is readily available from the Mining Cadastre office in Antananarivo (printing capacity is not available at the Toliara Interregional Mining Office).



- The second is a map of current mining activity. These could be made from the aerial photo coverage currently being flown for the geological survey update. They could be updated at least once a year from Landsat images (the resolution is barely adequate, but the cost is right (about \$400 a frame, which is much less than it would cost to travel throughout the area making a survey)).

4) Where there is no BAM, the training already offered mayors by the MEM needs to be intensified. Communes should be asked to nominate trainees as “Communal mining officer,” so that someone on the local level can acquire some technical competence and understanding of the sector.

5) To follow the principle in (1) above, BAMs and Communal Mining Officers should be empowered to collect royalties and distribute them to the communes. That would cut out two or three stops for dealers processing a shipment. To handle funds, local mining officials must master basic accounting. Accounting records must be public, available for inspection by officials or ordinary citizens at any time.

- The BAMs should be provided with the two maps mention above in the analysis, i.e. a permit map and updatable aerial photo/Landsat coverage.
- Using these maps, the BAMs should work with local authorities to prepare a census of mining activity in the zone.
- BAM officers should rotate regularly, to reduce opportunities for collusion in corrupt practices
- Participatory monitoring and evaluation measures need to be established

6) Work with communes to establish an equitable and efficient system for distributing mining royalties and administrative fees. This might be based on the census mentioned above, and annually updated. Since it will take some time to organize the maps and census, communes with sapphire mining might agree in the meantime to share and share alike.

7) Train BAM authorities and communal mining officers in extension activities beyond the assessing and parcel sealing for which they have been initially prepared:

- Facilitating the process of miners organizing formal cooperatives or companies
- Teaching miners improved mining techniques, basic gemology, and the legal rights and responsibilities of miners
- Working with mayors, police and local tribunals to arbitrate disputes between miners, mine-claim holders and land-owners by providing basic legal information about their respective rights and obligations

8) Revise legal provisions concerning claim holding, and consulting current claim-holders and other stakeholders in the process. Monitor the recent decreases in carré size and increases in fees to see whether they actually result in more miner cooperatives getting access to claims and whether the current pattern of absentee speculator claim-holding diminishes. If not, either fees should be raised substantially higher or requirements to mine actively should be added to the claim retention conditions.



9) Create a practical and reliable statistical system. Exports are the easiest point at which to capture the volume of activity. Production statistics are non-existent for artisanal miners and probably for small-scale mining as well. Current export and tax receipt statistics are not recorded regularly, even for the minority of mineral products that are officially exported. They should be recorded daily, by exporter. If that is done, it will soon be easy to compare official exports with the reality in the field and have an idea of who is, and is not, operating through legal channels.

Improve Living and Working Conditions

10) Improve public safety. A new unit of gendarmes has been posted to Ilakaka. They need to work transparently with the community to identify the major problems and begin enforcing justice. For example, they should hold town meetings, not just private meetings with officials. They should be rotated frequently to minimize the development of corrupt relationships. They should be banned from selling arms and subjected to criminal penalties if they do sell arms.

11) Improve infrastructure. The most urgent needs throughout the area are improved water supply, electricity, telephone and banking facilities. An aqueduct project is already underway. No one knows whether the private company that used to provide electricity plans to purchase another generator after the last one blew. That would be the best solution. Telephone service needs to be extended from Andoha'Ilakaka to Ranohira and as much of the actual mining area as possible. The arrival of telephone service, everyone noted, reduced robberies, as police were able to respond before robbers got away. Banks should be contacted until one is found that is willing to create a branch in Andoha'Ilakaka.

12) Implement the current plan to work through NGOs to improve health and hygiene at mine sites and in mine towns.

Develop the Value Chain

13) Send Malagasy to study heat treatment in Thai gem programs.

14) Remove import duties on all types of gem processing and jewelry-making equipment and supplies.

15) Remove the ban on importing gold and gemstones (this is reportedly already under consideration).

16) Develop sustainable training programs in bead- and cabochon-making from lesser-quality stones and training in all types of hand-made jewelry-making.

17) Create synergies with tourism, including marketing liaisons between jewelry producers and tourist markets and potentially mine tours as a side attraction for tourists. This allows jewelry-makers to get to know the tastes of the market. The tourist market



will be an important secondary market for second-quality production as the export of first-quality production gets underway.

18) Gradually phase in training in more capital-intensive forms of jewelry-making.

Marketing

19) End currency controls. They do not keep capital in the country. In fact, they appear to have had the opposite effect, both in Madagascar and in other countries that have had similar controls. They force merchants who would prefer to be legal but lack adequate banking facilities to resort to extra-legal measures in order to stay in business. When currency controls are ended and business people believe that they will remain off, one can expect net capital to flows to be **into** the country rather than out.

20) International buyers are critical for the success of colored gem marketing, as they bring the capital that makes mining possible. Madagascar has been gradually making it easier for international buyers to operate legally, which in turn attracts more buyers with more capital.

21) The new DSTM system allows buyers to buy and export using a business visa (instead of having to start a local company). It was, however, still not operational at the time of the PRA in July/August 2005. It should be implemented and monitored.

