Impact Study of Sida-Funded Rural Access Improvement Project (Phases I-III) in Northern Afghanistan

Final Report

Submitted by

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ACRONYMS

ATR	Assess Transform and Reach Consulting
BHC	Basic health clinic
CHC	Comprehensive health clinic
FGD	Focus group discussion
MRRD	Ministry of Rural Rehabilitation and Development
MoPW	Ministry of Public Works
RAIP	Rural Access Improvement Project
Sida	Swedish International Development Cooperation Agency
UNOPS	United Nations Office for Project Services
WASH	Water, sanitation and hygiene

EXECUTIVE SUMMARY

The United Nations Office for Project Services (UNOPS) commissioned an Impact Study of the Rural Access Improvement Project (RAIP) to ATR Consulting based in Kabul, Afghanistan. The project, supported by the Swedish International Development Cooperation Agency (Sida), was implemented by UNOPS in the four provinces of Balkh, Jawzjan, Samangan and Sari Pul. Implemented in three phases between 2007 and 2015, the project is planned for completion in June 2016.

RAIP aimed to reduce poverty in rural areas by facilitating improved access to economic and social services for the population, thereby fostering equitable growth and reduced rural-urban socioeconomic disparities. RAIP had a heavy focus on the provision of rural infrastructure, prominently roads along with the capacity development of relevant provincial public institutions.

The impact study was commissioned as a follow up action of the project evaluation with an objective of assessing the magnitude and distribution of direct and indirect socioeconomic impacts of RAIP on the target population. It also aimed to accomplish a comparative analysis of project and non-project communities against a set of impact indicators. A summary of the findings of key performance indicators can be found in Appendix 3.

Methodology

The study adopted a theory of change model for rural infrastructure intervention leading to a set of measurable direct and indirect outcomes and impact. It identified plausible indicators for outputs, outcomes and impact. ATR Consulting conducted the study in the absence of valid baseline data.

The study applied a mixed method approach using a combination of qualitative and quantitative approaches. Data collection covered both RAIP project sites and non-project sites for comparison purposes. In all, the study covered 1,596 household surveys (half project and half comparison households), distributed across the four provinces based on relative weights of road length completed under the project. Other data sources included 16 focus group discussions with key representative stakeholders, 32 case studies, 181 origin-destination surveys, 40 transporter surveys and 40 traffic density and composition surveys.

The data analysis follows the logical framework supported by quantitative and qualitative results. Wherever possible, the study reports the test of significance associated with differences in project and non-project respondents' mean values. Overall, the selection of comparison group (non-project) households appears robust, based on similar key static household attributes, with the exception of the access variable. This confirms the validity of comparisons between the project and non-project households. Due care has been taken to avoid non-project areas supported by other development cooperation assistance.

The study team identified the fieldwork areas for the project and non-project households in close consultation with UNOPS staff based in Mazar-e Sharif. Security concerns persisted throughout the fieldwork period, more so in some areas, which led to a longer timeframe and reassignment of field teams to other areas in some cases.

Key Findings

The results from the study based on discussion and data collected reveal a number of findings that are also summarised, by indicator in APPENDIX 3 – SUMMARY OF KEY PERFORMANCE INDICATORS Key findings are:

- Education, health and economic status of households is better in the RAIP communities compared to non-project areas. Improved access in the project has partly contributed to this achievement.

- Household income sources are more diversified in the project areas compared to non-project areas, but at the same time, the proportion of landless households also tends to be relatively high in both areas. Improved access seems to have contributed to greater diversification, nevertheless the agricultural production system remains confined to traditional low value crops.

- Access to drinking water is better in RAIP areas compared to non-project areas. However, it is still far from the desired level, particularly for girls and women who typically carry the burden of fetching water. This is not solely attributable to RAIP since there are other community led initiatives in place aimed at improving access to water.

- Access to education is better in project than non-project areas but not directly attributable to improved roads, although it has helped students to travel on a smooth road surface. Most of the students walk to school. On the other hand, regularity of attendance and teachers' presence have improved due to better road conditions.

- Access to health services in the project areas is better than the non-project areas. Doctors' response time is shorter in the project areas as well. While other factors (availability of clinics nearby for instance) may have played a part, the overall mobility of heath care staff is better in the project than the non-project areas.

- The greatest benefit has been seen in the communities who are more mobile now than before RAIP implementation. They are able to use their personal or hired transport for seeking jobs, social interaction, purchase of inputs and limited sale of farm produce. However, since the job market is limited, there are no visible signs of improved wages associated with better access to markets.

- Traffic density varies from one province to another based on population density and overall security conditions for travelling on the road. Nevertheless, overall traffic density is low and has the potential to increase over time as the economic wellbeing of households and security situation improve. At present, the use of vehicles is largely for personal transport and less so for business or income generation purposes. About 77% of vehicles transport passengers. Light vehicles alone account for 60% of the vehicles on the road, while heavy vehicles account for only 8%.

- Since public transport is limited on the roads and is comprised of mostly older vehicles (all manufactured in 2001 or earlier), there is no significant reduction in transport costs or passenger fares. There is no firm indication of reduced operation and maintenance costs for the transport operators.

- Government officials are better informed and more aware of technical capacity associated with road infrastructure construction, operation and maintenance, largely attributable to RAIP. However, there is little evidence of ownership in local communities for regular operations and maintenance.

- Road safety remains a concern as increased accidents and fatalities appear on improved roads, largely due to speeding and new drivers who lack formal driving training.

Lessons

The study reveals key lessons for future support aimed at improving access for the rural population in Afghanistan. These are:

- While improved access (e.g. roads and water supply) is necessary, it is not sufficient for improving the welfare of rural populations and reducing poverty. There is a need for different agencies to collaborate effectively towards a common goal.

- The provision of improved access needs to consider key economic and social service centres (demand driven) during the planning of the intervention.

- Outcomes are indicative of potential impacts. While it is not practical to assess impact within a short time period, assessment of outcomes helps ascertain the direction of project impact relative to its intended goal.

- Data collection in a challenging environment needs to be flexible and requires triangulation using a combination of qualitative and quantitative methods.

- Ownership of the infrastructure should rest with the communities served by the facilities. This helps to ensure safety, as well as sustainable operation and maintenance.

Recommendations

The study demonstrates that improving access for rural populations in Afghanistan has already resulted in some positive impacts. It proposes four key recommendations based on the successes and lessons from the first three phases of project design and implementation to increase impact for the communities:

- Afghanistan's development partners, including Sida, should consider continued support for improving access to the rural population in the country. In the presence of weak governance, it makes sense for UNOPS to implement the next phase of the project, if approved for funding.

- The next phase of the project should be planned giving due consideration to local needs. This will require wider consultation with agencies involved in the provision of community, economic, social and environmental services. The process should also give due attention to reducing road fatalities through a concerted effort on the part of all stakeholders, designing, for instance, public awareness campaigns about safe driving practices. The project design should clearly lay out the theory of change, adaptable to the local context.

- Quantitative data collected during this study should be compiled into a database to form a baseline for the next phase of the project. Qualitative impact stories (both positive and negative) should be compiled based on personal accounts from individuals, households and communities.

- A sustainable road maintenance fund should be created to encourage local ownership for operation and maintenance over the defined economic life of the facility.

SECTION 1 - INTRODUCTION

A. Country Context

Since 2002 rural development in Afghanistan has been contingent on the rehabilitation of secondary and tertiary roads and the construction of a network of national roads to link rural districts with the provincial centres of economic growth and development. Poor infrastructure, including roads, have been compounded by the intransigence of Taliban and anti-government support. The rural roads sector has therefore benefitted from consistent international funding and assistance over the intervening 13 years, first through the National Emergency Employment Program and then through the National Rural Access Program. International donors have worked with the Ministry of Public Works (MPW) and the Ministry of Rural Rehabilitation and Development (MRRD) to redevelop the national, secondary and tertiary roads that had been destroyed by conflict and poor governance. National roads, such as the highways connecting Kabul to Jalalabad and Kandahar, fall within the remit of USAID, the Asian Development Bank and, until recently, certain Provincial Reconstruction Teams (PRTs).

The Afghan Government and donors realise that continued support for rural road development is essential for improved access to markets, employment opportunities, health facilities and educational services. By upgrading a secondary or tertiary road, development actors can increase passenger and freight transport by reducing travel times, increasing the variety of vehicle options and, therefore, reducing the cost of transport for low income individuals dependent on hiring a seat in a car or rickshaw. Communities are able to purchase a wider range of consumables from an increased variety of markets and diversify their income sources because of greater mobility. Additionally, women have access to preventative medical care such as pre-natal services and mother child nutrition advice.

B. Programme Context

The first phase of RAIP began in 2007 in Samangan and Sari Pul, two remote and underserved provinces in Northern Afghanistan which had failed to match/enjoy/reach the economic development or access to basic services seen in other northern provinces with better connected urban and rural districts. Poor road connections in both provinces isolated farmers from markets and hampered employment opportunities beyond the most basic landless labouring. The security risk, time required and financial cost of travel prevented women from seeking treatment at even basic health centres (BHCs) and isolated all but the wealthiest from travelling to access advanced medical care at comprehensive health centres (CHCs).

Phase I included elements of capacity building of local shuras and contractors in addition to bitumen and gravel road construction and paved the way for an expansion into Balkh and Jawzjan provinces in phase II (2010-2013). Balkh contains the urban centre of Mazar-e Sharif with strong economic links to the rest of Afghanistan and international markets while Jawzjan benefitted from consistent development support from the Swedish and subsequently Turkish PRTs, in addition to electrical investment from Turkey and neighbouring Turkmenistan. The second phase developed a more advanced gender dimension by recruiting local women to increase female participation in appropriate road construction tasks. More attention was paid to the additional elements of infrastructure projects designed to tackle rural poverty through water, sanitation and hygiene (WASH) interventions and subprojects including solar heating for schools, mosque repair, playground construction and bridge rehabilitation. Phase III began in April 2013 and is close to completion. It built on the gains made in

previous years to foster equitable growth across urban and rural districts and continued its road construction, capacity building and community infrastructure remit under increasingly challenging security conditions.

C. Scope and Objectives of the Impact Study

In July 2015, ATR and consulting expert Ganesh Rauniyar, Team Leader for this study, developed a series of research tools to determine the socio-economic impact of all three phases of the RAIP project with close attention to the effect on access to essential services such as health and education, access to markets for consumers and sellers, income generation and employment opportunities. The study also reviews the capacity building component of RAIP and looks at how attitudes and practices relating to gender empowerment have been affected by all aspects of RAIP programming. The objective of the analysis is to inform the project of where their interventions have been most successful, taking into consideration economic, cultural and security factors beyond the control of RAIP. The results provide the project with actionable recommendations on how to increase the impact of infrastructure sub-projects through, for example, close coordination with the provincial Departments of Education and Health, and reviews the local and macro-level issues that currently act as barriers to services and economic development. It reviews which elements of capacity building have been the most sustainable and where more attention would be required to secure full community participation.

The report begins with an explanation of the research methodology before expanding on the impact of the RAIP project by analysing household characteristics of control and treatment respondents, direct outputs in terms of traffic movement, direct outcomes and the capacity building component. As there is a lack of baseline data, the impact study compares control versus treatment groups between communities of similar demographic, socioeconomic and cultural attributes to determine the comparative impact of the RAIP activities. The results also review the indirect and unexpected outcomes of the intervention, looking again at access to services, economic aspects of rural development, social interaction in the community and, finally, the outcomes on gender roles including the decision making process and female involvement in income generation.

The report concludes with lessons learnt and actionable recommendations.

SECTION 2 – RESEARCH METHODOLOGY

The discussion on methodology covers five parts: (i) a conceptual framework, (ii) data sources and limitations, (iii) preparation for data collection, (iv) data collection description, and (v) analytical methods adopted for data analysis. A brief discussion follows.

A. Conceptual Framework

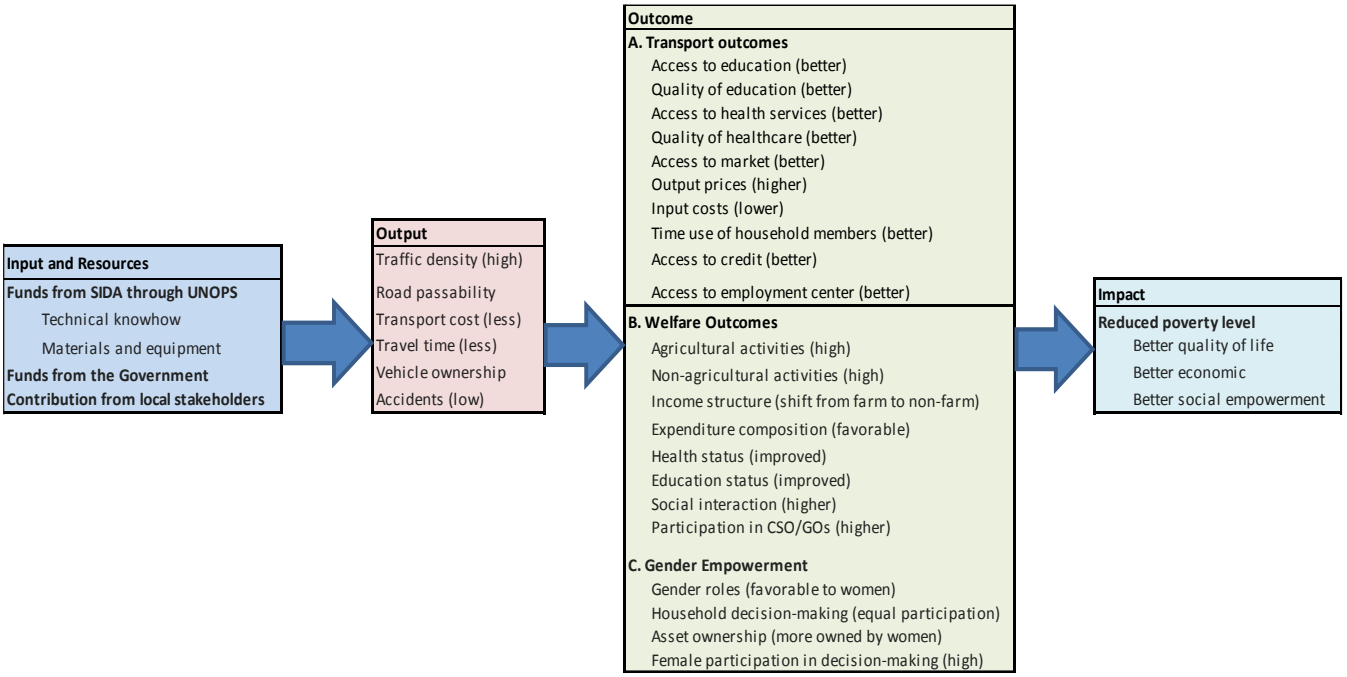
The impact study follows a conceptual framework based on a review of literature on impact of rural roads in Asia and the Pacific region, as depicted in Figure 1. Key assumptions on project impact are:

(i) There are no other rural roads funded in the study area by any other agencies.

(ii) The comparison areas are similar enough to RAIP communities, with the exception of access to rural roads, to serve as a valid comparison group.

(iii) Hence, any differential changes between the project and comparison communities on impact parameters are primarily due to RAIP intervention of improved access to the communities and beneficiaries.

Figure 1: Conceptual framework



Broadly speaking, impact pathways are direct and indirect. Direct pathways refer to visible measures while indirect pathways refer to inferential deductions but are not directly measurable. In the RAIP context, direct pathways refer to transport outputs and outcomes. Table 1 summarises relevant variables and their corresponding measurements. The conceptual framework formed the basis for designing data collection.

Table 1: Impact pathways of rural roads in Afghanistan

Impact Pathway (Effect)	Indicator Variable	Measurement of Variable
Direct Effect: Transport Output	• Traffic density • Road passability • Transport costs/fares • Transport patterns • Vehicle ownership • Accidents	• Vehicles/day, frequency of bus service • No. of days road closure in a year • Passenger and freight transport fares • No. of trips, duration, mode of transport to selected destinations (by age and gender) • No. of motorised and non-motorised vehicles owned • No. of road injuries and fatalities (by age and gender)
Direct Effect: Transport Outcome	• Access to education • Quality of education • Access to healthcare facilities • Quality of healthcare facilities • Access to markets • Prices • Time use of household members • Access to credit • Access to employment centre	• School enrolment, dropouts (by gender), distance and time spent commuting • Absenteeism of teachers, availability of school supplies • No. of visits (by age and gender), distance and time spent in commuting • Qualification of staff, availability of medical supplies, absenteeism of health staff • No. of visits (by age and gender), products sold and purchased • Prices of key commodities, agricultural inputs, agricultural land • Time spent on firewood collection and other transport tasks • No. of visits (by gender) • No. working in off-farm activities, travel time to employment centres (by gender)
Indirect Effect: Welfare Outcomes	• Impact on agricultural activities • Impact on non-agro activities • Income structure • Expenditure composition • Health status • Education status • Social interaction • Civil society/government office participation	• Crop mix, use of inputs, visits of extension agents • Activity mix, off-farm employment • Type of income sources • Share of food, transportation, education, health and other items • Incidence of illness, number of workdays lost due to illness, by gender and age group • Literacy, years of education, by age and gender • No. of visits to other villages and cities, participation in social events, by age and gender • No. of civil society organisations actively involved, No. of visits to government offices
Indirect Effect: Gender Empowerment	• Gender roles • Household decision-making • Asset ownership • Female participation in economic activities	• Changes in gender roles by men and women • Changes in household decision-making by men and women • Changes in major asset ownership (land, house, vehicles, agro-machinery etc.) • Types of income generating activities performed by female members and share of household income, ability to use income for own or family needs

B. Data Sources and Limitations

1. Data sources

Under an ideal situation, it would have been desirable to collect and report baseline data pertaining to the project prior to RAIP's commencement from both project and comparison areas. In the context of Afghanistan, the secondary statistical data system is weak, and prior to the commencement of the project, no valid baseline data was collected by the project team for assessing impact. Hence, this called for a heavy reliance on primary data.

As demonstrated in Figure 1: Conceptual framework, impact pathways of rural roads tend to be complex and multidimensional. The study's Team Leader designed a set of data collection tools based on a mixed method approach using qualitative and quantitative techniques comprising of:

(i) Household surveys
(ii) Transport origin and destination surveys
(iii) Transporter surveys
(iv) Traffic density and composition surveys
(v) A list of guiding questions for focus group discussions with guidance notes, and
(vi) A list of guiding questions for case study accompanied by guidance notes

These instruments complemented each other and helped to ascertain RAIP's impact on its intended beneficiaries. These appear in **Appendix 1**.

2. Limitations and challenges

The impact study encountered a number of limitations or challenges. These should be considered while interpreting the results. Key limitations are:

(i) As stated earlier, the impact study lacked baseline data, and thus the results reflect the impact at one point in time and hence do not reflect progressive impacts over time.
(ii) Attacks on Kunduz and its momentary fall to the Taliban, as well as an increased presence of insurgents throughout the northern provinces posed security threats at the time of data collection.
(iii) An ATR staff member responsible for oversight of the data collection process had to travel to Mazar-e Sharif to finalise the list of villages with staff in charge of RAIP and their road engineer, thus delaying the start of the data collection process.
(iv) Some of the villages in each province became insecure during the data collection process. ATR's field team and the enumerators refused to travel to these areas. ATR kept RAIP staff informed and jointly agreed on alternate treatment and comparison villages. In addition, the ATR team could not conduct fieldwork in Khaniqa district of Jawzjan Province due to obstruction by an elder (who happened to be a local commander) and as a result the team had to opt for replacement villages.
(v) To ensure data collection met a reasonable standard, ATR had to make changes in enumerator staffing. One enumerator from Jawzjan Province could not continue due to personal reasons and two additional enumerators from Samangan did not perform satisfactorily and had to be replaced by new enumerators. ATR repeated four FGDs (two male FGDs in Samangan and two female FGDs in Balkh) due to poor quality first time. ATR had to discard and repeat 60 household surveys from Samangan and Balkh, again due to poor quality.

The lack of usable baseline data was the primary reason why ATR could not establish the impact of RAIP on poverty reduction during the impact study. Despite this, ATR attempted to gain an understanding of the levels

of poverty in control and treatment locations through specific survey questions relating to income and expenditure. This was very challenging in the RAIP areas because of the scale of subsistence farming, where monetary value cannot be attributed to the produce households grow and consume themselves. Equally these farmers are vulnerable to differences between the crop output each season which are unpredictable and vulnerable to cyclical phases of flood and drought, particularly in northern Afghanistan. The assessment of poverty levels was further complicated by the binary, gendered nature of household duty division, which excluded women from decision making or access to information on issues relating to income and expenditure. Where ATR conducted household surveys with females in male-headed households their awareness of income generated by their husband or his average spending was extremely low.

