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# END-LINE SURVEY RESULTS – REVISED

PROPERTY RIGHTS AND ARTISANAL DIAMOND  
DEVELOPMENT (PRADD) IN LIBERIA

JANUARY 2013

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## **DISCLAIMER**

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# ACRONYMS

CSPro	Census and Survey Processing System
KP	Kimberley Process
KPCS	Kimberley Process Certification Scheme
PRADD	Property Rights and Artisanal Diamond
SBA	Subah-Belleh Associates
USAID	United States Agency for International Development
USD	United States Dollars

# EXECUTIVE SUMMARY

The Kimberley Process Certification Scheme (KPCS) regulates the international trade of rough diamonds, providing internal controls and a regulatory and tracking system applied to alluvial diamonds from the point of excavation to the point of export. The United States Agency for International Development (USAID) Property Rights and Artisanal Diamond Development (PRADD) project in Liberia was premised on the knowledge that strengthened property rights reduce conflict and create positive incentives to good stewardship of the land. When a community makes more formal and secure the rights of artisanal miners to prospect and dig for diamonds, the number of conflicts over mining claims diminishes. That miner is then more likely to sell his diamonds through legal channels, which in turn enables the government to meet its obligation to the Kimberley Process (KP) to certify those diamonds as conflict-free. In addition, rather than selling his diamonds in fear and haste, a miner who is secure in his rights will negotiate better prices that he can use to provide for his family. Finally, a secure claim on the land increases the value of the claim should the miner decide to sell, thereby stimulating the market in land. PRADD strived to strengthen the internal chain of custody system by clarifying, formalizing, and recording rights of miners and communities in diamond producing areas, demonstrating that compliance with the KPCS is easier for governments when miners' rights are strengthened, and that a more effective KPCS translates ultimately into reduced conflict.

In early 2011, prior to implementation of PRADD activities, the project conducted a traditional door-to-door household survey to establish a baseline for evaluating the impact of project activities, assess conditions in project and control areas, and inform project programming. This baseline survey was administered to 826 mining households in three counties in Western Liberia: Bomi, Cape Mount, and Gbarpolu. During August 2012, an end-line survey was administered to 639 mining households in the same project and control areas to assess changes since the baseline and to evaluate project impacts.

The demographic profiles of the baseline and end-line respondent groups were statistically similar, allowing for comparison of results over time. Indeed, some important differences were found, but the short timeframe between the baseline and end-line surveys may have compromised the amount of attitude and behavioral change to be expected due to the project's activities. In addition, the baseline report aggregated both of the respondent categories—control and project areas—into a single set of reported results. Although this does allow detection of differences in response rates between the two groups, it weakened the ability to attribute those differences to the project's activities.

Still, important similarities and differences were found. In both surveys, about three-quarters of miners reported having no valid license for their claims, although miners did hold various other documents besides licenses. The reasons for not obtaining a license were reported in similar proportions in both surveys, with costs (both of the license itself and costs associated with getting the licenses) being the most often cited in both surveys. In both surveys as well, miners held a similar number of claims and dug a similar number of pits per claim. In both surveys, licensed miners were found to generate more revenue from their claims as did unlicensed miners. While overall revenue from diamonds was similar in both surveys, the proportion of revenue from other sources was higher in the end-line survey, and the diversity of income sources was higher among end-line project areas respondents than control areas respondents.

Miners responding to the end-line survey reported having sold significantly more of their diamonds through local licensed brokers than did miners responding to the baseline survey, an important finding for PRADD. Even more significantly, considerably more miners in project areas reported registering all of

their diamonds at the regional diamond office compared to miners in control areas, and significantly fewer reported registering none of them at the regional diamond office.

Overall, reported conflicts over mining claims were common in both the baseline and end-line surveys, with the sources of conflicts cited in similar proportions in both surveys. However, in both surveys, project area respondents mentioned conflicts among local miners dramatically more often than did those in the control areas. Further, the number of reported conflicts spiked in the year before each survey, with project area respondents reporting 50 percent more conflicts than did control area miners in both surveys. These spikes could be an unintended consequence of PRADD's effect of making claims more valuable through more secure property rights, and thus making them something worth fighting over, or it could be that miners saw their claims as a way to benefit from the project, perhaps with miners thinking the project could help them resolve the conflict. Finally, the spikes could be a result of simply being asked the question—issues termed “conflicts” now perhaps weren't at the time; memory dims as time passes.

Miners utilized a variety of means to resolve these conflicts. In both surveys, most conflicts were resolved locally. In the end-line survey, project area miners reported slightly higher self-resolution than did control area miners, perhaps indicating the beginnings of a positive effect of PRADD's conflict resolution activities. This conjecture is supported by the finding that the exact opposite trend held in the baseline data, where more miners in control areas practiced self-resolution as did miners in project areas; and also by the finding that more miners in project areas considered the security of customary rights to land to be “very secure” than did miners in control areas.

In response to an open-ended question, more end-line project area respondents mentioned important environmental remediation measures than did end-line control areas respondents, and in greater proportions than did baseline project area respondents, recognizing miners' responsibility to avoid washing gravel in stream used for drinking water and to replant trees and restore streams to their natural courses after mining has ceased. Together, these findings may indicate the effectiveness of PRADD's awareness and outreach programs. More time between surveys might have provided clearer results.

# 1.0 INTRODUCTION

Small-scale diamond mining is an important source of livelihood in rural Liberia where diamonds from alluvial deposits are mined using artisanal methods. In Liberia, diamonds are generally found in remote, rural areas where a significant fraction of diamond mining occurs informally—outside the government’s control. Mining rights are frequently insecure and disputes over claims are common. In addition, some of these diamonds may enter informal chains of custody to become part of the “conflict diamond” trade.

In 2003, the Kimberley Process Certification Scheme (KPCS) was set in place to regulate the international trade of rough diamonds, providing internal controls and a regulatory and tracking system applied to alluvial diamonds from the point of excavation to the point of export. The KPCS is a voluntary agreement that functions as a tripartite alliance of representatives from the diamond industry, civil society, and the governments of diamond-producing and -trading countries to combat the trade in conflict diamonds. There are currently 75 member countries; these countries adopt statutes that require central government to register all production and marketing of diamonds. The KPSC thereby ensures to buyers that these diamonds do not originate from conflict zones, which in turn helps prevent the trade in diamonds from financing conflict. In addition to adhering to KPCS requirements, the Government of Liberia requires that all artisanal and informal diamond miners be licensed, and that only licensed miners be allowed to mine diamonds.

The United States Agency for International Development (USAID) Property Rights and Artisanal Diamond Development (PRADD) project in Liberia was premised on the knowledge that strengthened property rights reduce conflict and create positive incentives to good stewardship of the land. When a community makes more formal and secure the rights of artisanal miners to prospect and dig for diamonds, the number of conflicts over mining claims diminishes. That miner is then more likely to sell his diamonds through legal channels, which in turn enables the government to meet its obligation to the Kimberley Process (KP) to certify those diamonds as conflict-free. In addition, rather than selling his diamonds in fear and haste, a miner who is secure in his rights will negotiate better prices that he can use to provide for his family. Finally, a secure claim on the land increases the value of the claim should the miner decide to sell, thereby stimulating the market in land. PRADD strived to strengthen the internal chain of custody system by clarifying, formalizing, and recording rights of miners and communities in diamond-producing areas, demonstrating that compliance with the KPCS is easier for governments when miners’ rights are strengthened, and that a more effective KPCS translates ultimately into reduced conflict.

Prior to the implementation of PRADD, a local survey research firm, Subah-Belleh Associates (SBA), conducted a survey to assess conditions in project and control areas, inform project programming, and serve as a basis for evaluating the impacts of the project activities. This baseline survey was administered to 826 mining households in three counties in Western Liberia: Bomi, Cape Mount, and Gbarpolu. The baseline survey was conducted during the period February to March 2011.<sup>1</sup>

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<sup>1</sup> It is noted that while the majority of the field work took place in February–March 2011, an additional 60 samples were collected in April 2011 in order to increase the number of control samples. These additional samples were collected only from control sites.

During August 2012, a second survey was administered to 639 mining households in the same three areas to assess changes since the baseline and to evaluate the impacts of project activities. The short timeframe between the baseline and end-line surveys was due to an earlier-than-anticipated closing of the project, which was in turn due to budget cuts combined with poor responsiveness on the part of the Ministry of Lands, Mines and Energy in Liberia. It must be noted that the short interval between the two surveys compromised the amount of attitudinal and behavioral change to be expected due to the project’s activities.

## 1.1 SURVEY CONTEXT, DESIGN, AND METHODOLOGY

The field work for both surveys was conducted by SBA. Prior to conducting the baseline survey, miners were identified and listed through consultations with mining agents, miner chairmen, and miners themselves. Names of approximately 910 miners were listed for potential interview. After numerous visits to attempt interviews, 826 miners were located and interviewed from the list, with the intent to again interview the same 826 miners during the end-line survey. (Of those interviewed, 4 were found not to be suitable, so the actual sample size of the baseline survey was 822.)

The questionnaire consisted of 135 separate questions in six general areas: Mining activities and opinions about mining, conflicts and security, policy awareness and perceptions, environmental responsibilities, household economic activity and household assets, and basic demographic information. Because the end-line survey was intended to collect data that would be used to measure change, the questions that were asked during the end-line survey were essentially<sup>2</sup> identical to questions asked during the baseline survey. Because diamond mining is a seasonal activity in Liberia—with mining carried out during the dry season of October to June—the baseline questioning referenced the October 2010–June 2011 mining season while the end-line questioning referenced the October 2011–June 2012 mining season.

For the end-line survey, field data collection was implemented simultaneously in project and control areas designated by mining “zones” as shown in Table 1.1. A data collection team comprising four enumerators and one supervisor was assigned to each zone. Of the 822 individuals sampled in the baseline survey, 407 lived in project intervention areas and 415 lived in control (non-intervention) areas. Of the 639 individuals interviewed in the end-line survey, 361 lived in project areas while the remaining 278 lived in control areas.

Mining Zone	Control/Project
Gbarma	Control
Varguay	Project
Weasua	Project
Kumgbor	Control
Bomi	Control

**Table 1.1: Interviews by Mining Zone**

Data collection took place from August 2–29, 2012. The survey methodology was traditional door-to-door. Teams worked simultaneously in the four mining zones. Absenteeism of miners from the mining communities was a major constraint during the conduct of the end-line survey. Because the time of the field work was during the rainy season and the Muslim fasting month, minimal mining activities were taking place in the survey areas. (During the rainy season, miners typically relocate to other areas.) As a result, overall only 78 percent of the miners expected to be interviewed were available for interviews.<sup>3</sup> However, this was still sufficient for comparison purposes.

<sup>2</sup> A few questions were omitted from the end-line survey that, in the baseline survey, were intended to collect information for work planning. One additional question, not asked in the baseline survey, was added to the end-line having to do with miners’ perceptions about the security of their customary rights to land.

<sup>3</sup> The percent of miners interviewed in Varguay and its associated control area, Gbarma, were 81 and 79 percent, respectively. Weasua had 71 percent coverage, while its associated control area, Kumgbor, had 78 percent coverage.

## 1.2 QUALITY CONTROL

Quality control for both surveys began with careful selection of the enumerators themselves, with enumerators selected from a pool of experienced individuals who had participated in surveys with SBA over the years. For the end-line survey, the primary criterion for selection as an enumerator or supervisor was participation in the baseline survey. Because not all of the individuals who participated in the baseline survey were available to participate in the end-line survey, others were recruited and selected based on their understanding of the questions and how well they posed the questions during mock interviews. The best four trainees from this group were selected to fill the open supervisor positions, with an additional 16 chosen to fill the enumerator gap. Training entailed question-by-question review of the questionnaire and conduct of mock interviews.

During the field work, a quality assurance team comprising two members was assigned to monitor data collection. The team carried out spot-checks and reviewed completed questionnaires on a daily basis. When errors were found that could not be resolved through consultations with the enumerators and their supervisors, enumerators were sent back to correct them.

End-line survey data processing was carried out using the Census and Survey Processing System (CSPro). Data processing began with formatting of the questionnaire into a CSPro-compatible format, transforming it to an easy-to-use data entry screen. Data entry clerks were trained to match the data entry screen with the paper copy of the questionnaires. Two data entry clerks were selected from SBA's pool of experienced data entry personnel, and guided through the program and procedures for data entry. The data were delivered in Microsoft Excel to a Senior Statistician for analysis.

## 1.3 ISSUES ENCOUNTERED

Data analysis initially proceeded by comparing, as much as possible, results presented in the baseline report with comparable results derived from the end-line data set. Unfortunately, the baseline report aggregated both respondent categories—control and project area—into a single set of reported results. This made it impossible to compare changes in control area responses to changes in project area responses. Instead, it became possible only to compare changes in control area responses to the aggregated baseline responses, and changes in project area responses to the aggregated baseline responses.

In order to attribute changes to the project's activities, the baseline data needed to be re-analyzed. First, the control versus project areas were re-constructed using the known locations of each respondent. Then, to be able to attribute the project's activities to changes in selected key attitudes and behaviors, the baseline data were re-analyzed to provide a control-versus-project comparison with the end-line data analysis. However, prior to conducting this analysis, the baseline data required quite a bit of reconstruction in order to be able to combine it with the end-line data set for comparison purposes.

In doing so, it was found that the baseline data had many problems. First and foremost, there were no unique identifiers associated with the samples in the baseline data set. This meant that the separate spreadsheets into which the baseline data were stored could not be cross-referenced or cross-analyzed. So the first step was to create a unique identifier by concatenating the ID and "category" and using the result to generate an identifier that was consistent with the identifier used in the end-line data set. Secondly, unlike the end-line data set, where the claim and pit data were organized by column, in the baseline survey data, these data were organized in sequential rows. This made it necessary to derive a new data set to aggregate the information to the household level. In the process of doing this, it was discovered that there had been replications in the question numbering which first needed to be resolved. Once the unique identifier was in place and the redundant question numbering resolved, aggregating the information to the household level was accomplished by writing a Python script to extract and aggregate the data. (Excel look-up tables could also have been used for this purpose. The question numbering system itself had also

changed between the two surveys, but this was easily fixed by manually renumbering the baseline questions to match the numbering of the end-line questions.) Third, in the baseline survey, either the skip questions were not handled properly by the interviewers, or else the data from skip questions were not entered properly into the spreadsheets. In either case, the results were mismatches in the total counts.<sup>4</sup> Finally, the individual data entries had not been adequately “cleaned:” almost every question had erroneous (non-allowed) data entries.<sup>5</sup> In such cases, the erroneous data were simply removed from the analysis, resulting in a reduced sample available for each question’s analysis that was less than the total number of samples and which varied depending on the extent of erroneous data present in that particular question.<sup>6</sup>

For the end-line survey, in spite of SBA’s efforts to control data entry errors, a number of issues were detected in the data during analysis, along with several data entry errors, although not nearly to the extent that such issues and errors were present in the baseline data. Most of the end-line data issues and errors were resolved through e-mail and telephone interactions between SBA and the Senior Statistician. For those that could not be resolved in this way, obvious errors were eliminated from the analysis simply by removing the erroneous data from the analysis.<sup>7</sup> Confusing data are flagged as such in footnotes or elsewhere, as appropriate and relevant, in this report. In one case, a question could not be used at all (question about unlicensed miners’ willingness to pay for a license); this is flagged in a footnote.

The many data issues are the most likely explanation of why some of the results from the re-analyzed data do not match the results as they were presented in the baseline report—different handling of the problematic data would have slightly changed the results. Only when it was necessary and the data made it possible to demonstrate changes over time between the control and project sites were the baseline data re-analyzed, otherwise the results provided in the August 2011 baseline report are replicated for comparison purposes.

Even prior to data analysis, issues had come up during conduct of the field work that impact the results. Specifically, during the field work, in addition to miner absenteeism (mentioned above), the rainy season also made an already poor road systems impassable in some cases. Also, during the end-line interviews, enumerators found that some individuals interviewed during the baseline survey were not actually miners, or that they were only resident in the area for a very short time (only a few days, in some cases) and therefore not representative of the local mining community. In many communities, miners who had very high expectations from PRADD (expecting, in particular, that PRADD would provide them with cash) did not cooperate with the survey team, or skewed their responses in reaction to their disappointed expectations. The enumerators also heard reports of negative information about PRADD being spread, presumably to build a negative attitude toward the project.

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<sup>4</sup> For example, 127 baseline respondents answered “yes” when asked whether they had experienced a conflict over a claim. A subsequent question, “What kind of claim?” was asked only of those who responded “yes” to the first question. So there should have been 127 total responses to, “What kind of claim?” but in fact there were 132 such responses. A similar issue was identified in the responses to all of the skip questions.

<sup>5</sup> For example, data entered for “gender” should have included only two values: “1” for male and “2” for female. However, many other values were entered, such as “6”, “14” and “42.” Similar situations occurred for nearly every question analyzed.

<sup>6</sup> In some cases, almost a third of the data were found to be erroneous.

