Alternative Financing Mechanisms For Artisanal Diamond Development

OPPORTUNITIES TO IMPROVE THE LIVELIHOODS OF ARTISANAL MINERS IN THE PRADD PROGRAM AREAS OF THE CENTRAL AFRICAN REPUBLIC

JULY 24-AUGUST 14, 2008

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ACRONYMS AND ABBREVIATIONS

AFL	*Artisan Facilitateur Local* / Local Artisan Facilitator
ASCA	Accumulating Savings and Credit Association
BADICA	*Bureau d'Achat du Diamant Centrafricain* / CAR Diamond Buying Office
BECDOR	*Bureau d'Expertise Centrafricain en Diamond et d'Or* / CAR Diamond and Gold Expertise Office
CAR	Central African Republic
CEC	*Caisse d'épargne et du crédit* / Savings and Credit Institution
CEMAC	*Commission économique et monetaire de l'Afrique Centrale* / Central African Economic and Monetary Commission
CMCA	*Caisse Mutuelle de la Centrafrique* / Mutual Savings and Credit Institution of the CAR
FCFA	*Franc de la Communauté Financière Africaine* / Central African Franc
KP	Kimberley Process
MFI	Microfinance Institution
MSME	Micro-, Small and Medium Enterprises
NGO	Nongovernmental Organization
PRADD	Property Rights and Artisanal Diamond Development Pilot Program
RoSCA	Rotating Savings and Credit Association
SODIAM	*Société du Diamant Centrafricain* / CAR Diamond Company
SWOT	Strengths, Weaknesses, Opportunities and Threats (analysis)
UCACEC	*L'Union Centrafricaine des Caisses d'Epargne et du Crédit* / Union of Savings and Credit Institutions of the CAR
UNCMCA	*L'Union Nationale des Coopératives Minières de la Centrafrique* / National Union of Mining Cooperatives of the CAR
UNCDF	United Nations Capital Development Fund
UNDP	United Nations Development Programme
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

One of the principal expected results of the PRADD program is an increase in the opportunities for land and property rights holders in target areas to benefit more directly from the fair market value of diamonds (Result 3).

Pilot program stakeholders have identified mine financing as a major issue at both production and collection levels of the value chain. Collectors currently provide the most common source of financing for artisanal miners[1], and this financing is typically linked to purchase agreements. Miners' illegal status, low levels of education, and lack of organization result in low bargaining power at the time of sale. Access to alternative financing could increase miners' financial autonomy and, through group saving, lending and re-investment in both diamond production and alternative economic activities, increase their incomes to ultimately contribute to the improvement of their livelihoods.

Local savings and lending groups called Kelemba have proved to be popular and effective financing mechanisms in other sectors in CAR. The consultant was tasked with examining the potential application of the Kelemba model to artisanal mining at the program sites. The rural finance mission objectives were the following:

- Conduct participatory analyses of current financing mechanisms for mining activities and of alternative savings and credit mechanisms (Kelemba) in the target areas.
- Organize multi-stakeholder knowledge-sharing workshops between key actors in the target areas in order to analyze the possibility of applying alternative finance mechanisms to mining activities in the target areas.

This fieldwork showed that the Kelemba structure could provide secure saving, intra-group lending and opportunity for re-investment in income-generating activities, and perhaps most importantly, increase cohesion and solidarity between miners. These economic and social aspects could allow miners to reap greater benefits from their economic activities, and improve their livelihoods and those of their families.

Given the socio-economic challenges as well as the opportunities for Kelemba to help improve the livelihoods of miners in the program areas, the consultant recommends the following initiatives for the PRADD program in conjunction with primary program stakeholders:

- Promote a culture of savings via further awareness-raising activities detailing the utilization of Kelemba group-based savings.
- Help create robust mining cooperatives and consider subsidizing the purchase of group patents.
- Help create Kelemba mechanisms within the cooperatives and train both active and potential Kelemba members (potential cooperative members) in rotating and accumulating savings and credit association (RoSCA / ASCA) development and best practices.
- Train artisan miners in diamond sector-specific MSME management.
- Support parallel agricultural and off-farm income-generating activities.[2]
- Explore the possibility of a directed value chain relationship with diamond companies.

[1] Collectors finance both artisanal tenant miners (typically in cash and in-kind to pay and feed their their teams of diggers) but may also finance diggers directly. These relationships are further discussed in Section 4.2, Current Diamond Financing Mechanisms in Pilot Areas.

[2] Further discussed in Section 5.0, Recommendations.

By supporting the replication and strengthening of existing local financial mechanisms within formal cooperative structures as well as the diversification of income streams, the program can contribute to increased legality of mining activities and greater income generation, and ultimately to improved livelihoods of artisanal miners and their communities.

1.0 BACKGROUND AND RATIONALE

The PRADD program represents an element of support to the Kimberley Process (KP) from the U.S. Department of State.[3] The KP was established in 2000 by public and private sector and civil society representatives from major diamond-producing and -trading countries to reduce the trade in conflict diamonds. KP members must enact certain national policies aimed at reducing illicit diamond trade and submit comprehensive trade and production statistics, among other requirements. KP member countries must regulate and track diamonds from the point of production to export, i.e., throughout the entire diamond value chain. In 2004, the Government of the CAR enacted a mining code that requires national registration of all alluvial diamond production and marketing activities. The 2004 mining code also seeks to protect the rights of artisanal miners. The Government of the CAR, however, is struggling to translate these laws into practice. Effective monitoring and regulation of the sector are difficult given the small-scale and itinerant nature of alluvial diamond mining, and a significant portion of alluvial diamond mining activity remains under- or unregulated.

USAID's PRADD program looks to address two major challenges:

- insufficient monitoring of the industry and a lack of reliable information to ensure the integrity of the KP; and
- insecure property rights, poverty and exploitation of artisanal miners and mining area communities.

Regarding the first challenge, one of the most significant obstacles to bringing alluvial diamond producing countries into the Kimberly Process has been the inability to capture accurate production data at the mine sites. Artisanal diamond mines attract a variety of rent-seekers and predators, with nefarious consequences for producers' livelihoods, as well as for community development and the natural environment. The PRADD program views these challenges as two dimensions of one core problem: the lack of transparency and ineffective regulatory systems that inhibit information collection also enable more powerful stakeholders to exploit the relatively powerless.

The PRADD program is based on the premise that improved land tenure, property rights, and production data will help bring alluvial diamonds into the legal chain of custody and improve the livelihoods of artisanal miners. The thrust of PRADD's activities through August 2008 have focused on developing processes and tools for identifying and acknowledging land and property rights holders and raising awareness among artisanal miners, diamond collectors and local government officials about their rights and responsibilities as laid out in the Mining Code.

One of the principal results targeted by the PRADD program is an increase in the opportunities for land and property rights holders in target areas to benefit more directly from the fair market value of diamonds (Result 3). Local communities in the Lobaye mining area remain poor despite the presence of lucrative mineral resources on their land. In its second year, the PRADD pilot program aims to undertake activities that more directly target the profitability of production in order to improve the livelihoods of artisanal miners in particular, and their local communities more generally. Mine financing has emerged as a major issue at both production and collection levels of the value chain. Currently, the most common source of finance for artisanal tenant and non-

[3] The following two paragraphs draw from various PRADD program documents.

tenant (*débrouillard*) miners is diamond collectors.[4] The oligopolistic collectors, most of whom are non-nationals, wield disproportionate influence over both pre-financing and sale transactions with local artisanal miners. Artisanal miners are encumbered by illiteracy, a dearth of organization, and in 94% of cases, a lack of legal rights to diamond production and sales despite their locally-recognized property ownership claims.[5]

Access to finance can contribute to the improvement of livelihoods of individuals and communities in mining areas. Specifically, access to finance improves the business environment and can help build individual and community assets: physical capital, through the purchasing of mining equipment as well as agricultural inputs for alternative and/or complementary income-generating activities; and to knowledge capital through MSME management and diamond sector-specific trainings. Access to alternative financial mechanisms, in particular, can also begin to diminish the power differential between producers and collectors.

In the CAR in general, less than 1% of the population benefits from access to formal and semi-formal finance.[6] There are only three banks and two regionally (CEMAC) licensed microfinance networks, *L'Union Centrafricaine des Caisses d'Epargne et du Crédit* (UCACEC) and *Crédit Mutuelle de la Centrafrique* (CMCA), who operate twelve of the thirty-six cooperatives or associations offering basic savings and credit services.[7] In total these organizations serve a client base of approximately 34,000, and reach only four out of twenty prefectures. A number of independent local savings and credit institutions (CECs) also exist.[8] The mining areas targeted by the PRADD program are no exception to the norm, and these communities lack any type of formal financial intermediary.

