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BAMYAN-DUSHI ROAD
SOCIO-ECONOMIC BASELINE STUDY
FINAL REPORT

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Acronyms

ADB	: Asian Development Bank
ADT	: Average Daily Traffic
Afs	: Afghani(s). Afghan currency
ANA	: Afghan National Army
ANP	: Afghan National Police
ANDS	: Afghanistan National Development Strategy
ARAO	: Afghanistan Rehabilitation and Agricultural Organization
AREU	: Afghanistan Research and Evaluation Unit
CDC	: Community Development Committee
CSO	: Central Statistical Office
CIDA	: Canadian International Development Agency
DoT	: Department of Transportation
EST	: Evaluation Study Team
FAO	: Food and Agricultural Organization
GIS	: Geographical Information System
GoIRA	: Government of Islamic Republic of Afghanistan
HAPO	: Helping Afghan Farmers Association
IRD	: International Relief and Development
ISAF	: International Security Assistance Force
MDG	: Millennium Development Goal
MAIL	: Ministry of Agriculture, Irrigation and Livestock
MPW	: Ministry of Public Works
MRRD	: Ministry of Rural Rehabilitation and Development
M&E	: Monitoring and Evaluation
MT	: Metric Ton
NRAP	: National Rural Access Program
NRVA	: National Risk and Vulnerability Assessment
NGO	: Non-Governmental Organization
OIEE	: Office of Infrastructure, Engineering and Energy
OPPD	: Office of Program and Project Development
PDC	: Provincial Development Council
PRT	: Provincial Reconstruction Team
REFS	: Reconstruction of Economic Facilities and Services
SOW	: Scope of Works
SSPSRL	: Support to Strategic Planning for Sustainable Rural
ST	: Study Team
SDLR	: Social Development and Legal Rights
SUPPORT	: Services and Program and Project Offices for Results Tracking
UNOPS	: United Nations Office for Project Services
USAID	: United States Agency for International Development
US$	: United States Dollar
WB	: World Bank
WFP	: World Food Organization
ZOI	: Zone of Influence

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EXECUTIVE SUMMARY

This report establishes the baseline estimates for social and economic indicators in the Bamyan to Dushi Road's Zone of Influence (ZOI), a 30-kilometer corridor bracketing the 160 kilometers road connecting the cities of Bamyan and Dushi. The baseline estimates establish initial values of indicators as of July 2009 that will show how the improvement of the road influences social and economic development in the ZOI over time. The degree and pace of change due to this project road improvement will become clear through comparing the baseline values to data to be collected in follow-on surveys in 2012.

To gather the data for the socio-economic baseline indicators, the Study Team developed seven sets of questionnaires for households, settlement demography, market overview, shopkeepers, freight transport companies, drivers, and traffic counts. The Study team interviewed the following -

- 219 households in 62 ZOI-villages,
- 74 households in 8 control villages,
- 50 shop keepers in 8 markets,
- 50 passengers,
- 50 drivers,
- 13 private vehicle owners, and
- 10 freight companies owners and/or representatives.

Traffic counts were carried out simultaneously at three sites (start, middle and end) for seven calendar days from 6 am to 6 pm. The study team also conducted focus group discussions (FGD) in the ZOI and carried out key informant interviews with government departments and development agencies. Secondary sources of information were gathered primarily through library works in CSO and AREU.

The baseline data that were generated under this study were broken into five categories: traffic count and transport indicators, social indicators, trade indicators, agricultural indicators, and security indicators. In addition, key issues and people's priority demand beyond the road rehabilitation in the ZOI were also addressed that might generate higher degrees of impact of the project road. Below we summarize important findings from each of these categories.

Traffic count and Transport Indicators: Only Microbuses travelled over the full length of the project road, while buses and freight vehicles travelled on different sections. Average daily traffic frequency on the project road at the start up point in Dushi was 386 vehicles per day the corresponding figure at the end point location in Bamyan was 590.

At middle point location near Karimak, traffic counts indicated that 293 vehicles/day used the project road. Only microbuses travelled the full length of the project road. Higher volume of traffic at two ends of the project road and lower volume at the middle also indicated that all vehicles were not travelling the full length of the road from Dushi to Bamyan. Thus, it is highly likely that the traffic counts were picking up high local traffic, and the reader is cautioned in interpreting the traffic count results.

Passengers' travel time by micro-bus took 10-12 hours to cover the project length. Ticket price was 800 afs ($16) / passenger for travelling from Bamyan to Dushi by micro-bus. Freight services do not cover the whole length of the project road because of the non-passability conditions at different points.

Freight vehicles were found at different ranges on the project road, and their movements were within limited scale. On an exercise it was worked out that average, freight rate was US$ 0.78/MT/km. This worked out to about 6,240 afs ($124.8)/MT from Bamyan to Dushi. It is anticipated by the freight owners that on improvement of the road, freight costs will drop down by 75 percent per ton.

Social Indicators: Total population in the ZOI was estimated to be 146,076, of which 71,440 were male and 74,636 were female. They would receive potential benefits on rehabilitation of the project road through increases in income and access to various economic and social facilities. At present, average monthly individual income in the ZOI was 4,750 ($95) and average monthly household income was 9,403 afs ($188). The average income earnings were skewed by relatively higher incomes in the uppermost quintile. All the four bottom quintiles' income bands fell below $1 per capita indicating at least 80% of the households lie below poverty line in terms of income measurement.

With respect to household assets, 85 percent of households had a radio, 22 percent had a bicycle and 3 percent owned cars. Televisions were surprisingly widespread at 29 percent of households. With respect to access and uptake of education, 41.45 percent of school-aged males and 32.01 percent of school-aged female children in the households sampled attended school. With respect to health care access, average distance from the households to the nearest health centre was 6.77 kms. With regard to respondents' estimate for travel times to maternal child clinics, the average for all responses was about 2.33 hours. More than 95 percent of the sample respondents said that they used the Bamyan-Dushi Road to access health care and maternal child clinics. Respondents have expressed that this travel time parameter will diminish with road rehabilitation as automobile traffic becomes more common.

Trade Indicators: Agricultural goods, dry goods, textiles and garments were the major group of commodities in the markets. Most of the markets had 1-2 pharmaceutical shops. On an average the amount invested per shop in the sample market was 53,194 afs ($1063.88), and average daily sales revenue was 1,305 afs ($26))/shop. A wide range of both local and imported goods are available through these shops. The average service area for the shops was 4.5 kilometers – basically, their village and its surrounding area, though more than 52 percent of the shops covered their service area up to 1 km. With respect to the usefulness of the Bamyan-Dushi road to the traders and the shop operators, it was reported that over 90 percent of the village shops had their goods arrived, at least in part, along the project road. For the majority, these goods were brought by either horse or donkey cart as the road condition was very bad. Access to market by the villagers was mostly on foot.

Agricultural Indicators: The 219 households surveyed reported a total **irrigated land** area of 585.70 jeribs (116.00 hectares), which works out to 2.67 jeribs (0.53 hectare) per household. 60% of the respondent households raised crops. Most of the farmers had **irrigated land area**, and proportions of irrigated and **non-irrigated** area were 73.19

percent and 26.81 percent respectively. Crops such as corn and wheat were almost completely consumed within producing households. Potatoes are extensively grown by almost all the farms for household use and as a marketed product. Farming practices were mixed with respect to technology. Out of 131 respondents, only 42 (32.06 percent) of the sampled farmers used tractors and hand tools at some point in their cultivation of fields. Farmers and villagers anticipate that on rehabilitation of the road, tractors will be become increasingly available in the study area and many tractor owners would be able to rent out their services to farmers for a fee.

Security Indicators: Illegal Armed Groups (IGEs), and Anti-Government Elements (AGEs) still exist in the two provinces, land conflicts usually form around ethnic divisions between Tajiks and Hazaras. Deh Salah and Puli Hesar are the districts known for drug-trafficking – it has gone worse than before. There are threats even on building the road especially in Tala Barfak area. The spill-over effect this could have on the project road.

KEY ISSUES - PRIORITY DEMAND AND RECOMMENDATIONS

The security situation of the project road remains stable and access to communities is possible. Anti-government sentiments are rare in this area. However, frequent factional fighting mainly in Anderab District poses a threat for the region. There are also increasing concerns over the stability of provinces bordering Bamyan including Ghor, Wardak and Dai Kundi. There are reportedly threats even on building the road especially in the Tala Barfak area. The spill-over effect of these threats may impact the project road.

The **Potato** of Bamyan is of excellent quality, and production results in a surplus. Every year farmers loose potatoes through spoilage because of lack of adequate transportation and storage facilities. People's top priority is the rehabilitation of the **Bamyan-Dushi road**, followed by construction of more **cold storage facilities**, and development of the **rural roads** that connect village to village and village to the project road.

The findings of this study support the idea that rehabilitating the Bamyan-Dushi Road is likely to generate substantial benefits for the population in the ZOI. To achieve the full effect of the project benefits, the study provides a set of recommendations that include:

- Ensuring security on the project road and in the ZOI
- Constructing more cold storages in the ZOI, and
- Developing rural roads connecting village to village and village to project road.

It is recommended that USAID allocate resources to strengthen security on the project road as a precautionary measure. It is also recommended that USAID allocate resources to develop rural roads (as prioritized by MRRD) and establish more cold storage facilities in the ZOI. Until these are improved benefits derived from the rehabilitation of the project road will be limited.

1. INTRODUCTION

1.1 SOCIO-ECONOMIC OVERVIEW OF THE BAMYAN AND BAGHLAN PROVINCES

The project road, as defined in this report, connects two provinces in Afghanistan - Bamyan in the centre and Baghlan in the north, and as social and economic characteristics of these two provinces will have greater impact on the project road, this section provides an overview of the social and economic characteristics of these two provinces to draw a general conclusion.

Bamyan province lies on the highlands of Afghanistan, and nearly the whole of its area is mountainous or semi-mountainous, while only 1.8 percent of the area is made up of flat lands. The province covers 1.5 percent of the total population of Afghanistan. With its approximately 344,000 inhabitants, it is the 27th most populous province in the country. Approximately 97% of the population lives in rural areas. A typical household in Bamyan on an average has 7 members, and the male-female ratio is almost 50-50, and such a family size is an indicator of a high fertility regime.

The people are primarily Hazara, followed by Tajik, Tatar and Pashtun. Bamyan is the largest province in the Hazarajat region of Afghanistan, and is the cultural capital of the Hazara ethnic group that predominates in the area. The Bamyan province is only a summer area for Kuchi, and no Kuchi stay there during winter. Dari is spoken by 96 percent of the population. Bamyan was the site of an early Buddhist monastery[1]. It is also known for its natural beauty. The Band-e-Amir lakes in western Bamyan province continue to be a tourist destination for Afghans. *Literacy* rates in Bamyan are low, ranging from 0.5 percent, in districts such as Saighan, to 6 percent in Bamyan centre for women and 6 percent in Saighan, to 31 percent in Bamyan centre for men. On an average only 8 percent of the households use safe drinking water, and almost none have safe toilet facilities. Agriculture is the main occupation of the province although much of the land is barren and inaccessible, with acute water shortages, and small landholdings . Demographic pressures are also contributing to the further division of landholdings and the use of more marginal lands. It is estimated that 30 percent of the population in Bamyan is landless and amongst those who do own land the majority own small landholdings of 2-3 geribs. About 86 percent of the population earns a living through agriculture and livestock husbandry. The main crops grown in Bamyan are potato, wheat, barley, and beans. Most fields are 'snow-fed', irrigated by water from the melting snow following winter, or by springs and karezes. *Potato* cultivation in Bamyan Province employs thousands of people and output can top 150,000 tons a year. Around 93 percent of rural households in the province own livestock[2] or poultry. Horticulture is a potentially lucrative area for the province with the production of mainly apple and apricot, but also peach, cheery, walnuts and pears. These fruits grow mainly in Kahmard,

[1] Many statues of Buddha are carved into the sides of cliffs facing Bamyan city. The two most prominent of these statues were standing Buddhas, measuring 55 and 37 meters high respectively, that were the largest examples of standing Buddha carvings in the world . They were probably erected in the 4th or 5th century C.E. They are listed among UNESCO's World Heritage Sites and 100 Most Endangered Sites by the World Monuments Fund.

[2] The most commonly owned livestock are: donkey, cattle, sheep, goats and oxen.

with small orchards in parts of Punjab, Bamyan and Yakawalang. Handicrafts are produced in all districts in Bamyan province, though mostly in Waras, Panjab, and Bamyan centre. Rugs are the most common product, made in more than half of the villages mostly in Waras and Panjab. Jewelry comes in second position followed by shawl making and carpets. Mineral resources are abundant in Bamyan province though not well surveyed. There are coal mines in the district of Kahmard, very significant deposits of Iron Ore in the Hajikak area, marble in Pujnab district, and sulphur deposits at various places.