<sup>7</sup> For example, possible responses to a yes/no question are “1” for “yes” or “2” for “no.” If the number “12” appears in the data as an answer to a yes/no question, it cannot be resolved to a “1” or “2” without going back to the original paper questionnaire. In this case, it would be eliminated from the analysis. Each removed data point reduced the sample size for that question by one.

Notwithstanding the issues described above, end-line comparisons between project and control areas remain somewhat ambiguous because the original process of choosing control areas was challenged by locating areas with similar mining characteristics as the project areas without intervening to an extent that would raise expectations or skew the results. This was particularly challenging since most of the diamond mining taking place in Western Liberia is unlicensed and informal. All of these factors should be taken into account when reading the results described in this report.



# 2.0 DATA ANALYSIS RESULTS

The end-line data analysis proceeded by comparing, as much as possible, results presented in the baseline report with comparable results derived from analysis of the end-line data set. The end-line data analysis also examined differences in end-line responses given by miners in project areas to those given by miners in control areas. When possible, the baseline data was re-analyzed to distinguish control versus intervention differences—that is, to compare changes *between* the two respondent groups over the time period of the two surveys. This comparison allows attribution of those differences to the project’s activities.

In the following, totals may not always add to 100 percent as all responses are rounded to the nearest percent, and “don’t know” and “refused” responses are not included.

## 2.1 DEMOGRAPHICS

The demographic profiles of the baseline and end-line respondent groups were statistically similar, as were the demographic profiles of the control and project groups. This allows for comparison of results over time, and between groups. In both surveys and for both groups, the reported average household size was about five individuals, while the reported years of education for the respondent were between four and five. In the baseline project areas, there were slightly more female miner respondents (14 percent) than in the baseline control areas (8 percent), while the end-line survey had slightly more female respondents (12 percent) than the baseline survey (10 percent) overall. A wide ethnic population was represented in both surveys, with no particular ethnic group dominant. In all, at least 15 tribes were represented; the largest representation was from the Gola, comprising just under one-third of respondents.<sup>8</sup> These and other detailed demographic data are provided in Annex A; Question Set 1: Demographic Information.

## 2.2 MINING ACTIVITIES

Key characteristics of mining claims identified in the baseline survey report were consistent with those found in the end-line survey. In both surveys, the majority (about four-fifths) of respondents reported having only one claim; the remaining one-fifth reported having two or more claims. As recounted in the baseline survey report, most miners interviewed in the end-line survey reporting having longstanding claims, with an average of 15 years for all claims reported in both surveys. Table 2.1 shows the total number of claims reported in the end-line survey and the average time held for the claims.

Compared to the baseline, prospecting remained the most common means of acquiring a claim, although inheritance and granting by a chairman were also significant (see Table 2.2). Other means cited of acquiring claims included through a mining agent, a tribal council and by obtaining a land title. However, these other means were insignificant, together accounting for just 1 percent of the total.

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<sup>8</sup> A few, just 3 percent, responded “other” when asked to identify their tribe.

Number of Claims	End-Line Survey	Claim	Average length of time held
One claim	79% (n=506)	First claim	15 years
Two claims	17% (n=108)	Second claim	14 years
Three claims	3% (n=17)	Third claim	16 years
Four claims	1% (n=8)	Fourth claim	18 years
<b>TOTAL</b>	<b>100% (n=639)</b>	<b>Average for all claims</b>	<b>15 years</b>

**Table 2.1: Reported Number and Length of Time Claims Held**

For those respondents in the end-line survey who said they held licenses on their current claims, questions were also asked about the class of license held and whether or not those claims had ever been mined without a valid license. Among those who held licenses for their claims, almost everyone reported holding a Class C license on their first claim and, for those who held them, all (100 percent) reported holding Class C licenses on their second, third, and fourth claims. Only two individuals (1 percent) reported holding a Class B license on their first claim and no one reported holding a Class A license on any claim. When asked whether they ever mined their claims without a valid license, about one-third said that they had mined their first and/or second claims without a valid license, while fully two-thirds said that they had mined their third and/or fourth claims without a valid license. Miners did hold various other documents besides licenses for their claims, including receipts, permits, clearance and prospecting documents, and other documents. Detailed results about licensing of claims are shown in Annex A, Question Set 2: Information About Licensing of Claims.

How Acquired	Baseline Survey	End-Line Survey
Prospected	44%	43%
Inherited	27%	32%
Granted	25%	24%
Other	4%	1%

**Table 2.2: How Mining Claims Were Acquired (All Claims)**

Table 2.3 below compares some of the findings described in the baseline survey report with comparable results from the end-line survey. Specifically, miners held a similar number of claims and dug a similar number of pits in each claim, with licensed miners<sup>9</sup> in both surveys reporting digging more pits than did unlicensed ones. In both surveys, licensed miners were found to generate about twice as much revenue from their claims as did unlicensed miners. In the baseline survey report, it was also found that licensed miners found about twice as many diamonds. This did not hold for the end-line survey, where both categories of miners reported finding many fewer diamonds than they reported finding in the baseline survey. This could be attributable, however, to the timing of the survey, which was during the rainy season after mining had stopped, and miners had gone on to other activities. That is, it could simply be that they did not remember all the diamonds they found, especially the smaller-sized stones. This hypothesis is supported by the higher revenue reported. Or it could be that the alluvial deposit is depleting. Anecdotally, miners have said that not as many diamonds are found today as in the past, which is one of the reasons they cite for switching to gold mining.

<sup>9</sup> Following the terminology established in the baseline report, a “licensed miner” is a miner who has licensed all of his/her claims. An “unlicensed miner” is a miner who has not licensed at least one of his/her claims. Thus, a miner with three licensed and one unlicensed claim is an “unlicensed miner.”

Several questions were asked about the licensing of these claims. About three-quarters of respondents reported that they had no valid license for their claims, a finding consistent with the baseline survey report. Of those who responded that they had no valid license, about two-thirds said that they previously had a valid license, while about one-quarter said that they had applied for a license this year but were still waiting to receive it.

Overall Diamond Mining Characteristics	Baseline Survey*			End-line Survey		
	All Miners, All Claims	Licensed Miners, All Claims	Unlicensed Miners, All Claims	All Miners, All Claims	Licensed Miners, All Claims	Unlicensed Miners, All Claims
Average number of claims held	1.24	1.29	1.20	1.26	1.25	1.26
Number of pits	2.71	2.97	2.51	1.78	2.21	1.67
Total diamond revenue**	USD 1,335	USD 1,744	USD 1,024	USD 1,555	USD 2,521	USD 1,170
Average number of stones found	11.1	15.6	7.8	5.5	6.8	4.9
* Baseline results shown in this table are from "Summary Report of the Baseline Survey" (August 2011)						
** Computed for those who reported revenue. Currency is United States Dollars (USD)						

**Table 2.3: Comparison of Overall Mining Characteristics for Licensed and Unlicensed Miners**

Table 2.4 shows that miners in control areas reported finding diamonds in similar size proportions as did miners in project areas. Because of the way the percentages may have been computed in the baseline report (see notation in table) no direct comparison with baseline results is possible. However, if the assumption footnoted in Table 2.4 is correct, then the size proportions presented in the baseline are also similar to those found in the end-line survey. Even then, no direct comparison is possible for the larger-sized diamonds because the carat ranges were changed in the end-line survey questionnaire compared to the ranges in used in baseline survey questionnaire.

Also of interest are how the mining is supported and to whom the diamonds are sold. Table 2.5 (next page) compares reported financial support, with end-line miners tending to self-support somewhat more often than baseline miners.

	Baseline Survey		End-Line Report			
	As Reported in Baseline Report	Re-computed percent with assumption <sup>(a)</sup>		All Miners, All Areas	Miners in Project Areas	Miners in Control Areas
<b>% of stones by weight</b>						
< 25 points	15.2%	20%	< 25 points	20.6%	21%	20%
25–50 points	16.9%	22%	25–50 points	27.1%	27%	27%
50–75 points	12.2%	16%	51–75 points	16.2%	14%	20%
75 points–1 carat	12.2%	16%	76 points–1 carat	14.5%	16%	13%
1–1.5 carats	9.3%	12%	1.1–2 carats	11.9%	12%	11%
> 1.5 carats	11.1%	15%	> 2 carats	9.7%	10%	9%
TOTAL	76%	≈ 100%		100%	100%	100%
(a) It is assumed that in the baseline calculation, the missing percent are those miners that reported finding zero diamonds in the weight category. In the end-line survey, no miner reported finding zero diamonds; therefore, percentages are computed based on the total number of found diamonds.						

**Table 2.4: Comparison of Diamonds Found**

	Baseline Survey*			End-line Survey		
	All Miners, All Areas	Miners in Project Areas	Miners in Control Areas	All Miners, All Areas	Miners in Project Areas	Miners in Control Areas
<b>Financial supporter</b>						
• Self	36%	42%	29%	47%	43%	55%
• Relative	18%	11%	26%	13%	14%	11%
• Local licensed broker	22%	24%	20%	32%	34%	28%
• Other Liberian	16%	15%	16%	5%	5%	5%
• Other non-Liberian	8%	8%	7%	4%	5%	2%
* Baseline results shown in this table are re-computed from the baseline data in order to show changes over time between control and project sites.						

**Table 2.5: Sources of Financial Support**

The latter aspect—to whom the diamonds are sold—is especially important for PRADD, since more diamonds from project areas should have been sold to licensed brokers in support of the KP. Indeed, as can be seen from Table 2.6, significantly more diamonds were reported having been sold through local licensed brokers in the end-line survey as compared to the baseline survey. However, as can also be seen, there appeared to be a greater increase in sales to licensed brokers in control areas than in project areas. This finding is inconclusive due to a large amount of erroneous data in the baseline data set—almost a quarter of the baseline data for this question was found to be erroneous and was removed from the analysis.

	Baseline Survey*			End-line Survey		
	All Miners, All Areas	Miners in Project Areas	Miners in Control Areas	All Miners, All Areas	Miners in Project Areas	Miners in Control Areas
<b>Diamonds sold to**</b>						
• Local licensed broker	47%	52%	42%	72%	68%	78%
• Supporter who is not a licensed broker	25%	19%	32%	16%	21%	7%
• Someone else	17%	16%	18%	10%	9%	12%
<b>“Did you have these diamonds registered at the regional diamond office?”</b>						
• All of them	19%	17%	20%	41%	46%	33%
• Some of them	11%	13%	9%	6%	5%	6%
• None of them	70%	70%	71%	53%	48%	60%
* Baseline results shown in this table are re-computed from the baseline data either because they were not included in the baseline report or to show changes over time between control and project sites.						
** Missing percentages represent miners who reported that they sold to more than one person.						
Also note: A large amount of erroneous data in the baseline data set for both of these questions was removed from the analysis, so conclusions should be drawn only with great caution. For additional details see Annex A, Question Set 4: Chain of Custody.						

**Table 2.6: How Diamonds Enter the Chain of Custody**

Another question asked of miners was whether or not they registered their diamonds at the regional diamond office. In this case, significantly more miners from project areas in the end-line survey reporting

registering “all of” their diamonds at the regional diamond office compared to miners in the control areas, and significantly fewer reported registering “none of them” at the regional diamond office. Because registration is a key step in the KP, this is an important finding regardless of to whom the diamonds were sold. Although it appears that there was a much higher increase in miners registering diamonds in project areas versus control areas, this finding is, unfortunately, inconclusive due to a large amount of erroneous data in the baseline data set. For this question, almost one-third of the baseline data was found to be erroneous and was removed from the analysis.

The baseline report noted that, for a miner, average total diamond revenue for all claims was \$1,335, the average number of stones retrieved was 11.1 stones, the approximate average carat weight per stone was 0.86 carats, and the approximate price per carat was 229 United States Dollars (USD). This compares in the end-line survey, for all miners, of an average total diamond revenue of 1,555 USD, an average number of stones retrieved of 4.73 stones, an approximate average carat weight per stone of 0.78 carats, and an approximate price per carat of 418 USD. The average revenue per claim reported in the end-line survey was 1,451 USD (compared to a reported 1,277 USD in the baseline survey), with seven percent of claims yielding revenues in excess of 5,000 USD (compared to about five percent reported as yielding this much revenue in the baseline survey).

Within each claim, mining investments are in “pits” dug within the claim area. Pit-level characteristics reported in the end-line survey were similar to those recounted in the baseline survey report, as shown in Table 2.7, with reported average diamond revenue higher and total costs consistently lower in the end-line survey as compared to the baseline survey report. Other characteristics were also similar, such as the depth of the digs (measured traditionally in terms of the end-to-end length of a shovel, about 4.5 feet), time required, and number of diamond boys employed.

Pit Characteristics	Baseline-Survey*			End-line Survey		
	All Claims	Licensed Claims	Unlicensed Claims	All Claims	Licensed Claims	Unlicensed Claims
Diamond revenue (USD)	759	890	617	814	1218	715
Total costs incurred (USD)	385	483	284	251	383	195
Net income (USD) Revenue - Costs	374	407	333	563	835	520
Depth, in “shovels”	2.06	2.26	1.86	1.96	2.47	1.75
Time to reach gravel (weeks)	3.03	3.24	2.83	3.10	3.79	2.84
# diamond boys employed	4.51	4.98	4.03	4.02	4.54	3.83

\* Baseline results shown in this table are from “Summary Report of the Baseline Report” (August 2011)

**Table 2.7: Pit Characteristics**

As noted also in the baseline survey report, the use of equipment was rare with the exception of water pumps. Water pumps were reported as being used just over half of the time in the baseline survey report, and as being used almost four-fifths (78 percent) of the time in the end-line survey. As with the baseline survey, other equipment mentioned were a dump truck, dredge, washing plan, and “yellow machine” (such as a backhoe, front-end loader, or bulldozer). Figure 2.1 (next page) shows the frequency of use for these types of equipment in the end-line survey.

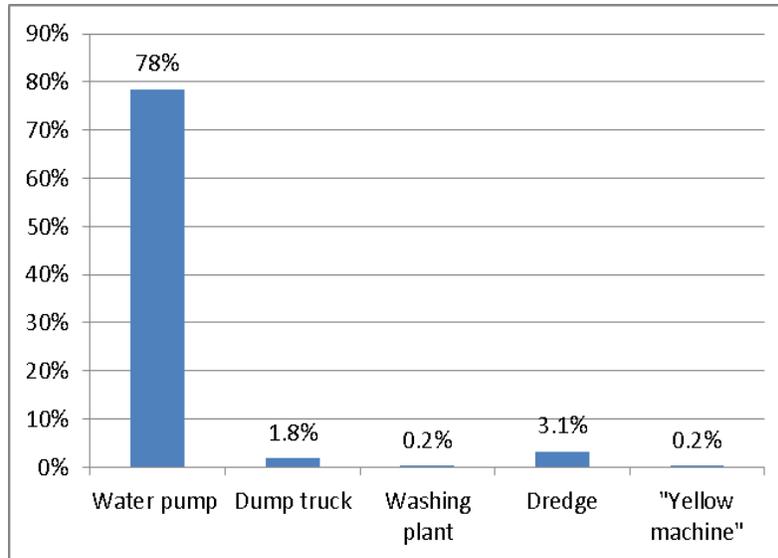


Figure 2.1: Miners Reporting Equipment Use

## 2.3 REPORTED CONFLICTS AND SECURITY OF CUSTOMARY RIGHTS

Overall reported conflicts over mining claims were common, although slightly less so in the end-line survey compared to the baseline survey, with 12 percent of miners reporting conflicts in the end-line survey compared to 17 percent in the baseline survey (Table 2.8).

Reported Incidents of and Attitudes About Conflict	Baseline Survey*			End-line Survey			Difference End-line - Baseline	
	All Claims	Claims in Project Areas	Claims in Control Areas	All Claims	Claims in Project Areas	Claims in Control Areas	Project Areas	Control Areas
Ever had a conflict? Percent who answered "yes"	17%	20%	14%	12%	11%	13%	-9% $X^2 = 10.736$	-1% $X^2 = 4.029$
"Very worried" about future conflicts over claims	40%	51%	28%	45%	47%	41%	-3% $X^2 = 7.549$	+13% $X^2 = 18.309$
Conflicts about mining are a "big problem" in this area	9%	9%	10%	15%	20%	9%	+11% $X^2 = 48.597$	-1% $X^2 = 0.748$

\* Baseline results shown in this table are re-computed from the baseline data either because they were not included in the baseline report or to show changes over time between control and project sites.

Table 2.8: Conflicts, Baseline Versus End-Line Survey and Control Versus Project

As can be seen from Table 2.9 below, the sources of conflicts were cited in similar proportions in the end-line survey compared to the baseline survey, with disputed boundaries remaining as the primary source of conflict cited in both surveys.