In other areas of the country, poor rural communities have developed a substitute to formal financial services: a local safety net mechanism that constitutes simultaneously a solidarity group and access to savings and credit. Called *tontines* in French or *Kelemba* in Sango, a native language, this mechanism is highly prevalent in Africa and Asia. In the CAR, it takes the form of an amalgam of rotating and accumulating savings and credit associations (RoSCA and ASCA).[9] Following preliminary research, PRADD program staff confirmed that Kelemba exist in the target areas, but the program lacked comprehensive information that could illuminate the potential, if any, of these alternative finance mechanisms to contribute to improving miners' capacity to manage their revenues and contribute to the growth of their MSMEs. ARD therefore sought the services of a consultant specialist in rural finance to analyze current mine financing and assess the feasibility of applying alternative finance mechanisms to artisanal mining in the pilot areas.

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[4] This report will refer to artisanal tenant miners as "artisanal miners" or "miners," and non-tenant patented miners by their local French designation, "*débrouillards.*" See an in-depth discussion of key stakeholders in Section 3.0, Rural Finance Mission Overview, and in Annex 1.0, Stakeholder Analysis.

[5] An October 2007 PRADD socio-economic study in the pilot areas showed that only 6% of miners in the pilot areas have purchased the necessary legal patent for diamond production. ARD, Inc. October 2007

[6] Formal finance includes legally registered banks and microfinance institutions, while semi-formal finance refers to microfinance networks and savings and credit institutions that may or may not be legally recognized. UNCDF and UNDP CAR 2006

[7] Ministry of Finances and Budget 2006

[8] These autonomous enterprises may be financed by NGO projects, local churches or other groups, foreign missionaries, or individuals. They may or not be legitimate, and some have engaged in fraudulent activities. They are often in remote areas and are therefore difficult to track; regulatory authorities often only become aware of their existence via word of mouth. Columbia University and UNDP CAR 2008

[9] The RoSCA and ASCA models are further explained in Section 2.0, Conceptual Foundations.

2.0 CONCEPTUAL FOUNDATIONS

2.1 TONTINES, ROSCAS AND ASCAS

Tontines are prevalent across the African continent, and represent a longstanding local financial mechanism that allows individuals to access lump sums of cash through group-based saving. These mechanisms can be found all over the developing world in various guises, and usually take the form of RoSCAs, ASCAs, or a combination thereof. RoSCAs typically comprise between ten and forty members, each of whom contributes a set amount of cash to a rotating pool of funds on a regular basis.[10] Members often, but not always, make contributions during a group meeting. The pool rotates among members with the same frequency as the contributions, with the order of rotation based on various characteristics.[11] In most cases, the group collectively decides upon the order of distribution of the rotating fund. Members wishing to receive the pool before their scheduled turn must present their case before the group. In some cases, tontines use a bidding process to determine the allocation of their rotating fund. No matter which mechanism is used to determine the rotation schedule, it is often flexible because members know each other and the group operates in solidarity. Members who cannot afford the regular monetary or in-kind contributions on a given rotation are typically asked to catch up by the next meeting, without paying interest or fines.

Members of combination RoSCA/ASCAs make an additional, smaller contribution to a separate, accumulating group fund. The accumulating fund does not rotate, but instead may be utilized for emergencies, group projects, or as an intra-group loan fund that grows as borrowing members repay their loans with interest. The accumulating fund may be disbursed after a set period of time such that group members receive shares proportional to their contributions over the course of the cycle.

Tontine members use their lump sums to invest or re-invest in both farm and off-farm income-generating activities. Members also typically use part of the fund for household consumption needs, school fees, or social events. Membership in Kelemba is based on geographical proximity and an individual's capacity to contribute to the group fund(s), i.e., he or she must participate in some type of income-generating activity. The Kelemba structure pools risk and provides insurance for communities that have long been deprived of any government-sponsored social services. More than simply a financial mechanism, however, tontines endure because they are both born of and reinforce local solidarity networks.

2.2 KELEMBA IN THE CAR

Kelemba are prevalent and complex in the CAR, and myriad communities utilize them. They serve as a socio-economic recovery mechanism in post-conflict areas, and safety nets that pool limited community assets to maximize utility for the rural poor.[12] For both urban and rural populations, Kelemba substitute for formal financial

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[10] Some RoSCAs save in-kind (in items such as soap, oil, etc.) or contribute labor to each other's fields either as an alternative to or along with cash. See Section 4.0, Findings, for further discussion of Kelemba characteristics in the project sites.

[11] The rotation order can be based on need, seniority, lottery/bidding or other qualities but is most often agreed upon as a group prior to a rotation cycle. Columbia University and UNDP CAR 2008

[12] Columbia University and UNDP CAR 2008

intermediation, which is only available for elites. From the southern city of Mbaiki to northern Paoua and Ndélé in central CAR, Kelemba groups have shown great resilience to hardships such as armed conflict and banditry, geographic isolation, and depressed local economies.

Most tontine members participate in tontines to access a "safety net" mechanism: a combination of communal social support and access to lump sums. Periodic lump sums of cash from the rotating fund are greater than those which most individuals can generate or access on their own. Lump sums enable members to intensify existing income generating activities or diversify their activities. These activities may be undertaken individually or collectively. Market traders often use their rotating fund to purchase agricultural commodities at a low unit price for resale at a higher margin. Farmers, on the other hand, typically purchase tools or additional seed to increase their productivity or output, or to pay for the transport of their products to Bangui where they can sell them at higher prices. Many members also report that they use their lump sums to pay for educational or health expenses. This link between economic and social needs again exemplifies the safety net mechanism inherent in tontines – they allow members to respond to emergencies.

Members also appreciate the opportunity to safely "deposit" savings. This makes sense given the dearth of access to formal financial services, especially in the remote post-conflict areas where we conducted our study. While not a substitute for banks, tontines enable members to store a portion of their saving outside of their residence, providing a modicum of security and helping to ease pressure from other family members to spend or lend their savings against their wishes.

Many Kelemba are also ASCAs, and part of or the entire accumulating fund is almost always granted to members on an ad hoc basis for emergencies (illnesses or funerals). In some Kelembas, the accumulating fund serves simultaneously as a loan fund, whereby individual members borrow a portion of the fund to finance their income generating activities and pay back the loan with ten to twenty percent interest. Borrowers must first have the group's approval for their intended use of the loan, but generally loans are disbursed for any economic (non-consumption) activity. Some Kelembas also use part of their accumulating fund to invest in a group field or communal income generating activity (e.g. home-brewed beer production or livestock raising).

Other operational characteristics of various Kelemba in the CAR include: impromptu cash or in-kind contributions for emergencies, the maintenance of an in-kind fund of materials needed for funerals or other social events, an in-kind rotating fund of household products to be used for consumption or retail, and labor tontines whereby members work on each other's fields on a rotating basis.[13]

While all of these mechanisms serve to support income-generating activities, provide a safe "deposit" for savings outside of the home, and provide types of insurance or an economic safety-net, members equally value the social aspects of Kelemba. The majority of Kelemba members are women, who have historically had less access than men to formal finance despite their participation in productive activities. Kelemba empowers women and other vulnerable groups such as returnees, widows, and youth by facilitating greater financial autonomy. The Kelemba small group structure and regular meetings can also serve as opportunities for discussion of social issues and for conducting a variety of trainings. In some areas of the country, Kelemba that are embedded in women's groups or farmers' cooperatives are liaising with UN agencies or NGOs to access maternal health awareness and other trainings. In the longer term, strong Kelemba groups can even signal to semi-formal and formal financial service providers (MFIs and banks, respectively) the existence of a potential client base.[14]

Artisanal miners and their families, despite their involvement in the lucrative diamond sector, are vulnerable to exploitation by other key actors and lack financial autonomy. The Kelemba structure could provide secure saving, intra-group lending and other financial services. Most importantly, Kelemba could contribute to increased cohesion and solidarity among miners by encouraging communal labor, savings and investment, and social safety

[13] Columbia University and UNDP CAR 2008

[14] Ibid

nets. These social and economic aspects could allow miners to reap greater benefits from their economic activities, and improve their livelihoods and those of their families. Before attempting to facilitate Kelemba creation for miners, however, it is critical for program staff to understand the current diamond production financing mechanisms and the specific challenges facing miners.

2.3 DIAMOND VALUE CHAIN FINANCE

The diamond value chain encompasses all activities in the diamond sector from the level of production to international export to the final consumers. Value chain analysis looks at relationships between and among actors within and peripheral to the value chain. The financing of miners by collectors in the pilot areas constitutes value chain finance, as the lenders (collectors) are embedded in the diamond value chain and provide loans specifically for the purpose of value chain activity.[15] As this financing occurs directly between two actors in the value chain, rather than through a contractual relationship with actors outside the chain, it can be described more specifically as *direct* value chain finance. The loans (in this case, both in cash and in-kind) are linked to implicit purchase agreements between miners and collectors.

There are advantages to this type of directly embedded value chain finance. The lender, in this case the collector, has intimate knowledge of diamond price fluctuations and other risks, which include the purchase of poor quality stones, contract shirking or side-selling by miners, and unpredictable lending and borrowing opportunities. Collectors may be able to more easily absorb these risks than could an external financial institution. The lender is also able to mitigate risk more easily than an external actor because of his proximity to borrowers. Collectors can share knowledge and may even learn from other community members about a certain borrower's (miner's) repayment history. Proximity can also help borrowers, as collectors (lenders) live in close proximity to borrowers and can provide ongoing support. The danger with directly embedded value chain finance, however, is that the lender often wields too much control over the borrower. By raising miners' awareness of alternative or complementary financing mechanisms such as Kelemba, PRADD aims to mitigate detrimental aspect of diamond value chain finance in the pilot areas.