Baghlan province lies on the main route to the north and Northeastern regions of Afghanistan. Nearly half of the province area is mountainous or semi mountainous terrain while one third of the area is made up of flat land. The province has a total population of around 742,000. Around 80 percent of the population of Baghlan lives in rural districts while 20 percent lives in urban areas. Around 51percent of the population is male and 49 percent is female. A typical household in Bamyan on an average has 6 members. The major ethnic groups living in Baghlan province are Tajiks and Pashtun followed by Hazaras and Uzbeks. Dari is spoken by 70 percent of the population and Pashtu is spoken by 22 percent. Baghlan province also has a population of Kuchi or nomads whose numbers vary in different seasons. The overall literacy rate in Baghlan province is 21 percent. In Baghlan province, on average only 19 percent of households use safe drinking water. On an average only 2 percent of households have access to safe toilet facilities. On an average 15 percent of households in Baghlan province have access to electricity with the majority of these relying on public electricity.

Agriculture is the major source of revenue for 45 percent of households in Baghlan province. The most important field crops grown in Baghlan province include wheat, barley, rice and maize, rapeseeds and flax. The most common crops grown in garden plots include fruit and nut trees (50 percent), vegetables (12 percent) and produce such as grapes, potatoes, beans and alfalfa, clover or other fodder. Rapeseed (15 percent) and wheat (5 percent) are also frequently gown in garden plots in the province. Baghlan is the center of sugar beet production in Afghanistan. Cotton production and cotton manufacturing are also important in the region. Baghlan is both an agricultural and an industrial province, and it is rich with minerals such as gold, coal and uranium. In terms of industry, one textile and one cement factory are working in the Province. The majority of commercial activity in Baghlan is related to trade in agricultural and livestock products. To all extents and purposes small industry is absent in Baghlan and there is only a small production of handicrafts mostly related to rugs in Dushi, Tala wa Barfak and Jolge, and to jewelry in Dushi, Nahrin, Jolge, and Khost va Farang.

The level of economic hardship both in **Bamyan** and **Baghlan** provinces is reasonably high, and the people have been suffering from extensive food insecurity. In spite of that Bamyan province is in an advantageous position in producing a surplus level of potatoes. Bamyan potatoes are of excellent quality and the province has strong potential to produce a lot more. There are complaints about declining profits, mainly because of lack of storage facilities and bad roads. Every year thousands of tons of potatoes in Bamyan province are lost due to lack of facilities where potatoes and seeds can be protected from extreme weather conditions. Poor roads prevent farmers from selling their produce further afield, including abroad. Many parts of Afghanistan, including Kabul, import potatoes from Pakistan. The existing storage facilities in the province are sufficient only to protect 2-3 percent of annual

production. Farmers will stop potato cultivation here unless the problems of storage rooms, transport and marketing are solved. Bamyan has been poppy-free, but this could change if farmers find it too difficult to make a profit from potatoes.

The Bamyan - Dushi road links up the Bamyan province with Kabul and other provinces, and thus more markets for the Bamyan potato will be created as soon as the Bamyan to Dushi road would be completed. It is the crying need of the potato growers and the locality to rehabilitate the Bamyan-Dushi Road as immediately as possible and at the same time they also urge for more cold storage facilities in the project area.

1.2 PROJECT BACKGROUND AND STUDY PURPOSES

Socio-Economic Baseline Study of the Bamyan-Dushi Road has been undertaken as a part of USAID-supported effort on road rehabilitation to restore economic infrastructure in Afghanistan[3]. Parwan-Bamyan & Bamyan-Dushi Roads while connecting with Asphalt Road to connect Kabul will be economically very important as they will link up the eastern portion of the country with western. The Ministry of Public Works (MPW) categories the Bamyan-Dushi Road as a national highway requiring a high level of service because of its strategic importance providing an alternative route from Kabul going north bypassing Salang pass.

Checchi and Company Consulting was assigned to conduct this Socio-Economic Baseline Study of the 160 kilometers Bamyan-Dushi Road under the SUPPORT project[4] to find out existing social and economic conditions before the construction works begin. Applying similar procedure, an impact assessment will be carried out in FY 2012 after the completion of the road. The results from the impact assessment will be compared with baseline study to find out changes in the socio-economic conditions resulted from the construction of the road. The current baseline assessment will show the 2009 findings by 26 indicators.

1.3 REPORT ORGANIZATIONAL PLAN

This report's organizational plan explains how study was carried out and structured in different sections. The report is structured in five sections. As the project road primarily links up between two provinces – Bamyan and Baghlan, the first section of the report provides an overview of the social and economic characteristics of these two provinces. The section also describes the project background and study purposes.

The second section described our approaches and methodologies of the study that provided detail on the context within which the socio-economic indicators were developed and field research that was undertaken to populate them. The indicators themselves were also defined.

[3] The USAID road reconstruction program dates from 2002, under the Reconstruction of Economic Facilities and Services (REFS) program. Over 2,000 kms of primary roads, secondary and urban roads were funded by USAID. USAID, under the Afghanistan Infrastructure Rehabilitation Program (AIRP) and with a budget of over $850 million[3], continues the reconstruction of roads.

[4] Under USAID Contract No. GS-10F-0425M, Task Order No. 306-M-00-07-00502-00

In the third section, findings of the traffic counts were reported and the socio-economic indicator findings were also developed. The indicators were broken out as traffic count and transport, social, trade, agricultural and security.

The fourth section explained some important key issues and priority demand of the people in the ZOI beyond the road rehabilitation which might produce greater impact on road rehabilitation. Summary of Findings and recommendations are provided in the fifth section.

2. METHODLOGY OF THE STUDY

2.1 INDICATORS

This study concentrated on analysis of 26 indicators as listed in the SOW[5]: These included the following:

1. Household Incomes,
2. Employment,
3. Wages,
4. Population in the zone of influence (ZOI) along the road (men/women),
5. Number of people benefitting from the road (men/women)
6. Incidence of Poverty,
7. Travel Times,
8. Travel Costs,
9. Traffic volumes,
10. Maintenance and operation cost of vehicles,
11. Number of businesses,
12. Total amount of sales values,
13. Agricultural production,
14. Amount invested in the businesses,
15. Cost of public transportation,
16. Cost of freight transport,
17. Prices of essential food,
18. Prices of agricultural inputs,
19. Prices of essential household stuff that were not locally produced,
20. Shopkeeper monthly sales revenue,
21. Access to Healthcare and Education (men/women),
22. Access to market,
23. Literacy rates (men/women),
24. Number of acres of irrigated land,
25. Numbers of acres of cultivated land, and
26. Number of security incidences

The present study categorized all these 26 indicators into five major groups of indicators, such as: Traffic count and Transport indicators, Social indicators, Trade indicators, Agricultural indicators and Security indicators to analyze the baseline social and economic situation in the ZOI.

[5] See SOW in the Annex I

2.2 SURVEY DESIGN

One of the most popular methods to estimate **net** impact of a road project is the 'Double-Difference' method[6]. This method requires information for both project villages (villages in the ZOI) and control villages (villages outside the ZOI having the similar characteristics of the project villages except road interventions)[7]. Social Development and Legal Rights **(**SDLR), a local and well-experienced survey contractor, was assigned to carry out (i) scoping surveys of the villages in ZOI and control villages, (ii) household surveys, (iii) settlement demographic surveys, (iv) shop-keeper/business surveys, (v) freight transport companies' surveys, (vi) drivers' surveys, (vii) passenger surveys, and (viii) traffic counts.

SDLR carried out village scoping surveys within the zone of influence (ZOI)[8] and the control areas. Totally 180 villages were identified within the ZOI. The study team decided to select 62 ZOI-villages (35%) randomly for the purpose of household, settlement demographic, and market surveys. Considering the security question and remoteness, only 8 villages were identified as control.

On an average 4-5 households were randomly selected from each of sample 62 ZOI-villages. As the number of sampled "control villages" was less in comparison with the number of sampled villages within the ZOI, on an average 9-10 HHs in each control villages were selected randomly to make the sample size representative and comparable with ZOI-villages. In total 219 households were interviewed for establishing baseline household data in the ZOI-villages, and 74 in the control villages.

Table-2.1: Sample Villages and Households in ZOI and Control Villages

Type of Village	*Total Villages Identified within the ZOI*	*Sample Village*	*Sample Households*
ZOI-Village	180	62	219
Control Village	-	8	74
Total	**180**	**70**	**293**

2.3 SURVEY QUESTIONNAIRE AND ENUMERATION

Twenty-six indicators were used to assess the social and economic conditions in the area under study. The Study Team developed seven different sets of questionnaires in English. The current project employed the services of the Afghan Consulting Firm SDLR. All the sets were translated into Dari by SDLR. The Field work of Baseline Survey started with

[6] . Ravallion (2001) in his work on 'The Mystery of the Vanishing Benefits'[6], and Baker (2000) in his 'Handbook on Evaluating Impact of Development Projects'[6] have provided a theoretical framework for application of "regression model" in "double differencing" to estimate net project impact (See Theoretical framework of Double-Difference method and Regression model in annex- , which might be used to estimate net project impact in the follow-up year 2012.

[7] Nevertheless, it must be remembered that this approach would not necessarily isolate the influence of other factors completely since it may be extremely difficult in the field to identify project and control villages that really have the same characteristics.

[8] ZOI is defined as an area of 15 km corridor on either side of the road.

an orientation workshop for enumerators in Pul-i-Khomri center of Baghlan province on 17 June 2009. The actual field work of Baseline Survey stared on 19 June 2009 by deploying all the teams along the Dushi – Bamyan Road. Enumerators were brought from different areas to Pul-i-Khomri to receive training for maximizing the effectiveness of the training. The contents of the training were regarding the clarification of survey questionnaire and the way how to approach the study within Afghan communities.

Enumerators' Training in Pul-i-Khomri

The SDLR project manager was responsible for ensuring assembling enumerators as per requirements and providing all technical and administrative support. Each team compromised two men and a woman. Four supervisors (senior Staff) were assigned along the road to assist the survey teams and establish sound coordination and liaison with local governmental bodies, community elders, aid organizations and etc. Often meetings were held between the enumerators and the project manager to ensure speedy resolution of problems if and when they were developed. Data generated by these surveys form the basis of the discussion below.

Household Survey: Households are an important and fundamental socio-economic unit in Afghanistan. These were therefore targeted, and structured household questionnaires were used to gather information on household income, employment, wages, education, health care practices, agricultural production, and gender issues, poverty and others. This information was collected through interview with the senior member of the family or household head.

Settlement Demographic Survey: A second set of survey questionnaires was used at the village level, to collect information about the distance of the village from the road, population, road-benefitted population, schools and clinics, agricultural land base and available amenities in the village. These questionnaires were enumerated through interviews with village leaders or in their absence with any senior member in the community.

Shopkeeper/Businesses Survey: The third survey instrument was sought to obtain information about shop ownership, business investment, goods sold, and product prices (both locally produced and not locally produced). In addition to this structured questionnaire targeting individual shopkeepers, the survey team registered the numbers of shops categorized by the goods they were selling, and used the project road for transporting goods to or from the sample enterprises.

In addition to those three surveys which were enumerated across the ZOI, the project also enumerated surveys targeting drivers and owners of transport companies operating in Bamyan and Baghlan. These included a survey instrument targeting drivers (passenger or freight vehicles), transport companies, and passengers.

Enumerators conducting settlement demographic survey in the ZOI

Driver Survey: Driver interviews were often undertaken in tandem with the freight transport company surveys. However, driver surveys were also undertaken along the road and/or at bus and taxi depots. A total of 50 vehicles operators were interviewed. The questionnaires cover topics such as vehicle operators' frequency of travel, travel patterns, ownership, costs, income, and security along the road.

Passenger Survey: This survey provided basic data on origin/destination, travel times, fares, and income levels of the passengers. Passenger surveys were carried out primarily at bus depots and along the road. The questionnaire also contained questions for assessing expected impacts of the rehabilitation of the road. In total, 50 passengers were interviewed

Freight Transport Companies: The survey of freight transport companies focused on urban areas, where shipping companies tended to set up shop. Structured interviews were conducted with those firms, and information were collected on transportation destinations, vehicle types used for transport, travel time, costs, and prices, and operation and maintenance costs of vehicles. Seven (7) companies in Pul-i Khomri and 3 companies in Bamyan province were found conducting business on Dushi – Bamyan Road and were interviewed by SDLR enumerators.

Traffic Counts: The survey team carried out traffic counts along project road. These traffic counts provide volume and composition of traffic passing on the roads. The traffic counts entail directional counts of passenger vehicles (cars, buses and minibuses) and freight vehicles (two axle, three axle and articulated trucks). This was a seven-day count, conducted every day from 6 am to 6 pm, at three locations preferably at the head and tail of the project roads and the middle. In an effort to avoid confounding the counts with local traffic and traffic moving to other directions using a part of the road, SDLR positioned the counters on the outskirts of the two towns, Bamyan and Dushi. Counters noted the direction and vehicle type of each passing vehicle (motorized) over the counting period 6 am to 6 pm.