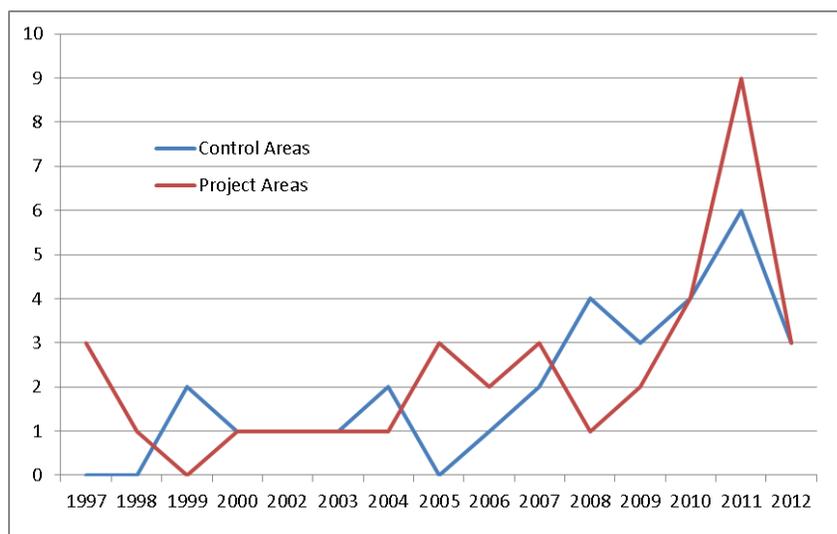
It is interesting to note, however, that in the end-line survey mention of conflicts over mining rights *among* local miners was dramatically higher in the project areas than in the control areas. This is even more striking when compared to the baseline survey, where these types of conflicts were reported more often in the control areas than in the project areas. In addition, in the end-line survey, more than twice as many miners in project areas said that conflicts about mining are a “big problem” as did miners in control areas, whereas in the baseline survey opinions about this were about equal. In the end-line survey, a slightly higher percentage of miners in project areas also reported being “very worried” about future conflicts over claims than did those in the control areas; this difference was even greater in the baseline survey where more than half of project area respondents said they were “very worried” about future compared to less than a third of control area respondents.

Reported Types of Conflicts	Baseline Survey*			End-line Survey		
	All Claims	Claims in Project Areas	Claims in Control Areas	All Claims	Claims in Project Areas	Claims in Control Areas
• Boundaries	46%	47%	46%	41%	39%	43%
• Mining rights with (other) local miners	23%	19%	27%	21%	29%	11%
• Mining rights with outsiders	11%	8%	15%	11%	12%	9%
• Prospecting	9%	14%	3%	8%	2%	14%

\* Baseline results shown in this table are re-computed from the baseline data in order to show changes over time between control and project sites.

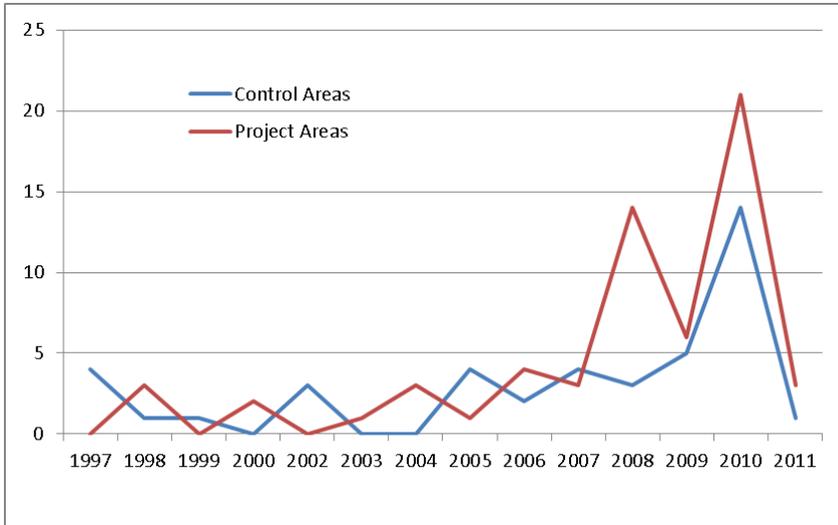
**Table 2.9: Conflicts and Security, Baseline Versus End-Line Survey and Control Versus Project**

In fact, the number of reported conflicts spiked in 2011, with project area miners reporting 50 percent more conflicts than control area miners, as shown in Figure 2.2a. Of the 15 conflicts reported in 2011, nine were in project areas and six were in control areas. This compares to the baseline results, where a similar spike was observed for conflicts reported in 2010, with project area miners reporting about one-third more conflicts than control area miners (Figure 2.2b). These spikes in the



**Figure 2.2a: Reported Number of Conflicts, End-Line Survey**

year prior to the survey could be an unintended consequence of PRADD’s effect of making claims more valuable through more secure property rights, and thus making them something worth fighting over. Or it could be due to local miners seeing claims as a way to benefit from the project, especially given the widespread misperception that PRADD would provide cash to artisanal diamond miners. Or the spike

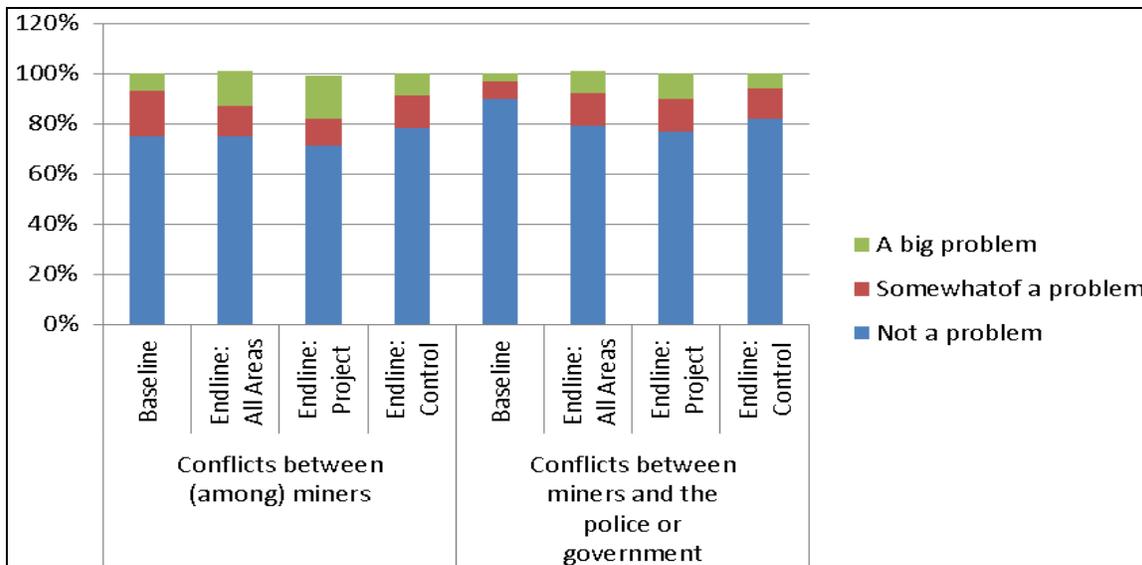


**Figure 2.2b: Reported Number of Conflicts, Baseline Survey**

could have been due to miners thinking the project could help them resolve the conflict, or any number of other reasons. Finally, the spike it could be a result simply being asked the question—issues being termed “conflicts” at the time of the survey might not have been seen as such at the time they occurred. Memories dim as time passes. A focus group discussion would have been an excellent mechanism for exploring

this finding in more detail, and might be considered by other projects carrying out similar surveys.

The baseline survey report noted that, despite their expressed concerns about future conflicts, miners were less apt to view conflicts as a problem in their local communities. This was validated in the end-line survey, as shown in Figure 2.3 below; although, as also can be seen from the figure, more miners in the end-line survey said that conflicts among miners and conflicts between miners and the police or government were a “big problem” compared to those who said this in the baseline survey. In addition, most who said this in the end-line survey were from the project areas, where as the baseline survey the number from the two areas who said this was about equal (see Annex A, Question Set 3: Mining Conflicts). As this question was asked in a different portion of the questionnaire, so as not to be influenced by the previous questions, the results support the idea that it may have been the presence of the project itself that was inadvertently causing the conflicts, as noted above.



**Figure 2.3: Miners Perceived Severity of Conflicts in Their Communities**

Miners who experienced a conflict utilized a variety of means to resolve the conflict, as shown in Table 2.10. In both surveys, most conflicts (more than half) were resolved locally. In the end-line survey, project area miners reported slightly higher self-resolution of conflicts than did control area miners, perhaps indicating the beginnings of the positive effect of PRADD’s conflict resolution activities. However, the sample size was so small (accounting for just a half dozen or so samples) as to not be statistically significant. (Additional details can be found in Annex A; Question Set 3: Mining Conflicts.)

Means for resolving conflict	Baseline Survey*			End-line Survey		
	All Areas	Project Areas	Control Areas	All Areas	Project Areas	Control Areas
<b>Conflict resolved by:</b>						
• “Ourselves”	22%	17%	26%	14%	16%	11%
• (Local, informal) “mining chairman”	25%	32%	18%	39%	37%	43%
• (Local government) mining agent	29%	29%	29%	20%	26%	14%
• Police or court	2%	3%	1%	6%	5%	9%
• Someone else	13%	13%	12%	9%	9%	9%
• Conflict was not resolved	9%	5%	13%	10%	7%	14%
* Baseline results shown in this table are re-computed from the baseline data in order to show changes over time between control and project sites.						

**Table 2.10: Mining Claim Conflict Resolutions**

In the end-line survey, miners were also asked one question about how secure they felt in their customary rights to land. (This question was not asked in the baseline survey.) The results are shown in Table 2.11 below. It is interesting to note that more miners in project areas considered the security of the customary rights to land to be “very secure” than did miners in control areas. This would indicate a positive outcome of PRADD’s efforts to strengthen land rights in the project areas.

“How would you consider the security of your customary rights to land?”	End-line Survey	
	Project Areas	Control Areas
Very secure	63%	54%
Secure	24%	30%
Somewhat secure	8%	9%
Insecure	5%	6%

**Table 2.11: Security of Customary Rights to Land**

## 2.4 KIMBERLEY PROCESS AWARENESS

Both surveys contained a number of questions intended to capture the extent of miners’ knowledge about the KP. Miners were asked whether or not they had heard of the KP. As can be seen in Figure 2.4 below, in the end-line survey significantly fewer miners answered “no” when asked whether they had heard of the Kimberley Process (29 percent) compared those who answered “no” to this question in the baseline survey (50 percent), with fewer from the end-line project areas answering “no” (24 percent) than from the control areas (35 percent). However, while there was also an increased recognition rate when comparing project area respondents in the baseline and end-line groups (with 40 percent of the baseline project area respondents saying they had not heard of the KP compared to just 24 percent of end-line project areas

respondents) control area respondents reported hearing of the KP in similar proportions, indicating no change in awareness of the KP between the two surveys.

Those miners who responded “Yes” to the question about whether they had heard of the KP were administered a four-question true-false quiz to affirm and assess their knowledge about the process:

Which of the following steps are a part of the Kimberley Process?

- Getting a mining license for any claim that you are mining.
- Asking the mining agent for the correct price of each diamond you find.
- Registering all diamonds you find with the Regional Diamond Office.
- Giving a voucher to the broker when the diamond is sold.

The correct answers were “yes” (or true) for all but the second question, which was “no” (or false).

The results of the quiz, intended to gauge changes in understanding *about* the KP, were also inconclusive. Specifically, while end-line respondents from the project areas received improved scores on the quiz than did those baseline project area respondents, this same trend held true for control area respondents.

There could be several reasons for the inconclusive results, including successful effects of the intensive PRADD communications campaign, which would have covered control areas too. Or it may be the effect of the short timeframe between the two surveys. The quiz data itself was problematic—there was a great deal of erroneous data in the baseline survey for these questions (fully 14 percent of quiz scores had to be removed from the analysis due to erroneous data entries). More time between surveys and a greater sample size (i.e., less erroneous data) might have given a clearer picture.

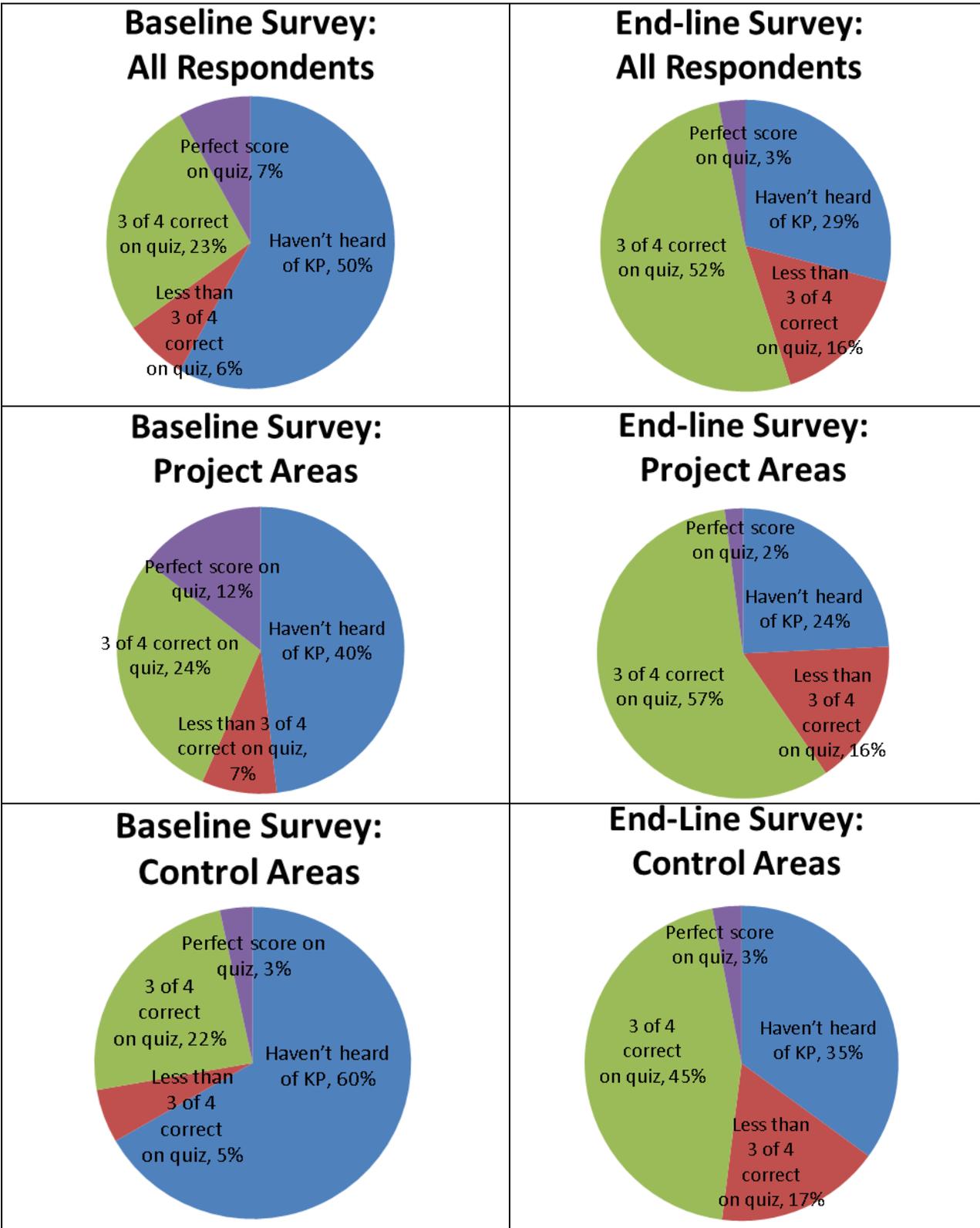
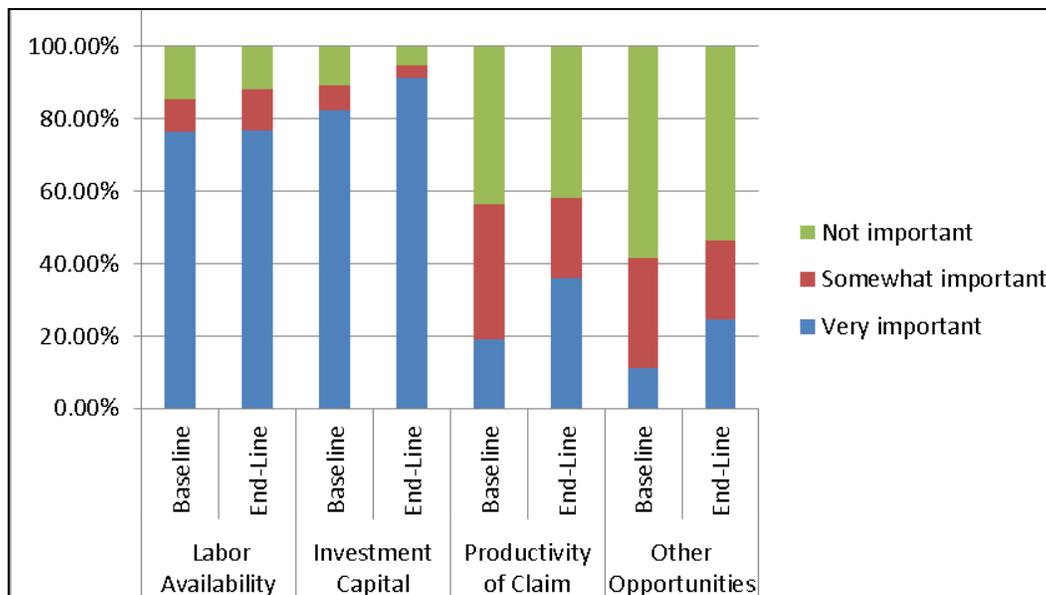


Figure 2.4: Awareness and Knowledge of the Kimberley Process

## 2.5 MINERS' BELIEFS, ATTITUDES, AND CONCERNS

The survey contained a number of questions on miners' opinions about a range of topics including constraints on mining activities, attitudes about licensing, attitudes toward brokers, and beliefs about miners' responsibilities toward the environment.<sup>10</sup>

To assess the importance of constraints on mining activities, miners were presented with some potential reasons why they did not mine more intensively, and asked if each reason was "very important," "important," or "not important." Figure 2.5 below shows the results of these questions.



