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# FINAL REPORT

## OCTOBER 2004 – JULY 2007

### GEMSTONES AND ARTISANAL AND SMALL SCALE MINING



August 2007

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The BAMEX project is implemented by Chemonics International Inc. and its partners.

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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## ACRONYMS

ADEPTA	Association pour le Développement des Echanges Internationaux et des Produits et des Techniques Agroalimentaires
Alliance	Alliance Ecorégionale de l'USAID
ARKH	Antenne Régionale des Koloharena
BAMEX	Business and Market Expansion
BCI	Business Centers Ivoharena
BFV	Banky Fampanandrosoana ny Varotra
BOA	Bank of Africa
CARE	Care International
CCS	Corridor Coffee Spices
CEQUIP	Crédit for Equipement
CEM	Caisse d'Epargne de Madagascar
CIIFAD	Cornell International Institute for Food, Agriculture and Development
CITE	Centre d'Informations Techniques et Economiques
CKH	Coopératives Koloharena
CNCC	Comité National pour la Commercialisation du Café
CNISZ	Committee for the Normalization of the Ilakaka-Sakaraha Zone
CNKH	Confédération Nationale KoloHarena
COLEACP-PIP	European and Southern Hemisphere Countries Trade Facilitation Institution
CSBF	Commission de Supervision Bancaire et Financière
CTHT	Centre des Techniques Horticoles de Tamatave
CQI	Coffee Quality Institute
DAP	Di-Ammonium Phosphate
DDP	Développement des Partenariat
DNQ	Direction des Normes et de la Qualité
D1	D1 Oils Company
EAM	Entreprendre A Madagascar
EAFCA	East African Fine Coffee Association
EDBM	Economic Development Board of Madagascar
EG	Economic Growth
ERI	Eco-Regional Initiatives
ESSA	Ecole Supérieure des Sciences Agronomiques
EUREP-GAP	European Retailers and Producers working group for Good Agricultural Practices
FCE	Fianarantsoa Côte- Est railway
FCPA	Fonds de Commercialisation des Produits Agricoles
FEMAG	
FIEFE	Fonds d'Investissement pour les Entreprises Favorables à l'Environnement
IGA	Institut de Gemmologie d'Antananarivo
IGM	Institut de Gemmologie de Madagascar

IMRA	Institut Malgache de Recherches Appliquées
IPA	Salon International des Industries et des Procédés Agroalimentaires
JIRAMA	Jiro sy Rano Malagasy
LDI	Landscape Development Interventions
MAEP	Ministère de l'Agriculture, de l'Elevage et de la Pêche
MAP	Madagascar Action Plan
MCA	Millenium Challenge Account
MCC	Millennium Challenge Corporation
MECIE	Mise en Compatibilité des Investissements avec l'Environnement
MEFB	Ministry of Economy, Finance, and Budget
M&E	Monitoring and Evaluation
MEM	Ministry of Energy and Mining
MFI	Microfinance Institutions
MEPSPC	Ministère de l'Economie, du Plan, du secteur Privé et du Commerce
OTIV	Ombona Tahiry Ifampindramana Vola (IMF Institution)
PAM	Plantes Aromatiques et Médicinales
PCL	Plate-forme de Concertation pour la Filière Litchi
PRA	Pest Risk Assessment
PSDR	Projet de Soutien pour le Développement Rural
SME	Small and Medium Enterprises
UCV	Union de Commercialisation des Ventes
USAID	United States Agency International Development
USDA	US Department of Agriculture
USG	United States Gouvernement
TIAVO	Tahiry Ifamonjena Amin'ny Vola
WCS	Wildlife Conservation Society
WWF	World Wide Fund

# **Madagascar Business and Market Expansion (BAMEX) Final Report: Gemstones and Artisanal and Small Scale Mining Activities**

## **1. Overview**

The US Government, through its Economic Support Funds (ESF), provided \$400,000 to the BAMEX Program to contribute to a large, multi-donor initiative to fight corruption, improve governance and support professionalization in the gemstone sector.

BAMEX focused its activities on good governance and the fight against corruption, while also addressing the need for increasing value-added activities along the value chains and emphasizing environmentally friendly activities at all stages. This focus was maintained at the association, value chain and national levels. All in all, the project facilitated over \$593,500 of sales of mostly semi precious gemstones. In addition,

### **Strengthening SMEs and professional associations**

- BAMEX contributed to formalization of gemstone stakeholders through associations.
- BAMEX provided organizational, commercial, and financial management training to formal stakeholders to increase their competitiveness in local, regional, and international markets.
- BAMEX organized specialized training to introduce basic and advanced processing skills, and increase the quantity and quality of local gemstone products.

### **Building a more effective value chain**

- BAMEX helped promote awareness and compliance with lawful practices at all transaction levels, from the mine to international markets.
- BAMEX, through its business centers, helped set up systems for the efficient dissemination of information related to the mining sector.
- BAMEX helped set up the gemstone market in Antananarivo which is held twice a month, providing a safe environment for formal trading.

### **Promoting a transparent legal and regulatory environment**

- BAMEX worked closely with the government and partners in amending the Mining Code and its application decrees.
- BAMEX supported the devolution of mining sector laws and regulations by providing assistance to central and local government in partnership with the Ministry of Energy and Mines.
- BAMEX's participation in the Inter Ministerial Committee for the Normalization of Mining Activities in the Ilakaka/Sakaraha Zone helped fight the pervasive corruption characteristic of this pilot zone where small scale mining employs more than 50,000 permanent and part-time workers.

Our vision was to “maximize the contribution of artisanal, small-scale mining to sustainable development through the promotion of good governance, the fight against corruption, protection of the environment, and increased value-added along the value chains.”