C. Preparation for Data Collection

The preparation for data collection by field teams involved three key activities outlined below. ATR appreciated support from RAIP Mazar-e Sharif staff in selecting the final list of villages for the study.

1. Selection of villages

The study covered four RAIP provinces - Balkh, Jawzjan, Samangan and Sari Pul. The RAIP staff prepared a list of potential villages and road sections for data collection in each of these provinces. The list consisted of the villages for both treatment and comparison groups. ATR staff randomly selected villages from the list in each province and confirmed these with Mazar-e Sharif staff. Replacement villages due to security challenges in the field were selected based on the recommendation of RAIP staff, as needed.

2. Organisational arrangement

A Research Officer at ATR headquarters was tasked with the organisational responsibility for field work. ATR management recruited 36 field staff (44.4% female), comprising 16 field researchers (50% female), 16 field surveyors (50% female) and four field monitors (no female) based on ATR's recruitment policy comprising:

(i) **Physical access**: All field researchers and surveyors had lived and worked in the province, and if possible, district(s) where data collection is conducted and had developed a network of support and contacts. ATR does not recruit any staff from government institutions.

(ii) **Performance**: Recruitment favours field researchers who have already undergone training and have a satisfactory record of performance. Those field researchers that are new receive additional training, where necessary.

(iii) **Endorsement**: Where possible, ATR relies on its trusted network for identifying field staff, and

(iv) **Language**: All field staff members are fluent in the dominant language(s) of the target districts.

ATR prepared two separate teams of field workers (researchers and surveyors/enumerators) per province; eight teams in total. Each team comprised two male and two female staff. Field surveyors/enumerators were to conduct household and traffic/transport surveys and field researchers were to conduct FGDs and case studies. ATR strictly adhered to cultural sensitivity and ensured that field staff interviewed respondents of the same gender. ATR recruited one field monitor for each province to oversee all the data collection and to coordinate with and report to ATR management. All teams received additional support from headquarter staff based on need.

3. Training field staff

The Team Leader reviewed all data collection tools with ATR's Research Officer and Training Officer during the first week of August 2015 while he was in Kabul. He ensured both persons adequately understood all the data collection tools and were able to interpret as and when needed, particularly during translation.

All field staff received training at a neutral place. Training covered project objectives, the contents and use of data collection tools, data recording and quality assurance protocols and procedures. ATR grouped the field staff into three clusters for training by their level of responsibility (comprising surveyors/enumerators, field researchers and field monitors). All field staff received a four-day training workshop on interview techniques as well as sensitivity training regarding potential issues encountered while working with vulnerable groups. ATR's Research Officer and Training Officer led the workshop after receiving training from the Team Leader.

D. Data Collection

As stated earlier, based on the guidance of the Team Leader, ATR adopted six data collection tools, of which three focused on transport related information (transport origin and destination survey, transporter survey and traffic density and composition survey), two on qualitative attributes (FGDs and case studies) and one on quantitative attributes (household survey). **Table 2** summarises the number of cases covered under each of the data collection tools.

Table 2: Sample size distribution adopted for primary data collection by type of tool

Data Tool	Samangan	Balkh	Jawzjan	Sari Pul	Total
Focus group discussion (FGD)	4	4	4	4	**16**
Case studies	8	8	8	8	**32**
Household survey	510	338	226	520	**1594**
Origin destination survey	50	54	46	31	**181**
Transporter survey	9	11	9	11	**40**
Traffic density and composition survey (number of observation)	10	10	10	10	**40**

1. Focus group discussion

In each province, FGD distribution included two from the RAIP area (one male and one female), and two from the comparison area (one male and one female). On average, each FGD lasted for approximately three hours. In each group, (i) one moderator facilitated the discussion covering key areas as stated in the list of guiding questions for FGDs and (ii) one note taker recorded discussion points. He/she also monitored and took note of participants' behaviour including communication dynamics.

Photo 1: Focus Group Discussion in Jawzjan province

The field researchers selected FGD participants in consultation with community representatives as well as those familiar with RAIP (village heads, elders, religious leaders, CDC members, health workers, education employees, NGO representatives or government employees). ATR field researchers ensured that all participants possessed considerable knowledge about their village or community, were well respected in the community and were well aware of RAIP activities. All participants consented to the discussion prior to the FGDs. The ATR field researchers first explained the objectives of the study and the manner in which findings and contributions of participants were to be used in detail prior to the commencement of data collection.

2. Case studies

Of the 32 case studies, 50% comprised RAIP beneficiaries who had attended RAIP's capacity building training and workshop programmes and they included civil engineers, shura members, small-scale entrepreneurs and students. The ATR team randomly selected the case study participants from a RAIP list of 300 beneficiaries. The other half of the case studies covered interviews with teachers, health workers, transport owners, farmers and other businesses residing in villages targeted by RAIP road projects.

3. Household survey

The household survey tool had 17 different sections comprised of structured questions. The survey tool sought, among other things, information on the respondent and his/her household background; occupational structure; land ownership; proximity to market, schools, health service centres and other infrastructure facilities; travel patterns and travel purposes; social interaction; and gender roles.

A total of 1,594 sample household surveys were completed, half from the treatment group (RAIP areas) and another half from the comparison group areas. In both representative areas, 50% of the respondents were males and 50% females. The sample size for each of the two groups (treatment and comparison) has a confidence level of 95%[1].

The sample size distribution by province was proportionate to the length of road segments built. Detailed provincial level sample size determination appears in **Table 3**[2]. The actual number of surveys recorded compared to the number of surveys planned for each province varies slightly because surveyors had to interview the same number of males and females (creating the need for an even number of surveys) and some surveys were discarded for being incomplete. This slight variance has no incidence on the margin of error or any other measure of statistical validity. The margin of error is presented in **Table 4**.

Table 3: Household sample size distribution by province

Description	Samangan	Balkh	Jawzjan	Sari Pul	Total
Total length of roads (km)	204.1	137.1	88.7	208.6	**638.5**
Share of total length (%)	32.0	21.5	13.9	32.7	**100**
No. of HHs based on road section	**511**	**344**	**222**	**523**	**1600**
Treatment group sample	256	172	112	264	**804**
Control/comparison group sample	254	166	114	256	**790**
Total number of surveys	**510**	**338**	**226**	**520**	**1594**

[1] ATR uses a Sample Size calculator to determine the minimum sample necessary to respect these criteria (http://www.surveysystem.com/sscalc.htm).

[2] ATR confirmed the basis for sample size distribution with UNOPS staff.

Table 4: Margin of error, by group of respondents (for a confidence level of 95%)

		Sample size	Margin of error
Treatment group sample	Male	402	4.89
	Female	402	4.89
	Total	804	3.45
Comparison group sample	Male	395	4.93
	Female	395	4.93
	Total	790	3.49

In each province, two male surveyors and two female surveyors worked together as a team. In line with cultural sensitivities, surveyors and respondents were of the same sex, that is, male surveyors surveyed male respondents and female surveyors surveyed female respondents. Within each selected area, the surveyors interviewed male and female respondents in their respective homes.

Since villages do not have a practice of maintaining a list of households, the surveyors had to opt for an alternative method. The selection of survey households followed a 'random walk protocol.' Starting from a landmark such as a mosque, market or school, surveyors stopped at every third house on the street and turned right around the block in a clockwise manner (this enabled the survey of households that were on the main street as well as households located on small streets). After arriving at the identified households, the surveyors invited only one knowledgeable person among the present household members to participate in the survey, such as an elder, primary income earner or main decision maker.

4. Transporter, origin and destination, and traffic density and composition surveys

(i) In each province, interviews were conducted with 10 vehicle owners randomly selected in public places such as bus, truck or taxi stands. Vehicle owners were asked about the regularity of their vehicle use, the nature of vehicle usage and the cost of vehicle maintenance.
(ii) Surveyors interviewed drivers about where they were driving to and from. This allowed for recording what the vehicles were transporting and whether they were driving to a market place. Surveyors surveyed all drivers in places where the traffic density was low, and one driver of every 5-10 vehicles in places where traffic density was high.
(iii) To measure traffic density and composition, surveyors were asked to stand along various roads, conducting 10 observations in each province. They recorded traffic density and composition by recording each vehicle that passed by during an average period of 3.25 hours. The observation was conducted at different times of the day and during market and non-market days.

5. Data quality assurance

ATR used a multi-layered information verification system as described below:
(i) Ensuring quality began at the onset of the project with the recruitment of field staff who were trusted and who had proven capacity to collect quality data;
(ii) Piloting data collection tools in coordination with RAIP staff in Balkh province provided the opportunity to obtain feedback, expose ambiguities or other issues and make adjustments accordingly;

(iii) Field monitors cross-checking the activities of field researchers and surveyors by calling participants and interviewees daily to validate that FGDs, surveys and interviews for case studies had taken place during data collection phase;
(iv) Conducting surprise visits by ATR HQ staff to all provinces to monitor during FGDs, surveys and case studies;
(v) An initial verification of all data was collected by the Monitoring Officer before it was forwarded to data entry team for further review and to minimise discrepancies or inaccuracies early on;
(vi) Data was reviewed in Kabul to ensure completeness of responses. Follow-up was conducted by phone to correct any errors or non-responses (blanks); and
(vii) Triangulating data against the findings from other sources to ensure data consistency.

6. Data verification plan

ATR team developed a plan to ensure efficient data verification. This included:
(i) A work plan for each field researcher;
(ii) Detailed guidelines outlining the procedure for filling in and recording the information and the level of quality expected from the data collected;
(iii) Detailed guidelines for the selection of FGD participants as well as selection of participants for the case studies and respondents for the surveys;
(iv) Coordination with ATR headquarters regarding the locations and procedures for data collection prior to the data gathering exercise; and
(v) Explanation of the minimum timeframe allocated for each of the data collection tools and expected behaviour of the field researchers towards participants.

E. Analytical Method Used

Since the data collection was based on a mixed method approach, the analysis adopted in the study followed data-appropriate analytical methods. The qualitative data from the FGDs and case studies were analysed using NVivo® software. This software allows the analyst team to organise transcript text according to the ideas expressed and the demographic profile of the participants. Each phrase of the text was tagged under various themes and codes assigned to participants based on gender, age and any other relevant demographic information. When such tools are combined with a thorough reading of the data, this approach allows for a more rigorous interpretation of qualitative data and a more transparent data analysis process. The analysis was finalised by reviewing contradictions or inconsistencies between qualitative and quantitative data, as well as any other surprising results, in light of the local context, to understand what external factors might explain such results.

The quantitative data analysis was interpreted using Excel® and SPSS®. The results were presented in tables and graphics. Where appropriate, comparisons between RAIP and comparison groups were presented for clarity and plausible reasons for deviations discussed. Analysis focused at the regional level, as disaggregation at the provincial level would not produce statistically significant results.[3] The data in the tables and graphics were then analysed per question, and when necessary, results from various questions were compared. Analysis consisted of various statistical methods, including some limited inferential statistics (using the post-test only analysis technique).

[3] Tables with provincial level results are nevertheless presented in tables in the report when differences at the provincial level are of interest.

SECTION 3 – IMPACT RESULTS

This section summarises results from the qualitative and quantitative data and discusses underlying reasons associated with the findings pertaining to RAIP's impact, as demonstrated in the conceptual framework (Figure 1: Conceptual framework). Wherever possible, the report compares attributes and impacts between RAIP and comparison group households. Data limitation did not permit the presentation of the full results chain but the report presents comparative results, including with and without comparisons in selected areas. The study covers four project-supported provinces – Balkh, Jawzjan, Samangan and Sari Pul[4].

The report presents the socioeconomic characteristics of the two broad groups of households before discussing impacts. Results are grouped into (i) direct effects and (ii) indirect effects resulting from improved access in the selected project areas (refer to conceptual framework in **Figure 1: Conceptual framework**). The unit of reference is the household.

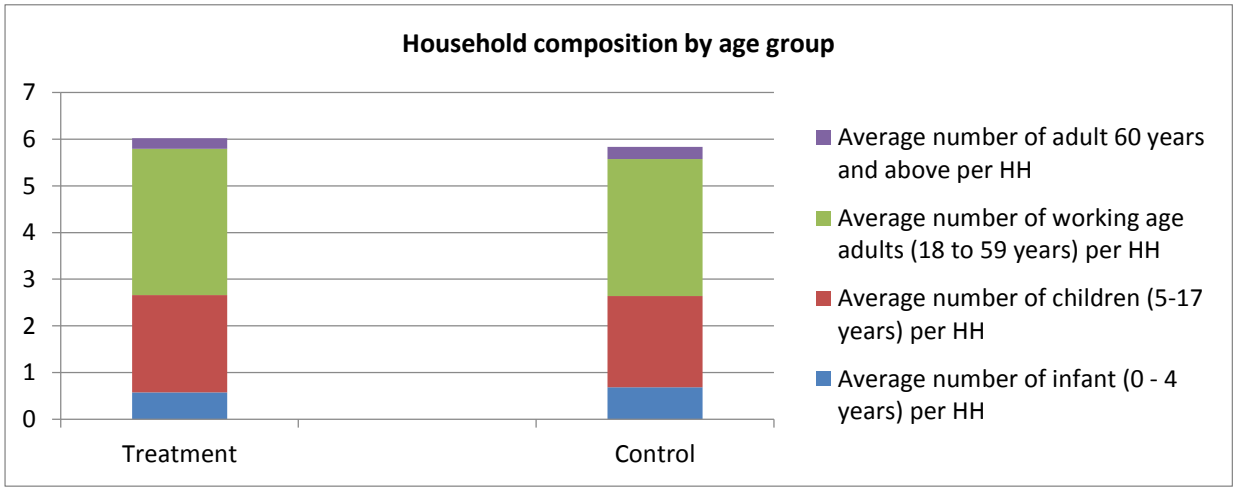
A. Household Characteristics

For valid comparison, treatment and comparison households should resemble each other on all characteristics except those related to road access. The study captured four relevant variables for this purpose: (i) household composition, (ii) gender composition, (iii) living environment, and (iv) the household asset structure.

1. Household Composition

The average number of members per household is similar between beneficiary and non-beneficiary households. The household composition is also similar in both groups as presented in the below chart.

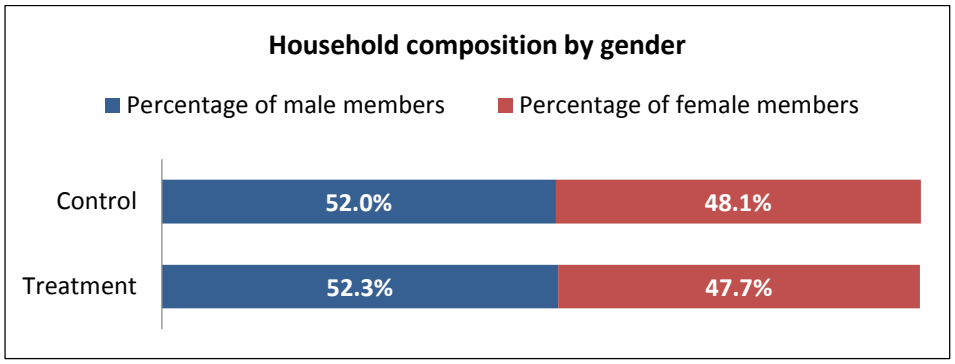
Chart 1: Household composition by age group



[4] Variations between provinces are shown in the report when they are significant, but it should be noted that the sample does not allow for a disaggregation of results by province as the margin of error ranges from 6.03 for the treatment group in Balkh province to 9.26 for the treatment group in Jawzjan province.

Chart 2 shows that respondents reported a higher proportion of males than females in households in both RAIP and comparison households. This is due to two factors: (i) life expectancy is higher for men in Afghanistan, with men representing a bigger share of the overall population[5], and (ii) in traditional areas, people feel culturally ashamed to refer to female members of their family when talking to a person who is not a relative (such as the surveyors).

Chart 2: Household composition by gender



Female-headed households[6] only represent a small proportion of all surveyed households: 2.4% among the treatment group and 1.9% among the control group.

2. Residence and Living Conditions

Ninety-one per cent of the sample households own the residence in which they live (**Chart 4**)[7]. In over 94% of the cases the respondent houses are made of mud. The situation for both treatment and control groups is similar, but more houses within the treatment group are made of brick rather than mud[8] (**Chart 3**).

Chart 3: Type of house

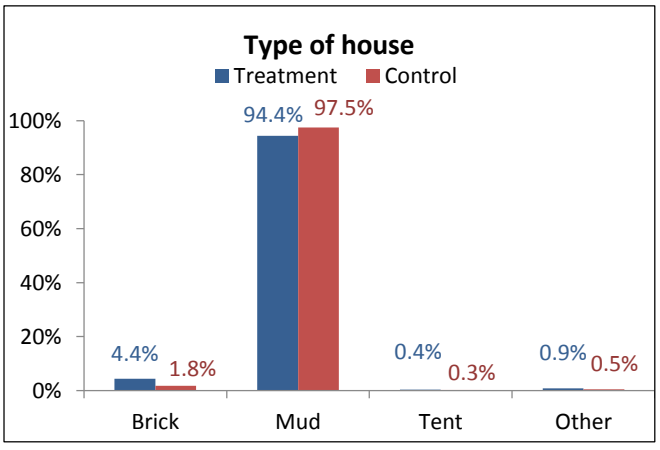
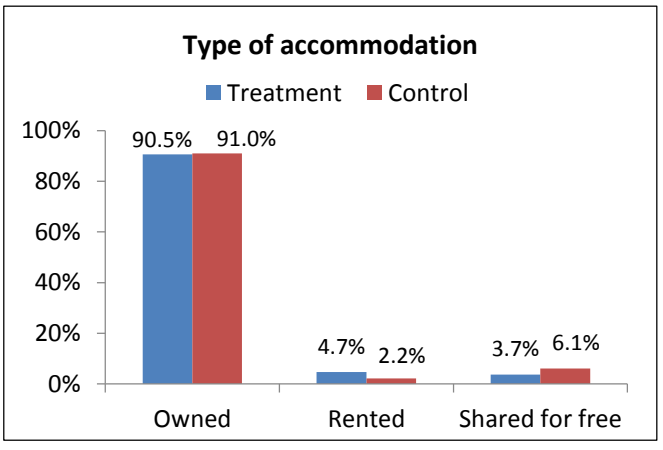


Chart 4: Type of accomodation



[5] The Central Statistics Office report 2012, estimates the male population represents 51.2% of the Afghan population and the female population, 48.8%.

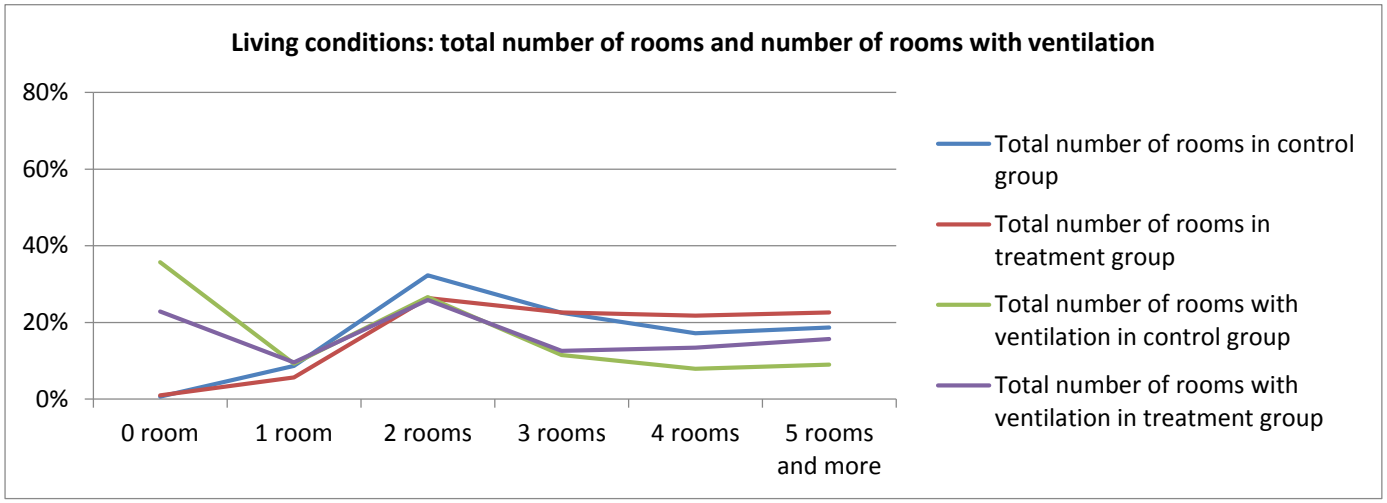
[6] Based on the cultural and social context, female-headed households were defined as households in which there is no male member over 18 years old. In the Afghan rural context, when a widow has a son, this son will become the head of the household as soon as he can work and provide for his family.