**Figure 2.5: Constraints on Mining Activities**

As can be seen from Figure 2.5, the overall relative importance of each constraint was comparable between the surveys; although it is notable that the availability of investment capital ("hard to find support") and of other opportunities ("doing other things") were both rated more important in the end-line survey than in the baseline, as was the lack of productivity in the claims. In fact, the availability of other opportunities was cited more than twice as often as being "very important" in the end-line survey (25 percent) as the baseline survey (11 percent). This finding is consistent with findings from the economic analysis (next section) which show a more diversified household income, in general. The lack of productivity from claims was also cited considerably more often as being a "very important" constraint in the end-line survey (36 percent) compared to the baseline survey (19 percent), supporting the finding from Section 2.2 above wherein miners reported getting fewer diamonds from their claims. The increased frequency of "very important" as a response to the constraint about availability of investment capital may very well be due to miners' disgruntlement that the project did not provide them with funding, a complaint that many respondents stressed to the enumerators during the conduct of the end-line survey. Labor availability was cited about the same in both surveys; in both surveys, it was mentioned in just over three-quarters of responses as being "very important."

Miners were also asked to rate the overall importance of having a mining license, and to rate a number of specific reasons why having a mining license was desirable. Figure 2.12 shows the results of these

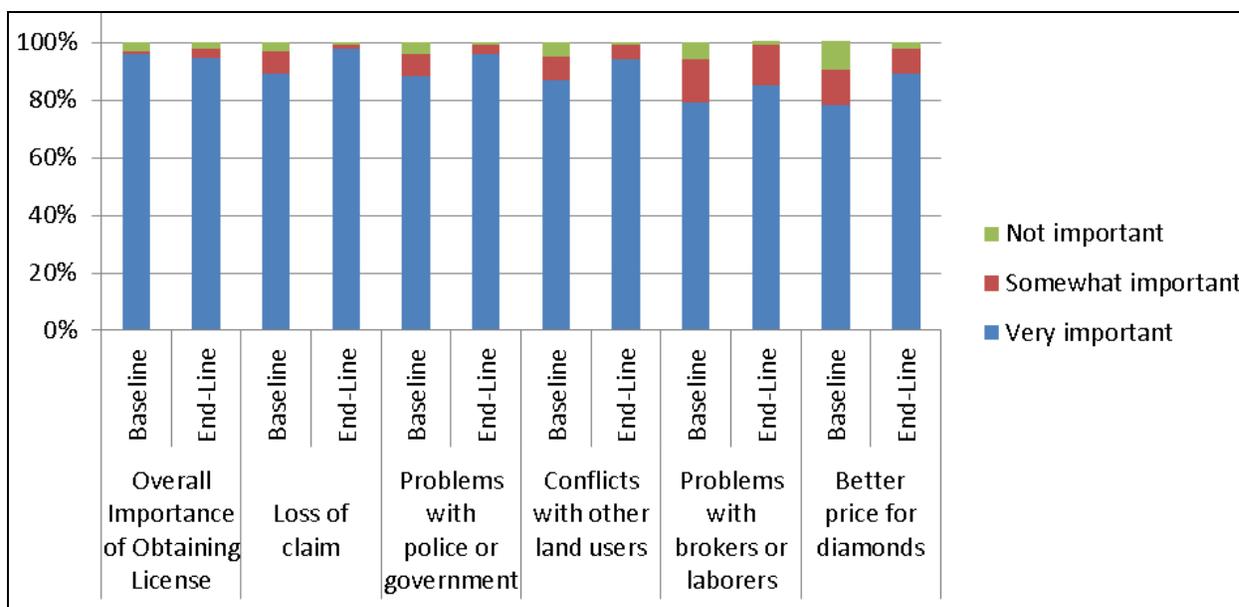
<sup>10</sup> Additional questions about microfinance asked in the baseline survey were omitted from the end-line survey.

questions. As shown, respondents in both surveys overwhelmingly said they believe that having a mining license is important, almost all saying that having a mining license is “very important.” There was no significant difference between the ratings when comparing control to project area respondents.

Respondents to the end-line survey rated all reasons for having a license higher than did respondents to the baseline survey, with the greatest difference in responses to “I will get a higher price for my diamonds,” which 89 percent of end-line survey respondents said was “very important” compared to 78 percent of baseline respondents.<sup>11</sup>

“How important is it to you to have a mining license?”	Baseline Survey			End-line Survey		
	All Claims	Claims in Project Areas	Claims in Control Areas	All Claims	Claims in Project Areas	Claims in Control Areas
Very important	96%	97%	95%	94%	95%	93%

**Table 2.12: Importance of Having a Mining Claim**



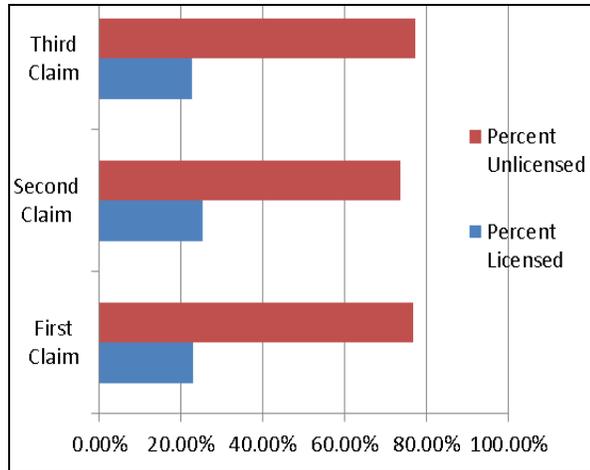
**Figure 2.6: Importance of and Reasons for Obtaining a Mining License**

Miners can license up to four claims. Miners were asked whether they had licensed each of their claims. Figure 2.7 shows the results for the end-line survey. About three-quarters of miners had not licensed their first, second, or third claims. (Only three miners reporting having a fourth claim, so licensing on this claim is not shown.) Overall, 79 percent of miners reported having at least one unlicensed claim. Following the terminology established in the baseline report, those who operate any unlicensed claim are called an “unlicensed miner.”

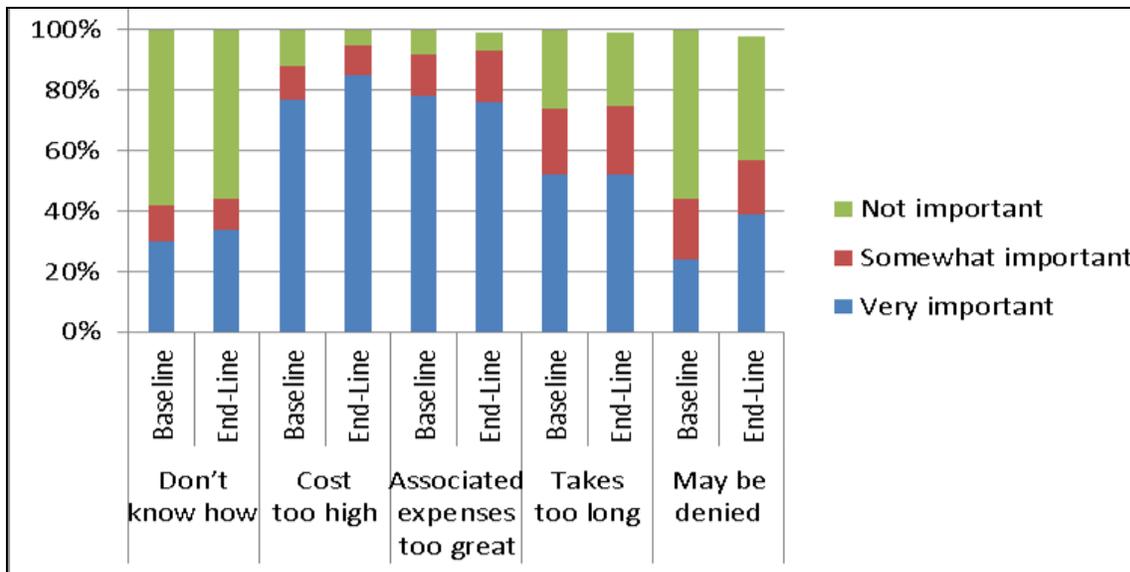
The cost of obtaining a Class C license is about 150 USD, and requires that the miner travel to Monrovia to apply. Those miners who had chosen not to obtain licenses were asked to rate a number of possible reasons why they did not do so. As can be seen from Figure 2.8, reasons given were rated similarly in the

<sup>11</sup> Due to unresolvable ambiguities in the baseline data set, it was not possible to conduct a control-versus-project area analysis. For additional details, see Annex A; Question Set 4: Miners’ Beliefs, Attitudes and Concerns.

end-line survey as in the baseline. In both surveys, the cost of the license<sup>12</sup> and the expenses associated with securing the license (which requires travel to Monrovia) were the most often cited as being “very important.” In fact, proportionately more miners in the end-line survey cited the cost of the licenses as very important (85 percent) compared to those citing the cost of the license as “very important” in the baseline survey (77 percent). Interestingly, significantly more miners cited the possibility of denial of the license as being “very important” in the end-line survey (39 percent) compared to the baseline survey (24 percent).



**Figure 2.7: Licensing of Claims**



**Figure 2.8: Reasons for Not Obtaining a Mining License (Asked Only of Unlicensed Miners)**

Miners were asked whether or not they thought that brokers pay a fair price for the diamonds, and also whether or not they thought that brokers were better informed than miners about the prices of diamonds. Figure 2.9 below compares the baseline and end-line responses to these questions. There was little change in opinion between the two surveys; nor was there a significant change in opinions about brokers between the control and project areas (see Annex A; Question Set 5: Miners’ Beliefs, Attitudes and Concerns). The greatest difference in opinion came when comparing the responses from the control and project areas in the end-line survey, as shown in Table 2.13. Significantly more miners in the project areas (81 percent) thought that brokers “never or almost never” paid fair prices for diamonds than did those in the control areas (62 percent), and also thought that brokers were “a lot more” informed than miners about prices (80 percent versus 65 percent in the control areas). This would indicate that PRADD’s activities raising

<sup>12</sup> Both surveys also asked miners how much they would be willing to pay for a mining license; because of the different way the question was asked in the two surveys, no equivalent data was available from the end-line survey that could be used for comparison purposes to findings from the baseline survey.

awareness of how to value diamonds had an effect, except these same differences were echoed in the baseline survey, with ratios of 81-to-70 percent and 80-to-70 percent, respectively (see Annex A, Question Set 5: Miners' Beliefs, Attitudes and Concerns).

In all cases, only a few percent felt that brokers "always" or "usually" paid a fair price, or that brokers were "less informed" than miners about prices. However, it should also be noted that in the end-line survey these two questions were only asked of a small subset of respondents. As such, they may not be statistically representative of the population as a whole.

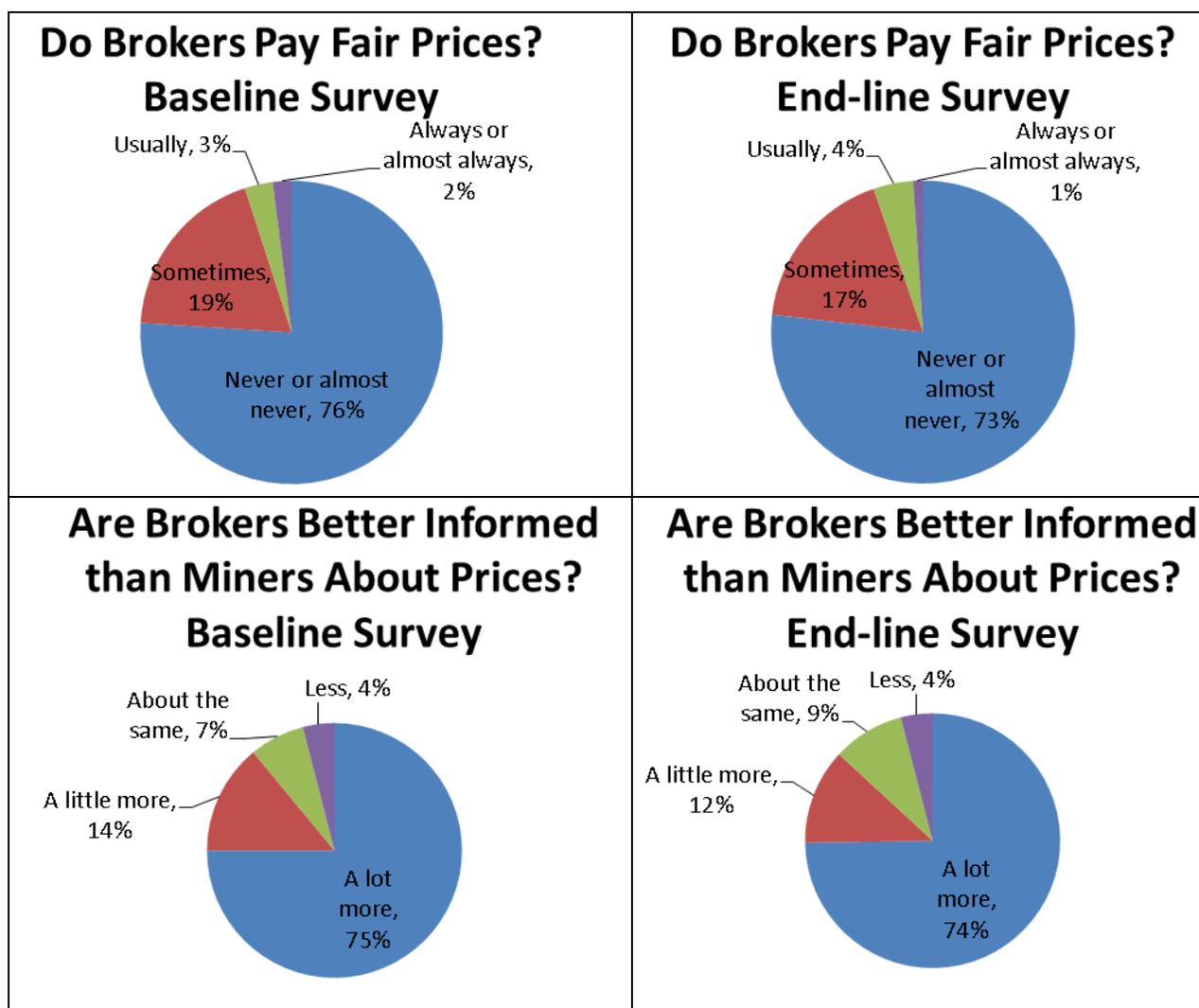


Figure 2.9: Miners' Feelings About Brokers

"In general, do you think that brokers pay miners fair prices for diamonds?"	End-Line		"In general, do you think brokers know more about the prices of diamonds than miners?"	End-Line	
	Project (n=88)	Control (n=60)		Project (n=85)	Control (n=57)
Always or almost always	1% (n=1)	2% (n=1)	A lot more	80% (n=68)	65% (n=37)
Usually	3% (n=3)	5% (n=3)	A little more	11% (n=9)	14% (n=8)
Sometimes	13% (n=11)	23% (n=14)	About the same	6% (n=5)	12% (n=7)
Never or almost never	81% (n=71)	62% (n=37)	Less	2% (n=2)	7% (n=4)

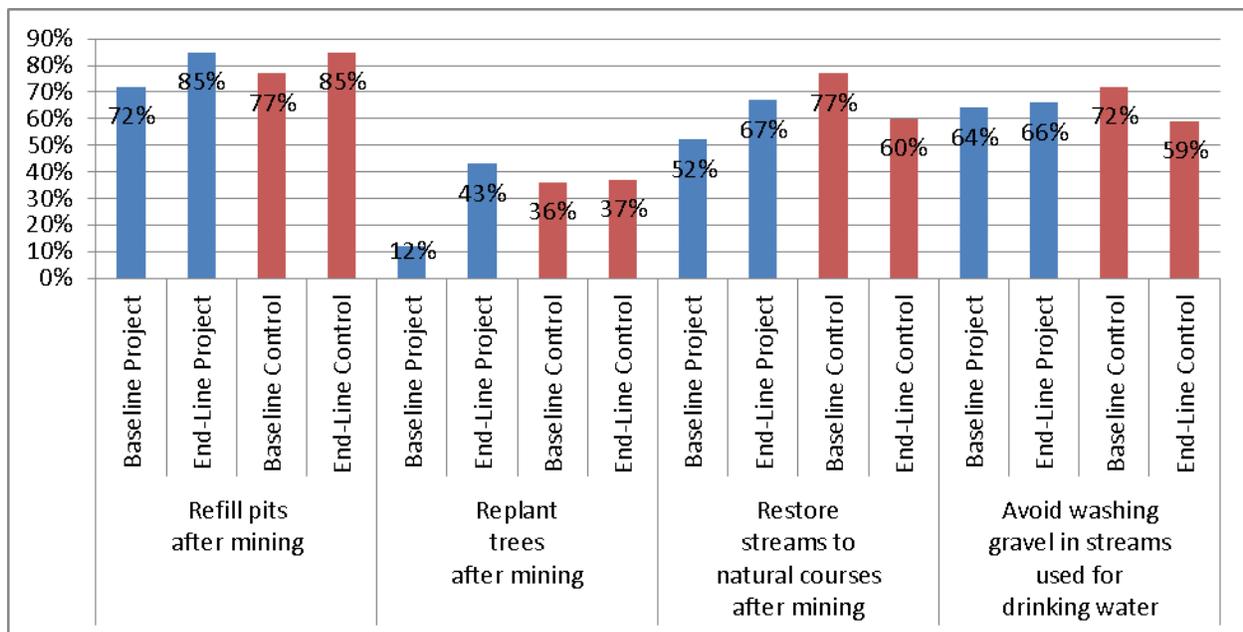
Table 2.13: Miners' Attitudes toward Diamond Brokers

Finally, miners were asked questions about the impact of mining on the environment, and what they thought (if anything) miners should do about it. This was asked as an open-ended question. If one of four possibilities were listed, it was flagged. The results are shown in Table 2.14 and Figure 2.10 below. As can be seen, project area respondents in the end-line survey mentioned environmental practices more often than did end-line control area respondents, and in greater proportions than did baseline project area respondents.