[15] If lenders were providing loans for simple consumption, this would not constitute value chain finance.

3.0 RURAL FINANCE MISSION OVERVIEW

3.1 OBJECTIVES

The consultant was tasked with the following mission objectives:

Objective 1: Conduct participatory analyses of current financing mechanisms for mining activities and of alternative savings and credit mechanisms (Kelemba) in the target areas.

Objective 2: Organize multi-stakeholder knowledge-sharing workshops between key actors in the target areas in order to analyze the possibility of applying alternative finance mechanisms to mining activities in the target areas.

The consultant designed and carried out these information-gathering and awareness-raising activities in order to assess their potential to improve the livelihoods of artisanal miners, culminating in recommendations for the PRADD program.

3.2 METHODOLOGY

Previous research

The consultant had previously studied alternative rural finance mechanisms in the CAR, and brought this knowledge to bear on the PRADD analyses. Previous primary research focused on the characteristics of Kelemba in other regions of the CAR, which contributed to the formulation of relevant study guides to gauge the presence and nature of Kelemba in the pilot areas. Previous secondary research included a literature review of the CAR country context (political, economic and social).

Fieldwork

Major stakeholders[16]

The primary stakeholders in the rural finance analysis and workshop exercises were artisanal miners, *débrouillards,* members of Kelemba groups in the pilot communities of Ngotto and Bossoui, and collectors in Boda. Miners comprise mostly men and some women who own land for production and usually employ diggers, but occasionally conduct all production activities themselves. Kelemba members are mostly women and some men who engage in group-based saving and lending to support income-generating activities (market trade and agriculture). Many Kelemba members have husbands or family members engaged in artisanal mining. Collectors are seven men (only one Central African) who buy diamonds from miners, and occasionally from other producers, and sell to buying offices and national companies. These three groups represent the main actors at the production and collection stages of the artisanal diamond value chain. *Débrouillards* (also known as "false artisans") are economic operators

[16] See Annex 1.0, Stakeholder Analysis.

who obtain artisanal mining patents which enable them to buy diamonds, but who have no land and who conduct no actual mining. The *débrouillards* are considered "legal" miners, since they hold patents, but their possession of patents for the sole purpose of collecting diamonds constitutes an illegal activity. Nevertheless, *débrouillards* are influential actors in the PRADD pilot zones and some participated in the field activities.

The team and the consultant also met with secondary stakeholders in the public and private sectors, namely the Mayor of Ngotto and Bossoui and the head of Groupe Perrière, a diamond research and exploitation company based in Bangui that operates in the program areas. The consultant also spoke with the President of the National Union of Mining Cooperatives of the CAR (UNCMCA), an apex organization for mining cooperatives based at the Ministry of Mines.

Activities

The team conducted separate ***focus groups*** with Kelemba members and artisanal miners. In Ngotto, the focus groups comprised 18 Kelemba members and 20 miners. In Bossoui, the team conducted focus groups with 19 Kelemba members and 25 miners. For each of the two groups in each location, participants were split into three groups of roughly equal size, and PRADD mission staff and local program facilitators (AFLs) utilized the focus group guides to steer a semi-structured discussion. Participant volunteers read and translated the guide questions in each group and took down answers. This activity encouraged ownership and buy-in of participants.

Following the smaller focus groups, the team facilitated a ***large-group discussion*** during which participant volunteers conveyed the highlights of their focus group discussions to the larger group. A participant volunteer noted main ideas and points of comparison on a large easel. This exercise facilitated information exchange among the participants and demonstrated the range of experiences, particularly with regards to mine financing, of various individuals.

In both locations, the team facilitated a ***participatory value chain analysis*** with an emphasis on value chain financing. In Ngotto, this was conducted informally during the focus groups, but the team realized that the exercise could be more meaningful if conducted as a large group. Since participants had widely varied finance relationships, sharing of examples and experiences as a large group resulted in a richer and more complete value chain design.

The culminating activities in both program sites were ***multi-stakeholder workshops*** that brought together the Kelemba members and artisanal miners. Building on the questions posed to each participant group in focus group and large group discussions, the participants jointly conducted strengths***, weaknesses, opportunities and threats (SWOT) analysis*** of the Kelemba model with a focus on its application to mining activities. In Bossoui, participants evaluated the characteristics they identified and selected the top three strengths and opportunities that Kelemba offered with respect to mining activities. This brought in the notion of planning and helped miners, in particular, imagine alternative finance scenarios.

The team provided the Mayor of Bossoui and Ngotto with a ***mission debriefing*** after conducting activities in Ngotto and solicited feedback. This meeting facilitated useful information exchange between PRADD and a local government partner.

Finally, the team conducted ***semi-structured interviews*** with five of the seven collectors in Boda. Members of the Mining Brigade had to accompany the team in order to gain access to the collectors. The collectors' perspectives were crucial to obtaining an objective view of the nature of value chain finance.

In Bangui, the consultant also conducted ***semi-structured interviews*** with the President of UNCMCA and the head of Groupe Perrière, which were useful for triangulating information collection and gaining a sense of the perceptions and interests of secondary stakeholders.

Research limitations

The number of focus group and workshop participants in the field was limited by the budget for participant per diems – the PRADD team could only ask the AFLs to gather 15 to 25 participants per focus group or workshop. In both Ngotto and Bossoui, all mission activities were attended by additional Kelemba members and miners who were not on the official participant lists provided to program staff by local facilitators. Other interested villagers also attended some of the activities. At the multi-stakeholder workshop in Bossoui, attendance surpassed 100. The presence of community members not receiving per diems for their participation speaks to local interest in the program, but the observers were not necessarily members of target groups. The team could have gathered more information from a larger of the target populations (miners and Kelemba members) without the constraint of a per diem list. Per diems therefore limited the sample size for this research. They also provided financial incentive for participants to attend meetings and workshops, which did not allow the team to gauge local demand based solely on the content of the mission activities. In future, program staff may want to consider eliminating the per diem policy in order to garner more information from a greater number of stakeholders and ensure that program activities respond to demand in the local community.

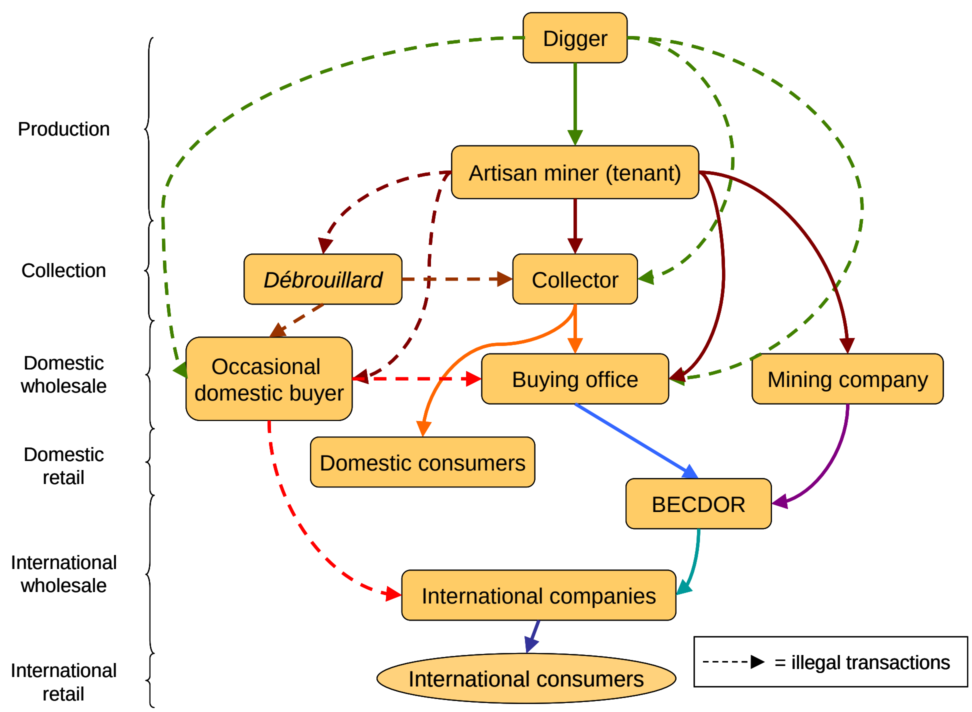
Also, while members of the Mining Brigade allowed the team to gain access to five of the seven licensed collectors in Boda, the image of proximity between program staff and the Mining Brigade could risk giving an impression of program complicity with all of the latter's activities, including alleged corruption. Miners may be less trusting of the program's intentions in future if they perceive program staff to be friendly with members of the Mining Brigade, since many view the Mining Brigade as supporting collectors' over miners' interests.

