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AFGHANISTAN INFRASTRUCTURE AND REHABILITATION PROGRAM

KESHIM-FAIZABAD ROAD SOCIO-ECONOMIC MID-POINT DRAFT FINAL REPORT

OCTOBER 2010

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EXHIBITS

ABBREVIATIONS AND ACRONYMS

AFS	Afghanis (Currency)
ANSF	Afghan National Security Forces
B&V	Black and Veatch
CDO	Community Development Officer
CF	Coalition Forces
K-F	Keshim-Faizabad
GAO	Government Accounting Office
GIRoA	Government of the Islamic Republic of Afghanistan
Ha	Hectare
HH	Household
IR	Intermediate Result
IRP	Infrastructure and Rehabilitation Program
K-F	Keshim–Faizabad Road
LBG	The Louis Berger Group, Inc.
M&E	Monitoring and Evaluation
NGO	Non-governmental Organization
O&M	Operations and Maintenance
Obs	Observations
OMB	Office of Management and Budget
PKR	Pakistani Rupee
PMP	Performance Management Plan
REFS	Rehabilitation of Economic Facilities and Services
SO	Strategic Objective
SSR	Southern Strategy Road
STATA	Data Analysis and Statistical Software
TO	Task Order
USD	United States Dollars
VOC	Vehicle Operator Cost
ZOI	Zone of Influence

EXECUTIVE SUMMARY

USAID Afghanistan Mission and the Afghanistan Infrastructure Rehabilitation Program

The United States Agency for International Development (USAID) is implementing a wide range of programs that support the Afghan people in obtaining the capacity and resources to successfully manage their future development. As a key part of its efforts, USAID funds the Afghanistan Infrastructure and Rehabilitation Program (IRP), a five-year program that commenced in the summer of 2006. IRP's focus is on rehabilitating, extending, and maintaining Afghanistan's road network and increasing and maintaining power generation capacity. To ensure sustainability, IRP also funds several significant institutional reform and capacity building projects.

IRP has built or is currently reconstructing three roads: Keshim-Faizabad; Gardez-Khost; and the Southern Strategy Road. The Keshim-Faizabad (K-F) Road, upon completion, will provide those living and working within the ZOI with an all-weather paved asphalt road. As of 31 March 2010, approximately 84 km or 81 percent of the road had been paved. The target completion date for the entire road is October 2010. The road is approximately 103 km long and its alignment runs from Keshim to Faizabad. For the purpose of this study, the Zone of Influence (ZOI) has been set at 15 km on either side of the center line of the road. The population within the ZOI is estimated to be 629,373 people.

USAID M&E Framework

This study has been prepared as a part of USAID's overall program evaluation process, which is intended to provide USAID's management both in the field and in Washington, DC with the necessary information to maintain a results-oriented approach to program strategies. It also serves USAID in its reporting obligations to internal and external stakeholders, including senior management, GAO, and the United States Congress.

This study is but one part of IRP's broader reporting requirements to USAID. IRP employs a comprehensive monitoring and evaluation framework that is outlined in its Performance Management Plan (PMP). The IRP PMP has 26 indicators for the transport sector.

Twelve of these indicators are routinely reported in the Semi-Annual Monitoring Reports. The remaining fourteen indicators are outcome indicators intended to capture broader social and economic project impacts of the transport project interventions on the populations they serve. These involve types of data that require additional field research and data collection using an array of quantitative and qualitative research instruments. This mid-project report is the result of such field research and is intended to serve as a functional baseline study of conditions along the K-F Road,[1] although the execution of this study was quite late due to reasons discussed later in this report. The indicators addressed in this report are outcome indicators that are intended to measure progress in achieving USAID's Strategic Objectives 1 and 3 for Afghanistan:

- SO1: Thriving economy led by the private sector
- SO3: Better educated and healthier population

Evaluation Design and Approach

The IRP M&E Study Team designed an evaluation strategy to measure and report on these fourteen transport sector outcome indicators. Each of the fourteen indicators used in this study is meant to illustrate the change in some outcome that is thought to be impacted, in part, by rehabilitation of the K-F Road, and be indicative of achieving one of USAID Afghanistan's intermediate results. A central issue in evaluation design is that of *correlation* versus *causality*. It is impossible to identify causality with certainty between program interventions

[1] A baseline study was attempted in May 2007; however, due to lack of funding and supervision much of the data collected in considered unreliable.

and the outcome indicators. This evaluation is designed to maximize the Study Team's ability to separate intervening factors from the impacts caused by road rehabilitation, while simultaneously acknowledging the difficulty of doing so completely.

There were a number of critical constraints that greatly limited the Study Team's options for evaluation designs that establish causal linkages. In some cases the Study Team overcame these constraints by technical innovation while in other cases a less rigorous approach had to be chosen. The three most important constraints are detailed below.

Constraints in evaluation of infrastructure: Large-scale infrastructure projects are not good candidates for randomized program interventions, which are the most effective way to establish more rigorous causal linkages.

Constraints of evaluation in Afghanistan: Political insecurity in the region was not a factor in evaluating the K-F Road; however, the geography and climate did pose some obstacles which required some field procedures to be adapted. Lack of demographic and household identification data complicated the creation of a good sampling frame, which is vital for achieving a representative sample.

Constraints because of approval delays: Delays in both the approval of IRP's PMP and the allocation of funds for its implementation meant that this "baseline" study was conducted some 20-22 months after project commencement. Thus, some project impacts had already begun by the time this first study was conducted.

A pre-post evaluation design, although quite limited in its ability to make causal inferences, was chosen to measure the fourteen indicators for the K-F Road. The primary limitation of this design is the difficulty in distinguishing between changes that are the result of road rehabilitation and those that would have happened anyway. Qualitative study methods and data from secondary sources were used to help make these distinctions, but inferring project impact is still tenuous.

The Study Team devised nine survey instruments in order to collect the data necessary to measure fourteen indicators including a household survey, business and market overview surveys, village elder surveys and various vehicle and transportations surveys. These instruments were field-tested in the Keshim District September 24 – 28, 2010. In some cases an indicator could be measured using more than one instrument. These were supplemented by a series of key informant interviews (Faizabad mayor; two district agricultural department officials) and focus groups (one woman's group in Faizabad and one in Jata village; one men's group in Keshim and one in Layaba village; and a businessmen's group in Faizabad). For reasons discussed above, good sampling is very challenging in Afghanistan. The "best" sampling strategy is not a straightforward choice but one that appropriately values tradeoffs. Some of these tradeoffs are discussed further below:

- Representativeness and comparability
- Costs and statistical power
- Rigor and ease of implementation

The Study Team worked hard to make every reasonable effort to achieve representative samples in spite of the many limitations and challenges. Most notable for the household surveys, it overcame the absence or reliable demographic data through conducting an innovative aerial household census of the ZOI. In order to do this, the Study Team used satellite imagery to identify and geo-tag 54,644 household structures. This has yielded arguably some of the most accurate demographic data for any region in Afghanistan.[2]

[2] The same method was applied for mid-point data collection on the Keshim-Faizabad Road, the report for which will be released shortly after this one.

Study Findings

Since this is a mid-point survey intended to serve functionally as a baseline, the data gathered establishes indicator values for a point in time. Findings about changes correlated with the road rehabilitation will have to wait until these values are measured again in the post-project study. In Exhibit 1, the values for each indicator are listed.

Due to some data collected earlier, there are two indicators—travel time and traffic volume—where we have information on changes related to the rehabilitation that has already taken place. Travel time between the two terminal cities has decreased dramatically. Before the start of road works, it was common for taxis to take 6 hours and buses 8 hours to travel the 103 km between Keshim and Faizabad. According to the taxi and bus surveys conducted for this study, these travel times have since fallen to roughly three and half hours for taxis and five hours for buses. Once the road is complete, these times should come down even further.

IRP also conducted a baseline traffic count in November 2007 and has done several follow-up traffic counts since June 2009. The traffic counts show a significant increase in traffic volume starting in the spring of 2010, but further traffic counts will be conducted in order to determine if this increase in traffic volume will be sustained.

While the indicator values are static in nature and await the post-project field research to provide insight on the impact of the rehabilitation, there are, nonetheless, some interesting insights that can be drawn from the data that was already gathered.

Exhibit 1: Summary of Mid-Point Indicator Values

Indicator	Indicator Value	Unit	Indicator Definition
Outcome Indicators as measured in November/December 2009 and April/May/June 2010 Data Collection			
1. Cost of Food Staples	29.59	US Dollars	Mean Price for Bundle of Food Staples
2. Markets Where Goods Sold	7.5 (Crops) 10 (Livestock)	Kilometers	Median Household Distance Traveled to Sell Crops and Livestock
3. Number of Businesses	3,301	Number	Total Number of Businesses in Keshim, Faizabad, and along K-F Road
4. Monthly Sales by Businesses	5,173	US Dollars	Median Business Sales (Last 6 Months)
5. Household Incomes	559	US Dollars	Median Total Household Income
6. Vehicle Operating Costs	415	US Dollars	Previous Month's Median Vehicle Operating Costs
7. Travel Times	4:12	Hours	Mean Passenger Travel Time between Keshim and Faizabad
8. Passenger Fare Costs	8.51	US Dollars	Mean Passenger Fare Costs between Keshim and Faizabad
9. Cost of Freight Transport	0.276	US Dollars	Median Cost Per Ton Per Kilometer
10. Freight Tonnage	3,292 ± 477	Tons	Total Daily Freight Tonnage Transported
11. Cost of Informal Payments	0.41	US Dollars	Median Cost of Informal Payments per trip between Keshim and Faizabad
12. Travel Time to Health Clinics	62	Minutes	Mean Travel Time to Health Clinics for Minors
13. Frequency of Visits to Health Clinics	6	Number	Median Number of Household Visits to Health Clinics Per Year
14. Rates of School Attendance	85	Percent	Overall Percentage of School-age ChildrenA ttending School

1. USAID AFGHANISTAN MISSION

The United States Agency for International Development (USAID) has been implementing programs that support the Afghan people in obtaining the capacity and resources to successfully manage their future and development. Reliable infrastructure and energy networks are essential for economic growth. Viable and secure roads are already paving the way to deliver farmers' products to market, providing access to health and education services, and facilitating regional trade. USAID's rehabilitation of more than 1,677 km of roads has increased mobility and strengthened trade and security. Approximately 80 percent of Afghans now live within 50 km of the Ring Road.[3] Afghanistan has made good progress both politically and economically since the Taliban was ousted. However, armed conflict continues and, while predominantly in the southern and eastern provinces, no part of the country is immune to the effects of war. Afghanistan remains fragile, insecure, and poor. The USAID/Afghanistan 2005-2010 Strategic Plan[4] focuses on 3 Strategic Objectives (SO) aimed at addressing these problems:

SO1: A thriving economy led by the private sector

SO2: A democratic government with broad citizen participation

SO3: A better educated and healthier population

USAID is funding a variety of programs and projects to support these objectives. These include capacity building in government ministries, funding construction of power plants, schools, clinics, a new national electric power system, and an expanded road network.

The intended benefits of infrastructure projects are both short and long term. In the short run, benefits largely come from short-term employment generated by these projects as well as opportunities for local firms that improve their skills thus strengthening local contractors' capacities. Outcome and impact measures should be drawn from these activities while the evaluation should be in the context of these non-infrastructure goals.[5]

1.1 AFGHANISTAN INFRASTRUCTURE AND REHABILITATION PROGRAM (IRP) OVERVIEW

The Afghanistan Infrastructure and Rehabilitation Program (IRP)[6] is a five-year USAID-sponsored program that commenced in the summer of 2006. The program is implemented by a Joint Venture between The Louis Berger Group, Inc. (LBG) and Black and Veatch Special Projects Corp. (B&V).

IRP's mandate, in supporting USAID's Strategic Objectives, is to increase:

- The availability of secure, reliable and affordable supplies of power and energy; and
- The nation's ability to provide safe and reliable transport systems allowing cost efficient and timely movement of goods and people.

The five-year program focuses on rehabilitating and extending roads, power generation capacity, and power transmission networks across Afghanistan. To increase capacity and ensure sustainability, IRP also funds institutional reform and capacity building projects. Some of the key projects that IRP is overseeing include:

[3] USAID funded the construction of 389 km of Kabul-Kandahar Highway and 246 km of Kandahar-Herat Highway on the Ring Road.
[4] USAID/Afghanistan Strategic Plan, May 2005.
[5] http://pdf.usaid.gov/pdf_docs/PNADG193.pdf. Accessed June 9, 2010.
[6] IRP marks the next phase in infrastructure reconstruction and rehabilitation in Afghanistan. Its principal precursor was the USAID Rehabilitation of Economic Facilities and Services (REFS) Program. REFS was an emergency infrastructure program focusing on the immediate improvement and rebuilding of basic infrastructure required to allow the country to function as a nation immediately following Afghanistan's liberation from the Taliban.

- Reconstruction of the Gardez-Khost Road
- Reconstruction of the K-F Road
- Reconstruction of the Southern Strategy Road
- Management of Operations and Maintenance for 1,500 km of regional, national, and provincial roads, which is soon to be expanded to nearly 3,700 km
- Design of the Ghazni-Gardez Road, Bamyan-Dushi Road, Strategic Provincial Roads in the South and the East, and several bridges
- Construction of the 105 MW Tarakhil Power Plant
- Technical assistance in obtaining imported power from Uzbekistan, Tajikistan, and Turkmenistan

To ensure long-term sustainability, IRP has a specific "capacity building" component which requires IRP to employ Afghans and Afghan sub-contractors (where possible) to assist them in developing technical and professional skills. Additionally, IRP is working with ministry personnel and other government employees to create a foundation for institutions to effectively and independently manage Afghanistan's infrastructure.

1.2 IRP ROAD REHABILITATION PROGRAM

Thirty years of conflict virtually destroyed the transport infrastructure of Afghanistan, and many Afghans lack the necessary skills or training to build, operate, and maintain the national infrastructure. IRP's Road Rehabilitation program is focused on extending the country's road network. IRP is accomplishing this through the design, reconstruction, and rehabilitation of several roads.

IRP is currently reconstructing three roads: Keshim-Faizabad; Gardez-Khost; Bamyan-Dushi; and has completed the Southern Strategy Road. USAID selects road projects based on their ability to achieve the Afghan Mission's Strategic Objectives. These objectives include the projects' role in meeting infrastructure needs to increase physical access to markets, improve import and export of goods, enhance access to education and health facilities, improve security, and foster better connectivity between districts.

As a part of its capacity building efforts through IRP, in November 2007, recognizing the need for maintenance to preserve the roads it had built, USAID established the Road Operations and Maintenance (O&M) and Capacity Building Program (TO-14), which created the Road Management Unit (RMU) to manage the maintenance of these rehabilitated roads. To strengthen local capacity, the RMU has conducted road maintenance through Afghan private contractors using the innovative performance-based contracting approach. During its first two years, the RMU demonstrated such operational success that in February 2010 it was given oversight over an additional 1,940 km of Afghanistan's road network through funding from the Asian Development Bank.

As a part of this program, TO-14 is also working closely with the many GIRoA ministries that are managing the various components of the transportation sector. GIRoA suffers from endemic corruption[7] and poor governance, and the GIRoA staff generally lack the technical skills necessary to carry out their duties. The TO-14 program is working to strengthen these skill sets to improve the GIRoA's overall management and administration of transportation infrastructure.

Building on TO-14's capacity building efforts, TO-26, the Bamyan to Dushi Road is principally managed by IRP-employed Afghan engineers, and construction will largely be completed by Afghan sub-contractors. In addition to the oversight and feedback from IRP engineers to sub-contractors, TO-26 also has a community outreach component and is developing projects[8] for the road's zone of influence (ZOI). The purpose is to develop the local population's skill-set thereby creating future employment opportunities.

[7] In 2009, Transparency International Corruption Perception Index rated Afghanistan 179 out of 180 countries, the second most corrupt country in the world.
[8] This work has been in coordination with the Aga Khan Foundation thus far.

1.3 KESHIM-FAIZABAD ROAD

The Keshim to Faizabad Road, which is 103 km in length, predominantly lies along the left bank of the Kokcha River and the right bank of the Keshim River in Badakhshan Province, linking the communities of Keshim (a district center) and Faizabad (the provincial capital) and approximately 30 villages. Upon completion, the road will provide those living and working within the ZOI with a paved asphalt all-weather road enabling reliable year-round transport. The ZOI is defined as15 km either side of the center line of the road. The population for the ZOI is estimated to be 624,373 people.[9]

Background. Over the years, frequent floods and mudslides mostly due to regional earthquakes, localized rain, and snow events have contributed greatly to the deterioration of the road. At the beginning of the project, the route was a primitive, variable width dirt road, with a limited number of poorly maintained drainage structures. Substantial improvements were needed to meet the requirements set forth in the Ministry of Public Works Interim Road and Highway Standards adopted in March 2005.

Status. Construction activities required building seven bridges and more than 600 culverts. Due to the road's poor condition coupled with the physical challenges posed by narrow canyons and a very mountainous terrain, extensive rock blasting was also required. Construction of the K-F Road will be substantially complete by the end of Oct 2010. The paving will be completed and all that will remain are two bridges. One of those will be completed in November and the final bridge, which was washed out in a flood event in the spring, will be completed in 2011.

Anticipated Impact. Historically, this road was part of the ancient Silk Route from the Mediterranean Sea to the Far East. Today, the road is seen as a vital piece of the GIRoA's plans to construct a two-lane road connecting to the international border with China. Upon completion, the K-F Road will link Afghanistan's most remote city, Faizabad, to Keshim and points south. For example, a bus trip between Kabul and Faizabad used to take at least two days and cost 40 USD, now the trip takes less than 12 hours and the one-way ticket price is 14 USD.[10] The connectivity created by the K-F Road should lead to increased economic opportunities for those living in the K-F ZOI and beyond. The reconstructed K-F Road should create opportunities for the farming communities to transport their products to markets more efficiently and at reduced cost. It will also increase the diversity of consumer goods available while lowering the cost of these. The improved road should also allow for increased access to education and health care.

[9] This is based on an aerial household census conducted using satellite images from 2004, which counted 54,644 housing compounds. Data about the number of households per compound and on the mean household size were drawn from a sample of 485 household surveys and were used together to extrapolate an estimate for the ZOI's population. This number is much higher than the 265,381 beneficiary estimate that IRP projected based on data from Afghanistan's Central Statistic Office.

[10] https://www.irp-af.com/?pname=open&f=doc100326_newspik072_web250px.jpg&id=326&type=html Accessed 10 July 2010.

II. USAID MONITORING AND EVALUATION FRAMEWORK[11]

USAID's evaluation process is a systematic analytical effort that is planned and conducted in response to specific management questions about performance of USAID-funded development programs or activities. Effective evaluations are geared towards results (outcomes) and, where applicable, address the projects relevance, effectiveness, impacts, and sustainability. Evaluations provide USAID's management both in the field and in Washington, DC with the necessary information to maintain a results-oriented approach to program strategies.

USAID's expectation is that a well-structured evaluation process will provide its operating units with data on project results achieved (via the monitoring system) as well as how and why they were achieved, and what can be done to further improve performance. USAID program evaluations can be carried out by measuring progress in any of the following: activities; intermediate results; or strategic objective, depending on the performance issue.

USAID Afghanistan requires that, wherever possible, Afghans are employed to conduct opinion surveys, focus groups, and evaluation works in general. IRP, in keeping with USAID's mandate, employed Lapis, an Afghan firm to carry out the data collection for this study and directly employed a team of Afghans for data entry works.[12]

2.1 USAID'S REPORTING REQUIREMENTS

In order to better understand USAID's contractor reporting requirements, it helps to first understand how they fit in with USAID's own reporting requirements both internally and to other government entities. Contractor reporting that is done well will help USAID in its own reporting efforts which serve as the basis for broader US government oversight. According to federal law, USAID must inform internal and external stakeholders, including senior management, OMB, and the United States Congress. The following is a list of policies that specify its current reporting requirements:[13]

- FY 2009 Foreign Operations Performance Report and FY 2011 Performance Plan – submitted in conjunction with the FY 2011 Foreign Operations Congressional Budget Justification.
- This Joint Summary of Performance Financial Information includes the Agency Financial Report (AFR) and the Annual Performance Report and Annual Performance Plan (APR/APP).[14] USAID's Agency Financial Report (AFR) for FY 2009 provides financial and related information to help Congress, the President, and the public assess the Agency's performance relative to its mission and stewardship of financial resources.
- Department of State and USAID Strategic Plan, FY 2007-2012.
- Government Accountability Office (GAO) High-Risk Improvement Plans.[15]

In 2005, the GAO recommended that USAID's Administrator do the following:

- Establish a performance management plan that complies with USAID directives
- Clearly stipulate in all future reconstruction contracts that contractors are to develop performance management plans specific to the work they are conducting

[11] TIPS, Performance Monitoring and Evaluation, USAID Center for Development Information and Evaluation and in the Role of Evaluation in USAID. 1997.
[12] http://pdf.usaid.gov/pdf_docs/PNADG193.pdf. Accessed 9 Jun 2010.
[13] http://www.usaid.gov/policy/budget/. Accessed 17 Jun 2010.
[14] These reports fulfill the Agency's compliance with the Government Performance and Results Act reporting requirements.
[15] USAID must make available all documentation for the GAO to conduct their annual audit.

- Completely communicate the performance information from the plans to executive decision makers in Kabul and Washington, DC

Thus, the GAO's assessment underlined the need for a stronger monitoring and evaluation component to be a part of USAID's efforts.

2.2 IRP REPORTING

IRP reporting requirements are deliverables that are specified either to IQC or specific Task Orders. The wide range of reports enables both IRP and USAID to monitor works and, if necessary, adjust projects to maintain a results-oriented approach.

2.2.1 GENERAL REPORTING REQUIREMENTS

IRP is required to provide a number of reports to ensure that USAID staff both in the field and USAID/DC is well-informed about the performance of USAID programs and strategies. The IQC states that the following reports are required deliverables:

- Needs Assessment Report and Project Work Plan
- Performance Management Plan (PMP)
- Monitoring and Evaluation Reports for Energy and Transport Sector Task Orders
- Technical reports according to schedules shown in the approved Work Plan
- Daily, monthly, and quarterly program status reports
- Task order closeout reports
- Quarterly update information into the USAID/Afghanistan geo-base system
- Task order budget updates

These reports will inform USAID in the field and Washington of the program's use of Agency resources, e.g., whether the program is efficiently using USAID resources.

2.2.2 THE PERFORMANCE MANAGEMENT PLAN (PMP)

While the preponderance of IRP reporting covers inputs and some outputs, IRP also employs a more comprehensive monitoring and evaluation framework that is outlined in its Performance Management Plan (PMP). IRP's PMP seeks to measure a broader set of outputs and several key outcomes. The PMP is an USAID management tool that specifies indicators, provides detailed definitions for each performance indicator, and sets targets for indicators allowing program managers to track a project's performance versus its indicator targets from inception to completion. Performance indicators are measures of inputs, processes, outputs, outcomes, and impacts for development projects, programs, or strategies.[16] IRP's PMP has 26 indicators for the transport sector. Twelve of these indicators are routinely reported in the Semi-Annual Monitoring Reports and are a mix of output and outcome indicators. The data for the semi-annual report largely consists of project records and operations data (e.g., the number of Afghans trained) and provides USAID with regular updates on the program's outputs.

The remaining fourteen indicators are outcome indicators intended to capture broader social and economic project impacts of transport project interventions on the populations they serve. This type of analysis requires data obtained by conducting additional field research and data collection that uses a wide array of quantitative and qualitative research instruments.

[16]Source: http://lnweb90.worldbank.org/oed/oeddoclib.nsf/b57456d58aba40e585256ad400736404/a5efbb5d776b67d285256b1e0079c9a3/$FILE/MandE_tools_methods_approaches.pdf. Accessed 6 Jun 2010.

Exhibit 2: Transport Indicators for M&E Activities

Transport			
Indicator	**Type of Indicator**	**Data Source**	**Reporting Frequency**
IR 1.1: Rehabilitate the Rural Economy			
Cost of food staples	Outcome	Business surveys	Pre- and Post-Project
Markets where goods sold	Outcome	Household surveys	Pre- and Post-Project
IR 1.2: Increase Incomes Through Economic Growth			
Number of businesses	Outcome	Business surveys	Pre- and Post-Project
Shopkeeper monthly sales	Outcome	Business surveys	Pre- and Post-Project
Household income	Outcome	Household surveys	Pre- and Post-Project
IR 1.3: Expand and Improve Access to Economic Infrastructure			
Travel times	Outcome	Driver/passenger surveys	Pre- and Post-Project
Vehicle operator costs	Outcome	Driver/passenger surveys	Pre- and Post-Project
Passenger fare costs	Outcome	Driver/passenger surveys	Pre- and Post-Project
Cost of freight transport	Outcome	Freight company surveys	Pre- and Post-Project
Volume of freight	Outcome	Freight company surveys	Pre- and Post-Project
Cost of informal payments for road use	Outcome	Driver/passenger surveys	Pre- and Post-Project
IR 3.1: Increase Access of Women and Children to Basic Health Services			
Travel time to health clinics	Outcome	Household surveys	Pre- and Post-Project
Frequency of visits to health clinics	Outcome	Household surveys	Pre- and Post-Project
IR 3.2: Increase Access to Quality Teaching and Suitable Learning Environments			
Rates of school attendance	Outcome	Household surveys	Pre- and Post-Project

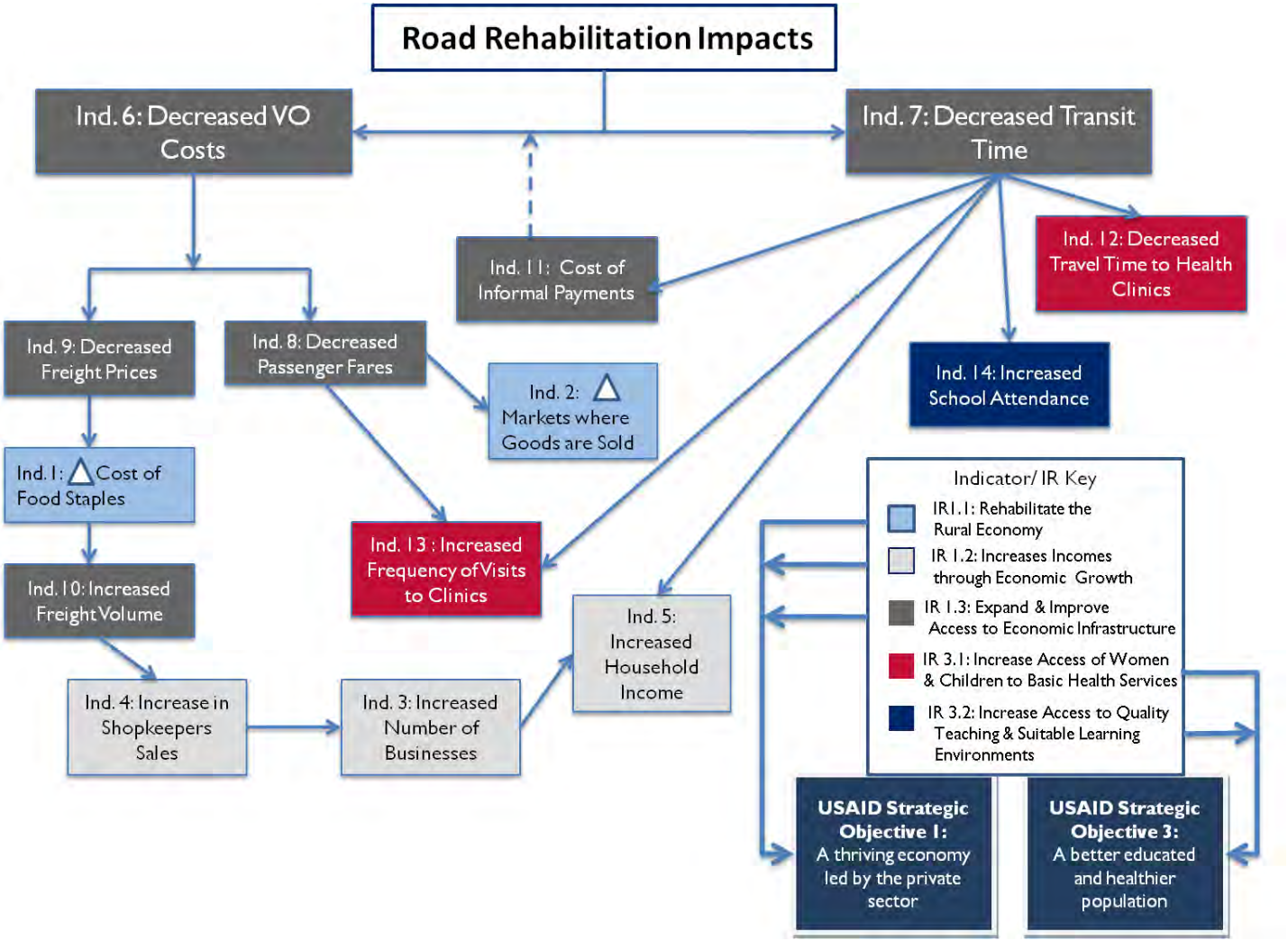
USAID's Strategic Objectives for Afghanistan are the source for the five Intermediate Results. The Study Team selected the fourteen indicators in order to measure progress within these five Intermediate Results (IRs). Intermediate Results must achieve target values for a project to successfully meet USAID's Strategic Objectives. If a confounding factor is identified in the M&E process, USAID and the project implementer can make adjustments thus, putting the project on track. Exhibit 2 above organizes the fourteen indicators under the appropriate IRs and lists the primary data sources that will be used in measuring them.

This report will measure the above indicators at the project's mid-point and the same indicators will be measured post-project. This will measure the impacts of the K-F Road as well as the level of success in attaining USAID's Strategic Objectives 1 and 3 for Afghanistan:

- SO1: Thriving economy led by the private sector; and
- SO3: Better educated and healthier population

Exhibit 3 is a graphic representation of the anticipated outcomes of a rehabilitated K-F Road. Strategic Objective 1 is geared toward advancing the political economy of Afghanistan to develop a sound foundation so a thriving private sector (SO 1) can emerge and sustain the Afghan people.

Exhibit 3: Graphical Representation of Results Framework



III. EVALUATION DESIGN AND APPROACH

The IRP M&E Study Team designed an evaluation strategy to measure and report on these fourteen transport sector outcome indicators. An evaluation design is a specific plan to collect and analyze data in a way that best answers the questions being asked. This includes the targeting, timing and scope of data collection, the types of instruments to be used and the sampling strategy employed in implementation. The approach and methods chosen for carrying out an evaluation have critical implications on how these questions will be answered.

An evaluation design inherently makes trade-offs. A central issue in evaluation design is that of *correlation* versus *causality*. Each of the fourteen indicators used in this study is meant to illustrate the change in some outcome that is thought to be impacted, in part, by rehabilitation of the K-F Road, and be indicative of achieving one of USAID Afghanistan's Intermediate Results. The theoretical impacts of road rehabilitation and their causal linkages with the fourteen indicators are diagrammed in Exhibit 3. For example, the price of food staples (Indicator 1) is affected by transport costs. When the K-F Road is improved, the cost of transporting a ton of rice from Keshim to Faizabad should decrease, which should then be reflected in the cost of rice and overall food staples. Therefore, a decrease in the price of food staples can be an indicator that the road indeed achieved lower transport costs. Lower food costs were chosen to be indicative of Intermediate Result 1.1, *Rehabilitation of the Rural Economy.* However, there are many other factors that drive the price of food staples such as inflation rates, the quality of the harvest that year, and the price of farm inputs. Transport costs along the K-F Road are just one of many factors that can cause a change in food staple prices. It is impossible to identify causality with certainty between the program intervention and the outcome indicators. However, many of the intervening causes can be measured, and their effect on the indicators may be separable. This evaluation is designed to maximize our ability to separate intervening factors from the impacts caused by road rehabilitation, while simultaneously acknowledging the difficulty of doing so completely.

In the case of the K-F Road rehabilitation (TO-4), the Study Team defined the impact area, or the ZOI, as the area that is 15 km on either side of the center-line of the road as well as the 15 km radius of the terminal points of the road. This section describes the approach taken to evaluate these fourteen indicators in this ZOI.

3.1 DESIGN CONSTRAINTS

There were a number of critical constraints that greatly limited the Study Team's options for evaluation designs that establish causal linkages. In some cases the Study Team overcame these constraints by technical innovation while in other cases a less rigorous approach had to be chosen. The three most important constraints are detailed below.

3.1.1 CONSTRAINTS IN EVALUATION OF INFRASTRUCTURE

Evaluations that establish more rigorous causal linkages often rely on randomizing or varying the intervention in a way that withholds the program from some people and not others, thus creating a Treatment and Control group, which allows study of the differences between these two populations. Infrastructure programs are not well suited for this approach. An infrastructure project serves everyone in the area where it is constructed and therefore cannot be withheld from some individuals while granting access to others in the same area. The alternative to varying the treatment within a given area is to randomize the placement or timing of the intervention. However, roads and other infrastructure projects

are chosen to go in certain locations for specific reasons; it is not feasible to leave such a fundamental choice to random chance. Therefore, it is difficult to establish a plausible counterfactual for infrastructure projects. Recently, a few macro-level studies that exploit some quasi-random determinants of infrastructure placement or use instrumental variables have been carried out that make compelling estimates of causal impact.[17] However, rehabilitating the road from Keshim to Faizabad, a project that affects a large geographic area and has a pre-determined placement in a unique region, cannot be evaluated through experimental or quasi-experimental type evaluation designs.

3.1.2 CONSTRAINTS OF EVALUATION IN AFGHANISTAN

In addition, implementing an evaluation in Afghanistan, a conflict area, faces additional severe constraints. Two of the most important constraints to conducting a rigorous evaluation are inadequate demographic and household identification data and security conditions.

To conduct a survey that achieves a representative sample, the first choice in sampling strategies is a lottery type random selection. This requires a complete list of the units (whether households, businesses, villages, or vehicles) from which to draw the selections. While such lists are commonly available in more economically developed countries, this is not the case in Afghanistan. The lack of more general demographic data such as the populations of villages or districts, in turn limited the potential and utility of stratified and cluster sampling. Both rely on information about the underlying population and its organization into larger units. Contemporary studies done in Afghanistan are usually left to make best-effort estimates of relative population sizes of villages and attempt to make an exhaustive inventory of them, relying on local estimates and scoping exercises that make qualitative judgments in the field. However, these are thought to result in a number of biases, most of which result in underrepresentation of poor, rural and minority populations.

3.1.3 CONSTRAINTS BECAUSE OF APPROVAL DELAYS

The Study Team used the pre-project situation in the ZOI as the most plausible and feasible counterfactual to compare with the post-project results (more on this research design below). To implement this design, a baseline survey prior to the start of the construction of the road or shortly thereafter was necessary, as outlined in the PMP submitted to USAID for approval in August 2007. Construction of the K-F Road commenced in November 2007. USAID provided comments to the Draft PMP in October 2008, and a revised PMP was approved by USAID in March 2009. In conversations with USAID, IRP underscored the importance of expeditiously conducting a true "baseline study" for the K-F Road[18] and sought to have this done in the summer 2009. USAID requested that IRP submit a budget for approval covering all PMP implementation activities through the remainder of the IQC contract, August 2011. This budget was submitted in May 2009 to USAID, but USAID approval was delayed. Finally, in September 2009 clear direction was given to proceed with data collection with approval to use TO 1 funds. At that time, the study plan was revised in order to accelerate the lead time needed so that data collection could be completed before winter. Staff and resources were immediately deployed, a Survey Director was hired and mobilized to Afghanistan in October, a subcontract was awarded in November and data collection began in December. The delay in implementing the baseline is a significant constraint noted here for two reasons. First, it limits the scope of impacts the study can detect. Post-project data will be collected after road completion; however, with the exception of some data IRP collected in 2007 that relates to a few

[17] Donaldson, David (2008). "Railroads and the Raj: the economic impact of transportation infrastructure." LSE Working Paper; Michaels, Guy (2008). "The Effect of Trade on the Demand for Skill - Evidence from the Interstate Highway System." *Review of Economics and Statistics*, 90(4), November; Keller, Wolfgang and Shue. Carol "Institutions, Technology, and Trade." University of Colorado Working Paper.