Environmental Practice Mentioned	Baseline Survey*			End-line Survey			Difference End-line - Baseline	
	All Claims	Claims in Project Areas	Claims in Control Areas	All Claims	Claims in Project Areas	Claims in Control Areas	Project Areas	Control Areas
Refill pits after mining	74%	72%	77%	85%	85%	85%	<b>+13%</b> $X^2 = 46.697$	<b>+8%</b> $X^2 = 18.445$
Replant trees after mining	24%	12%	36%	40%	43%	37%	<b>+31%</b> $X^2 = 143.23$	<b>+1%</b> $X^2 = 47.000$
Restore streams to natural courses after mining	65%	52%	77%	64%	67%	60%	<b>+15%</b> $X^2 = 56.421$	<b>-17%</b> $X^2 = 49.449$
Avoid washing gravel in streams used for drinking water	68%	64%	72%	63%	66%	59%	<b>+2%</b> $X^2 = 24.726$	<b>-13%</b> $X^2 = 36.619$

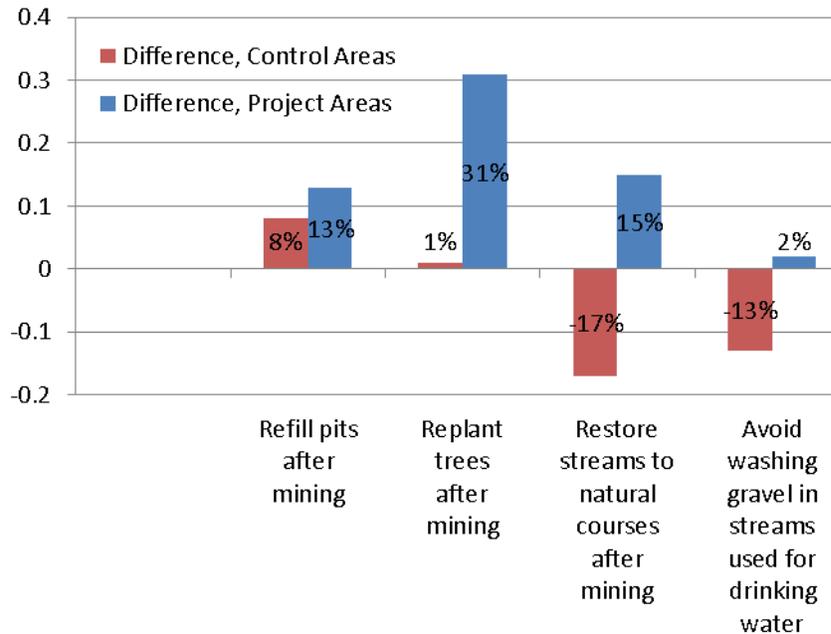
\* Baseline results shown in this table are re-computed from the baseline data in order to show changes over time between control and project sites.

**Table 2.14: Protecting the Environment**



**Figure 2.10: Responses to What Miners Should Do To Protect the Environment**

The differences are particularly striking when shown graphically: Figure 2.11 below shows the differences between the responses to these questions when comparing those from the control areas versus those from the project areas. This is dramatic evidence that PRADD’s efforts to impart knowledge about good environmental practices were successful. Determining changes in practices—whether or not the practices were actually being carried out—would have required a different question.



**Figure 2.11: Differences in Responses to What Miners Mention They Should Do To Protect the Environment**

## 2.6 ECONOMIC ANALYSIS

As can be seen Table 2.15 below, slightly fewer (55 percent) respondents to the end-line survey reported that their households generated income from their own mining claims as compared to the respondents to the baseline survey (59 percent). However, for those who reported income (not all miners reported generating income from their claims) they reported more income from this source than in the baseline survey: 1,555 USD total diamond revenue compared to 1,335 USD recounted in the baseline survey report. In both surveys, more respondents from project areas reported generating income this way than did respondents from control areas.

Source of Income	Households Reporting Income from Source					
	Baseline Survey: All Areas	Baseline Survey: Project Areas	Baseline Survey: Control Areas	End-Line Survey: All Areas	End-Line Survey: Project Areas	End-Line Survey: Control Areas
Mining Own Diamond Claims	59%	61%	57%	55%	64%	53%
Other Mining	11%	8%	14%	21%	23%	18%
Farming, Agricultural Production	42%	32%	52%	51%	53%	49%
Small Businesses	34%	33%	35%	38%	40%	35%
Wages, Salaries	6%	4%	8%	14%	14%	14%
Pensions	2%	< 1%	4%	8%	8%	9%
Remittances	8%	4%	12%	17%	14%	19%
Other sources	13%	6%	20%	14%	14%	13%

**Table 2.15: Percentage of Households Reporting Earning Income from Sources**

As can also be noted from Table 2.15, overall diversification of income was higher among the end-line survey respondents compared with the baseline survey respondents; further, income sources identified in the end-line survey were more diversified in project areas than control areas, with a higher percentage of project area respondents reporting that they generated income from all income sources compared to those in the control areas. The one exception to this was wages, which was the same between control and project area respondents. The exact opposite held true in the baseline survey, where control area households reported more diversified income sources, with a higher percentage of control area respondents reporting that they generated income from all income sources compared to those in the project areas. This is strong evidence of the effect of PRADD's efforts to encourage diversification of sources of income.

# 3.0 SUMMARY OF RESULTS

In summary, the demographic profiles of the baseline and end-line respondent groups, and of the control and project groups, were statistically similar, allowing for comparison of results over time and between groups. Indeed, some important differences were found, but the short timeframe between the baseline and end-line surveys may have compromised the amount of attitude and behavioral change to be expected due to the project's activities. In addition, problems with the data itself—especially the baseline data—weakened the ability to attribute some differences to the project's activities.

Still, important similarities and differences were found. In both surveys, about three-quarters of miners reported having no valid license for their claims, although miners did hold various other documents beside licenses. The reasons for not obtaining a license were reported in similar proportions in both surveys, with costs—both the cost of the license itself and the costs associated with getting a license—being the most-often cited in both surveys. In both surveys as well, miners held a similar number of claims, and dug a similar number of pits per claim. In both surveys, licensed miners were found to generate more revenue from their claims than did unlicensed miners. While overall revenue from diamonds was similar in both surveys, the proportion of revenue from other sources was higher in the end-line survey, and the diversity of income sources was higher among end-line project area respondents than control area respondents.

Miners responding to the end-line survey reported having sold significantly more of their diamonds through local licensed brokers than did miners responding to the baseline survey, an important finding for PRADD. Even more significantly, considerably more miners in project areas reported registering all of their diamonds at the regional diamond office compared to miners in control areas, and significantly fewer reported registering none of them at the regional diamond office. Although a promising preliminary finding also indicated that there might be significantly larger *increase* in registration rates on the part of the project group between the two surveys compared to the control group, this finding was, unfortunately, inconclusive due to the large amount of erroneous data in the baseline survey for this question. Regardless, because registration is a key step in the Kimberley Process Certification Scheme, these are important findings for PRADD.

Overall, reported conflicts over mining claims were common in both the baseline and end-line surveys, with the sources of conflicts cited in similar proportions in both surveys. However, when the sources of claims by project area versus control area miners were compared, it was found that in both surveys, project area respondents mentioned conflicts among local miners dramatically more often than did those in the control areas. Further, the number of reported conflicts spiked in the year before each survey. These spikes could be an unintended consequence of PRADD's effect of making claims more valuable through more secure property rights, and thus making them something worth fighting over, or it could be that miners saw their claims as a way to benefit from the project, perhaps with miners thinking the project could help them resolve the conflict. Finally, the spikes could be a result of simply being asked the question—issues being remembered as conflicts might not have been deemed so at the time. Memories dim as time passes. A focus group discussion would have been an excellent mechanism for exploring this finding in more detail, as well as the reasons behind the finding that project area respondents reported 50

percent more conflicts than did control area miners in both surveys. Focus groups might be considered by other projects carrying out similar surveys.

Miners utilized a variety of means to resolve these conflicts. In both the baseline and the end-line surveys, most conflicts were resolved locally. In the end-line survey, project area miners reported slightly higher self-resolution than did control area miners, perhaps indicating the beginnings of a positive effect of PRADD's conflict resolution activities. This conjecture is supported by the finding that the exact opposite trend held in the baseline data, where more miners in control areas practiced self-resolution as did miners in project areas; and also by the finding that more miners in project areas considered the security of customary rights to land to be "very secure" than did miners in control areas.

While awareness of the KP and of miners' responsibilities to the environment were both higher in the end-line survey compared to the baseline, and higher among end-line project area respondents than among end-line control area respondents, control area respondents reported hearing of the KP in similar proportions, indicating no change in awareness of the KP between the two surveys. In response to an open-ended question, more end-line project area respondents mentioned important environmental remediation measures than did end-line control areas respondents, and in greater proportions than did baseline project area respondents, recognizing miners' responsibility to avoid washing gravel in stream used for drinking water and to replant trees and restore streams to their natural courses after mining has ceased. Together, these findings may indicate the beginnings of impact of PRADD's awareness and outreach programs. More time between surveys might have provided clearer results.

In addition to the short time frame between surveys, the other major factor limiting the data analysis was data quality, especially of the baseline data. For projects considering undertaking similar surveys, a review of the data entry process and resulting data set after the first batch of questionnaires had been entered would help identify emerging issues. Ideally this step would occur before the field work was even completed, since if there are issues with how the questions are being asked—such as handling of skip questions—these can often be revealed by looking at the data. Other data issues found in the baseline were probably a result of inexperience in the preparation of data sets that were to be used for analysis purposes, and would have been avoided simply by better training of data entry personnel. Many of the issues found in the baseline data were not found in the end-line data set, for example.

A longer time period between baseline and end-line would be expected result in larger changes in knowledge, attitudes, and behaviors. The conduct of complementary focus group discussions could be used to explore specific survey findings. For example, focus groups discussions about conflicts among local miners might have revealed many lessons that would be important when designing future projects with goals similar to those of PRADD.

# ANNEX A: SURVEY RESULT DETAILS

All responses are rounded up to the nearest percent. Totals may not always add to 100 percent if “don’t know” and “refused” responses are not included. In addition, counts may not always add up in cases where erroneous (invalid) responses are removed (especially from the baseline data).

**Question Set 1.a: Demographic Information for All Samples (Controls and Project or Intervention)**

Average Household size		Mean years of education		Percent female		Migrant households		Average per capita household income from all sources	
Baseline Survey All Areas	End-Line Survey All Areas	Baseline Survey All Areas	End-Line Survey All Areas	Baseline Survey All Areas	End-Line Survey All Areas	Baseline Survey All Areas	End-Line Survey All Areas	Baseline Survey All Areas	End-Line Survey All Areas
5.3 people	4.6 people	4.9 years	4.0 years	11%	12%	16%	Not asked.	USD 329	USD 240

Percent who self-identified as Gola		Percent who self-identified as Kpelle		Percent who self-identified as Mandingo		Percent who self-identified as Kissi		Percent who self-identified as in another tribe	
Baseline Survey All Areas	End-Line Survey All Areas	Baseline Survey All Areas	End-Line Survey All Areas	Baseline Survey All Areas	End-Line Survey All Areas	Baseline Survey All Areas	End-Line Survey All Areas	Baseline Survey All Areas	End-Line Survey All Areas
26%	31%	14%	13%	14%	12%	12%	12%	35%	32%

Percent of households earning income derived from mining own diamond claims		Percent of households earning income derived from other mining		Percent of households earning income derived from farming and agricultural production		Percent of households earning income derived from small businesses		Percent of households earning income from other sources, including wages, pensions and remittances	
Baseline Survey All Areas	End-Line Survey All Areas	Baseline Survey All Areas	End-Line Survey All Areas	Baseline Survey All Areas	End-Line Survey All Areas	Baseline Survey All Areas	End-Line Survey All Areas	Baseline Survey All Areas	End-Line Survey All Areas
59%	55%	11%	21%	42%	51%	34%	38%	29%	53%

**Question Set 1.b: Demographic Information Comparing Control to Intervention (Project) Samples**

Average Household size		Mean years of education		Percent female		Migrant households	
Baseline Control	Baseline Project	Baseline Control	Baseline Project	Baseline Control	Baseline Project	Baseline Control	Baseline Project
5.5 people	5.2 people	4.7 years	5.1 years	8%	14%	24%	8%

Percent who self-identified as Gola		Percent who self-identified as Kpelle		Percent who self-identified as Mandingo		Percent who self-identified as Kissi		Percent who self-identified as in another tribe	
Baseline Control	Baseline Project	Baseline Control	Baseline Project	Baseline Control	Baseline Project	Baseline Control	Baseline Project	Baseline Control	Baseline Project
22%	29%	17%	11%	17%	10%	11%	13%	33%	36%

Percent of households earning income derived from mining own diamond claims		Percent of households earning income derived from other mining		Percent of households earning income derived from farming and agricultural production		Percent of households earning income derived from small businesses		Percent of households earning income from other sources, including wages, pensions and remittances	
Baseline Control	Baseline Project	Baseline Control	Baseline Project	Baseline Control	Baseline Project	Baseline Control	Baseline Project	Baseline Control	Baseline Project
57%	61%	14%	8%	52%	32%	35%	33%	33%	12%

Average Household size		Mean years of education		Percent female		Migrant households		Household income per capita	
End-Line Control	End-Line Project	End-Line Control	End-Line Project	End-Line Control	End-Line Project	End-Line Control	End-Line Project	End-Line Control	End-Line Project
4.6 people	5.2 people	4.1 years	3.9 years	12%	12%	Not asked.	Not asked.	USD 285	USD 205

Percent who self-identified as Gola		Percent who self-identified as Kpelle		Percent who self-identified as Mandingo		Percent who self-identified as Kissi		Percent who self-identified as in another tribe	
End-Line Project	End-Line Control	End-Line Project	End-Line Control	End-Line Project	End-Line Control	End-Line Project	End-Line Control	End-Line Project	End-Line Project
34%	27%	16%	9%	12%	11%	11%	14%	27%	39%

Percent of households earning income derived from mining own diamond claims		Percent of households earning income derived from other mining		Percent of households earning income derived from farming and agricultural production		Percent of households earning income derived from small businesses		Percent of households earning income from other sources, including wages, pensions and remittances	
End-Line Project	End-Line Control	End-Line Project	End-Line Control	End-Line Project	End-Line Control	End-Line Project	End-Line Control	End-Line Project	End-Line Control
64%	53%	23%	18%	53%	49%	40%	35%	50%	55%

Claims	“Do you have any other type of document besides a license for this claim? What type of document?”				“ How did you acquire this claim?”		
	Receipt	Permit	Clearance	Prospecting	Inheritance	Granted by chairman	Prospected
First claim	5% (n=22)	23% (n=113)	23% (n=113)	12% (n=60)	34% (n=216)	24% (n=153)	41% (n=262)
Second claim	7% (n=7)	26% (n=25)	20% (n=21)	11% (n=10)	28% (n=36)	22% (n=28)	50% (n=64)
Third claim	13% (n=2)	31% (n=5)	19% (n=3)	13% (n=2)	18% (n=4)	27% (n=6)	55% (n=12)
Fourth claim	---	1% (n=50)	1% (n=50)	---	17% (n=1)	33% (n=2)	50% (n=3)

Statistics	“A Class C license costs USD 150. If the license cost less, could you afford to buy one? How much could you afford?”				“Apart from the money you paid for the license, how much did you pay for other things to get your license?”				“If you need to go to your claim, how long does it take you to get there?”			
	Min.	Max.	Mean	S. Dev.	Min.	Max.	Mean	S. Dev.	Min.	Max.	Mean	S. Dev.
First claim	USD 20	USD 180	USD 82	USD 27	USD 10	USD 1500	USD 218	USD 205	5 mins	9 hours	57 mins	54 mins
Second claim	USD 25	USD 150	USD 88	USD 26	USD 0	USD 500	USD 183	USD 148	4 mins	6 hours	61 mins	58 mins
Third claim	USD 50	USD 150	USD 86	USD 32	USD 60	USD 700	USD 262	USD 272	5 mins	4 hours	67 mins	62 mins
Fourth claim	USD 75	USD 145	USD 98	USD 40	USD 30	USD 700	USD 363	USD 335	20 mins	90 mins	52 mins	27 mins

### Question Set 2: Knowledge about the Kimberley Process

Knowledge of Kimberley Process	Baseline-Survey			End-line Survey		
	All Areas (n=775)	Project Areas (n=397)	Control Areas (n=378)	All Areas (n=639)	Project Areas (n=361)	Control Areas (n=278)
Haven't heard of KP	50% (n=385)	40% (n=160)	60% (n=225)	29% (n=186)	24% (n=88)	35% (n=98)
KP Quiz Results***	(n=390)	(n=397)	(n=378)	(n=63)	(n=361)	(n=278)
Perfect score on quiz	7% (n=57)	12% (n=47)	3% (n=10)	3% (n=18)	2% (n=9)	3% (n=9)
3 of 4 correct on quiz	23% (n=178)	24% (n=95)	22% (n=83)	52% (n=331)	57% (n=207)	45% (n=124)
Less than 3 of 4 correct on quiz	6% (n=46)	7% (n=27)	5% (n=19)	16% (n=102)	16% (n=56)	17% (n=46)

\* The quiz results reported in the baseline report represented that portion of respondents who said they had heard of the Kimberley Process, and the percentages reported in that report were of *all* who responded to the first question, not just of the respondents who answered “Yes” to the first question. Thus the total percentage of quiz scores sums to 100% minus those who responded, “No” to the first question, i.e., 50% for all areas in the baseline survey and 71% for all areas in the end-line survey.