BAMEX conducted mining sector activities in collaboration with the following entities:

- International Business Initiatives (IBI), a US consulting firm led by Dr. Lucie Phillips.
- SOLUTIONS S.a.r.l., a local consulting firm led by Mr. Jean-Louis Rabeharisoa, who has over ten years of experience in the Malagasy mining sector.
- *Projet de Gouvernance des Ressources Minérales de Madagascar* (PGRM), the World Bank's mining sector reform project, and its *Institut de Gemmologie de Madagascar* (IGM).

- Numerous partners, such as the *Institut de Gemmologie d'Antananarivo (IGA)*, *Cabinet R-CONSEILS*, the *Institut Supérieur de la Communication, des Affaires et du Management (ISCAM)*, and the Association MANIRISOA.
- *Chefs de Région*, mayors, and numerous other central/local government officials.

The table below provides a snapshot of BAMEX results within the sector.

LEVEL		RESULTS INDICATORS		October 1, 2004 to September 30, 2005	October 1, 2005 to September 30, 2006	October 1 1, 2006 to July 31, 2007	Totals
RM 1 <sup>1</sup>		Increased value of gemstone sales from BAMEX clients <sup>2</sup>	Targets	\$152 000	\$305 000	N/A <sup>3</sup>	
			Actual values	\$113 000	\$305 500	\$175 000	\$593,500
			Performance	74%	100%		
	ER 1.1	Volume of sales from BAMEX – sponsored gemstones exchange and trade	Targets	\$50 000	\$100 000	\$48 500	\$198,500
			Actual values	\$95 000	\$80 000	\$80 000	\$255,000
			Performance	190%	80%	185%	130%
	ER 1.2	Number of visitors at gemstones market	Targets	N/A	N/A	2400	
			Actual values	22,252	11,296	14,918	48,466
			Performance			468%	
	ER 1.3	Number of trainers/ trainees trained in cabochon cutting/ jewelry	Targets	N/A	N/A	40	
			Actual values			52	52
			Performance			130%	
	ER 1.4	Number of small miners trained in gemmology and environmental impact assessment	Targets	N/A	N/A	100	
			Actual values			280	280
			Performance			280%	
RM 2		Increase in number of formalized enterprises and associations assisted by BAMEX	Targets	3	N/A	N/A	
			Actual values	3			3
			Performance	100%			
	ER 2.1	Increase in private sector investment in gemstones	Targets	\$10 000	\$30 000	N/A	
			Actual values	\$7 500	\$35 000		\$42,500
			Performance	75%	117%		
	ER 2.2	Volume of credit obtained by gemstone enterprises with BAMEX support	Targets	\$12 000	\$25 000	\$20 000	\$57,000
			Actual values	\$12 000	\$12 700	\$8 700	\$33,400
			Performance	100%	51%	44%	58.6%
ER 3.1	Number of DSTM cards delivered	Targets	N/A	N/A	100		
		Actual values			78	78	
		Performance			78%		

<sup>1</sup> Gray lines depict indicators from BAMEX's first phase that are no longer monitored.

<sup>2</sup> Sales at the gemstone market in Antananarivo, gemstone fairs and CASM in Antsirabe, and international trade fairs in Tucson, Arizona and Bangkok, Thailand.

<sup>3</sup> N/A: not applicable.

## 2. Main activities and results

### Result Module 1: Increasing competitiveness

#### 1.1 - Increased value of gemstone sales from BAMEX clients

TARGETS Oct 1, 2006 July 31, 2007	ACHIEVEMENTS		
	As of September 30, 2006	From October 1, 2006 to July 31, 2007	TOTAL
Not Applicable	\$418,500	\$175,000	\$593, 500

#### 1.1.1 Support gemstones exchange and trade

*Volume of sales from BAMEX-sponsored gemstones exchange and trade*

TARGETS Oct 1, 2006 July 31, 2007	ACHIEVEMENTS		
	As of September 30, 2006	From October 1, 2006 to July 31, 2007	TOTAL
\$48,500	\$175,000	\$80,000	\$255,000

*Number of visitors at gemstones markets*

TARGETS Oct 1, 2006 July 31, 2007	ACHIEVEMENTS		
	As of September 30, 2006	From October 1, 2006 to July 31, 2007	TOTAL
2,400	33,548	14,918	48,466

#### A. Creation of the Antananarivo Gemstone market



With support from SOLUTIONS S.a.r.l., BAMEX took the initiative of setting up a market for gemstones at the Soarano railway station. The first market day was organized November 20, 2005 under the sponsorship of the Minister of Energy and Mining. This market helps associations of gemstone dealers in precious, semi precious and industrial stones organize themselves to sell their products in possible best conditions, especially by targeting tourists.

The market takes place twice a month, on week-ends. A token entrance fee is charged to defray costs, an important move toward sustainability and an advance over similar traditional markets.

To help the market become financially sustainable, the Gemstone Market association was formalized under Authorization No. 3350PA/ANT/SPA/ASS of December 29, 2005. The Gemstone Market is currently managed by a management committee made up of representatives of associations, cooperatives and independent small scale operators in the mining sector with help from the Ministry

of Energy and Mining (MEM), which helps with administrative formalities, and from the *Institut de Gemmologie de Madagascar* (IGM), which verifies authenticity of stones.

Support for the association from BAMEX included the following:

- Capacity building among participants: training in lapidary techniques, training in practical gemmology, training in specialized gemmology, training in cooperative techniques, training in negotiating techniques, training in developing business plans.
- Procuring equipment such as tools, tables, and parasols.
- Support in marketing: advertisement in daily newspapers, advertisement in Passport to Madagascar (the booklet distributed to passengers arriving in Madagascar), broadcasting spots on television channels, publishing flyers.