4.0 FINDINGS

4.1 OVERVIEW OF FINDINGS

The primary source of financing for artisanal diamond mining in the PRADD pilot areas is *directly embedded* in the diamond value chain. Actors at the collection level – legal collectors and *débrouillards* – provide cash and/or inputs (tools, daily food stipend, and diggers' permits) to miners and their teams for the purpose of production. The mutual understanding is that that the miners will then sell their products to the collector who provided them such financing, and the loan capital is deducted from this sale. In practice, diamond value chain financing is much more complex, fluid and often opaque. It is characterized by bilateral lending and borrowing relationships that can be vertical (between actors at different levels of the value chain, such as miners and collectors) or horizontal (amongst actors within the same level of the value chain, such as between collectors). The next section describes in detail the financial relationships between these various actors, with a focus on the production and collection levels, as this is where the PRADD program looks to focus its support.

Figure 1. Diamond value chain in the PRADD program areas (based on participatory value chain analysis with miners). Each actor's transactions are represented by a different color.

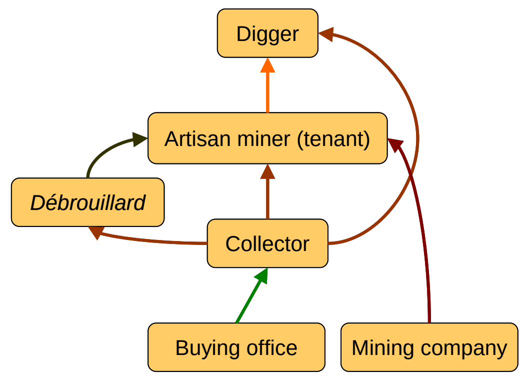


4.2 CURRENT DIAMOND FINANCING MECHANISMS IN PILOT AREAS

Débrouillards to miners

Débrouillards act as secondary middlemen: they receive financing from other collectors to finance miners and monitor their activities. This relationship is more likely in remote or less accessible areas where a collector finds it more profitable to hire a *débrouillard* as a proxy than to work in the area himself.

Figure 2. Value chain financing in program areas (based on participatory analysis with miners). Each actor's financing is represented by a different color.



Miners to diggers

Diggers must also purchase permits from the government, even though they do not own the land on which they work. Miners sometimes pay for their diggers' permits, which cost 2,000 FCFA[17] and are purchased from the Mining Brigade. In return, the digger commits to a year of service with the miner. This agreement usually takes the form of a verbal or written contract.

Collectors to miners and diggers[18]

Miners become indebted to collectors in order to access tools, equipment and other forms of capital to pay for temporary laborers. These loans are reimbursed via the sale of the diamond from the miner to the collector. Many miners complain that they have no choice but to accept collectors' offers, regardless of the real value of the product. Collectors and miners form relationships of convenience based on pricing and reliability. The relationships can range in duration from a month to many years.

Collectors typically make large investments: one collector spends approximately one million FCFA per mining hole, and another said that seven to eight million FCFA are necessary to find any diamonds at a given mining site. With 50 million FCFA, one collector specified, he would use 10 million FCFA to finance miners and 40 million FCFA to buy the products.

Collectors engage in in-kind pre-financing and contract labor for both male and female miners. They provide some miners with teams of hired diggers equipped with tools such as shovels, pails, sieves, drills, scales, magnifying glasses and occasionally even motorized pumps. Collectors also provide weekly stipends for diggers on an ongoing basis. One collector employs (ostensibly vis-à-vis the miner) between 60 and 125 temporary diggers at a time. He pays them 5,000 to 6,000 FCFA per group of four to five diggers, which amounts to 1000 to 2000 FCFA per person, per week. He also provides them with two sacks of cassava and meat per week, at a cost of about 30,000 FCFA. This relationship can be short- or long-term depending on the success of production, a collector's financial status, and the rapport between collectors and miners.

The loan capital provided for the payment of diggers' salaries is supposed to be paid by collectors to miners to diggers, as the miner is the legal landowner. All the collectors insisted that they do not have direct contact with diggers, but it may have been difficult for the PRADD team to elicit honest responses to this question since collectors know that a direct collector-digger relationship would be illegal. The value chain conceived by miners, however, affirmed that some collectors do finance diggers directly. Miners also noted that diggers who pay for their own permits often bypass the miner and sell products directly to collectors in a clandestine fashion, which constitutes one of the illegal transactions in the diamond value chain (Figure 1 above).

[17] The exchange rate as of completion of this report was 420 FCFA to US$ 1.

[18] Collectors interviewed in Boda: Amadou Gissé, Mali; Mahamat Awal, Chad; Douglas Atamere, Chad; Cherif Dahirou, Chad; Camille Guimalet, CAR. Other stakeholders refer to collectors as "Muslims," "Arabs," or "Chadians." Two of the five collectors with whom we spoke (Gissé, Awal) work directly for mining companies (SODIAM and BADICA respectively).

Some collectors also provide loans (ranging from 100,000 to two million FCFA) to miners who come to them with economic difficulties and whom they consider trustworthy. The capital is then deducted without interest from the sale price of the product. They also provide occasional grants for cases of illness or death of a miner or a member of his family, which can range from 30,000 to 50,000 FCFA. These grants and no-interest loans may sound too good to be true; while it is possible that some collectors who have particularly strong relationships with certain miners may provide some assistance for emergencies, it is possible that larger loans

Lending to miners is more common than providing security for savings, but one collector said that he would, upon request, keep a portion of the miner's diamond revenues for him until he needs to access the cash. This is usually for a period of 1-2 months. This collector also provides advice on money management to the miner. One miner said he saves as much as half the sale price of a mined rough diamond (he gave the example of one that was sold for 800,000 FCFA) with a collector or a company. He re-invests the other half of the revenues in his work.

CASE STUDY: DÉBROUILLARD CÉCILE MANDAZOU, NGOTTO

Ms. Mandazou, a female artisanal miner originally from Bambari, first began her work as a collector, but has never saved or taken credit from collectors. She has been a miner for thirty years, and holds a patent but operates as a *débrouillard* as she does not own land. She participated in one Kelemba for agricultural activities but never for mining activities. She employs about 50 diggers in 4 mining sites, but says she still has problems procuring adequate materials for her work. She says that life can be "a bit difficult" as one of the only women in her field.

Collectors also occasionally provide a "gift" of a motorcycle to a miner upon completing a particularly lucrative transaction with him. The miner may ask the collector to safeguard the gift for a short period of time, which constitutes a form of in-kind savings. The miner inevitably "comes to [cash in] on the gift" within a short period of time, when the rest of his revenues run out.[19] Collectors may also provide smaller gifts of tools such as shovels and sieves.

Collectors lend among themselves both in cash and in-kind, e.g. in diamonds or fuel for transport, to support mining or other economic activities. This lending occurs on an ad hoc basis and without interest. Collectors may also seek short-term loans from the buying offices, which they repay directly following a sale. No collectors avowed belonging to a Kelemba, but there is an association of collectors that saves together and uses its group fund to pay for security guards when necessary. The collectors in the PRADD pilot zones do not have experience with banks, so all of their financing comes from the buying offices or their own networks. Miners and PRADD program staff believe that collectors maintain informal financing arrangements with Muslim contacts abroad (in Central and West Africa and possibly the Middle East) but this is a sensitive topic to which no collector referred. The team was hesitant to broach the subject for fear of losing access to collectors.

Collectors often pursue parallel economic activities, which also serve as investments and secured savings: real estate, transport, investment in or ownership of local small businesses and livestock. They make no pretexts about their investments, which are for profit, not charity. Some collectors mentioned hearing about community development projects such as schools or pharmacies financed by field-based diamond buying companies, but none of the seven collectors had contributed to such projects.

Buying offices and companies to collectors and miners

The collectors all mentioned a type of golden age when mining companies were flush with cash and didn't hesitate to dole it out to miners in the form of loans and materials. The miners were in turn efficient – taking four to five days to dig and prepare gravel for the washing phase – as opposed to two or more weeks now.) Apparently the companies began to lose large sums of money when production decreased along with real diamond prices, and companies ceased to provide regular financing to miners. At the same time, they withdrew their offices from the field and are now based only in Bangui. They also refer to the presence of road bandits (*zaraguinas*) and resulting insecurity as contributing to the depression of the sector. As the sector has become less profitable and corruption

[19] Interview with collector Cherif Dahirou, Boda, 7 August 2008

has increased, there has been an increase in the number of monitoring agents and supervisors in the mining areas, as well as an increase in employment of temporary laborers.

Diamond companies do sometimes hire and finance collectors as their representatives in the field (this was the case for two collectors in Boda), but they claim not to finance miners directly. Participatory value chain analysis with miners revealed that direct financing from companies to miners does exist, but no miners admitted to pursuing this type of relationship. Participants acknowledged the existence of deals between companies and miners, but it was very difficult to garner any further information on this practice.

Outside lenders and miner self-financing

Miners often ask friends or better-off community members (usually retired male civil servants who access pension funds) to finance their digging activities until the gravel has been extracted and is ready to be washed. After finding a diamond, the miner reimburses the lender with interest. The lender, however, takes on 100% of the risk: if the miners do not find any diamonds, his initial investment is a sunk cost.