\*\* The baseline quiz results reported here were re-computed using the original baseline data. It must be noted that there was an excessive amount of erroneous (non-allowed) data in the baseline data set for the KP quiz questions. Some 40 to 60 samples needed to be removed from *each* quiz response. An erroneous data point in any one of the four responses would eliminate that entire score from being reported here, thus accounting for this missing 14% from baseline quiz results. In the end-line survey, on the other hand, responses coded as “don’t know” (98, not an option in the baseline survey) are included as “wrong” answers.

**Question Set 3: Mining Conflicts**

	Incidents of Conflict					
	Baseline*			End-Line		
	All Areas (n=744)	Project Areas (n=385)	Control Areas (n=359)	All Areas (n=637)	Project Areas (n=360)	Control Areas (n=277)
Ever had a conflict? Percent who answered “yes”	17% (n=127)	20% (n=76)	14% (n=51)	12% (n=77)	11% (n=41)	13% (n=36)
What kind of conflict?	(n=132)**	(n=73)	(n=59)	(n=76)	(n=41)	(n=35)
• Boundaries	46% (n=61)	47% (n=34)	46% (n=27)	41% (n=31)	39% (n=16)	43% (n=15)
• Mining rights with local miners	23% (n=30)	19% (n=14)	27% (n=16)	21% (n=16)	29% (n=12)	11% (n=4)
• Mining rights with outsiders	11% (n=15)	8% (n=6)	15% (n=9)	11% (n=8)	12% (n=5)	9% (n=3)
• Prospecting	9% (n=12)	14% (n=10)	3% (n=4)	8% (n=6)	2% (n=1)	14% (n=5)
“Very worried” about future conflicts over claims	(n=800)	(n=403)	(n=397)	(n=639)	(n=361)	(n=278)
	40% (n=318)	51% (n=205)	28% (n=113)	45% (n=286)	47% (n=171)	41% (n=115)
<b>Perceived severity of conflicts between (among) miners</b>						
	(n=796)	(n=403)	(n=393)	(n=639)	(n=361)	(n=278)
• Not a problem	75% (n=597)	69% (n=277)	81% (n=320)	75% (n=476)	71% (n=258)	78% (n=218)
• Somewhat of a problem	18% (n=147)	25% (n=100)	12% (n=47)	12% (n=76)	11% (n=40)	13% (n=36)
• A big problem	7% (n=52)	6% (n=26)	7% (n=26)	14% (n=87)	17% (n=63)	9% (n=24)
<b>Perceived severity of conflicts between miners and the police or government</b>						
•	(n=798)	(n=405)	(n=393)	(n=639)	(n=361)	(n=278)
• Not a problem	89% (n=713)	88% (n=353)	92% (n=360)	79% (n=505)	77% (n=277)	82% (n=228)
• Somewhat of a problem	7% (n=57)	10% (n=40)	4% (n=17)	13% (n=80)	13% (n=48)	12% (n=32)
• A big problem	4% (n=28)	3% (n=12)	4% (n=16)	9% (n=54)	10% (n=36)	6% (n=18)
* Erroneous (invalid) responses were removed from the baseline data set.						
** Only those who answered “Yes” to, “Have you ever had a conflict?” should have been asked the question, “What kind of conflict?” Therefore the total count for “What kind of conflict” should have been 127, not 132. It is uncertain why the actual count is higher. Perhaps respondents were allowed to give more than one response to the question.						

	How Conflicts Are Resolved					
	Baseline*			End-Line		
	All Areas (n=744)	Project Areas (n=385)	Control Areas (n=359)	All Areas (n=637)	Project Areas (n=360)	Control Areas (n=277)
Ever had a conflict? Percent who answered “yes”	17% (n=127)	20% (n=76)	14% (n=51)	12% (n=77)	11% (n=41)	13% (n=36)
How was the conflict resolved?	(n=143)**	(n=75)	(n=68)	(n=76)	(n=41)	(n=35)
• “Ourselves”	22% (n=41)	17% (n=13)	26% (n=18)	14%	16%	11%
• (Local, informal) “mining chairman”	25% (n=36)	32% (n=24)	18% (n=12)	39%	37%	43%
• (Local government) mining agent	29% (n=42)	29% (n=22)	29% (n=20)	20%	26%	14%
• Police or court	2% (n=3)	3% (n=2)	1% (n=1)	6%	5%	9%
• Someone else	13% (n=18)	13% (n=10)	12% (n=8)	9%	9%	9%
• Conflict was not resolved	9% (n=13)	5% (n=4)	13% (n=9)	10%	7%	14%

\*\* Only those who answered “Yes” to, “Have you ever had a conflict?” should have been asked the question, “How was the conflict resolved?” Therefore the total count for “What kind of conflict” should have been 127, not 143. It is uncertain why the actual count is higher. Perhaps respondents were allowed to give more than one response to the question.

#### Question Set 4: Chain of Custody

	Baseline			End-Line		
	All Areas	Project Areas	Control Areas	All Areas	Project Areas	Control Areas
Who was the supporter?	(n=406)*	(n=205)	(n=201)	(n=980)	(n=613)	(n=367)
• Myself	36% (n=145)	42% (n=86)	29% (n=59)	47% (n=460)	43% (n=261)	54% (n=199)
• A relative	18% (n=75)	11% (n=22)	26% (n=53)	13% (n=124)	14% (n=85)	11% (n=39)
• A local licensed broker	22% (n=91)	24% (n=50)	20% (n=41)	32% (n=314)	34% (n=210)	28% (n=104)
• Other Liberian	16% (n=64)	15% (n=31)	16% (n=33)	5% (n=47)	5% (n=28)	5% (n=19)
• A non-Liberian	8% (n=31)	8% (n=16)	7% (n=15)	4% (n=35)	5% (n=29)	2% (n=6)
To whom were the diamonds sold?	(n=377)**	(n=209)	(n=168)	(n=530)	(n=335)	(n=195)
• Local licensed broker	47%	52%	42%	72%	68%	78%

	(n=179)	(n=108)	(n=71)	(n=379)	(n=227)	(n=152)
• Supporter who was not a licensed broker	25% (n=93)	19% (n=39)	32% (n=54)	16% (n=83)	21% (n=69)	7% (n=14)
• Someone else	17% (n=63)	16% (n=33)	18% (n=30)	10% (n=54)	9% (n=30)	12% (n=24)
• More than one person	11% (n=42)	14% (n=29)	8% (n=13)	3% (n=14)	3% (n=9)	3% (n=4)
Were diamonds registered at regional diamond office?	(n=335)***	(n=184)	(n=151)	(n=526)****	(n=330)	(n=196)
• All of them	19% (n=62)	17% (n=32)	20% (n=30)	41% (n=217)	46% (n=152)	33% (n=65)
• Some of them	11% (n=38)	13% (n=24)	9% (n=14)	6% (n=29)	5% (n=17)	6% (n=12)
• None of them	70% (n=235)	70% (n=128)	71% (n=107)	53% (n=278)	48% (n=160)	60% (n=118)
<p>* Erroneous baseline data consisting of 183 samples (31 percent of the total samples for this question) were removed from the analysis of this question. The percentages reported here are based on the reduced data set.</p> <p>** Erroneous baseline data consisting of 108 samples (22 percent of the total samples for this question) were removed from the analysis of this question. The percentages reported here are based on the reduced data set.</p> <p>*** Erroneous baseline data consisting of 151 samples (31 percent of the total samples for this question) were removed from the analysis of this question. The percentages reported here are based on the reduced data set.</p> <p>**** Don't know and refused responses from the end-line survey (two samples) are not shown.</p> <p>Also note: The total sample for the three questions is for all pits, all claims, a sum that may be larger than the total number of respondents.</p>						

### Question Set 5: Miners' Beliefs, Attitudes and Concerns

"Which of these reasons are important for you?"	"Some reasons why some people don't dig more pits on their claims."							
	Labor Availability ( "Hard to find diamond boys")		Investment Capital ( "Hard to find support")		Productivity of Claim ( "Not enough diamonds on my claim")		Other Opportunities ( "I was busy doing other things")	
	Baseline* (n=798)	End-Line (n=639)	Baseline* (n=796)	End-Line (n=639)	Baseline* (n=799)	End-Line (n=639)	Baseline* (n=8799)	End-Line (n=639)
Very important	76% (n=609)	77% (n=490)	82% (n=656)	91% (n=584)	19% (n=152)	36% (n=227)	11% (n=89)	25% (n=158)
Somewhat important	9% (n=72)	12% (n=74)	7% (n=56)	3% (n=21)	37% (n=299)	22% (n=141)	31% (n=244)	22% (n=138)
Not important	15% (n=117)	12% (n=74)	11% (n=84)	5% (n=34)	44% (n=348)	42% (n=267)	58% (n=466)	54% (n=342)
Don't know / No response	N/A	< 1% (n=1)	N/A	--	N/A	1% (n=4)	N/A	< 1% (n=1)

\* Baseline results shown in this table were re-computed from the baseline data. Erroneous data points were removed from the analysis.

“Which of these reasons are important for you?”	“Some reasons why some people don’t dig more pits on their claims.”							
	Labor Availability (“Hard to find diamond boys”)		Investment Capital (“Hard to find support”)		Productivity of Claim (“Not enough diamonds on my claim”)		Other Opportunities (“I was busy doing other things”)	
	Baseline Control (n=394)	Baseline Project (n=404)	Baseline Control (n=395)	Baseline Project (n=401)	Baseline Control (n=393)	Baseline Project (n=406)	Baseline Control (n=395)	Baseline Project (n=404)
Very important	76% (n=298)	77% (n=311)	83% (n=328)	82% (n=328)	23% (n=90)	15% (n=62)	10% (n=41)	12% (n=48)
Somewhat important	9% (n=36)	9% (n=36)	7% (n=29)	7% (n=27)	43% (n=171)	32% (n=128)	32% (n=127)	29% (n=117)
Not important	15% (n=60)	14% (n=57)	10% (n=38)	11% (n=46)	34% (n=132)	53% (n=216)	57% (n=227)	59% (n=239)
Don’t know / No response	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Baseline results shown in this table were re-computed from the baseline data. Erroneous data points were removed from the analysis.

“Which of these reasons are important for you?”	“Some reasons why some people don’t dig more pits on their claims.”							
	Labor Availability (“Hard to find diamond boys”)		Investment Capital (“Hard to find support”)		Productivity of Claim (“Not enough diamonds on my claim”)		Other Opportunities (“I was busy doing other things”)	
	End-Line Control (n=278)	End-Line Project (n=361)	End-Line Control (n=278)	End-Line Project (n=361)	End-Line Control (n=278)	End-Line Project (n=361)	End-Line Control (n=278)	End-Line Project (n=361)
Very important	79% (n=221)	75% (n=269)	91% (n=252)	92% (n=332)	36% (n=99)	35% (n=128)	21% (n=57)	28% (n=101)
Somewhat important	11% (n=30)	12% (n=44)	3% (n=8)	4% (n=13)	24% (n=67)	20% (n=74)	23% (n=63)	21% (n=75)
Not important	9% (n=26)	13% (n=48)	6% (n=18)	4% (n=16)	40% (n=110)	43% (n=157)	56% (n=157)	51% (n=185)
Don’t know / No response	< 1% (n=1)	--	--	--	1% (n=2)	1% (n=2)	< 1% (n=1)	--

Importance and reasons for obtaining a mining license	Overall Importance of Obtaining License		Reasons for Obtaining License									
			Loss of claim		Problems with police/ government		Conflicts with other land users		Problems with brokers/laborers		Better price for diamonds	
	Base-line* (n=798)	End-Line (n=639)	Base-line* (n=826)	End-Line (n=639)	Base-line* (n=826)	End-Line (n=639)	Base-line* (n=826)	End-Line (n=639)	Base-line* (n=826)	End-Line (n=639)	Base-line* (n=826)	End-Line (n=639)
Very important	96% (n=764)	94% (n=603)	89% (est.)	98% (n=626)	88% (est.)	96% (n=615)	87% (est.)	94% (n=601)	79% (est.)	85% (n=544)	78.3%	89% (n=569)
Somewhat important	2% (n=14)	3% (n=22)	8% (est.)	1% (n=8)	8% (est.)	3% (n=19)	8% (est.)	5% (n=33)	15% (est.)	14% (n=91)	12% (est.)	9% (n=59)
Not important	3% (n=20)	2% (n=14)	3% (est.)	1% (n=5)	4% (est.)	1% (n=4)	5% (est.)	1% (n=3)	6% (est.)	< 1% (n=2)	10% (est.)	2% (n=11)
Don't know / No response	N/A	--	N/A	--	N/A	< 1% (n=1)	N/A	< 1% (n=2)	N/A	< 1% (n=2)	N/A	--

\* Values labeled "est." were estimated from bar graphs presented in the baseline report. Values without the "est." notation were taken from the narrative or tabular portion of the report, which reported actual values. The baseline data could not be re-computed due to ambiguities in the question numbering for this question, see notes next table.