[18] IRP attempted to conduct a Baseline Study on the K-F in Late 2007/ Early 2008. However, lack of funding seriously hampered data collection and reliability.

indicators, the earliest data available for comparison for most indicators was collected in November/December 2009 and April/May/June 2010 when half of the road had already received its first layer of asphalt, the time at which a road begins to have an impact due to reduced travel times and vehicle operator costs.

The quantitative survey effort will largely miss impacts that took place before December 2009, so it is best suited to measure outcomes occurring after the mid-point. Indeed, preliminary field research conducted in September 2009 provided substantial anecdotal evidence that the road's effects were already being felt in such areas as vehicle ownership, market access, and hospital access. This means that comparisons between the mid-point and post-project data will significantly underestimate the road's impact. To mitigate the effects of this constraint, the Study Team is using qualitative techniques, retrospective questions and secondary data source to gauge general impacts that occurred before the mid-point study. While this will help to provide a fuller picture, the opportunity for establishing values for each indicator prior to the construction start date has been lost.

Another constraint related to approval delays is that the enumerators were not able to collect data from all the sampling points before the onset of winter which necessitated the postponement of data collection for one-third of the sampling points until April/May/June 2010. In order to provide a valid comparison between mid-point and post-project data, the two studies should be carried out at the same time of year in order to smooth out seasonal patterns in measuring outcomes. This split in data collection times for the mid-point study now makes this impossible. However, in anticipation of this possibility, the survey instruments were designed with some redundancy in the event that post-project data collection does not take place at the same time of year. That is, a few key questions were repeated with multiple timeframes. For example, shopkeepers were asked to report their revenues during the most recent winter, during the most recent summer, and during the last month. The K-F Road is scheduled for substantial completion in October 2010. Currently, the plan is to conduct the post-project survey in November/December 2010.

3.2 EVALUATION DESIGN: PRE-POST METHOD AND QUALITATIVE STUDY TO INFER IMPACT

A pre-post evaluation design, although quite limited in its ability to make causal inferences, was used to measure the fourteen indicators for the K-F Road. For reasons discussed earlier, more rigorous evaluation designs were not possible. The primary limitation of this design is the difficulty in distinguishing between changes that are the result of road rehabilitation and those that would have happened anyway. Qualitative study methods and data from secondary sources help make these distinctions, as discussed below, but inferring project impact is still tenuous.

3.2.1 INFERRING IMPACT FROM CHANGES USING THIS METHOD

A pre-post study establishes a "control" by gathering data on the treated population prior to implementing an intervention. The differences in population statistics gathered before and after the treatment are caused by two types of impacts: 1) those resulting from the intervention (Type I and Type II) and 2) those resulting from any other programs, changes or trends that have taken place in the interim time period (Type II). The challenge of this method is separating Type I impacts from Type II impacts. For example, if median household incomes increase within the K-F ZOI between the mid-point and post-project studies, how does one differentiate whether this resulted from the K-F Road or from other changes that would have taken place without the road? Where we can anticipate what those other changes may occur and measure them efficiently, statistics can be used to plausibly separate them from road impacts. For example, if we find that the mean cost of fuel needed to drive one kilometer along the K-F Road has fallen 15 percent from the mid-point to follow-up study (which could result from the road's improvement), we can calculate how much of that result was driven by a change in fuel prices and separate out the change. The remaining effect

is then a measure of what the change in per kilometer fuel costs would have taken place if fuel prices had not changed. The instruments used in this study were deliberately and methodically designed to collect control data on as many intervening factors as possible with respect to identifying impacts for the fourteen indicators. Once known factors for which we have data are controlled for, the remaining change observed represents the impact caused by the K-F Road rehabilitation *and* any other factors that have not been controlled for. At that point, a causal linkage between the intervention and the remaining change observed *may* be inferred using un- confirmable assumptions, but cannot be rigorously or statistically established. Causality can be reasonably inferred only if both of the following assumptions hold:

i. There are no known factors that have not been controlled for that affected the outcome variable in the interim time period.
ii. There are no unknown factors that affected the outcome variable in the interim time period.

If these two assumptions are true, then the change observed is indeed the impact caused by the intervention. Therefore, the strength of any causal linkage suggested depends on the veracity of these assumptions. It is up to the evaluator, and in turn the reader, to critically assess the reasonableness of these assumptions and decide how credible the purported impacts are.

3.2.2 ENHANCING IMPACT INFERENCES WITH QUALITATIVE EVALUATION

Qualitative assessment was integrated into the evaluation design, in part, to provide insight into potential causal mechanisms. Open-ended questions help detect the presence of intervening factors that may be contributing to outcomes observed. For example, we can ask vehicle operators in a focus group whether their fuel usage per kilometer has gone up or down in the last year and then follow-up by asking 'why.' Reasons may be given that confirm or challenge the assumptions described above, which are necessary to infer impact. For example, drivers may respond that stricter enforcement of speed limits has led to greater fuel efficiency, a plausible reason for a drop in fuel costs other than road improvement.

3.2.3 SUPPLEMENTING SURVEY DATA WITH SECONDARY DATA SOURCES

This study has also been designed to use secondary data to supplement survey findings. For example, hospital records from before and after road construction are being sought to provide an outside reference on whether more patients are making visits and whether they are coming to the hospital from a wider area than before. Using primary data and other external records such as traffic counts allows the study to make conclusions about changes that took place after construction began but before the first data collection, the mid-point surveys, took place.

3.3 USE OF SURVEYS

The Study Team devised nine survey instruments in order to collect the data necessary to measure fourteen indicators. In some cases an indicator could be measured using more than one instrument. Each instrument targets a different unit of analysis, and instrument names are derived from those units. Exhibit 4 below maps the indicators to the primary and secondary instruments and data sources used to measure them.

Exhibit 4: Indicators and Their Data Sources

	Indicator	Instrument / Data Source	Supplementary Sources
1	Cost of Food Staples	Market Overview	Business Surveys, Stakeholder Focus Groups, City Manager Semi-structured Interviews
2	Markets where goods sold	Household Surveys	Stakeholder Focus Groups, City Manager Semi-structured Interviews
3	Number of Businesses	Count conducted by CDOs	Business Surveys, Stakeholder Focus Groups, City Manager Semi-structured Interviews
4	Shopkeeper Monthly Sales	Business Surveys	Stakeholder Focus Groups, City Manager Semi-structured Interviews
5	Household Income	Household Surveys	Stakeholder Focus Groups, City Manager Semi-structured Interviews
6	Vehicle Operator Costs	Vehicle Operator	Household Surveys, Stakeholder Focus Groups, City Manager Semi-structured Interviews
7	Travel Times	Bus, Pass, Taxi	Vehicle Operator, Stakeholder Focus Groups, City Manager Semi-structured Interviews
8	Pax fare costs	Bus, Pass, Taxi	Vehicle Operator, Stakeholder Focus Groups, City Manager Semi-structured Interviews
9	Cost of Freight Transport	Freight Truck	Business Surveys, Freight Company Semi-structured interviews
10	Volume of Freight	Traffic Counts, Freight Truck	Business Surveys, Freight Company Semi-structured Interviews
11	Cost of Informal payments for Road Use	Vehicle Operator	Freight Company Semi-structured Interviews
12	Travel Time to Health Clinics	Household Surveys	Hospital Records, Stakeholder Focus Groups
13	Frequency of visits to Health Clinics	Household Surveys	Hospital Records, Stakeholder Focus Groups
14	Rates of School Attendance	Household Surveys	Stakeholder Focus Groups, City Manager Semi-structured Interviews

3.3.1 APPROACH TO INSTRUMENT DESIGN

Survey instruments were designed to gather the necessary data to measure the indicators and assess intervening factors driving changes observed and to minimize errors during survey application and data entry. Some of the features used are listed highlighted below.

- Guiding language to introduce survey and new topics and appropriately give context to questions;
- Filter questions and skip patterns;
- Coded answers with write-in space for "other;"
- Clearly defined time scope in questions (e.g., "during the last 30 days, how much money?"); and
- Acceptance of refusals and "I don't knows" for each question.

All instruments were pre-tested in similar field conditions in the vicinity of Keshim in Badakshan Province, and feedback obtained from both respondents and enumerators was incorporated into the final instruments. The original instruments were drafted in English and then translated to Dari and Pashto for field use. Independent back translation to English was performed in order to assure translation quality and integrity or meaning.

Exhibit 5 provides summary information on the instruments used, including their length, content, average duration, the number of observations, response rate, the indicators they measure, and the unit of analysis.

Exhibit 5: Summary Information on Instruments Used

Instrument	No. of Questions	Contents	Duration (minutes)	No. of Obs.	Response Rate	Primary Indicators Measured	Unit of Analysis
Household	82	HH characteristics, expenditures; income; agricultural activity; use of the K-F Road; access to markets, healthcare, and schools.	36	485	98.30%	2, 5, 12, 13, and14	From an aerial survey, 502 GPS points within 15 km of the KF representing compounds / households were selected for enumeration
Small Business	31	Business Type and Characteristics, goods sold, revenues, transport costs, total expenditures, use of the K-F Road to receive goods.	33	194	93.72%	4	Businesses located in the two terminal cities of Keshim and Faizabad.
Vehicle Operator	33	Trip length (km) and time, vehicle type, usage of the K-F Road; Expenses for fuel, repair and maintenance; Night-time K-F Road Use and Incidence of stops for Informal Payments on the K-F.	30	188	60.60%	6 and 11	All drivers using the K-F Road from points all along the road and in Keshim and Faizabad.
Market Overview	1	Retail price for at least 10 and no more than 14 items.	N/A	300	N/A	1	Prices of items chosen for the basket of goods were recorded. Samples of items as well as the markets themselves were arbitrarily chosen for convenience.
Personal Vehicle	5	Passenger Fares and Trip Lengths	N/A	174	N/A	7 and 8	Non-commercial cars and trucks using the K-F Road were stopped at points along the K-F as well as in Keshim and Faizabad.

Instrument	No. of Questions	Contents	Duration (minutes)	No. of Obs.	Response Rate	Primary Indicators Measured	Unit of Analysis
Bus	4	Passenger Fars, Occupancy, and Trip Length	N/A	78	N/A	7 and 8	Buses using the K-F Road were stopped at points along the K-F as well as in Keshim and Faizabad.
Freight Truck	4	Trip length, Quantity of Cargo, and Cost of Shipping	N/A	33	63.60%	9 and 10	Trucks using the K-F Road were stopped at points along the K-F; approximately 64% were in Keshim and Faizabad.
Taxi	5	Passenger Fars, Occupancy, and Trip Length	N/A	51	N/A	7 and 8	Taxis departing either Keshim or Faizabad with the other terminal city as its destination.
Village Elder	43	Village size; access to services and markets; Road use by elders and village residents; development priorities; anticipated impacts of the K-F Road.	30	102	100%	None Directly	Villages located within 15 km of the K-F Road

3.4 SAMPLING

Sampling is what allows a limited number of responses to be generalized to represent a larger group. For reasons discussed above, good sampling is very challenging in Afghanistan. Nevertheless, the Study Team took the sampling strategy for each instrument extremely seriously. We dealt with the limitations and constraints on sampling in two ways. First, we worked tirelessly to make every reasonable effort to achieve representative samples in spite of the many limitations and challenges discussed above. Second, we carefully and critically evaluated the data collected to readily recognize any biases in our sampling, in order to assure that our findings are appropriately qualified. In sum, we did the best we could and then made sure we did not overreach with our findings.

3.4.1 TRADEOFFS IN SAMPLING DESIGN

Designing a sampling strategy inherently involves making tradeoffs between important objectives and principles. The "best" sampling strategy is not a straightforward choice but one that appropriately values tradeoffs. Some of these tradeoffs are discussed further below:

- Representativeness and Comparability – Where representativeness refers to how closely the sample represents the population, comparability refers to how reliably the sampling approach can be repeated in order to detect changes over time. There are situations where perfectly representative sampling methods are infeasible or impossible. Designing a 'next best' sampling approach often involves making tradeoffs between a method that will yield a fair degree of sampling error but will bias the results in an understandable and replicable way or using an approach that would produce less sampling error but possibly bias the results in less certain ways that would not be consistent between the mid-point and post-project data. In other cases the more representative approach would have produced unbiased results that are so noisy; detecting a change over time was unlikely. Since this study relies on comparisons between samples collected at two points in time and is ultimately interested in measuring the *difference*, a larger but stable bias is preferable so as not to distort the change measured. Subtracting one biased estimate from another estimate with the same bias can cancel out the bias.

- Costs and statistical power – Power is the probability of statistically detecting a change in the sample a change occurs in the overall population. Power depends on the minimum effect size, or minimum degree of change that will be detectable, the number of samples that will be collected, and the variance of the responses. The questions needed to answer each indicator were reviewed for statistical power in order to detect a five or ten percent effect size. The sample sizes were adjusted to find the minimum number of observations needed to bring the power levels to at least 80 or 90 percent. Where the resulting sample sizes were deemed too high, we adjusted the question to reduce variance, revised the instrument in order to lower the cost of obtaining a high number of samples, or devised an alternative measurement approach. This process assures that resources are not wasted collecting more samples than needed or collecting too few samples to measure the indicator. Further, the sample sizes for the post-project survey will be optimally adjusted, taking into account the actual variance observed. This will lead to additional costs savings in the post-project study and further assure that the changes in the indicators can be statistically detected with an acceptable probability.

- Rigor and ease of implementation – Another important dimension in sampling design, and other aspects of the evaluation process, is the tradeoff between method and statistical rigor and the ease and simplicity with which the planned methods can actually be implemented. If sampling designs are too ambitious and place expectations on field teams that cannot be fulfilled, data quality will suffer in a number of ways. Survey personnel in the field may get frustrated and try to adapt the method

as they deem appropriate or make mistakes without being aware. In any case, this introduces a complex array of distortions and biases in the data that may or may not be detectable. On the other hand, rigorous methods, when well followed, produce data that are more representative and freer from error. Therefore, it is critical that the sampling design strike the right balance to achieve optimal data quality given the context. Achieving the right balance requires the following: survey designers and directors with field experience overseeing survey teams; an understanding the capabilities of the survey team; pilot testing sampling approaches; extensive and well designed training of survey personnel; and the ability to adapt sampling approaches as appropriate and necessary when something is not working.

3.4.2 SAMPLING DESIGNS USED

Household Survey. Due to the lack of reliable demographic data, we conducted an aerial household census of the ZOI. We used satellite imagery of one to two meters in resolution to identify and geo-tag residential structures. In total, 54,644 household structures were identified and geo-tagged within the study ZOI. Of those, 502 household structures were randomly selected for enumeration. Given the mountainous terrain and poor roads in the areas, the Study Team elected to limit the number of places that the Study Team had to travel which exceeded 10 km in distance from the road. It did this through creating a value-to-effort weighting system which allowed for a random selection of a specified number of household structures and then amplifying the number of households that were surveyed in proximity to the selected households. This served to increase the efficiency of the data collection without compromising the representativeness of the sampling group. Exhibit 6 maps the locations of the household survey sampling sites

Once the residential structures were selected, the Survey Teams were issued GPS units with each sampling point programmed into the unit. The enumerators were instructed to go the household points in their GPS units. These were denoted as three digit numbers (e.g., 322). They were told to put the GPS unit in their pocket once they were within 30 feet of the house. They were to then continue walking in the same direction, counting down from 30 (or whatever the last number was, i.e. 25, 26, 27, etc.). When they stopped, they interviewed the closest housing compound. When there was more than one household residing in a compound, each survey had a randomization sheet where enumerators were to list all households in the compound, record the count, and using the minute on their cell phone and the count, find the random nth household to sample.

Business Survey. IRP CDOs conducted a GPS census of all businesses located in the cities of Keshim and Faizabad and in the villages directly along the K-F Road. A total of 3,301 businesses were identified and from these a sample of 161 businesses was randomly selected. As with the household surveys, the GPS coordinates of each were entered into GPS units that were issued to the enumerators, who were instructed to conduct the survey at each GPS point. Of these, the enumerators submitted 144 surveys, but they failed to conduct surveys of any of the five businesses that were selected from the villages along the road outside of Keshim and Faizabad.

In addition to these surveys, IRP intended to survey a sample of 70 businesses in the polygons that were visited for the household survey. Based on the number of households in those polygons, the Study Team chose a sample size of between 0 and 4 businesses in each polygon (decimals were randomly rounded up with a probability equivalent to the decimal, otherwise they were rounded down), and they instructed the teams to conduct up to that number if the actual number of businesses in the polygon turned out to be less than the sample size. Each survey had a randomization sheet where enumerators were to list all businesses in the polygon, record the count, and using the minute on their cell phone and the count, find the random nth business and sample it.

As it turned out, the number of businesses sampled in each polygon bears little resemblance to the number that IRP requested. Of the 49 polygons that IRP had requested one or more businesses to be sampled, only 17 were sampled with the correct number. Twenty-five were under-sampled and seven were oversampled. Also, three polygons got sampled where zero samples were requested. The under-sampling may have been due to the fact that there were not enough businesses in the polygon. For the four under-sampled polygons where IRP actually has at least one survey done, the number of businesses is greater than the number of samples requested in only two of them. It is difficult to understand what the cause of oversampling could have been. It is possible that in villages that had an adequate number of businesses the enumerators tried to compensate for under-sampling in other locations. As a result, for the analysis below the Study Team chose not to use the data from the surveys in the villages where the GPS census was not performed. While this means that data about businesses will be confined to the terminal cities, this approach will avoid using data where its representativeness is questionable.

Market Overview Survey. Market overview surveys were conducted to collect a sample of prices for a common range of goods from a shopper's perspective. These included 24 items such as food staples, personal care products, fuels, batteries, fertilizer and pesticides. A convenience sampling approach was adopted in which enumerators were instructed to go to various markets and to gather price samples. Enumerators were to pose as real buyers. This means the sample could suffer from a degree of selection bias. In the follow-up survey, the Study Team will train enumerators to conduct the surveys in the same way, so while a bias may be present, the bias will be across all data points and in both periods of data collection; therefore, any movements in price that are detected will still be valid. In other words, whatever bias may exist will be replicated in a systematic way in the post-project enumeration, so the bias will be across all data points; therefore, any movements in price that are detected will be valid. In order to assure a significant sample of prices for many goods, enumerators were instructed to continue to collect prices from as many shops in the bazaar that sold a certain item until 10 prices were recorded.

Vehicle Operator Survey. The IRP Study Team instructed enumerators to conduct the vehicle operator surveys along the K-F Road outside its two terminal cities—Keshim and Faizabad. Unfortunately, the enumerators failed to follow this instruction and conducted the survey all along the road, but with particular concentration outside of Keshim (15 percent) and Faizabad (40 percent) as well as at the road's mid-point in Argo District (40 percent). However, the questions are framed in such a way so that vehicle operator costs can be adjusted for travel distance. In total, 203 Vehicle Operator Surveys were conducted. Enumerators were instructed to attempt to stop each vehicle, conduct the survey, and then resume with the next passing vehicle. Failed attempts were logged in the survey to gauge non-response bias.

Freight Truck Survey. Similar to the vehicle operator survey, enumerators were stationed outside of Keshim and Faizabad on the K-F Road and stopped freight vehicles heading towards the other city. The Study Team instructed enumerators to pose as interested clients in order to minimize response biases.

Paid Passenger Vehicle Survey. Similar to the vehicle operator survey and freight truck survey, enumerators were stationed outside of Keshim and Faizabad on the K-F Road and they stopped personal vehicles heading towards the other city. The Study Team instructed enumerators to pose as interested clients in order to minimize response biases.

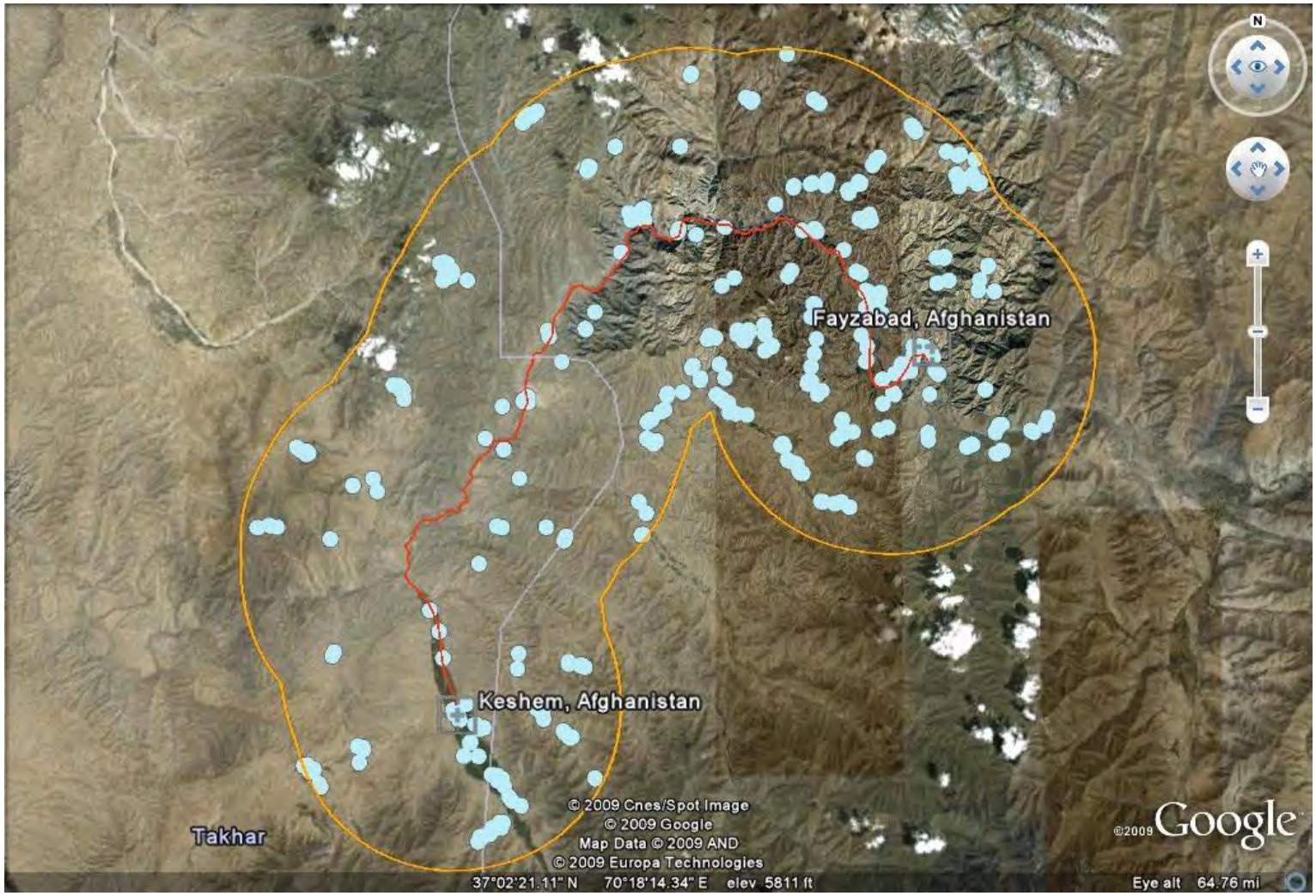
Bus Survey. Enumerators were instructed to seek buses and mini-buses in Keshim bound for Faizabad and vice versa. Samples were taken at one point in each terminal city where buses are known to depart from. The Study Team instructed enumerators to pose as interested clients in order to minimize response biases.

Taxi Survey. Similar to the bus survey, enumerators were instructed to seek taxis in Keshim bound for Faizabad and vice versa. Samples were taken at one point in each terminal city so that the taxi's departure

city is known. The Study Team instructed enumerators to pose as interested clients in order to minimize response biases.

Village Elder Survey. In each village where household survey samples were taken, enumerators interviewed a village elder or leader whenever possible. This survey functioned as a tool for protocol to ensure the support and cooperation of the community surveyed as much as it did for gathering qualitative information.

Exhibit 6: Map of Household Sampling Sites for the K-F Mid-Point Study



IV. STUDY FINDINGS

In this section, the Study Team presents the findings of this mid-point report. Section 4.1 provides context to the reader by reporting on broad findings concerning the ZOI, including a discussion of the geographic distribution of households in the ZOI, general household characteristics, road usage patterns, and village elder development priorities. Section 4.2 presents the findings for each of fourteen indicators, providing information on the methodology for data collection, the quantitative results, and a discussion on any data limitations that were encountered. Section 4.3 discusses several special issues, including the security environment as well as key findings that were drawn from qualitative research that was conducted. Finally, Section 4.4 identifies various sampling issues that the Study Team faced in this round of research as well as the steps it plans to take to mitigate any concerns in the follow-up study.

4.1 OVERVIEW OF THE KESHIM-FAIZABAD ZOI

In addition to data for the formal set of indicators that will be discussed later in this section, information was gathered on a number of other characteristics of ZOI households, villages, and businesses. The intent of this section is to use this information to provide a broad overview of the ZOI which will help provide context for this report's later discussion of individual indicators. In addition to using data from the household and business surveys, this section will also draw information collected in the village elder surveys. It is important to note that the information in the village elder surveys is not based on any representative sample and thus should be used to provide a very general understanding of certain characteristics and not used to draw any conclusions about the ZOI population. To avoid confusion, anywhere information is drawn from the village elder surveys, this will be clearly mentioned.

4.1.1 GEOGRAPHIC DISTRIBUTION OF THE POPULATION

The level of benefit a household or village receives from the road will depend largely on its proximity to the road. Households and villages that lie closer to the road will derive greater benefits. Additionally, households that are more geographically isolated from the terminal cities, but still lie close to the road should theoretically experience some of the greatest impacts of the road. In order to better understand the geographical dimension of impacts, this section takes a closer look at what the aerial census tells us about the geographic distribution of the population in this area.

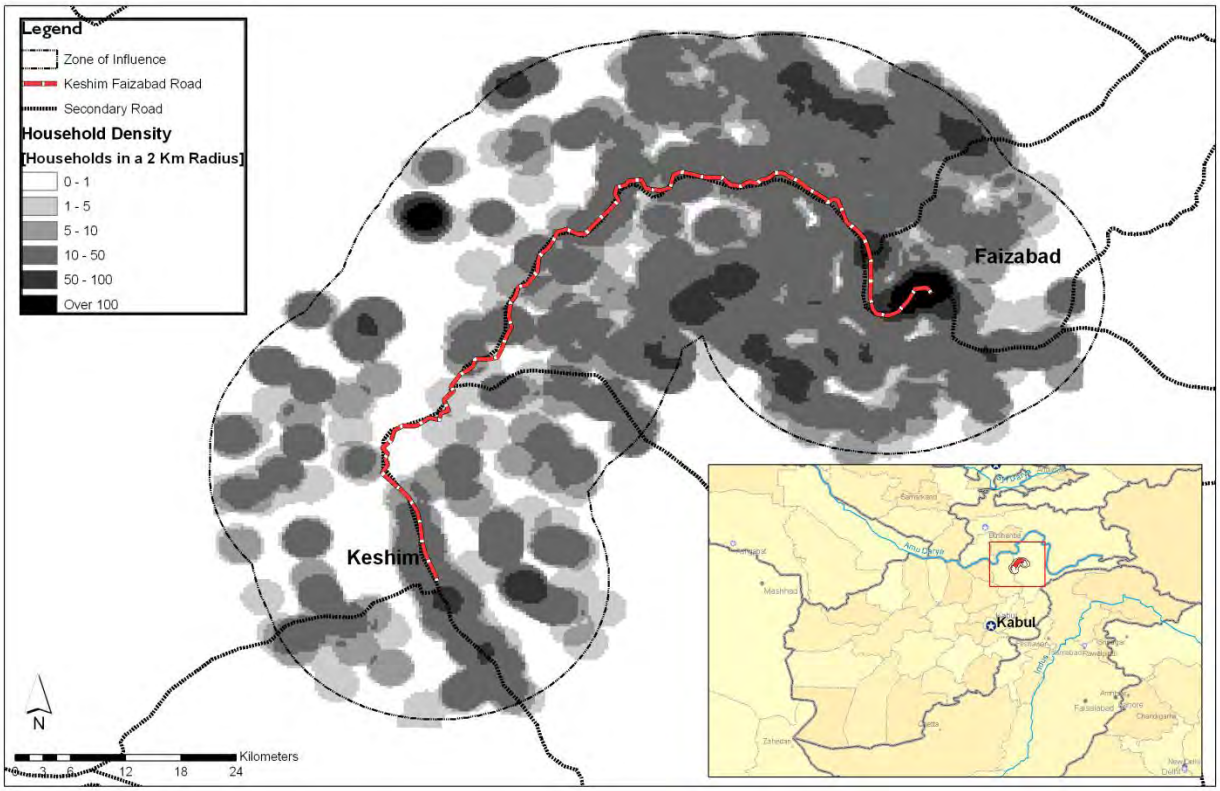
Geographic isolation, in theory, decreases access to education and health services, markets and income earning opportunities. This study found robust statistical relationships between household distance from cities and indicators of health and education and access to markets. While the relationship between distance to cities and income was not found to be statistically significant, poverty incidence appears to increase with distance from either city. A relationship between distance and market access was not found, but data from the follow-up study will allow for this relationship to be explored further. A rehabilitated road can decrease the "costs" of isolation especially for households far from terminal cities but close to the K-F Road. The follow-up study will enable the Study Team to test theories about isolation and economic and social opportunities in ways that have not been possible with previous studies in Afghanistan which use conventional data. In the past, answering spatial questions about road impacts has been constrained by two factors. First, data are often unmarked geographically or include only very crude geographic metrics. Second, past studies have lacked an overall picture of where the population is located. This makes it especially difficult to get a geographically representative sample, and further, makes it almost impossible to test whether the sample gathered is geographically representative, and then gauge any bias present.

The sampling method used for this study to randomly select households also provided a rich set of information about the ZOI. Every residential dwelling in the K-F Road's ZOI was tagged and counted using

satellite imagery and its geographic location was catalogued. In total, 54,604[19] houses were identified within the 15 kilometers ZOI of the K-F Road.

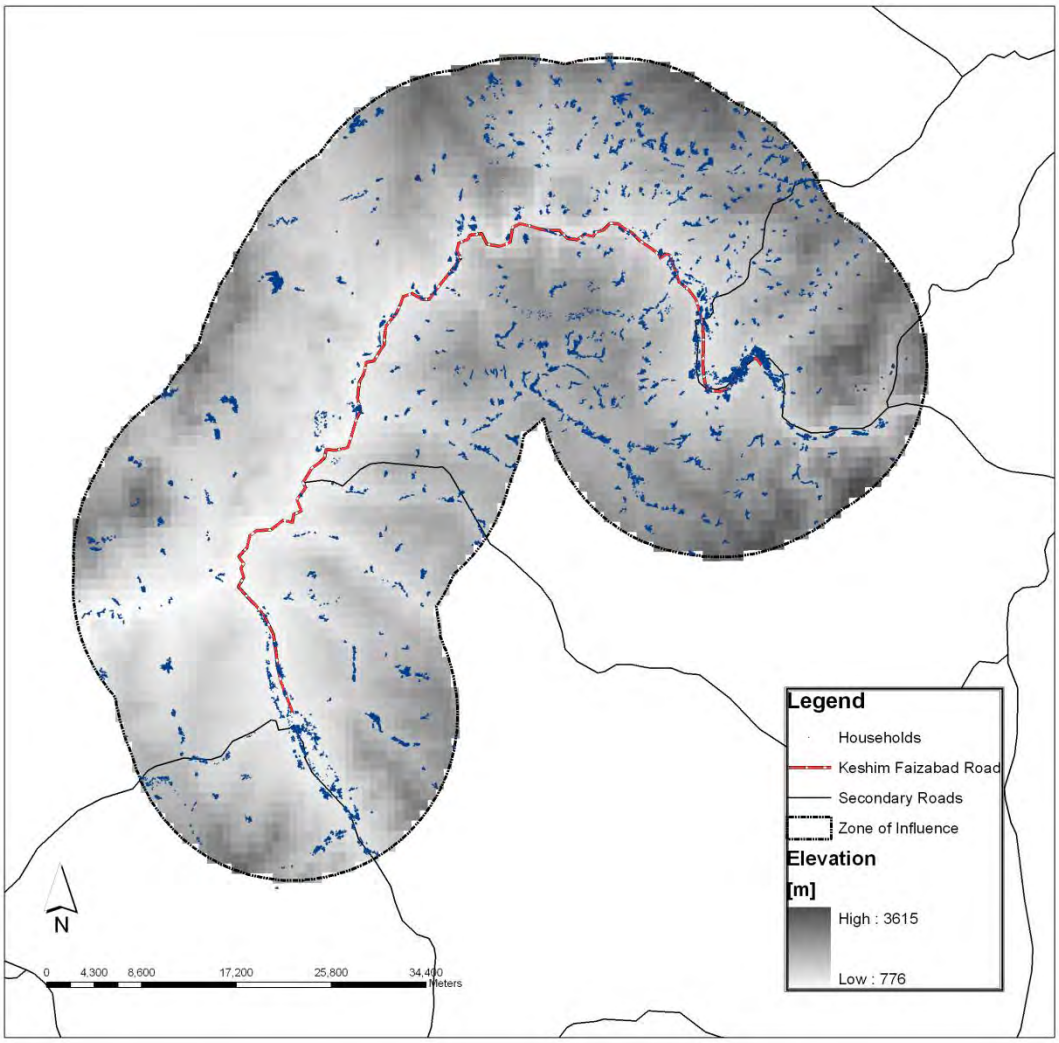
Exhibit 7 shows the household density and distribution in the ZOI of the K-F Road. As expected, the maximum densities of households are located in Keshim and Faizabad. High densities are also notable along the K-F Road, particularly approaching Faizabad. Household density also increases in valleys and along the secondary roads. Exhibit 8 provides a map that shows a clear relationship between population distribution, elevation, and roads. The lowest densities occur in the southwestern portions of the ZOI.

Exhibit 7: Map of Household Density in the Zone of Influence of the Keshim-Faizabad Road



[19] Based on field data collected by the Study Team in Badakhshan Province in the ZOI for the K-F Road, the Study Team estimates that 3.5 percent of the households marked during the aerial census were not in fact occupied residences. There are a variety of reasons, but the most likely possibilities are human error in interpreting the satellite images, or houses may have been abandoned since 2004 when the satellite imagery was taken. It is not known how many dwellings were missed in the census; however, the GIS analyst deliberately and carefully included any structure that appeared to possibly be a household in order to minimize the number of households erroneously excluded.

Exhibit 8: Household Distribution and Elevation along the Keshim-Faizabad Road



One surprising finding is that densities stay fairly level across the three five-kilometer increments away from the road. The area from 0 to 5 kilometers from the K-F Road has a mean density of 17 households per square kilometer, the area from 6 to10 kilometers has a mean density of 15 households per square kilometer, and the area in the 11 to15 kilometer range has a mean density of 17 households per square kilometer. In general, the highest household density is found within one kilometer from the road (42 households per square kilometer). It is important to note that the household distribution beyond 1 km from the road is not uniform. In fact, the second highest household density occurs between 10 and 11 kilometers from the road where there are approximately 25 households per square kilometer. Thus, the Study Team's expectation that household density would decrease at increasing distances from the road proved wrong.

4.1.2 GENERAL HOUSEHOLD STATISTICS

Based on the household survey, it was found that, in general, multiple households reside in a single compound. While an average of 14.8 people lives in a compound, the average number of households residing in a compound is 2.6. The number of households in a compound range from one up to ten. In terms of construction type of dwellings, nine in ten households live in mud or clay structures while most of the remaining households live in brick structures. These dwellings have an average of four rooms. The average length of time in a residence is 26.9 years, and it is apparent that few non-nomadic households physically resettle – the average stay of households within a village is 45.2 years with only 26 percent having moved

villages in the last twenty years. The age demographics within the households surveyed are similar to those generally found throughout Afghanistan – almost 3 in 5 members of households surveyed are under the age of 18, suggesting a burgeoning youth population.

Surveyed villages have rudimentary access to electricity. Of the 88 localities sampled in the village elder survey; only 23.8 percent reported receiving electricity. This is similar to the data gathered from the household survey which showed that 20.6 percent of households purchase electricity for their homes. To fill this gap in electrification, 97.8 percent of households own a kerosene lantern and 73 percent own battery-powered lamps. Diesel generators and kerosene/paraffin stoves, however, have low rates of ownership, only 11 percent and 15 percent respectively.