BAMEX discontinued its financial support to the association at the end of 2006. Market management functions were transferred and the market is now fully autonomous.

From November 2004 to July 2007, the market welcomed more than 48,000 visitors. For the same period, nearly \$250,000 in sales were recorded.

In spite of overall good results and increasing participation among gemstones dealers, challenges remain. During the first two and a half years, the Antananarivo Gemstone Market required substantial support from BAMEX. Indeed, the need to pay operating costs of the market led to hesitation among sellers regarding their regular participation. The Gemstone Market Management Committee made substantial efforts to reduce operating costs by asking various entities to take part in exhibitions and to contribute to the costs.

Other factors also present challenges, including the existence of several informal markets around Antananarivo. The general rule in Madagascar is for gemstone markets to be informal. In some markets, there is a government subsidy (e.g., infrastructure at prices which may not be beaten such as at the Andravoahangy, Pochard, and Route Digue markets). Gemstone dealers are generally not inclined to formalize their activities, particularly if they are competing against numerous informal dealers. In addition, under the arcades of the *Avenue de l'Indépendance*, less than 300 meters away from the Gemstone Market, informal transactions are continuing in the street or in cars parking there all day long. There is no sign that the authorities will take decisive action to remedy this problem.

An additional challenge will be for the gemstone dealers to improve the quality and diversity of products offered for sale. Despite buyers' regular expression of their satisfaction with purchases in terms of pricing, quality, and transaction procedures, the relative absence of new products and designs has clearly had an adverse effect on attendance. The Gemstone Market is well known today, but innovation and more aggressive marketing is still needed to attract a larger number of potential buyers.

## **B. Organization of a Gemstone Fair at the Antsirabe Railway station.**

Success from the organized market in Antananarivo encouraged Antsirabe Mining Operators in the *Fédération des Opérateurs Minières de Vakinankaratra* (FEDOMINVAK) to organize three gemstone fairs in Antsirabe. Indeed, gemstone related activity in the Antsirabe region is very high and warrants careful consideration, as illustrated by the discovery of what appears to be an important ruby deposit in Ambohimandroso. The Gemstone Fair is therefore an efficient tool for identifying and opening real channels of



communication with the actual operators of the sector. Sessions were held during 2005 Whitsuntide week-end, in the course of tourist season in August 2005, and in August 2006. This latter was the most successful. Such sessions resulted in sales of more than \$26,000 with 21,761 visitors.

So far, the organization of these *Foires des Mines du Vakinankaratra* has received an overwhelming response and support from all stakeholders and the local authorities. All appear to be strongly committed to using the gemstone sector as a motor for the development of their community.

At the same time, despite the fact that participation was high, the overall quality and diversity of products offered was of a relatively low standard and prices were relatively high. This illustrates the necessity for technical training modules (gemmology, lapidary, jewelry making, etc.) to increase the quality of the finished products; more financial and management training sessions are also needed.

### C. CASM 2006 annual general meeting.



International recognition of the potential of artisanal and small scale mining in Madagascar, as well as the proactive stance taken by the Malagasy Government, the private sector, and donors integrating in the nation's poverty reduction strategy, resulted in the selection of Madagascar as the location for the 2006 Annual General Meeting of "Communities and Small Scale Mining" or CASM.

A major aim of CASM is to collect and share the lessons learned from development efforts – what has and has not worked in different contexts – and contribute to the improvement of new efforts, especially given the limited resources available for work within the sub-sector. CASM is developing good practice toolkits and guidance notes for various stakeholder groups to improve the design and implementation of policies and programs. It also supports and organizes local, regional and international learning events to assist in the dissemination and integration of best practices. Through its knowledge generation activities, CASM links small-scale mining assistance to the achievement of broader development objectives, especially the Millennium Development goals. They also support development of projects and approaches by individuals, communities and institutions that will contribute to the reduction of poverty and the creation of more viable livelihoods in rural areas where small-scale mining is a significant activity.

The international conference on artisanal and small-scale mining took place in Antsirabe on November 11-15, 2006. It hosted about 230 international participants (Nigeria, RDC, Tanzania, Mongolia, Liberia, Thailand, Great Britain, USA, Sierra Leone, India, Ghana, Malawi, and Switzerland) which is a record, according to the CASM Executive Secretary in his closing speech. About 60 nationals were also present.

As a key organizer, BAMEX paid transportation fees (Tana-Antsirabe-Tana), accommodation fees, registration fees, and site visit fees for 28 local participants. BAMEX also contributed to the organization of the trade exhibition with BCI Antsirabe and FEDOMINVAK, which was a key point in the event. Twenty-six exhibitors came from Antsirabe, Antananarivo, and Toamasina, and participated in the exhibition. The event hosted 11,133 people and generated sales of about \$29,150.

#### 1.1.2 Attendance at International Gemstone Shows

Upon the request of PGRM officials, BAMEX provided various support to Malagasy mining operators participating in international fairs. BAMEX helped operators participate in five fairs:

- The Annual Bangkok International Gems and Jewelry Fair in September 2005, March 2006 and March 2007.
- The Tucson World Gems and Jewelry Fair in February 2006 and 2007.

**A. Bangkok International Gems & Jewelry Fair – September 2005**

Six mining sector exporters were trained to help them get the most from this fair, particularly in terms of negotiation techniques and export/import formalities. Sales generated by the participants during the fair amounted to \$18,000, which was acceptable given that it was their first participation at this major international event.

**B. Tucson World Gems and Jewelry Fair - February 2006**

Eight mining sector company representatives were trained to get the most from this fair, particularly in terms of negotiation techniques and export/import formalities. Sales generated by the participants during the fair amounted to \$220,000.