Miners also use the resources from farming to finance mining activities. Some miners save some of their mining income at home, as well as in tools that constitute in-kind savings (which can be sold at a later date if necessary). Some miners keep written accounts of their diamond sales (*cahier de dépenses* or *cahier de comptes*), but 94% do not have an official government accounts book, since this is linked to the purchase of a patent.[20] Some of the miners in our sample had received management training from a local NGO, Échelle, or as part of a degree program in Bangui. The large majority of miners, however, have never received any formal training in MSME management or financing.

CASE STUDY: COLLECTOR CAMILLE GUIMALET

Mr. Guimalet is the only collector originally from the CAR. He started out as an artisanal miner and has also worked for a private diamond and gold research and exploitation company.

When queried about the relationship between miners and collectors, he said that some miners are "dishonest," and engage in side-selling even after being pre-financed by a collector. He encourages contracts (with copies for the Ministry, the miner, and the collector) but didn't have any on hand. He estimates that about 80% of contracts between collectors and miners are verbal, but insisted that this is according to the preferences of miners, who are often illiterate and fear exploitation or legal persecution.

Mr. Guimalet hearkened back to his days as a young artisanal miner in the late 1970s, when the State provided demonstration mining sites to train students. He emphasized the importance of this type of applied learning and was sorry that this support had been discontinued. He also regretted that current mining companies were cutting corners in exploiting mining sites without conducting proper research.

He cited a lack of solidarity among miners as one of the reasons for the prevalence of foreign-born diamond collectors, and encouraged the development of miners' associations that could acquire group permits as per the Mining Code. Although Mr. Guilmalet has been operating as a collector for over 30 years, he still remembers how difficult it was for a native non-Muslim to break into the field. As General Secretary of the Federal Union of Collectors, he has established a name for himself, and now relies on other collectors for loans and vice versa. He admits, however, that he cannot access the regional or international Muslim economic solidarity networks.

Mr. Guimalet also cited the need for further awareness-raising and training of artisanal miners. Even with better knowledge of the sector or management training, however, he acknowledges the speculative nature of diamond mining. "It's a poker game," he said wryly.

La Brigade Minière (The Mining Brigade)

The Mining Brigade is not directly involved in diamond value chain finance, but does have an important impact on the enabling environment of the value chain. The Mining Brigade is a special unit created by and under control of the Ministry of Mines, Energy and Hydraulics charged with enforcing the mining code. In practice, however, this unit is reportedly plagued by serious problems of corruption. While the mining code seeks to encourage the growth of artisanal mining and help local and national actors, members of the Brigade appear to have better relationships with collectors than with miners or diggers. Miners, most of whom sell diamonds to collectors illegally as they do not hold patents, often find themselves the brunt of crackdowns on illegal activities. As we have seen in the value chain analysis, however, illegal transactions are rampant and not confined solely to the activities of miners.

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[20] ARD, Inc. October 2007

CASE STUDY: GROUPE PERRIÈRE DIAMOND COMPANY

Lawrence Perrière is head of Groupe Perrière, a diamond research and prospecting company operating in program areas. The company has only been working in the Lobaye for three years, and Mr. Perrière has been with the company for one year. Groupe Perrière currently has a research permit, which includes the right to extract but not to sell diamonds. Mr. Perrière has, however, sent and even sold some samples to companies in Antwerp. Groupe Perrière owns an area of about 1000 km^2 of land with many small rivers, so Perrière deals with both artisanal tenant miners and divers, who occupy a similar level of authority in the riverside areas.

Groupe Perrière's financing to miners involves inputs such as tools and materials for digging and washing gravel. The company is still in the testing phase of both machines and staff (divers). Mr. Perrière insinuated that the nascent nature of his work in the area was part of the reason for which he has no contracts with any workers, but said that even when his company enters the "action" phase he would only develop contracts with divers and tenant miners (the "upper workers").

When asked if he would like to have contracts with the tenant miners in his research areas, he said that ultimately it would be more profitable for him to have contracts than the current chaotic system. He would prefer a reliable group of miners and diggers who are happy with their salary or remuneration, who will bring all their diamonds directly to him, and thus discourage side-selling.

He currently employs his own team to prospect and do research. He buys diamonds directly from the tenant miners in his area. He said that sometimes those collectors who operated illegally on his land have come to him soliciting legal work, and he does negotiate in an attempt to co-opt rather than alienate them. Mr. Perrière also said that collectors sometimes act as buyers, and both collectors and buyers may send *débrouillards* to illegally collect diamonds from the area.

When asked about typical conflicts with other stakeholders, he only cited problems with other mining companies, and Getrad in particular. Getrad's land area borders on Groupe Perrière's, and apparently Getrad staff were prospecting and selling diamonds from Groupe Perrière land until Mr. Perrière took them to court over the matter.

Mr. Perrière's discussion of relationships between key stakeholders in the mining area painted a chaotic picture of artisanal miners, collectors, *débrouillards* and even mining companies who alternate between licit and illicit work depending on financial incentives.

4.3 ALTERNATIVE FINANCING MECHANISMS IN PILOT AREAS: KELEMBA

Operational and structural characteristics

Kelemba are predominantly composed of women and in some cases include men. Some artisanal miners belong to Kelemba, but the groups primarily comprise farmers and local market traders.

Kelemba members contribute between 1,000 and 5,000 FCFA per person per week[21], and as the number of members often ranges from ten to forty, some group funds can exceed 100,000 FCFA per rotation. While some Kelemba hold meetings to coincide with each rotation of the group fund, others simply deposit their bi-weekly contributions at the home of a *maman Kelemba* (Kelemba leader), who then distributes the group fund for each rotation.

Only one of the Kelemba from the Ngotto sample includes an accumulating fund. Members of these groups contribute 250 to 500 FCFA per person and take 2,000 FCFA from the rotating fund at every round (every one to two weeks) for the accumulating or solidarity fund.[22] Other Ngotto groups had tried to implement this mechanism in the past but cited a lack of sufficient revenues to save even 100 FCFA per week in addition to their rotating fund contributions.

> **CASE STUDY: ARTISANAL MINER FLORENT GBAZIBÉZÉ, NGOTTO**
>
> Mr. Gbazibézé does not have a patent, which makes him a typical artisanal miner in the project zones: he is a property owner, but without a patent his diamond exploitation operations are illegal. He operates independently using his own tools and employing his children as diggers. He often takes his products to the same collector in Boda. He belongs to a Kelemba and uses his turn of the rotating fund to purchase clothing for his family and support his agricultural activities.

The accumulating fund is more common in Bossoui than in Ngotto. Groups in Bossoui often save 100 to 500 FCFA per member per rotation for their accumulating fund, and sometimes also take 500 FCFA from the rotating fund at every round. The accumulating fund serves as a type of mutual insurance in the case of an illness or death in members' families, and can also serve as a loan fund. In Bossoui, one Kelemba group utilizes its accumulating fund for intra-group loans to support members' income-generating activities, and charges 20% interest in order to grow the fund.

One group in Ngotto saves in-kind with each member contributing five liters of home-brewed beer per rotation. Members then take turns selling the beer. Many groups work together on projects such as a communal field or livestock raising. They also engage in labor tontines whereby the group works together on each member's personal field in turn.

Income-generating activities

The utilization of Kelemba funds in the PRADD program areas mirrors that of other areas of the country.[23] On their turn of the rotating fund, Kelemba members finance household consumption, school and health fees, and re-investment in their income-generating activities. When Kelemba members use their rotating fund for re-investment, this most often takes the form of market trade and farming. Women prepare and sell local beer and cassava fritters, increase their wholesale purchase of grains and other food products in Bangui or regional markets

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[21] This is a normalized figure, and some groups contribute on a bi-weekly or monthly basis. Groups that contribute 5,000 FCFA per week were often composed of female miners who have access to larger sums of cash than women who are only involved in agriculture and petty trade.

[22] Members call this fund the "*caisse noîre*" or black box, but this French term connotes money laundering in the larger Francophone world, so this report refers to this fund as the accumulating or solidarity fund.

[23] Columbia University and UNDP CAR 2008

for retail in the local market, or invest further in agricultural production of grains, legumes, and/or vegetables. They may also invest in animal husbandry or increase their livestock holdings (sheep and goats), which can be sold later in the year to take advantage of cyclical price increases. The purchase and resale of agricultural products or livestock also constitutes a form of in-kind savings. The price of these goods often appreciates, so upon their sale the owner can access a lump sum of cash with earned interest.[24]

4.4 POTENTIAL APPLICATION OF KELEMBA TO DIAMOND FINANCING

Opportunities: stakeholder response to program ideas[25]

The participatory SWOT analysis revealed that primary stakeholders perceived benefits from the potential application of Kelemba mechanisms to the diamond mining sector.

During the workshops, participants identified both economic and social characteristics as the major strengths of Kelemba: solidarity, the accumulating or solidarity "insurance" fund, and sound money management. They also identified strengths such as knowledge sharing and group reflection, secure and regular savings, and utilization for income-generating activities. Financial autonomy, individual investment and investment in group projects constituted the most important opportunities offered by Kelemba for miners.