A large percentage of households raise crops. In all, 61 percent of surveyed households raise at least some form of crops, and about half of these households depend on these crops for half or more of their food. Only 3 percent of households entirely depend on the crops they raise for subsistence (see Exhibit 9 below).

Exhibit 9: Household Daily Food Subsistence on Household Crops Grown

All Food Grown	2.7%
Most Food Grown	6.7%
Half of Food Grown	41.0%
Some of Food Grown	49.5%
Total	100%

The median monthly cost of food for those households raising crops for their own consumption was $21, while the median monthly cost of food for those not raising crops was $15.[20]

Exhibit 10 below shows the breakdown of households using irrigation and/or rain as a crop watering method. Thirty percent of households use irrigation, while 70 percent rely on rain to water their crops. Households growing crops were also asked about their usage of fertilizers, pesticides, and seeds for farming. Seventy percent of these households reported using fertilizers, 70 percent reported planting seeds, and just over a third of the households reported the use of pesticides.

Exhibit 10: Household Irrigation in Crop Cultivation

Household Irrigation Use in the ZOI	
Irrigation	12%
Rain	70%
Both Irrigation and Rain	18%
Total	100%

4.1.3 ROAD USAGE

This sub-section highlights the many forms of interactions that residents, farmers, and business owners currently have with the K-F Road.

Current Village Interaction with the Road. In order to discern village accessibility to the K-F Road, the Study Team asked a set of questions in the village elder survey to capture this kind of information. The Study Team interviewed village elders from 88 villages located within the K-F Road's ZOI. The average distance of

[20] It is not entirely clear why households that raise crops for their own consumption have higher expenses for food, although the median size of households that grow food for consumption is nine compared to eight for those who do not.

these villages to the road is 9.6 kilometers. Exhibit 11 below shows the median travel times to the K-F Road by transport mode.

Exhibit 11: Travel times to K-F Road from Villages by Transport Mode

Travel Time to K-F Road (Min)		
Mode	**Mean Travel Time (min)**	**% Observations**
Vehicle	25	14%
Donkey, Mule, Horse	180	41%
Walk	165	45%

In order to reach the K-F Road, 82 percent of villagers reported having to travel along dirt or dilapidated roads, while the rest reported using gravel or paved roads. In terms of overall number of trips to Keshim and Faizabad by village elders surveyed, the average annual number of trips reported to Keshim was 11 times and the average number of annual trips to Faizabad was 22.[21]

Current Road Usage for Education and Primary Health Care. The Study Team also surveyed village elders concerning their use of the road for accessing social services such as education and health care. Of the 88 village elders surveyed, 58 responded that there is a primary school within the village. If a primary school is not located within the village, the median travel distance to the nearest attended school outside of the surveyed village is 2 kilometers. Given that the primary mode of transportation in the region is by animals or by walking, the median time spent to travel to a primary school outside of a village is 30 minutes. Of the thirty villages which do not have primary schools, only five reported having inhabitants who use the K-F Road to travel to the nearest primary school.

Regarding secondary schools, of the 88 village elders surveyed, 58 reported that they did not have secondary schools within their village. Where a secondary school is not located within the village, the median travel distance to the school is seven kilometers taking 40 minutes to reach the school. Of the 58 villages where no secondary schools are available, 18 have inhabitants who use the K-F Road to travel to the nearest secondary school. According to the household survey, eleven percent of households use the K-F Road to reach a primary or secondary school whether that primary school is within the village or not.

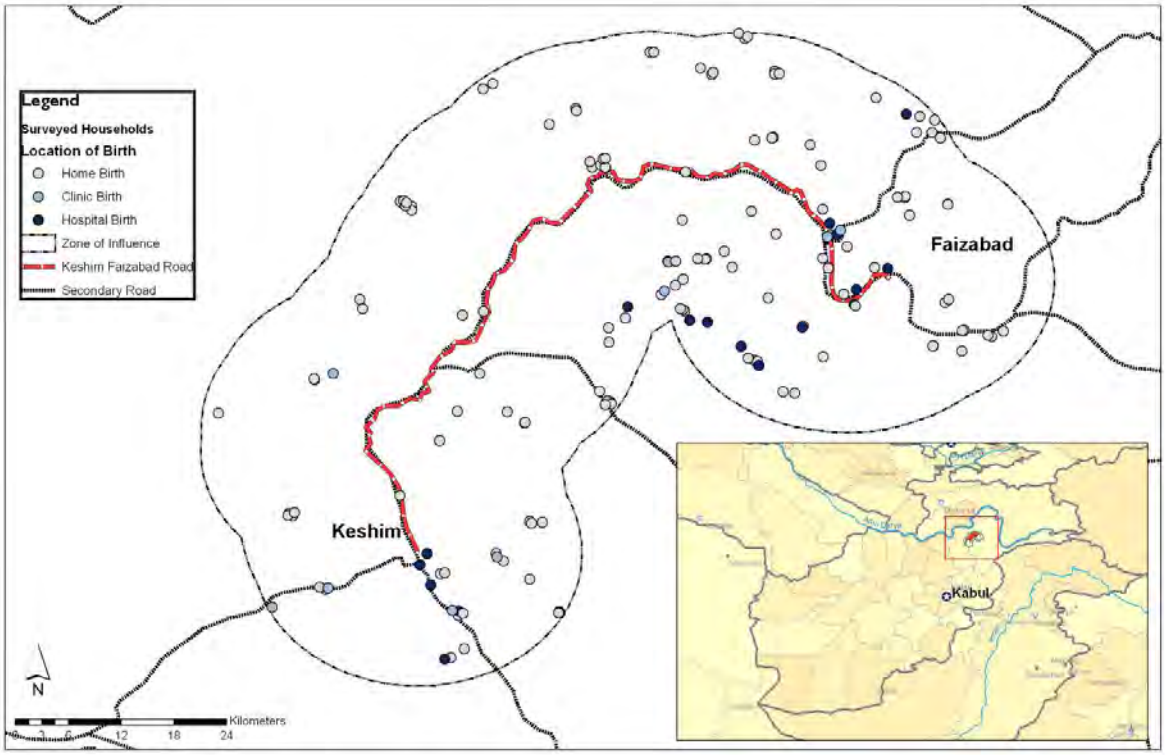
There is a higher usage of the K-F Road for accessing medical care. This is mainly due to the fact that of 88 villages, twelve have clinics and only one has a hospital. On average, the nearest hospital is 29 kilometers from a village, and three in five villagers surveyed reported travelling on the K-F Road to reach a hospital. Villagers reported travelling an average of 9.2 kilometers to reach clinics, and 18 percent of villagers reported using the K-F Road to reach a clinic. Based on the data, it can be inferred that around forty percent of households reach hospitals and clinics by a motorized vehicle if a health care facility is not available in their village. The other sixty percent travel by animal transport or walk.

Current Road Usage for Child Birth. In the household survey, thirty-eight percent of households reported having had a child birth within the last year. However, only 20 percent of these births were carried out in a hospital or clinic. Of those who provided a reason for not going to a clinic or household, 53 percent said it was too far and five percent said travel to the clinic was too expensive. Given that Badakhshan Province has one of the highest maternal mortality rates in the world; it will be interesting to see if the presence of the road has any impact on residents in the ZOI taking advantage of maternal care. Exhibit 12 shows the places

[21] That number of trips to Faizabad decreases as one lives further away from the K-F road was found to be significant at the 95% confidence interval. This was not significant for trips to Keshim. Overall, one can assume that as road conditions improve both on the K-F Road as well as on auxiliary roads, travel will increase to larger population centers where more markets and social services are available.

where births occurred-home, clinic, or hospital -for those households who reported there being a birth in the past year.

Exhibit 12: Location of Births in the Keshim-Faizabad ZOI



Current Road Usage by Farmers and Businesses. The business surveys were used to identify some key characteristics about K-F Road use. Of the 193 business that responded, 54 percent received goods for their businesses by the K-F Road. While 70 percent of these goods come by trucks or vans, the other 30 percent come by a variety of vehicles including buses, cars, jeeps, donkeys, and horses. Business owners were also asked about their usage of the road to transport their goods in the summer and winter months. The Study Team found that 43 percent of 188 business respondents use the K-F Road to transport at least half of their goods and merchandise to the final destination during the summer months. During the winter months, the usage of the road was roughly as high as the summer months with 39 percent of businesses transporting their goods and merchandise on the K-F Road. See Exhibit 13 for a fuller breakdown of K-F Road use by season.

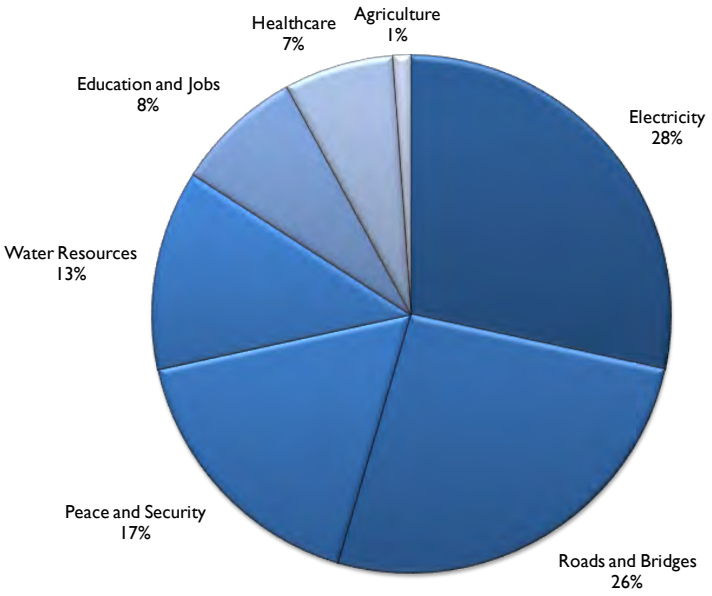
Exhibit 13: Proportion of Goods and Merchandise ZOI Businesses Transported via the K-F Road in Summer and Winter Months

Proportion of Goods	Summer (%)	Winter (%)
All	38	36
More than Half	4	3
Half	1	0
Less than Half	4	4
Almost None	0	2
None	53	55
Total	100%	100%

4.1.4 HIGHEST DEVELOPMENT PRIORITIES

For the Village Elder Survey, respondents were asked to choose the most important priorities from a list of factors that would affect their livelihoods. Factors included electricity, road, security, and health care, among many others. Exhibit 14 shows the breakdown of number of people stating their top priorities for development impacts.

Exhibit 14: Highest Development Priorities for 88 Villages



Of 88 village representatives, 23 claimed that roads are the greatest priority for their village. This was considered the second-most important priority behind electricity, which 25 people claimed to be the highest priority. Altogether, 44 of the 88 village elders reported that the rehabilitation of roads (K-F Road as well as auxiliary roads) is one of their top two priorities for their village.

4.2 MID-POINT INDICATOR RESULTS

This section reports mid-point values representing the situation in the abridged ZOI as of data collection in November/December 2009 and April/May/June 2010. These data will provide a point of comparison with values that are generated by post-project data, which will allow the Study Team to gauge any changes in the intervening time.

Exhibit 15 summarizes these values for each indicator and provides brief definitions for each indicator. For each indicator, the sections that follow will provide information on its rationale, methodology, results, and data limitations.

Exhibit 15: Summary of Mid-Point Indicator Values

Indicator	Indicator Value	Unit	Indicator Definition
Outcome Indicators as measured in November/December 2009 and April/May/June 2010 Data Collection			
1. Cost of Food Staples	29.59	US Dollars	Mean Price for Bundle of Food Staples
2. Markets Where Goods Sold	7.5 (Crops) 10 (Livestock)	Kilometers	Median Household Distance Traveled to Sell Crops and Livestock
3. Number of Businesses	3,301	Number	Total Number of Businesses in Keshim, Faizabad, and along K-F Road
4. Monthly Sales by Businesses	5,173	US Dollars	Median Business Sales (Last 6 Months)
5. Household Incomes	559	US Dollars	Median Total Household Income
6. Vehicle Operating Costs	415	US Dollars	Previous Month's Median Vehicle Operating Costs
7. Travel Times	4:12	Hours	Mean Passenger Travel Time between Keshim and Faizabad
8. Passenger Fare Costs	8.51	US Dollars	Mean Passenger Fare Costs between Keshim and Faizabad
9. Cost of Freight Transport	0.276	US Dollars	Median Cost Per Ton Per Kilometer
10. Freight Tonnage	3,292 ± 477	Tons	Total Daily Freight Tonnage Transported
11. Cost of Informal Payments	0.41	US Dollars	Median Cost of Informal Payments per trip between Keshim and Faizabad
12. Travel Time to Health Clinics	62	Minutes	Mean Travel Time to Health Clinics for Minors
13. Frequency of Visits to Health Clinics	6	Number	Median Number of Household Visits to Health Clinics Per Year
14. Rates of School Attendance	85	Percent	Overall Percentage of School-age ChildrenA ttending School

4.2.1 INDICATOR 1: COST OF FOOD STAPLES

Rationale

A rehabilitated K-F Road should reduce overall transport costs.[22] A decrease in transport costs should both improve access to additional markets and reduce costs of agriculture inputs. In theory, costs of production and transport of agricultural goods will decrease and farmers should pass their savings on to consumers so that consumers will pay less for the same goods.[23] Reduced transport costs will also allow for a more diverse selection of goods, which could provide alternatives to existing goods and thus offer another downward pressure on goods currently sold in the region. However, the price of some goods that are produced in the area could increase as producers take advantage of lower transport costs to sell their goods in markets located farther away. Farmers will be able to reduce the price of that good in those markets and

[22] See indicator 9 and 11 for further caveats related to how benefits from improved roads can be captured through non-competitive practices or through levies of informal payments.

[23] How the price of any particular good reacts to lower transport costs will depend on factors such as the structure and performance of that market. If production perfectly expands to meet additional demand opened up by decreased transport costs, prices where the good is produced will stay the same. However, production may not expand at the same pace as demand for a number of reasons. Producers may not anticipate the extra demand, they may lack capital inputs, or they may perceive risk in expansion. Markets may also be controlled by a small number of producers. In any of these cases, prices that are initially low near a good's source will rise as lower transport costs enable that product to be sold elsewhere where prices are initially higher, so prices will converge over time.

simultaneously increase the price in its growing region in the short run. Once the market reaches its new equilibrium, overall costs for a given bundle of goods within the ZOI are still expected to decrease overall.

While prices may increase or decrease for a specific good in a single location, reduced transport costs should cause prices to converge across locations, which enable markets to bridge location-dependent pricing. Therefore, the expectation is that the price of food staples within the ZOI will begin to converge upon completion of the K-F Road. This is true regardless of where goods are produced, within the ZOI or not. In order to identify this movement in prices, the Study Team measured the absolute deviation in prices below. As this discussion makes clear, the data collected for this indicator needs to be interpreted with some awareness of the ZOI's market dynamics.

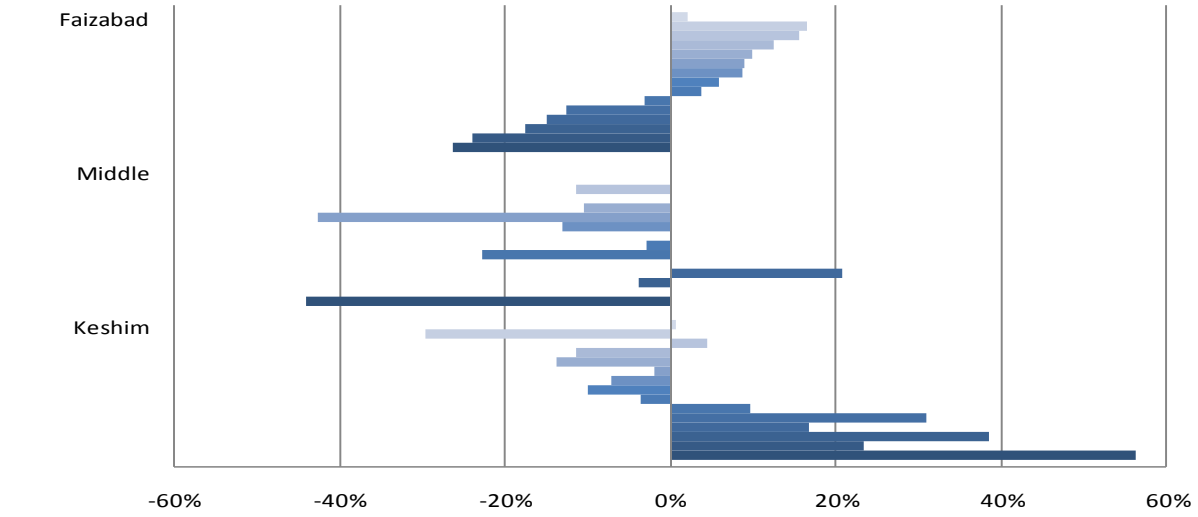
Methodology

Market overview surveys were conducted to assess the cost of various food staples. Sales price data on 14 food staple items including grains, dairy products, meats, fruits, vegetables and legumes were collected from shops in Keshim, Faizabad, and in Sabze Bahar at kilometer 52 of the K-F Road. The sum of the average market prices of these 14 food staples provide the 'mean bundle cost of food staples,' which is a single figure that can be compared with future studies. Enumerators recorded up to 10 prices in each bazaar or market area sampled for each of the 14 food items selected. In all, 1,179 price observations were recorded, with more than 80 values each for 11 out of 14 of the food items. The Study Team used these values to calculate the mean cost for a bundle of these 14 food items. The mean cost for this bundle of food staples will be used for to analyze price deviations between Keshim and Faizabad and for comparison in the post-project study.

Results

The mean price of a bundle of the 14 food staples was 29.59 USD. While there was no significant difference in the *total* bundle cost between Keshim and Faizabad, the prices of *individual* goods varied significantly by location. To measure the degree of individual item price differences, the Study Team calculated the mean absolute deviation in prices between Keshim and Faizabad to be 27.7 percent. Exhibit 16 illustrates the percentage difference in mean prices in Keshim, Faizabad and Sabze Bahar from the ZOI mean price per good. It is important to note that the "Middle" or Sabze Bahar area does not have a Total Bundle Cost because we only had prices for 10 out of 14 goods in the bundle. After the road is complete and beneficiaries begin to change their behaviors, prices should converge and the price of the bundle should decrease.

Exhibit 16: Food Price Differences by Location



	Keshim	Middle	Faizabad
Bundle Total	1%		2%
tomato	-30%		17%
milk	4%	-11%	15%
grapes	-11%		13%
rice	-14%	-11%	10%
walnut	-2%	-43%	9%
beef	-7%	-13%	9%
oil	-10%	0%	6%
mutton	-4%	-3%	4%
dried yogurt	10%	-23%	-3%
kidney bean	31%		-13%
wheat flour	17%	21%	-15%
potato	38%	-4%	-18%
corn	23%		-24%
onion	56%	-44%	-26%

Data Limitations

The bazaars sampled may not be representative of all bazaars and the prices they set for the 14 food staples selected may not be representative of all shops that sell those goods. In order to collect enough observations to allow for detecting changes in prices likely, the Study Team chose a non-statistical sampling method. Enumerators recorded prices in selected bazaars using a convenience sampling approach, collecting the observations they found, for a maximum of ten observations per enumerator per site. Shops that were more visible had the required goods prominently displayed and were generally more accessible had a higher probability of being sampled. Fortunately, the bias from this method simulates the purchasing patterns of an actual shopper better than a random sampling via GPS coordinates, etc. Therefore, the data collected provides more relevant results in terms of what a shopper likely experiences than a random sample might in some ways.[24] However, the number of samples taken in Keshim, Faizabad, and Sabze Bahar may be disproportionate and at the ZOI level could distort price estimates both for individual goods as well as for the cost of the entire bundle of goods. The weighting of prices for each good in the bundle will need to be consistent between

[24] There was no control for geographic sampling densities prior to enumeration. Further, price differences between the sampled areas may have been more or less variable in a randomized sample. All of this will need to be considered carefully when analyzing the post-project data.

locations in the follow-up analysis. In summary, although price estimates may be biased at the mid-point, there should be no impact on validity when comparing this data to the post-project data as long as the follow-up enumeration is conducted in the same manner. In other words, whatever bias may exist will be replicated in a systematic way in the post-project enumeration, so the bias will be across all data points; therefore, any movements in price that are detected will be valid.

4.2.2 INDICATOR 2: MARKET WHERE GOODS ARE SOLD

Rationale

Reduced transport costs and travel times on the K-F Road should increase access to markets farther away by rural households that sell their agricultural goods. This will allow farmers to reach markets where they can sell their goods for higher prices and thus increase rural incomes.

Methodology

The household survey was used to gauge the number of households that cultivate crops and raise animals as well as which of these households sell either crops or animals and the location in which they are sold. Based on responses from 485 households, 65 percent reported growing crops, out of which 22 percent reported selling them. Twenty-five percent of households in the ZOI reported raising animals, and 70 percent of those households reported selling animals in the last year. The Study Team asked households that sold crops or livestock where they sold their highest value goods. This indicator is measured from these responses.

Results

As shown in Exhibit 17, agricultural goods were primarily sold at nearby bazaars as well as in the bazaars in Keshim and Faizabad. A third of the respondents sold their crops at a bazaar in Keshim, a third sold their crops at a bazaar in Faizabad, and a quarter sold their crops in nearby bazaars.

Exhibit 17: Household Agricultural Sales by Market

Where Sold	Crops (%)	Livestock (%)
Roadside Stand	9.0 %	6.0 %
Nearest Bazaar	23.9 %	27.5 %
Bazaar in Keshim	31.3 %	22.8 %
Bazaar in Faizabad	31.3 %	24.8 %
Businessman	0.0 %	9.4 %
To a Neighbor	0.0 %	0.7 %
Other	4.5 %	8.7 %
Total	100 %	100 %

In order to decrease sensitivity to extreme values, the median distance was selected as the measure for this indicator. As shown in Exhibit 18, the overall median distance travelled to sell crops was 7.5 kilometers. The K-F Road was used by 37 percent of the households to sell their crops. The median distance travelled by households to Keshim was half the median distance travelled to Faizabad (see Exhibit 18).

The Study Team also checked for sensitivity of the household responses to the season in which the surveys were conducted. The majority of the households surveyed in the spring did not sell their crops.[25] As a result,

[25] This could be due to the fact that the spring household surveys were conducted in areas farther away from the road where there were lower percentages of households who sold their crops. This will need to be explored further in future analysis after the post-project data is collected.

there were not enough observations to compare the results to the winter surveys for the distance to sell crops or whether they used the K-F Road.

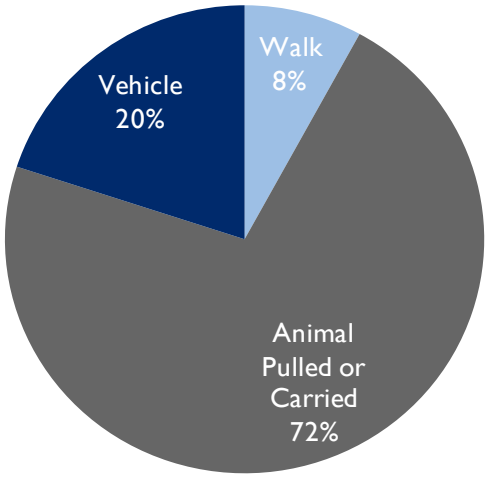
Exhibit 18: Median Distance Traveled by HH to Sell Crops (Kilometers)

Where Crops Sold	Total Obs.	Median Distance (km)
Roadside Stand	5	0
Nearest Bazaar	9	3
Bazaar in Keshim	18	8
Bazaar in Faizabad	17	16
Other	3	0.1
Total	52	7.5

The primary mode of transportation used to get crops to market was animal-drawn or hand-carried carts with 72 percent of households reporting use of this method.

Exhibit 19 below shows more fully the breakdown of modes of transport.

Exhibit 19: Mode of Transport for Transporting Crops to Market



The median dista ıibit 20. Nearly 31 percent of households that sold livestock used the K-F Road, and 95 percent of these households walked to reach their destination to sell livestock.

Exhibit 20: Median Distance HouseholdsTravel to Sell Livestock

Where Livestock Sold	Obs.	Median Distance (km)
Roadside Stand	6	0.0
Nearest Bazaar	9	1
Bazaar in Keshim	29	11
Bazaar in Faizabad	23	15
Other	8	0.02
Total	75	10

Data Limitations

A little over one third of households that sell livestock responded "I don't know" when asked how far they travelled to the place of sale. These households were more likely to report "nearest bazaar" as the location of sale. Therefore, we expect the measure of distance to markets for livestock has an upward bias; that is, the median distance if we could include households that did not know would be lower.

The Study Team also encountered a problem with some of the data collected for crops and livestock sold. There were several cases where respondents gave answers to the highest value of crops or livestock sold but in an earlier response said that they did not sell that type of crop or livestock. It is not clear whether there was a survey translation problem or another issue related to how the enumerators conducted the survey. This needs to be studied further.

4.2.3 INDICATOR 3: NUMBER OF BUSINESSES

Rationale

This indicator gauges whether the rehabilitation of the road improves the economy. Road improvements can create new business opportunities and one would expect that the current project would result in an expansion of businesses operating in the ZOI that are directly or indirectly associated with the transport of people and goods (e.g., service stations, car parts, roadside food service) or which typically benefit from lower transport costs. In addition, lower transport costs could also induce additional economic growth in the ZOI as residents and road users have more disposable income to spend on other goods and services in the region.

However, this indicator tracks, at best, only one component of economic growth—new business formation. In addition to catalyzing new businesses to form, economic growth can stimulate existing businesses to expand operations. The latter is not captured by the indicator, which is simply a count of total business in the ZOI. In fact, it is even possible that future economic growth could lead to a consolidation of operating businesses in certain segments in order to take advantage of economies of scale so that the business count could decline over time. Hence, this indicator should be used cautiously when making conclusions regarding the project's ability to promote business growth in the ZOI. It should be complemented by data on the growth of existing businesses to see what changes have occurred once the follow-up data is collected. Further limitations are discussed below.

Methodology

To assess the number of businesses in the ZOI with available resources, the Study Team took a two-step approach to measure the number of businesses. For businesses in Keshim, Faizabad, and villages along the K-F Road, the Study Team conducted a full on-the-ground census of businesses, counting and marking the location of each one with a handheld GPS unit. For businesses away from the road, the Study Team conducted surveys using a statistical sample. The Study Team visited 49 sampling sites ranging from 2 to 15 km from the K-F Road and counted the number of businesses. Although we cannot use these to accurately estimate the total

number of businesses away from the K-F Road, we can compare these results with those from the follow-up study in order to detect a change. For the purposes of this count, businesses were defined as any permanent or semi-permanent structure where goods or services were sold. For example, people selling fruit off of a blanket on the ground or a cart with wheels were excluded as these are likely to change location over time.

Results

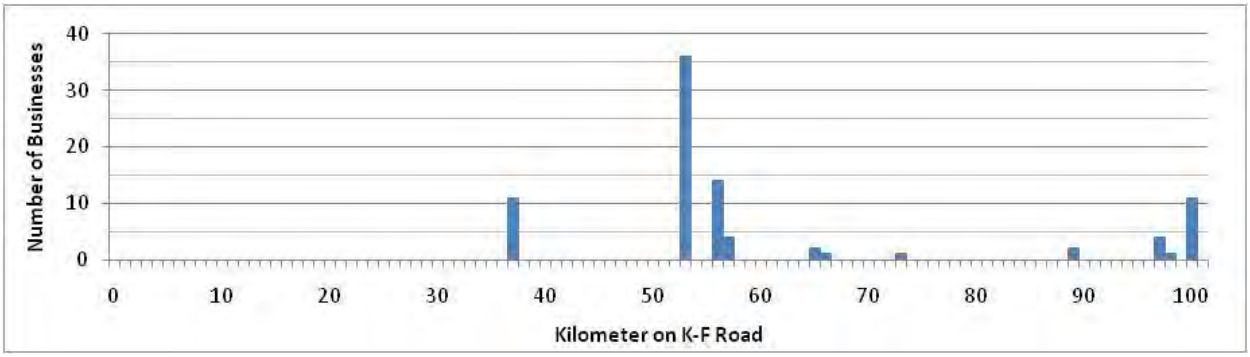
In total, the Study Team counted 3,301 businesses in Keshim, Faizabad, or in villages along the K-F road. Exhibit 21 shows the breakdown of businesses counted among these locations.

Exhibit 22 shows the location of the 89 businesses counted along the K-F Road that were outside of Keshim and Faizabad. In villages away from the road, the Study Team found at least one business in 28 of the 49 sampling sites visited, a rate of 57.1 percent. The average number of businesses at each site, including those where none were found, was 2.45.

Exhibit 21: Number of Businesses along K-F Road

Location	Number of Businesses
Keshim	1,132
Villages along the K-F Road	89
Faizabad	2,080
Total	3,301

Exhibit 22: Businesses Counted Along K-F Road Outside of Keshim and Faizabad by Kilometer[26]



Data Limitations

The business counts were conducted by local CDOs from the area in an attempt to ensure that all known areas with businesses were included. Despite this, it is likely that businesses that were not visible from the road but located in known commercial areas are excluded from these counts. The likely impact is a bias in the business count is reflected in an artificially lower count. In the follow-up study, the counting technique will be repeated, and thus, any bias will be replicated. The difference between the two biased counts should be thus, unbiased, and therefore, the comparison between mid-point and follow-up should be indicative of the actual change in the number of businesses. The number of businesses away from the road is discussed below in the "Data Limitations" section for Indicator 4 (Business Monthly Sales).

[26] The kilometer station starts at zero from Keshim and ends in Faizabad at km103.

4.2.4 INDICATOR 4: BUSINESSES MONTHLY SALES

Rationale

The expected outcome of rehabilitating the K-F Road is increased economic activity as a result of decreases in shipping costs and reduced travel times as well as an increase in transport options. Narrowly, the expectation is that the ZOI will experience an increase in transport-related businesses (e.g., service stations, auto parts, roadside food service). More broadly, businesses that rely heavily on transportation should also benefit from the anticipated decrease in transport costs. Reduced transport costs may stimulate overall economic growth leading to new business opportunities and increased employment. Additionally, as reduced transport costs are reflected in lower prices of goods, both businesses and consumers will have more money on hand; therefore, the consumption of goods and services is likely to increase.

Not all impacts of the road will necessarily lead to increased shopkeeper sales, however. Greater access to goods may result in increased competition from new entrants to the marketplace, which could lead to a decrease in revenue and potentially lower profit margins. Therefore, any changes in the values that this indicator measures need to be interpreted cautiously and in the light of other possible changes.

Methodology

For this indicator, the Study Team measured the mean and median monthly sales for businesses within the K-F Road ZOI. It used the data from the small business surveys to determine the values for this. The small business surveys also provided data on employment, use of the K-F Road, and transport and other expenses. Information collected on sales in the last six months provided the greatest number of valid responses and thus was used for the analysis of median sales by business-type. The data related to employment, transport costs, total expenditures, and the use of the K-F Road will assist the Study Team's analysis of the K-F Road's impacts on local businesses.

A total of 196 small business surveys ZOI-wide were conducted. However, only the 143 that were conducted in Keshim and Faizabad were used because of some problems in the data collection for businesses outside of these two cities.[27] Of those, only 75 surveys had valid responses to the income questions.[28]

Results

Exhibit 23 illustrates the mean and median sales by business categories and district in the last six months. Mean sales for all business categories in the Study Area was 13,297 USD. The Retail/Trade category makes up 84 percent of all small businesses enumerated with 63 observations while there were no restaurants sampled. Regarding the two districts, the overall mean sales reported by businesses located in Faizabad was 75 percent more, although the median sales figures are the same.

[27] See the section on Data Limitations for further explanation.
[28] There were a high number of "I Don't Know" responses, which will be discussed further in the Data Limitations section.

Exhibit 23: Business Categories and Sales in Keshim, Faizabad and The Total Study Area (USD)

District	Business Category	Mean Sales Last 6 months	Median Sales Last 6 months	Obs
Faizabad	Restaurants	$ -	$ -	0
	Retail/Trade	$ 17,493	$ 4,138	33
	Service	$ 13,561	$ 10,046	6
	Small-scale Industry	$ -	$ -	0
	Other	$ 9,683	$ 12,415	3
	Total	$ 16,374	$ 5,173	42
Keshim	Restaurants	$ -	$ -	0
	Retail/Trade	$ 10,099	$ 5,690	30
	Service	$ 414	$ 414	1
	Small-scale Industry	$ 3,104	$ 3,104	2
	Other	$ -	$ -	0
	Total	$ 9,381	$ 5,173	33
Total Study Area	Restaurants	$ -	$ -	0
	Retail/Trade	$ 13,972	$ 5,173	63
	Service	$ 11,683	$ 10,046	7
	Small-scale Industry	$ 3,104	$ 3,104	2
	Other	$ 9,683	$ 12,415	3
	Total	$ 13,297	$ 5,173	75

In the future analysis, the Study Team will look at whether reduced transport costs are factor in small business income. For the 63 Retail/Trade business that provided full answers to income and expense questions for the previous six months, the Study Team found that mean transport costs amounted to eight percent of sales, while mean total expenditures amounted to 46 percent of sales.[29]

Data Limitations

As stated in the methodology section, there were issues in the implementation of the business surveys, which limited the Study Team's ability to properly analyze the business survey data. At the outset, the Study Team selected 161 businesses to randomly sample based on the GPS census of all businesses[30] in Keshim, Faizabad, and along the K-F Road alignment. However, the contractor conducted only 5 of 17 of the businesses that were located along the K-F Road but outside of Keshim and Faizabad. Therefore, from the GPS census random sample 144 surveys out of 161 were completed. To gather data on businesses in areas more distant from the road, the Study Team randomly selected an additional 70 businesses to be enumerated from 49 polygons that were identified for the household survey. As mentioned in Section 3's discussion on the business sampling method and its implementation problems, the data collected could not be used in this analysis due to data collection issues. These enumeration issues limited the Study Team's analysis of business income, business cost profiles, and road usage to only businesses that were located in Keshim or Faizabad.

Further complicating the data analysis were the low number of surveys with valid responses to the income questions with only 90 out of 196 responses to sales in the last six months and with an even lower number of

[29] If median sales and expenditure figures are used, transport costs remain at eight percent of sales, while the ratio of total expenditures to sales goes down slightly to 40 percent of sales.
[30] The GPS census found 3,301 businesses within Keshim, Faizabad, and along the alignment.

responses to income questions for last summer and winter. Responses regarding total expenditures and transport costs also had a smaller than expected number of valid responses.[31] The Study Team, after reviewing these issues, has decided to conduct qualitative interviews of businesses in the post-project study to reach a broader understanding of the road and its impacts on local businesses.

4.2.5 INDICATOR 5: HOUSEHOLD INCOME

Rationale
Household income is one of the most fundamental indicators to track trends in economic development. In the long term, the Study Team expects that improved road conditions will generally increase household income due to factors such as improved access to markets and increased economic activity from decreased transport costs.

Methodology
Information on household incomes was collected from the household surveys. Of the 485 households surveyed, 279 provided information on income. Income was calculated as the total cash earnings from crop and livestock sales, non-farm cash earnings, and non-cash payments received. Additionally, information on total household expenditures was collected to provide a reference point for total reported income. Total expenditures are reported monthly and include both goods and services.

Results
Household income data from the ZOI indicates high rates of poverty with 38.4 percent of households earning less than 1 USD per day, and 52.9 percent of households earning less than 2 USD per day.[32] In the long term, the Study Team expects that improved road conditions will generally increase household income due to factors such as improved access to markets and increased economic activity from decreased transport costs. Due to the variability in reported household incomes, median income is reported. Household income is presented based on the household's reported source of income in Exhibit 24.

The income source categories considered were farm, barter, non-farm, and mixed. The largest category is represented by households that did not report any income. The majority of the households that did report income reported it to be from a single source. Of these sources, the most common was non-farm income. Approximately 39 percent of households reported that they receive some income from non-farm sources while 27 percent are reported to receive some income from farm sources. Households that derive their income from multiple sources reported significantly higher incomes than those that depended on a single source. Generally speaking, the highest incomes were reported in households with mixed income sources and the lowest incomes were reported in those that reported in-kind payments as their only source of income generation.