2.4 TARGETED INFORMATION AND KEY INFORMANTS' INTERVIEW

The Study Team obtained views and opinion of the key informants on project road and social issues by meeting with central government officials particularly with the Ministry of Public Works, Ministry of Transport and Civil Aviation, Ministry of Rural Rehabilitation and Development, Ministry of Agriculture, Irrigation and Livestock, Ministry of Public Health, and Ministry of Labor and Social Affairs. The team also met provincial governor of Baghlan and provincial governess of Bamyan provinces. There were 613 CDCs in Bamyan and 646 in Baghlan provinces. The team met with 2 CDCs in each province. The team conducted FGD in the ZOI and also interviewed the staff of the police sub-station on the project road. The Team also met with PRT and other USAID people. The team came across with ADB, WB, DFID and CIDA's rural infrastructure development experts. Freight and passenger transport companies (Bamyan and Dushi) were interviewed to determine the institutional set-up for their respective markets and costs and prices. Local development agencies and NGOs were also interviewed.

2.5. FOCUS GROUP DISCUSSION (FGD)

The study team conducted FGD in the ZOI area in order to collect on the perspective of the project road rehabilitation, any key issues, and the people's priority demand beyond the road rehabilitation that might affect potential impact of the project road. The team conducted 3 FGDs, 1 in Bamyan, 1 in Dushi and 1 in Karimak. The FGD also helped the study team to validate the survey data collected by the survey team. Shown below is an example of an FGD carried out in the ZOI.

2.6 SECONDARY SOURCES OF INFORMATION

The team reviewed all available data and reports providing background on economic conditions in the zone of influence, provinces and Afghanistan more generally. Central Statistical Organization (CSO) and Afghanistan Research and Evaluation Unit (AREU) were the main sources of secondary information. AREU library is rich in collection and documentation of other organizations' works in Afghanistan. The team gathered secondary sources of information primarily through library works in these two organizations.

3. FINDINGS OF THE STUDY

3.1 TRAFFIC COUNT AND TRANSPORTATION INDICATORS

The **traffic counts** provided the study team with a measure of the volume and composition of traffic passing on the Bamyan-Dushi Road, and provided important background information for determining potential impacts of the rehabilitation such as increased traffic volume and total cost savings from decreasing travel times and travel costs in the follow-up years.

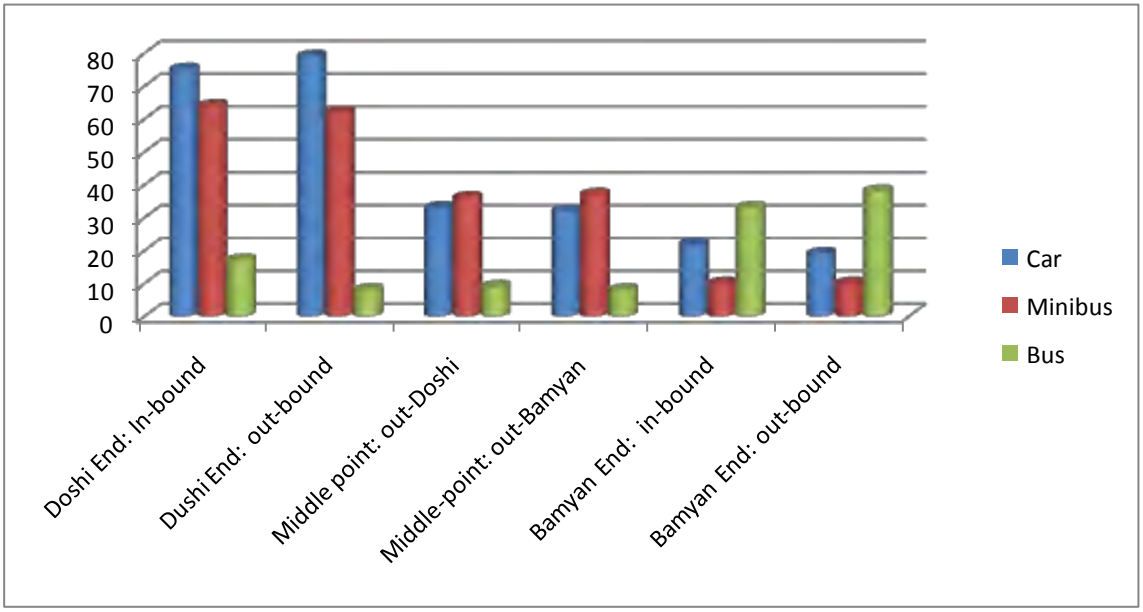
The traffic counts were undertaken along the project road over a seven day period, 12-hour counts from six in the morning until six in the evening. While 24-hour counts would have provided a more complete picture of these traffic patterns, security considerations precluded these. It was also reported by the villagers that no vehicles were operating on the project road at night. Three separate counts were undertaken. The first count took place just at the starting point of Dushi. The second counts were taken at the end point of the road at Bamyan. And, the third counts were taken in a mid place of the road between Bamyan and Dushi, called Karimak. Counters noted the direction and vehicle type of each passing motorized vehicle over the counting period 6 am to 6 pm.

Table-3-1 and Graph below provides a summary view of daily traffic volumes at the three count sites. It is noted that only mini-bus travelled over the full length of the project road.

Table-3.1: Average Daily Traffic Volume by Vehicle Type

Location	Direction	Passengers' Vehicles			Freight Vehicles		Total
		Cars	Minibuses	Buses	Two axle	Three axle	
Dushi	In-bound	75	64	17	18	8	182
	Out-bound	78	62	8	27	29	204
Middle (Karimark)	Towards Bamyan	32	36	9	56	10	143
	Towards Dushi	32	37	8	64	9	150
Bamyan	In-bound	21	10	33	190	19	273
	Out-bound	19	10	38	227	23	317

Chart-1: Showing passenger traffic per day on average



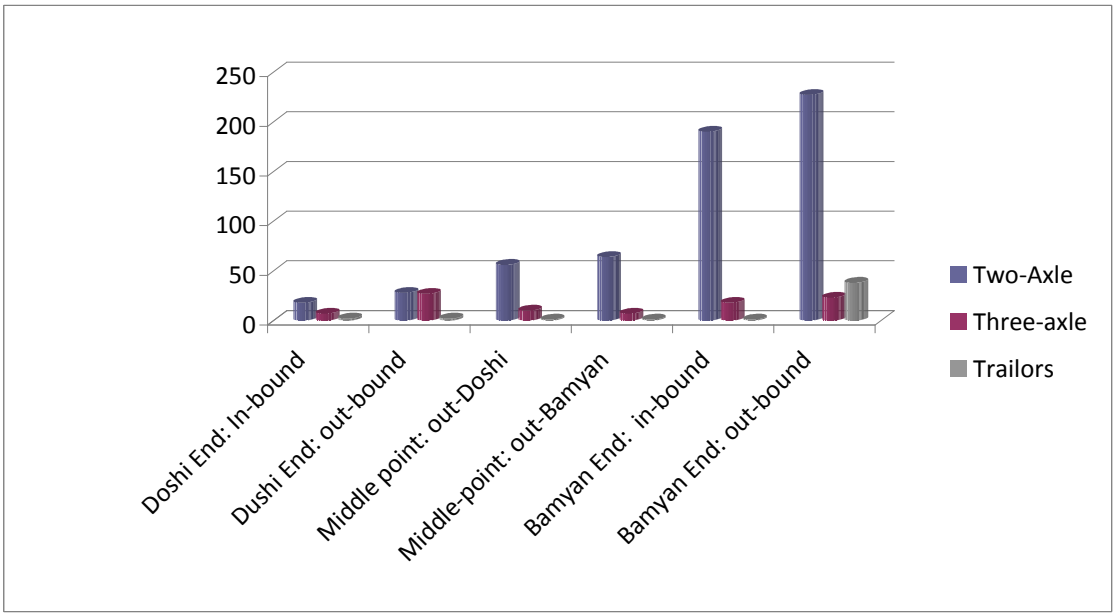
Freight vehicles travelled only a shorter distance and at different sections along the project road. All these were private transports and no public transport was available on the project road. Average daily traffic frequency on the project road at the start up point in Dushi was 386 vehicles per day and the corresponding figure at the end point location in Bamyan was 590 vehicles per day.

At middle point location near Karimak, traffic counts indicated that 293 vehicles/day used the project road. On both the extreme sites (Bamyan and Dushi), traffic volume was higher than the middle site (Karimak). Then again, traffic volume at Bamyan site was about 1.53 times higher than Dushi site and 2.01 times higher than the Karimak. It was also obvious that the passengers' vehicles were more concentrated at Dushi site whereas the freight vehicles are more concentrated at Bamyan site. At Karimak site (middle of the road), both passengers and freight vehicles were dramatically low indicating that major volume of vehicles were not operating over the full length of the road.

The vehicles were not travelling directly to Dushi but most of them were going to the other near-by villages such as Tala, Barfak, Wado, Marghaw, Gambar, Shutur Jangal, Choqorakdeh, Khelar, Dahne Turmosh, Lobya, Sare lar. Thus, it is highly likely that the traffic counts were picking up high local traffic, and the reader is cautioned in interpreting the traffic count results.

In addition, the **travel time**, **cost of travel** and **operating and maintenance cost** of vehicles are important indicators for the impact of the road rehabilitation. The photo below illustrates existing road conditions local drivers must content with.

Chart-2: Showing Freight Traffic per day on average



Travel time and travel costs data were taken from both passengers and the drivers, and maintenance costs data were taken from drivers and vehicle owners. For simplicity, as only minibuses were travelling over full length of the project road, and freight vehicles in different sections, the analyses of travel time, travel cost and operation and maintenance cost were exercised only for these two categories of vehicles. The photo below illustrates conditions of different sections of the project road. Only Micro-buses travel over the full length.

Passengers' travel time by micro-bus took 10-12 hours to cover the project length. It is because of the lack of security, bad condition of the road and high curvature of the road with the mountains, all vehicles only used the road during the day time.

Travel costs were another important transportation indicator that the study team tracked across a number of road users. Ticket price was 800 afs ($16) per passenger for travelling from Bamyan to Dushi by micro-bus. Micro-bus drivers tended to be waiting for a trip more than they are actually making them. On an average they performed two trips a week.

Freight services could not cover the whole length of the project road because of the non-passability conditions at different sections of the road though the microbuses were capable to overcome these constraints. Freight vehicles were found at different sections of the project road, and their movements were in limited scale. On an exercise it was estimated that Freight vehicle would take 22-24 hours under the present road conditions. Travel time will decline significantly on rehabilitation of the road. The freight travel time will decline from 24 hours to around 8 hours on improvement of the road as was anticipated by the freight drivers. Shown below are typical freight vehicles on the road.

Freight rate varied depending on the type of commodity, and also timely booking of the load. If freight was already booked, and if still remained surplus capacity, then one could bargain, and thus the rate might fall for the additional capacity. However, on an exercise it was worked out that on an average, freight rate was US$ 0.78/MT/km. This worked out to about 6,240 afs ($124.8)/MT from Bamyan to Dushi. It was anticipated by the freight owners that on improvement of the road, freight costs would drop down by 75 percent per ton.

Fuel Tanker and Micro-Bus on the road.

In this survey interviews were made with 13 owners and drivers of the vehicles in order to determine the operation and maintenance costs of vehicles. Operation and maintenance (O&M) cost of vehicle was very high as was expressed by the owners and drivers. Many owners were reluctant to drive their vehicles over the project road. On an exercise taking some selected items on O&M which have direct impact on road improvement, it has been found that annual O&M costs for a typical minibus accounted for 126400 afs and the corresponding figure is more than double for a truck (26400afs).

Table-3.2: Annual Operation and Maintenance Costs of Vehicles (Cost in afs)

Vehicle Type	Fuel	Lubricants	Tire	Washing	Repairing	Engine Overhauling	Total
Microbus	2400	84000	3000	16000	18000	3000	126400
Truck	8000	170000	10000	30000	40000	6000	264000

It was obvious that many sections of the road were almost inaccessible, and road improvement will have a greater impact on O&M costs. After rehabilitation, with only one-third of the present costs, one would be able to drive the vehicle over the project road as anticipated.

3.2 SOCIAL INDICATORS

Social indicators used to measure social welfare among groups within the ZOI included: population benefitted both male and female, employment and wages, income and poverty,

access to health care and education, and literacy. These factors do not necessarily capture the complete picture of a peoples' social welfare, but they were selected because they were available, quantifiable, and because they provided some indication of people's presumed quality of life.