Participants noted that Kelemba group funds could be used to procure group equipment and tools, as well as respond to members' short-term consumption needs and medium-term need for secure saving and borrowing. They also highlighted the potential for re-investment in mining activities, investment in parallel or alternative income-generating activities, and longer-term community development through group projects and external partnerships. Miners did not bring up the possibility of labor tontines, but this is one example of a concrete, collaborative activity that could reinforce a miners' cooperative structure.

Challenges: characteristics of the socio-economic context

Despite the participants' openness during the participatory SWOT analyses, an inherent lack of solidarity exists among miners – indeed, mistrust, dishonesty and individualism were identified as key weaknesses within existing Kelemba, and participants worried that abuses of trust and intra-group conflict would plague miners' Kelemba. Any program activities that seek to promote group-based saving, lending and/or diamond production must first evaluate the capacity or willingness of miners to combine efforts in an equitable and sustainable manner. The PRADD program should address this social characteristic of the target areas through awareness-raising sessions with miners about the benefits of solidarity and cooperation, focusing on financial autonomy, prior to helping miners create cooperatives and Kelemba.

> *"Men do not want [the community] to know the secret of their [income]."*
>
> -Female Kelemba member
> Bossoui, August 2008

Even at the household level, individuals expressed caution in mixing mining and other types of income. Female Kelemba members in Ngotto said that they are extremely reticent to finance mining activities – even their own, in the case of female miners – because of the inherently high risk therein. Female Kelemba members in Bossoui, however, confirmed their financing of diggers via their husbands, who are miners.

Male miners, for their part, believe that Kelemba is a "women's affair." Both male and female Kelemba members perceived men to be more individualistic than women. Men maintain an opacity in their financial dealings, which is

[24] The profit from this sale, which constitutes the "interest" on savings, may not always be enough to cover inflation, so the real value of the revenue may be equal or even lower than that of the initial purchase price of the item.

[25] See the results of the participatory SWOT analyses in Annex 2.0.

also related to the competitive and even cutthroat mining environment. Other women said that men specifically hide their revenues from their wives. Both men and women expressed a general sentiment that men in the mining community are more likely than women to spend money outside the household on non-essential items. Maintaining a veil of secrecy over the details of their income may allow them to more easily make these types of non-household purchases without incurring questions or conflict from their wives.

More concretely, both miners and *débrouillards* fear that they would not be capable of reimbursing a Kelemba "loan," or turn of the rotating fund, through regular group contributions. This is mainly attributable to the speculative nature of their mining activities, but also speaks to a lack of knowledge and training in good RoSCA/ASCA practices. Female Kelemba members in Bossoui expressed the need for training in Kelemba development, management and use of the rotating fund for interest-bearing loans.

The main challenges to the application of Kelemba by miners to mining activities are social in nature: both in terms of tense relationships and lack of trust among key actors, and with respect to lack of education and financial know-how specifically among miners. Future PRADD program activities must seek to bring out the strengths of the Kelemba structure, capitalize upon the opportunities specific to mining activities that miners themselves identified, and simultaneously seek to address issues of community trust and financial literacy. Members of local government and civil society with whom we spoke have neither the technical nor the financial capacity to carry out activities to this end: the local Mayor (of Bossoui and Ngotto) complained of a lack of government funding, and the UNCMCA is not active in the project zones. Both stakeholders were open to new project initiatives, however. The local Mayor, because he is not active in mining activities, could serve as an important liaison between farmers, collectors, project staff, and other important actors. Representatives of UNCMCA in Bangui also expressed an interest in collaborating with PRADD in the project areas, although they have no current plans to initiate their own activities in these zones due to a lack of funding.

5.0 RECOMMENDATIONS

The PRADD program looks to improve the livelihoods of artisanal miners with a view towards improving socio-economic conditions for mining communities more generally. The program does not seek to efface the middlemen, or collectors, but rather to look towards more innovative strategies through improved finance opportunities for producers. When considering interventions in value chain finance, it is important to analyze incentives and advantages of various finance providers. Replacing collectors or *débrouillards* with external financing, such as direct lines of credit to miners, risks negating the positive aspects of collector-based financing due to proximity – namely, risk mitigation for lenders and long-term assistance for borrowers – without actually decreasing the power differential between lenders and borrowers.[26] Providing external credit lines has generally failed to encourage sound repayment practices, as borrowers are likely to feel less pressure to reimburse an unknown external lender than they are their neighbors and friends.[27]

Rather, supporting existing local mechanisms such as Kelemba and encouraging their application to diamond mining activities would enable miners to better manage their funds and access more inputs through group procurement, as well as encourage self-reliance by utilizing their own savings. Supporting Kelemba constitutes a demand-driven approach – if miners see benefit in saving, growing their money, and accessing their own inputs, they will be willing to invest some of their revenues in the group fund. The Kelemba mechanism allows poor and/or relatively powerless groups to become their own finance providers. Since members utilize their own savings to fund loans, group projects and re-investment in income-generating activities, they therefore have a greater stake than would any external actor in the profitability of their activities. This mechanism also allows for greater financial autonomy and more reliability than collector-based financing, as members can count on a lump sum at regular intervals.

The program seeks to empower artisanal miners by increasing their social and financial autonomy, but also to contribute to increased profitability of artisanal diamond mining at the production level in order to improve community livelihoods more broadly. Kelemba would not replace the collectors, although admittedly the introduction of an autonomous financing mechanism would have an impact on the current governance structure. Collectors must perceive the collective benefits of Kelemba if they are to finance cooperatives or groups of miners. Collectors have complained about miners' abuse of their trust, either through side selling or non-repayment of loans, and would be happy to see miners better organized and providing a more reliable source of production.

Given the socio-economic challenges as well as the opportunities for Kelemba to help improve the livelihoods of miners in the program areas, the consultant recommends the following for the PRADD program:

1. **Promote a culture of savings via further awareness-raising activities detailing the utilization of Kelemba group-based savings.** Encourage a culture of savings by demonstrating potential benefits that can contribute both to increased legality (for example, through group purchasing of patents) and profitability (through group procurement of inputs and tools) of artisanal mining. Work with collectors to explain the potential benefits of miners' Kelemba for them – namely, more reliable production sources and loan repayments. This type of awareness-raising can serve as a base for the other project activities recommended below, which are designed to increase solidarity, income and financial autonomy of miners.

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[26] In Sierra Leone, one of the main design problems for a similar project was the replacement of local "supporters" (collectors) with a USAID-linked investor, which effected a different kind of dependency rather than increased independence for miners. DDI and PAC 2008

[27] See a discussion of this concept, termed by Montgomery "cold" vs. "hot" loans, in Murray and Rosenberg 2006.

2. **Help create robust mining cooperatives and consider subsidizing the purchase of group patents.**[28] Miners expressed strong interest in the idea of forming cooperatives with the potential for partnerships with the Ministry or external actors (NGOs), but they must be encouraged to create robust structures that increase trust and pool risks and capital so that the whole is stronger than the sum of its parts. Mining cooperatives may access a group patent and production notebooks from the Ministry to carry out collaborative production, which amounts to a mining labor tontine. The program may consider subsidizing these purchases for cooperatives that hold elections for cooperative board members, meet regularly, identify a shared vision and goals, create a rotating fund or an emergency fund, or engage in other activities that exhibit a commitment to creating a durable structure that can lead to increased legality and profitability. Collaborative productive activity will help develop group cohesion and encourage discussion among miners, and will help create robust cooperatives rather than hollow legal structures.

3. **Help create Kelemba mechanisms within the cooperatives and train both active and potential Kelemba members (potential cooperative members) in RoSCA/ASCA development and best practices**.

   An MSI/USAID mining cooperatives project in Sierra Leone found that cooperatives work best if they are based on a simple scheme and strengthened local practices.[29] The Kelemba structure already exists locally and is recognized by the target group, can be adapted to a combination of mining and alternative income-generating activities, and allows for innovation. A strong Kelemba can make for a strong cooperative, as members are likely to exhibit greater buy-in if they contribute their own savings to the group than if they had external or no group funds.

   RoSCA/ASCA best practice training should include:

   - **Re-investment in income-generating activities.** Members may use a portion of the rotating fund for household consumption, but only re-investment in mining and parallel income-generating activities (agriculture and market trade) will serve to increase miners' incomes and improve their livelihoods.
   - **Use of the accumulating fund for interest-bearing loans.** This is the only mechanism by which Kelemba can truly grow group funds for further re-investment.
   - **Use of the accumulating fund for communal and community projects.** Engaging in group projects (e.g. mining production, farming, livestock raising) will serve to pool strengths and maximize the utility of the Kelemba structure. It can also contribute to increased solidarity among miners. If miners agree upon a community project goal (e.g. construction of a school, pharmacy, or health center), they will begin to think about mining activities with a longer-term perspective. A community project also encourages linkages between the mining sector and the larger community.

   Kelemba in the program areas lack heavy safes (*coffre-forts*) and members worry about the security of their funds. The program might consider **providing small safes** with multiple keys, or heavy safes in order to further encourage a culture of savings and buy-in from miners.