[31] There were a high number of invalid responses with only 120 of 196 total expenditures observations and just 92 out 196 transport costs observations for the past six months being valid.
[32] Due to high underreporting of household incomes, income earnings are reported per household rather than in per capita terms. In this context, households that did not report income (as seen in Exhibit 1) may include subsistence households, whereby all goods produced are consumed by the household.

Exhibit 24: Median Annual Household Income by Income Source

Income Source	Percent of Households	Median (USD[a])
No Income Reported	42.2%	0
Only Farm[b]	14.7%	476
Only Non-Cash Payments[c]	3.4%	103
Only Non-Farm[d]	27.3%	367
Mixed[e]	12.4%	1552
Total[f]	100%	559

[a] Currency exchange rates were obtained from FOREX. To adjust for seasonality, two different exchange rates were used: 1 USD = 48.33 AFN (winter) and 1 USD = 46.30 AFN (spring).

[b] This includes animal and crop sales as well as the monetary value of crops used as payment for other products or services.

[c] Respondents were asked to report the value of any in-kind payments their household received during the previous 12 months.

[d] This refers to households that only reported non-farm income.

[e] The Mixed category includes all households that reported more than one source of income.

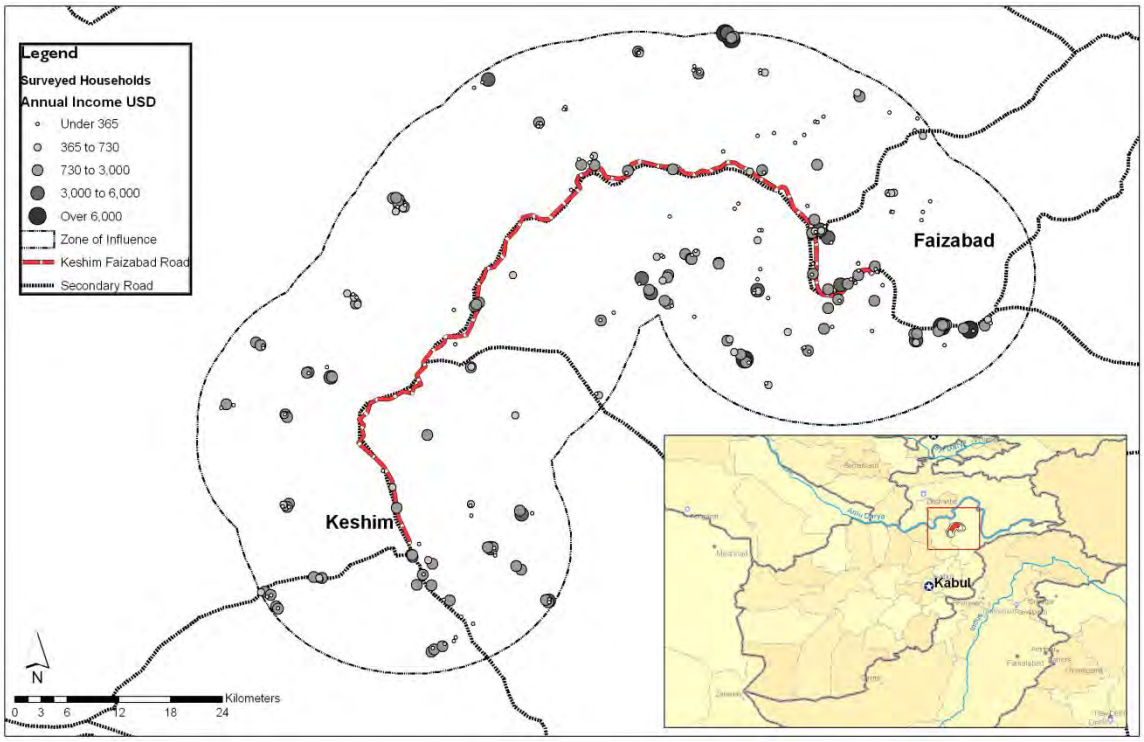
[f] Total represents the median out of all households reporting their income.

There was no statistically significant correlation found between total income and total annual expenditures. When referencing the reported expenditures, approximately 89 percent of households reported total annual incomes lower than total annual expenditures. This is possibly due to bias towards over-reporting expenditures and/or under-reporting income. Respondents might also have difficulties with annual estimations. Household density, district, and proximity to the road and its terminal cities (Keshim and Faizabad) were all found to be insignificant predictors of total income. Exhibit 25 shows the distribution of households and their reported daily income. The majority of households is both very poor and making less than USD 1/day or, moderately poor and making somewhere between 2 USD and 8 USD/day.

Exhibit 25: Household Income Distribution

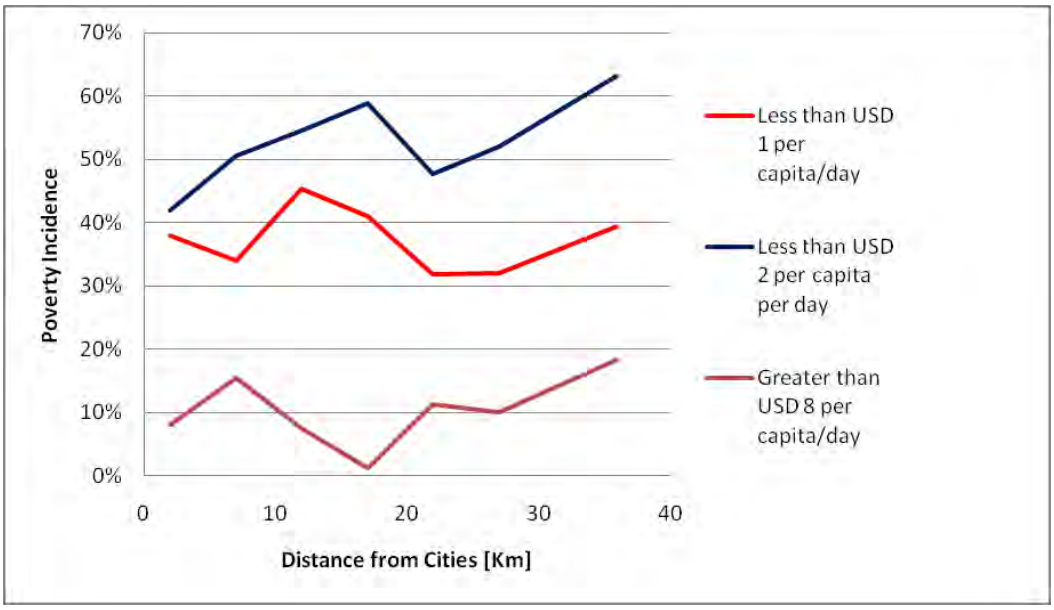
Exhibit 26 below is a map showing household income variations in the K-F Road ZOI.

Exhibit 26: Annual Household Income in Keshim-Faizabad ZOI



Further analysis reveals a more complex relationship between distance and income. While there is no statistically significant relationship between distance to the city and income, there appears to be a relationship between the incidence of poverty and proximity to cities. Poverty generally tends to increase at larger distances from the cities. Households around 30 km away from the closest city (either Keshim or Faizabad) show an increase in incidence of poverty. Another interesting characteristic is the simultaneous increase of higher incomes at larger distances from the cities indicating higher income disparities farther from the cities. Exhibit 27 displays the poverty incidence at various distance ranges from the city. While there is no linear relationship between poverty incidence and distance from the city, it appears that poverty is higher than elsewhere at 30 km or more from a city. The highest incidence of poverty seems to be prevalent around 35 km from the city. These preliminary observations will have to be further tested once the post-project data is available.

Exhibit 27: Poverty Incidence and Distance from Cities



The poverty rate is not statistically correlated with distance along the road or distance from the road. This may be a result of noisy data or the effect of secondary roads unaccounted for or a more complex relationship not detected. The follow-up study will determine whether a more consistent relationship has developed once road rehabilitation is complete.

Data Limitations

Data limitations exist due to a lack of responses that provide information on income. Also, the date when the surveys were conducted must be considered. Generally, sampling in the spring versus the winter did not seem to have a significant influence on most of the income reported. The exception to this is for the reporting of annual crop sales. Although 40 percent of spring respondents reported raising crops, only about 4 percent of those reported selling any of these crops. In comparison, for the winter surveys about 21 percent of those that reported raising crops also reported selling them. This discrepancy could imply recall issues among the respondents and/or could point to the geographic differences between the spring and winter sampling points. The spring sampling points included more remote households, which could mean that they are in more mountainous terrain that limits plot size, resulting in a greater concentration of subsistence farming. The remoteness of these households could also limit the number of markets where producers can sell their goods.

4.2.6 INDICATOR 6: VEHICLE OPERATOR COSTS

Rationale

Roads that are in poor condition take a heavy toll on those vehicles that travel them in the form of accelerated wear and tear and frequent breakdowns. Vehicles also consume more fuel while travelling on rough and degraded roads. The high maintenance, repair, and fuel costs are borne by the vehicle operator and are ultimately built in to passenger fares and the price of freight shipments. Rehabilitating the K-F Road should reduce vehicle operator costs.

Methodology

For this indicator, the Study Team measured the median monthly cost for operating a vehicle that used the K-F Road. Vehicle operator costs (VOCs) are defined as the monthly sum of fuel and maintenance costs. Both the vehicle operator survey and the household survey were employed to determine the values for this indicator. The vehicle operator survey asked vehicle operators to report on fuel and maintenance expenditures for the previous month. These data combined with traffic counts from October 2009 and

January 2010 were used to estimate the monthly vehicle operator costs for all vehicles using the road. In addition, data from a separate household survey were used to estimate the number of households owning a motorized vehicle.

Results

The household survey found that 2.33 percent of households have one or more vehicles. As to VOCs, there were 142 vehicle operators that fully responded to questions regarding their VOCs for the previous month. The median monthly operating costs were found to be 415.37 USD per vehicle. Exhibit 28 disaggregates the vehicle operator costs into its two categories: median costs of repairs and fuel reported by vehicle type.

Exhibit 28: Cost of Fuel and Repairs (USD) by Vehicle Type

	Median Cost of Repairs	Obs. of Costs of Repairs	Median Cost of Fuel	Obs. Cost of Fuel	Median Total VOCs	Obs. Total VOCs
Motorcycle	$ 8.28	3	$ 14.48	3	$ 22.76	3
Car	$ 124.15	97	$ 206.91	94	$ 351.75	82
4-Wheel Drive	$ 165.53	9	$ 155.18	11	$ 434.51	7
Van	$ 103.46	25	$ 258.64	22	$ 475.89	21
Minibus	$ 35.17	5	$ 165.53	5	$ 200.70	3
Truck	$ 486.24	26	$ 1,758.74	27	$ 2,461.20	24
Unknown	$ 413.82	2	$ 332.61	2	$ 746.43	2
Total	**$ 144.84**	**167**	**$ 225.53**	**164**	**$ 415.37**	**142**

Data Limitations

The vehicle operator survey team stopped vehicles at numerous points along the K-F Road over a 24-day period between the hours of 6:30 am and 6:30 pm. Most vehicles were stopped during late morning or mid-afternoon. This sample may not be representative of the actual traffic using the K-F Road as some types of vehicles or drivers with certain driving habits may have been more or less likely to be driving at particular times and to stop during those times. Although this may bias the indicator estimate, this bias will be replicated in the follow-up, so that any change detected should be a reliable indication of a change in the actual VOCs for vehicles using the K-F Road.

4.2.7 INDICATOR 7: TRAVEL TIMES

Rationale

The rehabilitation of the K-F Road is expected to reduce overall travel times along the road. A rehabilitated road will provide a smoother roadway and a road geometry designed for travel at higher speeds. The result should be safer, more comfortable travel with less vehicle wear at increased speeds. To track this effect, we measure travel times between Keshim and Faizabad as an indicator of road improvement.

Methodology

The Study Team surveyed vehicles that carry passengers for hire, inquiring about the duration of the trip in a context that replicated an actual passenger-operator interaction. It calculated mean travel times for three

service types: buses, personal vehicle,[33] and taxis. Travel times considered are for trips between Keshim and Faizabad and were measured for both directions.

Enumerators were instructed to go to bus stations and taxi stands, or commonly known departure points in Keshim and Faizabad to conduct the bus and taxi surveys. Data collection for personal vehicle paid passenger surveys occurred on the side of the road outside of Keshim and Faizabad.

In order to estimate an overall measure of travel times across modes, the Study Team combined the mean trip durations into a weighted value based on the actual flow of vehicles. This is calculated based on traffic counts[34] that recorded the weekly frequency of different vehicle types and the typical occupancy of each vehicle type as determined from the paid passenger surveys.

Results

The mean travel times between Keshim and Faizabad are shown below in Exhibit 29. Travel time by taxis and personal vehicles about 32 and 36 percent lower than travel times by bus, respectively.[35] For taxis, travel times for trips from Keshim to Faizabad were significantly lower than trips in the other direction. On average, taxi drivers reported travel times 44 minutes shorter than trips in the opposite direction. One explanation for this phenomenon may be different stopping patterns or divergent routes. In the follow-up survey, the Study Team plans to conduct qualitative interviews with passenger service providers to add context to the analysis.

Exhibit 29: Mean Travel Times Between Keshim and Faizabad

Mode of Transportation	Mean Trip Duration (h:mm)
Taxi	3:24
Personal Vehicles with Passengers	3:11
Bus	5:00
Average Passenger*	4:12

* Calculated as described in Method section.

Data Limitations

The vehicle sampling was geographically asymmetric (see Exhibit 30). Traffic counts were conducted in October 2009 and January 2010 at both the Keshim and Faizabad ends of the road. These traffic counts show higher numbers of vehicles on the road near Faizabad. This pattern is represented in the sampling of buses and taxis but not in personal vehicles. In the case of personal vehicles, there was a reported difficulty in finding vehicles driving the full length of the road. This may have contributed to the small sample size and its asymmetry. In the case of buses, only a few were available and these were all surveyed outside of Faizabad. It should also be noted that all buses included in the survey fall under the category of minibus as they all have fewer than 20 passengers.[36]

[33] In the ZOI, it is very common for personal vehicles to pick up passengers along the route to their destination and charge them a fee for riding along.
[34] The Study Team used the average of traffic counts conducted in October 2009 and January 2010.
[35] Statistically different from zero at the 99% confidence level.
[36] The threshold for minibuses was previously established for the Gardez-Khost Baseline report. For continuity, this same threshold is used for the current report.

Exhibit 30: Paid Passenger Survey Sample Size for Trips Between Keshim and Faizabad

Mode of Transportation	Keshim-Faizabad	Faizabad-Keshim
Taxi	13	30
Personal Vehicles	17	2
Bus	0	8

4.2.8 INDICATOR 8: PASSENGER FARE COSTS

Rationale

Travel times and operating costs should decrease once the road is rehabilitated, reducing the overall cost of providing passenger transport services. As a result, reduced passenger fare costs are an indicator of improvements in the K-F road.

Methodology

The Study Team surveyed vehicles that carry passengers for hire, inquiring about the cost of a passenger trip in a context that replicated an actual fare negotiation. We calculated mean passenger fare costs for three service types: buses, personal vehicle,[37] and taxis. Fares considered are for trips between Keshim and Faizabad and were measured for both directions.

Enumerators were instructed to go to bus stations and taxi stands or commonly known departure points in Keshim and Faizabad to conduct the bus and taxi surveys. Data collection for personal vehicle paid passenger surveys occurred on the side of the road outside of Keshim and Faizabad.

Results

The mean passenger fare costs between Keshim and Faizabad are shown below in Exhibit 31. Analysis of the data demonstrates a statistically significant difference between travel fares for buses, taxis, and personal vehicles.[38] Fares for travel by taxis and personal vehicles were about 25 and 21 percent higher than those by bus, respectively. [39]

Exhibit 31: Mean Passenger Fare Costs Between Keshim and Faizabad

Mode of Transportation	Fare (USD)
Taxi	9.55
Personal Vehicles	9.26
Bus	7.63
Average Passenger*	8.51
* The average passenger is weighted to represent a single passenger taking into consideration the average passenger capacity of vehicles and the vehicle count for each vehicle type on the road.	
Conversion based on FOREX exchange rate for November 23, 2009 through January 2, 2010.	

[37] In the ZOI it is common for personal vehicles to pick up passengers along the route to their destination and charge them a fee for riding along.
[38] The passenger vehicle fare is significant at the 95% level (P>.003) with a confidence interval (.593, 2.66). Taxi fare is also significant at the 95% confidence level (P>.000) with a confidence interval (.9777, 2.866).
[39] These numbers were calculated by the percentage difference in mean fares between Taxi Buses, and Personal Vehicles and Buses (see Exhibit 31).

A weighted index was developed based on the number of total passengers that take each form of transportation in order to estimate the fare for the average passenger. This index was calculated based on traffic counts that recorded the weekly frequency of different vehicle types and the typical capacity of each vehicle type as determined from the paid passenger surveys. The traffic counts were conducted in October 2009 and January 2010. The average passenger traveling between Keshim and Faizabad paid roughly 8.51 USD per trip.

Data Limitations

The data limitation issues for Indicator 7 are similar to those discussed for Indicator 8 since the survey instruments used were the same in both cases. Namely, the vehicle sampling used for the calculation of this indicator was geographically asymmetric. The reader can refer to the Data Limitations section of Indicator 7 for a fuller discussion of this.

It should also be noted that all buses included in the calculation of passenger fare costs fall under the category of minibus as they all have fewer than 20 passengers.[40] An improved road will likely increase the number of full-size buses on the road, which will introduce an even cheaper form of transport that will even further increase social, political, and economic access in the ZOI.

Field teams reported difficulty collecting a large number of observations as passenger-carrying vehicles were reportedly sparse with only 70 observations made for taxi (43), personal vehicles (19), and buses (8). The follow-up report is expected to have a larger number of observations due to increased traffic between Keshim and Faizabad as a result of improved road conditions. This will provide us a richer set of data that can be used to draw stronger conclusions.

4.2.9 INDICATOR 9: FREIGHT COSTS

Rationale

This indicator measures the cost per ton per kilometer of commercial freight shipping on the K-F road via truck. An improved road should lower vehicle operating costs, such as fuel and maintenance expenses, which in turn lower freight shipment costs. This in turn should stimulate economic growth by creating new business and trade opportunities and making goods that are already shipped by road cheaper.

Methodology

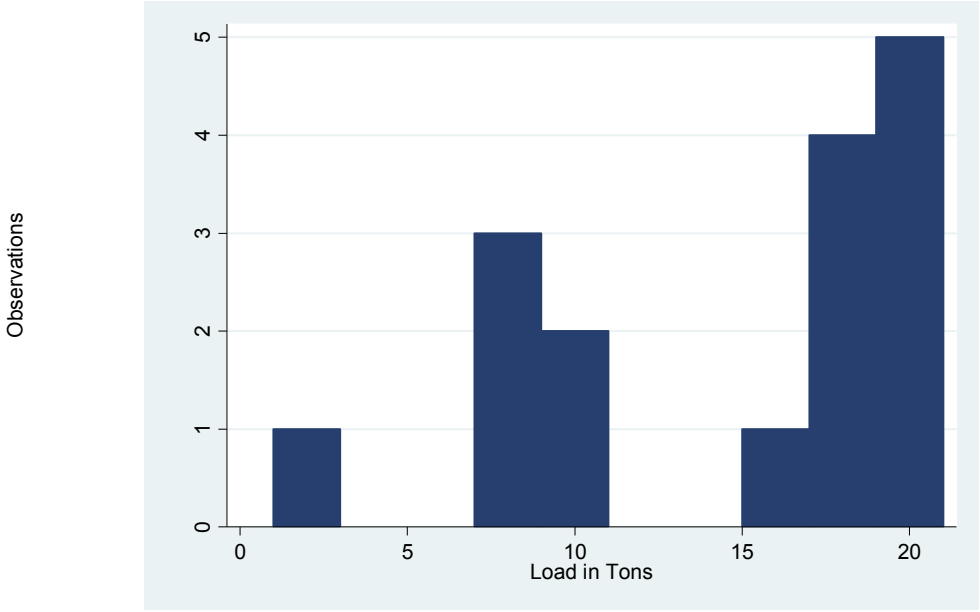
Enumerators along the K-F Road stopped freight trucks heading from Keshim to Faizabad or vice versa.[41] Truck drivers were asked about the size of the load they were carrying, trip distance, travel time and cost to ship. From these responses, the Study Team calculated a mid-point value for the mean cost per ton per kilometer shipped on the K-F Road. This value will be compared with data collected in the follow-up study in order to detect a change in freight shipping costs.

Results

The median cost per ton per kilometer found among the 16 usable observations taken was 0.276 USD with a mean of 0.358 USD.[42] All but one of these trucks reported a trip distance between 103 and 110 km, which is the approximate length of the K-F Road. Those 15 trucks reported travel times between 5 and 10 hours with a mean travel time of 7 hours. Truck loads ranged from 1 to 21 tons and Exhibit 32 shows the distribution of tonnage reported.

[40] This threshold for minibuses was previously established for the Gardez-Khost Baseline report. For continuity, this same threshold is used for the current report.
[41] Enumerators collected the data at various points on the road—12 surveys were conducted near Keshim, 8 in the middle section (Km 39-53), 11 near Faizabad, and 2 in an unidentified location.
[42] Nine trucks reporting trip distances significantly beyond the length of the K-F road (from 170 to 600 km) were excluded from this calculation as were eight trucks whose drivers did not know their trip distance. Including these observations, the mean and median cost per ton per km does not differ materially; each would be lower by about USD 0.01.

Exhibit 32: Histogram of Truck Load Sizes



Data Limitations

The low number of observations will ultimately make it difficult to detect a statistically valid change in this indicator in the follow-up study. Field teams reported a limited number of trucks available for sampling on the K-F Road and resorted to collecting samples at various points along the road as they were carrying out other data collection. Therefore, this should not be considered a statistical sample; the observations may not be representative in terms of direction of travel and time of day. They are also not representative of the traffic flows at other times of year. Also, we do not know how many truck drivers refused to take the survey and any characteristics about them.

In addition, some drivers did not respond to key questions necessary for calculating this indicator, so some seven responses had to be excluded representing a non-response rate among trucks that actually stopped of up to 43 percent. However, analysis suggests that freight costs for drivers is only marginally sensitive to these excluded observations when reasonable values are imputed for missing responses.

4.2.10 INDICATOR 10: FREIGHT VOLUME

Rationale

As described in the rationale for Indicator 9, an improved K-F Road should reduce freight costs. If reduced freight costs indeed stimulate new business opportunities and economic growth, this should be evident in an overall increase in the volume of freight travelling the K-F road. This may result from lower freight costs enabling new trading opportunities. Increased freight volumes may also result from overall increases in demand for presently traded goods if the region experiences economic growth and incomes rise.

Methodology

Enumerators along the K-F Road stopped freight trucks heading from Keshim to Faizabad or vice versa. Truck drivers were asked about the size of the load they were carrying, trip distance, travel time and cost to ship. From these responses, the Study Team calculated the mean load size for trucks travelling the K-F Road. Combining this with truck counts taken in October 2009 and January 2010, it estimated a mid-point value for the total volume of freight travelling the K-F Road in order to compare with follow-up data upon road completion.

Results

Freight truck surveyed along the K-F Road reported freight loads that result in a mean load of 15.58 tons. Using the standard error of this estimate, we estimated the daily freight volume conveyed along the K-F Road to be 3,292 tons ± 477 tons.[43] Exhibit 33 provides fuller figures below. Applying the mean freight shipping cost per ton per km calculated in Indicator 9 above, this implies the total daily value of freight services provided on the K-F Road at the time of this study was an estimated 121,346 USD. Annually, these estimates translate to 1.20 million tons of freight shipped at a cost of 44.3 million USD.

Exhibit 33: Monthly Freight Volume

	Estimate	95% Conf. Interval	
		Lower	Uppper
Average Daily Truck Count	**211**	n/a	n/a
Mean Truck Load	**15.6**	13.3	17.8
Daily Freight Volume	**3292.0**	2814.7	3769.4

Data Limitations

See limitations for Indicator 9 for data limitations related to the average truck load estimate. Also, the traffic counts used in this estimate were taken in October 2009 and January 2009. The Study Team took the average of these two counts to get the estimated daily truck counts as of late November 2009 and early December 2009 when the freight truck surveys were collected. Thus, this approach implicitly assumed that truck traffic trend was linear.

4.2.11 INDICATOR 11: COST OF INFORMAL PAYMENTS

Rationale

The improvement of a road to excellent standards should substantially reduce vehicle operator costs, which should result in lower personal and commercial transport costs. This should increase commerce and improve access to social services. These benefits, however, depend on the lower costs of transport being passed on to road users. These benefits will not materialize if government officials and/or local "bandits" co-opt them through collecting informal tolls. There is, in fact, strong anecdotal evidence in Afghanistan that road improvements have lead to increased informal payments to either government officials or self-appointed toll collectors.

This indicator will provide the reader with an understanding of whether the benefits of the improved K-F Road are being passed down to the road's users. The cost of informal payments at project mid-point and project completion will be compared and evaluated for any changes. Knowing the cost of informal payments and how this changes once the road is completed will help identify whether and to what extent the benefits of road improvements are being captured illicitly, thus diminishing the socio-economic benefits.

Methodology

The vehicle operator survey was used to query 203 respondents about informal charges incurred while driving the K-F Road. Respondents were interviewed at various locations along the K-F Road. Enumerators asked drivers if they are ever stopped to pay official or unofficial charges. Those that responded affirmatively were asked how many times they are usually stopped on a one-way trip between Keshim and Faizabad and how much they usually pay per trip.[44]

[43] 95 percent confidence interval.
[44] Of the 203 vehicle operators surveyed, there were 188 valid responses to the question of whether they were stopped.

Results

Of those that responded, approximately 61 percent vehicle operators responded that they had been stopped to pay either an official or unofficial toll. Exhibit 34 illustrates the number of stops that vehicle operators reported for an average K-F Road one-way trip.[45] The number of stops ranged from one to 24. The mean number of stops was 1.6 and the median number of stops was one.

Exhibit 34: Number of Stops Reported for One-Way Travel on the K-F Road

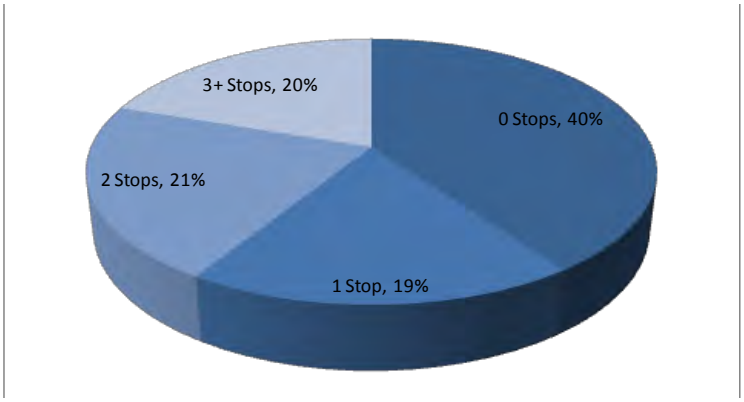


Exhibit 35 provides the mean and median cost of informal payments for a usual trip along the K-F Road. The median cost of informal payments for all types of vehicles is 0.41 USD. In order to discern if payments differed according to the size of vehicle, the Study Team grouped vehicles into three broad categories: Personal use vehicles, multi-use vehicles, and trucks.[46] The mean cost for each category is also provided in Exhibit 35 below. Trucks reported the highest mean cost at 5.18 USD followed by multi-use vehicles with a mean of 1.86 USD and then personal vehicles with a mean of 1.65 USD. The difference of the means between these three vehicle types was found to be statistically significant.[47] Exhibit 35 also provides information as to the probability of each type of vehicle being stopped, though none of these were found to have strong statistical significance.

Exhibit 35: Cost of Informal Payments by Vehicle Category (USD)

Vehicle Categories	Mean Cost	Median Cost	Percent Stopped
Trucks	$5.18	$3.10	19%
Personal Use	$1.65	$0.41	64%
Multi-Use	$1.86	$0.41	17%
Total	$2.35	$0.41	100%

Data Limitations

The best way to ensure that enumerators had the largest universe of drivers using the K-F Road was to position them along the road near more urban areas. The majority of surveys enumerated were done in Faizabad and Argo districts, 81 percent in total, which created a bias, in that the overall or mean results are more representative of the Faizabad end of the road. Additionally, results may be more biased towards those who do more rural-urban or urban-urban travel, rather than rural-rural travel. Furthermore, there may be an inherent bias in the pool of respondents that were enumerated for the vehicle operator survey. Drivers that stopped for enumerators holding clipboards along the K-F Road may have appeared official and thus may have stopped for the same reasons they stopped and paid informal tolls.

[45] Of the 203 vehicle operators surveyed, there were 187 valid responses to the question of how many times they were stopped.
[46] Trucks include 2-axle trucks, 3-axle trucks, and tractor trailers. Personal use vehicles include cars, motorcycles, and 4 wheel-drive vehicles. Multi-use vehicles include minibuses, vans, buses, and pick-up trucks.
47 This was found to be significant at the 99% confidence level.

4.2.12 INDICATOR 12: TRAVEL TIME TO HEALTH CLINIC

Rationale

With the completion of the K-F Road rehabilitation, the time required to travel to health facilities should decrease. Changes in the average travel time to health clinics are an indicator of increased access to health services that are related to improvement in road conditions.

Methodology

The Study Team used the household survey to evaluate travel times to health clinics. It asked households how far away the nearest clinics and hospitals are from their residence, the length of time it takes to reach the nearest clinic and hospital, and the number of trips they made to each of the health facilities in the last 12 months. Of the total 485 households surveyed, 460 provided responses regarding the length of time it takes to reach the nearest clinic. Residing in these households were 2,418 minors and 797 adult females.

Results

The mean travel time for households to take minors to the nearest clinic was 62 minutes and the mean travel time to the nearest clinic for adult females was 47 minutes (see Exhibit 36). Approximately 15 percent of minors and adult females travelling to health clinics used the K-F Road. Those reporting using the K-F Road were located on average 3 kilometers from the K-F Road and households not using the road were on average 9 kilometers from the road.

Exhibit 36: Mean Travel Time to Clinic

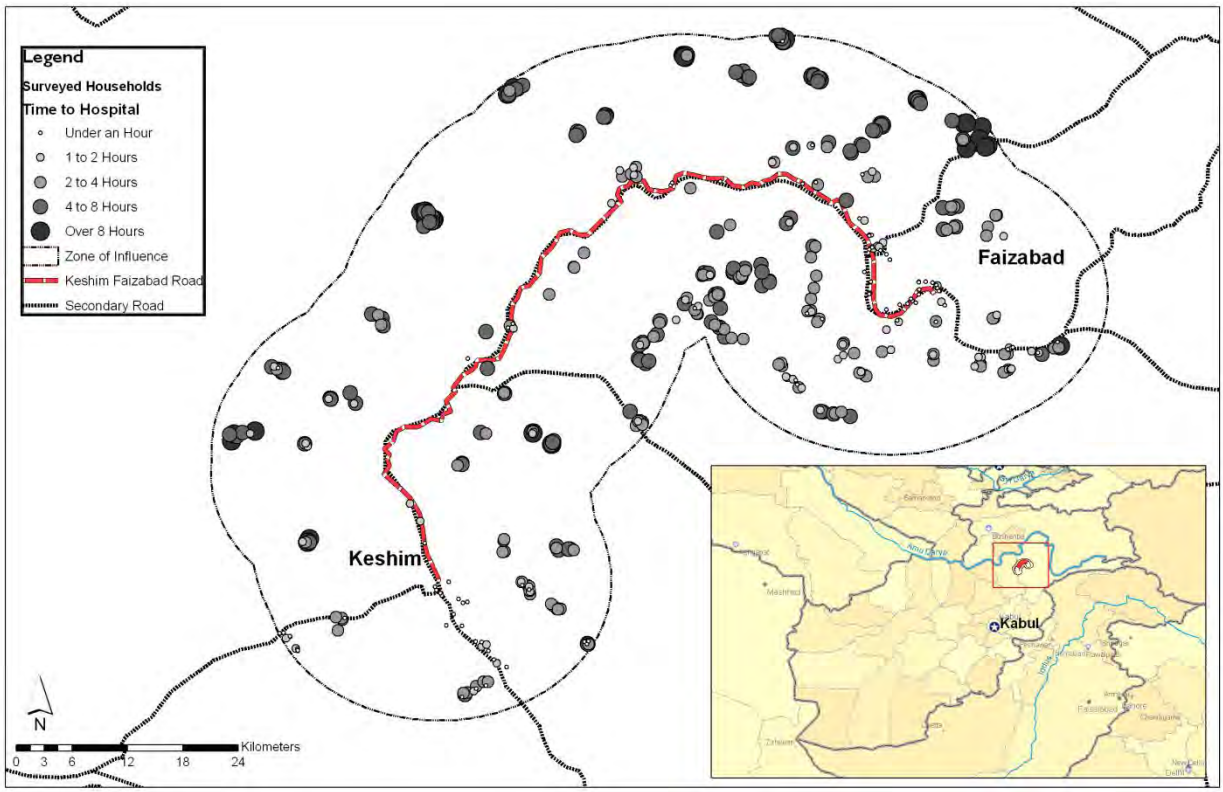
Mean Travel time to Clinic	
Minors	62 Minutes
Females	47 Minutes

The mean travel time to the nearest hospital was 108 minutes for minors and 82 minutes for adult females. A greater percentage (approximately 60-62 percent) of minors and females rely on the K-F Road to access the nearest hospital.

Household distance from the K-F Road was a significant predictor of travel time to the nearest clinic. For every kilometer farther from the road the household resided the total travel time to clinics increased by 2.8 minutes.[48] The median total household travel time to the nearest clinic was 30 minutes for households within one kilometer of the road; households more than one kilometer from the road experienced a median travel time to clinics of 60 minutes or more. A household's distance from the nearest city (Keshim or Faizabad) was also a significant determinant of clinic travel times. The median time to clinics for households within 5 kilometers of the nearest city was 27.5 minutes versus 3.5 hours for households located over 45 kilometers away from a city. For every kilometer farther from the city that the household resided, the total travel time to clinics increased by approximately 5 minutes. Exhibit 37 provides a map of the travel time to hospitals that households reported.

[48] Distances to the road are based on the shortest linear distance to the road and therefore do not reflect the actual paths or trails taken to reach the road.

Exhibit 37: Map of Travel Time to Hospital



Data Limitations

The data obtained for distance to the nearest clinic and nearest hospital contained a large portion of "I don't know" responses. Of the 485 households, 41 percent (approximately 200 households) answered "I don't know" to the number of kilometers to the nearest hospital or to the nearest clinic. Of the 200 households that answered "I don't know" to each of the distance questions, 166 answered "I don't know" to both questions. The households that answered "I don't know" to both questions were both farther from the K-F Road and the nearest city: 70 percent were over 9 kilometers away from the K-F Road and 78 percent were over 15 kilometers from the nearest city. Since a large portion of the households that answered "I don't know" to the distance to health facilities were farther from the K-F Road and the nearest city, this could mean there is a bias of documenting health facility travel times for households closer to roads and cities.

4.2.13 INDICATOR 13: FREQUENCY OF VISITS TO HEALTH CLINICS

Rationale

As rehabilitation of the K-F Road reduces travel times and travel costs (e.g., passenger fares and vehicle operator costs) to health facilities, the Study Team expects to see residents in the ZOI access health services more frequently.

Methodology

Responses to the household survey were used to evaluate this indicator. Enumerators asked the number of times that members of the household visited clinics and hospitals within the last year. Of the total 485 households surveyed, 355 provided responses regarding the number of visits to clinics. Of the households that did not provide responses to number of visits to clinics, 106 responded "I don't know" and twelve responded "Not applicable." A total of 395 households provided responses to the number of visits to hospitals. The households that did not provide responses regarding the number of visits to hospitals either answered "I don't know" (72 households) or "Not applicable" (8 households).