22) The Guichet Unique, implemented in 2004, is also not operating properly. The main problem seems to be that the MEM laboratory and customs are using two different lists of standard values. At a very minimum, they should agree on a common list of gem values.

The 24-hour time limit on processing parcels should be set to penalize officials rather than exporters, as is the case now. The goal should be to process a shipment in four hours or less.

23) Descending the marketing chain to the level of resident dealers, if government is able to make it easy for them to seal a parcel and pay their royalties in one place (see above), those who fail to export legally should be penalized. Making it easy has to come first, however. Punishing dealers for not complying with a system that is extraordinarily difficult to comply with simply breeds corruption.

24) The recent decision to allow dealers to pay royalties themselves, and thereby obtain a LP3 permitting legal export, was a good one. The vast majority of stones on the market are not coming from mine claim-holders. So the old system that required dealers to produce an LP1, that only claim-holders could issue, simply produced rent-collecting claim holders.

25) Miners and brokers also want better marketing arrangements. The most useful measure that one can offer them is market information via the internet. The BAMs should



have gemology information centers, including internet connections, on which they can consult price trends for gold, gems and currencies. There have been proposals to ban foreigners from buying a mine sites. Some countries, notably Sri Lanka, have such a ban. In Madagascar, however, since the law allows foreigners to hold mine claims, it cannot very well ban them from mining areas.

26) Policing of mining areas needs to be closely monitored. The gendarmerie is already present and a mining police force is proposed. BIANCO is also clearly interested in operating in mining zones. Gendarmes and police reportedly shake-down legal operators as often as they protect legal business. And the gendarmes protecting legal business in Ilakaka were being paid on the side for it. The combination of gems/gold and arms is inevitably dangerous, as the temptation is strong to use force to get money and money to buy arms.

27) Continue the development of the gem marketing infrastructure. The Gare-mines bi-weekly market is a worthy initiative that should be continued. It may take more than a year to get it on a self-sustaining organizational basis. The owner of the Karibotel, which is the current center of the street gem-trade in Antananarivo, owns another building down the block which he wants to make into a gem exchange. He seems to believe that it could be an official/monopoly exchange. Phillips met several times with him and his business partner, exploring their ideas, and attempting to persuade them that gem exchanges elsewhere—and most likely theirs—are not and probably cannot be monopolies (even the DeBeers diamond monopoly is now ended). A more likely and more suitable, organizational model is simply a building or cluster of buildings rented to specialists in gems and jewelry. Such exchanges are found in Thailand, Sri Lanka, South Africa, Dubai, Turkey and many other countries. To the extent that the business prospers, the landlords prosper. The entrepreneurs seemed to understand, and said that others had given them similar advice. They nevertheless hoped for an official mandate, financing, etc. That probably would not be the best use of official resources. They should be encouraged to develop the property for gem and jewelry marketing, but on a private sector basis.

Efforts to get Malagasy dealers to participate effectively in Thai or other gem shows have not yet been successful. Those who traveled to this year's Bangkok Show reportedly had small stocks of modest quality overpriced goods that were not competitive. This is a tough business with high entry costs, mostly in terms of knowledge and capital. That is why we recommend addressing other niches in the value chain first.

Next Steps

The reports that came from the current PRA, plus the reports of the one local and two national workshops conducted to permit dialogue on the findings, have generated considerable policy, governance and project-implementation recommendations. There were a number of representatives of ministries and police/armed forces at the first restitution who favored a dramatic military-style operation to impose order on the area. This should be discouraged. It was done five years ago, to no apparent lasting benefit. Doing it again would likely result in rough treatment and corrupt exceptions that



accentuate local resentments of official abuses. They would also scare off the international dealers and potential investors who are just beginning to take a heightened interest in Madagascar.

BAMEX will benefit from having this overview of one small portion of the mining sector in Madagascar as a guide for its policy work. As for direct project interventions, it needs to prioritize those based on its human and financial resources. It will likely select those that fit with its vision for economic growth in Madagascar and its roles relative to other sources of assistance to the field. PGRM will likely take the lead on formalization of the artisanal and small-scale mining sector. BAMEX can work effectively to reinforce that work. On point (9) mining statistics, for example, the local consultants hired to revise the system in Madagascar do not appear to have had any vision of what an improved system might look like, or why good statistics are needed. They appear to have had no comparative experience, so just recommended tables that could be made for data collected on existing forms. They suggested no link between mining and tax statistics. BAMEX can offer a mining statistics expert from Tanzania, who has upgraded its situation from a similar lack of system to one that now produces meaningful data.

BAMEX can also contribute to building the local value chain. The planned cabochon training of trainers will initiate this process. It will demonstrate the principle that more value-added can be gained from a large volume of waste material than from a very small volume of high quality material. If BAMEX receives additional funding, training in bead-making and various types of hand-made jewelry-making would move Malagasy capabilities one step higher in the value chain.

BAMEX could also work effectively on synergies between mining and tourism. BAMEX's business centers should conduct outreach to tourist shops, to encourage them to carry the gems and jewelry produced by project trainees.