   Program staff and AFLs could carry out awareness-raising sessions followed by multiple trainings using a pictographic manual that they have developed collaboratively with local or international experts. Strong Kelemba groups in each location, utilizing a knowledge sharing workshop structure similar to that used during the rural finance mission, could carry out some of this training. This would also serve to validate existing local practices and encourage community involvement in the program.

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[28] UNCMCA is charged with these two responsibilities, but they are not active in the pilot areas and have not shown proof of operationality in any part of the country. USAID 2006

[29] MSI for USAID 2004

4. **Train miners in diamond sector-specific MSME management**. Even if miners have greater access to financial products and services, the profitability of their activities will only improve if they simultaneously improve recordkeeping and budgeting and adopt other MSME management techniques. If PRADD conducts additional training in **valuation techniques**, it should ensure that this training is available to all interested miners, and not only the AFLs. Participants in the participatory analyses complained that knowledge from training sessions for local facilitators did not "trickle down" to other miners as intended. Miners who are more knowledgeable about the value of the diamonds they sell are less likely to be exploited by collectors.

5. **Support parallel farm and off-farm income-generating activities.** Successful women's Kelemba, particularly in Bossoui, have diversified their income sources in order to maximize gains from mining, agriculture and market trade. The program should encourage this type of economic diversification, either through other types of training or the procurement of inputs for parallel or complementary income-generating activities. Parallel activities could include agriculture, local or regional market trade in agricultural products, and fishing. Activities complementary to mining could include artisanal jewelry production. Further study of local and regional markets will need to be carried out in order to help miners diversify into parallel or complementary economic activities that respond to local and/or regional demand.

   In conjunction with encouraging a culture of savings, revenues from parallel economic activities that are less speculative than diamond mining could also help miners to smooth consumption over periods of low production.

6. **Explore the possibility of a directed value chain relationship with diamond companies**, whereby a group of miners makes an agreement to source production only to a particular company, which in turn agrees to support the group as necessary to increase production. This support could take the form of subsidizing patent and production notebook purchases, training, inputs, etc. This relationship would necessitate written contracts between companies and groups of miners that specify terms and conditions, e.g. pre-financing, timing, minimum pricing, provision of inputs or training, penalties for side-selling, workers' rights, etc. Miners are already engaged in informal directed relationships with collectors, but formalizing these transactions through written contracts can provide increased security for actors at both production and collection levels. While Groupe Perrière seemed amenable to the idea of contracting with miners, PRADD will need to further vet and promote the idea of a more formalized direct relationship between companies and miners. This relationship may need to come at a later stage in program activities, once miners have demonstrated commitment and proper management of cooperatives and Kelemba.

Supporting the development of Kelemba within robust cooperative structures would provide outlets for further learning, through group trainings; greater financial autonomy, through group saving and lending; and increased solidarity, through shared goals, input procurement and labor. Miners will need this combination of increased knowledge, physical, and social capital in order to increase the legality and profitability of their activities and contribute to improved livelihoods for themselves and their families.

In the beginning, the program may need to subsidize certain group inputs such as patents, safes or even tools. As mentioned previously, providing external credit lines can prove counter-productive. Miners may not have enough cash at the start of the Kelemba rotation to contribute to multiple funds.[30] Initial subsidies could jumpstart group-based ownership, and the program could then encourage further group procurements and projects.

[30] The MSI for USAID cooperatives program found that some miners might have been too poor to contribute to group funds in the beginning. MSI for USAID 2004

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ANNEXES

ANNEX 1: STAKEHOLDER ANALYSIS OF COOPERATIVES AND KELEMBA FORMATION

Stakeholder	Stakeholder's Status/Role	Power (1-5)*	Stakeholder's Likely Interest in Project	Interest (-2 to +2)**	Stakeholder's Likely Perception/Attitude Toward the Project	Stakeholder's Capacity, Resources, and Constraints Related to Project	Strategy to Involve Stakeholder in Project/Address Stakeholder's Concerns
PRIMARY Stakeholders		*1 = little power to influence outcome of project			** -2 = max interest in failure; +2 = max interest in success		
ARTISANAL TENANT MINERS (TARGET GROUP)	Mostly men and some women who own land for production and usually employ diggers, but occasionally conduct all production activities themselves	4	Increased income; increased bargaining power vis à vis collectors; increased access to patents (licenses)	2	Positive attitude towards potential benefits of project Vary regarding the formation of cooperatives and contribution to group savings & credit, procurement, and projects	Major lack of solidarity/cohesion; lack of knowledge of Kelemba practices; lack of knowledge of revenue or MSE management; lack of knowledge of cooperative formation; volatile production and income	Work with local and national government to facilitate formation of cooperatives; undertake awareness-raising activities; provide Kelemba, MSE (including budget) management and diamond sector-specific trainings
Collectors	Seven mainly non-national (1 Central African) men who buy diamonds from artisanal miners (and occasionally from other producers) and sell to buying offices and companies	4	More reliable production and direct sourcing from mining cooperatives	1	Distrustful of miners - would need strong guarantees of sourcing commitments	Collectors lack access to reliable financial services; could provide group inputs, training and/or financing; could completely withdraw financing if threatened	Conduct awareness-raising sessions with collectors to highlight the benefits of working with miners' cooperatives
Kelemba members	Mostly women and some men who engage in group-based saving and lending to support income-generating activities (market trade and agriculture); many Kelemba members have husbands or family members engaged in artisanal mining	2	Increased income and savings for artisanal miners could contribute to positive spillovers for the household; Kelemba members could train miners who want to create Kelemba within their cooperatives	1	Positive attitude towards potential benefits of project	Kelemba seen as "women's activity" so men may be skeptical about their contribution to trainings; major time constraints as women are engaged in agriculture, market trade, household work	Invite women to contribute to Kelemba trainings for miners
Débrouillards	Patented artisanal miners who do not own land and therefore work as illegal collectors	1	Potential inclusion as beneficiary (artisanal miner)	0	Positive attitude if included in trainings, other benefits	Unclear	Include in awareness-raising campaigns about rights and legality
Diggers (Nagbata)	Permanent or temporary workers on miners' land	1	Potential for better pay and other benefits if increased legality and profitability in the value chain	0	Unclear	Unclear	Inform group of collective benefits of project
Families of artisanal tenant miners	Families with member in project's target group	1	Increase income and savings for miners could to contribute to positive spillovers for household	1	Unclear	Unclear	Inform group of the collective benefits of project

Stakeholder	Stakeholder's Status/Role	Power (1-5)*	Stakeholder's Likely Interest in Project	Interest (-2 to +2)**	Stakeholder's Likely Perception/Attitude Toward the Project	Stakeholder's Capacity, Resources, and Constraints Related to Project	Strategy to Involve Stakeholder in Project/Address Stakeholder's Concerns
SECONDARY Stakeholders							
Diamond buying offices	National offices that buy from collectors and sell to companies or exporters, who ostensibly submit diamonds to BECDOR prior to export	3	More reliable production	2	Positive attitude if benefits include more reliable production	Unclear	Inform group of the collective benefits of project
Diamond research and exploitation companies (e.g. Groupe Perrière, Noble Minerals)	National and international companies that conduct research and exploitation and provide "samples" to large international companies abroad; ostensibly submit diamonds to BECDOR prior to export	3	More reliable production and direct sourcing from mining cooperatives	2	Positive attitude if benefits include more reliable production and sourcing; would need strong guarantees of sourcing commitments	Could provide group inputs, training and/or financing	Inform companies about the benefits of working with miners' cooperatives in formal sourcing agreements
Mayor of Ngotto and Bossoui	Local government representative who is not involved in mining activities	2	Improved livelihoods for community	2	Positive especially regarding decreased dependence of local miners on non-national collectors	No local government funding available	Encourage Mayor, as outside observer, to inform non-target stakeholders about collective benefits of project
Mining Brigade	Special unit under Ministry of Mines tasked with ensuring Mining Code compliance; often come to aid of collectors rather than miners	4	Increased legality in the value chain	-1	Ostensibly positive but may actually prefer opacity and illegality in the chain for (continued) rent-seeking	Monopoly on government power in the project areas	Inform group of the collective benefits of project
Ministry of Mines	National government bureau tasked with oversight of mining activities	5	Increased legality in and profitability of value chain	?	Ostensibly positive but may actually prefer opacity and illegality in the chain for (continued) rent-seeking	Could fast-track or sabotage formation of cooperatives; could facilitate or block access of PRADD staff to project areas	Inform group of the benefits of project to local community
UNCMCA	Ostensibly non-governmental union of mining cooperatives housed at Ministry of Mines; tasked with organizing and supporting mining cooperatives	1	Provide blueprint for development of cooperatives in other mining areas	-1	Angry not to have been included in previous project activities; perceive PRADD as usurping their role in the project areas	Unclear	Include a UNCMCA representative in trainings if necessary to maintain peaceful relations

ANNEX 2: PARTICIPATORY SWOT ANALYSES OF KELEMBA

(See Section 3.2, Methodology, for a discussion of the use of the SWOT analysis tool during fieldwork.)