[7] No statistical difference on this result (P-value=0748)

[8] This difference is statistically significant with p-value= .003 for brick houses and .045 for mud houses.

The households in both groups live in similar conditions, with the treatment group being slightly better off (3.7 rooms, including 2.7 with ventilation on average within the treatment group compared to 3.4 rooms, including two with ventilation on average for the control group). The difference in results between the two groups is statistically significant[9], which could mean that RAIP's impact on household wealth has led to enhanced living conditions. Household access to latrines is almost identical between the two groups[10], with approximately 91% of the households having latrines within their compound, 8% having access outside their compound and 1% having no access to latrines.

Chart 5: Total number of rooms and number of rooms with ventilation



Households rely heavily on firewood for cooking (approximately 70.5% in both groups)[11]. A much greater proportion of the treatment group (15% against 4% within the control group) use gas[12]. Sources of lighting vary very much from one group to another mostly because this variable depends on local provider sources. The main difference is that the comparison group relies more on solar panels (75%) than electricity (12%) while the treatment group has better access to electricity (38%) and less access to solar panels (52%).

3. Household Assets

Surveyed households generally possess some land, but only a limited portion of this land is irrigated. Most households own less than 5 jeribs of land (5 jeribs = 1 hectare), and only 15 to 20% of the households surveyed possess over 10 jeribs (2 hectares). While there are some differences in the land ownership ratio between the treatment and comparison groups, the patterns are very similar. Differences could likely be explained by the geography of the areas, which may influence the number of jeribs owned. For instance, plots are smaller in mountainous areas than they are in plains. The below chart confirms that the repartition of wealth follows the same patterns in both groups.

The RAIP beneficiary and comparison households have the same proportion of milking cows (60% do not possess any, 28% possess one and 12% possess two or more). However, a greater proportion of the treatment group possess cattle (26.6%), sheep (34.7%) or poultry birds (44%) compared to 14.2%, 29.8% and 31.8%

[9] P-value for the number of rooms = 0.20 and for the number of rooms with ventilation = 0.000

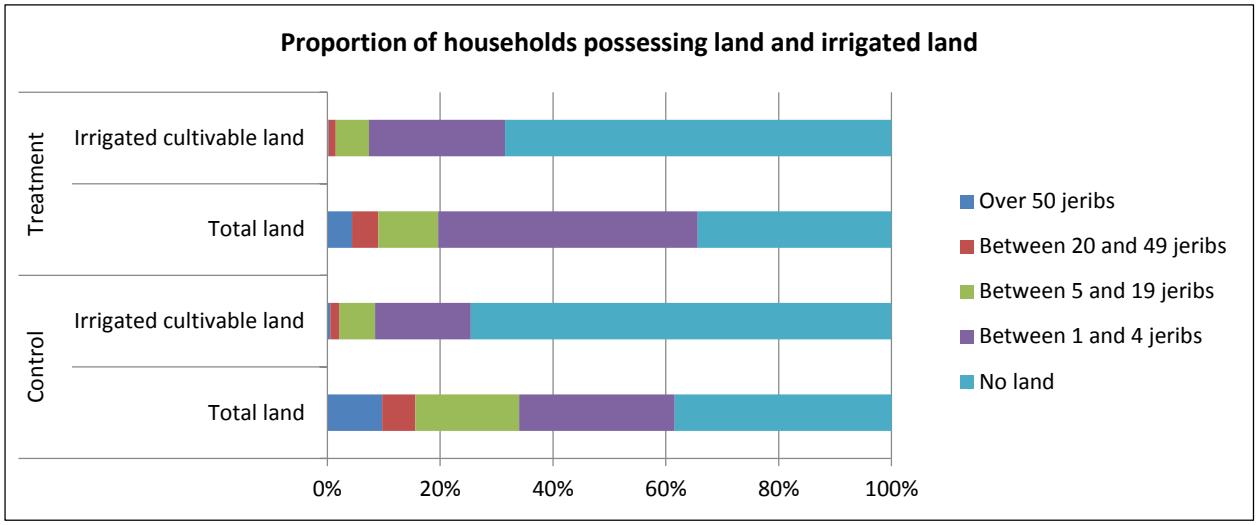
[10] No statistical significance for latrine outside the compound (p-value=0.662) or outside the compound (p-value=0.959)

[11] No statistical significance for firewood (p-value=0.908)

[12] This difference is statistically significant (p-value=0.000)

respectively within the comparison group. This difference is again likely to be explained by geography, with households in mountainous areas being more likely to own animals rather than land.

Chart 6: Proportion of households possessing land and irrigated land



Only 1% to 4% own farm machinery or an irrigation pump, with no difference between the two groups.

Forty per cent of the RAIP beneficiaries possess a TV compared to only 20% within the control group. This is probably due to the fact that RAIP beneficiaries have better access to reliable electricity (38%) compared to households in the comparison group (12%) as explained above.

B. Direct Effects at the Output and Outcome Levels

1. Outputs

Direct effects at the output level are considered through (i) the traffic density and patterns, (ii) households' level of vehicle ownership and their utilisation and (iii) transport costs and fares. Road passability could not be reviewed under this study because of limited time and resources. In addition, this study examined the direct effect of a smaller component of RAIP: access to potable water.

i. Traffic density and patterns

Valid baseline data was not established from the beginning of the RAIP intervention, so it cannot be statistically confirmed that RAIP had a direct effect on traffic density, but qualitative data provides anecdotal evidence that it did. In addition, this anecdotal evidence is confirmed when triangulated with the higher ratio of households owning a vehicle in the treatment group (see sub-section below) and the more frequent usage of vehicles as revealed in the transport owner survey (see the end of this sub-section). The traffic composition survey provides data on the current traffic density of the RAIP roads. The largest volume of traffic by far was on roads in Sari Pul, with 17 vehicles using the road per hour. This is likely because the roads surveyed in Sari Pul were asphalted[13]. The traffic is the lowest in Samangan[14], mostly because of high insecurity on the specific roads tested by ATR on this occasion[15], as explained in the FGDs.

[13] With 50.5 km of asphalt roads built in Sari Pul, the survey of asphalt road is representative.

Table 5: Traffic density, vehicles/hour

Balkh	Jawzjan	Sari Pul	Samangan
6.9	6.3	17	4

Qualitative data provides evidence that the RAIP activities have led to a significant increase in traffic in the areas where the FGDs took place. FGD Participants unanimously acknowledged that traffic visibly increased following the road rehabilitation project, diversity of vehicles on the roads increased and people tended to travel much more. Only in Samangan did participants highlight the effect of recent insecurity on traffic density.

> "*Yes, more vehicles use the road such as rickshaws, motorcycles and vehicles. Before, because of the bad condition of the road, vehicles were not coming from Mazar-e Sharif, but now they come twice a week.*"
> Teacher, female, Balkh province

> "*There was one jeep in our village in the past, but now you see that every kind of vehicle uses this road*."
> Head of a clinic, male, Balkh province

> "*Before drivers [from the city] were presenting excuses [for not coming to our village], saying that the road was bad and that their vehicle would always break down, but now vehicles can be found.*"
> Twelfth grade student, female, Jawzjan province

> "*Before vehicles were not coming to this area, but now they are coming and whenever we want, we go to city and come back*."
> Midwife, female, Jawzjan province

> "*Before there was no car, but now the road is better and people come a lot.*"
> Tribal elder, male, Jawzjan province

> "*Students, teachers, government officials and government personnel travel more on this road and the problems of people have decreased. People had more problems before when the road was bad, as there was no transportation. But now it is better. Yet, there is still no security*."
> Headmaster, female, Samangan province

> "*As the other sisters said, with the improvement of the road, more vehicles are now using the road than before. Before the road was not good, so there was not even one vehicle using the road in a month. Now, however, vehicles do not pass by as often as before due to security reasons [after the road had been rehabilitated but before the security deteriorated].*"
> Nurse, female, Samangan province

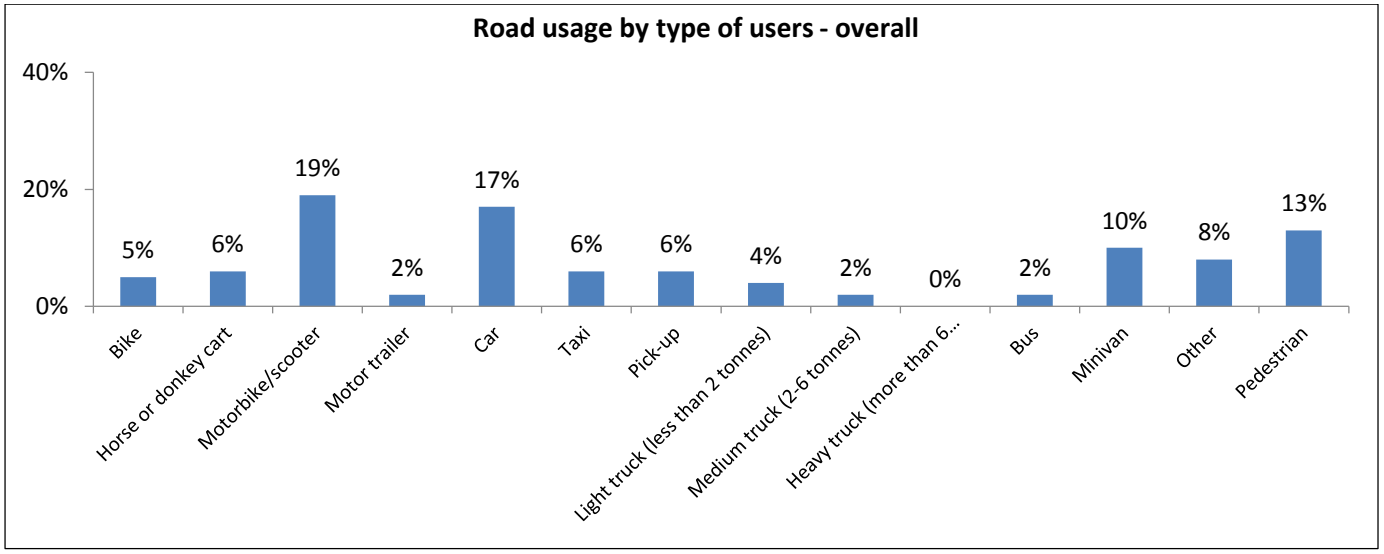
> "*Of course the number of people travelling to the city increased and it is because of the road construction that we can easily travel to the city and solve our problems*."
> Teacher, male, Sari Pul province

[14] While Samangan is one of the most secure provinces under this project, the roads on which the traffic density tool was conducted were insecure.

[15] While there is no data on population density, a review of the density of settlements (villages) along the roads shows that there is no correlation between traffic density and the number of settlements.

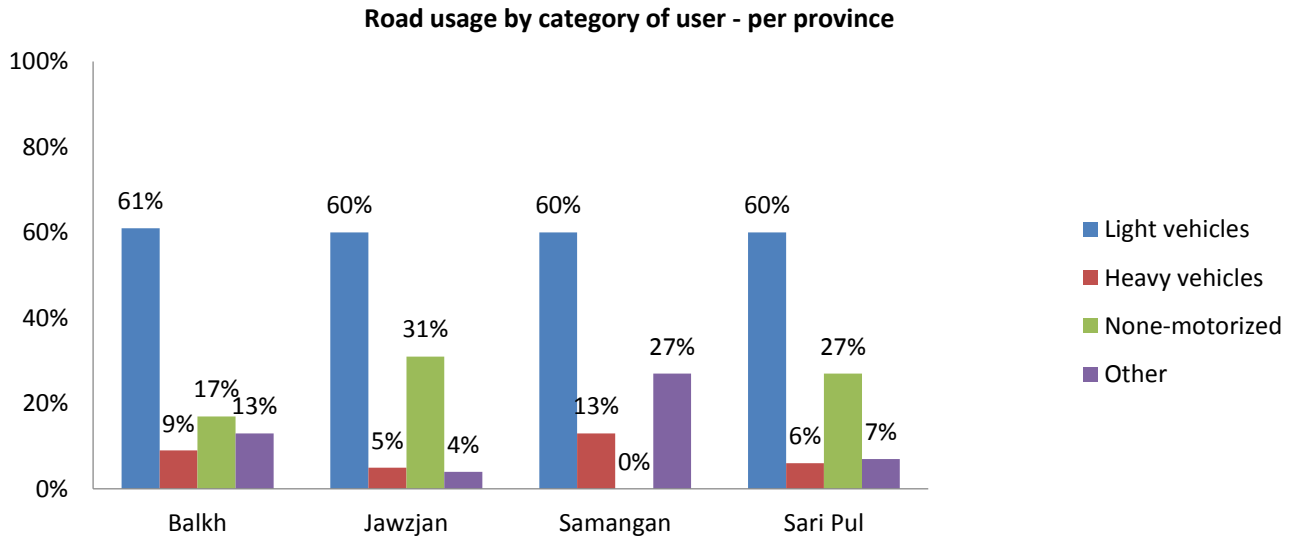
The majority of vehicles using roads constructed under RAIP are light, such as motorbikes, cars, minivans, taxis, rickshaws and pick-ups, which comprise 60% of the traffic. Heavier vehicles, such as buses and trucks, comprise only 8% of the traffic. A significant volume of non-motorised means of transport (including bikes, horses and pedestrians) account for 24% of road usage.

Chart 7: Road usage by type of user - overall



When considered at the provincial level, there are few differences in the kinds of vehicles using the roads. The proportion of vehicles which are light vehicles remains very similar in all four provinces, while there is only small variation in the proportion of heavy vehicles using the roads. The absence of non-motorised vehicles on the Samangan roads reflects the lack of security reported above[16].

Chart 8: Road usage by category of users, per province



All vehicle owners reported using their cars at least five times a week during the dry season (summer and autumn) and at least three times a week during the wet season (winter and spring).

[16] Previous ATR qualitative research in insecure areas confirms that the number of pedestrians or cyclists decreases in times of fighting. People are afraid to be in the crossfire and feel safer on motorcycles, in order to quickly escape skirmishes.

Of all respondents, 57.5%[17] use their vehicle mostly (at least 70% of the time) as a rental vehicle, using it the rest of the time for personal reasons, and to a lesser extent, social reasons. Only 12.5% of interviewed owners mainly (80% of the time) use their vehicle for business[18]. Another 15% of respondents mostly (at least 70% of the time) use their vehicles for personal reasons.

Increased traffic density has led to an increase in road accidents in most of the places where FGDs took place. Participants noted that, with the enhancement of road quality, drivers go faster and drive recklessly, often without having even taken any driving courses. In Sari Pul, male participants attributed the increased number of traffic accidents to the fact that there were too many turns on the road. The respondents in FGDs who did not complain about an increased number of accidents explained that these had been avoided thanks to the presence of speed bumps.

> "*Of course the road has many benefits, but the drivers drive fast. One person was killed by a vehicle in the past four years and in the second day of Eid, 17 or 18 people were injured because of fast driving.*"
> Head of clinic, male, Balkh province
>
> "*The police, who have to take care of the security of the road, to the contrary, drive their Rangers so fast*."
> Teacher, female, Samangan province

> "*This is an undesirable outcome of the road: now there are many accidents on the road and this is because of the recklessness of drivers. When people buy a vehicle, after two days they themselves drive it."*
> Head of shura, male, Samangan province

> *"The road became the cause of accidents; before the vehicles were going slow, but now they go fast because the road has been constructed.*"
> Teacher, male, Samangan province

ii. Vehicle ownership

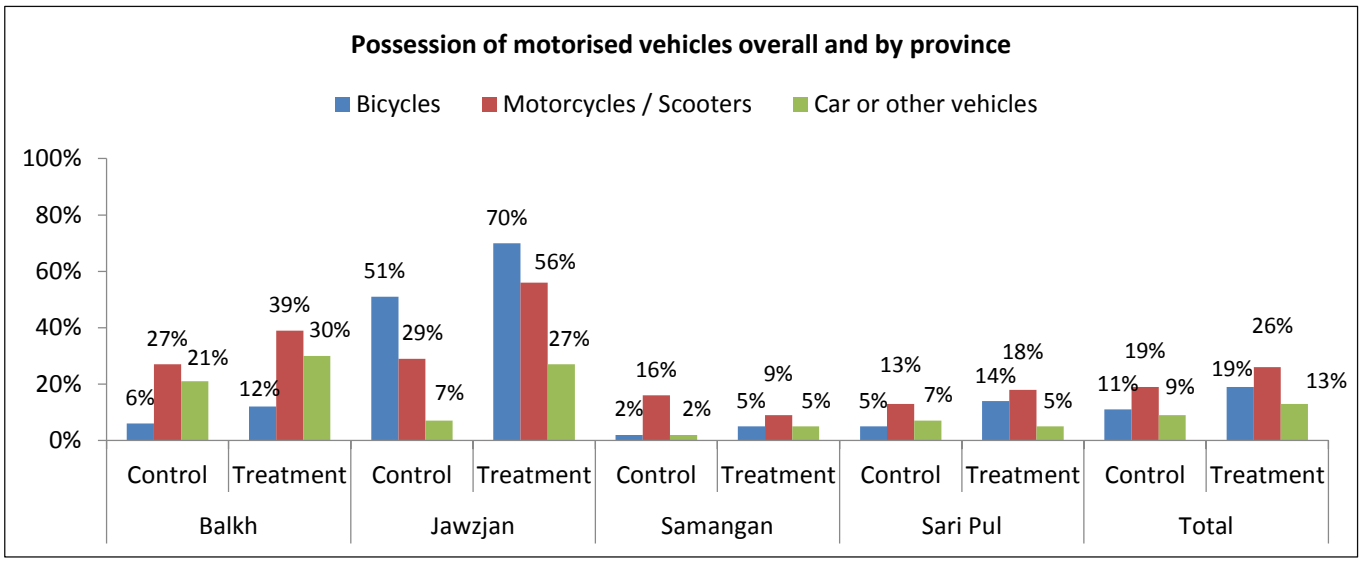
Vehicle ownership rates are much higher within the treatment groups than the comparison group and the difference is statistically significant,[19] confirming a higher propensity for mobility, potentially due to better roads. Overall, 19% of the RAIP beneficiaries possess at least one bicycle, 25% possess at least one motorbike and 13% possess at least one car. This is respectively 8 percentage points, 7 percentage points and 4 percentage points higher than within the comparison group. Possession of vehicles is much lower in Samangan and Sari Pul.

[17] Not being able to define the size of the population frame (number of vehicles passing by on the surveyed road within a week), it is not possible to calculate confidence intervals and margin of errors for this sample of 40 respondents. Percentages presented in this paragraph should thus be read carefully and be understood as general patterns rather than as statistically viable data.

[18] The proportion of car owners using their car for business is low because business in rural areas is limited to selling agriculture surplus (seasonal activities only) or a small amount of man-made goods (carpets for instance).

[19] P-value=0.000 for both car and bicycle categories and p-value=0.001 for the motorcycle category.

Chart 9: Possession of motorised vehicles overall and by province



iii. Transport cost/fares

The transport owner survey reveals that vehicles used on the surveyed roads are mostly old models (out of 40 surveys, all models were from 2001 or before). Respondents claimed to spend around 69.8 USD per month on reparation and maintenance of their vehicles. In addition, vehicle owners spend about 296 USD for changing tires on average 1.75 times a year. The average fare they take for a one-way trip per passenger was reported to be 103 Afghani (around 1.6 USD), and the cost per *ser*[20] of transported goods was reported to be 24 Afghanis (0.37 USD) on average.

The traffic origin and destination survey reveals that most vehicles transport passengers (77%), 10% transport food items[21] and only 5% transport non-food items.