Results

For clinics, of the households that provided a response, 14 percent reported no trips to the clinic the past year, 32 percent reported one to five visits, and 54 percent reported six or more visits to the clinic. For hospitals, of the households that provided a response, 12 percent reported no trips to the hospital, 52 percent reported one to five visits to the hospital, and 36 percent reported six or more trips to the hospital. Exhibit 38 breaks down the reported number of visits to the clinics in percentage terms, while Exhibit 39 provides a map of the reported times according to household location in the ZOI. Similarly, Exhibit 40 provides the percentage breakdown of hospital visits, and Exhibit 41maps the reported times according to household location in the ZOI.

Exhibit 38: Number of Household Trips to Clinics

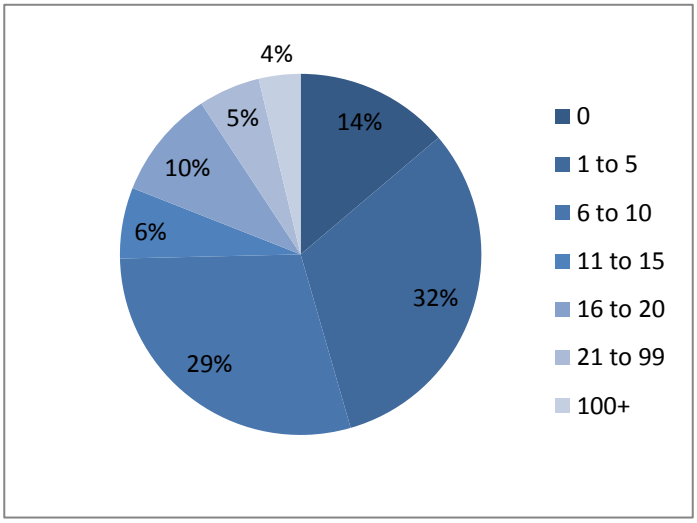


Exhibit 39: Map of Household Visits to Health Clinics in the ZOI

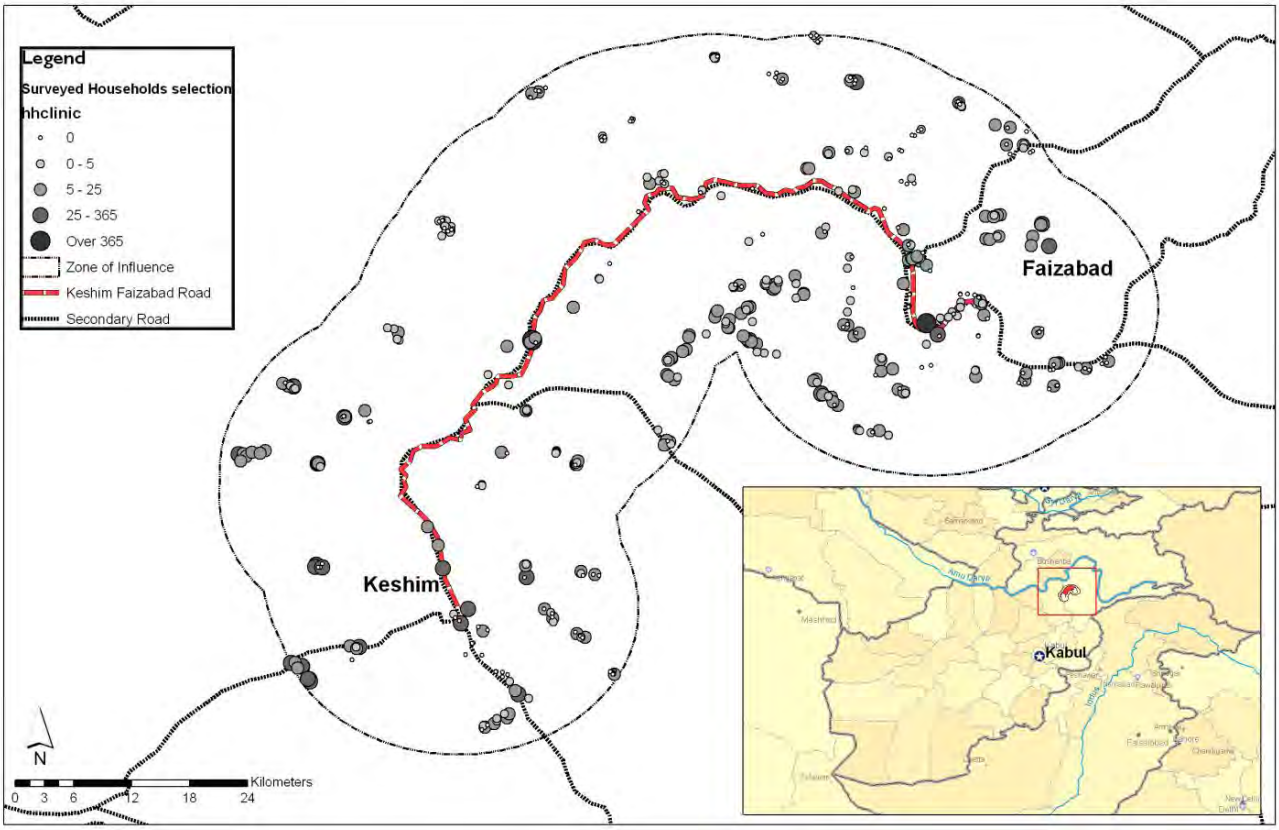


Exhibit 40: Number of Household Trips to Hospitals

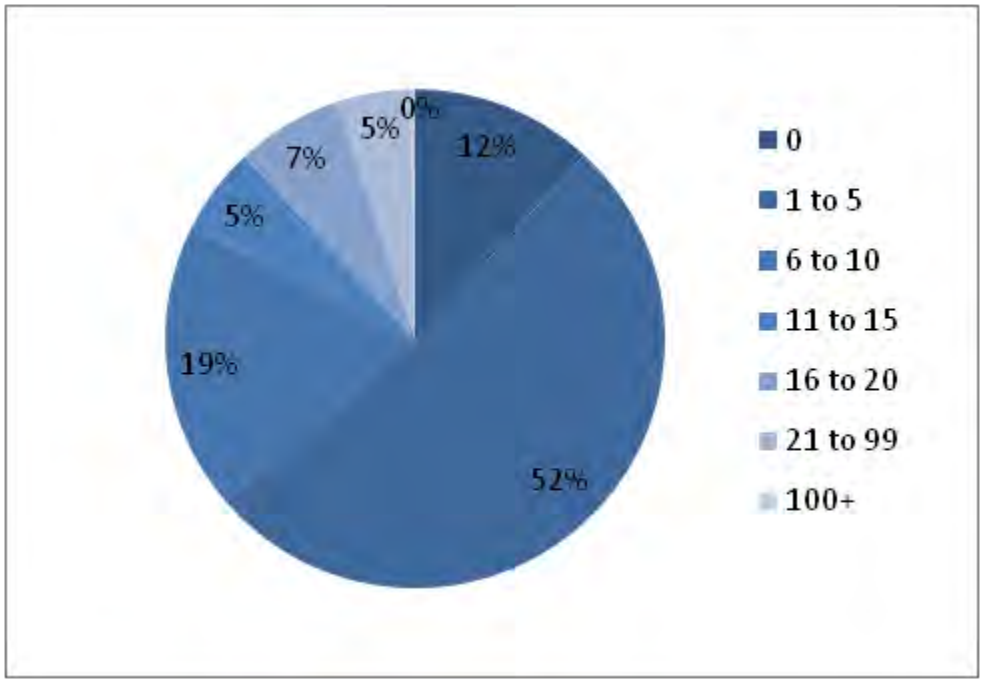
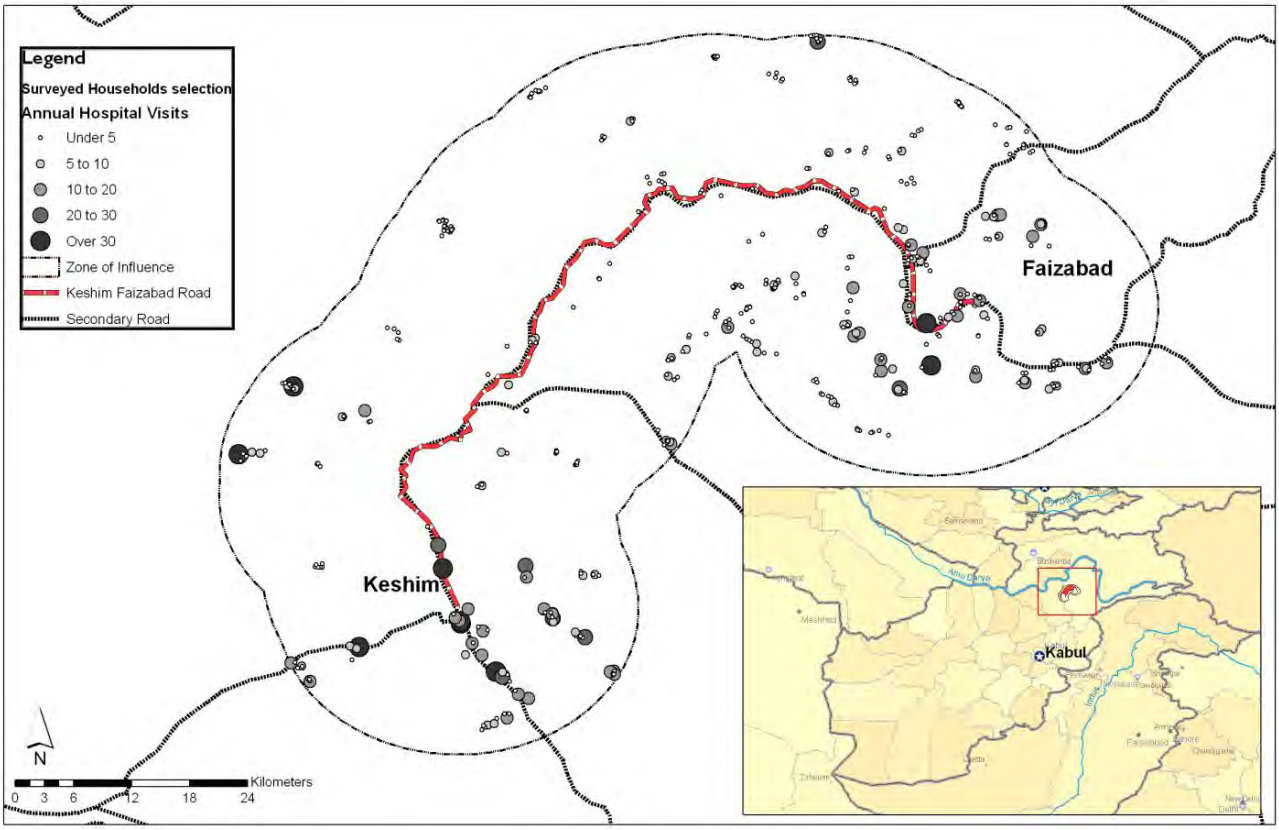


Exhibit 41: Number of Household Visits to the Hospital in the ZOI



In order to decrease sensitivity to extreme values, the median value was selected as the baseline value. As shown in Exhibit 42, median total household visits to health facilities were 6 visits a year to clinics and 4 visits a year to hospitals. Household responses regarding the number of visits to health facilities were sensitive to the time in which the survey was conducted. Surveys conducted in the spring had responses yielded a median number of 2 visits to clinics and hospitals, whereas households surveyed in the winter responded with a median number of 6 visits to clinics and 5 visits to hospitals. The Study Team tested whether the distance to the road or to the nearest city could have been a factor in this difference.[49] It found that the distance to the nearest city for the households surveyed in the spring was 24 kilometers, compared to only 13 kilometers for households surveyed in the winter.[50]

Exhibit 42: Median Household Visits per Year

Facility Type	Median HH Visits Per Year
Clinic	6
Hospital	4

[49] Since the spring surveys were the ones that the survey team were not able to conduct in the winter due to accessibility, the Study Team conjectured that the distance from the road could have been a likely factor explaining this difference.
[50] Distances to the nearest city are based on the shortest linear distance to the city and therefore do not reflect the actual paths or trails taken to reach the city.

Data Limitations

The data consisted of a large portion of "I don't know" responses for the number of visits to health clinics and hospitals. Of the 485 households, 106 households answered "I don't know" to the number of visits to the nearest clinic and 72 households answered "I don't know" to the number of visits to hospitals. Of the households that answered "I don't know" to each of the distance questions, 49 answered "I don't know" to both questions. The Study Team tested whether there was any correlation between households that answered "I don't know" to both questions with whether they used the K-F Road, the distance to the K-F Road, and also the distance of the households to the nearest city. The tests produced no conclusive explanation as to why a portion of the households answered "I don't know" to the number of visits to clinics and households.

4.2.14 INDICATOR 14: RATES OF SCHOOL ATTENDANCE

Rationale

If the improved K-F Road results in lower transport costs and faster travel times, the Study Team expects a rise in the rate of school attendance. However, the potential magnitude of these gains, or at least the magnitude that can be measured, might be limited since the proportion of those surveyed who use the road to travel to school is quite limited as discussed below. Also, only a little over half of the respondents (55 percent) where one or more children did not attend school identified distance to school as the reason for non-attendance.

Methodology

Rates of school attendance were calculated from household surveys. A total of 485 households were surveyed regarding the number of children that attend school within the household. Due to sensitivity in asking the number of females between the ages 6 and 18 (school age), the survey omitted this question. Rather, households were asked the number of females between the ages of 0 and 18. As a result, the Study Team had to estimate the number of school-age females. This has resulted in some data limitations, which are discussed below.

Results

As Exhibit 43 shows, households reported that approximately 85 percent of all school-age children attended school. They reported approximately 91 percent of male school-age children attend school and an estimated 77 percent of female school-age children attend school. Fewer households reported full school attendance by all school-age minors in the household (66 percent). Of these, 81 percent reported full school attendance by male school-age children and 71 percent full school attendance by female school-age children.

Households residing closer to the K-F Road reported a greater percentage of full school attendance, compared to households farther from the road.[51] Eighty-six percent of households within one kilometer of the road reported full school attendance, while only 61 percent of households residing 6 kilometers or more from the road reported full school attendance. Survey data indicates that 10.6 percent of the households use the K-F Road to travel to school. Therefore, as mentioned earlier both for this reason and due to already higher attendance rates near the K-F Road, the potential for improvement in school attendance rates is rather limited.

Exhibit 43: Rates of School Attendance

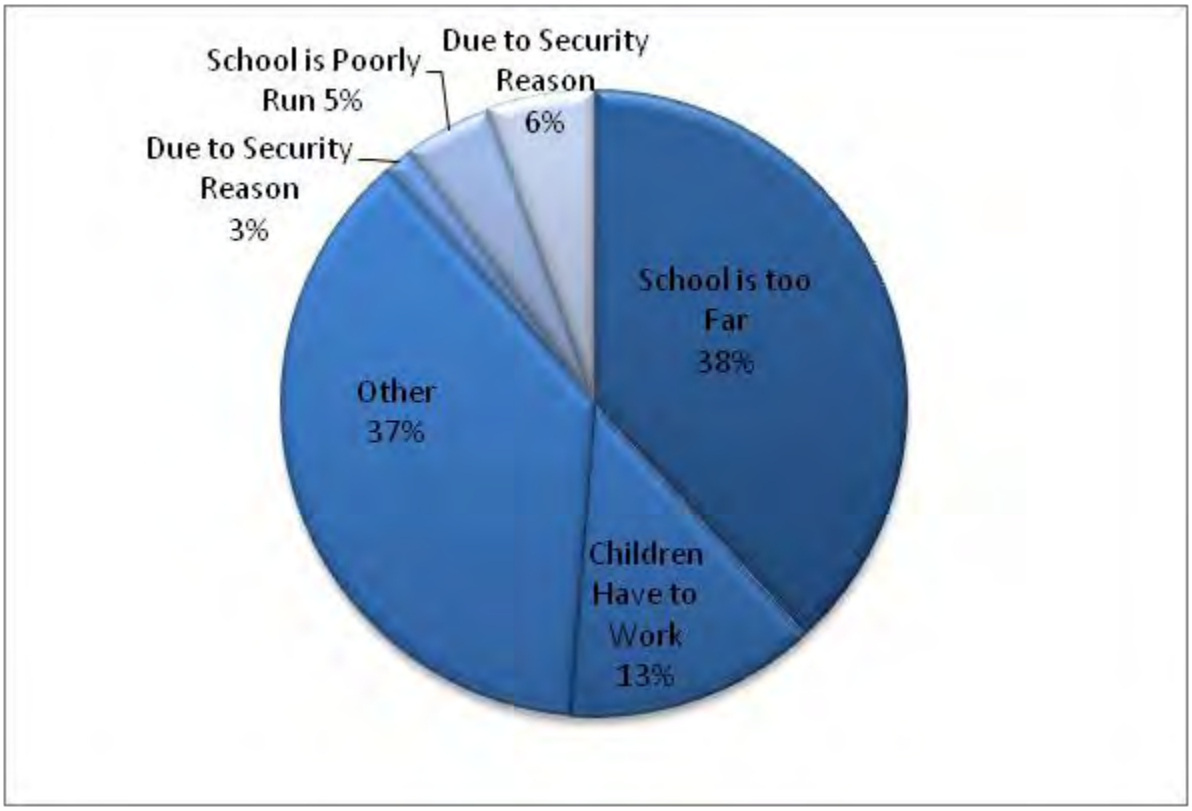
Households with Full School Attendance	School-Age Minors Attending School
66%	85%

[51] Distances to the road are based on the shortest linear distance to the road and therefore do not reflect the actual paths or trails taken to reach the road.

School attendance was found to be sensitive to the season in which the survey was implemented. Households reported a greater instance of full school attendance in the spring months compared to winter months. Full school attendance for households in the spring months was 77 percent, whereas full school attendance in the winter months was 60 percent. Although there is greater percentage of households reporting full school attendance in the spring months, the difference between these attendance rates was not found to be statistically significant.[52]

The majority of households reported that the reason for children not attending school was that the school was too far (see Exhibit 44). Roughly a third of the households responded that there were "Other" reasons their children did not attend school. The households that responded "Other" included responses such as infancy, poverty and other responses. Of the households that responded that the school was too far, 79 percent were 6 kilometers or more from K-F Road.

Exhibit 44: Reasons for Children not Attending School



Data Limitations

The survey instrument did not ask the number of females between the ages of 6 and 18. The instrument only asked how many females were between the ages 0 and 18. In order to present an indicator with the percentage of all school-age children that attend school, the Study Team estimated the number of school-age females. The estimate was based on the percentage distribution of males for the age groups of 0 to 5 and 6 to 18. Of the total males under 18 years of age, half were between 0-5 years of age and half were 6-18 years of age. Therefore, a 50:50 distribution was assumed for the female population in the K-F ZOI. The total females under the age of 18 was 1069, so it was estimated that half (534) were between 0-5 years of age and half (534)

[52] Given that the spring households were more distant from the road than the winter households, one would have expected for school attendance rates to be lower in the spring households compared to those that had surveys conducted in the winter on the basis of the earlier observation that attendance appears to decline the farther away a household is from the road. Thus, if there is indeed a difference between school attendance in the spring and fall, the numbers given here probably understate the difference.

were between 6-18 years of age. In the post-project survey, a question will be included to identify the number of school-age girls, so this assumption can be tested and the attendance rates adjusted accordingly.

4.3 TOPICS OF SPECIAL INTERESTS

4.3.1 KESHIM-FAIZABAD ROAD SECURITY

Badakhshan was the only province never to fall under Taliban control and to be fully ruled by the United Front. After the fall of the Taliban, many former United Front commanders from Badakhshan were integrated into both provincial and national government positions, which initially resulted in Badakhshan being relatively secure. However, from 2003 through 2006, Badakhshan was the second largest opium-producing province after Helmand. In 2006, Badakhshan's poppy cultivation peaked with a total of 15,607 ha planted. An opium eradication campaign was implemented in 2007 and has been considered generally successful.

The number of security incidents recorded over the last five years indicates that there has been some deterioration in Badakhshan's security conditions. The K-F Road ZOI, however, has a much different security profile than much of Afghanistan. Badakhshan's security issues are more likely to be local conflicts. They appear to be linked primarily to the control and use of economic resources rather than any political or religious ideologies.[53] Many of these incidents have involved infighting between provincial and national police primarily linked to cross-border drug smuggling. The province has several transit points for Afghan opium and heroin to make its way to Central Asia, Russia, and Europe. With few barriers to entry, trans-national drug trade has continued in spite of a decline in poppy production.[54] In addition, land and water conflicts arise from tensions related to the availability of both arable land and of water for irrigation purposes.[55]

While anti-government efforts have been relatively rare in Badakhshan Province, there are growing indications that the Taliban and other anti-government groups are beginning to make in-roads into the region. When the Study Team works on the post-project analysis, it will be necessary to assess any changes in the security environment that have taken place. Any further deterioration may vitiate some of the impacts of the road if it results in reduced traffic volume or increases the cost of road use through an increase in informal road fees.

Exhibit 45 below lists the security incidents tracked by WITS data in Badakhshan Province since construction began on the K-F Road. Since July 2007, 19 security incidents have been reported in Badakhshan Province.

[53] A Guide to Government in Afghanistan Case Study: Badakhshan Province. Afghanistan Research and Evaluation Unit and the World Bank. March 2004.

[54] "Conflict Analysis: Baharak District, Badakhshan Province." Cooperation for Peace and Unity, 2009, p. 5. http://www.cpau.org.af/Research/Docs_our_publications/Baharak%20Conflict%20Analysis%20Feb%2009.pdf. Accessed 6 October 2010.

[55] Ibid., p. 15.

Exhibit 45: Number of Attacks[56]

Date	Subject	Perpetraitor Characteristic.	Dead	Wounded	Hostage	Total Victims
7/19/2007	1 civilian killed, 26 others injured in suicide IED attack in Faizabad, Badakhshan, Afghanistan	Islamic Extremist (Sunni)	1	26	0	27
8/7/2007	1 residence damaged in rocket attack in Faizabad, Badakshan, Afghanistan	Unknown	0	0	0	0
9/2/2007	1 office damaged in rocket attack in Keshem, Badakhshan, Afghanistan	Unknown	0	0	0	0
11/21/2007	Community targeted in RPG attack in Faizabad, Badakhshan, Afghanistan	Unknown	0	0	0	0
6/28/2008	Community targeted in RPG attack in Faizabad, Badakhshan, Afghanistan	Islamic Extremist (Sunni)	0	0	0	0
8/8/2008	1 security guard wounded in rocket attack by Taliban near Faizabad, Badakhshan, Afghanistan	Islamic Extremist (Sunni)	0	1	0	1
12/3/2008	3 police officers killed in armed attack by suspected Taliban in Faizabad, Badakhshan, Afghanistan	Islamic Extremist (Sunni)	3	0	0	3
12/20/2008	2 contractors killed in IED attack in Keshem, Badakhshan, Afghanistan	Islamic Extremist (Sunni)	2	0	0	2
1/21/2009	1 civilian kidnapped near Faizabad, Badakhshan, Afghanistan	Unknown	0	0	1	1
1/24/2009	1 health clinic damaged in Faizabad, Badakhshan, Afghanistan	Islamic Extremist (Sunni)	0	0	0	0
3/4/2009	1 residence damaged in rocket attack in Faizabad, Badakhshan, Afghanistan	Islamic Extremist (Sunni)	0	0	0	0
8/18/2009	3 election workers killed in IED attack near Faizabad, Badakhshan, Afghanistan	Islamic Extremist (Sunni)	3	0	0	3
11/7/2009	Community targeted in RPG attack in Faizabad, Badakhshan, Afghanistan	Islamic Extremist (Sunni)	0	0	0	0
11/21/2009	3 police officers wounded by Taliban in Keshem, Badakhshan, Afghanistan	Islamic Extremist (Sunni)	0	3	0	3
		Total	9	30	1	40

4.3.2 ASSESSMENT OF ROAD IMPACTS TO DATE

This section seeks to assess road impacts that likely took place before the mid-point study. The baseline indicator values established in this report reflect conditions in December 2009 and January 2010 when 75 km had already been paved. When these values are compared to the post-project situation, they will miss changes that had already taken place by the time the mid-point study was conducted. Recognizing that users of this report have a strong interest in knowing the impacts that have taken place since road construction began, this section looks to other data sources to make a non-statistical and informal assessment of what changes have been reported so far.

In order to assess impacts that have already taken place in absence of true baseline data, the Study Team employed a number of techniques. First, the Study Team included some retrospective questions in the surveys that were conducted in winter 2009/spring 2010 in order to try to capture some pre- (or early) project conditions along the road. These questions ask respondents to answer key questions with respect to their memory of the situation one year before. The problem with this method is that there is a known recall bias in responses that rely on memory. To correct this bias, the same question will be asked during the follow-up

[56] Data is drawn from the Worldwide Incidents Tracking System, which was created by the National Counterterrorism Center. https://wits.nctc.gov/FederalDiscoverWITS/index.do?t=Reports&Rd=Country%7C4294967023%7CAfghanistan%7C%7CProvincesStates%7C4294947102%7CBadakhshan%7C%7CGeocodeAnchor%7C4294851521%7CFeyzabad%2C+Badakhshan%2C+Afghanistan%2C&Rcv=Perpetrator&Nf=p_IncidentDate|LTEQ+20091231||p_IncidentDate|GT+20070701&Nrc=id+8092+dynrank+disabled&N=0. Accessed 7 October 2010.

study about the period when the mid-point study was conducted. Then the Study Team will be able to identify the direction and level of bias from recall. Second, the Study Team conducted focus groups and key informant interviews during the mid-point study and asked about impacts that have taken place already. Third, the Study Team used traffic counts which began in April 2009.[57] The results to the retrospective questioning will be analyzed in the post-project report, so this section will focus on the results of the latter two techniques.

Qualitative Research Findings. Several qualitative interviews were used to capture more fully how the rehabilitation of the K-F Road is impacting the area. In addition to the village elder surveys, two key informant interviews were conducted with district agriculture officials and one interview was conducted with the Mayor of Faizabad. Also, five focus groups were conducted—urban women, rural women, urban men, rural men, and businessmen.

In the focus group with urban women conducted in Faizabad, participants highlighted the way the road opens access to new markets, which will help women in their businesses. They underlined the need to further these efforts through the rehabilitation of feeder roads and international connector roads. Businessmen in Keshim echoed these comments and spoke of how goods that took three or more days to travel between Keshim and Faizabad now take only one day. They noted that prices have already decreased as a result of the road. A group of rural men from Layaba village also noted prices decreasing and positively commented on the way the K-F Road has opened access to markets farther away, including Kabul. Rural women from Jata village pointed out how reduced transport fares has given them expanded access to markets as well as increased their ability to get to medical care. The Mayor of Faizabad also stressed the way the road opened up access to markets and joined others in wanting to see roads rehabilitated that would open up access to international markets, including Pakistan, Tajikistan, and China.

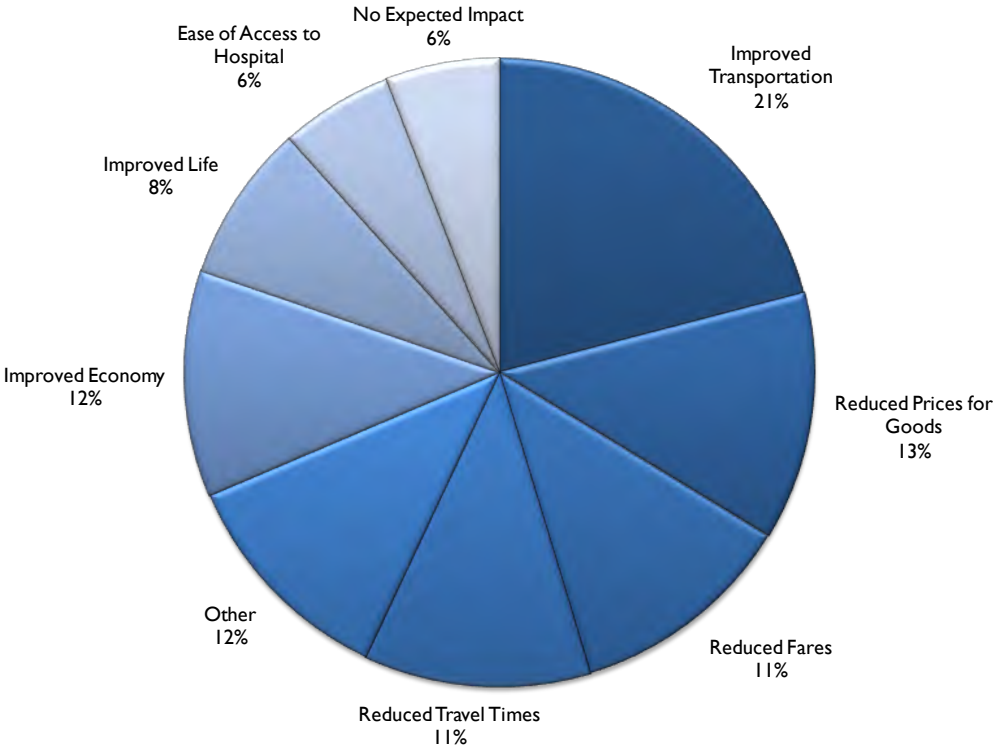
In both focus group discussions and key informant interviews, there were a couple of negative impacts that were mentioned as well. First, several noticed an increase in road accidents along the road. Second, in conversations with rural and urban women as well as with several village elders, uncompensated land taking was mentioned. While many suggested that the benefits would outweigh any loss of land, land taking seems to be a sore point for many along the road. There is a keen awareness that the government is responsible for compensating any land taking and that it has ignored this responsibility.

Also worth noting is that in several cases, interviewees expressed concern about the government's ability to maintain the road. The Mayor of Faizabad was skeptical that the government would carry out its responsibility in this area. One participant in the urban men focus group on Keshim highlighted the need for the government to levy road user charges, which could finance road maintenance.

Based on the village elder surveys, Exhibit 46 displays a breakdown of how people initially felt their lives would be affected by the road improvements.

[57] There was a pre-project traffic count conducted by the road design team in the summer of 2007, but the data is not as complete as the subsequent traffic counts.

Exhibit 46: Breakdown of Respondents Stating the Greatest Potential Impact of the Road



Most respondents highlighted the direct benefits of the road, such as generally improved transportation (21 percent), reduced fares (11 percent), and reduced travel times (11 percent). However, several also pointed to the secondary benefits of the road, such as the reduced prices of goods (13 percent), an improved economy (12 percent), and increased access to healthcare (6 percent).

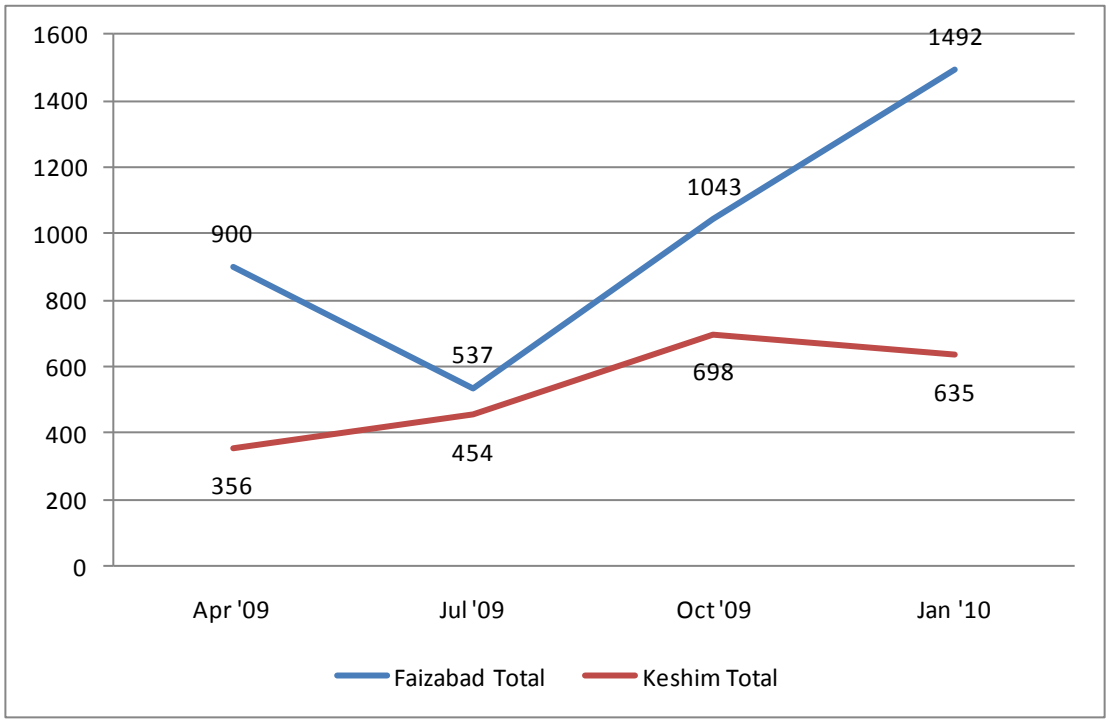
Travel Time and Traffic Volume. Traffic counts measure changes in road usage over time and as such constitute the best way to measure one of the most direct impacts of an improved road. Consequently, beginning in April 2009, USAID commissioned the tabulation of traffic counts along the road in both Keshim and Faizabad that have resulted in useful data to serve as a baseline.

Over the course of the next year, further counts were conducted in the same approximate locations in order to make comparisons. Along the 103 km road, the two enumerating locations were between kilometers 18 and 19 on the Keshim side as well as between kilometers marker 94 and 96 on the Faizabad side. Four traffic counts were undertaken to gather data on each of the four seasons. They were conducted in April, July, and October of 2009 and in January of 2010.

Exhibit 47 below shows the average daily number of vehicles counted on each end of the K-F Road.[58] Vehicles include motorcycles, cars, trucks, SUVs, 2+-axle trucks, and buses. The count of vehicles does not include military vehicles, tractors, rickshaws or any carriages pulled by animals.

[58] The April 2009 traffic count was only a 12-hour count. While this means that this traffic count is a bit understated, traffic in the evening is quite limited, so this still provides a good indication of traffic volume during this period.

Exhibit 47: Daily Average Vehicle Count per Period



Although there appears to be a general upward trend in traffic volume, it is too early to draw any definitive conclusions about changes in traffic volume. Traffic varies with season and as of this writing we have no traffic counts that compare traffic volume between identical seasons. Construction actvity also negatively impacts traffic and varies with the particular type of construction activity being performed. The dip in July 2009 is most likely attributable to traffic reductions due to construction activity. Once the post-project traffic data is collected, the Study Team will do further statistical analysis in order to separate seasonality, day of the week patterns, and random variation. Security concerns also affect traffic volume. Until recently, Badakhshan was quite a stable province, but a recent deterioration in security there may have a negative impact on traffic volume.

By further disaggregating the vehicles on the road, we can attempt to spot more specific trends of average daily usage of the road. Exhibit 48 and Exhibit 49 display the detailed traffic counts per vehicle type.