The ZOI **population** estimate used for this study was generated on the basis of the following exercise: The Central Statistics Organization (CSO) provided data for each of the major civil divisions within the ZOI. The statistics were most precise, and up-to-date figures were available, however, it should be noted that the CSO data was based on projected estimates calculated from the last nationwide census[9]. Based on the percentage of the district area which fell in the ZOI, and in consideration of the major population centers of the district within the ZOI, a percentage inclusion figure was generated by the SUPPORT GIS staff. Following tables show the population within the ZOI and male and female benefitted as a result of the road rehabilitation.

Table-3.3: Population Estimates for the ZOI

Province	Civil Division	Population	ZOI %	ZOI Population
Bamyan	Bamyan City	75,500	38%	28,690
	Shebar	26,800	79%	21,172
	Saighan	21,800	16%	3,488
	Kahmard	33,100	32%	10,592
Sub-Total		**157,200**	**-**	**63,942**
Baghlan	Dahana Ghuri	53,500	56%	29,960
	Dushi	60,800	65%	39,520
	Khinjan	27,700	2%	554
	Tala wa Barfak	27,500	44%	12,100
Sub-Total	**-**	**169,500**	**-**	**82,134**
Total ZOI	**-**	**326,700**	**-**	**146,076**

Source: Based on Central Statistical Organization, 'Estimated Population of Afghanistan 2008-2009'.

Table-3.4: Female and Male Population Estimates for the ZOI

Province	Civil Division	Population		ZOI %	ZOI Population	
		Female	Male		Female	Male
Bamyan	Bamyan City	37,800	37,700	38%	14,364	14,326
	Shebar	12,900	13,900	79%	10,191	10,981
	Saighan	10,700	11,100	16%	1,712	1,776
	Kahmard	16,200	16,900	32%	5,184	5,408
Sub-Total	**-**	**77,600**	**79,600**	**-**	**31,451**	**32,491**
	Dahana Ghuri	26,000	27,500	56%	14,560	15,400
	Dushi	29,700	31,100	65%	19,305	20,215
	Khinjan	13,600	14,100	2%	272	282
	Tala wa Barfak	13,300	14,200	44%	5,852	6,248
Sub-Total	**-**	**82,600**	**86,900**	**-**	**39,989**	**42,145**
Total ZOI	**-**	**160,200**	**166,500**	**-**	**71,440**	**74,636**

Source: Based on Central Statistical Organization, 'Estimated Population of Afghanistan 2008-2009

[9] Central Statistical Organization, 'Estimated Population of Afghanistan 2008-2009'

With respect to the benefit of the to be expanded on rehabilitation of the road, there were no measures in our collected field data that allowed us to estimate people (men and women) would be benefitted in the ZOI a direct comparison of labor markets between the Baseline Studies and the present. However, considering the accessibility to the road and increased vehicle operation on the road would allow workers to travel more broadly and expanded employment opportunities would be met. It is quite likely that the improved supply will be motivated by increased demand for transport, and that part of this increased demand is workers getting from home to work. With respect to increased access to productive inputs, it was anticipated that improved road would result in increased use of purchased inputs in agriculture. The evaluation team was not able to ascertain the extent to which new production technologies would be extended by foreign or domestic technical assistance, but certainly the road would facilitate the latter. Regardless, the use of purchased inputs and mechanized cultivation will up in the ZOI, and it was anticipated that majority of the population, both poor and rich, and men and women in the ZOI would be benefitted.

The present picture is however gloomy when the **individual** and **household income** were calculated and **incidence of poverty** was examined. The Table below reported the averages for individual income and their quintile picture. For the sample, average monthly individual income of an earning member was 4,750 afs ($95) for the people living in the ZOI-villages. The corresponding figure for the control village was 3,919 afs ($78). Thus the individual income was about 22% higher for the ZOI-villages than the control villages.

Table-3.5: Individual Monthly Income of Villagers Living in the ZOI and Control Villages

Quintile	ZOI-Village		Control Village	
	Individual	**Household**	**Individual**	**Household**
First Quintile (Highest)	12,590 ($251)	25,453 ($509)	8,941 ($179)	15,453 ($309)
Second Quintile (Medium high)	4,870 ($97)	10,162 ($203)	3,425 ($68)	7,895 ($158)
Third Quintile (Medium)	3,701 ($74)	5,476 ($109)	2,599 ($52)	4,102 ($82)
Fourth Quintile (Medium low)	2,520 ($50)	3,478 ($70)	1,491 ($30)	2,980 ($60)
Fifth Quintile (Low)	980 ($20)	1,702 ($34)	798 ($16)	1,498 ($30)
All-Average	**4,750 ($95)**	**9,403 ($188)**	**3,919 ($78)**	**5,758 ($115)**

There are no reliable statistics about the **poverty** line in the Afghan economy. On international standards of measurement of poverty in developing countries, people are treated to be "extremely poor" when per capita income per day is $1 or below. The average family size of the sample in the study area is 6.5 for the ZOI-villages, and 5.3 for

the control villages. On this count, 2nd to 5th (except 1st) quintiles clearly fell below poverty line.

The Afghan Government's 1386 (2007) National Risk Vulnerability Assessment (NRVA)[10] study measures poverty rate with per capita income of about US$14 per month. With this measure, about 80% of sample households in the ZOI fell below the poverty line. Given the importance of the road for many of the efforts, it is very likely that the road rehabilitation will provide a platform for other efforts that might result in reducing poverty in the ZOI.

The Study attempted to quantify rates of **employment** by household members in the sampled villages by using field data. Average participation rate in ZOI villages was about 20.25%. This was about one-half of the national average of $40%. The control villages exhibited a low rate of employment participation.

Table-3.6: Employment Rates of Household Members in the ZOI and Control Villages

Survey Villages	Total HH Members	Employed Members	Employment Participation Rate (%)
ZOI-Villages	1414	286	(20.25%)
Control Villages	391	48	(12.15%)

The occupational diversification was very limited both in ZOI-villages and control villages. More than 80 percent of the working populations were involved in farming and rest were in police service, armed force service, teaching, shop-keeping, driving and weaving. Monthly wage-income varied from 2,300 to 6,700 afs depending on the occupation.

Table-3.7: Occupations & Wages of Household Members in ZOI and Control Villages

Occupation	ZOI-Villages (Afs/month)	Control Villages (Afs/month)
Farming	2,300	1,900
Driving	6,700	-
Teacher	3,600	-
Soldier	6,200	6,200
Police	6,000	-
Tailor	2,400	-
Labor	4,500	4,100
NGO worker	4,000	

[10] Ministry of Rural Rehabilitation and development and the Central Statistical Office, 'The National Risk Vulnerability Assessment, June 2007

In discussion with the local people, it appeared that the poorer people had great demands for skill training. Affordability and opportunities posed them major constraints to implementation. Development of semi-skilled and skilled manpower should be addressed as a social policy and long term strategy to receive more benefits on the road.

It was also obvious that average distance to find work varied from settlement to settlement. On an average, workers travelled about 7 kms to find works. Sixty-six percent of the workers found work within a distance of 2 kms. More than 80 percent of the workers found job within a distance of 5 km. Those who live in Shiber area were found to go to a longer distance than the others to find work. In control villages, average distance travelled by the workers was 1.6 km only to find work. Lack of road infrastructure compelled the people in the control villages to find their work in their communities.

Table-3.8: Average Distance to Find Work

Range of Distance (km)	No. of Households	Percent	Cumulative Percent
Up to 2	144	66%	66%
2 - 5	37	15%	81%
5 -10	8	3%	84%
10 - 20	10	5%	89%
20 - 40	10	5%	94%
Above 40	14	6%	100%
Total	**219**	**100%**	**-**

Note: Average distance travelled to find work is **7.03** km

With respect to non-money income measures of material well-being, evidence from the field survey data indicated that 85% of the households in the ZOI possessed a radio, followed by a television (29%) and a bicycle (22%). Ownership of small portable generator is another asset that was used by only 9 percent of the households.

Table-3.9: Asset Ownership across Sample Households in the ZOI

Asset	Household with Asset		Household without this Asset	
	Number	Percent	Number	Percent
Radio	187	85%	32	15%
Television	64	29%	155	71%
By-cycle	50	22%	169	78%
Car	8	3%	211	97%
Truck	13	5%	206	95%
Well in compound	44	20%	175	80%
Electric pump	6	2%	213	98%
Generator	20	9%	199	91%
Indoor pumping	1	0.4%	218	99.6%
Satellite TV	22	10%	197	90%

In addition to material possessions, the social indicators developed in the Baseline Studies used **literacy rate** and **school attendance** by school age children. Whether or not a household member was literate (can read and write) and children are currently attending school were recorded, along with total household populations. Following results were obtained as provided in Table below.

Table-3.10: Literacy rate of Household members and access of children to school

Survey Villages	Household size	Literate Members	Literacy Rate (%)	% of Children Enrolled	Female-Male Student
ZOI-Villages	6.5	2.4	36.9%	41.45%	27 : 73
Control Villages	5.3	0.6	11.3%	32.01%	22 : 78

On an average, there were more than 2 literate members in each sample family in the ZOI, and the corresponding figure in control village was 0.6. The percentage of children enrolled in primary schools was highest in ZOI-villages (41.45%) and lowest in control villages (32.01%). The overall picture of children access to primary school was not satisfactory.

About 70% of the children living in the control villages and about 60% of the children living in ZOI villages were not enrolled in primary schools, and thus they remained without the blessing of education though the distance of travelling to schools was only a moderate problem in both categories of villages, which was only an average of 0.71 km from sampled households in the ZOI-villages and 2.65 kms in control villages.

Table-3.11: Distance to Nearest Primary School from sample household in the ZOI

Range of Distance (km)	No. of Households	Percent	Cumulative Percent
Up to 1	153	69.9%	69.9%
1- 2	28	12.8%	82.7%
2 -3	25	11.4%	94.1%
3 - 5	9	4.1%	98.2%
5 - 10	3	1.4%	99.6%
Above 10	1	0.4%	100%
Total	**219**	**100%**	-

Note: Average distance from the Households is **0.71** km

Among the children who were attending schools, girl students were always fewer, which varied from 23% in control villages to 28% in the ZOI-villages. If this is the case at the primary school level, one might think that the disproportion of girl and boy students would be much wider at the higher education level, partly because of the social culture and early marriage of girls, and partly because of the economic conditions of the rural families. Most donor-aided project were ‘gender-neutral’; that is, projects were built on the assumption that both men and women would be equitably impacted by interventions.

The reality however is that women and men do not have equal access to receive the project benefits, because of socio-cultural and economic constraints. The issue of gender-inequality should be dealt with not only as a part of “social policy” but also as a reflection of this issue in all the project design to accelerate minimization of gaps between men and women. It is also notable that around 70% of the children in the control villages and 60% of the children in the ZOI-villages remained outside the stream of education system. All these issues need to be properly addressed both at the policy level as well as the project level.

With respect to access to health care centre, average distance from the households to the nearest health centre was 6.77 kms. Forty-three percent of the sample households had health care centers within the range of 5 kms distance.

Table-3.12: Distance to Health Care Centre from the sample households in the ZOI

Range of Distance (km)	No. of Households	Percent	Cumulative Percent
Up to 2	37	17%	17%
2 - 5	56	26%	43%
5 -10	75	34%	77%
10 - 15	38	17%	94%
15 - 20	9	4%	98%
Above 20	4	2%	100%
Total	**219**	**100%**	**-**

Note: Average distance from the Households is **6.77** km

Frequency of visit to health centre by the male and children was higher in control villages than the ZOI-villages. Women visit to health centre was higher in ZOI-villages. Overall frequency of visit to health centre by all these three groups of people ranged between 11 to 30 times per year.

Table-3.13: Frequency of Health Centre visits by the Men, Women and Children per Year

Village category	Men	Women	Children
ZOI-villages	11.32	20.78	28.60
Control villages	12.09	19.77	29.27

With regard to respondents' estimate for travel times to maternal child clinics, the average for all responses was about 2.33 hours. 62 percent of the sample households reached to the maternal clinic by 3 hours. More than 95 percent of the sample respondents said that they used the Bamyan-Dushi Road to access health care and maternal child clinics. They have also expressed that this travel time parameter will diminish with road rehabilitation as automobile traffic becomes more common.

Table-3.14: ZOI Household travel time to Maternal Child Clinic

Range of Time (Hours)	No. of Households	Percent	Cumulative percent
Up to 1.00	70	32%	32%
1 - 3	66	30%	62%
3 -5	60	28%	90%
5 - 10	18	8%	98%
Above 10	5	2%	100%
Total	**219**	**100%**	-

Note: Average spent to travel to maternal clinic is **2.33** hours.

None of the control villages have any health care facilities. They visited health care centre available in nearest ZOI-villages or towns. It has also been reported by the respondents that commercially available medicines do not seem to be widely available in the rural areas.