Respondents to the household survey reported the cost of one-way travel to the nearest BHC. The cost is over two-fold higher for non-RAIP beneficiaries compared to RAIP beneficiaries (respectively 85 Afghanis and 28 Afghanis as an average cost). The difference is statistically significant with a p-value of 0.000, but a number of other factors may have also influenced this result, including proximity of clinics in the target areas or absence of medical personnel in some BHCs in the comparison areas (leading patients to go to further clinics).

The transport cost to go to school could not be established, neither in the comparison nor the treatment group, as on average only 5% of respondents stated the cost of one-way travel to school.[22] Similarly, less than 2% of the respondents were able to state the transportation costs for agriculture products or goods produced through micro-enterprises. No additional conclusions could be drawn on possible transport cost reductions following the construction or rehabilitation of roads.

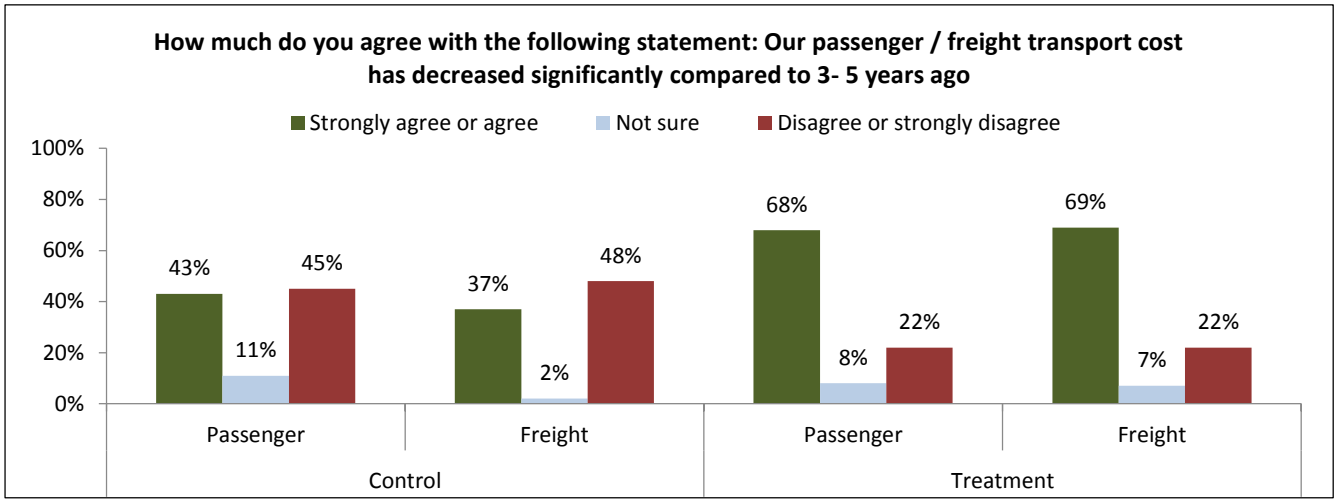
[20] A *ser* is a common measure of weight in Afghanistan and represents 7 kg.

[21] The data collection took place in October, a time which marks the end of the harvest season when there is little agricultural production to sell. In addition, the survey took place just after Eid Qurban, a time when households have already stocked a large amount of food and go less to bazaars.

[22] This is in line with the fact that about 5% of respondents said that their children were going to school by motorised vehicles; all other respondents with children stated that they were going to school by foot.

Yet, the perception that transport costs have decreased is much higher within the treatment group than within the control group[23], as presented **Chart 10** below.

Chart 10: How much do you agree with the following statement: Our passenger/freight transport cost has decreased significantly compared to 3-5 years ago

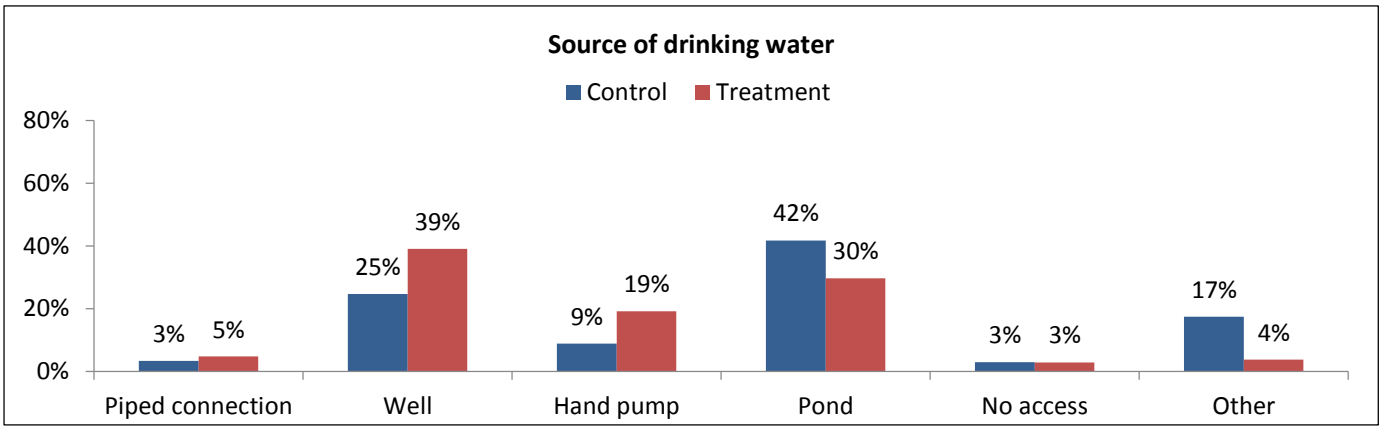


iv. Access to water

RAIP implemented a component dedicated to increasing access to potable water. The increased access to water was visible through the household survey, as demonstrated in **Chart 11** below. The difference between the two groups is statistically significant, thus indicating that the project had an impact on access to water.[24] In addition, a higher proportion of respondents from the treatment group reported having access to drinking water within their compounds (19% versus 12% in the control group[25]), or having access to drinking water less than 15 minutes away from their home (74% versus 61% in the control group[26]).

Participants in five FGDs (three in Samangan, one in Balkh and one in Jawzjan) reported having had water projects that increased their access to water, but this is not clearly attributed to RAIP.

Chart 11: Source of drinking water



[23] All results presented in this chart are statistically significant at p≤0.01 except the 'not sure' option for the passenger transport cost category, which is statistically significant at p≤0.05.

[24] P-value for hand pumps, wells, ponds and others =.000. No statistical significance for piped connection and 'no access'.

[25] P-value=.001

[26] P-value=.000

2. Outcomes

Living in rural areas in Afghanistan very often results in limited access to basic services, markets and jobs for a variety of reasons, including a lack of local capacity, infrastructure and public services and endemic poverty. Due to the multidimensional aspect of each problem, it is not always easy to determine a project's success or failure and to attribute such successes or failures. Yet, from the study it is evident that, on average, the physical access to services, such as schools, hospitals and clinics, as well as markets, is better in RAIP target areas than in comparison areas.

i. Access to education

In Afghanistan, school enrolment is related to a complex set of factors such as family economy, health, social obligations, culture, security, as well as accessibility. Yet, school enrolment among children from the RAIP households is higher than among children in the control group (70% vs. 54% for boys and 45% vs. 35% for girls – for more details see **Table 6** below). The higher proportion of boys attending school can be attributed in both the comparison and treatment groups to the sociocultural trend in Afghanistan of prioritising boys' education over girls'. Reasons for this situation range from domestic responsibilities, early marriage, adolescent pregnancy, poor quality of female schools, lack of community support and costs associated with sending girls to school.[27]

Analysis of the data shows that the difference between children attending school in RAIP households and the control group is statistically significant for children in community-based and primary schools, and for boys in high school. All other variances in school attendance between the control and treatment group are not statistically significant.

Table 6: School enrolment by education levels

	Control	Treatment	P-value
Percentage of households with boys enrolled in school			
Boys in community-based school	11%	17%	.000***
Boys in primary school	11%	16%	.011**
Boys in middle school	18%	17%	0.948
Boys in high school	14%	20%	.000***
Total	**54%**	**70%**	.001***
Percentage of households with girls enrolled in school			
Girls in Community based School	5%	11%	.000***
Girls in primary school	8%	11%	.010**
Girls in middle school	10%	9%	0.443
Girls in high school	12%	14%	.037**
Total	**35%**	**45%**	.086*

[27] Oxfam, 2011, *High Stakes – Girls' Education in Afghanistan*

Other aspects of quantitative data regarding education provide very little additional information on the possible impact of RAIP on access to education because of the following points:

- The travel time to school is reported to be very limited in both groups, with between 75% and 85% of students spending less than five minutes to go to school and another 10% spending about 10 minutes to commute to school, whatever their level of education is.
- Almost all students, at any level of education, go to school by foot, so no findings related to the improvement of roads could be interpreted. The cost of transport might have also affected this variable, with few students being able to afford motorised transport despite the quality road and the increased number of vehicles.
- No notable differences could be found in terms of absenteeism in schools between the comparison and treatment groups.
- The school dropout rate is generally less than 2% and is slightly lower among the comparison group than the treatment group. However, given the small sample, no conclusion can be drawn.

On the contrary, qualitative information suggests that access to education has improved thanks to the rehabilitation of the roads by RAIP. For example, in Balkh, FGD respondents noted that the majority of students walk to school and that road construction allows them to travel faster. Moreover, they added that with the road constructed, girls and female teachers were able to travel to school more safely.

> *"When I was in school, there was no female teacher for the girls, because the road was in bad condition and not safe and their houses were in Mazar-e Sharif. Now we have teachers in Dawlatabad whose houses are in Mazar-e Sharif, and yet still they come here for teaching."*
> Headmaster, male, Balkh province

In Jawzjan, the responses were similar, with participants mentioning that students and teachers are arriving on time more often, and that they can take a more direct path to school.

> *"The road has benefitted a lot of people. Before the paving and graveling of the road, students were going to school on the bank of streams, on the cultivated lands. Now they go by the road."*
> Mullah, male, Jawzjan province

In Samangan, respondents were overall quite positive towards the impact of the project on education, with some noting that the road has made it safer for children to travel to school and easier for those from remote areas.

> *"We can see the benefit of the new road; before the students from remote areas were not able to come to school, but now they can and do."*
> Head of shura, male, Samangan province

Finally in Sari Pul, the perception of the impact of the roads on education was very positive, with many respondents noting that security had improved on the roads and that it was now easier and faster for students to travel to school.

> *"Attendance has significantly increased, the road decreased the amount of time it takes children to get to school and young girls are allowed to travel on the road due to its perceived safety."*
> Headmaster, female, Sari Pul province

Case Study 1 - Samangan province: A female primary school teacher and headmaster

Prior to road improvements, students' attendance at this rural girls' school was very inconsistent and the rate of dropouts was much higher. As the headmaster stated, "the road was bad so few vehicles used it, which had a negative impact on security. This is the reason why families were not allowing the students to attend school." Before, the poor quality (and oftentimes insecure) road condition was an excuse given by parents not to send their daughters to school. Now, with a safer road to school, the teacher has seen a noticeable increase in the number of families letting both their sons and daughters go to school. Despite this progress, the situation remains difficult for the poorer children who often have to commute longer distances and cannot afford transportation costs.

Additionally, some of the teachers at the school have to commute long distances to work. While the cost of transport remains high, teachers' absenteeism is reported to have decreased because the road does not close anymore in cases of bad weather.

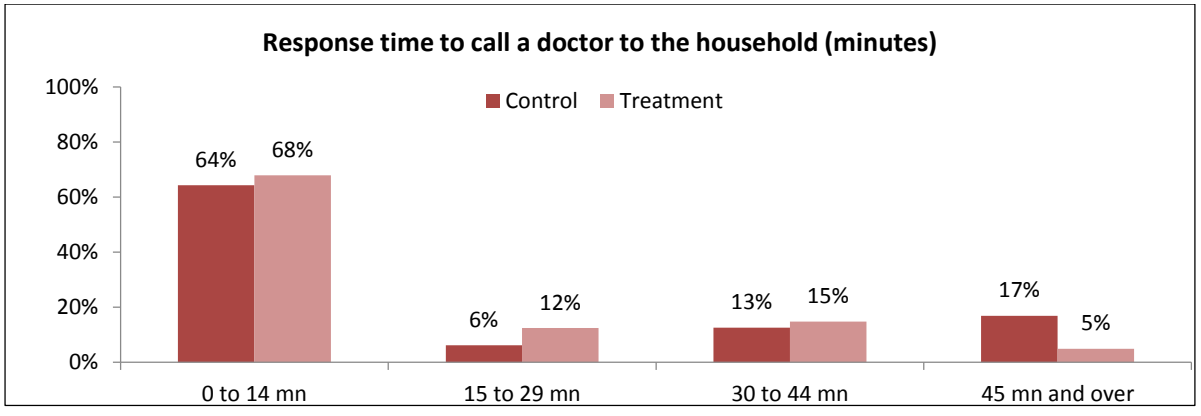
In regards to electricity access, the headmaster reported that the school currently did not have access to the state power grid, so the solar panels they received from the project were their primary source of electricity. However, she complained that this was not sufficient.

ii. Access to health services

The same complex multidimensional aspect as access to schools characterises access to health services in the communities. The survey focused mainly on infant, maternal health and children. The results confirm better access to health services and a more positive perception towards the quality of health services in the treatment group.

While results of the household survey show a reduced travel time to basic health clinics (BHCs) for RAIP beneficiaries than for the comparison group, the difference is not statistically significant.[28] The response time for a doctor to visit a household was also lower within the treatment group, but with again no statistical significance (p-value =0.18).

Chart 12: Response time to call a doctor to the household in minutes



Respondents claim to have visited BHCs and CHCs more often within the treatment group than within the comparison group, as presented in the below tables.[29] The increased number of visits to health centres applies

[28] P-value=0.482

[29] The difference of average number of times family visited BCH or CHC for infant / child illness between treatment and control groups is not statistically significant (chart 13), while it is when it comes to visit of women for their own health issues (p≤0.01) – refer to chart 14

for both children's and women's health issues. Only in one instance women who were not RAIP beneficiaries visited the clinic more often than RAIP beneficiaries (BHC visits, more than three times a year).

Chart 13: Number of times family visited BHC or CHC for infant/child illness over past 12 months

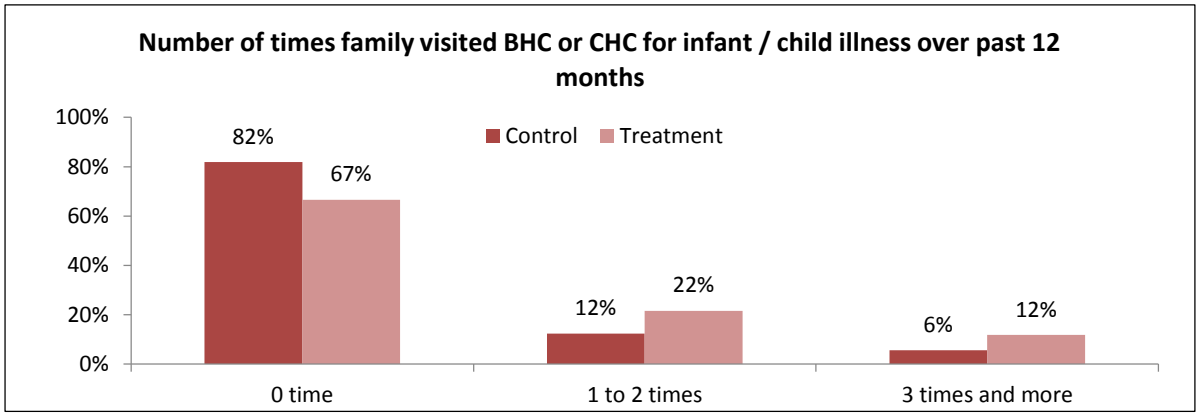
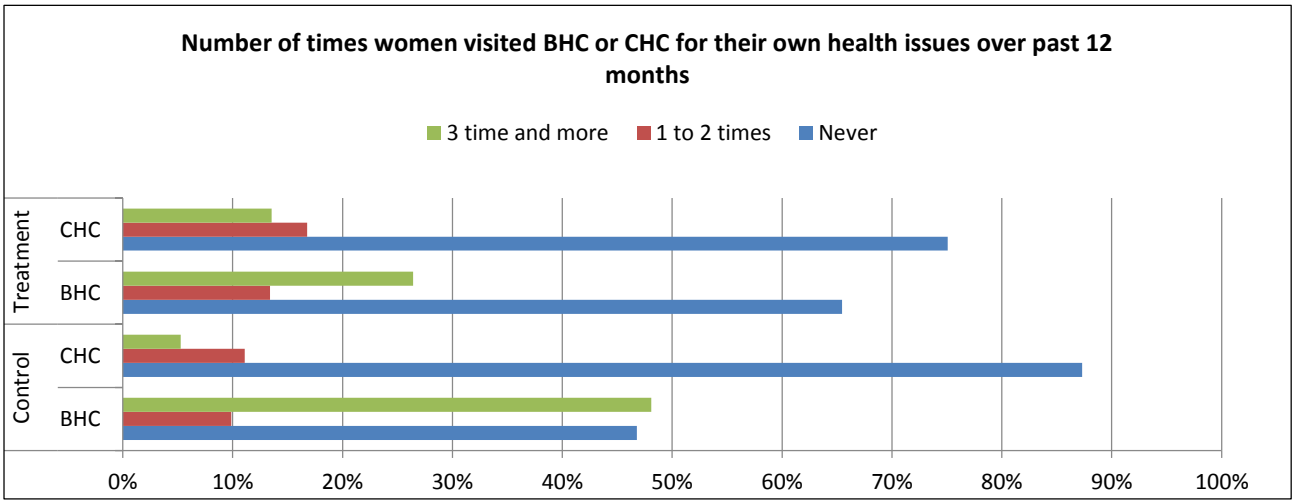


Chart 14: Number of times women visited BHC or CHC for their own health issues over past 12 months

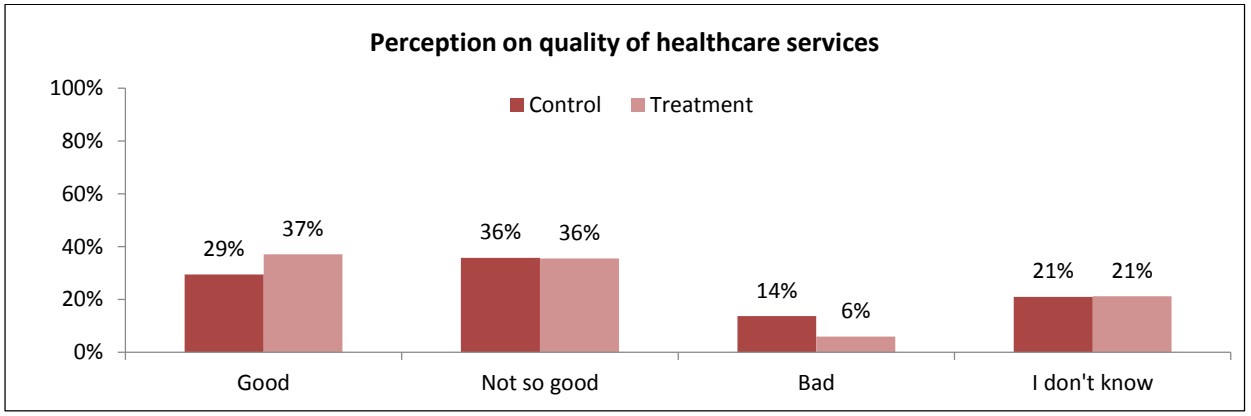


The survey showed interesting results regarding access to preventive health services. A greater proportion of respondents from the treatment groups (33%) claim obtaining pre-natal care services from trained birth attendants compared to those from the comparison group (22%).[30] The pattern is similar when considering respondents' source of maternal and child health nutrition advice, with 37% of the treatment group receiving advice from trained birth attendants, against 23% within the comparison group.[31]

Interestingly, the ease of access to health services also yielded higher satisfaction in the quality of health services among the treatment group. The proportion of respondents qualifying health care services as 'good' is 8 percentage points higher in the treatment group than in the comparison group,[32] and only 6% of RAIP beneficiaries find the services 'bad' against 14% of non-RAIP beneficiaries.[33]

[30] With a significance at p≤0.00
[31] With a significance at p≤0.01
[32] With a significance at p≤0.01
[33] With a significance at p≤0.01

Chart 15: Perception on quality of healthcare services



Case Study 2 – Balkh province: Testimony from a nurse in Kishindih district, Balkh province

The new road built by RAIP in the district of Kishindih has made a difference in an area that previously had immense difficulty in serving the needs of residents. Before the road was so bad that only people seriously sick or in a life-threatening condition went to the clinic on an emergency basis. The nurse at the clinic noted: "they wouldn't refer to the clinic until their situation had become serious."