Exhibit 48: Keshim Average Daily Vehicle Count by Vehicle Type and Period

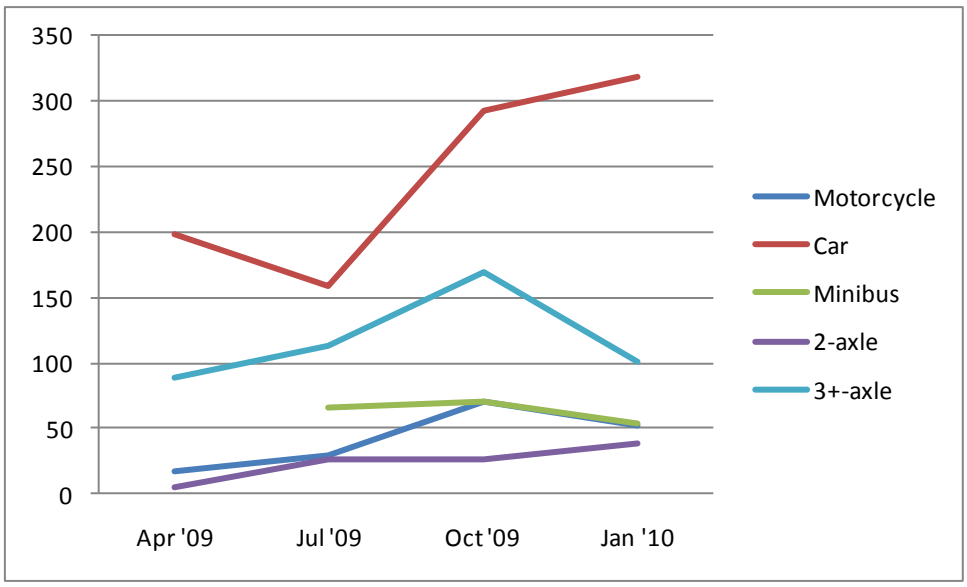
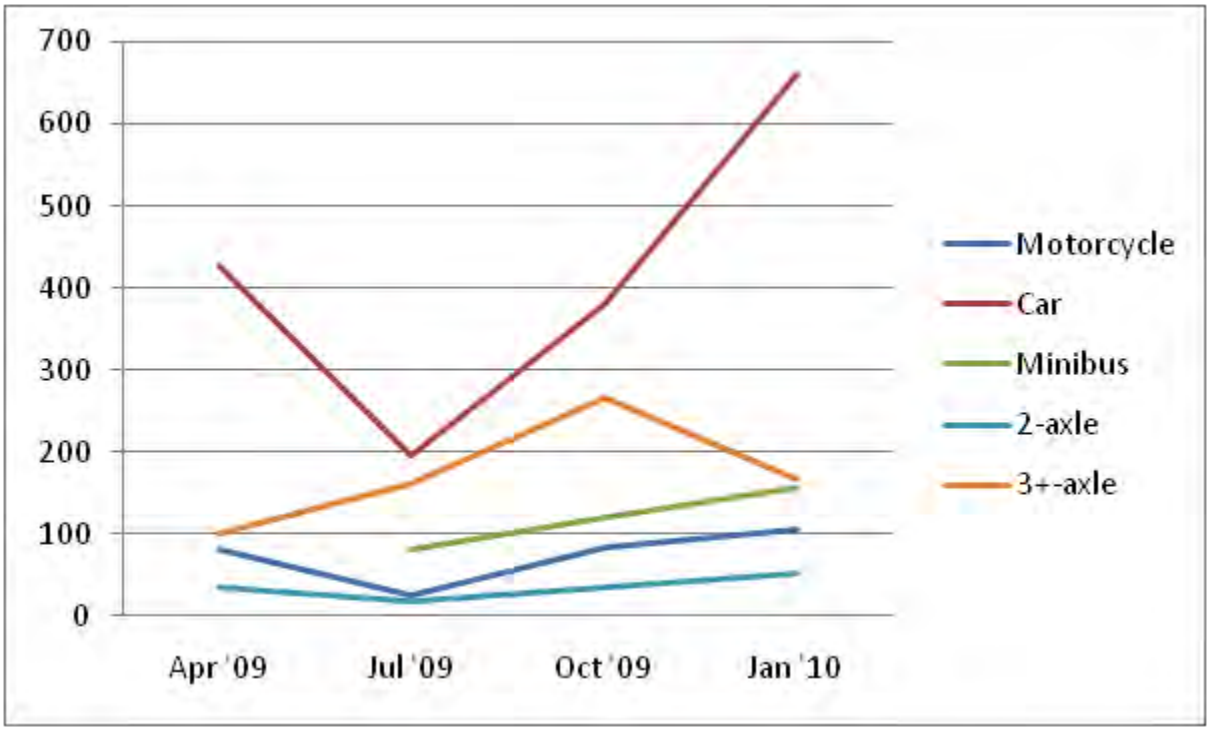


Exhibit 49: Faizabad Average Daily Vehicle Count by Vehicle Type and Period



In both Keshim and Faizabad, car traffic has experienced the most significant traffic volume increase. In Faizabad, most vehicles types experienced a steady increase through the year and into winter, except larger vehicles such as 3-axle trucks, which saw a decline in traffic counts in winter. This may be due to the fact that larger vehicles are more difficult to maneuver in winter months. In Keshim, few conclusions can be drawn, except for the number of cars which is seeing an increase in the average daily number using the road. Other vehicles types had no considerable changes except for 3-axled vehicles, which experienced an expected decline during the winter traffic count. As more traffic counts are undertaken and as more information about the socio-economic conditions is collected, the Study Team will be able do draw a fuller set of conclusions.

4.4 THREATS TO VALIDITY AND OTHER KNOWN EVALUATION ISSUES

Every study has its limitations, both in design and in implementation, calling into question the results presented. For the sake of transparency and conservatism, this section presents the caveats and statistical issues that should be considered when assessing the validity of the findings in this report. We highlight the issues we are aware of, outline what can be done to mitigate their effect on the issue, and assess the implications for the findings of this study. Exhibit 50 presents these for each indicator.

One significant sampling issue is that due to the onset of winter roughly 30 percent of household surveys and 15 percent of the small business surveys had to be conducted later in the spring. This has created a data set with values that may be affected by season. In the analysis presented in this study, the Study Team at several points tested for seasonal variation, the results of which are given in the text. In many cases, a fuller understanding of seasonal variation will have to wait for the post-project data. Weather permitting, the Study Team will conduct all of the surveys in the winter and can use this data to see if differences that were identified between data collected in the winter and spring are due to season or rather to geography, distance from road, or other possible factors.

Exhibit 50: Threats to Validity and Data Limitations by Indicator

Indicator	Issue	Mitigation and Implications
1. Cost of Food Staples	A non-statistical sampling technique was used to gather up to 10 price values for each commodity in a given market. Therefore, the weighting of any averages is arbitrary and does not reflect the actual makeup of shops or volume of goods traded.	Replicating this technique in the post-project study should reduce any systematic sampling error, making any detected change likely representative of the actual composition of prices. Price levels themselves should not be taken as representative.
2. Markets Where Goods Sold	1. There was a sizable portion of households that sell livestock, which responded "I don't know" when asked how far they travelled to the place of sale. These households were more likely to report "nearest bazaar" as the location of sale. Therefore, the Study Team believes that the measure of distance to markets for livestock has an upward bias. 2. The Study Team also encountered a problem with some of the data collected for crops and livestock sold. There were several cases where respondents gave answers to the highest value of crops or livestock sold but in an earlier response said that they did not sell that type of crop or livestock. It is not clear whether there was a survey translation problem or another issue related to how the enumerators conducted the survey.	1. The effect of non-response to market distance questions will be replicated in the post-project study and therefore any change observed will likely be representative of those who did respond. However, how this change relates to the population as a whole will be unclear because of the non-responders. 2. The Study Team plans to introduce a clarifying question or two at the end of the "Agricultural/Animal Husbandry" section of the survey. This will provide greater clarity concerning market access without risking changes in responses to other questions in this section due to the introduction of these new questions.
3. Number of Businesses	For businesses in Keshim, Faizabad, and villages along the K-F Road, the Study Team conducted a full on-the-ground census of businesses, counting and marking the location of each one with a handheld GPS unit. It is likely that businesses not visible from the road in commercial areas were not included in the counts. The likely effect is a downward bias in the business count.	In the follow-up study, the counting technique will be repeated, and thus any bias will be replicated. The difference between the two biased counts should be unbiased, and therefore the comparison between mid-point and follow-up should be indicative of the actual change in the number of businesses.

Indicator	Issue	Mitigation and Implications
4. Monthly Sales by Businesses	1. The businesses surveyed in Keshim, Faizabad, and along the road were randomly selected from the business census taken, so the data is likely to suffer from the same selection bias issues that indicator 3 faces.	1. The identical sampling frame will be used in the post-project study assuring that the bias will be replicated and that the two samples are comparable.
	2. While the sub-contractor did well at conducting surveys at the designated sampling points in Keshim and Faizabad, it conducted only 5 of 17 of the businesses that were located along the K-F Road between Keshim and Faizabad. The sub-contractor also failed to comply with the sampling method that was chosen to gather data on businesses in areas more distant from the road, where the business census count was not conducted.	2. The Study Team intends to confine the post-project survey to businesses in Keshim and Faizabad where the mid-point data was collected well, so that the post-project data will have a valid point of comparison. This means that this indicator will only measure business income changes for businesses in Keshim and Faizabad and will not be representative of business from the entire ZOI.
	3. There were a considerable number of businesses that responded "I don't know" or refused to answer questions about sales, limiting the number of surveys that could be used to estimate sales.	3. The effect of non-response to sensitive income questions will be replicated in the post-project study and therefore any change observed will likely be representative of those who did respond. However, how this change relates to the population as a whole will be unclear because of the non-responders. The Study Team will conduct some additional qualitative research on businesses to try to more fully understand the road's impact on business income.
5. Household Incomes	1. There was a sizable portion of respondents who responded "I don't know" or refused to answer questions on income. Of the 485 households surveyed, only 58 percent provided information on income.	1. The effect of non-response to sensitive income questions will be replicated in the post-project study and therefore any change observed will likely be representative of those who did respond. However, how this change relates to the population as a whole will be unclear because of the non-responders.
	2. The high variability of incomes makes detecting a small change in incomes between this study and the post-project study not likely.	2. If the high variability in answers makes a change undetectable, the post-project study can analyze whether the incidence of poverty has changed, which is less sensitive to highly variant data.
	3. While the date when the surveys were conducted (winter vs. spring) generally did not seem to have a significant influence on most of the income reported. The exception to this is for the reporting of annual crop sales. This discrepancy could imply recall issues amongst the respondents and/or could point to the geographic differences between the spring and winter sampling points.	3. Weather-permitting, the Study Team plans to conduct all of the household surveys in the winter in the post-project study. Analysis will allow it to see whether differences in reported crop sales are due to the seasonal variation or to other possible factors (e.g., recall, geography).
	4. There was a sizable portion of respondents who reported that they do sell a number of crops; however, when the respondents were asked to report the highest value of the crop, the response field was left blank in many cases.	4. In order to compensate for the discrepancy in respondents who reported they grew and sold a crop without reporting the highest value of that crop, the Study Team will add a question which will ask which crop the respondent made the most money on from sales. This change will track any misreported crop values in the post-project study without affecting or changing the bias perceived in the baseline study.

Indicator	Issue	Mitigation and Implications
6. Vehicle Operating Costs	A non-statistical sampling technique was used to collect responses from vehicles with enumerators standing along the road flagging down cars. This sample may not be representative of the actual traffic using the K-F Road as some types of vehicles or drivers with certain driving habits may have been more or less likely to be driving at particular times and to stop during those times. There were also a considerable number of drivers who refused to stop. Those drivers that did stop may not be representative of the actual population of drivers.	Replicating the same sampling technique in the post-project study should reduce any systematic sampling error, making a detected change likely representative of the population of drivers who stopped. Using the vehicle type of drivers which refused to take the survey, we can guess at the level and direction of any bias. However, if there is a difference between drivers that chose to stop versus drivers that did not stop for reasons unrelated to vehicle type but that affect how these drivers' vehicle operation costs are impacted, this will bias the results in an unknown way in making claims for the wider population of trucks.
7. Travel Times	A non-statistical sampling technique was used to collect responses from taxis and buses at established departure points to the other terminal city. A high proportion of the universe of buses and taxis were sampled over the days of enumeration. However, there could be other departure points and the days of enumeration may not reflect prices the rest of the year. The vehicle sampling also was geographically asymmetric.	As with the VOC data, replicating the same sampling technique in the post-project study should reduce any systematic sampling error, making a detected change likely representative of the population of drivers who stopped.
8. Passenger Fare Costs	A non-statistical sampling technique was used to collect responses from taxis and buses at established departure points to the other terminal city as well as for passenger vehicles on the road outside of Keshim and Faizabad. A high proportion of the population of buses and taxis were sampled during the days of enumeration. However, there could be other departure points and the days of enumeration may not reflect prices the rest of the year.	Replicating these collection techniques in the post-project study should reduce any systematic sampling error, making a detected change likely representative of the subset of drivers who responded to the survey. If there are any changes in prices that vary for all vehicles over short time frames, this could possibly confound our results if the follow-up survey fails to sufficiently repeat the approach of the initial survey.
9. Cost of Freight Transport	1. A non-statistical sampling technique was used to collect data for this survey with surveyors flagging down trucks driving on the K-F Road. Enumerators did not track the number of trucks that refused to stop. 2. The low number of observations will ultimately make it difficult to detect a statistically valid change in this indicator in the follow-up study. Field teams reported a limited number of trucks available for sampling on the K-F Road and resorted to collecting samples at various points along the road as they were carrying out other data collection.	1. Replicating this technique in the post-project study should reduce any systematic sampling error, making a detected change likely representative of the subset of truck drivers who stopped. Enumerators will also track the trucks that refused to stop. 2. Truck traffic should increase with the completion of the road, which will allow for observations to increase. This will increase the possibility for the follow-up survey to provide representative information, although this will not change the fact that in the current study insufficient observations were made to make such representative claims. The Study Team will use qualitative research to try to obtain a fuller picture of freight pricing dynamics related to the improved road.

Indicator	Issue	Mitigation and Implications
10. Freight Volume	A non-statistical sampling technique was used to collect data for this survey with surveyors flagging down trucks driving on the K-F Road. Enumerators did not track the number of trucks that refused to stop.	Replicating this technique in the post-project study should reduce any systematic sampling error, making a detected change likely representative of the subset of truck drivers who stopped. Enumerators will also track the trucks that refused to stop. Additionally, the traffic counts themselves will provide an objective way to discern changes in freight volume via observations on changes in the number and types of trucks using the road. While this does not provide actual freight volume, it offers a good proxy that can be used in the analysis of the freight truck survey data.
11. Cost of Informal Payments	The best way to ensure that enumerators had the largest universe of drivers using the K-F Road was to position them along the road near more urban areas. The majority of surveys enumerated were done in Faizabad and Argo districts, 81 percent in total, which created a bias, in that the overall or mean results are more representative of the Faizabad end of the road. Additionally, results may be more biased towards those who do more rural-urban or urban-urban travel, rather than rural-rural travel. Additionally, there may be an inherent bias in the pool of respondents that were enumerated for the Vehicle Operator Survey. Drivers that stopped for enumerators holding clipboards along the K-F Road may have appeared official and thus may have stopped for the same reasons they stopped and paid informal tolls.	Replicating this technique in the post-project study should reduce any systematic sampling error, making a detected change likely representative of the population of drivers who stopped. Using the vehicle type of drivers which refused to take the survey, we can guess at the level and direction of any bias. Although ultimately, if there is any difference between drivers that chose not to stop versus drivers that did that are unrelated to vehicle type but affect what kind of informal payments are levied, this will bias the results in an unknown way in making claims for the wider population of vehicles.
12. Travel Time to Health Clinics	Of the 485 households surveyed, 41 percent answered "I don't know" to the number of kilometers to the nearest hospital or to the nearest clinic. The households that answered "I don't know" to both questions were both farther from the K-F Road and the nearest city. Since a large portion of the households that answered in this way were farther from the K-F Road and the nearest city, the results could result in a bias of documenting health facility travel times for households closer to roads and cities.	The effect of non-response to these questions will be replicated in the post-project study and therefore any change observed will likely be representative of those who did respond. However, how this change relates to the population as a whole will be unclear because of non-responders. It is possible that through imputing values to those who did not respond, a more representative value can be generated.

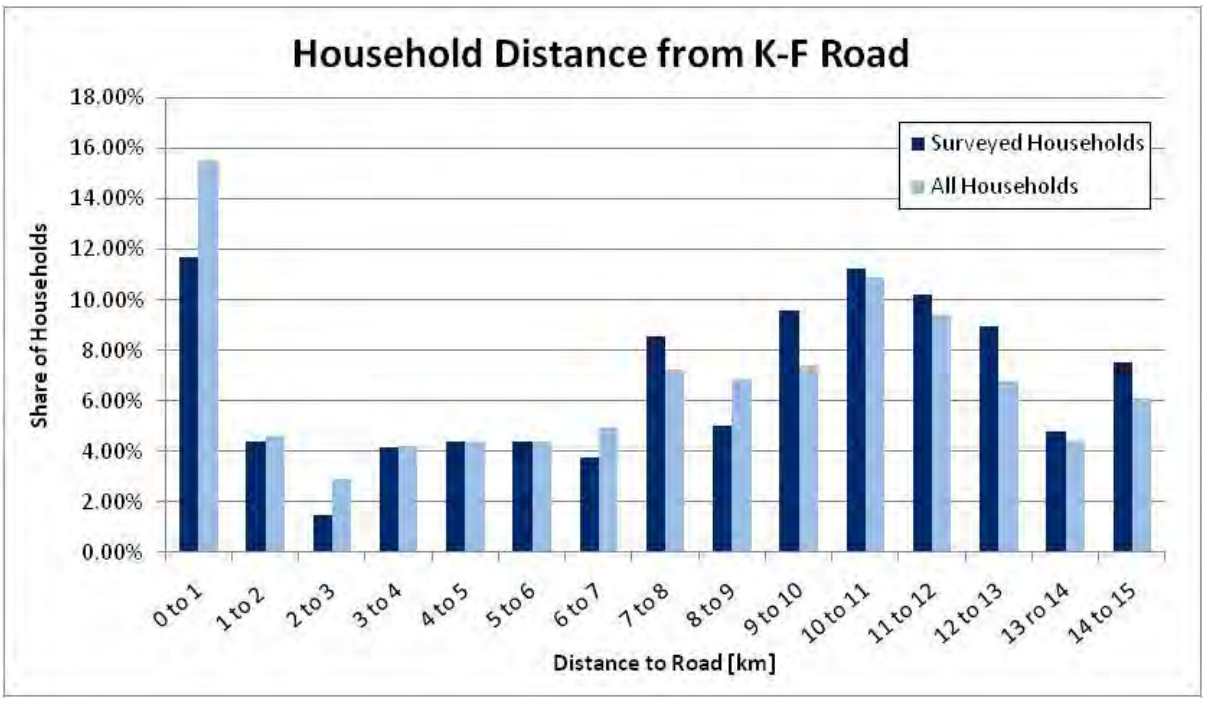
13. Frequency of Visits to Health Clinics	1. The data consisted of a large portion of "I don't know" responses for the number of visits to health clinics (22 percent) and hospitals (15 percent). 2. There was a sizeable portion of respondents who reported a very high frequency of visits to the health clinic. This is shown in the high variability of the data.	1. The effect of non-response to these questions will be replicated in the post-project study and therefore any change observed will likely be representative of those who did respond. However, how this change relates to the population as a whole will be unclear because of non-responders. It is possible that through imputing values to those who didn't respond, a more representative value can be generated. 2. The effect of over-reporting number of trips to the health will be replicated in the post-project study. Therefore, any change observed will likely be representative of the same variability. It is possible to ask a follow up question for those respondents who gave a response representative of a high frequency of trips to determine if they are either employed by the clinic or own a food vendor that sells food at the health clinic.
14. Rates of School Attendance	The survey instrument did not ask the number of females between the ages of 6 and 18. The instrument only asked how many females were between the ages 0 and 18. So the Study Team estimated the number of school-age female based on the percentage distribution of males for the age groups of 0 to 5 and 6 to 18.	In the post-project survey, a question will be included to identify the number of school-age girls, so this assumption can be tested and the attendance rates adjusted accordingly.

4.4.1 HOUSEHOLD SURVEY SAMPLING ISSUES

Since road impacts vary spatially, the Study Team considers a representative geographic sample to be critical. The aerial census used to create the household survey sampling frame assures that the sample will be much more geographically representative than samples from other studies that rely on outdated demographic data and hasty assessments of population distribution. The geographic intelligence of our approach also enables the Study Team to critically assess the actual geographic representativeness of the sample taken in order to detect and measure any bias. Such an assessment is impossible with traditional methods.

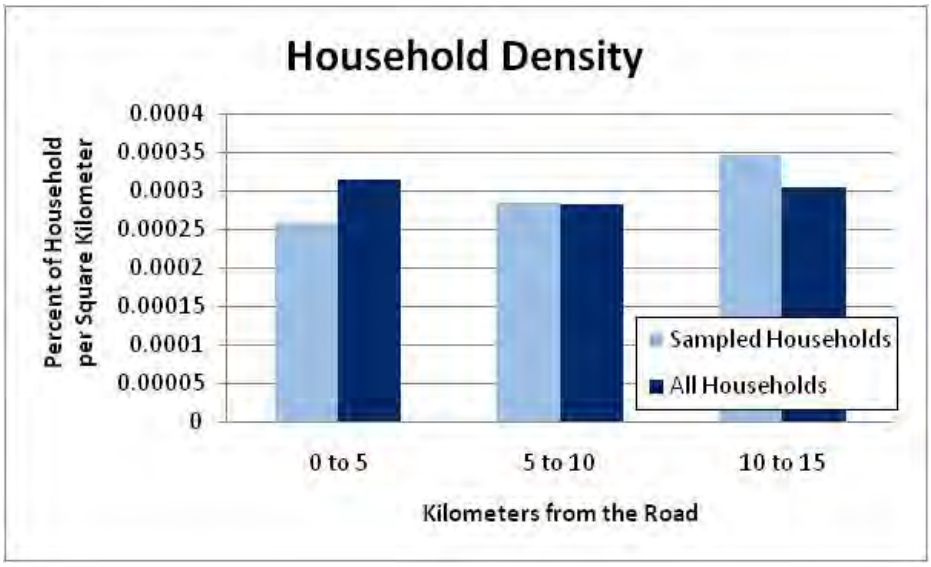
Exhibit 51 below shows the distribution of households counted by their distance to the K-F Road in comparison to the 485 households sampled in this study. The representation of households in each kilometer range versus the actual has some over-representations by as much as 30 percent and under-representations as large as 25 percent. Generally, households closer to the road (under 7 kilometers) are underrepresented by the sampling and households farther from the road are over-represented in the sampling.

Exhibit 51: Household Density in the Zone of Influence versus Distance to the Road



To further assess any overall bias in the sample, Exhibit 52 shows the share of households in 3 larger categories of distance. From this view it is clear that households in the 10 to 15 kilometer range were over-sampled. Such households make up 37.5 percent of the actual households, while comprising 42.7 percent of the actual sample. It is also clear from the chart that there is an under-sampling of households between 0 and 5 kilometers from the road. These households make of about 32 percent of the actual households and 26 percent of the sampled households. Generally the 10 to 15 kilometer sampling was fairly accurate. In order to adjust for these discrepancies, weighting was used for the analysis of all household indicators.

Exhibit 52: Household Density in the ZOI versus Distance to Road by Category



AFGHANISTAN INFRASTRUCTURE AND REHABILITATION PROGRAM

KESHIM-FAIZABAD ROAD SOCIO-ECONOMIC MIDPOINT STUDY REPORT

APPENDICES

APPENDIX 1: METHODOLOGY

1.1 TRANSLATION

The instruments were translated to Dari from English. These instruments were then back-translated to English by a different translator to verify the integrity of the translated meaning. The Study Team then worked with translators to reconcile any inconsistencies between the translated and original English versions. Finally, survey managers from communities within the ZOI made comments and suggestions on words used in the translated version while taking part in survey manager training. Final revisions were made as necessary.

1.2 TRAINING

In order to assure quality and consistency in survey execution, all enumerators and survey managers were trained despite the fact that most were experienced in survey implementation. The Study Team retained technical control over training the subcontractor's survey personnel. The Survey Director and Chief CDO conducted or oversaw all training sessions, which were conducted in Kabul.

Training was done in two stages. First, the survey managers underwent a four-day training program, and then the enumerators went through the same program. After training, the survey managers played an active role in facilitating enumerator training. The training program was designed to ensure high quality data collection and recording. Instruction was structured by instrument. Each instrument was introduced and then conducted from start to finish in a simulated class environment with the instructor acting as the respondent. Then enumerators practiced in pairs with each taking the turn of respondent and enumerator. Then enumerators were instructed to practice giving the instrument to a neighbor or family member that evening. On the following day, practice surveys were corrected for enumeration errors, and common mistakes were highlighted and clarified. Personnel unable to consistently follow the guidelines and apply the survey as instructed were dismissed. Upon completion of training, the enumerators and survey managers were each issued a manual detailing all the rules introduced during training. Two versions were distributed, one for enumerators and one for survey managers, as appropriate.

1.3 SURVEY MANAGEMENT

The subcontractor structured their survey personnel into teams of four enumerators. Each team was overseen by a survey manager, who was, in turn, overseen by a Program Manager. Finally, quality was assured by an expatriate Program Director.

Although field survey management was left to the contractor, the Study Team mandated the use of certain tools to assure smooth operation and high data quality. These included:

i. Instrument Control Logs – This is a tool that was used to track the chain of possession of all copies of the instruments issued to the subcontractor.

ii. GPS Units – GPS units were distributed to enumerators. The Survey Director had entered the GPS coordinates for all household sampling points and their alternates. The enumerators used the GPS units to locate the households where surveys needed to be conducted. The sampling points were grouped by polygon, and enumerators were instructed to conduct one villager elder survey in each polygon as well as a pre-determined number of business surveys.

iii. Sampling Worksheets – To guide consistent application of sampling methods and in order to assess how well these methods were carried out, step-by-step worksheets were issued for the household and business surveys.

1.4 DATA ENTRY

Data entry was carried out by four data entry staff using CS Pro.[59] This software allows a number of controls that limit error in the data entry process by rejecting invalid responses. Further, each survey was double-entered in a manner that warns the data entry staff when a value conflicts with the one previously entered and prompts them to re-check the value and to enter it again. Finally, a system of codes was used to track enumerator errors such as blanks and invalid responses to make sure that they were traceable to the step in the survey process where they originated.

1.5 DATA CLEANING

During data cleaning, all variables were screened for extreme values and general logical congruence. Questionable values were sent back to the field for verification with the original instrument. The overall data entry error for all data was roughly ten percent. The business survey was the instrument that had the most problems. Of the 196 business surveys submitted, two were invalidated because of data entry issues and 50 surveys were not used due to improper sampling methods being followed by the enumerators.

1.6 DATA ANALYSIS

A team of Economists based in Washington, DC conducted the data analysis. All results were audited using an internal quality assurance process to assure that calculations were replicable and appropriately treat outliers, non-response, averaging with zeros and other data issues.

For example, outliers remaining after verification were handled on a case by case basis in accordance with generally accepted statistical principles. Average values are highly sensitive to outliers, so in situations where this was the case, the Study Team used the median value or presented the mean and median together. It also tested to see if any statistical conclusion hinged on inclusion or exclusion of potential outliers. For estimation of aggregate values for the population, the mean was necessarily used, and therefore these estimates are sensitive to extreme values. We presented a confidence interval to show the uncertainty surrounding these estimates.

Any exceptions discovered in the quality assurance process were corrected and revisions were again quality assured before mid-point indicator values were finally accepted and reported here. Analysis was conducted using STATA statistical software and MS Excel.

[59] A freeware data entry program created by US Census, available here: http://www.census.gov/ipc/www/cspro/

APPENDIX 2: PRELIMINARY FINDINGS SUMMARY OF FIELD VISIT TO KESHIM

2.1 OVERVIEW

In September 2009, the Study Team conducted preliminary field research to prepare for the data collection for the mid-point study later in the year. This time allowed the Study Team to get a sense of some of the impacts that had already been realized. Many positive impacts were reported even though only 50 percent of the road had been paved.

What follows is brief bullet-point description of both positive and negative impacts that were reported to be connected to the K-F Road's rehabilitation. These observations are based on several interviews conducted over the course of a few days in Keshim and its surrounding area. They are anecdotal in nature, so they should not be pressed too far.

2.2 POSITIVE IMPACTS

- **Employment:** In several conversations, people expressed appreciation for the number of jobs created by the project.
- **Reduced Pollution:** In places where the base course of asphalt had been laid, remarks were made about the substantial reduction in dust.
- **Reduced Passenger Travel Time:** Passenger travel from Keshim to Faizabad was reported to have gone from an all day trip to 3 to 5 hours. For those living near Keshim, they said it had made an appreciable difference in how often they travel to Keshim.
- **Reduced Passenger Travel Costs:** Apparently, a taxi from Keshim to Faizabad used to cost around 500 Afs and now was reported to cost only 400 Afs, a 20 percent reduction. For more local travel, better roads have meant the introduction of rickshaws, which provides a very low-cost form of transport. Before from 10 km out it was reported to cost 60 Afs to get to Keshim and now the Study Team was told that it costs only 15 Afs.
- **Reduced Freight Costs and Travel Time:** The improved road reportedly also caused a decrease in freight costs. Local farmers (near Keshim) used to haul their goods to market primarily by donkey; now they reported that hiring a truck costs only 3,000 Afs, which was down from 5,000-6,000 Afs in the year before. Prior to the rehabilitation of the K-F Road, travel time for trucks between Keshim and Faizabad was reported to take 2-3 days and now, 4-8 hours.
- **Better Health Access:** The head doctor of the Keshim hospital reported that the hospital's patient load had doubled in the last year, and he attributed most of this growth to increased access provided by the K-F Road.
- **Increased Connectivity:** One of the benefits expressed by nearly all who were interviewed was a greater sense of connectivity. The deputy governor of Keshim district said that prior to the road rehabilitation Keshim's citizens did not feel a part of Badakhshan Province. However, now the improved road allows for frequent official travel to Faizabad, so he and the people of Keshim feel connected to Badakhshan in a new way.

2.3. NEGATIVE IMPACTS

- **Increased Accidents:** People mentioned that accidents had risen as the speed of travel has increased. The doctor at Keshim's hospital estimated that the hospital treated 2 road-related incidents a day.
- **Uncompensated Land Taking:** The issue of uncompensated land taking came up in every meeting the Study Team had in the Keshim District. In each case, people qualified their complaint by recognizing how much benefit the road would bring. However, they also made it clear that the land taking had created a great deal of hardship for many, in some cases leaving people without the means to provide shelter for their families.

APPENDIX 3: INSTRUMENTS

APPENDIX 3: INSTRUMENTS

3.1 HOUSEHOLD SURVEY

Survey Number: KF2009HH

IRP Keshim–Faizabad Road Baseline Survey:

Household Survey

A1	**Village/City Identification**	
A2	**District Identification**	
A3	**KM Along the Road**	
A4	**GPS Point**	
A5	**Enter the last number on your cell phone's clock**	

		Name	**Signature**	**Date (M/D/Y)**	**ID Code**
A5	Enumerator				
A6	Survey Manager				
A7	Data Entry				

		Result Code	**Enter Result Code**	**Start Time**	**End Time**
A8	First Visit	Fully conducted…….....1			
		Partially conducted…….....2			
		Not conducted for security reasons……3			
		Come-Back…….....4			
		Unavailable…….....5			
		Refusal…….....6			

[IF TWO ATTEMPTS ARE UNSUCCESSFUL OR A REFUSAL, SELECT A REPLACEMENT HOUSE AND BEGIN WITH B1.]

		Result Code	Enter Result Code	Start Time	End Time
B1	First Visit	Fully conducted……..1			
		Partially conducted…….2			
		Not conducted for security reasons…3			
		Come-Back…….....4			
		Unavailable…….....5			
		Refusal……...6			
B2	Second Visit	Fully conducted……..1			
		Partially conducted…….2			
		Not conducted for security reasons…3			
		Come-Back…….....4			
		Unavailable…….....5			
		Refusal……...6			

[IF YOU ARE UNABLE TO CONDUCT THE INTERVIEW AFTER TWO ATTEMPTS WITH THE INITIAL HOUSEHOLD AND REPLACEMENT HOUSEHOLD, GIVE THE SURVEY TO YOUR MANAGER AND START OVER WITH A NEW SURVEY.]

[Answer Codes:]
Don't Know…..-777

Not Applicable… -888

Refuse to Answer….-999

[At this point, please begin the interview by saying]

Good Afternoon, my name is _____. Could I please speak with the head of household *[the person in the household who is the primary breadwinner and makes most of the financial decisions]*?

[If the head of household is not available, please interview the household member who makes the most financial decisions.]

My name is …… and I came here on behalf of the company that is constructing the KF Road. I am here to ask you some questions regarding the current changes which have happened in your daily life due to the road.

This survey is designed to acquire information from the household regarding the type of changes which have taken place in your daily life. We are very kindly requesting your participation in this survey and hope you will answer our questions.

Now, if you have any questions regarding this survey please let me know.

[If asked, the survey will take approximately one hour.]

C1. May I begin now? Yes……I No……..2 ***[Enter code and skip to S7]***
[Enter Code]

Z1. How many people live in this compound?	**Z2. How many families live in this compound?**	**Z3. How many households live in this compound?** ***[If respondent's answer is one, enter number and skip to beginning of survey]***
[Enter Number]	***[Enter Number]***	***[Enter Number]***

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

[Utilizing the Numbers from Z3 and Z6, circle the appropriate number in the white area of the table below. This number refers to the household code in Z4. This is the household that you should interview. Please ask to interview the head of that household listed in Z5.]

Number of households from Z3	Last Number on your digital clock from Z6									
	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
2	1	2	1	2	1	2	1	2	1	2
3	1	2	3	1	2	3	1	2	3	2
4	1	2	3	4	1	2	3	4	3	4
5	1	2	3	4	5	1	2	3	4	5
6	1	2	3	4	5	6	5	3	1	4

Z4. Household Code	**Z5. What is the name of the head of each household?**	**Z6. [Enter the number from A5.]**
1		
2		
3		
4		
5		
6		

[Utilizing the Numbers from Z3 and Z6, circle the appropriate number in the white area of the table below. This number refers to the household code in Z4. This is the household that you should interview. Please ask to interview the head of that household listed in Z5.]