3.3 TRADE INDICATOR

Eight markets were surveyed and fifty shops were interviewed in detail. 62 percent of the shops were found in business for 5 years or less. Agricultural goods, dry goods, textiles and garments were the major group of commodities in the markets. Most of the markets had 1-2 pharmaceutical shops.

Table-3.15: Markets in the ZOI and Different Commodities Sold

Name of Market	Location	Agricultural goods	Dry goods	Meat	Pharmaceuticals	Textiles & Garments	Others
Kandehsang	Kandehsang	7	20	3	1	2	6
Tala Wa Barfak	Surkhjoy	13	34	6	3	13	35
Shutur Jangal	Shutur Jangal	0	8	2	1	20	10
Dahan Wado	Dahan Wado	4	12	4	2	20	16
Tala Wa Barfak	Center	9	40	3	7	10	34
Bolola	Av Par	0	9	0	1	0	4
Ghandak	Ghandak	0	100	4	2	5	15
Du Ab Makhizarin	Du Ab Makhizarin	170	8	5	4	21	43

Note: Double counting occurs due to multiple goods are sold by shops in the rural areas.

The food staples among this group of common shop goods had, in some cases, fairly standard prices, and in others, prices all over the map. This was shown for Potato, Rice, Wheat, Sugar, and Tea in the Table below.

Table-3.16: Prices of key food staples in the markets of the ZOI-Villages

Item	Average Price (Afs/kg)	Min and max price (Afs/kg)	Modal Value (Afs/kg)
Potato	5.50	4.00 – 7.00	5.00
Rice	28.50	23.00 – 30.00	29.00
Wheat	14.25	14.00 – 15.00	14.00
Sugar	45.50	43.00 – 50.00	45.75
Tea	75.75	70.00 – 85.00	78.70

The prices for the goods listed varied somewhat, as might be expected in places where there was little competition and substantial transportation costs.

Essential household foodstuffs not produced locally but available in the markets of the ZOI were generally Perhan and Tunban, shoes, toothpaste, tooth-brass and washing soap.

The average price of a Perhan with Turban was 250 afs. German made shoes were found mostly used, and a pair of shoes was sold at 500 afs. Prices for toothpaste varied depending on the countries from where they were imported. Chinese tooth pastes were generally used by the households and their price was only 10 Afs per unit. Those toothpastes which were imported from England or America, prices were as high as 25 afs per unit. Chinese tooth brushes were commonly used by the locality. Washing soaps were generally imported from Iran.

Table-3.17: Prices of Essential Household Stuff Not Locally Produced

Item	Average Price (Afs)/unit	Min and max price (Afs)/unit	Modal Value (afs/unit)
Perhan & Tunban	350	300 - 400	350
Shoes (pair)	500	450 - 600	500
Toothpaste	10	10 - 250	10
Tooth brass	25	25 - 150	25
Washing soap	15	15 - 50	15

With respect to the usefulness of the Bamyan-Dushi road to the traders and the shop operators, it was reported that over 90 percent of the village shops had their goods arrived, at least in part, along the project road. For the majority, these goods were brought by either horse or donkey cart as the road condition was very bad.

Access to market by the villagers was mostly on foot. The average service area for the shops was 4.5 kilometers – basically, their village and its surrounding area, though more than 52 percent of the shops covered their service area up to 1 km.

Table-3.18: Access to Market from Home in the ZOI

Range of Distance (km)	No. of Shops	Percent	Cumulative percent
Up to 1	26	52%	52%
1 - 3	4	8%	60%
3 – 5	3	6%	66%
5 – 10	9	18%	84%
Above 10	8	16%	100%
Total	**50**	**100**	-

Note: Average distance from home to market is **4.5** kms.

Shopkeepers were also asked to report an average daily gross sales revenue estimate and a majority did so. However, these estimates ranged from an exceptionally low 212 afs/day to 10,000 Afs/day. Majority of the shops (66 percent) fell within the range of 500 to 2,000 afs. The average for the sample of non-zero responses was 1,305 afs/day, or, US $26.10 per day.

Table-3.19: Average sales revenue per day by the shops in the markets in the ZOI

Range of Sales/Day (Afs)	No. of Shops	Percent
200 - 500	10	20%
500 – 1,000	19	38%
1,000 – 2,000	14	28%
2,000 -5,000	5	10%
5,000 – 10,000	2	4%
Total	**50**	**100**

Note: An average sale per day per shop is **1,305 afs ($26.10).**

Almost 60 percent of these goods were produced locally, and the rest were identified as "foreign" in origin. The amount invested in shops varied from 20,000 afs to more than 100,000 afs. Investment amount of about 74 percent of the shops fell within the range of 20,000 afs to 60,000 afs. On an average the amount invested per shop in the sample market was 53,194 afs ($1063.88).

Table-3.20: Amount Invested in Shops in the ZOI

Range of Investment (Afs)	No. of shops	Percent	Cumulative percent
20,000 – 40,000	19	38%	38%
40,000 – 60,000	18	36%	74%
60,000 -80,000	6	12%	86%
80,000 – 100,000	3	6%	92%
More than 100,00	4	8%	100
Total	**50**	**100**	-

Note: Average investment was **53,194 afs ($1,063.88)** per shop.

3.4 AGRICULTURAL INDICATORS

The primary reason that most rural settlements existed in the study area was the presence of water and suitable agricultural land. Given this, one would expect agriculture to be the dominant economic activity in the area, as is the case. However, in response to a survey question, it was found that that 60% of the respondent households raised crops. The 219 households surveyed reported a total **irrigated land** area of 585.70 jeribs (116.00 hectares), which worked out to 2.67 jeribs (0.53 hectare) per household. However, if only 70 percent of households were engaged in growing crops, then this figure rose to 0.89 hectare per household.

Much of the production of food staples in the study area was used within the household and was not offered for sale. In particular, the study found that crops such as corn and wheat are almost completely consumed within producing households. On the other hand, marketed crops such as potato, and fruits and nuts were clearly important sources of income for farm households. Potatoes were extensively grown by almost all the farms for household use and as a marketed product. Commonly grown crops frequency, disposition, and yield estimates (among survey respondents) for the study area were reported in Table- below

Table-3.21: Dispensation of crops grown in the ZOI-villages

Crop	No. of HH	HH consumption (% of growing crop)	Grown for Sale (%)	Agricultural output sold/HH (Afs)	Average price /kg (Afs)
Apple	43	25.8	74.2	10,576	110
Apricot	87	19.7	21.3	12,890	90
Peach	98	12.4	87.6	6,423	190
Potato	102	50.9	49.1	25,978	5
Wheat	115	98.5	1.5	2,034	14
Rice	120	98.9	1.1	1,312	28

Farming practices were mixed with respect to technology. Out of 131 respondents who both answered yes to the growing of crops and about how they cultivated their field, it was reported that 44 used animal traction and/or hand tools, 45 used both animals and tractors, and 42 used tractors and hand tools. Farmers and villagers anticipated that on rehabilitation of the road, tractors would be becoming increasingly available in the ZOI area and many tractor owners would be able to rent out their services to farmers for a fee.

Table-3.22: Farming Practice with Respect to Technology used by Farmers in the ZOI

Sample Using	Animal Traction	Hand Plough	Machine
Farmers Using	44	45	42
Percent of Sample	33.58%	34.35%	32.06%

Most of the farmers had **irrigated land area**, and proportions of irrigated and **non-irrigated** area were 73.19 percent and 26.81 percent respectively. Along with the use of various cultivation technologies, the survey data permitted an assessment of the portion of farmers who were using fertilizer and other purchased inputs for their crop production. The Table below reports those statistics.

Table-3.23: Use of purchased inputs in the ZOI

Input	% Farmers using input	Average expenditure (Afs)	Price/Kg (Afs)
Fertilizer	92.8	3,085.26	10.70
Pesticide	69.2	293.12	250.00
Seeds	95.5	1,732.34	Potato: 14.20 Wheat: 15.70 Rice: 85.70

In addition to cropping questions, households were asked to report on the number of poultry and livestock they had. Almost 68.50 percent of the 219 households kept some number of poultry, 42 percent reported owning sheep, 44.75 percent reported keeping goats, and almost 36 percent reported keeping one or more cows. 38.35 percent of the households reported to have a horse and/or donkey in their houses.

Table-3.24: Poultry & Livestock Enterprise of the Sample Households in the ZOI

Item	Poultry	Sheep	Goats	Cows	Horses	Donkeys
Average Number of Flock/Herd	7	5	5	2	1	1
Number of Farmers Keeping	150	92	98	78	5	79
Percent of Total	68.50%	42.00%	44.75%	35.62%	2.28%	36.07%

Respondents were asked whether or not they used the Bamyan to Dushi Road to transport their goods to market. Of those crop farmers (131) who responded to this question, 100 (76.33 percent) said that they did use the road and 31 (23.67 percent) said that they did not. However among the 67 farmers who provided a response to the question regarding where they marketed their product, 15 percent said that they sold it in the village. The remainder carried their goods to markets in the nearest district or provincial center to sell. The apparent difference in these two sets of percentages can be explained by the fact that many farmers did not have a marketed surplus. Shown below are potato farmers being interviewed by an enumerator in the ZOI.

With respect to transport costs, respondents were asked what percentage of their final sale price was consumed by transport costs. Of the farmers who provided a response to this question, 60 said that transport costs were zero as they carry their products by their own animal either horse or donkey. The average percentage cost among the non-zero responses was around 10 percent. However, these responses ranged from 2 to 20 percent, and must be taken with a note of caution. It is not clear, in retrospect, that the respondents had adequate numeracy to calculate this percentage

3.5 SECURITY INDICATORS

Security in the society is essential to ensure freedom of movement for people, commodities and ideas, and to promote social and economic development. Illegal armed groups (IAGs), anti-government elements (AGEs), land conflict, drug trafficking, accidents and robberies were taken as security indicators in the provinces and the project area.

In the recent past, the illegal armed groups (IAGs) were found at large in the districts of Saighan, Kahmard, and Shiber in Bamyan province. They were associated with the former Taliban regime, and helped the Taliban during their capture of Bamyan in 1997. They were controlled under the provincial commanders. A Disarmament of Illegally Armed Group (DIAG) project was initiated and process was operated on voluntary basis, but only a few commanders of IAGs in the province had so far submitted small quantities of functional weapons. There are still some illegally armed groups under the control of provincial commanders.

Anti-Government Elements (AGEs) existed both in Bamyan and Baghlan provinces. At present there is no clear evidence of the presence of AGEs in Bamyan province. Recently, some Hazaras have joined Taliban primarily on economic (poverty) reasons, which is rare for Hazaras. In Baghlan province, there were some AGEs such as followers of the Taliban and Hezb-i-Islami Gulbuddin (HIG). Most of the AGE activities were recorded along the Kunduz – Pul-I-Khomri road and in Jadeedi district in Baghlan province. The situation is worsening as the last incident occurred in the second week of July 2009, an attack on ANA (Afghan National Army).

Issues of land ownership and access to resources were the main source of tension in the remote rural area of the Bamyan province, and usually form around ethnic divisions, between the Tajiks and Hazaras. The major cause of tension in the province, was the relationship with Kuchi in the province, especially in Panjab, Waras and Yakawalang, and the inherent conflict in interest between those who use land for pastoral purposes and those who cultivate land. The present situation is improving except some land disputes in Doab Mekh Zarin area in the district of Kahmard.

Deh Salah and Puli Hesar are known districts for drug-trafficking – and reportedly the situation is worse than in previous years.

Traffic volume on the project road is extremely low due to the almost non-passable condition of the road and there are no records of road accidents.

The security situation of the project road remains stable and access to communities is possible. Anti-government Sentiments are rare in this area. In the recent past, no robberies within the ZOI were reported to the police. However, frequent factional fighting mainly in Anderab District poses a threat for the region. There are also increasing concerns over the stability of provinces bordering Bamyan including Ghor, Wardak and Dai Kund. There are threats even on building the road especially in Tala Barfak area. The spill-over effect this could have on the project road as was anticipated.

4. KEY ISSUES AND PRIORITY DEMAND OF THE PEOPLE IN THE ZOI

Apparently, **security** is not an issue in the project area as have been expressed by the local people and provincial governments of Bamyan and Baghlan. But in other parts of the provinces, the security situation is worsening. The road passes through mountains and hills and also over the low land, flooded with water. Construction of this road is clearly a difficult and costly undertaking. It may be mentioned here that 162 contractors working on the ring road lost their lives between 2003 and March of 2008 and 202 were wounded or injured in attacks[11]. Presently, frequent factional fighting mainly in Anderab District poses a threat for the region, and there are threats even on building the road especially in Tala Barfak area as we have stated earlier. Thus the security issue needs to be carefully examined before construction of the project road.