**C. Bangkok International Gems & Jewelry Fair - March 2006.**

Of the six Malagasy companies from the mining sector that attended the 37th year of this fair, two participated as exhibitors. The other four companies participated with the aim of gathering professional contacts and sourcing equipment related to product transformation/enhancement. Sales generated by the two exhibitors during the three days of effective attendance were \$5,500. Contacts were made with equipment suppliers as well as numerous international buyers. Malagasy participants also visited the Chantaburi gemstone exchange market, as well as the two leading gemological institutes operating in Thailand (Gemological Institute of America, Gemological Institute of Thailand).

**D. Tucson World Gems and Jewelry Fair – February 2007**

For the fair of Tucson organized from January 31, to February 5, 2007, only two operators applied to participate, SEAM and AFIA. Three other Madagascar based companies also took part in the fair but did not approach BAMEX for assistance.

At the end, AFIA was the only BAMEX-supported company that took part in the Fair. They sold most of their products for a value of \$15 000. They also obtained orders from several purchasers for an amount still not identified. AFIA, very satisfied with its participation, intends to return in Tucson in 2008, and is committed to organizing a booth and covering its own expenses.

**E. Bangkok International Gems & Jewelry Fair - March 2007**

Through the intervention of BAMEX, Madagascar obtained a double booth measuring 6m by 3m in Bangkok. The Consulate of Madagascar took charge of all accessories, display racks and electric connections. Only one out of the five companies who responded to the call for interest took part in the fair, the others could not prepare sufficient stock.

The participation of the SEAM company was a total success. They held numerous meetings with purchasers of several countries (India, Japan, Malaysia and Thailand). In terms of results, sales reached \$ 20 000 and orders amounted to \$ 60,000, for a total of \$ 80,000 in four days.

Before each international fair, training sessions focused on the following topics:

- Merchandise selection
- Merchandise packaging display strategies
- Merchandise pricing policy

- Export procedures from Madagascar and import procedures to Tucson or Thailand
- Logistic issues

Twenty-two participants took part in the international fairs and generated over \$338,500 in turnover.

It was agreed that the overall experience was very positive, as it enabled Malagasy dealers to compete on the international scene, contributing to a better understanding of how the world market functions, the type of products in demand, the level of quality, and prices.

It is clear that Malagasy gemstone dealers, as well as officials, stand to gain from increased participation in international gem fairs. Indeed, there are a lot of misconceptions about the gemstone trade in general, and Madagascar's position in the world market in particular.

While BAMEX managed to group most of its gemstone sector clients in associations, the challenge now is to bring them to the next level, which is to share orders and information concerning clients as a means to build up the reputation of the cooperative/association by being able to respond to requests that cannot be answered by going it alone.

Export procedures continued to be relatively difficult when compared with descriptions made by the official from the Ministry of Mines present at the workshops. The lack of cooperation between officials from Customs and Mines was persistent. Fortunately, BAMEX's support resulted in the participation by all dealers who attended the workshops and registered for the two international shows. Export procedures were started much earlier to provide enough time to settle issues raised by the Customs and Mines officials within the Mines export one stop office.

Furthermore, Madagascar possesses a wide variety of products with potential on the international market, but most of these products are rarely offered and thus remain unknown to the trend setters. For example, during the 37th Bangkok International Gems and Jewelry Fair, a leading Malagasy trader of ammonites was successful in selling her entire stock in one day and a contract for further transactions was signed a month later in Madagascar. The same happened to a relative newcomer who managed to sell a large lot of apatite at a record price during the Tucson show. Madagascar is blessed not only with world quality gems, but also a myriad of niche products that need to be marketed on the international scene. The sector must exploit such niches, which will in turn provide much needed capital and constitute the financial backbone of an industry currently dominated by foreign traders.

Regular participation in international events will also allow Madagascar-based companies to become more familiar with the quality standards and norms required to succeed in an extremely competitive global market. For example, the majority of finished products coming from Madagascar need to be re-cut, thus fetching lower prices in comparison with similar products coming from other nations where the cutting industry is strong. Most of all, by accepting lower standards, operators not only lose money on the re-cutting, but the full potential of the rough material is lost forever.

## **1.2 Training**

The above findings led us to hold training sessions in collaboration with beneficiaries and professionals in the areas involved. These were appreciated by small scale mining operators and lapidaries. Details on training sessions are provided in *annex 3*.

### **1.2.1 Lapidary – facet cutting training**

Three four-week training sessions were organized in collaboration with the *Institut de Gemmologie*. Such training focused on initiation to facet cutting which consists in providing basic elements for facet cutting according to international standards, initiation to the relation between gemmology and lapidary, assessing raw stones and choosing the appropriate size and type, and evaluating well cut stones. Afterwards trainees studied elements essential to establishing their own workshops for stone

facet cutting (choosing raw materials, equipment and consumables). Each training session lasted four weeks and gathered 31 participants.

### 1.2.2 Cabochon cutting training

The objective is to demonstrate that value-added and employment can be generated at the lower end of a value chain through high volume, lower value, and lower skill businesses. Typically, development strategies for gemstones tend to focus on the 1 or 2 percent of gemstones that constitute the top quality rough product. The remaining 98 percent is often not considered seriously and merely goes to waste. In the case of Madagascar, a strong case can be made for the benefits to be gotten from widening the product range and improving the quality of its cottage industry in cutting, polishing and jewelry/crafts making through this type of training.