D1. ***[HOUSEHOLD EDUCATION]*** ***[Please say]*** Now I will ask you some basic information about the members of your household. A household is defined as a group of people living under one roof and sharing financial resources.	**D2.** How many people live in your household who are over the age of 18?	**D3.** How many males live in your household that are from the ages of _____?	**D4.** How many females under the age of 18 live in your household? ***[Do not ask for females over 18]***	**D5.** Do all MALE household members ages 6 to 18 currently attend school? ***[Do Not Read]*** Yes……1 ***[Enter code and skip to D8]*** No……2	**D6.** How many MALE household members ages 6 to 18 do not currently attend school?	**D7.** What is the primary reason that these Male Children do not currently attend school? ***[Do Not Read]*** Children have to work ……...……...1 School is too far ....…….……2 Cost of travel too expensive… ……3 School fees too expensive……..4 School is poorly run…….……...5 School does not bring any benefit……..6 Due to security reason……..…..…...7 Other (Specify_____).....…….....8
	[ENTER NUMBER]	***[ENTER NUMBER]***	***[ENTER NUMBER]***	***[ENTER***	***[ENTER***	***[ENTER CODE]***
		0-5	***0-18***			
		6-18				
		Over 18				

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

D8. Do all FEMALE household members ages 6 to 18 currently attend school? ***[Do Not Read]*** Yes……1 ***[Enter code and skip to D11]*** No……2	**D9.** How many FEMALE household members ages 6 to 18 do not currently attend school? ***[Do Not Read]*** **If there is no FEMALE household members ages 6 to 18 in the family, skip to D11**	**D10**. What is the primary reason that these Female Children do not currently attend school? ***[Read list]*** Children have to work ……1 School is too far ……2 Cost of travel too expensive……..……..3 School fees too expensive……..……4 School is poorly run……..…5 School does not bring any benefit…..…….6 Due to security reason……..…..7 Other (Specify_____)……..8	**D11.** Do any household members attending school use the Keshim-Faizabad road to get to school? ***[Do Not Read]*** Yes……1 No……2 ***[Enter code and skip to E1]***	**D12.** How many household members attending school use the Keshim-Faizabad road to get to school?	**D12.** For household members using the Keshim-Faizabad road, how many kilometers do they travel to attend school?
[ENTER CODE]	***[ENTER NUMBER]***	***[ENTER CODE]***	***[ENTER CODE]***	***[ENTER NUMBER]***	***[ENTER KMs]***

[END HOUSEHOLD EDUCATION]

[Answer Codes:]

Don't Know…..-777

Not Applicable… -888

Refuse to Answer….-999

E1. [After observing the dwelling, please enter one of the appropriate codes from below.] House made of mud/clay….....1 House made of brick……..…2 House made of cinder block…...…3 House made of concrete……... 4 House made of corrugated metal...5 Tent……...…….…6 Other (Specify_____).....7	**E2. [DWELLING CHARACTERSISTICS AND RESIDENTIAL STATUS]** **[Please say]** Now I would like to ask you about your dwelling and your residential status.	**E3. [Before beginning this section, please read the following definition of dwelling to the respondent]** A dwelling is a space or a collection of spaces in which your household resides. If you reside in a space with another household, which is not a part of your family (for example, if another family lives in the same house, but does not share financial resources with you), please only refer to your household's specific space when answering the following questions.	**E4.** How many rooms does your dwelling have?	**E5.** How long has your household resided in this dwelling?		**E6.** How long has your household resided in this village/city?		**E7**. Have you returned to this village/city after living somewhere else previously? ***[Do Not Read]*** Yes……..1 No……..2
[ENTER CODE]			**[ENTER NUMBER OF ROOMS]**	**[ENTER YEARS AND/OR MONTHS]**		**[ENTER YEARS AND/OR MONTHS]**		**[ENTER CODE]**
				a. Years	**b. Months**	**a. Years**	**b. Months**	

[END DWELLING CHARACTERISTICS AND RESIDENTIAL STATUS]

[Answer Codes:]

Don't Know…..-777

Not Applicable… -888

Refuse to Answer….-999

F1. *[HOUSEHOLD CONSUMPTION AND WEALTH]* *[Please Say]* **Now I would like to ask you about the consumption for your household.**	**F2**. How much money did your household spend on food last month?	**F3.** Does your household grow some of the food it eats? *[Do Not Read]* Yes.....1 No.....2 *[Enter code and skip to F5]*	**F4.** How much of your food consumed does your household grow? *[Read List]* All……1 Most……2 Half……...3 Some……...….4 None……....5	**F5.** How far away is the nearest bazaar to you?	**F6.** How do you usually get to the nearest bazaar? *[Do Not Read]* Bus……..…...….....1 Minibus……..…….....2 Car…….....3 Jeep……....4 Van……..……....5 Truck…...……...….6 Motorcycle…….….....7 Tractor ….…....8 Trailer.....…....9 Donkey, Mule, Horse…10 Walk…...……....11 Rickshaw……..…..12 Other (Specify____)….13	**F7.** How long does it take you to get to the nearest bazaar?		**F8.** Do you have to use the Keshim–Faizabad Road to get to the nearest bazaar? *[Do Not Read]* Yes.....1 No.....2
	[ENTER IN AFS]	*[ENTER CODE]*	*[ENTER CODE]*	*[CIRCLE METERS or KMs AND ENTER NUMBER]* *Meters or KMs*	*[ENTER CODE]*	*[Enter Hours and/or Minutes]* *a. Hours*	*b. Minutes*	*[ENTER CODE]*

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

	G1. In the past month (30 days) have you or anyone in your household paid for _____?*[Do Not Read]* Yes……1 No……2	**G2.** How much did your household pay for _____ in the past month (30 days)? *[Skip _____ if G1 =2, -777, -999]*
Item	*[ENTER CODE]*	*[ENTER IN AFS]*
1. Body Soap		
2. Clothing Soap		
3. Toilet Paper		
4. Shampoo		
5. Petrol		
6. Diesel		
7. Kerosene (*khak*)		
8. Fire Wood/Charcoal		
9. Batteries		
10. Mobile Phone Minutes		
11. Public Transportation (e.g., bus fare)		
12. Electricity		
13. Satellite Fee		
14. Cigarettes		

[Answer Codes:]

Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

	H1. In the past 12 months, have you or anyone in your household purchased or paid for _____? ***[Do Not Read]*** Yes……1 No……..……2	**H2.** In the past 12 months, how much did your household pay for _____? ***[Skip ___ if H1 =2, -777, -999]***
Item	***[ENTER CODE]***	***[ENTER IN AFS]***
1. Clothing/Fabric		
2. Shoes		
3. School Fees (for public or private education)		
4. School Supplies		
5. Medicines		
6. Health Care Services		
7. Housing Maintenance (repairs & improvements)		
8. Housing Rent		
9. Weddings, Religious Events		
10. Taxes		
11. Debt		

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

11. *[Please say]* Now I would like to ask you about some of the goods in your household.		**12**. Does your household own a _____? ***[Do Not Read]*** Yes……1 No……2
	Item	***[Enter Code]***
	1. Television	
	2. Radio	
	3. VCR / DVD Player	
	4. Mobile Phone	
	5. Computer	
	6. Refrigerator / Full-size Freezer	
	7. Satellite Dish	
	8. Fan	
	9. Air Conditioner	
	10. Heater	
	11. Power Generator	
	12. Kerosene or Paraffin Stove	
	13. Electric Stove	
	14. Kerosene or Paraffin Lantern	
	15. Battery-Powered Lamp	
	16. Bicycle	
	17. Sewing machine	
	18. Iron	

[END CONSUMPTION AND WEALTH]

[Answer Codes:]

Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

J1. ***[VEHICLE OWNERSHIP ASSESMENT]*** ***[Please say]*** **Now I would like to ask you about any vehicles your household owns.**	**J2.** Are there any members of your household who have a motorized vehicle? ***[Do Not Read]*** Yes .....1 No.....2 ***[Enter code and skip to K1]***	**J3.** Please tell me all of the types of motorized vehicles that members of your household own or lease (up to 3). ***[Do Not Read]*** Bus……...……...1 Minibus……...2 Corolla Car…...…...3 Jeep……....4 Van…….....……....5 Truck……..…….6 Motorcycle…….....7 Tractor ……..…….....8 Other (Specify _____)…….9 Don't Know……..…-777 ***[Enter code and skip to K1]***	**J4.** Is this _____ owned or leased? ***[Do Not Read]*** Owned……....1 Leased……..…2	**J5.** Last **summer**, how much money did your household spend on repairs and maintenance for this _____?	**J6.** Last **winter**, how much money did your household spend on repairs and maintenance for this _____?	**J7.** Last **summer**, how much money did your household spend on fuel for this _____?	**J8.** Last **winter**, how much money did your household spend on fuel consumption for this _____?
	[ENTER CODE]	***[ENTER CODE(S)]***	***[ENTER CODE]***	***[ENTER IN AFS]***	***[ENTER IN AFS]***	***[ENTER IN AFS]***	***[ENTER IN AFS]***
		1.					
		2.					
		3.					

[END VEHICLE OWNERSHIP ASSESMENT]

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

K1. *[OWN AGRICULTURAL/ANIMAL HUSBANDRY PRODUCTION AND TRANSPORT]* *[Please say]* **Now I would like to ask you about your household's own agricultural production and how your household transported its goods to the bazaars in the last 12 months.**	**K2.** During the last 12 months, has your household cultivated any agricultural crops? ***[Do Not Read]*** Yes.....1 No.....2 ***[Enter code and skip to N1]*** Don't Know…....-777 ***[Enter code and skip to N1]*** Refuse to Answer...-999 ***[Enter code and skip to N1]***	**K3.** During the last 12 months, how many Jeribs did your household use for cultivation?	**K4**. Do you use an irrigation system or rain? Irrigation.....1 Rain.....2 ***[Enter code and skip to K6]*** Both……...3	**K5.** How money Jeribs of land used an irrigation system in the last 12 months?	**K6.** In the past 12 months, did you use _____? ***[Do Not Read]*** Yes…….....1 No…..…..……..…2 ***[If ALL responses are 2, -777, or -999, enter code and skip to L1]***		**K7.** In the past 12 months, how much money did you spend on _____? ***[Skip to L1 if K6=2,-777, or -999]***
	[Enter Code]	**[Circle Jeribs or Biswa and Enter Number]** **Jeribs** | **Biswa**	**[Enter Code]**	**[Circle Jeribs or Biswa and Enter Number]** **Jeribs** | **Biswa**		**[Enter Code]**	**[Enter in Afs. Enter "0" if there were no expenditures on item.]**
					1. Seeds		
					2. Fertilizer		
					3. Pesticides		

[AGRICULTURAL / ANIMAL HUSBANDRY PRODUCTION CONTINUES ON NEXT PAGE]

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

L1. Please tell me the agricultural crops your household harvested during the last 12 months, starting with the crop you produced the most. Examples include fruits, nuts, grains or other products you grew and sold. **(Record up to 5).**	**L2.** Did your household sell _____ during the last 12 months? ***[Do Not Read]*** Yes……..1 No……..……2 ***[If ALL responses are 2, -777, or -999, enter code and SKIP to L5]***	**L3.** How much _____ did your household sell during the last 12 months? ***[Skip if L2= 2, -777, or -999]***		**L4.** What was the total value of your household's _____ sales in the last 12 months? ***[Skip if L2= 2, -777, or -999]***	**L5.** Did your household give agricultural goods as an in-kind payment during the last 12 months? ***[Do Not Read]*** Yes……..1 No……..……2 ***[Enter code and skip to M1]***	**L6.** What was the value of your household's in-kind payments of agricultural crops in the last 12 months?
[Enter Crops]	***[Enter Code]***	***[Enter quantity and unit if L2=1.]***		***[Enter in Afs]***	***[Enter Code]***	***[Enter in Afs]***
		Quantity	***b. Unit***			
1.						
2.						
3.						
4.						
5.						

[AGRICULTURAL / ANIMAL HUSBANDRY PRODUCTION CONTINUES ON NEXT PAGE]

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

M1. *[PLEASE NOTE the highest valued crop from L4 and ENTER IT BELOW.]*	M2. Where does your household sell ___________? *[DO NOT READ LIST]* Road-side Stand…....….1 Nearest Bazaar……......2 Bazaar in Keshim..…..…3 Bazaar in Faizabad..…....4 Bazaar in Kabul…..........5 Businessman….…...…..6 Other(Specify______)....7	M3. How far away does your household sell _____________?		M4. How does your household usually transport _________ to be sold? [DO NOT READ LIST] Bus……...1 Minibus………......................................2 Car………...…......................................3 Jeep……………...4 Van………...5 Truck………...6 Motorcycle…...7 Tractor Trailer………......................................8 Bicycle…………...9 Walk………………...10 Walk with cart……………...........................11 Animal pulled (donkey, mule, horse)…....…….…...12 Animal carried (donkey, mule, horse)…..........…….13 Rickshaw……………………………………….14 Other (Specify___________)…...….....…………….15	M5. Does your household use the Keshim--Faizabad Road to transport ____________? *[DO NOT READ LIST]* Yes……..........................1 No…...……...…...…...2
[Enter Crop of Highest Value from L4]	**[Enter Code]**	**[Circle Meters or KMs and enter number. If distance NOT KNOWN, ask for the name of the destination village, town, or city.]**		**[Enter Code]**	**[Enter Code]**
		a. Meters or KM	**b. Name of Village/Town /City**		

[AGRICULTURAL / ANIMAL HUSBANDRY PRODUCTION CONTINUES ON NEXT PAGE]

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

N1. Does your household raise any animals for selling or eating? ***[Do Not Read]*** Yes.....1 No.....2 ***[Enter code and SKIP to P1]*** Don't Know…….-777 ***[Enter code and SKIP to P1]*** Refuse to Answer.-999 ***[Enter code and SKIP to P1]***	**N2.** In the past 12 months, how much money did you spend on feed for your animals?	**N3.** Please tell me the primary animals that your household owned during the last 12 months. Examples include sheep, cows, donkeys, camels, chicken, fish or other animals you grew and sold. Please list up to five.	**N4.** Did your household sell any _____ during the last 12 months? ***[Do Not Read]*** Yes….....1 No…..…..…..…2 ***[If ALL responses are 2, -777, or -999, enter code and SKIP to P1]***	**N5.** How many _____ did your household sell during the last 12 months?	**N6.** What was the value of your household's _____ sales during the last 12 months?
[Enter Code]	***[Enter in Afs]***	***[Enter Description of Animals]***	***[Enter Code]***	***[Enter Number of Animals]***	***[Enter in Afs]***
		1.			
		2.			
		3.			
		4.			
		5.			

[AGRICULTURAL / ANIMAL HUSBANDRY PRODUCTION CONTINUES ON NEXT PAGE]

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

O1. ***[Please note the highest valued animal from N6 for the household and enter it below.]***	**O2.** Where does your household sell _____? Road-side Stand…....1 Nearest Bazaar ……2 Bazaar in Keshim…..3 Bazaar in Faizabad….4 Bazaar in Kabul…...…5 Middleman…...……..6 ***[Enter code and SKIP to P1]*** To a neighbor……7 Other (Specify_____).8	**O3.** How far away does your household sell _____? ***[Circle Meters or KMs and enter number. If distance NOT KNOWN, ask for the name of the destination village, town, or city.]*** ***a. Meters or KM*** | ***b. Name of Village/Town /City***	**O4.** How does your household usually transport _____ to be sold? ***[DO NOT READ LIST]*** Bus……...…….....…1 Minibus…….....……2 Car……...…..…….....……3 Jeep…….....……..4 Van…….....……..5 Truck……...…….....……6 Motorcycle…....7 Tractor Trailer…….....…….....8 Bicycle…….....9 Walk……...…….....……....10 Walk with cart…….....…….....11 Animal pulled (donkey, mule, horse)..……..…12 Animal carried (donkey, mule, horse)……13 Rickshaw…….……14 Other Specify(_____)……....15	**O5.** Does your household use the Keshim--Faizabad Road to transport _____? Yes….....1 No…...…….…2
[Enter Animal of Highest Value]	***[Enter Code]***	***[Circle Meters or KMs and enter number. If distance NOT KNOWN, ask for the name of the destination village, town, or city.]***	***[Enter Code(s)]***	***[Enter Code]***
		a. Meters or KM | ***b. Name of Village/Town /City***		
1.				

[END AGRICULTURAL / ANIMAL HUSBANDRY PRODUCTION]

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

P1. ***[NON-AGRICULTURAL HOUSEHOLD ACTIVITIES AND LIVELIHOOD]*** ***[Please say]*** Now, I am going to ask you about the different kinds of income-generating activities that members of this household are engaged in. The next few questions are in regards to income you receive for any work that is not from your own farm production. This may include government work, non-farm labor, handicrafts, and labor on other household's farms.	**P2.** During the past 12 months, did any member in your household receive any income from sources other than your farm? ***[Do Not Read]*** Yes……..…..…..……1 No…..……...……2 ***[Enter Code and SKIP to P4]*** Don't Know……..……..…-777 ***[Enter Code and SKIP to P4]*** Refuse to Answer..……..-999 ***[Enter Code and SKIP to P4]***	**P3.** During the past 12 months, what was the total income members of your household received from sources other than your farm?	**P4.** In the past year, did your household receive any in-kind payments for any activities? ***[Do Not Read]*** Yes……..…..…..…1 No…..……2 [Enter Code and SKIP to P6] Don't Know……-777 [Enter Code and SKIP to P6] Refuse to Answer...…….-999 [Enter Code and SKIP to ***P6]***	**P5.** During the past 12 months, what was the monetary value of goods that your household received in-kind?	**P6.** Is anyone in your household employed by the company that is constructing the Keshim-Faizabad road? ***[Do Not Read]*** Yes……..…..…..1 No…..……..2 ***[Enter Code and SKIP to Q1]***	**P7.** During the past 12 months, what was the total income members of your household received from the company that is constructing the Keshim-Faizabad road?
	[Enter Code]	***[Enter in Afs]***	***[Enter Code]***	***[Enter Afs]***	***[Enter Code]***	***[Enter Afs]***

[END NON-AGRICULTURAL HOUSEHOLD ACTIVITIES AND LIVELIHOOD]

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

[Please say] *Now* I would like to ask you about transport needs related to work.	**Q2**. Does anyone use the Keshim–Faizabad Road to travel to his/her place of work? ***[Do Not Read]*** Yes…..…..…..1 No……..…..2 ***[Enter Code and SKIP to R1]*** Don't Know……..-777 ***[Enter Code and SKIP to R1]*** Refuse to Answer...-999 ***[Enter Code and SKIP to R1]***	**Q3.** What are the names of individuals in your household that travel to work on the Keshim-Faizabad road? List up to three.	**Q4.** In general, how many times a week does _____ use the Keshim–Faizabad Road to travel to their place of work? ***[Read List]*** Every day...…..……1 3–5 Days/Week…2 Once a week…….3 Every other week...4 Once a Month…..5 Never……....6	**Q5.** How far does _____ travel to work?	
	[ENTER CODE]	***[ENTER NAME(S)]***	***[ENTER CODE]***	***["If less than one kilometer, enter 0"; If distance NOT KNOWN, ask for the name of the destination village, town, or city.]***	
				a. KM	***b. Name of Village/Town /City***
		1.			
		2.			
		3.			

[END NON-AGRICULTURAL HOUSEHOLD TRANSPORTATION]

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

R1. *[HOUSEHOLD TRANSPORTATION FOR HEALTH CARE]* *[Please say]* **Now, I would like to ask you some questions related to health care and transportation.**	**R2.** How many kilometers away is the nearest clinic to you? ***[If less than one kilometer, enter "0"]***	**R3.** How long does it take you to get to the clinic?		**R4.** Do you have to use the Keshim–Faizabad Road to get to the clinic? ***[Do Not Read]*** Yes.....1 No.....2	**R5.** How much does it cost to travel to the clinic? **[ONE-WAY]**	**R6.** In the past 12 months, how many times did members of your household travel to the clinic?	**R7.** How many kilometers away is the nearest hospital to you? ***[If less than one kilometer, enter "0"]***	**R8.** How long does it take you to get to the hospital?		**R9.** Do you have to use the Keshim–Faizabad Road to get to the hospital? ***[Do Not Read]*** Yes.....1 No.....2
	[Enter in KMs]	***[ENTER HOURS AND MINUTES]***		***[Enter Code]***	***[Enter in Afs]***	***[Enter Number of Visits]***	***[Enter in KMs]***	***[ENTER HOURS AND MINUTES]***		***[Enter Code]***
		a. Hours	***b. Minutes***					***a. Hours***	***b. Minutes***	

[HOUSEHOLD TRANSPORT FOR HEALTH CARE CONTINUES ON NEXT PAGE]

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

S1. How much does it cost to travel to the hospital? [ONE-WAY]	**S2.** In the past 12 months, how many times did members of your household travel to the hospital?	**S3.** In the past year, was there any child born in your household? ***[Do Not Read]*** Yes.....….1 No.....…...2 ***[Enter Code and SKIP to S7]*** Don't Know.....…-777 ***[Enter Code and SKIP to S7]*** Refuse to Answer-999 ***[Enter Code and SKIP to S7]***	**S4.** Where was the baby born? ***[Do Not Read]*** Traditional healer came to the house….1 Midwife came to the house…..…….2 Went to Public Clinic……3 ***[Enter Code and SKIP to S6]*** Went to Private Clinic……..……4 ***[Enter Code and SKIP to S6]*** Went to Public Hospital...……5 ***[Enter Code and SKIP to S6]*** Went to Private Hospital.....……6 ***[Enter Code and SKIP to S6]*** Other (Specify_____)...…….7 ***[Enter Code and SKIP to S7]*** ***[Do Not Read]*** Don't Know…...……-777 ***[Enter Code and SKIP to S7]*** Refuse to Answer.....….....…….……-999	**S5.** What is the primary reason for not going to a health care facility? ***[Do Not Read]*** Treatment too expensive…1 ***[Enter Code and SKIP to S7]*** Facility/provider too far...2 ***[Enter Code and SKIP to S7]*** Travel to facility/provider too expensive…....……3 ***[Enter code and skip to S7]*** Other (Specify_____)…..4 ***[Enter code and skip to S7]***	**S6.** What is the primary reason for going to this facility/provider? ***[Do Not Read]*** Closest to dwelling...1 Best treatment……...2 Most affordable treatment.…….……3 Most affordable to travel to…….4 Most trusted……..…5 Other (Specify___).....6	**S7.** ***[END SURVEY]*** **This concludes our survey. Thank you for your participation !**
[Enter in Afs]	***[Enter Number of Visits to Hospital]***	***[Enter Code]***	***[Enter Code]***	***[Enter Code]***	***[Enter Code]***	

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

APPENDIX 3: INSTRUMENTS

3.2 VEHICLE OPERATOR SURVEY

Survey Number: KF2009VO

IRP Road Baseline Survey: Vehicle Operator

A1	**Village/City Identification**	
A2	**District Identification**	
A3	**KM Along the Road**	
A4	**GPS Point**	
A5	**Time**	**Start:**
		End:

		Name	Signature	Date (M/D/Y)	ID Code
A6	Enumerator				
A7	Survey Manager				
A8	Data Entry				

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

[At this point, please begin the interview by saying]

My name is …… and I came here on behalf of the company that is constructing the K-F Road. I am here to ask you some questions regarding the current changes which have happened in your daily life due to the road. This survey is designed to acquire information from drivers regarding the type of changes which have taken place in your daily life. We are very kindly requesting your participation in this survey and hope you will answer our questions. Now, if you have any questions regarding this survey please let me know.

[If asked, the survey will take approximately 20 minutes.]

B1. May I begin now? Yes……..1 No……..……..2 **[Enter Code and SKIP to H8]**
[Enter Code]

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

First Vehicle Operator Survey Attempt [Fill-in for ALL Attempts]		Code
C1. Date (M/D/Y)		
C2. Result	Fully conducted……..…1 Partially conducted……2 [SKIP to C5 for Second Attempt] Not conducted for security reasons……3 [SKIP to C5 for Second Attempt] Refusal……....4 [SKIP to C5 for Second Attempt]	
C3. Gender [Enter Code, Do Not Ask]	Male……....1 Female……..……..2	
C4. Vehicle Type [Enter Code. Do Not Ask]	Bus……..……..……1 Minibus……..…..…..…..2 Car……..……..……3 4-Wheel Drive…….....……..……4 Van…….....5 Pick-Up Truck..…….....6 Motorcycle…..…….....7 2-Axle Truck……...……8 3-Axle Truck ……...……...9 Tractor Trailer……...…..……...10 Other (Specify_____)……11	
Second Vehicle Operator Survey Attempt [Fill-in for ALL Attempts]		**Code**
C5. Date (M/D/Y)		
C6. Result	Fully conducted……..1 Partially conducted……2 [SKIP to D1 for Third Attempt] Not conducted for security reasons……3 [SKIP to D1 for Third Attempt] Refusal……....4 [SKIP to D1 for Third Attempt]	
C7. Gender [Enter Code, Do Not Ask]	Male……....1 Female……....2	
C8. Vehicle Type [Enter Code. Do Not Ask]	Bus……..……..……1 Minibus……..…..…..…..2 Car……..……..……3 4-Wheel Drive…….....……..……4 Van…….....5 Pick-Up Truck..…….....6 Motorcycle…..…….....7 2-Axle Truck……...……8 3-Axle Truck ……...……...9 Tractor Trailer……...…..……...10 Other (Specify_____)……11	

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

E1. [CURRENT TRIP] [Please say] I would like to ask some basic questions about your current trip today.	**E2.** What is the purpose of your travel today? **[Read List]** Daily Work.....……..1 Business Trip…….....…..2 Freight……..…..3 Carry Passengers……..…4 School……...……5 Shopping……...…..... 6 Medical Care……7 Family Visit……..…..…8 Driving Someone…..….....9 Other (Specify_____)..10	**E3.** In which city/village did your travel originate?	**E4**. To which city/village are you traveling?	**E5.** How far away is your destination from your origin?
	[Enter Code]	**[Enter Name of City or Village]**	**[Enter Name of City or Village]**	**[Enter KMs. If less than one, enter "0"]**

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

F. [Please say] Now I would like to ask you about this road and your fuel costs.	F1. How much time does it take for you to go from your **origin to your destination?**			F2. How much will you spend on **fuel** from your **origin to your destination?**	F 2. What is the approximate price of **fuel per liter** you will pay for this trip?
	[Enter Days, Hours, and Minutes]			[Enter Afs]	[Enter in Afs]
	a. Days	b. Hours	c. Minutes		

F5. In the last month, how many times did you use the Keshim-Faizabad road?	F6. In the last month, how many kilometers did you drive on the Keshim-Faizabad road?	F7. Last summer, how many times did you use the Keshim-Faizabad road?	F8. Last summer, how many kilometers did you drive on the Keshim-Faizabad road?	F9. Last winter, how many times did you use the Keshim-Faizabad road?	F10. Last winter, how many kilometers did you drive on the Keshim-Faizabad road?
[Enter Number]	[Enter KMs]	[Enter Number]	[Enter KMs]	[Enter Number]	[Enter KMs]

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer…-999

H1. [SAFETY QUESTIONS: Please say,] Last, I would like to ask you some questions about safety and security along the road.	H2. Do you ever drive this road at night? [Do Not Read] Yes……..…1 [Enter Code and SKIP to H4] No…….2 Don't Know...-777 [Enter Code and SKIP to H4] Refuse to Answer…….-999 [Enter Code and SKIP to H4]	H3. What is the primary reason you do not drive at night? [Read List] Cannot see at night……...1 Security (insurgents, bandits, etc.)……2 Condition of road…...…3 Government restrictions...4 Fear of military (US or Afghan)……...…….…5 Lack of service stations…6 Other (Specify____)…….7	H4. In the last year while traveling the road, have you had: [Read List] Personal goods stolen..……....1 Vehicle stolen…2 Merchandise stolen……3 Physically injury...4 Other (Specify___)……5 None of the above……..…6	H5. Are you ever stopped on the road to pay official or unofficial charges? [Do Not Read] Yes……...…….……1 No..……...…...2 [Enter Code and SKIP to H8] Don't Know.…….-777 [Enter Code and SKIP to H8] Refuse to Answer-..999 [Enter Code and SKIP to H8]	H6. Along the Keshim-Faizabad road, how many times are you usually stopped per one-way trip?	H7. When you are stopped along the road, how much do you typically pay in charges per one-way trip?	H8. [END SURVEY] [Please say] This concludes our survey. Thank you for your participation!
	[Enter Code]	[Enter Code]	[Enter Code(s)]	[Enter Code]	[Enter Number]	[Enter in Afs]	

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer…-999

APPENDIX 3: INSTRUMENTS

3.3 BUSINESS SURVEY

Survey Number: KF2009SmallBus

IRP Keshim-Faizabad Road Baseline Survey: Small Business / Shopkeepers

I. SURVEY INFORMATION

A1	**Village / City Identification**				
A2	**District Identification**				
A3	**KM Along the Road**				
A4	**GPS Point**				
		Name	**Signature**	**Date (M/D/Y)**	**ID Code**
A5	**Enumerator**				
A6	**Survey Manager**				
A7	**Data Entry**				

		Result Code	Enter Result Code	Start Time	End Time
A8	**First Visit**	Fully conducted……..……1 Partially conducted……..…..2 Not conducted for security reasons……..…3 Come-Back…….....…….....4 Unavailable…….....…….....5 Refusal…….....6			
A9	**Second Visit**	Fully conducted……..……1 Partially conducted……..…..2 Not conducted for security reasons……..…3 Come-Back…….....…….....4 Unavailable…….....…….....5 Refusal…….....6			

[At this point, please begin the interview by saying]

Good Afternoon, my name is _____. Could I please speak with the owner or the person who usually runs this business?

[If neither of these people is available, please interview the shop clerk who is there.]

My name is ..... and I came here on behalf of the company that is constructing the KF Road. I am here to ask you some questions regarding the current changes which have happened in your daily life due to the road.

This survey is designed to acquire information from the household regarding the type of facilities and changes which have taken place in your daily life. We are very kindly requesting your participation in this survey and hope you will answer our questions.

Now, if you have any questions regarding this survey please let me know.

[If asked, the survey will take approximately 20 minutes.]

B1. May I begin now? Yes.....1 No.....2 *[Enter Code and SKIP to F11]*
[Enter Code]

C1. ***[BUSINESS CHARACTERISTICS]*** **[Please say]** Now I would like to ask you some basic questions about this business.	**C2.** ***[Observe – Do not ask}… "What is the primary sector in which this business operates?" [Enter code to left and write brief description of business on the right]*** ***[Do Not Read]*** Restaurant……..1 Retail/Trade……..……2 Service……...…….3 Small-Scale Industry……...……...4 Other (Specify_____)...…5		**C3.** What is your relationship to the owner of this business? ***[Read List]*** Owner……..…….....1 Manager……..….....2 Employee……..…..... 3 Friend……..…….....4 Son……....5 Other (Specify_____)…..6	**C4.** In what year was this business founded?	**C5.** How many total employees does this business have (excluding family members of the owner)?
	[Enter Code]	***[Enter Description]***	***[Enter Code]***	***[Enter Year]***	***[Enter Number of Employees]***

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

C6. Please list the top goods or services this business sells in order of importance (up to five). ***[Enter short product description.]*** ***[Do Not Read]*** ***Don't Know……..……-777*** ***[Enter code and skip to E1]*** ***Refuse to Answer……-999*** ***[Enter code and skip to E1]***	**C7.** In what quantity do you typically sell [Item]		**C8.** What is the price of this item?	**C9.** Is this good or service made, produced or provided for in this province? ***[Do Not Read]*** Yes……...…… 1 No……...…. 2
[Enter Description of Good/Service]	***a. [Enter Quantity]***	***b. [Enter Unit]***	***[Enter in Afs]***	***[Enter Code]***
1				
2.				
3.				

D1. ***[Please say]*** Now I would like to ask you some basic questions about this business during the last six months**.** Please respond in Afs.	**D2. In the last six months,** how much was the value of the goods you sold?	**D3. In the last six months,** how much were your total business expenses?	**D4. Of those expenses in the last six months**, how much did you spend on transport costs to receive goods for your business?
	[Enter in Afs]	***[Enter in Afs]***	***[Enter in Afs]***

D5. ***[Please say]*** **Now I would like to ask you some basic questions about this business during last summer. Please respond in Afs.**	**D6. Last summer,** how much was the value of the goods you sold?	**D7. Last summer,** how much were your total business expenses?	**D8.** Of those expenses **last summer,** how much did you spend on transport costs to receive goods for your business?
	[Enter in Afs]	***[Enter in Afs]***	***[Enter in Afs]***

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

D9. *[Please say]* Now I would like to ask you some basic questions about this business during last winter. Please respond in Afs.	D10. **Last winter**, how much was the value of the goods you sold?	D11. **Last winter,** how much were your total business expenses?	D12. Of those expenses **last winter,** how much did you spend on transport costs to receive goods for your business?
	[Enter in Afs]	*[Enter in Afs]*	*[Enter in Afs]*

E1. *[BUSINESS TRANSPORT]* *[Please Say]* **Now I would like to ask you some questions about how goods reach your business.**	E2. Do you receive any of your goods through the Keshim-Faizabad road? *[Do Not Read]* Yes.....1 *[Enter code and skip to E4]* No.....2	E3. Why not? *[Read List]* My goods do not come from points along the road……...1 *[Enter code and skip to E6]* Route takes too much time……2 *[Enter code and skip to E6]* Road is too dangerous (insurgents, bandits).....……..3 *[Enter code and skip to E6]* Other (Specify_____)…..……4 *[Enter code and skip to E6]*	E4. How are the majority of your goods transported along the Keshim-Faizabad Road? *[Do Not Read]* Bus……...……...1 Minibus……...2 Car……...……...3 Jeep……..…...4 Van…….....….5 Truck…….…...….6 Motorcycle…….....7 Tractor Trailer…….…....8 Cart / Wheelbarrow / Wagon ……..…...9 On foot …….…..…10 *[Enter code and skip to E6]* Donkey/Horse……...11 *[Enter code and skip to E6]* Other (Specify_____).....12	E5. Is that your personal vehicle? *[Do Not Read]* Yes.....1 No.....2
	[Enter Code]	*[Enter Code]*	*[Enter Code]*	*[Enter Code]*

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

E6. Do you transport your goods through routes other than the Keshim-Faizabad road? ***[Do Not Read]*** Yes.....1 No.....2 ***[Enter Code and SKIP to F1]***	**E7.** Please mention them.
[Enter Code]	***[Enter Response]***
	a.
	b.
	c.

F1. ***[Please say]*** **Now I would like to ask you some questions about how goods reached your business last summer.**	**F2. Last summer,** approximately how many of your goods for this business travelled by way of the Keshim-Faizabad Road? ***[Read List]*** All.....1 More than Half.....2 Half.....3 Less than Half.....4 Almost None.....5 None.....6	**F3. Last summer**, how many times did your goods travel by way of the Keshim-Faizabad Road?	**F4. Last summer,** did you experience delays in receiving goods due to poor road conditions? ***[Do Not Read]*** Yes.....1 No.....2 ***[Enter code and skip to F6]***	**F5. Last summer,** how many times did you experience delays due to poor road conditions?
	[Enter Code]	***[Enter Number of Times]***	***[Enter Code]***	***[Enter Number of Times]***

[Answer Codes:]
Don't Know.....-777
Not Applicable... -888
Refuse to Answer....-999

F6. *[Please say]* **Now I would like to ask you some questions about how goods reached your business last winter.**	**F7. Last winter**, approximately how many of your goods for this business travelled by way of the Keshim-Faizabad Road? *[Read List]* All....……..... 1 More than Half…...….2 Half…….....……..…...3 Less than Half.....….4 Almost None….....5 None……...6	**F8. Last winter**, how many times did your goods travel by way of the Keshim-Faizabad Road?	**F9. Last winter,** did you experience delays in receiving goods due to poor road conditions? *[Do Not Read]* Yes.....1 No.....2 *[Enter Code and SKIP to F11]*	**F10. Last winter,** how many times did you experience delays due to poor road conditions?	**F11.** *[End of Survey, please read]* **This concludes the survey. Thank you for your participation.**
	[Enter Number of Delays]	*[Enter Number of Times]*	*[Enter Code]*	*[Enter Number of Times]*	

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

APPENDIX 3: INSTRUMENTS

3.4 MARKET OVERVIEW SURVEY

Survey Number: KF2009MKTOV

IRP Keshim-Faizabad Road Baseline Survey:

Market Overview Survey

A.1	**Name of Bazaar**			
A.2	**Village Identification**			
A.3	**District Identification**			
A.4	**KM Along the Road**			
A.5	**Survey Number**			

SURVEY INFORMATION

B. FIELD TEAM					
		Name	**Signature**	**Date (M/D/Y)**	**ID Code**
B1	**Enumerator**				
B2	**Survey Manager**				
B3	**Data Entry**				

1. How many stalls in the bazaar are selling agriculture produce? **[Enter Number.]**	**2.** How many stalls in the bazaar are selling dry goods? **[Enter Number.]**	**3.** How many stalls in the bazaar are selling meat? **[Enter Number.]**	**4.** How many stalls in the bazaar are selling toiletries and/or cleaning products? **[Enter Number.]**	**5.** How many stalls in the bazaar are selling hardware? **[Enter Number.]**	**6.** How many stalls in the bazaar are medicines? **[Enter Number.]**	**7.** What is the total number of stalls at the market? **[Enter Number.]**

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

8. Does the market have the following goods? Yes……...1 No……..2	**9.** How much did the following items **[Give quantity of item, unit, price, and brand (if applicable).]**			
Product	**a. Quantity**	**b. Unit Code**	**c. Price**	**d. Brand**
a. Food Item				
1. Wheat flour				
2. Rice				
3. Potato				
4. Milk				
5. Bread				
6. Beans				
7. Tomato				
8. Onion				
9. Beef				
10. Mutton/Sheep				
11. Oil/Ghee				

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

9. Does the market have the following goods? Yes……...1 No……2	**10.** How much did the following items **[Give quantity of item, unit, price, and brand (if applicable).]**			
Product	**a. Quantity**	**b. Unit Code**	**c. Price**	**d. Brand**
a. Non-Food Item				
1. Clothes Soap				
2. Toilet paper				
3. Shampoo (Pantene packet)				
4. Small batteries (flashlight)				
5. Large batteries (tape recorder)				
6. Mobile Phone				
7. Fan				
8. Petrol				
9. Diesel				
10. Fertilizer				
11. Pesticides				

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

APPENDIX 3: INSTRUMENTS

3.5 FREIGHT COMPANY SURVEY

Survey Number: KF2009FC_____

IRP Keshim-Faizabad Road Baseline: Freight Company Survey

A1	**Company Name**	
A2	**Scheduled Start Time**	
A3	**Village/City Identification**	
A4	**District Identification**	
A5	**Address**	
A6	**Closest GPS Point**	

		Name	**Signature**	**Date (M/D/Y)**	**ID Code**
A7	Enumerator				
A8	Survey Manager				
A9	Data Entry				

First Freight Company Survey Attempt ***[Fill-in for ALL Attempts]***		**Code**
A10. Date (M/D/Y)		
A11. Start Time		
A12. End Time		
A13. Result	Fully conducted……..1	
	Partially conducted…….2 ***[Skip to B1 for Second Attempt]***	
	Not conducted for security reasons……3 ***[Skip to B1 for Second Attempt]***	
	Refusal…….....4 [Skip to B1 for Second Attempt]	

B. Second Freight Company Survey Attempt *[Fill-in for ALL Attempts]*		**Code**
B1. Date (M/D/Y)		
B2. Start Time		
B3. End Time		
B4. Result	Fully conducted……..1	
	Partially conducted…….2 *[Skip to B1 for Second Attempt]*	
	Not conducted for security reasons……3 *[Skip to B1 for Second Attempt]*	
	Refusal…….....4 *[Skip to B1 for Second Attempt]*	
B.Third Freight Company Survey Attempt *[Fill-in for ALL Attempts]*		**Code**
B5. Date (M/D/Y)		
B6. Start Time		
B7. End Time		
B8. Result	Fully conducted……..1	
	Partially conducted…….2 *[Skip to B1 for Second Attempt]*	
	Not conducted for security reasons……3 *[Skip to B1 for Second Attempt]*	
	Refusal…….....4 *[Skip to B1 for Second Attempt]*	

[At this point, please begin the interview by saying]

My name is …… and I came here on behalf of the company that is constructing the KF Road. I am here to ask you some questions regarding the current changes which have happened in your business due to the road.