The Evaluation Team carried out FGD, conducted meeting with the CDC and interviewed the local people in the ZOI. People's top priority is the rehabilitation of the **Bamyan-Dushi road**, followed by construction of more **cold storages**, and development of the **rural roads** that connect village to village and village to project road. Shown below is an example of a cold storage facility constructed with USAID funding in Bamyan Town.

The Provincial Governor of Bamyan province and provincial officials expressed the same opinion with a greater emphasis for construction of cold storages and development of the rural roads. It was reported that some provinces, including Kabul, imported potatoes

[11] GAO Draft Report "Afghan Reconstruction", July 2008, quoted in 'Roads Socio-Economic Impact Assessment : Kabul-Kandahar and Kandahar-Herat Roads', August 2008.

from Pakistan in spite of over-production of potatoes in Bamyan. The Bamyan potato is of excellent quality. It is because of the poor conditions of the Bamyan-Dushi Road that the export marketing of potatoes from Bamyan is seriously hindered. Lack of storage facilities is another problem. Available cold storages' capacity is very small, and the Ministry of Agriculture reported that the existing capacity can serve only 3-5% of the total requirement. Villagers and farmers informed that they sometime spoil potatoes more than 50% of their produce due to marketing problem and lack of storage facilities.

The Dushi – Bamyan road is located in a mountainous area mostly going through narrow valleys. Most settlements are located off the road in small valleys to either side of the road within the zone of influence which don't have vehicle's access routes. The villagers used to walk from 30 minutes to 3 hours in order to reach to the Bamyan- Dushi road that consumed much of their time and slow the activities. Villagers and farmers urged for construction of rural roads that connected village to village and village to project road. They assigned priority of rural roads on two grounds: importing modern agricultural technology including HYV seeds and fertilizer to distant villages, and selling their produce to different market places. CDCs have already identified rural roads, which have already been prioritized by PDC. MRRD is responsible for development of the rural roads. MRRD started development of rural roads in some other provinces. It is also reported by MRRD that out of 120,000 kms of total rural roads, they could complete only 10,000 kms (8.33%). Finance is required to expedite implementation of rural roads project in all provinces including Bamyan and Baghlan.

It is also the demand of the potential road users for establishing a rest room with toilet facilities, particularly for the women in a mid-place in between Bamyan and Dushi. Their preferred place is at Karimak.

5. SUMMARY OF FINDINGS AND RECOMMENDATIONS

5.1 SUMMARY OF FINDINGS

In our study findings, the road rehabilitation indicators described the state of transport services from the perspective of frequency of operation, costs and travel times. The social indicators described conditions existing in the surveyed rural settlements with respect to measures of wealth and income and access to health care and education services. The trade and agriculture indicators described economic conditions in the surveyed settlements. In addition, security indicator described the extent of anti-social environment that might affect rehabilitation of the road and free movement of goods and people. In summary, these indicators show:

- Traffic volume is low on the project road due to bad conditions of the road. Microbuses travel full length of the project road, and passenger buses and freight vehicles travel only within different sections of the project road. Travelling is time-consuming and costly. It takes almost a day (11-12 hours) to travel from Bamyan to Dushi by Passenger micro-bus. Ticket price is 800 afs ($16)/person. On an exercise it works out that it takes 24 hours to cover the project road by freight vehicles. It also works out that on an average freight rate is US$0.78/MT/km. Freight owners anticipate that on improvement of the road, both travel time freight costs will drop

down by 75 percent.

- Monthly incomes of both an individual earning member and households in the ZOI are low, as low as 4,750 ($95) and 9,403 afs ($188) respectively. All the four bottom quintiles' income bands fall below $1 per capita indicating at least 80% of the households lie below poverty line in terms of income measurement. School attendance of the male child is higher than the female (73:27) and only 41.45 percent of the male and 32.01 percent of the female children are going to school. Access to health centre is low, and exceptionally female family members are visiting health centers higher than male.

- Agricultural goods, dry goods, textiles and garments are the major group of commodities in the sample markets. Most of the markets have 1-2 pharmaceutical shops. On an average the amount invested per shop in the sample market is 53,194 afs ($1063.88), and average daily sales revenue is 1,305 afs ($26)). The average service area for the shops is 4.5 kilometers – basically, their village and its surrounding area, though more than 52 percent of the shops cover their service area up to 1 km. Ninety percent of the shops have their goods arrived, at least in part, along the project road. For the majority, these goods are brought by either horse or donkey cart.

- Most of the farmers have irrigated land area, and proportions of irrigated and non-irrigated area were 73.19 percent and 26.81 percent respectively. 60% of the respondent households raise crops. Much of the production of food staples are used within the household and is not offered for sale. Crops such as corn and wheat are almost completely consumed within producing households. Potatoes are extensively grown by almost all the farms for household use and as a marketed product. Farming practices were mixed with respect to technology, and only 32.06 percent of the sampled farmers use tractors and hand tools at some point in their cultivation of fields. Farmers and villagers anticipate that on rehabilitation of the road, tractors will be becoming increasingly available in the study area and many tractor owners would be able to rent out their services to farmers for a fee.

- Illegal Armed Groups (IGEs), Anti-Government Elements (AGEs) still exist in the two provinces, land conflicts usually form around ethnic divisions between Tajiks and Hazaras. Deh Salah and Puli Hesar are the districts known for drug-trafficking – it has gone worse than before. There are threats even on building the road especially in Tala Barfak area. The spill-over effect may impact the project road.

5.2 RECOMMENDATIONS

The findings of this study support the idea that rehabilitating the Bamyan-Dushi Road is likely to generate substantial benefits for the population in the ZOI. To achieve the full effect of the project benefits, the study comes up with the following recommendations:

RECOMMENDATION #1: ENSURING SECURITY

The security situation on the project road and in the ZOI is better than in any other area of the provinces. Illegal Armed Groups (IAGs) and Anti-Government Elements (AGEs) still prevail in bordering districts of these two provinces. Road rehabilitation and building new

roads is threatened by the IAGs especially in the Tala Barfak area, a bordering district of Baghlan. This incidence might happen on Bamyan-Dushi project road during construction. So, security must be ensured for the road users, otherwise anticipated benefits could not be achieved.

RECOMMENDATION #2: PROVIDING REST STOPS WITH TOILETS

In order for the road networks to provide equal service and benefits to women, culturally appropriate provisions must be made to accommodate women travelers that are acceptable to them. Women need rest facilities along the road where they can have privacy to rest, pray, eat and use toilets and washing facilities. This provision may be made at Karimak, which is the middle point of the project road.

RECOMMENDATION #3: EXTENDING MORE COLD STORAGE FACILITIES IN THE ZOI

The Bamyan potato is excellent in quality and it has high demand in other provinces. Bamyan is a surplus potato growing area. It is anticipated that there will be high demand for the Bamyan potato in other provinces as soon as the project road has been constructed. Farmers will grow more potatoes when they find more storage facilities and fair prices. Existing cold storage facilities are very small and limited compared to requirements and anticipated demand, and many farmers have to sell potatoes at a very low price. Oftentimes farmers loose potatoes through spoilage due to lack of proper storage facilities. An extensive program on improving and providing more storage facilities in the ZOI needs to be taken into consideration by USAID/Afghanistan. This can be jointly considered by the OIEE and ADAG technical offices. Additional funding for this effort will ensure higher produce of potatoes, fair prices, and export to other areas, thus contributing to Bamyan's overall economy to a great extent, and to those villages in the ZOI.

RECOMMENDATION #4: DEVELOPMENT OF RURAL ROADS

Development of rural roads that connect village to village and villages to the project road is another important factor influencing the growth of the economy in the ZOI. This is also a great demand of the villagers and the farmers as this will facilitate their importation of modern agricultural technology to the remote villages to boost up their production, and accelerate selling their produce to distant markets.

It is recommended that USAID allocate resources to strengthen security on the project road as a precautionary measure. It is also recommended that USAID allocate resources to develop rural roads (as prioritized by MRRD) and establish more cold storage facilities in the ZOI. Until these are improved, benefit to the rehabilitation of the project road will be limited.

ANNEXES

ANNEX – A

SCOPE OF WORK

OBJECTIVE

The objective of this procurement request is to conduct socio-economic baseline study of a 160 kilometers road connecting the cities of Bamyan and Dushi.

BACKGROUND:

Roads are key to economic development and growth and are significant public assets as well. The Government of Islamic Republic of Afghanistan's (GoIRA) 2006 *Master Plan for Road Improvements* identified the Afghan road network as follows:

- Regional Highways - Ring Road and highways connecting Afghanistan to neighbouring countries – 3,242 kilometres
- National Highways - Linking provincial capitals to Ring Road- 4,884 kilometres
- Provincial Roads – Linking district headquarters to their provincial capitals - 9,656 kilometres; and
- Rural roads, gravel or earth surfaced - 17,000 kilometres

The USAID road reconstruction program dates from 2002, under the Reconstruction of Economic Facilities and Services (REFS) Program. Over 2,000 kilometers of primary roads, secondary and urban roads were funded by USAID. USAID, under the Afghanistan Infrastructure Rehabilitation Program (AIRP) and with a budget of over $850 million, continues the reconstruction of roads.

The Ministry of Public Works (MPW) has categorized the Bamyan-Dushi road as a National Highway requiring a high level of service because of its strategic importance providing an alternate route from Kabul going north bypassing Salang pass. It would allow traffic to avoid the Salang tunnel, which subjects all north and south bound traffic to considerable closure and time delays, traffic incidences due to heavy snow and avalanches during four months in winter season.. The provision of an all-weather paved road will also increase security by reducing the time to respond to local, regional, or national incidents and will facilitate access to social services and provide new regional trade opportunities including agriculture and mining.

METHODOLOGY:

This baseline study will gather current estimates of the indicators measured and will be compared with other similar studies that will be conducted after the completion of the road. The assessment will show the 2009 findings by indicator and show the increases or decreases in these indicators as estimated in 2012.

This baseline study will be conducted in FY 2009 before the construction works begin on Bamyan - Dushi road to find out about existing socio-economic conditions. Applying

similar procedure, an impact assessment will be carried out in FY 2012 after the completion of the road. The results from the impact assessment will be compared with baseline study to find out changes in the socio economic conditions resulted from the construction of the road.

The baseline data will be provided for the following indicators:

1. Household Incomes
2. Employment
3. Wages
4. Population in the zone of influence along the road (men/women)
5. Number of people benefitting from the road (men/women)
6. Incidence of Poverty
7. Travel Times
8. Travel Costs
9. Traffic volumes
10. Maintenance and operation cost of vehicles
11. Number. of businesses
12. Total amount of sales values (Dollar)
13. Agriculture production (Dollar)
14. Amount invested in the businesses
15. Cost of Public Transportation (Dollar)
16. Cost of Freight Transport (Dollar)
17. Prices of essential food
18. Prices of agriculture inputs
19. Prices of essential household stuff that are not locally produced
20. Shopkeeper Monthly Sales revenue
21. Access to Healthcare and Education (men/women)
22. Access to market (men/women)
23. Literacy rate (men/women)
24. Numbers of acres of irrigated land
25. Number of acres of cultivated land
26. Number of security incidences

Key informant interviews will be conducted to ascertain the views, opinions, historical perspectives, political significance, background and the Government of the Islamic Republic of Afghanistan's (GoIRA) point of view regarding the impacts of the road improvements. The interviewees will include ministers, governors, local officials, truck drivers, community leaders, passengers, businesses, World Bank, UN, and NGO personnel. The interviews will take into account the position and particular relevance of the person being interviewed.

A more detailed description of the surveys is suggested below:

Household Survey: Households are the basic economic unit of Afghan society, and the survey questionnaires developed by the Baseline Assessment team provide a useful description of their current economic and social circumstances. These questionnaires

should seek information on such topics as family size, employment characteristics, wealth and assets, education and health care practices, agricultural production, and gender issues, among others. In addition, the questionnaires should relate these characteristics to the roads and to their use by household members.

Settlement Demographic Survey: At the village level, the Baseline Assessment team should consider a separate questionnaire to collect information about its distance from the road, its population, its schools and clinics, its agricultural land base and its available amenities, in addition to its current access to the road. These questionnaires will be completed through interviews with village leaders. The data generated through the Settlement Demographic Survey should address the economic conditions of the surveyed settlements, with particular regard to available resources and services in those communities.

Shopkeeper/Farmers Businesses Survey: This survey should obtain information about shop ownership, goods sold including increase/decrease, product prices, agricultural production, income, prices of agriculture inputs, agricultural technology being used and the importance of the road to the shop's commerce and farmers. In addition to this questionnaire targeting individual shopkeepers, the Baseline Assessment Team also should have surveyors count the numbers of shops categorized by the goods they were selling in larger bazaars within the zone of influence of the roads.

Freight Transport Companies: The survey of freight transport companies should focus on urban areas where shipping companies tend to set up shop and structure interviews with those companies, seeking information on transportation routes, vehicle types used for transport, travel time, costs, prices and the expected impact of road improvements.