Visitors to the clinic often come from very far away with no reliable transportation methods. They had to consider the cost of transportation when deciding whether or not to make the trip to the clinic. In this regard the new road has been extremely beneficial. The nurse noticed that individuals were more willing to make the journey to the clinic for pre-emptive and preventive care. After the construction of the road the number of clinic visitors increased, particularly women who were beginning to realise the importance of watching their own health. This has a long term impact on improvements in health for those now able to reach the clinic. For instance, the clinic is now providing more training to pregnant women and new mothers in order to reduce infant mortality rates.

The positive impact of the roads built by RAIP on access to healthcare services was confirmed through the case studies and the FGDs, but the qualitative data also highlights remaining obstacles to the access to health care.

In Sari Pul province, women were generally more positive than men, but all highlighted the high transportation cost of travelling to the appropriate health facility, and the need for ambulances.

> *"It is better now, we can go to the city and the clinic and come back and mostly use rickshaws. Before, there weren't any rickshaws because the roads were bad. (…) [The road] helped us a lot. Before, the risk of death was high for pregnant women to get to hospital."*
> Principal and member of Shura, female, Sari Pul province

> *"Our clinic doesn't have any ambulances, so when we need one, we use motorcycles".*
> Shura member, male, Sari Pul province

In Samangan, most FGD participants complain of the lack of clinic in their area and present this need as a priority. Only a few participants were positive, highlighting the improvement of the transport situation for sick people.

> *"When the road was bad, people had many problems, there was no vehicle and they were taking patients to the clinic by donkey, but now it is better, there are good roads and vehicles".*
> Shura member, female, Samangan province

The situation seems more positive in Jawzjan province, where a healthcare employee in the local clinic claims that the average number of visitors to the clinic per day increased from 30 to 50, since the road was

rehabilitated. Participants claim that the cost of transport to the clinic has decreased, time to travel decreased (with trucks and cars getting stuck in mud before the road rehabilitation) and more convenient vehicles for sick people are available.

Finally, RAIP efforts in terms of asset construction were noted and appreciated, as FGD participants feel that it had a positive impact on their health status.

> "*The road is asphalted, there are water pipes on the side of the road, there are deep wells and it is a big help for people. Before we didn't have healthy water and people were quickly getting sick in the village, but now, thank God, we have potable water, even for washing our clothes*".
> Carpet weaver, female, Sari Pul province

iii. Access to markets for buying production inputs and consumption items

As part of the household survey, respondents were asked where they purchased their agriculture inputs and consumption items: local markets, distant markets or from relatives/friends. According to the data, there was a higher proportion of the treatment group purchasing agriculture inputs and consumption items from both local and distant markets compared to the comparison group. **Table 7**[34] highlights this difference in purchasing location between the comparison and treatment groups for the top five items bought by respondents. The purchases made by those in the treatment group are also more frequent than in the comparison group, which is shown in **Table 8**.

Table 7: Point of purchase of agriculture inputs and consumption items

	Seeds		**Fertilizers**		**Food and beverage**		**Clothes and shoes**		**Meat and dairy**	
	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment
No sale/no response	86%	67%	94%	84%	29%	20%	35%	16%	29%	23%
Local market	5%	**16%**	0%	**4%**	41%	40%	16%	**25%**	51%	46%
Distant market	10%	**16%**	5%	**12%**	29%	**38%**	49%	**57%**	18%	**30%**
Friends/ neighbours/ relatives	0.3%	1%	0.1%	0%	.8%	1%	.6%	2%	1%	2%

[34] For the distant market category, results are statistically significant at p≤0.1 for the purchase of seeds, and at p≤0.01 of the purchase of clothes and meat and dairy. For the local market category, results are statistically significant at p≤0.05 for seeds, fertilizers and clothes and at p≤0.01 for meat and dairy.

Table 8: Frequency of purchase of agriculture inputs and consumption items

	Food and beverage		p-value	Clothing and shoes		p-value	Meat and milk		p-value
	Control	Treatment		Control	Treatment		Control	Treatment	
No sale / no response	23%	16%	0.534	27%	10%	0.534	21%	15%	.000***
Weekly	18%	**44%**	.004***	3%	3%	0.083*	37%	**42%**	.005***
Monthly	55%	37%	0.012**	9%	**19%**	.002***	35%	36%	.000***
Twice a year	4%	2%	0.157	48%	**55%**	.000***	6%	4%	.059*
Annual	1%	.4%		14%	13%	0.251	1%	3%	.004***

A reduced burden upon men to act as *muharam* was noticed in other FGDs, as women are able to travel more independently due to the increased availability of transport options.

> *"When we wanted to go anywhere before, we had to have a man with us because there were thousands of problems on the way, but now when we come out of the house, there are many vehicles and rickshaws for women to travel in. Eight women can travel in one rickshaw to the city and we can buy whatever we need and come back together."*
>
> Teacher, female, Sari Pul province

Case Study 3 – Jawzjan province: A farmer's access to markets for buying and selling products

Prior to the construction of the road, the people of Salteq village had great difficulty accessing the services they needed due to the poor road conditions. Abdui Rasol, from Salteq Village, found the old road very difficult when travelling and highlighted a number of inconveniences: "Before the construction of the road people had many problems travelling, even tractors were not able to pass this road in the winter because there was too much mud. People were travelling from Qezal Ayaq to the local clinic in a vehicle and then changing to a donkey, horse or walking, just to reach the clinic."

With less time spent on the road travelling, the people of Salteq village have more time for productive activities that can help their families. Abdul Rasol is able to reach his destination much faster to purchase his agricultural inputs. Moreover, with males in the family being required for less time as a muharam for chaperoning women, more time can be devoted to productive activities, as Abdul Rasol explains: "The road has brought many changes. Before we were getting to the city in 30 minutes to an hour but now we reach in 15 minutes. I can travel to the city to purchase goods for the house, and take wheat, barley and melon to the city for sale more often than before. This is because prior to the road construction males had to travel with women for their appointments, but now it takes less time or they go by themselves."

Abdul Rasol also notes that there are more options available to transport his goods to and from the market, which has decreased the costs associated with buying and selling goods. Being able to travel more often also means that Abdul Rasol can bring more products to sell at the market. "With the new road, we can find a vehicle any time, whereas before only tractors could traverse on the difficult path. This has brought great changes to our business, including expenditure, with the journey costs decreased, now we can travel more often because the road is good and we can sell and purchase more goods in the city. We were paying 30-50Afs to the driver to go to the city but now we pay 20Afs. Before we were obliged to take a tractor to transport the products to the city but now we can take it in a rickshaw or other small vehicle that costs less. We still farm the same but with the road constructed, we have no trouble taking farm products to market."

iv. Access to markets for selling products

The impact of RAIP on accessing markets for the selling of surplus production, e.g. crops, livestock or goods developed through microenterprises is limited but visible. Within the comparison group, 23% of respondents claim selling agricultural produce or non-food items, while 25% reported doing so in the treatment group. Interestingly, female respondents largely under report sales (50% less than male respondents) made on agricultural surpluses or any other goods produced in the farm or through micro-enterprises. The pattern is similar in both the comparison and treatment groups, thus not affecting the overall comparison. This is not surprising as women are rarely involved in any aspects of marketing in rural Afghanistan. In addition, in such traditional settings, men consider any affairs conducted outside home need not be reported to women who are in charge of more domestic issues.

Participants in the FGDs were quite favourable in their assessment of the impact of the project on market access. Specifically they highlighted the fact it is now cheaper to transport products to market since the construction of the road.

> *"Before, whenever we wanted to take something to the bazaar, the drivers would have asked for 1,000 Afghanis but now they take 300-500 Afghanis."*
> Teacher, male, Jawzjan province

Ease of travelling to market has had a positive impact on respondents' ability to bring their products to market for sale, which they identified as improving their financial situation.

> *"Five years ago, our financial situation was not good, but when the road was made we could supply our products to the market. Our financial situation has improved and now people have started buying cars for themselves. They can easily go to city now."*
> CDC member, male, Jawzjan province

v. Access to job markets

A greater proportion of adult males in the treatment group (34%) than in the comparison group (19%) complement their farm income with other wage sources. However, more adult males in the control group are fully dependent on wages from outside the home (46% versus 38% in the treatment group). This indicates that the income of adult males in the treatment group is more diversified than within the comparison group. This diversification could be explained by the greater proportion of adult males in the treatment group using a motorised vehicle to reach their place of employment, making the commute easier and faster (see Chart 16: Mode of transport to reach workplace (for adult males only) below[35]).

[35] In this chart, the results under the 'motorised' and 'no employment outside' categories are statistically significant at $p \leq 0.01$.

Chart 16: Mode of transport to reach workplace (for adult males only)

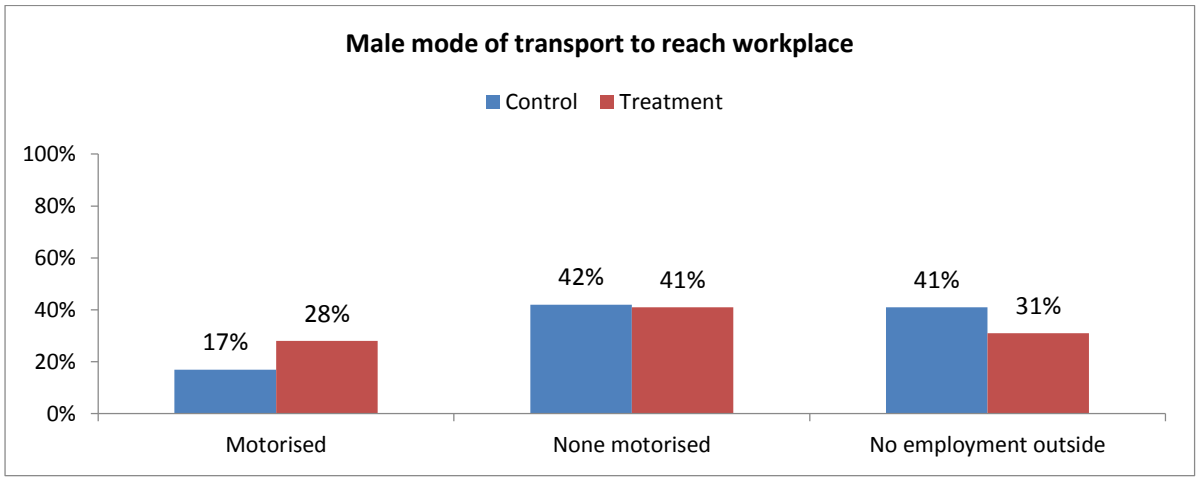
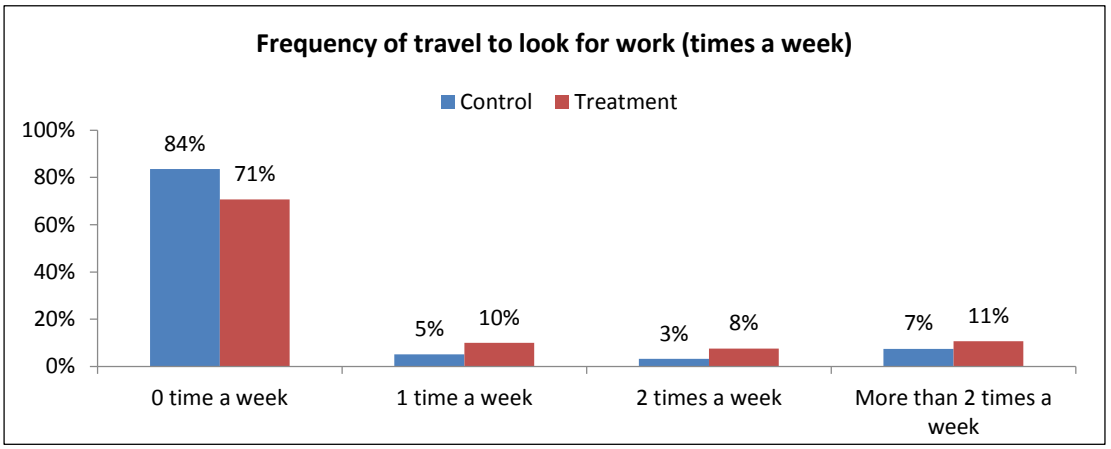


Chart 17[36] also confirms the greater mobility of adult males in the RAIP group than in the comparison group. While these results are statistically significant, they could also be explained by a number of other factors, including a shorter distance to job markets. The treatment group travels an average of 21.6 km to access wages or off-farm employment versus 25.8 km within the comparison group.

Chart 17: Frequency of travel to look for work (times per week)



There was mixed feedback from FGDs in regards to the impact of the road construction on wages and access to work. Some participants of the FGD remarked that they had noticed a steady increase in wages, but that this was accompanied by an increase in commodity prices. However, there were increased work opportunities for people in the agricultural sector.

"From my point of view, the salary has increased but at the same time we have seen the cost of products we buy also increase."

Principal, male, Balkh province

[36] The results are statistically significant at p≤0.05

"Travel is now very easy for people because the time needed to travel has now decreased. Now there are work opportunities, and with increased transport options, farmers easily can get to the city and sell their products."
Community member, male, Balkh province

Conversely, participants who had been engaged in the construction of the road themselves found that wages had decreased since the end of the project with few work opportunities available.

"When the Salteq Kalan's road was made there were a lot of work opportunities. The fees for labour were 300 Afghanis. Now, there are no labour opportunities, and the fee has been reduced to 200 Afghanis. I think the coming and going of people is good and easy now, but people's financial situation is not good."
Health worker, male, Jawzjan province

3. Capacity Building Component

Capacity building has been a characteristic of the RAIP initiative under multiple aspects, targeting individuals, communities, road construction companies and government institutions. It focused mainly on providing know-how in the area of construction but more importantly on maintenance of secondary and tertiary roads, with the long-term objective to keep the roads that were built or rehabilitated by the project operational.

i. Training of road engineers in construction companies and engineering faculties

Training of contractors and students in the engineering faculties seem to have had a positive, but limited impact, which is reviewed here through two case studies.

Case Study 4 – Balkh province: Local contractor who received training on road construction

As the deputy manager of a construction company, this contractor received training from UNOPS on construction techniques and management. He described how he had been selected to participate in the training, explaining that he had bid on a UNOPS request for proposal and that probably due to some technical weaknesses in his proposal, he had been invited along with representatives of other companies to attend the training. When describing the topics covered, he lists the following: management of construction projects as well as practical work, for example, compacting soil, using different machines, separating different types of gravel and mixing cement. He added that all the stages of road construction were included in the five-day session. The local contractor also noted that the training was participative and that trainers would ask participants to share their experience.

He reported having picked up technical skills and methods that he had previously been unaware of. This included, for instance, making sure that concrete is not mixed with salt water. He believes that the UNOPS training had a positive impact on the quality of the engineering work in the province, as most engineers were not aware of some of the newer technical approaches. As he claimed: "*Before our work was not up to standard. The training which, was both practical and theoretical, was effective and we have adjusted ourselves to these norms and standards. Almost 50% of our methods changed after attending the training*."

The local contractor added that such training should last longer and be repeated. This remark is in line with the multitude of comments made by FGD participants who point out the poor quality of roads constructed by organisations other than UNOPS.

Case Study 5 – Jawzjan province: Two female engineering students from Jawzjan University

Both former students who attended the engineering faculty of Jawzjan and went through the training programme organised by UNOPS agreed that the practical aspect of the university teaching was at best poor, and at worst non-existent. The former students were dismayed by the lack of laboratory facilities in the faculty, as well as the professors' lack of practical knowledge. They both consider the information taught at the university to be out-dated and not in line with current international standards. But they say that no other source of learning exists, especially for female students who cannot easily travel outside of their region for cultural reasons. The training was thus very much appreciated and perceived as a perfect way to fill the knowledge and skill gaps they had: "We have learnt many things in this seminar because these facilities were not available in the university, such as gravel, soil and road testing, etc."

UNOPS training, which lasted 60 days, filled these gaps. UNOPS offered a greater variety of subjects than in university: "We have learned many topics in this training, such as road section, accounting, computing and also section of water supply. At the end of the training, we submitted all the materials to the university dean and he copied them for the other professors who are now using the materials." All interviewed students confirmed that they had been selected to participate in the training based on merit (being among the best of their class).

While one of the students, who found a job as an engineer in a local construction company, confirms that she might use the knowledge she gained through this training in a professional framework ("now if someone does not mix the gravel or concrete at least I can tell them that this is wrong"), the other trainee has not found a job yet, mostly because she can only envisage working in Mazar-e Sharif, where there are fewer cultural constraints for women to work as an engineer. Unemployment among graduates from the engineering faculty seems to be widespread, as confirmed by the former student who is now employed: "I have a job, but many of my classmates have no job." This lack of impact on the employability of training participants could be corrected by setting up an internship programme or other activities with the goal of linking the best university students to the private sector.

ii. Capacity building on maintenance at the community level

The direct impact of this component is less visible than the preceding one. While several FGD participants and other stakeholders interviewed for case studies confirmed having participated in training sessions on road maintenance, which they usually qualified as interesting and useful, none could describe how they were practically using the knowledge or skills gained or developed during the training. In fact, several respondents to the qualitative part of the study regretted that they had no occasion to put into practice what they had learnt. One of the main reasons for this gap pertained to the lack of institutionalisation of community-based maintenance processes.

FGD participants claimed that, in most cases, the community was at least partially responsible for road maintenance, along with the government, but when it came to providing details on the exact responsibility of communities, it appeared that the role of local residents remained limited, with RAIP or the government conducting most of the work. In the few cases FGD participants confirmed the existence of a maintenance committee, its role seemed to focus on informing the government of the need to conduct maintenance activities, especially after floods had occurred. Other FGD participants who attended the training explained that their role consisted of advocating within the community for residents to not damage the road (mostly by removing gravel). Finally, a few communities reported conducting minor maintenance work (cleaning, filling in small potholes). No respondents were aware of any committee collecting funds to maintain the roads. Many, especially among male FGD participants, highlighted their lack of financial and technical capacity to maintain roads and relegated the responsibility to the government.

> "*There is no management committee for road maintenance and there is no one responsible for revenue collection*."
> Member of shura, female, Samangan province

A couple of anecdotes pointed to solid community mobilisation in certain areas, but such examples should be seen as exceptions. In fact, participants often take credit for road maintenance activities that were actually implemented by RAIP, but hired local community members as daily workers for the occasion.

> "*People do the maintenance of the road, flood has destroyed some part of the road then it was closed to the traffic and then we have worked for few days and rebuild it*."
> Religious scholar, male, Samangan province

Interviews of participants brought to light an occasional mismatch between the target beneficiaries and the topics of the training.

> "*We have learned the skill but haven't used it yet: when there is no road project, where should I use it? Projects of jacket weaving and tailoring were implemented in the area by UNOPS but there wasn't a road project. The training was good but there was no project in which I could implement it*."
> Member of women shura, female, Samangan province

While it is commendable that RAIP has rigorously ensured women's participation in all training, and despite their general positive comments, it appears that none of the female beneficiaries really knew what to make of their newly gained skills, mostly because of the very strictly defined roles of men and women within the communities. It would thus be recommended to design trainings on road maintenance that are specifically adapted to women. Additional research might be needed to tailor a training curriculum to women's needs, but it could include building advocacy skills for women to convince relevant authorities to maintain the road, or to raise awareness on the risk of accidents caused by speeding.

C. Indirect Effects

1. Welfare Outcomes

The evaluation of the welfare outcomes covers four topics: (i) impact on income and expenditure, (ii) education status, (iii) general health status and (iv) participation in social and community activities.

i. Impact on income and expenditure

According to the data collected through sample household surveys and FGDs, the impact from the project on income generation and household expenditure was mixed. Based on the responses provided by the sample households, the main sources of income are crops; followed by wages, livestock and dairy, and micro-enterprises. However, income source contributions are different when comparing the treatment and comparison groups, with a greater reliance in the non-RAIP households on crops and wages, demonstrating that there is less diversity in income generating sources within the comparison group. This is outlined in the table below, acknowledging that some households have more than one source of income generation.