This survey is designed to acquire information from freight companies regarding shipping company capacity, the cost of shipping and shipping fees. We are very kindly requesting your participation in this survey and hope you will answer our questions.

Now, if you have any questions regarding this survey please let me know.

[If asked, the survey will take approximately 20 minutes.]

D1. May I begin now? Yes……..1 No……..2 ***[Enter code and skip to G3]***
[Enter Code]

D1. How many drivers work for you?	**D2.** What three types of cargo do you most commonly ship?	**D3.** How many tons of freight do you ship on average every day?	**D4.** Does the condition of the road affect the fees you charge? ***[Do Not Read]*** Yes……1 No……..…..2
[Enter Number]	***[Enter Description]***	***[Enter Weight]***	***[Enter Code]***
	1.		
	2.		
	3.		

D5. In the past month, how many trucks did you send down the Keshim-Faizabad road?	**D6.** What are the three most common destinations for your shipments?	**D7.** What is the distance (in KMs) to _____?	**D8.** How much time does it take for you to go from here to _____?		
[Enter Number]	***[Enter Village/City]***	***[Enter KMs]***	***[Enter Days, Hours and Minutes]***		
			a. Days	***b. Hours***	***c. Minutes***
	1.				
	2.				
	3.				

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

E1. What types of vehicles do you have in your fleet? Please list up to five. ***[Read List]*** Van Pick-up Truck 2-axle Truck 3-axle Truck Tractor Trailer Other Specify_____)	**E2.** How many _____ do you have in your fleet?	**E3.** How many tons fit in a fully loaded _____?	**E4.** ***[Skip if the interview is taking place in Keshim]*** How much does it cost to ship a fully loaded _____ to Keshim?	**E5.** ***[Skip if the interview is taking place in Faizabad]*** How much does it cost to ship a fully loaded _____ to Faizabad?	**E6.** ***[Ask about the city (Keshim or Faizabad) that you are currently not in]*** One year ago, how much did it cost to ship a fully loaded _____ to Faizabad/Keshim?	**E7.** How much does it cost to ship a fully loaded _____ to Kabul?	**E8.** One year ago, how much did it cost to ship a fully loaded _____ to Kabul?
[Enter Description of Vehicle Type]	***[Enter Number]***	***[Enter Number]***	***[Enter in Afs]***	***[Enter in Afs]***	***[Enter in Afs]***	***[Enter in Afs]***	***[Enter in Afs]***
1.							
2.							
3.							
4.							
5.							

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

F1. Do your trucks ever drive on the Keshim-Faizabad Road at night? ***[Do Not Read]*** Yes……1 ***[Skip to F3]*** No……...2 Don't Know……..-777 ***[Skip to F3]*** Refuse to Answer……..-999 ***[Skip to F3]***	**F2.** What is the primary reason your trucks do not drive at night? ***[Read List]*** Cannot see at night…….1 Security (insurgents, bandits, etc.).....2 Condition of road.....3 Government restrictions...…..……4 Fear of military (US or Afghan)…….5 Lack of service stations……..6 Other (Specify_____).....7	**F3.** In the last year while traveling the Keshim-Faizabad road, have your drivers had: ***[Read List]*** Personal goods stolen…...……...1 Vehicle stolen…….....,,..,,.2 Merchandise stolen……..…3 Physically injured…....4 Other (Specify_____).....5	**F4.** I have heard that vehicles like yours are sometimes stopped on the Keshim-Faizabad road to pay charges. Is this true? ***[Do Not Read]*** Yes……1 No...……...2 ***[Skip to G1]***	**F5**. Along the Keshim-Faizabad road, how many times are you usually stopped?	**F6**. When vehicles like yours are stopped along the Keshim-Faizabad road, how much do they typically pay in fees each time they are stopped?
[Enter Code]	***[Enter Code]***	***[Enter Code]***	***[Enter Code]***	***[Enter Number]***	***[Enter in Afs]***

G1. What are the three major determinants of the price for shipping? ***[Write down the response. Clarify if needed.]***	**G2.** What are the three primary impediments to lower shipping costs in this region? ***[Write down the response. Clarify if needed.]***	**G3.** ***[End of Survey]*** **This concludes our survey. Thank you for your participation!**
1.	**1.**	
2.	**2.**	
3.	**3.**	

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

APPENDIX 3: INSTRUMENTS

3.6 FREIGHT TRUCK OPERATOR SURVEY

Survey Number: KF2009FT

	Name	Signature	Date (M/D/Y)	ID Code
Enumerator				
Survey Manager				
Data Entry				

Location Description:	
Destination (circle one):	**Keshim or Faizabad**
KM Number:	
GPS Point:	
Date:	
Start Time:	
End Time:	

	Length of trip to Keshim/Faizabad		How many kilometers is your total trip?	How many tons are you carrying?	How much does it cost to ship that?
	Hours	Minutes			
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

APPENDIX 3: INSTRUMENTS

3.7 PAID PASSENGER SURVEY – TAXI

Survey Number: KF2009TAXI

	Name	Signature	Date (M/D/Y)	ID Code
Enumerator				
Survey Manager				
Data Entry				

Location Description:	
Destination (circle one):	Keshim or Faizabad
KM Number:	
GPS Point:	
Date:	
Start Time:	
End Time:	

	Length of trip		Fare (Entire Vehicle)	Number of Passengers	Fare (Single Passenger)	Fare (Single Passenger: one year ago)
	Hours	Minutes				
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

APPENDIX 3: INSTRUMENTS

3.8 PAID PASSENGER SURVEY – PASSENGER CARS AND TRUCKS

Survey Number: KF2009PASS

Passenger Cars and Trucks:
This instrument excludes buses and taxis.

	Name	Signature	Date (M/D/Y)	ID Code
Enumerator				
Survey Manager				
Data Entry				

Location Description:	
Destination (circle one):	**Keshim or Faizabad**
KM Number:	
GPS Point:	
Date:	
Start Time:	
End Time:	

	Length of trip		Fare (Entire Vehicle)	Fare (Single Passenger)	Fare (Single Passenger: one year ago)	True Destination
	Hours	Minutes				
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

APPENDIX 3: INSTRUMENTS

3.9 DISTRICT AGRICULTURE KEY INFORMANT INTERVIEW

Survey: KF2009DADKI

IRP Keshim-Faizabad Road Baseline Survey:

District Agricultural Key Informant Interview

A1	**Village/City Identification**	
A2	**District Identification**	
A3	**Address**	
A4	**Closest GPS Point**	

		Name	Signature	Date (M/D/Y)	ID Code
A5	Enumerator				
A6	Survey Manager				
A7	Data Entry				

		Result Code	Enter Result Code	Start Time	End Time	Date (M/D/Y)
A8	First Visit	Fully conducted……..…..1				
		Partially conducted……...2				
		Not conducted for security reasons…3				
		Come-Back…..4				
		Unavailable…..5				
		Refusal…….....6				
A9	Second Visit	Fully conducted……..…..1				
		Partially conducted……...2				
		Not conducted for security reasons…3				
		Come-Back…..4				
		Unavailable…..5				
		Refusal…….....6				

[At this point, please begin the interview by saying]

Good Afternoon, my name is _____. I am from the company that is constructing the Keshim-Faizabad Road. As part of this project, we are conducting a survey that asks important questions about agricultural products in your district. The results will be used to determine how the road will potentially impact agriculture along the road.

Participation in this survey is completely voluntary and all information will be treated anonymously. Your responses will be combined with those of other respondents and any personal information will not be used for this study. If we should come to any question you don't want to answer, please let me know and I will go on to the next question. You can also stop the survey at any time. However, we hope you will participate in the survey since your information is important to us. The results will be used to better understand how improved roads impact communities like yours.

At this time, do you want to ask me anything about the survey? *[If asked, the survey will take approximately 30 minutes]*

B1. May I begin now? Yes……..…..1 No……...2 ***[Enter code and skip to F5]***
[Enter Code]

C1. Please tell me the primary agricultural crops cultivated in this district, starting with those of highest volume. Please describe up to five.	**C2**. Please tell me the primary cash crops cultivated in this district, starting with those of highest volume. Please describe up to five.	**C3.** How much _____ did the district grow during the last 12 months?		**C4.** What was the total value of _____ sales during the last 12 months?	**C5**. During the last 12 months, what was the total value of _____ sales in markets beyond the Keshim–Faizabad corridor?
[Enter Description]	***[Enter Description]***	***[Enter Quantity]***	***[Enter Unit]***	***[Enter in Afs]***	***[Enter in Afs]***
1.	**1.**				
2.	**2.**				
3.	**3.**				
4.	**4.**				
5.	**5.**				

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

C6. What are the most important markets for cash crops within the Keshim–Faizabad corridor? Please list up to five.	**C7.** What are the most important markets for cash crops outside of the Keshim–Faizabad corridor? Please list up to five.
[Enter names of Cities/Towns]	***[Enter names of Cities/Towns]***
1.	**1.**
2.	**2.**
3.	**3.**
4.	**4.**
5.	**5.**

D1. Please tell me the primary crops imported into this district, starting with those of highest volume. Please describe up to five.	**D2.** What is the primary place of origin for _____? ***[List place of origin for each crop. Indicate whether this is a province, district, or city/town, and enter the country.]***			**D3.** What was the total value of _____ sales during the last 12 months?
[Enter Description]	***[Enter Place of Origin]***	***[Enter Province, District, or City]***	***[Enter Country]***	***[Enter in Afs]***
1.				
2.				
3.				
4.				
5.				

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

E1. What percentage of farmers uses fertilizer? ***[Do Not Read]*** 91-100%.....1 81-90%.....2 71-80%.....3 61-70%.....4 51-60%.....5 41-50%.....6 31-40%.....7 21-30%.....8 11-20%.....9 1%-10%.....10 0%.....11	**E2.** What percentage of farmers uses pesticides? ***[Do Not Read]*** 91-100%.....1 81-90%.....2 71-80%.....3 61-70%.....4 51-60%.....5 41-50%.....6 31-40%.....7 21-30%.....8 11-20%.....9 1%-10%.....10 0%.....11	**E3.** What is the biggest impediment to farmers using fertilizers and pesticides? ***[Read List]*** Don't understand the value.....1 Don't know how to properly apply it.....2 Attachment to traditional ways of farming.....3 Inadequate access to supply.....4 Too Expensive.....5 Other (Specify_____).....6	**E4.** Are there government programs that provide subsidies for fertilizer and pesticides? ***[Do Not Read]*** Yes.....1 No.....2 ***[Skip to F1]***	**E5.** How much of a subsidy does the government provide for fertilizer? ***[Do Not Read]*** 91-100%.....1 81-90%.....2 71-80%.....3 61-70%.....4 51-60%.....5 41-50%.....6 31-40%.....7 21-30%.....8 11-20%.....9 1%-10%.....10 0%.....11	**E6.** What percentage does the Government of Afghanistan reduce the price for pesticide? ***[Do Not Read]*** 91-100%.....1 81-90%.....2 71-80%.....3 61-70%.....4 51-60%.....5 41-50%.....6 31-40%.....7 21-30%.....8 11-20%.....9 1%-10%.....10 0%.....11
[Enter Code]	***[Enter Code]***	***[Enter Code]***	***[Enter Code]***	***[Enter Code]***	***[Enter Code]***

[Answer Codes:]
Don't Know.....-777
Not Applicable... -888
Refuse to Answer....-999

F1. In your opinion, in rank of order of importance, what are the three greatest impediments to increased agricultural productivity for this district? ***[Read List]*** Ignorance of effective farming techniques..1 Inadequate use of farming technology……2 Inadequate access to farming technology…3 Inadequate access to markets…….....4 Inadequate irrigation systems…….…….....5 Lack of agricultural credit ...…….....6 Land ownership problems…...……7 Poor government policy/institutions.…….8 Other (Specify_____)…...……9	**F2.** In your opinion, in rank of order of importance, what are the three greatest impediments to the growth of commercial agriculture? ***[Read List]*** Low productivity of farms……..……1 Land plots too small……..2 Inadequate market knowledge……...3 Poor transport infrastructure…..……4 Political instability of region…….5 Inadequate access to markets…..…...6 Unfair competition from outside markets……...…7 Lack of agricultural credit..…….....8 Poor government policy/institutions..9 Other (Specify_____)…...…..10	**F3.** Describe the most important initiatives that your department is undertaking to strengthen the agricultural sector. Please describe up to three. ***[Write down the response. Clarify if needed.]***	**F4.** In your opinion, how will the Keshim–Faizabad Road improvement affect the agricultural economy of your district? ***[Write down the response. Clarify if needed.]***	**F5.** ***[END SURVEY]*** ***[Please say]*** **This concludes our survey. Thank you for your participation!**
[Enter Code]	***[Enter Code]***	**1.** _____ **2.** _____ 3.		
1.	**1.**			
2.	**2.**			
3.	**3.**			

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

APPENDIX 3: INSTRUMENTS

3.10 VILLAGE ELDER SURVEY

Survey: KF2009SD____

IRP Keshim – Faizabad Road Baseline Survey: Settlement/Demographic (Village Elder) Interview

A1	**Village/City Identification**	
A2	**District Identification**	
A3	**KM Along the Road**	
A4	**GPS Point**	

		Name	Signature	Date (M/D/Y)	ID Code
A5	Enumerator				
A6	Survey Manager				
A7	Data Entry				

		Result Code	Enter Result Code	Start Time	End Time	Date (M/D/Y)
A8	First Visit	Fully conducted……..1				
		Partially conducted……..2				
		Not conducted for security reasons…3				
		Come-Back…….....4				
		Unavailable…….....5				
		Refusal…….....6				
A9	Second Visit	Fully conducted……..1				
		Partially conducted……..2				
		Not conducted for security reasons…3				
		Come-Back…….....4				
		Unavailable…….....5				
		Refusal…….....6				

[At this point, please begin the interview by saying]

My name is …… and I came here on behalf of the company that is constructing the KF Road. I am here to ask you some questions about your community and how the road is affecting your lives.

This survey is designed to acquire information from village leaders about their local communities. We are very kindly requesting your participation in this survey and hope you will answer our questions.

Now, if you have any questions regarding this survey please let me know.

[If asked, the survey will take approximately 20 minutes.]

B1. May I begin now? Yes……..1 No……..2 ***[Enter code and skip to I8]***
[Enter Code]

C1. *[Please say]* **Now, I would like to ask you some general questions about your community.**	**C2.** How many houses are there in the village?	**C3.** What is the total population of men and women in the village?	**C4.** Is this village supplied with electricity? *[Do Not Read]* Yes……..…..1 No……..…..2 *[Enter code and skip to C6]*	**C5.** On average, how many hours per day does the village receive electricity?	**C6.** How far is the village from the Keshim–Faizabad Road? *[If less than one kilometer, enter "0"]*	**C7.** What mode of transportation do most villagers typically use to access the Keshim-Faizabad road? *[Read List]* Motorized Vehicle……1 Bicycle……..2 Donkey, Mule, Horse...3 Walk…….4 Other (Specify____)….5	**C8.** With this mode of transportation, how long does it take to get to the Keshim–Faizabad Road on a typical trip?	
	[Enter Number]	*[Enter Number]*	*[Enter Code]*	*[Number of Hours]*	*[Enter KMs]*	*[Enter Code]*	*[Enter Hours and Minutes]*	
							a. Hours	*b. Minutes*

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

D1. What kind of access road is there to the Keshim–Faizabad road? ***[Read List]*** Dirt road ……..…..1 Gravel road ……...…...2 Paved road...…….....….3 Other (Specify_____)....4	**D2.** Do passenger vehicles stop in this village? ***[Do Not Read]*** Yes……..…..1 No…….....…...2 ***[SKIP to D4]***	**D3.** How many times do passenger vehicles stop in this village per _____?		**D4.** From this village, how much does it cost to go to Keshim in a _____?		**D5.** From this village, how much does it cost to go to Faizabad in a _____?
[Enter Code]	***[Enter Code]***	***[Enter Number]***		***[Enter Code]***		***[Enter Code]***
		1. Day		**1. Car**		
		2.Week		**2. Minibus**		
		3. Month		**3. Public Bus**		

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

E1. Does the village have a primary school? ***[Do Not Read]*** Yes……..…...…1 ***[SKIP to E6]*** No……..…...….2	**E2**. How far is the closest primary school to the village? ***[If less than one kilometer, enter "0"]***	**E3.** What mode of transportation do most villagers typically use to access the closest primary school? ***[Read List]*** Motorized Vehicle…..1 Bicycle……..…..……..2 Donkey, Mule, Horse...3 Walk……..……..4 Other (Specify_____)....5	**E4.** With this mode of transportation, how long does it take to get to the closest primary school on a typical trip? [One-way]		**E5.** Do you have to use the Keshim–Faizabad Road to get to the primary school? ***[Do Not Read]*** Yes……...…...1 No……...**2**	**E6.** Does the village have a secondary school? ***[Do Not Read]*** Yes……..……1 ***[Skip to F4]*** No……..….2	**E7.** How far is the closest secondary school to the village? ***[If less than one kilometer, enter "0"]***
[Enter Code]	***[Enter KMs]***	***[Enter Code]***	***[Enter Hours and Minutes]***		***[Enter Code]***	***[Enter Code]***	***[Enter KMs]***
			a. Hours	***b. Minutes***			

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

F1. What mode of transportation do most villagers typically use to access the closest secondary school? ***[Read List]*** Motorized Vehicle……1 Bicycle……...2 Donkey, Mule, Horse...3 Walk……4 Other (Specify_____).....**5**	**F2.** With this mode of transportation, how long does it take to get to the closest secondary school on a typical trip? [One-way]		**F3.** Do you have to use the Keshim–Faizabad Road to get to the secondary school? ***[Do Not Read]*** Yes……....……1 No……....…….2	**F4.** Does the village have a public hospital? ***[Do Not Read]*** Yes……..……1 ***[Skip to G3]*** No……..…….2	**F5**. How far is the closest public hospital to the village? ***[If less than one kilometer, enter "0"]***	**F6.** What mode of transportation do most villagers typically use to access the closest public hospital? ***[Read List]*** Motorized Vehicle……1 Bicycle……..2 Donkey, Mule, Horse…...3 Walk……4 Other (Specify_____)…..**5**
[Enter Code]	***[Enter Hours and Minutes]***		***[Enter Code]***	***[Enter Code]***	***[Enter KMs]***	***[Enter Code]***
	a. Hours	***b. Minutes***				

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

G1. With this mode of transportation, how long does it take to get to the public hospital on a typical trip? [One-way]		**G2.** Do you have to use the Keshim–Faizabad Road to get to the public hospital? ***[Do Not Read]*** Yes……...……1 No……...2	**G3.** Does this village have a clinic? ***[Do Not Read]*** Yes……..……1 ***[SKIP to H1]*** No……...…..……2	**G4.** How far is the closest clinic to the village? ***[If less than one kilometer, enter "0"]***	**G5.** What mode of transportation do most villagers use to access the closest clinic? ***[Read List]*** Motorized Vehicle.…1 Bicycle……..…..2 Donkey, Mule, Horse..3 Walk……4 Other (Specify___)…5	**G6.** With this mode of transportation, how long does it take to get to the closest clinic on a typical trip? [One-way]		**G7.** Do you have to use the Keshim–Faizabad Road to get to the closest clinic? ***[Do Not Read]*** Yes……...…1 No……..….2
[Enter Hours and Minutes]		***[Enter Code]***	***[Enter Code]***	***[Enter KMs]***	***[Enter Code]***	***[Enter Hours and Minutes]***		***[Enter Code]***
a. Hours	***b. Minutes***					***a. Hours***	***b. Minutes***	

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

H1. Please tell me which types of crops are cultivated in your village mainly for sale in the market. (Describe up to four)	**H2.** From this village, how far away is the market where _____ is sold?	**H3.** Do you have to use the Keshim–Faizabad Road to get to the market where _____ is sold? ***[Do Not Read]*** Yes……..……1 No……..…….2	**H4.** What mode of transportation do most villagers typically use to access the market where _____ is sold? ***[Read List]*** Motorized Vehicle……..1 Bicycle…….....2 Donkey, Mule, Horse…..3 Walk……..…..4 Other (Specify_____)…..5	**H5.** With this mode of transportation, how long does it typically take to get to the market where _____ is sold? [One-way]	
[Enter Description of crop]	***[Enter KMs, if less than one enter "0"]***	***[Enter Code]***	***[Enter Code]***	***[Enter in Hours and Minutes]***	
				a. Hours	***b. Minutes***
1.					
2.					
3.					
4.					

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

11. ***[Please Read]*** **Now I would like to ask you some questions about your personal travel and perspective.**	**12.** How many times did you travel to Keshim city in the last _____?		**13.** How many times did you travel to Faizabad city in the last _____?	**14.** How many weddings did you attend in the last _____?	**15.** What is the distance of the farthest wedding you traveled to attend in the last year?
	[Enter Number]		***[Enter Number]***	***[Enter Number]***	***[Enter KMs]***
	1. Week				
	2. Month				
	3. Year				

16. Please describe from your perspective the three most important priorities for improving the livelihoods of those who live in this village. ***[List the priorities as they are given. Clarify if needed.]***	**17.** Please describe how you think the road improvement will affect the village once it is complete. ***[Clarify if needed.]***	**18.** ***[END SURVEY]*** **This concludes our survey. Thank you for your participation!**
[Enter Description of priorities]	***[Enter Response]***	
1.		
2.		
3.		

[Answer Codes:]
Don't Know…..-777
Not Applicable… -888
Refuse to Answer….-999

APPENDIX 3: INSTRUMENTS

3.11 CITY MANAGER KEY INFORMANT INTERVIEW

Survey: KF2009CM____

IRP Keshim-Faizabad Road Baseline Survey: City Manager

A.1	District Identification			
A.2	City identification			
A.3	Address			
A.4	Survey Number			

I. SURVEY INFORMATION

B. FIELD TEAM					
		Name	**Signature**	**Date (M/D/Y)**	**ID Code**
B1	Enumerator				
B2	Survey Manager				
B3	Data Entry				

[At this point, please begin the interview by saying:]

"Good Afternoon, my name is _____. I am from the company that is constructing the Keshim-Faizabad Road, which is funded by the United States Agency for International Development with cooperation with the Government of Afghanistan. As part of this project, we are conducting a survey that asks important questions about your city. The purpose of this survey is to collect information about the city's current economic life is like and how this road will impact the economy.

Please be aware that participation in this survey is completely voluntary and all information will be treated anonymously and be kept in the strictest confidence. Your responses will be combined with those of other respondents and any personal information will not be used for this study. If we should come to any question you don't want to answer, please let me know and I will go on to the next question. You can also stop the survey at any time. However, we hope you will participate in the survey since your information is important to us. The results will be used to better understand how improved roads impact communities like yours.

At this time, do you want to ask me anything about the survey? [If asked, the survey will take approximately 30 minutes]

May I begin now?"

[Respondent Agrees to the interview]

Yes.....1
No……..…….. 2 **[End Interview]**

	ENTER CODE

C. RESPONDENT IDENTIFICATION
C1. Respondent Name
C2. Respondent's Job Title
C3. Language of Interview

1. Economic and Living Status of Urban Population

In your opinion, is the city's economy growing stronger or weaker? Explain. How many people in the city would you consider "poor" and how many would you consider "well off?" What is your definition of the "poor" and the "well off" (i.e., what are the factors that identify a person as "poor" or "well off"?)? Why do you think the differences between the better-off and the poor exist? In your opinion, what causes poverty or what makes people better off? What can the government do to better alleviate poverty?

2. Economic Opportunity

How difficult is it to find a job in the city? How do current wages compare to household expenses? In your opinion, what needs to be done in order for there to be better economic opportunities? What are the greatest inhibitors to growth? Are there things the government could do to improve the economic life of the city? What programs of the government do you think are having the most positive impact? Are there sufficient economic opportunities for women? Are the economic opportunities for women improving or getting worse?

3. Impact of the Road Improvement for City Development

How important is the road for the city's economy? How will it impact trade within Afghanistan? What markets will the improved road increase access to and how will this affect businesses located in the city? How will the improved road affect trade with Pakistan? Will the road improvements lower travel costs (passenger and freight)? What determines current pricing for transport (government, drivers' associations, market)? Are there currently in tolls levied on road use? Once the road is complete will there be any levies for road use? Will the improved road have any impact (positive or negative) on the insurgency? Explain

5. Problems and Priorities for Development in the City

What are the biggest problems and concerns of your city? How are these problems and difficulties connected with the road condition and transport? How do you cope with these difficulties? In your opinion, how can these problems be solved? What do you think should be the priorities for the development of your city and the improvement of the people's living the city? What needs to be done to improve the lives of women? Any suggestions or recommendations?

6. Government and Aid Assistance

Are you aware of any programs by the government, donors (US, NATO, World Bank, etc.), or NGOs that have tried to help improve economic life in the city in the past five years? Have there been programs focused on improving the welfare of women? Describe some of these. How successful were they? Explain. How could such assistance be more effectively used?

7. Other Comments of the Participant Recorded During the Interview

APPENDIX 3: INSTRUMENTS

3.12 FOCUS GROUP GUIDE – VILLAGE MEN

Survey: KF2009VFG____
IRP Keshim - Faizabad Focus Group Discussion: Village Men

A.1	District Identification	
A.2	City identification	
A.3	Date	
A.4	Facilitator	
A.5	Recorder	
A.6	Time	Start:
		Finish:

Participant Roster

#	Name	Age	Gender	Occupation
1				
2				
3				
4				
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6				
7				
8				
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12				
13				
14				
15				

[At this point, please begin the focus group discussion by saying:]

"Good Afternoon, my name is _____. I am working on behalf of the company that is constructing the Keshim-Faizabad Road, which is funded by the United States Agency for International Development in cooperation with the Islamic Republic of Afghanistan. As part of this project, we are conducting this group discussion, with the permission of your village leaders, I will ask important questions about your city's business environment and how transport issues affect the city's commercial prospects. I would like to stress that the purpose of this meeting is to hear your points of view on these important issues. The results will be used to better understand how improvements in the Keshim-Faizabad Road will impact businesses like yours along the road. While the information collected here and at other meetings along the road, will be included in the study, it can in no way be construed a promise that the United States Agency for International Development or the Islamic Republic of Afghanistan will respond to the recommendations you make in the course of this conversation.

"Please be aware that participation in this discussion is completely voluntary and your comments will be kept in the strictest confidence. Your responses will be combined with those of other respondents and any personal information will not be used for this study.

At this time, do you want to ask me anything about the discussion? **[If asked, the discussion will take approximately 1 hour]**

May I begin now?"

[Once participants signal their assent, proceed with the discussion.]

1. Economic Overview

What are the primary economic sectors of this city? Which sectors are experiencing the most growth? Why do you think these sectors are growing? Which sectors have the greatest potential for growth? What would help these sectors grow? Where are the most significant markets for goods produced in this city and region? What kinds of goods are sold in markets like Kabul and Kandahar? What percentage of commerce here is associated with trade with Pakistan? Describe. What kinds of goods are imported from there? What goods have been successfully exported there?

2. Economic Obstacles

What are the biggest obstacles facing the city in terms of its economic development? Is the government adequately supportive of the commercial sector? Explain. What policies need to be introduced or changed to help stimulate the business environment? What kinds of corruption do you face in the operation of your business? How does corruption impact the success of your business?

3. Transport and Commerce

How do the current transport routes affect the markets you buy and sell from? How will improvements to the Ghazni– Khost road affect the kinds of markets you use? In what other ways will the road's improvement affect your businesses? How will it affect the prices of goods brought in from other regions? How will it affect transit routes for trade with Pakistan?

4. Cost of Transport

How do businesses transport the goods they buy or sell? How many businesses have their own vehicles to transport their goods? How many businesses use private transport companies? In your opinion, are transport prices set competitively? If not, how are they set? Truckers' associations? Government? Do you insure goods that you transport? Why or why not?

5. Current Aid to Businesses

Are you aware of any programs by the government or donors (US, NATO, World Bank, etc.) that have tried to help the business environment in the past five years? Describe some of these. How successful were they? Explain.

6. Priorities for Commercial Development

In your opinion, what do you think should be the priorities for the development of commerce in this city? **[List items, and encourage group to rank items in the order of importance.]** Any suggestions or recommendations?

7. Other Comments of the Participants Recorded During the Focus Groups Discussions

APPENDIX 3: INSTRUMENTS

3.13 FOCUS GROUP GUIDE – URBAN MEN

Survey: KF2009DADURBAN

IRP Keshim - Faizabad Focus Group Discussion: Urban

A.1	District Identification	
A.2	City identification	
A.3	Date	
A.4	Facilitator	
A.5	Recorder	
A.6	Time	Start:
		Finish:

Participant Roster

#	Name	Age	Gender	Occupation
1				
2				
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[At this point, please begin the focus group discussion by saying:]

"Good Afternoon, my name is _____. I am working on behalf of the company that is constructing the Keshim – Faizabad Road, which is funded by the United States Agency for International Development in cooperation with the Islamic Republic of Afghanistan. As part of this project, we are conducting this group discussion, with the permission of your village leaders that asks important questions about economic life in this city and how transport issues affect the city's welfare. I must underline that the purpose of this meeting is to hear your points of view on these important issues. The results will be used to better understand how improvements in the Keshim – Faizabad Road will impact villages like yours along the road. While your viewpoints will be included in the study, we can in no way promise that the United States Agency for International Development or the Islamic Republic of Afghanistan will respond to the recommendations you make in the course of this conversation.

"Please be aware that participation in this discussion is completely voluntary and your comments will be kept in the strictest confidence. Your responses will be combined with those of other respondents and any personal information will not be used for this study.

At this time, do you want to ask me anything about the discussion? [If asked, the discussion will take approximately 1 hour]

May I begin now?"

[Once participants signal their assent, proceed with the discussion.]

1. Economic and Living Status of Urban Population

In your opinion, is the city's economy growing stronger or weaker? Explain. How many people in the city would you consider "poor" and how many would you consider "well off?" What is your definition of the "poor" and the "well off" (i.e., what are the factors that identify a person as "poor" or "well off"?)? Why do you think the differences between the better-off and the poor exist? In your opinion, what causes poverty or what makes people better off?

2. Economic Opportunity

How difficult is it to find a job? How do current wages compare to household expenses? In your opinion, what needs to be done in order for there to be better economic opportunities? Are there things the government could do to improve the economic life of the city? Are there sufficient economic opportunities for women? Are the economic opportunities for women improving or getting worse?

3. Major Expenditure Items

What are your major expenditures? List items, and rank in the order of importance. What impact, if any, do you think the road will have on these expenditures? Why?

4. Impact of the Road Improvement for City Development

How important is the road for you and your living? What will the major use of the road be for people living in the city (to go see family, to travel to places of work, etc.)? If travel on the road were cheaper, would you use it more? How will the road improvement affect the city's economy? Are there negative impacts that the road's improvement could have on the city? Explain. For Women Survey: How will the road impact women in particular? In what way will it help the lives of women? Are there ways in which the road could negatively impact women? What would need to happen so that women can use the road more effectively, i.e., separate hotels, restaurants, facilities for children, etc.

5. Problems and Priorities for Development in the Village

What are the biggest problems and concerns of your city? How are these problems and difficulties connected with the road condition and transport? How do you cope with these difficulties? In your opinion, how can these problems be solved? What do you think should be the priorities for the development of your city and the improvement of the people's living the city? What needs to be done to improve the lives of women? Any suggestions or recommendations?

6. Government and Aid Assistance

Are you aware of any programs by the government, donors (US, NATO, World Bank, etc.), or NGOs that have tried to help improve economic life in the city in the past five years? Have there been any programs focused on improving the welfare of women? Describe some of these. How successful were they? Explain.

7. Other Comments of the Participants Recorded During the Focus Groups Discussions

APPENDIX 3: INSTRUMENTS

3.14 FOCUS GROUP GUIDE – URBAN WOMEN

Survey: KF2009DAD_URBANWOMEN

IRP Keshim-Faizabad Focus Group Discussion:

Urban (Women)

A.1	District Identification	
A.2	City identification	
A.3	Date	
A.4	Facilitator	
A.5	Recorder	
A.6	Time	Start:
		Finish:

Participant Roster

#	Name	Age	Gender	Occupation
1				
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[At this point, please begin the focus group discussion by saying:]

"Good Afternoon, my name is _____. I am working on behalf of the company that is constructing the Keshim-Faizabad Road, which is funded by the United States Agency for International Development in cooperation with the Islamic Republic of Afghanistan. As part of this project, we are conducting this group discussion, with the permission of your CDOs that asks important questions about economic life in this city and how transport issues affect the city's welfare. We must underline that the purpose of this meeting is to hear your points of view on these important issues. The results will be used to better understand how improvements in the Keshim-Faizabad Road will impact villages like yours along the road. While your viewpoints will be included in the study, we can in no way promise that the United States Agency for International Development or the Islamic Republic of Afghanistan will respond to the recommendations you make in the course of this conversation.

"Please be aware that participation in this discussion is completely voluntary and your comments will be kept in the strictest confidence. Your responses will be combined with those of other respondents and any personal information will not be used for this study.

At this time, do you want to ask me anything about the discussion? **[If asked, the discussion will take approximately 1 hour]**

May I begin now?"

[Once participants signal their assent, proceed with the discussion.]

1. Economic and Living Status of Urban Population

In your opinion, is the city's economy growing stronger or weaker? Explain. How many people in the city would you consider "poor" and how many would you consider "well off?" What is your definition of the "poor" and the "well off" (i.e., what are the factors that identify a person as "poor" or "well off"?)? Why do you think the differences between the better-off and the poor exist? In your opinion, what causes poverty or what makes people better off?

2. Economic Opportunity

How difficult is it to find a job? How do current wages compare to household expenses? In your opinion, what needs to be done in order for there to be better economic opportunities? Are there things the government could do to improve the economic life of the city? Are there sufficient economic opportunities for women? Are the economic opportunities for women improving or getting worse?

3. Major Expenditure Items

What are your major expenditures? List items, and rank in the order of importance. What impact, if any, do you think the road will have on these expenditures? Why?

4. Impact of the Road Improvement for City Development

How important is the road for you and your living? What will the major use of the road be for people living in the city (to go see family, to travel to places of work, etc.)? If travel on the road were cheaper, would you use it more? How will the road improvement affect the city's economy? Are there negative impacts that the road's improvement could have on the city? Explain. For Women Survey: How will the road impact women in particular? In what way will it help the lives of women? Are there ways in which the road could negatively impact women? What would need to happen so that women can use the road more effectively, i.e., separate hotels, restaurants, facilities for children, etc.

5. Problems and Priorities for Development in the Village

What are the biggest problems and concerns of your city? How are these problems and difficulties connected with the road condition and transport? How do you cope with these difficulties? In your opinion, how can these problems be solved? What do you think should be the priorities for the development of your city and the improvement of the people's living the city? What needs to be done to improve the lives of women? Any suggestions or recommendations?

7. Government and Aid Assistance

Are you aware of any programs by the government, donors (US, NATO, World Bank, etc.), or NGOs that have tried to help improve economic life in the city in the past five years? Have there been any programs focused on improving the welfare of women? Describe some of these. How successful were they? Explain.

8. Other Comments of the Participants Recorded During the Focus Groups Discussion