Importance and reasons for obtaining a mining license	Overall Importance of Obtaining License		Reasons for Obtaining License*									
			Loss of claim		Problems with police/ government		Conflicts with other land users		Problems with brokers/laborers		Better price for diamonds**	
	Base-line Control (n=397)	Base-line Project (n=401)	Base-line Control	Base-line Project	Base-line Control	Base-line Project	Base-line Control	Base-line Project	Base-line Control	Base-line Project	Base-line Control	Base-line Project
Very important	95% (n=374)	97% (n=390)	The baseline data were ambiguous for these questions. Specifically, in the data set, Q132 contained response codes but in the questionnaire there was no Q132 (the number 132 was assigned to a category label, not to a question). Because question labels were not provided within the baseline data set, it was unclear if (or how) Q132 should be re-assigned to Q133, Q133 to Q134, and so forth.									
Somewhat important	3% (n=11)	1% (n=3)										
Not important	3% (n=12)	2% (n=8)										
Don't know / No response	N/A	N/A										

Importance and reasons for obtaining a mining license	Overall Importance of Obtaining License		Reasons for Obtaining License									
			Loss of claim		Problems with police/government		Conflicts with other land users		Problems with brokers/laborers		Better price for diamonds	
	End-Line Control (n=278)	End-Line Project (n=361)	End-Line Control (n=278)	End-Line Project (n=361)	End-Line Control (n=278)	End-Line Project (n=361)	End-Line Control (n=278)	End-Line Project (n=361)	End-Line Control (n=278)	End-Line Project (n=361)	End-Line Control (n=278)	End-Line Project (n=361)
Very important	93% (n=259)	95% (n=344)	96% (n=268)	99% (n=358)	95% (n=264)	97% (n=351)	91% (n=254)	96% (n=347)	82% (n=229)	87% (n=315)	88% (n=244)	90% (n=325)
Somewhat important	4% (n=12)	3% (n=10)	2% (n=5)	1% (n=3)	4% (n=10)	2% (n=9)	7% (n=20)	4% (n=13)	17% (n=46)	12% (n=45)	10% (n=28)	9% (n=31)
Not important	3% (n=7)	2% (n=7)	2% (n=5)	--	1% (n=4)	--	1% (n=3)	--	1% (n=2)	--	2% (n=6)	1% (n=5)
Don't know / No response	--	--	--	--	--	< 1% (n=1)	< 1% (n=1)	< 1% (n=1)	< 1% (n=1)	< 1% (n=1)	--	--

Reasons for not obtaining a mining license	Reasons for Not Obtaining License (Asked only of Unlicensed Miners**)									
	Don't know how		Cost too high		Associated expenses too great		Takes too long		May be denied	
	Base-line*	End-Line (n=492)	Base-line*	End-Line (n=490)	Base-line*	End-Line (n=490)	Base-line*	End-Line (n=490)	Base-line*	End-Line (n=490)
Very important	30% (est.)	34% (n=165)	77% (est.)	85% (n=417)	78% (est.)	76% (n=373)	52% (est.)	52% (n=256)	24% (est.)	39% (n=189)
Somewhat important	12% (est.)	10% (n=51)	11% (est.)	10% (n=47)	14% (est.)	17% (n=84)	22% (est.)	23% (n=112)	20% (est.)	18% (n=90)
Not important	58% (est.)	56% (n=274)	12% (est.)	5% (n=26)	8% (est.)	6% (n=30)	26% (est.)	24% (n=117)	56% (est.)	41% (n=203)
Don't know / No response	N/A	< 1% (n=2)	N/A	--	N/A	1% (n=3)	N/A	1% (n=5)	N/A	2% (n=8)
* Values labeled "est." were estimated from bar graphs presented in the baseline report. Values without the "est." notation were taken from the narrative or tabular portion of the report, which reported actual values. ** "Unlicensed miners" are defined as those miners with at least one unlicensed claim.										
Reasons for not obtaining a mining license	Reasons for Not Obtaining License (Asked only of Unlicensed Miners**)									
	Question 129: Cost too high		Question 130: Associated expenses too great		Question 131: Takes too long		Question 132: May be denied		Question 133: Cost too high	
	End-Line Control (n=219)	End-Line Project (n=273)	End-Line Control (n=218)	End-Line Project (n=272)	End-Line Control (n=218)	End-Line Project (n=272)	End-Line Control (n=218)	End-Line Project (n=272)	End-Line Control (n=218)	End-Line Project (n=272)
Very important	33% (n=73)	34% (n=92)	83% (n=181)	87% (n=236)	76% (n=165)	76% (n=208)	46% (n=100)	57% (n=156)	35% (n=76)	42% (n=113)
Somewhat important	11% (n=24)	10% (n=27)	12% (n=26)	8% (n=21)	18% (n=39)	17% (n=45)	27% (n=59)	19% (n=53)	18% (n=39)	19% (n=51)
Not important	55% (n=121)	56% (n=153)	5% (n=11)	6% (n=15)	6% (n=13)	6% (n=17)	25% (n=55)	23% (n=62)	45% (n=99)	38% (n=104)
Don't know / No response	< 1% (n=1)	< 1% (n=1)	--	--	< 1% (n=1)	1% (n=2)	2% (n=4)	< 1% (n=1)	2% (n=4)	1% (n=4)
The complementary baseline control-versus-project analysis could not be completed because the ambiguity in set Q132 through Q137 carried into this next set of questions.										

<b>Perceptions About Prices Paid for Diamonds</b>						
<b>“In general, do you think that brokers pay miners fair prices for diamonds?”</b>	<b>Baseline (n=797)</b>	<b>Baseline Project (n=401)</b>	<b>Baseline Control (n=386)</b>	<b>End-Line (n=148*)</b>	<b>End-Line Project (n=88)</b>	<b>End-Line Control (n=60)</b>
Always or almost always	2% (n=19)	1% (n=5)	4% (n=14)	1% (n=2)	1% (n=1)	2% (n=1)
Usually	3% (n=21)	2% (n=10)	3% (n=11)	4% (n=6)	3% (n=3)	5% (n=3)
Sometimes	19% (n=152)	15% (n=61)	24% (n=91)	17% (n=25)	13% (n=11)	23% (n=14)
Never or almost never	76% (n=595)	81% (n=325)	70% (n=270)	73% (n=108)	81% (n=71)	62% (n=37)
Don't know / No response	N/A	N/A	N/A	5% (n=7)	2% (n=2)	8% (n=5)
<b>“In general, do you think brokers know more about the prices of diamonds than miners?”</b>	<b>Baseline (n=763)</b>	<b>Baseline Project (n=390)</b>	<b>Baseline Control (n=376)</b>	<b>End-Line (n=142*)</b>	<b>End-Line Project (n=85)</b>	<b>End-Line Control (n=57)</b>
A lot more	75% (n=572)	79% (n=308)	70% (n=264)	74% (n=105)	80% (n=68)	65% (n=37)
A little more	15% (n=112)	12% (n=46)	18% (n=66)	12% (n=17)	11% (n=9)	14% (n=8)
About the same	7% (n=52)	6% (n=25)	7% (n=27)	8% (n=12)	6% (n=5)	12% (n=7)
Less	4% (n=30)	3% (n=11)	5% (n=19)	4% (n=6)	2% (n=2)	7% (n=4)
Don't know / No response	N/A	N/A	N/A	1% (n=2)	1% (n=1)	2% (n=1)
* It is unclear why the sample sizes are low for the end-line survey. It could have been that these two questions were only asked of miners who responded in a certain way to a previous question, although these two questions were not set up as being subsequent to a skip question (see questions Q60 and Q 61 in the questionnaire, Annex B).						

Should miners do this?	Protecting the Environment							
	Refill pits after mining		Replant trees after mining		Restore streams to natural courses after mining		Avoid washing gravel in streams used for drinking water	
	Baseline* (n=786)	End-Line (n=639)	Baseline* (n=766)	End-Line (n=638)	Baseline* (n=776)	End-Line (n=638)	Baseline* (n=774)	End-Line (n=638)
Mentioned (baseline) / Yes (end-line)	74% (n=585)	85% (n=542)	24% (n=185)	40% (n=258)	65% (n=503)	64% (n=408)	68% (n=528)	63% (n=404)
No	26% (n=201)	12% (n=78)	76% (n=581)	50% (n=319)	35% (n=273)	28% (n=181)	32% (n=246)	31% (n=197)
Don't know / No response	N/A	3% (n=19)	N/A	10% (n=61)	N/A	8% (n=49)	N/A	6% (n=37)
* . Baseline results shown in this table were re-computed from the baseline data. Erroneous data points were removed from the analysis.								
Should miners do this?	Question 82: Refill pits after mining		Question 83: Replant trees after mining		Question 84: Restore streams to natural courses after mining		Question 85: Avoid washing gravel in streams used for drinking water	
	Baseline Control (n=388)	Baseline Project (n=398)	Baseline Control (n=394)	Baseline Project (n=372)	Baseline Control (n=394)	Baseline Project (n=382)	Baseline Control (n=391)	Baseline Project (n=383)
Mentioned (baseline) / Yes (end-line)	77% (n=300)	72% (n=285)	36% (n=140)	12% (n=45)	77% (n=303)	52% (n=200)	72% (n=283)	64% (n=245)
No	23% (n=88)	28% (n=113)	64% (n=254)	88% (n=327)	23% (n=91)	48% (n=182)	28% (n=108)	36% (n=138)
Don't know / No response	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Should miners do this?	Question 82: Refill pits after mining		Question 83: Replant trees after mining		Question 84: Restore streams to natural courses after mining		Question 85: Avoid washing gravel in streams used for drinking water	
	End-Line Control (n=278)	End-Line Project (n=361)	End-Line Control (n=278)	End-Line Project (n=360)	End-Line Control (n=278)	End-Line Project (n=360)	End-Line Control (n=278)	End-Line Project (n=360)
Mentioned (baseline) / Yes (end-line)	85% (n=235)	85% (n=307)	37% (n=102)	43% (n=156)	60% (n=167)	67% (n=241)	59% (n=165)	66% (n=239)
No	13% (n=37)	11% (n=41)	53% (n=147)	48% (n=172)	31% (n=86)	26% (n=95)	34% (n=95)	28% (n=102)
Don't know / No response	2% (n=6)	4% (n=13)	10% (n=29)	9% (n=32)	9% (n=25)	7% (n=24)	6% (n=18)	5% (n=19)

# ANNEX B: FINAL SURVEY INSTRUMENT

**PRADD Project Evaluation  
END LINE SURVEY  
Miner Household Questionnaire**

Date of interview: \_\_\_ / \_\_\_ / \_\_\_ (day, month, year)

**Identification**  
Respondent Name: \_\_\_\_\_ Respondent tracking number : \_\_\_\_\_  
County: \_\_\_\_\_ District: \_\_\_\_\_  
Clan: \_\_\_\_\_ Town: \_\_\_\_\_  
Enumerator Name: \_\_\_\_\_ Code: \_\_\_\_\_  
Supervisor Name: \_\_\_\_\_ Code: \_\_\_\_\_

**Quality Control**  
Interview Status:  
Fully completed \_\_\_\_\_ - 1  
Partially completed \_\_\_\_\_ - 2  
Not completed \_\_\_\_\_ - 3  
Total # of Visits: \_\_\_\_\_  
[Int: up to 3 visits before trying to make alternative plans]  
Enumerator Self Check (field), print first name: \_\_\_\_\_  
Field Supervisor Check (field), print first name: \_\_\_\_\_  
Other Check (field), print first name: \_\_\_\_\_  
# of missing values found by Field Supervisor: \_\_\_\_\_  
# of missing values resolved: \_\_\_\_\_  
# of missing values UNRESOLVED: \_\_\_\_\_  
[Sup: check total of resolved & unresolved and confirm with enumerator]  
Data Manager coding of open-ended responses (note question numbers): \_\_\_\_\_  
Management comments: \_\_\_\_\_

**Informed Consent**  
Hello, my name is \_\_\_\_\_. I am from Subah-Belleh Associates (SBA). SBA is a company owned by Liberians. We have been sent to ask you some questions to help the PRADD project on lessons learned. You may recall that our team talked to you almost two years ago: Property Rights and Artisanal Diamond Development. PRADD is funded by the United States Government and supports the government of Liberia strengthening the Kimberley Process Certification Scheme. It has been working to improve the lives of both licensed and unlicensed miners who are using shovels and diggers to mine diamonds, diamond boys, and the other members of their communities.  
I want to ask you the same questions you were asked before, which were about yourself and the problems that your family and your neighbours are really facing. The reason why we need this information is to help the project learned lessons on its activities in the mining sector and to see what kind of help the people in the mining sector in Liberia really need. We will take the information you give us and put it together with other information from all the other people we talk to so that we can really understand the situation.  
I can assure you that the answers you give to me will be confidential. We will not share any information about you with anyone other than our researchers, and no one else will be able to tell what answers you gave.

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Some of the questions I will ask you are about licensed and unlicensed mining. It is important that we get information about unlicensed mining so that we can draw lessons on how best to help all of the miners, whether they have licenses or not. If you are doing mining without a license, I promise you that you will not get in trouble with anyone if you tell me about it. If you are doing unlicensed mining, I hope that you will tell me about it so that we can understand the problems facing unlicensed miners too. If you feel that you do not want to answer any of the questions I ask you, you have the right to not answer them and we can move on.

But I hope that you will answer the questions. I am asking these questions because we really need this information to understand how to make things better for the miners in Liberia and their communities.

We only want to talk to you for about one or two hours. Do you agree for me to ask you questions?

- \_\_\_ -1 yes [proceed to household pre-consent]  
 \_\_\_ -2 no [confirm and terminate interview]

START TIME: \_\_\_\_\_

1. HOUSEHOLD MEMBERS (LIST ALL MEMBERS OF THE HOUSEHOLD)							
Line No.	First Name	Relationship to miner	Age	Sex 1 = male 2 = female	Highest level of education  <i>Instruction</i> (Individuals age 13 and above only)	Is child presently attending school 1 = yes 2 = no  <i>Instruction</i> (Individuals age 12 and under only)	What is the main thing this person is doing to get money or help the family live?  <i>Instruction</i> (Individuals age 13 and above only)
	101	102	103	104	105	106	107
1							
2							
3							
4							
5							
6							
7							
8							
9							

102 Relationship Status	
[1] Self	[14] Uncle/aunt
[2] Spouse	[15] Spouse's uncle/aunt
[3] Child	[16] Cousin
[4] Father/mother	[17] Spouse's cousin
[5] Father/ mother in law	[18] Spouse's brother's/ sister's child
[6] Brother/sister	[97] Other specify _____
[7] Brother/sister in law	
[8] Son's/daughter's spouse	
[9] Brother's/sister's spouse	
[10] Grandchild	
[11] Brother's/sister's child (nephew/niece)	
[12] Grandfather/grandmother	
[13] Spouse's grandfather/grandmother	

105 Highest Level Completed	
[1] None 0	[10] Grade 9
[2] Grade 1	[11] Grade 10
[3] Grade 2	[12] Grade 11
[4] Grade 3	[13] Grade 12
[5] Grade 4	[14] Post-secondary 13
[6] Grade 5	[15] Technical/vocational 14
[7] Grade 6	[97] Other specify: _____
[8] Grade 7	
[9] Grade 8	

107 Primary income generating activity
[1] None
[2] Agriculture
[3] Small business
[4] Regular wages/salary
[5] Occasional wages/salary
[6] Mining
[97] Other specify: _____

BASIC DEMOGRAPHIC INFORMATION							
Q#	Questions and Enumerator Instructions	Responses and Response Code Instructions	Resp. Codes	GO TO	Sup		
2	What is your tribe?	[1] Bassa [10] Mandingo [2] Gbandi [11] Mende [3] Gio [12] Sapo [4] Kpelle [13] Via [5] Krahn [14] Kru [6] Lorma [15] Mano [7] Belle [16] Kissi [8] Gola [98] Don't Know [9] Grebo [97] Other specify: [99] Refused					
MINING ACTIVITIES (Ask all questions in this section for each claim first before proceeding to the next claim)							
3	We need to ask you to give us a name or a number for this claim so that we can keep track of your different claims. What name or number would you give this claim?		Claim 1	Claim 2	Claim 3	Claim 4	
4	Do you have a valid license for this claim? (From 2011 to 2012)	[1] yes [98] Don't Know [2] no [99] Refused					<i>If yes, go to 9</i>
5	Have you ever had a valid license for this claim?	[1] yes [98] Don't Know [2] no [99] Refused					
6	Did you apply for a license for this year but you are still waiting to get it?	[1] yes [98] Don't Know [2] no [99] Refused					
7	Do you have any other type of document besides a license for this claim? What type of document do you have?	[1] Receipt [2] Permit [3] Clearance [4] Prospecting [97] Other specify: _____ [98] Don't Know [99] Refused					
8	A class C license costs US\$150, if the license cost less than this, could you afford to buy one? How much can you afford?						<i>Go to 12</i>
9	What type of license do you hdd for this claim?	[1] Class A [2] Class B [3] Class C [97] Other specify: _____ [98] Don't Know [99] Refused					
10	Did you ever mine this claim without a valid license?	[1] yes [2] no [98] Don't Know [99] Refused					

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			Claim 1	Claim 2	Claim 3	Claim 4
11	Apart from the money you paid for the license, how much did you have to pay for other things to get your license? For example, travelling to Monrovia or making other payments?	[98] Don't Know [99] Refused				
12	If you need to go to your claim, how long does it take you to get there?	[98] Don't Know [99] Refused				
13	In what year did you first start mining this claim?	[98] Don't Know [99] Refused				
14	How did you first get access to this claim for mining, before getting a license if you have one?	[1] Inheritance [2] Not inherited but permission granted by chairman [3] Prospected [97] Others Specify _____ [98] Don't Know [99] Refused				
15	Do you need a water pump to mine this claim?	[1] yes [2] no [98] Don't Know [99] Refused				
16	Do you have to dive to mine this claim?	[1] yes [2] no [98] Don't Know [99] Refused				
17	If you were to dig a new pit on this claim, how many shovels deep would you need to dig?	[98] Don't Know [99] Refused				

ID	Question	Response Options	Claims			
			Claim 1	Claim 2	Claim 3	Claim 4
			No. of pits/projects: _____	No. of pits/projects: _____ of _____	No. of pits/projects: _____	No. of pits/projects: _____
18	How many pits or projects did you dig on this claim during the last season? (December 2011-July 2012)	[98] Don't Know [99] Refused				
19	How many shovels deep was the pit or project?	[98] Don't Know [99] Refused	1			
			2			
			3			
			4			
			5			
20	How many weeks did it take from the time you started until you finished digging up the gravel?	[98] Don't Know [99] Refused	1			
			2			
			3			
			4			
			5			
21	How many diamond boys were employed?	[98] Don't Know [99] Refused	1			
			2			
			3			
			4			
			5			
22	Were they supervised?	[1] By a field agent always [2] By yourself always [3] By a field agent only during washing [4] By yourself only during washing [5] Not at all [97] Other specify _____ [98] Don't Know [99] Refused	1			
			2			
			3			
			4			
			5			
<b>Did you use any of the following equipment:</b>						
23	Water Pump	[1] Yes [2] No [98] Don't Know [99] Refused	1			
			2			
			3			
			4			
			5			
24	Dump-truck	[1] Yes [2] No [98] Don't Know [99] Refused	1			
			2			
			3			
			4			
			5			