One set of equipment geared towards the cabochon training was delivered from the US in October of 2005 (see the annexed list of materials received). Prior to handing over the equipment to the *Institut de Gemmologie d'Antananarivo – Annexe Antsirabe* (IGA) and to the *Direction Générale de l'Enseignement Technique et de la Formation Professionnelle- Lycée Technique Professionnel* (DGETFP/LTP) Fianarantsoa, the Program initiated a training of trainers in May 2006 with the participation of 12 teachers from such training establishments as well as from *Institut de Gemmologie de Madagascar* (IGM).



In May and June 2007, a basic training for cabochon cutting and follow-up session were provided for operators in Antsirabe by the *Institut de Gemmologie d'Antsirabe*. Forty participants acquired new cabochon cutting techniques.

*Number of trainers/trainees trained in cabochon cutting/jewelry*

TARGETS	ACHIEVEMENTS		
	As of September 30, 2006	From October 1, 2006 to July 31, 2007	TOTAL
Oct 1, 2006 July 31, 2007	Not Applicable	52	52

Several gemstone cutting and gemmology modules were offered in partnership with the IGM and IGA. Modules designed for beginners and advanced lapidaries were executed with great success, yielding a batch of qualified technicians.

A specialized cabochon cutting module was launched in May 2006, with top notch equipment imported from the U.S. Trainees in Antananarivo, Antsirabe, and Fianarantsoa benefited from this training. The program was designed so that graduates will be able to use the same equipment to pass on their knowledge to other trainees in all three locations.

Clearly, another challenge will be to facilitate access to equipment and consumables for the increasing number of qualified lapidary technicians. To address this crucial issue, BAMEX, in collaboration with the *Caisse d'Epargne de Madagascar* (CEM) and *Entreprendre à Madagascar* (EAM), has designed a financing mechanism for the benefit of the small mines and handicraft industry. BAMEX provided the Soafaniry association in Ilakaka with \$2,500 using the *Fonds d'Investissement pour les Entreprises Favorables à l'Environnement* (FIEFE) financial mechanism.

### 1.2.3 Gemmology training



Training such as Gemmology for All was provided to help mining operators understand the quality of raw stones from quarries and better defend their interests in sales negotiations. Indeed, in the mining sector, the assessment carried out by the project brought to light the fact that mining operators have considerable gaps in their ability to assess the quality of stones extracted from quarries.

*Number of small scale miners trained in gemmology and environmental impact assessment:*

TARGETS Oct 1, 2006 July 31, 2007	ACHIEVEMENTS		
	As of September 30, 2006	From October 1, 2006 to July 31, 2007	TOTAL
100	Not Applicable	280	280

Several training sessions were therefore organized in diverse strategic locations with high mining potential such as Antananarivo, Nandihizana, Ilakaka Sakaraha, Antsirabe, Ambatondrazaka. In the Alaotra Mangoro Region, training such as Gemmology for All helped communicate environmental standards for mining. Over 280 mining operators of all levels benefited from such training and indicated satisfaction.

### 1.2.4 Organizational development and financial management training sessions.

BAMEX supported three gemstone traders' cooperatives thereby formalizing the activities of more than 45 enterprises and individuals that also benefited from BAMEX support through the Antananarivo Gemstone Market.

The combined activities have shown that there is a willingness from a good number of stakeholders to formalize their activities. Only through continued support of these "pioneers" will more and more stakeholders take the plunge and decide to formalize themselves as well. Organizational development and financial management training sessions were provided to association members and individual gemstone dealers. Run by Mr. Georges RAKOTOZAFY, the training comprised the following phases:

- Participatory Rapid Appraisal of existing gemstone traders associations participating in the Antananarivo Gemstone Market. The adequacy of the associative model was discussed in depth, as well as the various legal formats to determine which model best suits the needs and objectives of the participants. It was decided that cooperatives are more appropriate as by law associations cannot redistribute profits directly to their members.
- The creation of gemstone traders cooperatives was the next step. Three cooperatives were created on October 14, 2005.

*Basic information concerning the three gemstone cooperatives:*

Name	Number of members	Number of Board members	Number of Managers
Famokarana Akora Voajanahary (FAV)	10	04	01
Coopérative de transformation des pierres (COTRAP)	14	05	01
Madagascar Vatosoa (MAVA)	21	06	01
<b>Total</b>	<b>45</b>	<b>15</b>	<b>03</b>

All board members of the above cooperatives were provided basic training in organizational development and financial management. These modules were executed in partnership with BAMEX's training and financial departments. A three-day session was organized on October 25, 26, and 27 at Falda, Antanimena. All 15 board members, along with representatives from BAMEX and SOLUTIONS, were present.

Training in negotiation techniques was also organized to help associations find sponsors. Twelve people attended this training.

The tradition in Madagascar is to operate in the informal sector, especially when it concerns gemstones. Despite the many advantages offered by the Antananarivo Gemstone Market, such as the free gemstone evaluation services by qualified personnel, a clean and secure setting where transactions can occur, the help of the Mines Service concerning the Laissez-Passer (by presenting an official Antananarivo Gemstone Market invoice, buyers will automatically be issued appropriate export papers at the airport by Mines officials stationed there), and finally the financial and technical support provided by BAMEX and its partners, many dealers we have contacted still hesitate to participate in the Gemstone Market.

Those who have opted to formalize their activities will benefit from additional training supported by BAMEX, while efforts will continue to formalize other operators who are still undecided. Furthermore, these efforts should be conducted in the provinces also.

## **Result Module 2: Expanding the use of business and financial services providers**

The Business Centers Ivoharena, hosted by our partners in many towns of Madagascar especially in Antsirabe, Fianarantsoa, Manakara, Mahajanga, Toamasina, and Ambatondrazaka have played a role in training gemstone traders associations, supporting local authorities and formalizing the whole value chain.