Table 9: Income structure

Source of income generation	% Of RAIP Households	% Of Non-RAIP Households	P-value
Crops	34%	27%	.002***
Employment/pensions	20%	31%	.000***
Livestock and dairy	12%	2%	.000***
Micro-enterprise	10%	6%	.001***
Remittances	9%	7%	0.281
Horticulture	8%	2%	.000***
Hunting	4%	1%	.000***
Gifts/gratuities	3%	2%	.071*
Other	15%	8%	.075*

A closer look at the high percentage of respondents claiming employment to be a source of income reveals that a large proportion of them are landless farmers/labourers, and thus count on seasonal employment, which is more a sign of vulnerability than income stability. The largest group of landless labourers was found in the non-RAIP group in Sari Pul.

This diversification of income was evident in the data collected through the FGDs, with participants providing anecdotal evidence of producers engaging in new income generation activities.

> *"I know a producer in Sayad city where the road has allowed him to diversify into selling yoghurt and milk, which was previously impossible to transport without vehicles and smooth roads".*
> ALP Commander, male, Sari Pul province

While discussions on the impact of the project on wages did not inform the analysis about whether changes to wages have had an impact on the economic bottom line of households, it is apparent that the project has had both positive and negative effects on wages. There were more participants stating that wages had either remained steady or dropped since the end of the project due to decreased work opportunities. However, some argued that wages had increased for the project's beneficiaries.

> *"It is worse [than before the road was built], people have the same income but the expenses have increased."*
> Doctor, male, Balkh province

> *"Before [the road was built] the labour wage was 100 or 150Afs, but now the labour wage is 250 or 300Afs"*
> Member of shura, female, Balkh province

As stated above, households in the treatment group are able to purchase items more frequently than those from the comparison group. Food and beverage, clothing and shoes and meat and dairy were all purchased on a more frequent basis in the treatment group. However in terms of other household expenses, FGD participants identified examples where expenditure had increased due to the construction of the road.

> *"For example, the road of Sayed Abad was constructed then the rates of houses changed, and the price of the land for a house was 3,000 Afghanis [per m²] but now it is 20,000 Afghanis."*
> Head of CDC, male, Balkh province

Qualitative data reveals that accessing markets has helped reduce farmer dependence on middlemen, allowing them to enjoy higher profits in line with market prices. FGD participants noted the convenience, reduction in travel cost and ease of reaching new markets as benefits experienced by farmers, providing them with greater independence to sell their own produce, which has the potential to result in higher profits.

> *"When the road was bad, other people/middlemen were coming from the city, purchasing agricultural products and taking them to markets, but now farmers themselves take their products to market."*
> Tribal elder, male, Samangan province

On the other hand, access to open markets alone cannot increase production of higher value commodities. This is reflected in FGD data with low profit crops identified as the main source of income for many farmers. Participants claim that the profit margin of the goods they produce is low and therefore it is not worthwhile to travel to bigger cities. Due to the region's lack of water, wheat and barley are the main crops, with the community unable to produce high profit crops (typically water-intensive crops). While the roads provide physical access to markets, there are socio-economic factors restricting market access.

> *"The farmers cannot produce any new crops, if there is no water then there is no production. Farmers have to stay with what is cheapest as the land can't cover expenses."*
> Council member, male, Balkh province

A review of expenditure in the household survey could not confirm any significant changes to the wealth of respondents within the two groups.

ii. Education status

Assessing impact in education status is challenging, as impacts on literacy levels or increased workforce capacity only materialise after a few years. This section thus focuses on reviewing the indirect impact of the roads on education, whether positive or negative, completing the analysis on access to education under section B.

In general, the qualitative data highlights an important finding: while the road has increased access to education facilities, by making commuting easier for school children, it has not had an impact on increasing demand for education (usually limited because of underlying poverty or traditions), or on facilitating access for the most vulnerable children, i.e. the ones living the furthest from the roads.

> *"The girls study religious lessons with the Mullah but they do not go to school. We do not have the money for them to take a rickshaw and the school is far by foot."*
> Female, Jawzjan province

> ***"**It has been a year that I have taught the girls in my house. The girls also come from other villages. Previously my students were not able to come in the winter because of mud on the roads."*
> Community-based school teacher, female, Jawzjan province

> *"People are poor and families do not have the ability to pay for the transport fare. Some students must take animals for grazing because there is no work [for their parents] in the village. If there is work in the village, like during road construction, then people would be able to work and send more children to school."*
> Headmistress, female, Sari Pul province

Many FGD respondents noted that they felt more secure and comfortable with the idea of both male and female children walking to school because the improved roads had improved overall security in the area. However, this optimism was not universal and some FGD participants in Samangan felt one of the unforeseen consequences of the road improvement and increased traffic and speed of vehicles was the risk to children who walk to school.

> *"People send their children to school with much fear because different vehicles pass on the road and the parents are scared that the vehicles will hit their children."*
> Female, Samangan province

Despite concerns about the speed of traffic, the RAIP roads constructed have impacted access to quality education in indirect ways such as assisting teachers with their commutes and therefore increasing the reliability of education services**.**

> *"The road benefits us a lot. Teachers and students go to school on time. Before the gravelling, teachers were not coming to school in winter. All the students were left behind. Now the road is good and they come to teach."*
> Male, Jawzjan province

> ***"****Vehicles are good for the teachers, students and government staff because they reach school and the office at a low transport cost. A number of students, teachers and government staff rent a car and pay regularly at the end of month.****"***
> Female, Sari Pul province

> *"People were facing many problems in these recent years because there was no transportation. People were not able to go from one place to another. The teachers were not able to come from the city to the village but now it is better."*
> Female, Samangan province

iii. Health status

Two indicators show evidence of indirect impacts on the health situation of residents surveyed as part of the RAIP group: the level of immunization of infants and the adoption of family planning measures. Almost twice as many respondents in the treatment group report using family planning measures (45% versus 25% among the comparison group[37]). Also, 19% of households in the comparison group report having at least one infant who was immunized, in comparison with 26% of households in the treatment group.[38] Other indicators were reviewed, including infant and maternal morbidity rates. While differences were noted, they were not statistically significant.

FGD participants discussed the health implications of the quality of roads on children walking long distances to and from school and on the general village environment. Opinions diverged, with some participants commending the health improvement brought by the road rehabilitation (either because the road was asphalted or properly gravelled), while other participants complained that the new gravelled roads did not have enough gravel, which triggered a high amount of dust when cars passed by.

[37] $p \leq 0.01$
[38] $p \leq 0.01$

"*The children go to school by road. The road which goes towards the district centre is good and the students, with much happiness, arrive clean and on time. The students who come from villages where there is no paved road come to school late and full of dust*."
Female, Sari Pul

For some respondents, almost exclusively females from Samangan province, road upgrades in their area had resulted in environmental degradation and increased health risks.

"When vehicles drive on the road then all the dust sits on fruits and even comes into our houses. If our children eat these fruits, they will get sick. They must asphalt our road."
Female, Samangan province

"This road has benefited us a lot, now we can easily commute to the city. I am a nurse in the city hospital, it has become easy for me to go to the city since the road was constructed. Now the only problem that we have is that the road is not asphalted, there is too much dust on the road and people get sick."
Female, Samangan province

"*First of all [the Government] must asphalt the road, we must be saved from the dust of road. The people suffer from dust in the summer and mud in the winter and all the fruits in the gardens are dusty and cause disease*."
Female, Samangan province

According to FGD participants, increased access to health services, thanks to RAIP, has a real but limited impact on patients' health. When it comes to emergencies, there are other barriers to consider, including transport costs and availability of vehicles. Apart from Balkh, respondents all complained about a lack of ambulances for the health centres, especially at night time.

"[A lack of a] clinic is our main problem. If sometimes a person has eye pain or get injured then Sonia jan gives medicine and also bandages the injured person. If a woman gets sick or is delivering, then we are obliged to transfer her to the city. We are far from the city. If we wait in line for a vehicle, then the patient might die, and if we go alone in a rickshaw, we have to pay 400Afs and at the same time we cannot transfer serious patients in rickshaws."
Female, Jawzjan province

iv. Participation in social and community activities

Accessibility plays an important role in maintaining household ties with relatives, friends, other communities, and government bodies as well as strengthening the social fabric. Barriers to maintaining these household ties are more linked to household financial constraints rather than a complex nexus of cause-effects as seen in the previous cases (including access to education and healthcare), and therefore changes in participation in social and community activities are a relatively clear indicator of RAIP's impact.

According to the household surveys conducted, families in the treatment group demonstrated a higher level of interaction with people from outside the community, either through receiving visitors or undertaking visits themselves, compared to those in the comparison group.

Further confirmation of the positive impact of RAIP on the treatment group comes from the active participation of its members in civil society. Among those surveyed in the treatment group, 26% belong to some form of civil society group (e.g. religious group, women's group or youth group etc.), acknowledging that some households may belong to more than one civil society group. The proportion of households belonging to civil society groups in the comparison group was much lower at 14%, once again acknowledging that some households may belong to more than one group. There was also a higher proportion attending civil society meetings within the treatment group (52%) compared to the comparison group (16%). Within the treatment group, 28% reported that civil society meetings required them to travel outside of their community, while for the comparison group less than 1% reported doing so. This last comparison is of most importance for the RAIP project, as it demonstrates greater social mobility within the treatment group compared to the comparison group. These figures are included in **Table 10** below.

Table 10: Comparison of involvement in civil society groups

	Treatment	Control
Percentage of households involved in a civil society group	26%	14%
Percentage of households with at least one member involved in a civil society group	52%	16%
Percentage of households with members who travel outside of community to attend a civil society group	28%	0%

The ability to travel for social occasions, including civil society meetings, weddings, funerals, and to visit relatives, was recognised in the FGDs as an area that the project has had an impact on. The ability to receive guests and attend weddings and funerals were identified as positive impacts of the project.

> *"We had no guests before, but since the road is constructed, now our guests easily come to our village."*
> Midwife, female, Jawzjan province

> *"Community cohesion is good now and people meet in shuras, attend weddings, charity events or funeral ceremonies. They are aware of on-going events, and the reason is the construction of the road."*
> Representative of local organisation, female, Sari Pul

2. Gender empowerment

The data collected provides an insight into how the project has impacted females' ability to access healthcare, attend school, engage in economic opportunities and participate in social activities.

To understand whether this project has had an impact on gender empowerment, a classification is required to determine what is meant by gender empowerment. In this case it is defined as the opportunities afforded to women and girls for their participation in family and civic life and their ability to independently access services including healthcare and education. Thus for the purpose of this impact assessment, a comparison between the treatment and comparison group is conducted on the level of gender empowerment experienced by females in each group. Moreover, perceptions of gender roles within the household and in civil society are also examined for comparison.

Employment status and the ability to engage in income generation is a strong indicator of women's empowerment. However, despite the large number of household surveys conducted, the sample size of women engaged in work aside from farming (which could not be differentiated between subsistence farming or farming for profit), was too low for comparison between the treatment and comparison groups. Therefore, this was not a measure used to determine the impact of the project on women's empowerment.

According to the household surveys, and as discussed in earlier sections, the proportion of households with girls enrolled in school in the treatment group is greater than the comparison group: 45% of households surveyed versus 35%, as shown in **Table 6**. The difference between the two groups demonstrates a greater level of empowerment among girls to enrol in school.

Female empowerment was also evident in the data collected on access to healthcare. Women's increased ability to visit a health clinic and adoption of family planning measures demonstrates a level of women's empowerment. In the case of women accessing preventive health services at either a basic or comprehensive health clinic, the treatment group showed a greater proportion of respondents obtaining pre-natal care services from trained attendants (33%), compared to those in the comparison group (22%). Results were similar when comparing the source of maternal and child health nutrition advice, with 37% of the treatment group obtaining advice from trained birth attendants, compared with 23% in the comparison group. These results presented under section B demonstrate a greater level of empowerment for women in the treatment group than in the comparison group.

In regards to the use of family planning measures, of the households surveyed, 45% of those from the treatment group had adopted family planning measures, compared with 25% in the comparison group. This indicates a strong level of women's empowerment within the treatment group about how decisions regarding family planning are made and adopted. The reason family planning measures are more often adopted in the treatment group could be a result of more frequent visits to the basic or comprehensive health clinics, allowing women in the treatment group to receive medical advice more often than those in the comparison group.

The ability to engage with social aspects of the community, including travelling to visit friends and family and participating in women's groups, is an effective way to measure the project's impact on women's empowerment. According to the data collected in the household survey, which is statistically significant, 70% of households in the treatment group either strongly agree or agree that women and girls are happier to travel on the road than five years ago, compared to 28% of households in the comparison group. Moreover, 48% of households in the treatment group strongly agree or agree that women should be allowed to travel outside without male accompaniment, compared to 39% in the comparison group. This is statistically significant and shows a more positive attitude towards women's empowerment in the treatment group when it comes to ability to travel independently, which is a key factor of gender empowerment in Afghanistan.

Table 11: Attitudes to female travel

Question	Statement	Treatment	Control	P- Value
Our women and girls are more happy to travel on the road than five years ago	Strongly agree/agree	69.7%	27.8%	.000***
	Strongly disagree/disagree	24.4%	50.8%	.000***
	Not sure/no response	6%	21.4%	.000***
Women should be allowed to travel outside without male accompaniment	Strongly agree/agree	48.3%	39.2%	.000***
	Strongly disagree/disagree	44.8%	54%	.000***
	Not sure/no response	7%	6.8%	0.875

The ability to participate and engage in a women's group is a strong demonstration of women's empowerment in a community. Women's groups did not make up a large percentage of the civil society groups that households were engaged in, however, there were significantly more households (2%) in the treatment group engaged in a women's group, compared with the comparison group (0%).

Questions posed in the FGDs provided fruitful discussions on the ways in which females travel, including the perceptions and the constraints women experience. Moreover, there was a discussion in both male and female FGDs on the role of women within the family unit and their ability to engage in income generating activities. For female travel patterns, both males and females indicated that women are now freer to travel due to increased safety on the road and more frequent permission granted by their male family members.

> *"Now men allow the women to leave the house and travel on this road."*
> Women's group member, female, Balkh province

> *"It depends on the family, if they are open minded then they allow their women to go the city and purchase what is needed, if they are not open minded then they don't."*
> Women's group member, female, Balkh province

> *"Women and students are using the road now because it is secure and paved – safer than unpaved routes."*
> Mullah, male, Sari Pul province

> *"Women and students are the biggest users of the roads because it is a comfortable and safe way for women and students to travel; the only concern on the road is accidents."*
> Elder, male, Sari Pul province

The responses from both males and females in the FGDs on women's role in the workforce were overall quite positive. The majority of females believed that women should conduct their domestic duties but also aim to support their husbands in work outside of the house.

> *"Majority of the women work in order to support their families, as there are few young boys and girls in every family and every one of them has expenses."*
> Business representative, female, Jawzjan province

Men also saw female employment as a positive factor in the family and identified the importance of women supporting the family's finances by obtaining additional work outside of the house.

> *"Women don't work much in our area, the women usually work in their houses and if they work then they work for their own benefit. Women have to work for their livelihood."*
> Health worker, male, Balkh province

> *"I think that women should work based on the choices of their husband. They should work to support the family. They should not be kept just for house work. There are some women who work as physicians who cure women."*
> Elder, male, Jawzjan province

> *"I think women also have the right to work like men. If a woman can stand on her own feet then she can help herself and the man of the family. It is a necessity that women work."*
> Health worker, male, Jawzjan province

"If the women work it is good because they support their families."
Primary school teacher, male, Samangan province

"I think that women should work to support the man of the family. There are a lot of jobs for them like poultry farming, tailoring, and carpet weaving."
Teacher, male, Jawzjan province

These positive responses concerning the role of women as income earners from both males and females participating in the FGDs demonstrates an encouraging gender empowerment mind-set displayed by community members in the RAIP provinces.

SECTION 4 – CONCLUSIONS, LESSONS LEARNT AND RECOMMENDATIONS

A. Conclusions

When RAIP began in 2007, the project was designed to address the real and urgent needs of the rural population of northern Afghanistan. A lack of tertiary roads and poor quality secondary roads presented major barriers to rural economic development in the fragile, agriculture-dependent provinces of Sari Pul and Samangan. In the intervening eight years, RAIP has demonstrated a serious, long-term commitment to improving the road infrastructure in a further two provinces, Balkh and Jawzjan, with additional elements of local capacity building, community infrastructure and gender-focused initiatives.

The findings from this study demonstrate that improved access has resulted in positive direct and indirect benefits for RAIP beneficiaries on a variety of socio-economic levels, primarily due to reduced travel time and general ease of travel facilitated by improved secondary road surfaces and tertiary road connections. The RAIP beneficiaries enjoy a higher rate of vehicle ownership and usage than non-beneficiaries and possess a widely held belief that travel costs have decreased. The income in these communities is more diverse, indicating a wider access to local and district markets and reduced reliance on crops and day labour wages alone. Commuting has become easier, facilitating access to a wider range of employment opportunities. RAIP communities have increased physical access to schools, with a higher proportion of girls attending alongside boys.

Female social mobility is also higher in RAIP areas, with more men comfortable with letting women travel alone. This could be one of the reasons for increased female attendance at basic health services for ante-natal treatment and family planning services – one of the most essential steps in addressing Afghanistan's chronic child malnutrition and high maternal mortality rates. RAIP beneficiaries also note improved access to safe drinking water in comparison with non-RAIP locations, an equally important step in addressing mother/child health. These achievements are partly attributed to support from other agencies in improving access to services.

The effectiveness of the capacity building component is mixed. ATR established that the courses for local contractors were particularly effective in teaching practical new techniques and the decision to work with female engineering graduates in Afghanistan should be commended and encouraged. Unfortunately, local level capacity building appears to have had very little retention in communities where respondents were unaware of how they could apply their new skills without Government assistance and/or advanced machinery. The ability of communities to fund and manage road maintenance is one of the determining factors for RAIP's sustainability and its lack of traction should be an issue for further attention.

The gender components of RAIP were added to the project during the second phase and included a combination of female recruitment, training local women in road construction and gabion weaving and including female graduates as part of the capacity building activities. Female community involvement, in particular, was intended to stimulate gender empowerment in the chosen locations. A proper systematic theory of change analysis to reflect Afghanistan's social and cultural norms and standards could have helped a more effective intervention. In rural Afghanistan, gender empowerment is a highly ambitious strategy and it has been very difficult to measure the impact of employment on RAIP female staff, female graduates or income generating activities at the community level beyond anecdotal evidence. However, there have been some indirect effects on women because of the road construction such as a greater degree of mobility to travel without a *muharam*, increased female attendance at school and improved WASH and health access indicators.

B. Lessons Learnt

Improved access (e.g. road and water supply) is necessary but not a sufficient condition for improving the welfare of rural population and reducing poverty. There is a need for different agencies to collaborate effectively towards a common goal. The number of agencies to be included, however, needs to be at a manageable level. In particular, the inclusion of relevant departments of education, health, women affairs, agriculture and supplies is appropriate so that future project designers can internalise inter-sectoral linkages for better development outcomes.

The provision of improved access needs to consider connectivity to key economic and social service centres (demand driven) during planning of the development intervention. The project design should include the key stakeholders in need of support and the services at the heart of the process. Road construction, for example, needs to take into account connectivity to local schools, health services and public institutions, etc. In doing so, it is also important to internalise the viability and feasibility of providing services based on affordability by the rural population.

While it is not practical to assess impact within a short period, assessment of outcomes helps to ascertain the direction of impact towards the intended goal. The achievement of the intended project impact rests on both internal factors (within the project's control) and external factors (outside the project's control). Furthermore, delivery of the full impact envisaged in the project design takes time and is guided by a favourable environment, including the prevailing security conditions. A theory of change at the core of the project design needs to reflect a pragmatic and achievable set of indicators that can be monitored, tracked and evaluated.

Data collection in a challenging environment needs to be flexible and requires triangulation using a combination of qualitative and quantitative methods. In a country like Afghanistan, it may not be practical to solely rely on one source of data. Often, there is a wide variance in the availability of quality field workers for data collection as well as for data analysis. A triangulation mechanism helps ensure a plausible set of results.

The ownership of the infrastructure should rest with the communities served by the facilities. This helps to ensure safety as well as the sustainability of operations and maintenance. It would have been desirable for RAIP to establish clear roles for the community in terms of their responsibility for road maintenance – currently the role is not clear, committees are not established and there is no financial backing for committees. This is a major sustainability issue given the lack of capacity and budget for national Government support.