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25	Washing plant	[1] Yes [2] No [98] Don't Know [99] Refused	1				
			2				
			3				
			4				
			5				
26	Dredge	[1] Yes [2] No [98] Don't Know [99] Refused	1				
			2				
			3				
			4				
			5				
27	A yellow machine, meaning a Caterpillar, backhoe, front-end loader, or bulldozer <i>(If no, go to 31)</i>	[1] Yes [2] No [98] Don't Know [99] Refused	1				
			2				
			3				
			4				
			5				
28	Backhoe	[1] Yes [2] No [98] Don't Know [99] Refused	1				
			2				
			3				
			4				
			5				
29	Front-end loader	[1] Yes [2] No [98] Don't Know [99] Refused	1				
			2				
			3				
			4				
			5				
30	Bulldozer	[1] Yes [2] No [98] Don't Know [99] Refused	1				
			2				
			3				
			4				
			5				
31	Who was the supporter?	[1] Myself [2] Relative [3] Local licensed broker [4] Other Liberian [5] Other non-Liberian [98] Don't Know [99] Refused	1				
			2				
			3				
			4				
			5				

6

32	Approximately what was the total cost to dig this pit/project for all equipment, food for diamond boys, and other expenses, in \$US?	[98] Don't Know [99] Refused	1			
			2			
			3			
			4			
			5			
	<b>How many diamonds did you find in this pit of the following weights</b>	<b>100 points = 1 carat</b>				
33	Less than 25 points	[98] Don't Know [99] Refused	1			
			2			
			3			
			4			
			5			
34	25-50 points	[98] Don't Know [99] Refused	1			
			2			
			3			
			4			
			5			
35	51-75 points	[98] Don't Know [99] Refused	1			
			2			
			3			
			4			
			5			
36	76 points – 1 carat	[98] Don't Know [99] Refused	1			
			2			
			3			
			4			
			5			
37	1.1 carat – 2 carats	[98] Don't Know [99] Refused	1			
			2			
			3			
			4			
			5			
38	More than 2 carats	[98] Don't Know [99] Refused	1			
			2			
			3			
			4			
			5			

39	How much in total did you receive for these diamonds?	<i>(Help the miner add up the total if necessary)</i> [98] Don't Know [99] Refused	1				
			2				
			3				
			4				
			5				
40	To whom did you sell them?	[1] Local licensed broker [2] Supporter who is not a local licensed broker [3] Someone else, [4] I sold them to more than one person [98] Don't Know [99] Refused	1				
			2				
			3				
			4				
			5				
41	Did you have these diamonds registered at the regional diamond office?	[1] All of them [2] Some of them [3] None of them [98] Don't Know [99] Refused	1				
			2				
			3				
			4				
			5				
	<i>I'm going to ask you about the two most valuable diamonds you found last season. For the most valuable diamond that you found in this pit:</i>		1				
			2				
			3				
			4				
			5				
42	What was the weight?	[98] Don't Know [99] Refused	1				
			2				
			3				
			4				
			5				

43	What was the colour?	[1] White/Sugar	1				
		[2] Blue	2				
		[3] Yellow	3				
		[4] Pink	4				
		[5] Brown	5				
44	What was the cut or shape?	[6] Red					
		[7] Green					
		[8] Black					
		[9] More than one colour					
		[98] Don't Know					
45	What was the clarity?	[99] Refused					
		[1] Round	1				
		[2] Flat	2				
		[97] Others specify _____	3				
		[98] Don't Know	4				
46	What price did you receive for it?	[99] Refused	5				
		[98] Don't Know	1				
			2				
			3				
			4				
47	How much do you think the broker sold it for?		5				
		<i>Ask the respondent to guess if he or she is unsure</i>	1				
			2				
		[98] Don't Know	3				
		[99] Refused	4				
		5					
<b>For the second most valuable diamond that you found in this pit:</b>							

48	What was the weight?	[98] Don't Know [99] Refused	1				
			2				
			3				
			4				
			5				
49	What was the colour?	[1] White/Sugar [2] Blue [3] Yellow [4] Pink [5] Brown [6] Red [7] Green [8] Black [9] More than one colour [98] Don't Know [99] Refused	1				
			2				
			3				
			4				
			5				
50	What was the cut or shape?	[1] Round [2] Flat [97] Others specify _____ [98] Don't Know [99] Refused	1				
			2				
			3				
			4				
			5				
51	What was the clarity?	[1] Clean [97] Others specify _____ [98] Don't Know [99] Refused	1				
			2				
			3				
			4				
			5				
52	What price did you receive for it?	[98] Don't Know [99] Refused	1				
			2				
			3				
			4				
			5				
53	How much do you think the broker sold it for?	<i>Ask the respondent to guess if he or she is unsure</i>  [98] Don't Know [99] Refused	1				
			2				
			3				
			4				
			5				

GENERAL MINING ACTIVITY					
Q#	Questions and Enumerator Instructions	Responses and Response Code Instructions	Resp. Codes	GO TO	Sup
54	Do you own a water pump?	[1] yes [2] no [98] Don't Know [99] Refused			
55	Besides the claims I have already asked you about, have you ever mined any claim without a license?	[1] yes [2] no [98] Don't Know [99] Refused			
56	How do you remember the diamonds that you find and sell? Do you write it down?	<i>If YES to "do you write it down?"</i> [1] always [2] sometimes [3] never [98] Don't Know [99] Refused			
57	Did you do any prospecting last year?	[1] yes [2] no [98] Don't Know [99] Refused		<i>If no, go to 62</i>	
58	Did you find any diamonds while prospecting other than ones you found on the claims you told me about?	[1] yes [2] no [98] Don't Know [99] Refused			
59	What was the total amount that you sold these diamonds for?	[98] Don't Know [99] Refused			
60	In general, do you think that brokers pay miners fair prices for diamonds?	[1] Never or almost never [2] Sometimes [3] Usually [4] Always or almost always [98] Don't Know [99] Refused			
61	In general, do you think brokers know more about the prices of diamonds than miners?	[1] A lot more [2] A little more [3] About the same [4] Less [98] Don't Know [99] Refused			
CONFLICTS AND SECURITY					
62	Have you ever had a conflict or palaver about mining on any of your claims?	[1] yes [2] no		<i>If no, skip to 69</i>	
63	If you have had more than one conflict or palaver, please answer the following questions about the most serious conflict or palaver you have had. Which claim did you have the conflict or palaver on?	[98] Don't Know [99] Refused			

Q#	Questions and Enumerator Instructions	Responses and Response Code Instructions	Resp. Codes	GO TO	Sup
64	What kind of conflict or palaver did you have?	[1] Conflict over boundaries [2] Conflict with someone in the local village over rights to the claim [3] Conflict with a "stranger miner" from elsewhere over rights to the claim [4] Conflict over farming or other use of the land [5] Conflict related to prospecting [6] Conflict with family members [7] Conflict with the police or government [97] Other specify _____ [98] Don't Know [99] Refused			
65	In what year did you have the conflict or palaver?	[98] Don't Know [99] Refused			
66	Who resolved it?	[1] Ourselves [2] The mining chairman [3] The mining agent [4] The police or courts [5] Someone else (specify) [6] It was not resolved [98] Don't Know [99] Refused			
67	If you were to have conflict that you couldn't resolve yourself, who would you go to in order to resolve it?	[1] Mining chairman, [2] Mining agent, [3] Someone else in the community, [4] The police or courts [98] Don't Know [99] Refused			
68	Do you think they be able to resolve it successfully?	[1] Definitely [2] Probably [3] Probably not [4] Definitely not [98] Don't Know [99] Refused			
69	How would you consider the security of your customary rights to land (for mining for example)	1] Very secure [2] Secure [3] some how [4] Insecure [98] Don't Know [99] Refused			
<b>OTHER HOUSEHOLD ECONOMIC ACTIVITY</b>					
	<b><i>Within the past year, did anyone in your household earn any money doing any of the following things? If so, how much in \$US?</i></b>	<b><i>-Ask the respondent to estimate for other family members, do not ask other family members if they are present -Help the respondent add up to totals if necessary. -Enter 0 if the respondent's household did not earn any money from the activity.</i></b>			
70	Mining activities not related to this miner's claims- for example gold mining, supporting someone else's claim, or buying or selling diamonds found on other claims.	[98] Don't Know [99] Refused			
71	Farming or agricultural production	[98] Don't Know [99] Refused			

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72	Small business revenues	[98] Don't Know [99] Refused			
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Q#	Questions and Enumerator Instructions	Responses and Response Code Instructions	Resp. Codes	GO TO	Sup
73	Wages or salary	[98] Don't Know [99] Refused			
74	Insurance, social security, or pensions	[98] Don't Know [99] Refused			
75	Western Union, Money gram, or other gifts from people outside the household	[98] Don't Know [99] Refused			
76	Others	[98] Don't Know [99] Refused			
<b>POLICY AWARENESS AND PERCEPTIONS</b>					
77	The Kimberley Process is a set of requirements for selling diamonds that you might have heard about. Have you heard of the Kimberley Process?	[1] yes [2] no [98] Don't Know [99] Refused		<i>if no, go to 81</i>	
	<b>Do you know which of the following steps are part of the Kimberley process:</b>				
78	Getting a mining license for any claim that you are mining	[1] yes [2] no [98] Don't Know [99] Refused			
79	Asking the mining agent for the correct price of each diamond you find	[1] yes [2] no [98] Don't Know [99] Refused			
80	Registering all diamonds you find with the Regional Diamond Office	[1] yes [2] no [98] Don't Know [99] Refused			
81	Giving a voucher to the broker when the diamond is sold	[1] yes [2] no [98] Don't Know [99] Refused			
<b>ENVIRONMENTAL DEGRADATION</b>					
	<i>Some people say that mining activities can cause problems for our rivers, forests, and farmland. Is there anything you think miners should do about this?</i>	<b>Read question and note if the respondent provides the answers listed in 81-84. Mark 98 for "Don't know" and 99 for "Refused" (if don't know skip to 86) Do not read 81-84 to the respondents</b>			
	<b>Did the respondent mention any of the following:</b>				
82	Refill pits after mining	[1] yes [2] no			
83	Replant trees after mining	[1] yes [2] no			
84	Restore streams to natural courses after mining	[1] yes [2] no			
85	Avoid washing gravel in streams used for drinking water	[1] yes [2] no			

Q#	Questions and Enumerator Instructions	Responses and Response Code Instructions	Resp. Codes	GO TO	Sup
<b>HOUSEHOLD ASSETS (where possible the enumerator should verify responses)</b>					
86	How many of each of the following does the household own?	[98] Respondent does not know [99] If respondent won't answer			
87	Bicycle				
88	Motorcycle				
89	Car				
90	Cell phone				
91	Cow				
92	Chickens				
93	Other livestock				
94	Radio				
95	Television/video				
96	Gas stove				
97	Clock/watch				
98	Sewing machine				
99	Refrigerator				
100	Table				
101	Chairs				
102	Cupboard				
103	Mattress				
104	Generator				
105	How much land does the household have in town (in lots)?	[98] Don't Know [99] Refused			
106	How much farmland does the household have (in acres)?	[98] Don't Know [99] Refused			
107	Does anyone in the household have a savings account at a bank? If so, what is the total value of savings?	[98] Don't Know [99] Refused			
108	Does anyone in the household have any other savings? For example, home saving, credit club, or Nigerian susu? If so, how much?	[98] Don't Know [99] Refused			
109	What is the main cooking fuel?	[1] Wood [2] Dung [3] Coal [97] Others specify _____ [98] Don't Know [99] Refused			
110	How many rooms are in the household's dwelling?	[98] Don't Know [99] Refused			
111	Is the kitchen in a separate room from the rest of the house?	[1] yes [2] no [98] Don't Know [99] Refused			

Q#	Questions and Enumerator Instructions	Responses and Response Code Instructions	Resp. Codes	GO TO	Sup
112	How many rooms are used for sleeping?	[98] Don't Know [99] Refused			
113	What is the dwelling's flooring material?	[1] Concrete/cement [2] Earth/sand/mud [3] Ceramic tile [97] Other specify _____ [98] Don't Know [99] Refused			
114	What is dwelling's wall material?	[1] Cement/stone blocks [2] Mud/sticks [3] Zinc/other metal [4] Mud bricks [5] Other bricks [97] Other specify _____ [98] Don't Know [99] Refused			
115	What is dwelling's roofing material	[1] Metal [2] Plastic/tarp [3] Concrete/cement [4] Thatch/Palm leaf [97] Other specify _____ [98] Don't Know [99] Refused			
<b>OPINIONS</b>					
	<i>I'm going to tell you some reasons why some people don't dig more pits on their claims. Which of these reasons are important for you?</i>				
116	Hard to find diamond boys	[1]Very important [2] Somewhat important [3] Not important [98] Don't Know [99] Refused			
117	Hard to find support	[1]Very important [2] Somewhat important [3] Not important [98] Don't Know [99] Refused			
118	Not enough diamonds on my claim	[1]Very important [2] Somewhat important [3] Not important [98] Don't Know [99] Refused			
119	I was busy doing other things	[1]Very important [2] Somewhat important [3] Not important [98] Don't Know [99] Refused			

Q#	Questions and Enumerator Instructions	Responses and Response Code Instructions	Resp. Codes	GO TO	Sup
119	In general, are conflicts about mining rights a problem for miners in this area?	[1] A big problem [2] Somewhat of a problem [3] Not a problem [98] Don't Know [99] Refused			
	<b><i>How much of a problem are each of the following types of conflicts in this area:</i></b>				
120	Conflicts between miners	[1] A big problem [2] Somewhat of a problem [3] Not a problem [98] Don't Know [99] Refused			
121	Conflicts with police or the government over mining claims	[1] A big problem, [2] Somewhat of a problem, [3] Not a problem [98] Don't Know [99] Refused			
122	Are you worried that you could have conflicts over your claims in the future?	[1] Yes, very worried [2] Yes, a little bit worried [3] No, not worried at all [98] Don't Know [99] Refused			
123	How important is it to you to have a mining license?	[1] Not at all important [2] Somewhat important [3] Very important [98] Don't Know [99] Refused			
	<b><i>How important do you think the following reasons are for having a license:</i></b>				
124	It prevents someone else from taking my claim from me	[1] Not at all important [2] Somewhat important [3] Very important [98] Don't Know [99] Refused			
125	It prevents problems with the police or government	[1] Not at all important [2] Somewhat important [3] Very important [98] Don't Know [99] Refused			
126	It protects me from conflicts with other miners or other people who want to use the land	[1] Not at all important [2] Somewhat important [3] Very important [98] Don't Know [99] Refused			
127	It could help me avoid problems with diamond boys or brokers	[1] Not at all important [2] Somewhat important [3] Very important [98] Don't Know [99] Refused			
128	I will get a higher price for my diamonds	[1] Not at all important [2] Somewhat important [3] Very important [98] Don't Know [99] Refused			

Q#	Questions and Enumerator Instructions	Responses and Response Code Instructions	Resp. Codes	GO TO	Sup
	<i>If you do not have license for any of your claims, how important are each of the following reasons as to why not? (skip if miner has license):</i>				
129	I don't know how to get a license	[1] Not at all important [2] Somewhat important [3] Very important [98] Don't Know [99] Refused			
130	The price for the license is too high	[1] Not at all important [2] Somewhat important [3] Very important [98] Don't Know [99] Refused			
131	The other expenses to get the license are too high (for example travelling to Monrovia, making other payments)	[1] Not at all important [2] Somewhat important [3] Very important [98] Don't Know [99] Refused			
132	It takes too long to get a license	[1] Not at all important [2] Somewhat important [3] Very important [98] Don't Know [99] Refused			
133	If I applied for a license, I might not get one	[1] Not at all important [2] Somewhat important [3] Very important [98] Don't Know [99] Refused			
134	It would not benefit you to have a license	[1] Not at all important [2] Somewhat important [3] Very important [98] Don't Know [99] Refused			
135	When miners in this community get money, do they spend it here in the community or do they spend it somewhere else?	[1] All or almost all in the local community [2] Most in the local community, [3] Mostly not in the local community, [4] None or almost none in the local community [98] Don't Know [99] Refused			

End of interview. Thank the person for their cooperation. Record finish time. Select level of co-operation below. If there are any responses that you think are unreliable, write under "enumerator comments" which questions and why you think that they are unreliable.

Level of co-operation

\_\_\_ 1 high

\_\_\_ 2 medium

\_\_\_ 3 low

FINISH TIME: \_\_\_\_\_ [Int: please transfer start time and calculate total time]

TOTAL TIME: \_\_\_\_\_

ENUMERATOR COMMENTS :

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