The following activities have been carried out by BCI based on requests received from stakeholders:

- Facilitate access to credit for associations/cooperatives, and SME involved in gemstone processing and trading;
- Provide information concerning market opportunities and such, or/and assisted access to information available via the Internet;
- Act as an interface between the MEM and local stakeholders in disseminating information concerning the laws and regulations;
- Organize workshops specifically concerning:
  - o Access to financing for artisanal small scale miners for the acquisition of basic mining equipment;
  - o Basic and business English for gemstone sector stakeholders.
- Work with financial institutions to mainstream mining activities so that commercial banks can start considering lending to formalized entities involved in the mining sector.

To strengthen and materialize such interventions, the FIEFE financing mechanism, in collaboration with EAM and CEM, was opened to stakeholders in the sector. Some mining operators, a small scale mining community and a lapidary benefited from financing for expanding their activities.

### 2.1 Increase in private sector investment in gemstones by BAMEX clients

TARGETS Oct 1, 2006 July 31, 2007	ACHIEVEMENTS		
	As of September 30, 2006	From October 1, 2006 to July 31, 2007	TOTAL
Not Applicable	\$42,500	Not Applicable	\$42,500

### 2.2 Volume of credit obtained by gemstone associations with BAMEX support

BENEFICIARIES	ACHIEVEMENTS		
	As of September 30, 2006	From October 1, 2006 to July 31, 2007	TOTAL
Gemstone market in Antananarivo	\$22,200		\$22,200
Soafaniry association in Ilakaka	\$2,500		\$2,500
M Tovohery / Antsirabe		\$4,000	\$4,000
Andriamena		\$4,700	\$4,700
<b>TOTAL</b>	<b>\$24,700</b>	<b>\$8,700</b>	<b>\$33,400</b>

BAMEX allocated \$22,200 as of June 30, 2006 to support the organization of the gemstone market in Antananarivo.

In collaboration with the *Caisse d'Epargne de Madagascar and Entreprendre à Madagascar*, BAMEX provided \$2,500 of support to the small-scale mining community Soafaniry in Ilakaka using the FIEFE mechanism. They have started reimbursement as stated by their engagement.

M. Tovohery, a member of the jewelers association of Antsirabe, changed the prejudice of financial institutions toward those in the mining sector. Not only did he start to repay his loan but he even asked to repay early. From an informal business he built a firm, thanks to a partnership with a Canadian business.



## Result Module 3: Enabling environment for private sector development improved

Activities under this results module have included the following:

### 3.1 Participation in the deliberation of the mining sector reform commission

BAMEX participated as a member of the working group in charge of coordinating the deliberations regarding the improvement of the Mining Code. This group was headed by the Director of Mines and

Geology and included officials from the Ministry of Energy and Mines, members of consulting firms MATSILO (specialized in legal reform), some key partners such as the *Conseil Supérieur pour l'Intégrité* (CSI), the *Bureau Indépendant Anti-Corruption* (BIANCO) and BAMEX's mining sector partner, SOLUTIONS SARL.

BAMEX also provided logistical support for the dissemination of drafts and collection of comments from public and private stakeholders. In addition, BAMEX funded and participated in the organization of a validation workshop concerning the revised application decree and took part in the final deliberations before the finalization of the decree.

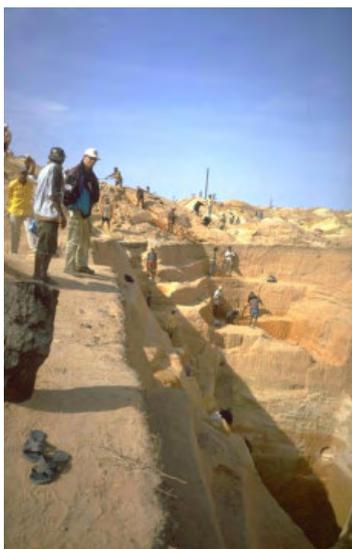
After feedback from the National Mining Committee and ministries, the final version of the decree to implement the Mining Law was issued on December 19, 2006.

### 3.2 Participatory Rapid Appraisal

The purpose of this trip was to lead a participatory rapid appraisal of mining, marketing and governance issues in the Ilakaka/Sakaraha zone, and to train BAMEX partners in PRA methodology. It was part of an effort to create a knowledge base and network of working relationships 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 the Project for Management of Mineral Resources (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 (as well as constraints facing) gem mining and trading firms. Based on this information, policy reform and market strategies were proposed. After consulting with their respective home-office colleagues, the team recommended solutions and potential policy reforms to be implemented.

Principal results from the PRA included the necessity to normalize all activities in the zone through:



- A census of mining stakeholders.
- Training of stakeholders and local authorities to understand mining laws and regulations.
- Training stakeholders in basic gemmology, lapidary and environmentally friendly extraction techniques.
- Establishment of Mines Administrative Offices in or near major mining zones.
- Giving these offices a mandate to not only implement laws and regulations but also create partnerships with stakeholders and local authorities in view of better management of mineral resources.
- Take suitable measures to eradicate corruption by reinforcing good governance throughout the zone.
- Provide clear incentives for entities and persons who formalize their activities.
- Punish those at all levels who continue to operate informally, after having provided reasonable opportunities and tools to formalize their activities.

### 3.3 Design and implementation of revisions to the Laissez-Passer documentation system from mine to export market and *Droit Spécial sur les Transactions Minières* or DSTM.

DSTM is a new system that enables foreign traders to come to Madagascar and purchase gemstones without having to create a local company. The DSTM system, which involves facilitating all procedures and providing a framework where foreign traders can travel throughout Madagascar to purchase gemstones, was signed by the Minister of Finance, Economy and Budget, and Minister of Energy and Mines in July 2005.