C. Recommendations

Afghanistan's development partners, including Sida, should consider continued support for improving access to the rural population in the country. In the presence of weak governance, it makes sense for UNOPS to implement the next phase of the project, if funding is approved. The needs are vast and a very high proportion of the rural population continues to be deprived of connectivity to local markets, employment centres, district centres and provincial centres. Likewise, access to public services tends to be severely limited due to locational disadvantages. The next phase should capitalise on the successes of the first three phases. Afghanistan continues to face on-going security challenges but the issue that will affect rural communities most directly in the coming years is the impact of a nationwide economic downturn and a contraction in employment opportunities available in isolated northern provinces. Safe, quick connections between income generating

agricultural locations and district and provincial centres will be essential in assisting Afghan communities to withstand the economic and food security shocks that coincide with economic decline.

Plan the next phase of the project giving due consideration to local needs. This will require wider consultation with agencies involved in the provision of community, economic, social and environmental services. This is feasible if development partners adopt the first recommendation. The project should clearly lay out a theory of change, adaptable to the local context. This theory of change must adjust to the shifting macro-level security and economic trends in Afghanistan and needs to be based on a critical self-review of development partners' assumptions about what can be achieved, at the outcome level in particular. The process should also give due attention to reducing road fatalities through a concerted effort on the part of all stakeholders, taking into account mitigation measures raised in dialogue with community leaders.

Use this study's database as a baseline for the next phase of the project. Collect impact stories (both positive and negative) based on personal accounts from individuals, households and communities. This study has generated a vast amount of both qualitative and quantitative data. This must be preserved and used as a foundation for monitoring progress in the future.

Create a sustainable road maintenance fund (mechanism) so that there is strong local ownership for operation and maintenance over the defined economic life of the facility. The provincial governments should make efforts to institutionalise local committees with local governance bodies such as the Community Development Councils (CDC) and District Development Assemblies (DDA), and provide measures for sustainability, e.g. ways of raising and managing collectively-owned funds. This should go hand-in-hand with capacity development initiatives to ensure quality construction, management, supervision, certification and the development of a workforce for both the public and private sectors.

APPENDIX 1 – TERMS OF REFERENCE

1.0 INTRODUCTION

1.1 The Government of Afghanistan started the National Rural Access Programme (NRAP) in 2002 to promote equitable economic growth by providing year round access to basic services and facilities in rural Afghanistan. In order to supplement this programme, the Swedish International Development Cooperation Agency (Sida) started financing Rural Access Improvement Project in the four northern provinces of Samangan, Balkh, Jawzjan and Sari Pul with the objective to contribute to poverty reduction in rural areas, bridge regional disparities, and support equitable growth. The project has been implemented by the United Nations Office for Project Services (UNOPS) in association with the four provinces.

1.2 The Government of Afghanistan's strategy is in line with Swedish International Development Cooperation which aims to enable people living in poverty (particularly women, girls and young men) to enjoy better living conditions in a peaceful, democratic and lawful society and therefore the RAIP has been facilitating achievement of these goals since its initiation.

1.3 The Phase-I of Rural Access Improvement Project (RAIP was initiated in December 2007 and was completed in December 2010. The Phase-II started in February 2010 and ended in December 2013. With successful completion of the two Phases, Phase III started in April 2013 and is now in the final year of implementation that will end on 31st December 2015.

1.4 It may be noted here that Phase I of the project covered only the two provinces of Sari Pul and Samangan. Balkh and Jawzjan provinces were later on added in Phase II. Further, the Rural Infrastructure Support Fund (RISF) projects were also added later on in Phase II and also included in Phase III for implementing small scale community driven demands/works for villages close to RAIP road construction corridors. Also, new components like RMMS (Road Maintenance & Management System), training activities (capacity building) and tertiary road components were added in Phase III.

1.5 In April 2014, Sida commissioned an Evaluation of the Rural Access Improvement Programme 2007 – 2015 (Phases I-III) in Northern Afghanistan for which Indevelop AB, an independent consulting firm, was contracted to carry out the evaluation under Sida's framework agreement for reviews and evaluations. The main purpose of the evaluation was to provide Sida with lessons from the three phases of RAIP which could form a basis for the design of new interventions. The evaluation also highlighted conclusions and recommendations with regard to the effectiveness of RAIP, the role of UNOPS as an implementing partner, the focus of the programme and cooperation with stakeholders and reflections on implementation modalities for future support. Accordingly, in January 2015, Indevelop AB submitted the report, ''Evaluation of Sida's Support to the Rural Access Improvement Programme (Phase I-III), Afghanistan''.

2.0 RATIONALE AND CONCEPTUAL FRAMEWORK

2.1 All the three phases of RAIP has been focussing on infrastructure works programme primarily of rural roads and bridges. The overall objectives or goals of all the three phases of the RAIP are to contribute to poverty reduction in rural areas, support economic development of the region, bridge disparities between urban and rural areas, support GOA's efforts towards equitable growth, build close cooperation and engagement with various partners, develop skills and competencies to design, build and maintain rural roads, build significant employment and economic opportunities for men and women, particularly in Phase II and III.

2.2 Major component of RAIP comprise of roads construction, road maintenance and construction of bridges. However, a number of community infrastructure were carried out under RISF which include water & sanitation facilities, construction and repair of mosques, schools & clinics, community halls and agriculture storage facility, irrigation canals, small village roads, culverts and retaining walls etc. There is another component under capacity building for training of university graduates, official of DPW and RRD, local shuras & foremen, local civil contractors, RAIP III engineers and women entrepreneur aspirants. In addition to above, some gender responsiveness projects (livestock, poultry, baking, weaving, wool spinning, tailoring etc) were also implemented. One of the key objectives was to create employment & business opportunities during the implementation of the projects especially construction and road maintenance programmes.

2.3 The propose impact study will therefore be designed to carry out qualitative analysis of socio-economic impacts of the projects from Phase I-III. The study will assess the magnitude and distribution of both the direct and indirect socioeconomic impacts of RAIP on target populations, individuals and households, and to determine the extent to which interventions under the RAIP cause changes in the wellbeing of targeting populations by analysing how they change overtime in communities that have RAIP projects as compared to those that do not have.

2.4 The Impact Assessment phase will comprise the following steps:

- Review the project documents, baseline surveys, socio-economic studies and evaluation reports.
- Revisit survey instruments.
- Development of evaluation methodology.
- Undertaking the impact survey.
- Carrying out the descriptive and statistical analysis of the surveyed data in comparison with the base line information.
- Organising seminars and workshops with a variety of governmental and a variety of other stakeholders.

2.5 UNOPS now wishes to hire a Consulting Firm (Consultant) to undertake the following terms of reference relating to implementation of the impact survey assessment to study road sub projects, community infrastructure under RISF component, capacity building and gender responsiveness projects implemented in the four northern provinces of Samangan, Balkh, Jawzjan and Sari Pul.

2.6 The Consultant is expected to hire Afghan Staff, both male and female, with relevant previous experience and education and to provide them with methodological training in participatory data collection methods. At the end of the assignment and prior to the approval of the Impact Study Report, the Consultant will make a series of formal presentations of the study findings and recommendations to UNOPS, Sida and other stakeholders as well. Invitations for the presentations will be extended to all levels and types of stakeholders to the extent possible. The summary of the report should also be translated in both Dari and Pashto, and distributed in the areas of implementation and the report should also be presented in local language for effective dissemination of data to all relevant stakeholders. The final payment to the Consultant will be subject to the approval of the Consultant's Impact Study Report (Final) by UNOPS. UNOPS will formally approve the report after review by Sida.

3.0 OBJECTIVES OF THE CONSULTANCY SERVICES

3.1 General

The general objectives of this consultancy service are to determine possible socio-economic benefits of RAIP. This will in future help to:

(i) Adapt policy overtime as result of the evidence from the impact assessment, and
(ii) Support future funding request for rural access improvement
(iii) Indicate what the projects have contributed till with regards to the overall goals of the project throughout the three phases.

3.2 Specific

The specific objectives of this consultancy services are to:-

(i) Develop a scientific evaluation methodology and survey design to conduct statistical analysis to determine the magnitude and distribution of the direct and indirect socio-economic impacts of rural road improvement, community projects implemented through RISF, capacity building training provided to various stakeholders and gender responsiveness project component; and the extent to which RAIP interventions cause changes in the well-being of targeted populations overtime compared without project interventions.

(ii) Conduct impact survey of a sample of individuals and households in areas that receive RAIP support (Project areas in four provinces) and on the sample of households that have not received support from RAIP I-III and needs to be statistical significance in the comparison. The sample groups should have adequate number of households for arriving at conclusions that are of realistic statistical value. The Consultant with the help of UNOPS (RAIP) will identify and make the sample for the survey.

(iii) Conduct descriptive statistical analysis of the impact by comparing with any other previous reports, data or base line information with the results from the survey.

4.0 SCOPE OF WORK

The Consultant is expected to carry out the following tasks with the final product being the Impact Study Report (Final Report). All the reports (draft and final) will be submitted to the Project Manager, RAIP, UNOPS Regional Office in Mazar-e-Sharif, Afghanistan. Prior to formal approval by UNOPS, the reports will be forwarded to Sida for review and comments.

Task 1: Review of related documents

The Consultant will review all the relevant documents of the projects including evaluation reports, baseline surveys, socio-economic studies and any other related documents/ reports for the development of methodology to be adopted in impact survey. The following reports/documents, in particular, should be referred in developing the methodology and updating the information that were previous collected- (i) Socioeconomic Baseline Survey: Jawzjan and Balkh Province, Final Report-04 Feb 2012 (ii) A Socio-economic Study of Samangan and Sari pul Province-

18 Dec 2010 (iii) Evaluation of Sida's Support to the Rural Access Improvement

Programme (Phase I-III), Afghanistan-Jan 2015 and, (iv) Project Appraisal of ARAP (latest)

Task 2: Development of Study Methodology and Piloting

(i) The Consultant will develop a detailed survey design and evaluation methodology. The methodology should be comprehensive enough to ensure a sound statistical analysis of impact assessment, and draw statistically valid inference on the impact of rural roads, community projects, capacity building and gender components on socio economic benefits to the communities.

(ii) The Consultant shall visit the Project areas and refine questionnaires, if necessary. This will include ways of organising and tabulating the information collected in electronic format.

(iii) Suggested indicators to be used for the study are provided in Annex 1.

(iv) The Consultant prepares a detailed report on its survey design and evaluation methodology as described above. The report should include, but not limited to:

- Detailed description of Project Areas to be surveyed
- Description of performance indicators to be used
- Draft survey questionnaire to be used

(v) Pilot the survey design and evaluation methodology developed for both the impact assessment study and road user satisfaction survey and beneficiaries of RISF projects, capacity building and gender components in a small sample of households and habitations with a view of refining them both before finalization and use in the main survey stage. A short report on the outcome of this pilot and the changes necessary shall be prepared.

Task 3: Conducting follow-up survey

(i) Once the methodology is developed, tested and accepted by the client, the Consultant shall conduct a full scale impact survey on selected project areas. (ii) Undertake qualitative survey of quantifiable data (e.g. Focus group discussions) in a subset of the habitations to gain additional insights and to verify/ augment quantitative survey.

(iii) The impact survey should include a detailed survey of transportation, economic/ income and social variables on both the project and comparison groups.

- Transportation variables should include accessibility index, transportation costs and times, modal choice, a detailed survey of transport needs, preference and demands of the rural communities and households (See Annex 1). The Consultant may use a similar approach and indicators as outlined in the project appraisal of ARAP, essentially focussing on measurable indicators related to improved connectivity, number of inhabitants provided with improved access, increase in traffic, trips made to schools, hospitals and other socio economic centres.
- Economic/ Income variables should include a detailed survey of economic activities in habitations, measuring agricultural productivity and non-agriculture employment, as well as prices of major commodities, income and expenditure of households (Annex 1)
- Social variables should include survey of availability and access of education and health facilities.
- All data collected is to be disaggregated, when possible, by men, women, boys and girls.

(iv) The Consultant shall submit in electronic form of the impact survey data. The data collected should be classified into habitation-level, household-level and project-level data base. The database should be easily searchable and accessible enough to conduct statistical analysis by the user. This should be in format compatible with baseline data, if any.

Task 4: Impact Evaluation

The Consultant shall not only carry out a descriptive statistical analysis but should rather stress on qualitative analysis of quantifiable data. These should be reached through a combination of FGDs, in-depth interviews, observations, questionnaires etc. The Consultant should note that one of the objectives of the study is to analyse the impact of the projects overtime. In addition, the unintended outcomes and indirect rights holders reached through the projects are also of interest during the study:

(i) Compare the changes in both project and comparison groups how they rank with respect to the indicators in Annex 1.

(ii) Conduct statistical correlation between selected socioeconomic variables on the one hand and the level of current accessibility to motorized transport on the other. This will include a quantitative analysis of how limitations in accessibility contribute to rural poverty.

(iii) Prepare a report detailing the findings of the analysis of the baseline and impact survey data to determine the true impact of the project interventions and draw lessons.

(iv) The Consultant is required to provide necessary clarifications for theory of changes as against to the baseline indicators.

5.0 OUTPUTS AND REPORTS

All reports have to be submitted to the Project Manager, RAIP, UNOPS Regional Officer in Mazar-e-Sharif. However, prior to formal approval, UNOPS will submit various draft reports to Sida for review. The Consultant will deliver the following outputs:

(i) **Inception Report**: Within Fifteen (15) days from the effective date of the contract. The Inception Report shall include work plan, detailed survey design and evaluation methodology.

(ii) **Report on the pilot of the Impact Survey**: Within Thirty (45) days from the effective date of the contract.

(iii) **Impact Survey (Draft Report):** Within One Hundred Fifty (150) days from the effective date of the contract (05 hard copies including electronic)

(iv) **Impact Study Report (Final Report):** Within One Hundred Eighty (180) days from the effective date of the contract. The Final Report shall incorporate all comments and revisions requested by UNOPS following the Draft Final Impact Study Report review by UNOPS and Sida and the Consultant's presentation of the study findings and recommendations to the project key stakeholders (05 hard copies including electronic). The main report should be maximum 30 pages excluding annexures.

6.0 COMMENCEMENT AND DURATION OF CONSULTANCY SERVICE

The Consultant shall commence the services immediately following the signing of a Service Contract with UNOPS and will complete the services within Six (6) months after the contract issuance.

7.0 LOGISTICS

(i) The Consultant will be responsible for arranging his own office space and other logistics. (ii) UNOPS Project Team will facilitate the Consultants and its team for scheduling meetings or workshops with government departments, agencies and other stakeholders by requesting and writing to them.

(iii) The Consultant and its team will be fully responsible for their own security during their services, including field surveys.

8.0 AGREEMENT

The Consultant will be required to enter into an agreement with UNOPS based on a Lump Sum Contract for Consulting Services. Both parties shall sign a Contract Agreement before commencement of the work.

9.0 SITE VISITS

The Consultant shall make site visits to the project site on their own to verify the previous studies data and collect data required for the Consultant's own study. UNOPS will however, provide contacts to rights

holders and community leaders. In addition, the Consultants should feel free to contact the community leaders and local shuras as deemed necessary for the field surveys.

10.0 COST AND PAYMENT OF CONSULTANT'S SERVICES

The Consultant shall meet the full operational costs of its field investigation and survey teams including all travels, remuneration, insurance, emergency medical aid, accommodation, offices and facilities, communications and all that is necessary for the proper operation of the teams. Costs shall include administrative and technical support from the Consultant's Head Office.

Mode of payment to the Consultant shall be made on the following basis:-

I. **1st instalment**: 25% (twenty-five percent) of the quoted amount will be paid to the Consultant after the Inception Report is submitted and accepted by UNOPS.

II. **2nd Instalment**: 50% (fifty percent) of the quoted amount will be paid on submission and acceptance by UNOPS of the Impact Survey (Draft Report)

III. **Final payment**: 25% (twenty five percent) of the quoted amount will be made to the Consultant after submission and acceptance of the Impact Study Report (Final Report) by UNOPS.

11.0 REQUIRED QUALIFICATION OF THE CONSULTANT

The Consultant's staff should have extensive experience in impact and socio economic studies and surveys related to social, economic, environmental aspects, road & transport sector, community projects, gender mainstreaming etc. It is highly desirable to have someone in the team with knowledge of human security and conflict sensitivity, environment and disaster risk reduction and resilience. Minimum requirements for the composition and qualification of the Consultant's project team are provided in the below table:

Description of Staff	Level of Qualification (minimum)	Years of professional experience (minimum)
Team Leader (Socio-Economist)-01 no.	Master's degree or higher (PhD preferable) in economics, preferably with specialization in social sector, public policy or related field	At least 15 years' experience in socio- economic assessment of projects; Proven ability to plan, organize, and effectively implement activities; Research and analytical skills; Ability to coordinate and work in teams, and in complex environments; Proven experience in participatory processes, and strong communication and advocacy skills; Experience in designing questionnaires, testing questionnaires, training enumerators; analysis of data and preparing a concise report; Strong knowledge on participatory data collection methodologies, data analysis and report writing; Should have good knowledge of the country, the
Transport/ Road Engineer (Technical)-01 No.	Master's Degree in Civil Engineering or Transport	10 years' experience in road design, construction and maintenance particularly rural roads, bridges and also associated civil engineering works; Should have good knowledge of the country, the context, the region and working in conflict zones; Should have completed at least one such similar nature of work.
Gender Specialist-01 No.	Master's Degree or equivalent in Gender Studies, Social Science, International Public Policy, or related field.	At least 10 years of substantive experience at International senior programmatic position with recognized expertise and experience in gender; particularly mainstreaming and public policy analysis; Experience with post conflict programming; strong analytical and writing skills; Should have good knowledge of the country, the context, the region and working in conflict zones ; Should have completed at least one such similar nature of work.
Interpreter/ Translator -2 nos. (1 male, 1 female)	Bachelor's Degree in social studies or related field.	5 years' experience particularly in Northern Afghanistan. Should have good understanding and knowledge of Afghanistan in the context of governance, political & developmental issues. Should have completed at least one such similar nature of work.

Both men and women should be engaged in the Consultant's team. Good knowledge of spoken and written English by the Consultant's key staff is essential. The Consultant shall include CVs of all their key staff proposed for this project.

APPENDIX 2 – DATA COLLECTION TOOLS

The data collection tools are presented in the following order:

- Traffic Composition and Density Survey
- Vehicle Origin and Destination Survey
- Transport Owner Survey
- Household Survey
- Focus Group Discussions
- Case Studies (General)
- Case Studies (Capacity Building)

A. Traffic Density and Composition Survey

MODULE A.1 Traffic Density and Composition Survey

Instruction

1. Please count the traffic either based on visual or automated traffic basis. Count should be at different points over a typical day but should include:
   (i) A market day and a non-market day and week day and weekend day or
   (ii) Over a randomly selected number of days

2. You need to count different types of vehicles as well as pedestrian traffic (if applicable).

1. Date of Count (day/month): ___ ___ ___ ___(Please use double digit, if 1 then use 01)
2. Time of Count: Start Time: _____ am/pm (Please circle am or pm)
3. Time of Count: Finish Time: _____ am/pm (please circle am or pm)
4. Location of Count:
   (i) Province: _____ (ii) District _____ (iii) Village _____
   (iv) Actual Location: _____ (Name/Landmark)

5. Direction of Traffic: _____

6. Record of Observations: (Please use code for the type of vehicle)

Observation #	Time of passage	Vehicle Type	Observation #	Time of passage	Vehicle type
1			11		
2			12		
3			13		
4			14		
5			15		
6			16		
7			17		
8			18		
9			19		
10			20		

Vehicle Code:

1 = bicycle 2 = horse or donkey cart 3 = Motor cycle/Scooter 4 = Motor-trailor 5= Car 6 = taxi

7 = pick-up truck, jeep, tractor 8 = Light truck (up to 2 tons) 9 = medium truck (2-6 tons)

10 = heavy truck (over 6 tons) 11 = Bus 12 = mini vans, 13 = other mode, 88 = pedestrian

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B. Origin and Destination Survey

MODULE A.2 Origin-Destination Survey

Instruction

3. Please stop the passing vehicles and ask questions about origin, destination and purpose of the trip.
4. All vehicles can be stopped in low traffic area.
5. In high traffic area, use random method such as every 10^{th} vehicle.
6. Please pre-code known points of origin and destination.
7. Please also pre-code known commodity type.
8. For vehicle code, please use the same code as in the traffic count survey (Module A.1)

1. Date _____ 2. Time period (from and to): _____ 3. Location: _____ 4. Direction of traffic: _____

1 Observation Number	2 Time of Passage	3 Vehicle type (code)	4 Origin of Vehicle (code)	5 Destination of Vehicle (code)	6 Vehicle load (tons)	7 Main commodity on vehicle (code)	8 Is your destination the market in _____? 1Yes 2No	9 If yes, how often do you go to the market? (times per month)	10 Type of market user
1									
2									
3									
4									
5									

Vehicle Code:

1 = bicycle 2 = horse or donkey cart 3 = Motor cycle/Scooter 4 = Motor-trailor 5= Car 6 = taxi

7 = pick-up truck, jeep, tractor 8 = Light truck (up to 2 tons) 9 = medium truck (2-6 tons)

10 = heavy truck (over 6 tons) 11 = Bus 12 = mini vans, 13 = other mode, 88 = pedestrian

C. Transport Owner Survey

Module 1-C: Transporter Survey Questionnaire

The purpose of this survey is to assess vehicle maintenance cost.