Driver Survey: Driver interviews may be taken in tandem with the freight transport company surveys. However, passenger and driver surveys should also be undertaken along the road and, in the case of these surveys, at bus and taxi depots. The questionnaires should seek information regarding such topics as vehicle operators' frequency of travel, travel patterns, ownership, costs, income, and security along the road, among others.

Passenger Survey: This survey provides basic data on origin/destination, travel times, fares, and income levels to determine the incidence of poverty among passengers. Passenger surveys are recommended at bus depots and along the road. These questionnaires should also collect information on expected impacts of the rehabilitation of the road.

Traffic Counts: In addition to surveying households, businesses, settlements, and transportation enterprises, the Assessment team will conduct traffic counts along the road. These traffic counts provide a measure of the volume and composition of traffic passing on the roads, which is important background information for determining economic impacts of the rehabilitation such as increased traffic volume, decreasing travel times and travel costs. The traffic counts entail directional counts of passenger vehicles (cars, buses and minibuses) and freight vehicles (two axle, three axle and articulated trucks). These traffic counts will be conducted in the same locations when the "after" study is conducted.

TIME FRAME FOR COMPLETION

The study and final report shall be completed within 7 weeks after contract award and no later than July 31, 2009

DELIVERABLES

- **Work Plan** describing the methodology that will be used to develop questionnaires conduct surveys and interviews, collect, compile, analyze, interpret and present data and findings. This work plan shall be delivered to the COTR within 5 calendar days after team arrives in Kabul.

- **Draft Report** to include an executive summary of Metrics no longer than 5 pages that succinctly reports on the findings pertaining to socioeconomic conditions. The report will provide data on metrics that will establish a baseline for quantifying at a later date the benefits to the Afghan people in order to effectively communicate the project's effects to policy makers in the U.S. Government and the GoIRA. In addition, the report will detail the methods used to arrive at these estimates and gather data. It will also describe the progress made, observations to be shared, issues identified and/or problems encountered and expected follow up work. The draft report will be submitted to the COTR within 35 calendar days of commencement of the assessment. Between seven (5) and fourteen (10) days after submittal of the draft report, the assessment team will give presentations as requested by the COTR to small internal USG audiences and possibly to GoIRA officials and other donors.
- The COTR will review and comment on the draft report within 5 days of submittal.

- **Final report -** the final report, incorporating USAID comments, will be submitted to the COTR for approval within 3 calendar days after receiving the COTR comments on the draft report.

TEAM COMPOSITION & LEVEL OF EFFORT

Team Leader and Transportation Economist: To provide transportation economics expertise, assist the design of survey and quality control, manage the project, and participates in presentations.

Economist: to provide survey design and analysis expertise, provides socio-economics expertise, survey quality control, conduct data analysis, and write report.

CCN Specialists: Qualified Afghans with very good knowledge of the areas covered by the study. They will be expected to provide administrative, logistical support, and translations services to the expatriate members of the team.

The survey is planned to be subcontracted to local Afghan firms. It is recommended that the survey be conducted by 2 teams of 2 persons each. One team will begin at Dushi and the other at Bamyan and work their progress toward the middle of the road.

The LOE will be broken down as follows:

Team Position	Travel Days	LOE (days) in Afghanistan	Travel Days	Total LOE
Team Leader	2	42	2	46
Economist	2	42	2	46
CCN Specialist		42		42
CCN Translator		42		42
			Total LOE	**176**

The sub-contracted survey team should be composed of both men and women to ensure women participation through out the process of this study**.**

FINAL REPORT Requirements:

The final report should not exceed 40 pages and will include the following main elements:

- Executive Summary (not more than 3 pages): stating the purpose of the evaluation, study method, key findings, recommendations, and conclusions.
- Table of Contents
- Introduction: capturing the context of the study, including the demography, geography, socioeconomic and other relevant information
- Body of the report:
    - Brief description of the baseline study
    - Methodology use for data collection
    - Detailed findings
    - Analysis of findings
    - Conclusions drawn for the analysis
    - Recommendations.
- Annexes

ANNEX - B

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ANNEX-C

List of Survey Villages

SN	Surveyor Name	GPS Coordinates		Village Name	Approximate Population
		Latitude	Longitudes		
1	Haji Ghulam Hazrat	35.59555	68.68025	Baghe Mulasha	1,500
2	Haji Bilal	35.5724	68.64329	Moroy Bala	1,200
3	Haji Bilal	35.605	68.6381	Daragak	1,500
4	Haji Ghulam Hazrat	35.59186	68.59874	Kandeh Sang	2,000
5	Haji Ghulam Hazrat	35.59863	68.57861	Chaharbagh	2,000
6	Haji Ghulam Hazrat	53.5968	68.54492	Rabat	28,000
7	Haji Ghulam Hazrat	35.63269	68.42639	Qala-i-Kayan	3,000
8	Haji Ghulam Hazrat	35.60672	68.50914	Lukhtoghay	1,800
9	Haji Ghulam Hazrat	35.59722	68.51465	Chelona	700
10	Haji Bilal	53.57162	68.51902	Qole Eskar	5,000
11	Haji Ghulam Hazrat	35.59142	68.48912	Qaloghu	500
12	Haji Ghulam Hazrat	35.58665	68.48094	Shilzar	500
13	Haji Ghulam Hazrat	35.57779	68.46059	Alam Ali	1,800
14	Haji Bilal	35.56551	68.42553	Kalangozar	2,000
15	Bazarg Omaid	34.72405	67.78617	Dahane Syahqol	1,000
16	M.Ismail	35.55668	68.38715	Jamesayed	900
17	M.Ismail	35.55463	68.38021	Zaghan	700
18	M.Ismail	35.5452	68.3793	Sarband	1,500
19	M.Ismail	35.53603	68.35982	Sehpesta	1,500
20	M,Aslam	34.95046	68.17743	Jawzar	170
21	Amina	34.93373	68.16937	Dahne Jawzar	175
22	Amina	34.82109	67.8951	Fatmasti	480
23	M.Aslam	34.79958	68.00289	Paymuri	500
24	Hakima	34.79622	67.89527	Zeraki	300
25	Amanullah	34.81761	67.94096	Topchi 1	600

26	Hakima	34.93373	68.16937	Dahane Jawzar	215
27	Amanullah	34.88777	68.0518	Bariki	160
28	M.Aslam	34.87497	68.19604	Madarqol	150
29	Amina	34.88662	68.18464	Qala-i-Abbas	120
30	Imamudin	35.22009	67.91364	Amrod	1,500
31	Imamudin	35.27533	68.02224	Chahartaj	700
32	Amina	35.29932	67.09238	Dahne Eshpushta	1,000
33	Imamudin	35.23098	67.94518	Pesheng	1,000
34	Mir Afghan	35.03098	68.01489	Toghay(2)	380
35	Mir Afghan	34.95863	68.02364	Amrutak	580
36	Mir Afghan	34.94147	67.96138	Dahane Mad	720
37	Mir Afghan	35.52552	68.34104	Choqorakdeh	1,800
38	Gulshan	35.487	68.2692	Wado	4,000
39	Gulshan	35.48927	68.31737	Khelar	1,050
40	M.Islam	35.51	68.34	Shutur Jangal	10
41	Hakima	35.4905	68.32319	Gambar	500
42	M.Zahar	35.36878	68.20199	Qara (2)	895
43	M.Zahar	35.0994	68.01353	Dahane Reshaqaw	123
44	Zainab	35.32135	67.90878	Dasht e Safed	2,500
45	M.Islam			Du Ab Makhizarin	2,080
46	Mir Afghan	35.39804	68.2916	Pazhak	700
47	Mir Afghan	35.35576	68.16862	Qara	210
48	M.Zahar	35.35492	68.15569	Surkhjoy	1,600
49	M.Zahar	35.35266	68.14062	Dawlatbeg	4,595
50	Mir Afghan	35.8601	68.04315	Kafshandaz	250
51	M.Zahar	35.41307	68.24356	Dahane Estama	200
52	Amanullah	34.87634	68.08524	Bolola	2,000
53	Amanullah	34.86284	68.16486	Walayatak	240
54	Hakima	34.87023	68.15736	pushta-i- Mazar	1,130
55	Amina	34.83789	68.03712	Eraqe Sulfa1	360
56	Mohammad Aslam	34.8255	68.04218	Eraqe Sulfa2	245
57	Mir Afghan	35.40471	68.27702	Tarnawa	680

58	Esmail	35.44862	68.26817	Azizudin	530
59	Esmail	35.43376	68.25464	Sange tanaw	230
60	Buzorg Omid	35.4547	68.28044	Kecha	440
61	Esmail	35.42745	68.24554	Shahr-i-Sagan	220
62	Mohammad Zahir	35.38599	68.21703	Tala Barfak	3,550

Control Villages

63	Haji Bilal	35.72667	68.59045	Kampirak	1,500
64	Haji Bilal	35.91221	68.49254	Tamas	1,000
65	Haji Bilal	35.67712	68.5329	Todak	900
66	Haji Bilal	35.72605	68.50958	Shine Masjed	1,000
67	Haji Ghulam Hazrat	35.71665	68.6606	Qash Sardaw	1200
68	M.Zahir	35.12385	67.93681	Khoja Kashmir	140
69	Attiq Fazli	35.71017	68.52262	Zayamazad	700
70	Attiq Fazli	35.73897	68.52335	Shin Oghor	800

ANNEX - D

List of Persons Interviewed

Mohammad Ehsan Zia
Minister of Rural Rehabilitation and Development

Eng. R. Muhammad Raz
Deputy Minister, Ministry of Rural Rehabilitation and Development

Dr. Rasooli
Deputy Minister, Ministry of Public Works

Saleem Khan
Deputy Minister, Ministry of Agriculture, Irrigation & Livestock

Professor Wasil Noor
Deputy Minister, Ministry of Labor and Social Affairs

Habiba Sarabi
Governor of Bamyan Province

Syed Aziz Hashimi
Deputy Governor of Bamyan Province

Dr. Ahmad Shah
Head of Roads, Ministry of Public Works

Sharif Akhtar
Technical Advisor to the Governor, Bamyan Province

M. Ramazan Shafaq
Director of Policy and Planning, Ministry of Transport and Civil Aviation

Eng, Mohammad Nase "Temory"
Head of Program Implementation Unit (PIU), Ministry Rural Rehabilitation and Development

Dr. Mohammad Akram
Director of Planning, Ministry of Public Health

Ajmal Shizai
Strategic Implementation Advisor, Ministry of Rural Rehabilitation and Development

Sam Nassif
Project Manager, USAID/OIEE

Alyson McFarland
Baghlan Field Program Officer, USAID, Provincial Reconstruction Team

Eng. A. W. Langari
Baghlan Deputy Field Program Officer, USAID, Provincial Reconstruction Team

Mesfin Wadajo
Transport Specialist, World Bank

Gibert Richard, PE
Chief of Party, HRLSH Program, International Relief and Development (IRD)

Steven Solter
Technical Director, Technical Support to the Central and Provincial Ministry of Public Health

Hayatullah Hayat
Director, SDLR

Razia Jan
Program Director, Arzu

ANNEX - E

Sample of Questionnaires
Shop Keepers Survey – Dushi – Bamyan Road

SURVEYOR: _____ CODE: _____

We work for a company that is surveying the socio-economic conditions on Dushi – Bamyan Road and we are trying to find out about economic activity along the road. We hope that you will be willing to help us with some information that will be confidential – no one will know what particular information you gave us because it will be combined with other people's information.

Name of Village: _____ Bazaar:_____

1) What is your relationship with the owner of this shop?_____

2) How long have you been selling goods, here?_____

3) What are the major items that you sell in order of importance?

Goods	Price/ Unit	Locally made	Foreign
1			
2			
3			
4			
5			
6			
7			

4) What is your estimated total daily sales volume? _____ Afs.

5) How far do you live from this market? ----------

6) Do you use the Dushi – Bamyan road to get to your shop from home? Yes/No

7) How long does it take you to get from home to here?

8) Does the merchandise in this shop get delivered by the using the Dushi – Bamyan Road?

9) How far I s the next (nearest) market from here?

10) How do most of your goods reach your shop? a) Donkey ___ b) Car/Van ___c) Truck (d) by-cycle (e) any other (specify) ____

11) How far do customers travel to shop in this bazaar? _____

12) How many family members depend on your earnings from this shop?

13) Do you think that road improvement will increase your sales volume? Yes/No

14) If yes, how much increase from present sale? -------- afs

Shop Keepers Survey – Dushi – Bamyan Road

Market Overview

1. Name of bazaar: _____2. Village/Town _____

3. District_____

4. Number of stalls selling agricultural produce: _____

5. Number of stalls selling dry goods: _____

6. Number of stalls selling meat: _____

7. Number of stalls selling hardware: _____

8. Number of pharmacies. _____

1. Total number of stalls: _____
2. Number of shops (a) run by only family members

   (b) run by family member plus employed person

   © Only by employed person

9. Comments:

Settlement Demographic Information Dushi – Bamyan Road Study

Surveyor_____GPS_____

Introduction: We represent the Dushi – Bamyan road socio-economic survey effort. We would like to know how the current circumstances affect you. Your answers to these questions will guide us for future road improvements.