After having actively participated in the design of the DSTM, BAMEX took part in an information and registration campaign in the Ilakaka-Sakaraha zone. This was done in conjunction with the “normalization” activities supported by the project in the zone. In addition, BAMEX placed a consultant within the Mines and Geology Directorate to carry out all tasks related to the effective implementation of the DSTM mechanism (DSTM registration and export procedure support, organization of workshops with concerned institutions such as the Ministry of Economy, Finance, and Budget, identification of practical solutions to issues identified within the implementation of procedures, etc.). The BAMEX consultant was also charged with the day-to-day follow-up of other specific BAMEX interventions within the Ministry for Energy and Mines.



BAMEX also carried out all tasks related to the creation and implementation of a DSTM kiosk in the arrival terminal at Ivato International airport, to welcome the operators as soon as they arrived in Madagascar and give them useful information and documents during their stay. The invitation to tender for the phase work was launched by BAMEX, and the official inauguration of the kiosk was done in June 2006.

As of this writing, records report the sale of 78 cards valued at \$ 10,000. With these cards, receipts on sales of gemstones with the DSTM have reached \$ 2,500.

In addition, BAMEX also invested in DSTM promotion activities. A communication plan was defined, which included a sensitization session for ambassadors. The ambassadors understood the importance of promoting the system and so were supportive of the distribution of bilingual flyers, as well as launching of a DSTM web page.

#### *Number of DSTM cards delivered*

TARGETS	ACHIEVEMENTS		
Oct 1, 2006 July 31, 2007	As of September 30, 2006	From October 1, 2006 to July 31, 2007	TOTAL
100	Not Applicable	78	78

### 3.4 Committee for the normalization of the Ilakaka Sakaraha Zone ( CNISZ)

In October 2005, BAMEX was requested by MEM to be part of the Technical Secretariat of the Committee for reorganizing Ilakaka Sakaraha as a technical and financial partner. The committee’s goal was to inform stakeholders (operators, *collectivités territoriales décentralisées*, and the administration) of tasks necessary for reorganizing the sector. This consisted of setting up facilities to facilitate operations under a legal framework and enable regulation of mining activities over the

whole chain (production, marketing, processing, export...). BAMEX, in addition to participation in strategic decision making by the Committee, also supported field assignments. The committee decided to develop an inter ministry action plan which would serve as a performance check of the reorganizing activities achieved. BAMEX also participated in work sessions for developing the local plan for safety and taxation.

Combined with findings from other surveys made by other entities (improving taxation in Ilakaka Sakaraha by PGD and decisions following the small scale mining strategic decision meeting), all elements are ready for establishing the overall action plan.

### **3. Conclusions**

Madagascar's mining sector has experienced a substantial boom since the discovery of several gemstones deposits in the nineties and early 2000s. These discoveries confirmed that Madagascar is positioned today as one of the world's most promising sources of colored gemstones. The potential benefits that could arise from the proper harvesting of these mineral riches clearly constitute one of its most valuable assets and potential source of income. Furthermore, the geographical distribution of mineral deposits that stretch from one end of the country to another can be considered a blessing in that potential income distribution and growth prospects cover most of the island.

However, major investments have not yet materialized in the sector of colored gemstones. The lack of capital and technical know-how, along with the existing weaknesses of the regulatory framework in place, constitute serious obstacles to the development potential of the colored gemstone sector in Madagascar.

As a clear illustration of this, statistics regarding gold are a testament to the problems that plague the mining sector. It is estimated that approximately 5 tons of gold are mined in Madagascar on a yearly basis, yet the official figures reflected a production of only 30 kg in 2003. Moreover, it should be noted that the mining sector should be contributing to poverty reduction in the countryside because at least 500.000 Malagasy work in this sector and small artisanal miners constitute the large majority.

Based on the Participatory and Rapid Assessment exercise, the team noticed basic shortcomings regarding management of activities related to the mining sector.

Texts in the law on mining sector were a step in the right direction but reality in the field showed how difficult they were to implement.

The exercise did not claim to analyze all aspects of such a complex sector but it seemed that some adjustments could have been implemented very rapidly and have had beneficial effects for all parties involved.

BAMEX thus continued bringing support to the Malagasy Government, as well as to the private sector with the aim of fully participating in the reforms required to truly benefit from Madagascar's mining resources. Despite fairly limited funds for this activity, achievements, results, and impacts are well beyond projections.

First, stakeholders were grouped into associations and cooperatives. This is the case for Association Soafaniry d'Ilakaka for which FIEFE financed working capital and purchase of small tools. The larger Association Gemstone Market d'Antananarivo was set up from scratch and has become an autonomous entity through which its members generate comfortable incomes every fortnight.

At the institutional level, support to the Ministry of Mining, with PGRM, resulted in issuance of the decree implementing the Mining Law. Still more, formal exports were increased through the pass system, special fee on mining transactions, and one-stop desk at Ivato Airport. We also participated in

the committee for reorganizing the area of Ilakaka-Sakaraha. In addition, the Ministry is currently implementing a resolution regarding sector reform: holding Strategic Decision Meeting both at the central level and in main operating zones. It is largely known that BAMEX-MEM-PGRM partnership strongly influenced and accelerated the processing of some cases at the Ministry.

However, we cannot claim that we conducted and achieved all actions required for full development of the gemstone sector and small scale community mining. Some milestones were strongly anchored; concrete results and important impacts are noticed. But the process took several decades in other countries similar to Madagascar. The current work has therefore to be pursued assiduously and particular attention has certainly to be paid to key actions. Among these are the associations born through our interventions, and whose capacities may not yet guarantee their sustainability. However, they reflect the future in the sector. Also in need of continued support is the DSTM system.