Bossoui:

STRENGTHS	WEAKNESSES
Getting together / good group relations Solidarity - 1 Security and regularity of funds Accumulating fund - 2 Good management - 3 Discussion and knowledge-sharing during meetings Honesty Initiative Re-investment Saving Loyalty	Poor group relations Poor management Lack of rigor / monitoring Betrayal of trust Dishonesty Poor behavior Irregularity of funds
OPPORTUNITIES	**THREATS**
Investments – 2 Improving livelihoods Equipment / inputs Safe savings Financial independence for artisan miners Financial autonomy (in general) – 1 Partnerships (donors) Mining investments Communal or community projects – 3	Theft (lack of physical savings structure) Household conflicts over funds raised Death of a member and consequent loss of funds Non-reimbursement Favoritism

Ngotto:

FORCES	WEAKNESSES
Solidarity / good member relations Loyalty / honesty / regularity Good management / discipline Safe savings Accumulating fund Re-investment	Dishonesty Mistrust / individualism Poor member relations Irregularity of funds Poor behavior Poor management Lack of accumulating fund Insecure savings Lack of rigor / monitoring
OPPORTUNITIES	**RISKS**
Investment Equipment / inputs Resolution of financial problems Autonomy of mine financing Improvement of livelihoods Accumulating fund to support community development	Non-reimbursement Conflict Death of a member and consequent loss of funds Favoritism Theft (lack of adequate physical savings structure)

ANNEX 3: KELEMBA REPRESENTATIVES FOCUS GROUP GUIDE

ARD, Inc. – Projet Pilote DPDDA
Guide d'entretien des membres des kelemba sur les mécanismes de financement – août 2008

Date : ……………………………………………...   Lieu :……………………………….........
Interviewé(e)s: ……..……………………………………….   Enquêteur
:……………………………………………
Lieu de la réunion : ……………………………………………………

Questions à poser :

A. Les caractéristiques structurelles et opérationnelles de la tontine:

A.1 Organisation et accès (l'Eglise, femmes du marché, par village ou entre les villages, etc.)

A.2 Membres : hommes ? catégorie de femmes : femmes chefs de chantier, femmes libres/célibataires, femmes des artisans, etc.

A.3 Utilisation de la cagnotte (AGR/petites commerces, agriculture, mines)

A.4 Prêts du fonds accumulant
- taux d'intérêt
- utilisation

A.5 Fonds de maladie/malheur / solidarité / « caisse noire »
- Don ou prêt
- En espèces ou en nature
- Combien et comment

A.6 Discussions entre membres des vos activités (minières, agricoles, de commerce) et de la vie sociale (famille, santé, etc.) ?

A.7 Projets communs : terrains communs / champs communs / tontine de travail

B. Vos activités génératrices de revenus:

B.1 Sources de revenus - AGR ? Agriculture ? Mines ? (A décrire)

C. Autres typologies de financement

C.1 Des prôches, CECs (historique), en betail/volaille, etc.

D. Perceptions des caractéristiques sociales et économiques des zones pilotes

D.1 Rapport entre artisans miniers, sociétés de diamant, collecteurs – historique et actuel

D.2 Comportement femmes chefs de chantier – en financement et gestion specifiquement – different de celui des hommes ?

D.3 Si les hommes ne font pas kelemba – pourquoi pas ?

D.4 Investissements des hommes artisans – communautaires ? Sinon, pourquoi pas ? (Contraintes aux investissements communautaires ?)

D.5 Raison pour les non-achats des patentes des chefs de chantier ?

ANNEX 4: ARTISANAL MINERS AND *DEBROUILLARDS* FOCUS GROUP GUIDE

Date : ………………………………………... Lieu :…………………………….........
Interviewé(e)s: …….………………………………………. Enquêteur :……………………………………………
Lieu de la réunion : ……………………………………………………

Analyse participative / outil : Tracer la « chaine de valeur » du secteur des diamants et rapports entre acteurs clés

- Definir les acteurs clés
- Offre / démande : offre de diamants, production, procession, marché national, marché international, marchés de support : financier, multi-sectoriel, sectoriel ?
- Ou se-trouvent les débrouillards dans la chaîne ? les pygmées ? les femmes artisans, épouses des artisans, célibataires ?
- Discuter les rapports entre acteurs dans la chaîne
    - avec les sociétés de diamant, les artisans miniers
    - groupements / kelemba de collecteurs ?

Questions à poser :

A. Caractèristiques de financement des collecteurs :

A.1 Epargne ou crédits chez les collecteurs ? chez les sociétés/ bureaux d'achat ?

Si oui :

A.1.1 En outils / équipements : lequels ?

Femmes artisans peuvent y accèder aussi ? Et les ouvriers ?

A.1.2 En espèces ou crédits ?

Prêt ou don ?

Combien et comment ?

Le prêt est fait sur quelles ressources ?

L'argent pourrait être utilisé pour :
□ Outils/équipements □ Nourritures □ Santé □ Scolarité □ Décès □ Autre

Femmes artisans peuvent y accèder aussi ? Et les ouvriers ?

A.2 S'il vous arrive une maladie/malheur (ou à un prôche à vous), le collecteur ou société pourriez vous aider avec :

Un don □ Un prêt □ Rien □ Autre à spécifier

Si oui, de combien et comment ?

Est-ce que vous gardez des fonds pour ce genre d'urgences (« caisse noire ») ?

A.3 Vous faîtes des tontines/kelemba entre artisans artisans miniers ?

Si oui :

Utilisation de la cagnotte (AGR/petites commerces, agriculture, mines)

Prêts du fonds accumulant

- taux d'intérêt
- utilisation

Fonds de maladie/malheur / solidarité / « caisse noire »

- Don ou prêt
- En espèces ou en nature
- Combien et comment

Discussions entre membres des vos activités (minières, agricoles, de commerce) et de la vie sociale (famille, santé, etc.) ?

Projets communs : terrains communs / champs communs / tontine de travail

A.4 Autres méthodes/mécanismes d'épargner / accèder aux crédits ? Débrouillards ?

B. Gestion des revenus :

B.1 Est-ce que vous tenez des comptes écrits de tes activités ?

B.2 Est-ce que vous avez jamais eu des formations en gestion ou comptabilité ?

B.3 Utilisation des revenus miniers (AGR/petites commerces, agriculture, réinvestissement en mines) ?

B.4 Vous menez des activités parallèles – AGR/petite commerce, agriculture

ANNEX 5: COLLECTORS FOCUS GROUP GUIDE

Date : ……………………………………...   Lieu :…………………………….........
Interviewé(e)s: …….……………………………………….   Enquêteur :……………………………………………
Lieu de la réunion : ……………………………………………………

Analyse participative / outil : Tracer la « chaine de valeur » des diamants et rapports entre acteurs clés.

- Acteurs clés
- Offre / démande : offre de diamants, production, procession, marché national, marché international, marchés de support : financier, multi-sectoriel, sectoriel ?
- Ou se-trouvent les débrouillards dans la chaîne ?

Discuter les rapports entre acteurs dans la chaîne

- avec les sociétés de diamant, les mineurs
- groupements / kelemba de collecteurs ?

Questions à poser :

A. Votre méthode/mécanisme de financement pour les activités des artisans miniers (chefs de chantier)

A.1 En outils / équipements : lequels ?

A.2 Vous prêtez de l'argent aux artisans ?

Especes, crédits, en nature ?

Prêt ou don ?

Combien et comment ?

Le prêt est fait sur quelles ressources ?

L'argent pourrait être utilisé pour :
□ Outils/équipements □ Nourritures □ Santé □ Scolarité □ Décès □ Autre

Aux femmes artisans / chefs de chantier ? Aux ouvriers ?

A.3 S'il arrive une maladie/malheur à un artisan ou à un prôche à lui, vous pourriez l'aider avec :

Un don □ Un prêt □ Rien □ Autre à spécifier

Si oui, de combien et comment ?

A.4 Est-ce que vous gardez un fonds pour ce genre d'urgences (comme « caisse noire ») ?

B. Financement des collecteurs :

B.1 Epargne ou crédits chez les sociétés/ bureaux d'achat ?

B.2 Autres méthodes d'épargner / chercher des crédits

B.3 Tontines/kelemba ?

Si oui :

Utilisation de la cagnotte (AGR/petites commerces, agriculture, mines)

Prêts du fonds accumulant
- taux d'intérêt
- utilisation

Fonds de maladie/malheur / solidarité / « caisse noire »
- Don ou prêt
- En espèces ou en nature
- Combien et comment

Discussions des activités – minières, agricoles, de commerce ?

Projets communs : terrains communs / champs communs / tontine de travail

C. Vos activités génératrices de revenus:

C.1 Activités parallèles / AGR ? Agriculture ?

D. Connaissance / perception du financement des artisans :

D.1 Manière des mineurs d'épargner (tontine/kelemba, financé par les sociétés/bureaux, pas d'épargne) :
- Femmes artisanes ?

D.2 Fonds de solidarité (en cas d'urgences/malheur)?
- Femmes artisanes ?

D.3 Comportement – specifiquement en terme de financement et gestion – des artisans

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