---

1. Name of settlement: _____
2. Number of individuals in settlement:_____
3. How far is this village from the Dushi – Bamyan road:_____

4. Number of primary schools: _____
5. Number of enrolled students: male_____ female_____
6. Number of secondary schools. (Or distance to nearest one) _____
7. Number of enrolled students: male_____female_____

8. Number of health care centers: clinics_____hospitals_____

9. Sources of drinking water: _____

a) Percentage of people using common well/karez_____
b) Percentage of people using private well/karez_____

10. Number of flour mills: _____

11. How many jeribes of irrigated field in this village: _____
    11a). What is the source of water? _____

12. Public facilities for settlement:

(a) Mosque :_____
(b) Post offices: _____
(c) Telephone offices:_____
(d) Petrol pumps: _____
(e) Public baths: male _____female _____
(f) Other (specify):
_____

13. Do buses stop in this village?:_____
    13a): How often? _____

14. How Much does it cost to go to:

Place	By small car	By minibus	By bus
Bus Station			
Kabul			
Ghazni			
Kandahar			

Passenger Survey

We represent the Dushi – Bamyan Road socio-economic survey effort. As a passenger and user of the road your answers will help us to determine the socio-economic benefits of recent road improvements. Your name will not be used.

Location survey taken _____ (Province/District/Rural/Urban)

---

1. Respondent a) Age:___ b) Gender:___ c) Occupation:_____) Years of education: ___

2. Location of your household? _____ (town/village/district)

   Urban/Rural: _____

3. What is your **most** frequent destination? _____.

Frequency (number of times): _____ per month.

4. How long does it take to get to your **most** frequent destination?

   a) by bus _____hours/minutes

   b) by mini-van _____hours/minutes

   c) by car _____hours/minutes

5. What is the cost of a one-way trip to your **most** frequent destination?

   a) by bus, Afs. _____

   b) by mini-van, Afs. _____

   c) by car Afs. _____

6. Which means of transportation do you use **most** often to your most frequent destination?

   a) bus; b) mini-van; or c) car, (d) any other (specify) -------

7. a) Other than your **most** frequent destination, where else do you travel very often?
   _____ (district/province/town)
   b) Is this travel on the Dushi – Bamyan Road_____ (Yes/No)

8. a) When traveling on the Dushi – Bamyan Road by bus, do you transport goods for sale?

   b) If yes, how much do you pay? Afs _____

   c) If yes, what type of goods do you transport? _____

9. Do the road improvements of the past few years affect you?
   a). Easier movement
   b). Reduction in transportation cost
   c). Opening more job opportunities
   d). Increase in income sources
   e). Increase political involvement

f). Increase trips to hospitals, schools, banks, other social institutions

g). Other (describe)

Questionnaire for Transportation and Freight Companies

City _____ Date_____ Initials _____ No. _____

1. Which is the road you most frequently use for shipping goods?
    a. Dushi – Bamyan Road
    b. Other roads

2. How many trucks did you send down the Dushi – Bamyan road during last month?

3. What are the three most common destinations for your shipments?
    a. _____
    b. _____
    c. _____

4. What type of vehicle do you use for shipping your goods?
    a. Car or jeep
    b. Bus
    c. Minibus
    d. Truck (2axle)
    e. Truck (3 axle)
    f. Tractor Trailer

5. How many vehicles do you own? _____
6. How many drivers work for you? _____
7. Do your drivers own their own trucks?
8. What type of cargo you usually ship?
    a. Food
    b. Nonfood (please specify_____)

9. How many tons of freight do you send on average per trip?
10. Does road condition affect the fees you pay/charge?
11. When you price a shipment, what are the major elements of the price?
    1._____,
    2._____,
    3._____,
    4._____
    5. _____.
12. Are there any (non-market) controls on freight rates?
13. If yes, please explain:

    a. Controlled by few owners of trucks
    b. Controlled by shipper's associations
    c. Controlled by government

14. How many major competitors are there in this city?

15. Who are your five biggest competitors? 1_____, 2_____, 3_____, 4_____, 5_____

16. How would an improved road affect you? (Number _____)

17. Describe what type of security incidence happened on the road and when?

18. Do you think that road improvement will decrease all such incidences?

Household Survey

Surveyor: _____

A. GENERAL INFORMATION

A1. GPS coordinates: _____ A2. GEO Code: _____ A3. Village: _____ A4. District: _____ A5. Province: _____

B. INFORMANT'S PROPERTY INFORMATION

B1. Property user is: __Owner, __ Tenant, __ Relative of absent owner, __ Other (explain)_____

C. SOCIAL GROUP

Pashtun ___ Uzbek___ Tajek ___ Hazaras___ Turkmen ___ Kuchi ____ Other_____

D. HOUSEHOLD INFORMATION

D1. List ALL people sleeping & eating in the household (unless living out of town)

*	Male/ Female	Age	Years of School	Currently Enrolled in School	Monthly Income	Source of Income	Not Working (excluding children)

Continue below if more than 15 * = Person(s) interviewed

D2. How many widows live in this household?
D3. How many members of this household have returned from living in exile during the past 2 years and are now living in this compound? _____

E. LIVELIHOOD INFORMATION

E1. Do you earn wages outside the home? _____If yes, answer E2., and E3.:
E2. Do you use the Dushi – Bamyan road to reach your place of employment?

E3. What mode of transport do you use to get to work?

Mode travel	*Distance*	*travel time1-way*	*Cost/trip 1-way*
Walk			N/A
Non-motorized			
Motor Bike			
Private Vehicle			
Bus			
Mini-van			

F. HOUSEHOLD MEMBERS (how do you fill up this column if no. of members is more than one)

F1. How often do you travel on the Dushi – Bamyan Road to look for work? _____
F2. How far do you travel to look for employment? _____
F3. What is your monthly income? _____
F4. What is the total monthly income of your entire household? _____
F5. How many people contribute money to the total household income? _____
F6. How many relatives send money to your household who do not live in your household? _____.
F7. About how much money does your household receive per month from relatives not living in this household? _____ AFS/month.

G HOUSEHOLD WEALTH ASSESSMENT
G1. What is the size of the household compound? _____

Items	*Number of items in household*
Radios	
Television	
Bicycles	
Car	
Truck	
Animal drawn cart	
Well on compound	
Electric pump for well	
Generator	
Indoor plumbing	
Tractor	

H HEALTH CARE

H1a. What are the principal reasons that men in this household seek healthcare or medical attention?

a. _____ b. _____
c. _____ d. _____

H1b. What are the principal reasons that women in this household seek healthcare or medical attention?

a. _____ b. _____
c. _____ d. _____

H1c. What are the principal reasons that children in this household seek healthcare or medical attention?

a. _____ b. _____
c. _____ d. _____

H2. How many times per year do members of this household normally go to health centers or hospitals?
Men: ____ (times/year); Women: ____ (times/year); and Children: ____ (times/year)

H3. How far do you travel for health care? _____

H4. Do you use the Dushi – Bamyan Road to obtain medical care? _____

H5. How long does it take to reach a maternal-child clinic (in time)? _____

H6. How does a roundtrip to the nearest hospital cost? _____
H7. How do you get to the hospital/clinic; how long does it take; and how much does it cost?

_____

Mode of Transport	*Time it takes*	*Cost*
Walk		
Bus		
Minibus		
Private car		
Other		

I EDUCATION

How many members in your family can read and write?

I1. How far is the nearest primary school? _____ (# kilometers)
I2. How far is the nearest secondary school? _____ (# kilometers)
I3. How do your children travel to primary school?
a. walk ____ b. bus____ c. minivan ____ d. private car _____ e. non-motorized ___
I4. How do your children travel to secondary school? _____(# kilometers)

J WOMEN AND TRANSPORTATION

J1. In a year, how often do the women of this household travel on the Dushi – Bamyan Road?
_____

J2. What are the most common reasons women travel on the Dushi – Bamyan Road?
_____

J3. When women travel away from the household, who normally travels with them?
_____

J4. Do mid-wives practice in this community? _____ If not, how far away do women have to travel to be assisted in child birth? _____

K. AGRICULTURE

K1. Do you raise crops? Yes____ No ___ (if no, go to Section L, below)
K2. How many jeeribs of rain-fed land do you farm? _____
K3. How many jeeribs of irrigated land do you farm? _____
K4. Information on household agricultural output

a. Types of crops cultivated	*b. % for use in household*	*c. % for sale in market*	*d. Unit sale price (Afs/kg)*	*e. Total annual yield (Seers)*

K5. How do you cultivate your land?

a. Animal traction
b. Machine (tractor)
c. Hand plowed

K6. How much do you spend per year on:

a. fertilizers: _____ Afs.
b. pesticides: _____ Afs.
c. seeds: _____ Afs.
d. transport: _____ Afs.

K7. Of the following animals how many of each do you keep?

Poultry: _____;
Sheep: _____;
Goats: _____;
Cows: _____
Donkeys: _____;
Horses: _____;
Goats: _____

K8. Do you use the Dushi – Bamyan road to take your products to market?

____ yes, ____ no

K9. Where do you sell your farm products? _____

L. OTHER HOUSEHOLD PRODUCTION

L1. Do you or others in your household produce other goods or services for sale?

L2. If so, what goods or services do you produce?

List: _____
_____
_____

L3. Where do you sell your goods and services?
L4. Do you sell (a) to a middleman or (b) directly in the market?

L5. Do you use the Kabul-Kandahar road to transport your goods for sale?

L6. How much of the final sale value is spent on transporting the goods?

L7. Can you estimate how much you earned from the sale of goods and services during the past year? _____

BUS OWNER/ TRUCK OWNERS/CAR OWNERS INTERVIEW

MAINTENANCE AND OPERATION COST OF VEHICLES

1. Owner of ----------
2. Cost of tire (per year) ---------- afs
3. Cost of Fuel per year ----------afs
4. Cost of driver and conductor (if nay) per year--------- afs
5. Toll and parking cost per year……..afs
6. Car wash and repairing cost per year --------- afs
7. Any other cost relating to operation and maintenance (specify) -------- cost -----afs
8. Road tax per year ---------- afs
9. Unseen (pleasing) cost per year on average ---------- afs

Questionnaire for Vehicle Operators

Location:_____
(Rural/Urban) _____

We are documenting how improving the Dushi – Bamyan affects commerce. We would like to know how the condition of the highway affects you. Your answers are important in forming recommendations for improvements in roads and road-related services. **This questionnaire is anonymous.**

1. How many times did you drive the Dushi– Bamyan road during the last month? _____ times.
2. On average, how far do you go before you break for the day?
_____Kms.
_____ (location)
3. Where did you begin this journey? _____
4. Where is your final destination? _____
5 a) Do you own the vehicle? Yes ____ No ____
b) If no, who pays your salary? _____
If yes, go to question 8.
c) Do you lease the vehicle? Yes ____ No_____
If no, go to question 7.
d) if you lease the vehicle, do you lease from the government?
e) do you lease from a private owner?
6. What vehicle leasing fees do you pay per month?
Afs.._____
7. Who usually pays for the vehicle repair?
8. How much do you pay (or the owner pay) for vehicle repairs per month? _____ Afs.
9. What is the value of the freight you haul, on average, per trip?
_____ Afs.
10. Do you (or the owner) have freight insurance?
11. If yes, what is the cost of the insurance per 5,000 Afs. of freight? _____ (cost)
12. How many vehicles do you or your boss own? _____ (number)
13. How are freight rates set? Does some person or organizations set your fares or freight rates?
Yes _____ No _____
14. If yes, does
a. the government set rates?
b. the truckers association set rates?
c. rates set by owner.
15. Does the road condition affect your fees?
a. yes b. no
16. How much do you earn per month by driving this vehicle?
Afs.._____
17. Are you paid by the trip?
18. Is there a bonus for a faster trip?
19. In the last six months, have you been:
Personally robbed?
Vehicle stolen?
Physically injured?
Merchandise stolen?
20. How many years have you been driving a truck or in the trucking business?
21. Due to security concerns, do you stop driving at night?
22. Along the Dushi – Bamyan road: a) How many times are you stopped by Afghan authorities to pay fees? _____ b) On average, how much do you pay in fees per stop? _____ Afs.
23. Along the Dushi – Bamyan road: a) How many times are you stopped by other people to pay fees? _____ b) On average, how much do you pay in fees per stop? _____ Afs.
24 What is the price per liter for fuel? _____ Afs.
25. Is fuel readily available along the route
26. On average, how long do you wait to refuel at stops along the way?