**ANNEX-1:  
Equipment list for cabochon cutting**

	Description	Quantity	Units
1	Cabbing machine, 6"	10	Each
	Diamond disk 6", 180 mesh ( <i>1 par cabbing machine</i> )	10	
	Diamond smoothing disc 600 ( <i>1 par cabbing machine</i> )	10	
	Diamond smoothing disc 1200 ( <i>1 par cabbing machine</i> )	10	
	Diamond smoothing disc 325 ( <i>1 par cabbing machine</i> )	10	
	Tech-10 Polish Pad ( <i>1 par cabbing machine</i> )	10	
	Support de meule en plastique ( <i>4 par cabbing machine</i> )	40	
2	Type Diamond Disk, 6", 1200 mesh	2	Each
3	Type Diamond Disk, 6", 600 mesh	2	Each
4	Type Diamond Disk, 6", 260 mesh	2	Each
5	Type Diamond Disk, 6", 180 mesh	2	Each
6	Type Diamond Disk, 6", 100 mesh	2	Each
7	10" Slab saw w/Blade and Vise	1	Each
8	Thin Kerf Cont.Rim Saw Blades	1	Each
9	Vibra Shine Tumblers	3	Each
10	Extra Tumbler Bowls for Vibra Shine	3	Each
11	1 Lb.can Tumbling Grit	9	Each
12	15 Lbs. Of Plastic Pellets (lot de 3)	3	Lot
13	Cabochon Plastic Template Kits (set of 3)	3	Kits
14	Stainless Steel Alcohol Lamp	4	Each
15	Dop sticks (3 pieces per set)	10	Sets
16	Scribe pen alum/brass	2	Sets

**ANNEX-2 :**

**Success story : *Formalisation de la vente de pierres précieuses***

**Les petits revendeurs peuvent maintenant vendre leurs pierres sur un marché formel.**

L'USAID aide à la création d'un environnement sain et sûr pour l'achat et la vente de pierres industrielles, semi-précieuses et précieuses.

Holinirina était autrefois une petite marchande qui vivait au jour le jour de la vente de pierres précieuses emballés dans du papier ordinaire, dans la rue, dans un environnement de peur, de méfiance et d'insécurité. Comme ces revendeurs sont obligés de négocier à la va-vite, ils acceptent de céder leurs marchandises à des prix de loin en deçà de leur valeur réelle. Ils opèrent dans le secteur informel pour éviter que leurs activités ne soient soumises au fisc. Du point de vue des marchands, les impôts réduisent les bénéfices déjà marginaux et n'apportent aucun gain aux marchands eux-mêmes. De la part des acheteurs, ils sont réticents à investir sans avoir l'assurance de l'authenticité, de la qualité et de la valeur des pierres qu'ils souhaitent acheter.

Depuis 2004, l'USAID appuie un programme de création d'un environnement sain et sûr pour l'achat et la vente de pierres industrielles, semi-précieuses et précieuses. Le résultat est la mise en place d'un marché des pierres bimensuel qui a généré des ventes de plus de 158.000\$ et attiré des dizaines de milliers de visiteurs. Des gemmologues de l'Institut de Gemmologie de Madagascar viennent vérifier la qualité des pierres et des représentants du Ministère de l'Energie et des Mines assurent une assistance administrative, surtout aux acheteurs étrangers.

Pour permettre au marché de continuer à se développer même après que le programme aura pris fin, l'USAID a apporté son aide pour la création d'une Association des Marchands de Pierres Précieuses gérée par les marchands eux-mêmes dont le rôle est d'organiser et de gérer les opérations journalières du marché. Une cinquantaine d'associations membres ont bénéficié de différentes séances de formation, dont une douzaine a même pris part à des foires internationales des pierres précieuses à Bangkok et à Tucson.

Le marché des pierres d'Antananarivo est un haut lieu commerçant de la ville et tend à devenir un marché permanent géré entièrement par les parties prenantes elles-mêmes

**ANNEX-3:**  
Liste des formations

THEMES DE FORMATIONS	BENEFICIAIRES	LIEU	TOTAL	DATE	ETABLISSEMENTS FORMATEURS
Techniques de négociation - Recherche de sponsoring	Opérateurs économiques du secteur minier	TNR	7		ISCAM
Techniques coopératives	Coopératives du secteur minier	TNR	15	24-27 octobre 2005	Georges RAKOTOZAFY et SR/CLA
Lapidairerie	Associations et coopératives du secteur minier	TNR	31	28 novembre-23 décembre 2005 - 6 février 2006 3 mars 2006- 27 mars 2006 -25 avril 2006	IGM
Gemmologie pratique	Associations et coopératives du secteur minier	TNR	4	20 mars-31 mars 2006	IGM
Formation en Cabochon	IGM/IGA/LTP	TNR	12	Avril 2006	Daniel Pogorzelski
Formation en gemmologie pratique spécialisée et lapidairerie	Associations et coopératives du secteur minier	Nandihizana – Sakaraha - Ilakaka	195	29 juin au 09 juillet 2006	IGM
Formation en cabochon de base	Opérateurs miniers	Antsirabe	20	07 au 18 mai 2007	IGA
Formation en cabochon de perfectionnement	Opérateurs miniers	Antsirabe	20	14 au 30 juin 2007	IGA
Formation en gemmologie pratique	Opérateurs miniers	Antsirabe	20	11 au 13 juin 2007	IGA
Formation en éducation environnementale et en gemmologie pratique	Opérateurs miniers et associations	ABZ	68	03 au 04 juillet 2007	IGA
<b>TOTAL</b>			<b>392</b>		