Instruction:

1. **Please complete this questionnaire by interviewing vehicle owners in each province. The owner can be an individual or a company.**
2. **In each province, interview should be conducted with 10 vehicle owners.**
3. **Interview can be held at a person's home or at a public place like bus/truck/taxi stand.**

Transport owner's detail:	Name: Location: Mobile phone no.
Day and date of interview	Day of the week: Date :
Name of the Interviewer	
1. What type of vehicles do you use?	
2. How old is your vehicle?	Year:
3. How many days in a week do you use your vehicle?	No. of days: Dry Season _____ Wet Season _____
4. How many kilometres do you drive your vehicle in a month	Km:
5. How much did you spend in past month on repair of your vehicles (excluding tires but including spare parts)	AFN: USD:
6. How much did you spend in past 12 months on repair of your vehicles (excluding tires but including spare parts)	AFN: USD:
7. How much did you spend on other things like oil, lubricants, regular servicing in past 6 months?	AFN: USD:
8. How much do you spend on fuel for your vehicle per month? (*or fodder for animal transport*)	AFN: USD:
9. How often do you replace your tires? (*or wheels/harnesses for animal transport*)	Once _____
10. How much does it cost to replace tires at one time:	AFN: USD:

11. What sort of trips does your vehicle make? (*to/from which villages/communes/district centres and, if possible, approx. %)*	Personal:_____% Social _____% Business:_____% Rental: _____% Others: _____%
12. What is an average distance per trip?	Km:
13. Do you use your vehicle for rent or transporting goods? 1=Yes, 2=No	

If response to question 13 is YES then continue, otherwise stop. This includes public transport such as minivan, taxi, truck, bus, motor cycle, and animal drawn cart.

14. What is the total load your vehicle can carry?	Ton: or Kg:
15. What is the average length of trip? (*if not the average then a range of distances*)	Km
16. What are the average fares you charge per one-way trip for passengers?	This year: Last year:
17. What do you charge per one-way trip for goods carried?	This year: _____ per _____(weight) Last year _____ per _____(weight)

D. Household Survey

Rural Access Improvement Projects in Afghanistan (SIDA/UNOPS)
SOCIOECONOMIC IMPACT ASSESSMENT OF RURAL ACCESS IMPROVEMENT

Module B: Household Survey

Instruction:

4. **Greet the household head and members and explain the purpose of the survey.**
5. **Please complete this questionnaire with the head of the household.**
6. **In the absence of head of household, the next elder person may be interviewed.**
7. **Please pre-code provinces, districts and sub-districts.**

A. General Information

1. Province:	2. District:
3. Village:	4. Project Beneficiary: YES/NO
5. Phone number:	
6. Date of Interview:	7. Interviewer:

B. Household Background

B1. Household Type

B1.1 Residential Status: 1=Owner, 2=Tenant, 3=Relative of absent owner, 4=Other _____	
B1.2 Social Group: 1=Pashtun, 2=Uzbek, 3=Taiek, 4=Hazaras, 5=Turkman, 6=Nomadic, 7=Arab, 8=Other	

B2. Household Roster (start the listing first with head of the household for all members sleeping and eating in the same households)

Position in the family	Age In years	Gender 1=M, 2=F	No. of years Attended school	Currently in School (1=yes, 2=No)	Currently working (1=yes, 2=No)	Main Occupation (Refer to code)*
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						

For more than 18 members in the household, please continue on this page with additional rows.

*Main Occupation code: 1=farmer, 2=landless labourer, 3=government employee, 4=trader, 5=middleman, 6=retailer, 7=skilled labourer (carpenter, plumber, electrician, machine operator etc.), 8=unemployed / housewife, 9=student, 10=child not going to school.

C. Employment Status

Employment type	Male	Female
C.1 No. of adult members working on farm full-time		
C.2 No. of children (15 years and under) working on farm full-time		
C.3 No. of adults working on farm part-time		
C.4 No. of children working on farm part-time		
C.5 No. of adults working off-farm most of the time		
C.6 No. of children working off-farm most of the time		
C.7 No. of adults fully dependent on wages from outside home		
C.8 No. of children fully dependent on wages from outside home		
C.9 No. of adults having no work		
C.10 No. of children having no work		

For household members working off-farm or on wage employment	
C.11 Distance need to travel for wages or off-farm employment (Km)	
C.12 Mode of transport to reach employment place (refer to code*)	
C.13 One way cost of travel to reach employment place (AFN)	
C.14 One way travel time to reach employment place (minutes)	
C.15 Distance to main road (km)	
C.16 Household monthly income from wage or off-farm employment	
For household members looking for work	
C.17 How often do you/members travel to look for work (times in a week)?	
C.18 Is access a major problem reaching to the place likely to have job? 1=yes, 2=no	
C.19 How far do you travel to look for work? (Km)	
C.20 How many household members send money from outside? No.	
C.21 How much do you receive per month, if any? AFN	

**Main mode of transport code*: 1=walk, 2=donkey/horse/camel, 3=motor bike, 4= private vehicle, 5=others' vehicle, 6=Bus, 7=mini-van/taxi, 8=bicycle, 9=tractor, 10=other _____

D. Living Conditions

Housing	
D.1 Type of house (1= brick house 2=mud-house, 3=tent, 4=Other _____)	
D.2 Type of accommodation (1=owned, 2=rented, 3=shared for free)	
D.3No. of rooms Total	
D.4 No. of rooms with ventilation	
D.5 Source of drinking water (1=piped connection, 2=well, 3=hand pump, 4=pond, 5= no access; other= 6	
D.6 Place of drinking water (1=within compound, 2=outside compound within less than 15 mn walk; 3=outside compound further as 15 mn walk)	
D.7 Source of lighting (1=electricity, 2=solar, 3=kerosene lamp,4= Gas lamp, 5= Candle,6= electric generator, 7= no access; 8 =other _____)	

D.8 Cooking fuel (1=firewood, 2=gas, 3=coal, 4=fuel 5=other _____)	
D.9 Latrine (1=within compound, 2= outside compound 3= no access)	
D.10 Have family transport (1-Yes, 2=No)	
D.11 If have family transport, what kind? _____	

*Mode of transport 1=*animal cart, 2= motor bike 3=light vehicle, 4=heavy vehicle,

E. Household Assets

E.1 Total land owned (jerib)	
E.2 Cultivable land area (irrigated and unirrigated) (jerib)	
E.3 Irrigated land area jerib)	
E.4 No. of milking cows	
E.5 No. of other cattle	
E.6 No. of goats/sheep	
E.7 No. of poultry birds	
E.8 No. of large farm machinery (e.g. tractor, power tillers, etc)	
E.9 Irrigation pumps	
E.10 No. of shops/bakery	
E.11 No. of bicycles	
E.12 No. of animal drawn cart	
E.13 No. of motor cycles/scooters	
E.14 No. of car or other vehicles	
E.15 No. of television sets	
E.16 No. of radios	
E.17 No. of Generator	
E.18 No. of trucks	
E.19 No. of other assets (specify) _____	

F. Education

School Type	**Male No.**	**Female No.**
F.1School age children in the household (5-18 years old)		
F.2 In community based school		
F.3 In primary school		
F.4 In middle school		
F.5 In high school		
Distance to school (by School type) in Km each way	**Boys' School**	**Girls' School**
F.6 Community based school (CBS)		
F.7 Primary school		
F.8 Middle school		
F.9 High school		
Travel Time to school (by school type) in minutes each way	**Boys' School**	**Girls' School**
F10. Community based school (CBS)		
F.11 Primary school		
F12. Middle school		

F13. High school		
Transport Mode to school (by school type) (refer to code)	**Boys' School**	**Girls' School**
F14. Community based school		
F15. Primary school		
F16. Middle school		
F.17 High school		
School days missed in past one month	**Boys**	**Girls**
F18. Community based school children		
F19. Primary school children		
F20. Middle school children		
F21. High school children		
No. of children dropped out from school (no longer going)	**Boys**	**Girls**
F22. Community based school children		
F23. Primary school children		
F24. Middle school children		
F25. .High school children		
Reasons for children not going to school [refer to code]**	**Boys**	**Girls**
F26. Community based school children		
F27.Primary school children		
F28. Middle school children		
F29. High school children		
School transport cost (AFN) one way journey	**Boys' School**	**Girls' School**
F30. Community based school		
F31. Primary school		
F32. Middle school		
F33. High school		

**Mode of transport code*: 1=walk, 2=motor bike, 3= private vehicle, 4=others' vehicle, 5=bus, 6=mini-van,/taxi 7=bicycle

**Reasons for school drop-out (1=distance, 2=lack for transport, 3=illness, 4=needed to earn income, 5=marriage, 6=family restrictions for other reason, 7=security risk

G. Healthcare

Child Health	
G.1 No. of infants in the households	
G.2 No. of infants immunized	
G.3 Distance to nearest community health centre (BHC) km	
G.4 Travel time to reach the nearest BHC (min)	
G.5 Mode of transport to reach the nearest BHC [refer to code]**	
G.6 No. of days in a month infants were sick over last one month	
G.7 No. of days young children (1-5 years old) were sick over last one month	
G.8 No. of days older children (6-15) were sick over last one month	
G.9 No. of days men (16 and over) were sick were sick over last one month	

G.10 No. of days women (16 and over) were sick over last one month	
G.11 Quality of health care services (1=good, 2= not so good, 3=bad)	
G.12 One way travel cost to the nearest BHC in AFN	
G.13 One way travel cost to nearest comprehensive health centre (CHC) in AFN	
G.14 No. of infant deaths in the households	
G.15 No. of times visited BHC or CBC over past 12 months for infant/child illness	
Maternal Health	
G.16 Pre-Natal care provider*	
G.17 Source of maternal and child health nutrition advice*	
G.18 Mode of transport to reach BHC**	
G.19 Mode of transport to reach CBC	
G.20 Time to reach nearest BHC in minutes	
G.21 Time to reach nearest CBC in minutes	
G.22 Response time to call a doctor to the household (minutes)	
G.23 Any family planning measure adopted (1=yes, 2=no)	
G.24 Source of family planning information (1=husbands, 2=neighbours, 3=health workers, 4=radio, 5=Shura representatives)	
G.25 No. of times women visited BHC in past 12 months for their own health issues	
G.26 No. of times women visited CBC in past 12 months for their own health issues	
G.27 No. of maternal deaths in the household	

***Mode of transport code*: 1=walk, 2=motor bike 3= private vehicle, 4= bicycle, 5=bus, 6=mini-van/taxi, 7= others' vehicle

**Pre-natal care provider*: 1=elderly women in the village, 2=Trained birth attendant, 3= other family members, 4=nurse in the area, 5= other health facilities _____

H. Income Generation

Source of Income	Undertaken by the household (1=yes, 2-no)
H.1 Crops	
H.2 Horticulture	
H.3 Livestock and dairy	
H.4 Microenterprise (carpet weaving, bakery, basket weaving, knitting, poultry raising etc,)	
H.5 Remittances	
H.6 Gifts/gratuities	
H.7 Employment/Pensions	
H.8 Hunting	
H.9 Other _____	

I. Crops and Horticulture (if it does not apply to the household then move to next section)

Crops/Fruits/ Vegetables Grown	Area (jerib)	Production (Quantity)/ No./Ser per jerib	Marketable Surplus (% of production)	Point of sale (1=homestead, 2=local market, 3= farther from local market)	Mode of Transport*

Mode of transport: 1=carry on head or back, 2=animal cart, 3=tractor, 4=light vehicle, 5=heavy vehicle, 6=donkey/horse/camel

J. Livestock and Dairy Products (Skip if not applicable)

Kind of Livestock/Dairy Products	No./Amount Produced/ Quantity	Marketable Surplus (% of production)	Point of Sale (1=homestead, 2=local market, 3= farther from local market)	Mode of Transport*	Transportation cost AFN
Cows					
Sheep/Goat					
Horses					
Camel					
Donkeys					
Poultry birds					
Milk and milk products					
Other cattle					
….					

**Mode of transport*: 1=carry in hand, 2=animal cart, 3=tractor, 4=light vehicle, 5=heavy vehicle

K. Microenterprise(s)

Kind of Products Produced	No./Amount Produced/ Quantity	Marketable Surplus (% of production)	Point of Sale (1=homestead, 2=local market, 3= farther from	Mode of Transport*	Transport cost AFN

			local market)		
Carpet weaving					
Knitwear					
Gabion weaving					
Poultry					
Tailoring. and embroidering					
Handicrafts					
Jam making					
Scarf weaving					
Wood carving					
Food stuff (cake, candy,					
Livestock rearing					
….					

Mode of transport: 1=carry on hand, head or back, 2=animal cart, 3=tractor, 4=light vehicle, 5=heavy vehicle, 6=donkey/horse/camel

L. Household Expenditure

Expenditure Item	Frequency (1=weekly, 2=monthly, 3=twice a year, 4=annual)	Amount	Source of Fund (1=savings, 2=loan, 3=neighbours, 4=money lenders)	Point of Purchase (1=local market, 2=distant market 3=friends/ neighbours/relatives, 4=middleman, 5=others	Transport Cost per unit AFs, where applicable
Production Inputs					
L.1 Seeds					
L.2 Fertilizer					
L.3 Farm chemicals					
L.4 Hired draft animal for land preparation					
L.5 Labour					
L.6 Farm credit/loan in cash or kind					
L.7 Transport					
L.8 Storage					
L.9 Farm machinery					
L.10 Others ___					
Consumption Items					
L.11 Food/ beverages					
L.12 Education					
L.13 Social function					

L.14 Health					
L.15Clothing and shoes					
L.16 Meat/milk/ egg					
L.17 Gift/donation					
L.18 Other - _____					

M. Use of Road

Purpose	Name of Road (develop a code for the names of roads)	Frequency of use (1=daily, 2=2-3 times a week, 3=weekly, 4= less frequently
M.1 Input purchase		
M.2 Selling farm produce		
M.3 Visiting friends/relatives		
M.4 Visiting government offices		
M.5 Wage employment/job		
M.6 Microenterprise products		
M.7 Other purpose _____		

N. Participation in Social and Community Activities

N.1 How many people in the **last month** did people who live outside this community visit you in your home?	
N.2 How many times in the **last month** did you visit people who live outside this community?	
N.3 For most recent visit, how did you travel there?*	
N.4 How far this person you visited recently lives? km	
N.5 How long did it take you to get there for one way trip (minutes)	
N.6 What was the purpose of the visit? [refer to code]**	
N.7 How many times in the last year did you attend a festival or ceremony (wedding, funeral, religious festival, etc.) outside this community?	
N.8 For the most recent such trip, how did you travel there?*	
N.9 How far was the place you visited? km	
N.10 How long did it take you to get there? minutes	
N.11 In past 12 months, have you attended a community event outside this community? 1=yes, 2=no	
N.12 In past 12 months, did you travel to meet a political or tribal leader? 1=yes, 2=no	
N.13 In the past 12 months, did you contact a local police? 1=yes, 2=no	

N.14 Other social and community activities _____	

*Travel mode: 1=walking, 2=private vehicle, 3=taxi, 4=public vehicle, 5=other _____

**Purpose of visit: 1=social, 2=business, 3=official, 4=community project, 5=other _____

O. Membership in local/district/provincial community organization [if not relevant, skip)

Is anyone in your household an active member of any of the following type of organization?		No. of years of active affiliation	Location of the group 1=in the community 2=outside community	No. of household members involved
Type of Organization	Active Status (1=yes, 2=No)			
O.1 Farmer group				
O.2 Cooperative society				
O.3 Trader/professional association				
O.4 Loan or finance group				
O.5 Water management group				
O.6 Forestry management group				
O.7 Religious group				
O.8 Cultural association				
O.9 youth group				
O.10 Women's group				
O.11 School management committee				
O.12 Health group				
O.13 Sports group				
O.14 Other group/association _____				

P. Overall perception about the road [Code: 1=strongly agree, 2=agree, 3=not sure, 4=disagree, 5=strongly disagree

P.1 Road is serving our household needs better than 5 years ago	
P.2 Our traveling time has decreased significantly compared to 5 years ago.	
P.3 Our passenger transport cost has decreased significantly compared to 5 years ago..	
P.4 Our freight cost has decreased significantly compared to 3-5 years ago.	
P.5 Overall condition of our road is much better than 5 years ago.	
P.6 Our women and girls are more happy to travel on the road than 5 years ago..	

P.7 What needs to be done to improve the conditions of road? **Please circle all that apply.**

P.7.1 Maintain regularly
P.7.2 Introduce higher construction standards
P.7.3 Organize road users group for maintenance
P.7.4 I have no idea
P.7.5 Other _____

P.8 What needs to be done to improve transport service in the area? **Please circle all that apply.**

P.8.1 Regulate private transport service _____
P.8.2 Develop public transport for both men and women
P.8.3 Provide incentive to private sector to develop transport services
P.8.4 Increase security on road and public transports _____
P.8.5 I have no idea
P.8.6 Other _____
_____

Q. Perceptions on gender roles, decision-making and control over resources [For each statement, please select one code from: 1=strongly agree, 2=somewhat agree, 3=disagree, 4= strongly disagree, 5=no opinion.

Q.1 It is acceptable to us for our daughter and wives to work outside the house.	
Q.2 Girls have right to go to school and they should attain schools regularly.	
Q.3 Boys and girls should be treated equally.	
Q.4 Men should respect women as equal partners.	
Q.5 Women should be allowed to keep part of household income for their needs.	
Q.6 Women should be allowed to travel outside without accompanied by men.	
Q.7 Both men and women should be involved in acquiring new assets or sale of assets.	
Q.8 Women should have access to and control over household budget and finances.	
Q.9 Women should be allowed to launch their own business.	
Q.10 Women should be actively involved in local community activities.	
Q.11 Women should be allowed to join community based organizations.	
Q.12 We will support our daughters to become teachers or health workers.	

Q13. Do you have any additional comments/suggestions?
_____

THANK YOU FOR YOUR VIEWS, PATIENCE AND TIME.

E. Focus Group Discussion

MODULE 2B: GUIDING QUESTIONS FOR FOCUS GROUP DISCUSSION

Background: The aim of the focus group discussion is to gather perspectives of some of the key stakeholders as a part of impact assessment of a project supported by UNOPS in four provinces. The project has supported improved access for the local people, build small infrastructures, and developed capacity of local women in taking up income generating activities. It has also trained some of the government staff and some other stakeholders.

Instructions:

1. **ATR Researchers will conduct 4 focus group discussion per province. Two focus group discussions will take place with men and another two with women representatives.**
2. **The probe statements (in blue) are provided to guide and keep the discussion focussed. S(he) may opt to expand further based on the responses from the participants.**
3. **Each focus group discussion will be led by an experienced facilitator and a note taker.**
4. **Each focus group will comprise 8 (eight) representatives from a wide range of fields who are able to give balanced feedback. and include:**

Men's Focus Group	Women's Focus Group
1. A respected community elder 2. A Comprehensive Health Centre (CHC) in charge 3. A primary school (boys) headmaster 4. A middle school boys) headmaster 5. A Community Development Council member 6. A religious leader 7. A community based organization (CBO) or NGO representative 8. A senior government representative from roads department	1. A Shura member 2. A senior female staff member at CHC 3. A primary school (girls) headmaster 4. A middle school (girls) headmaster 5. A representative from microenterprise operation (carpet, basket weaving, bakery) 6. A senior female doctor/nurse from CHC 7. A CBO or NGO representative 8. A senior female government staff in roads department or other relevant government department

A. Identification

FGD Type (Please circle male or female FGD): Male Female

1. Province:	2. District:	3. Venue of FGD:
4. Facilitator-1:	5. Faciltator-2:	6. Date of FGD:

B. **List of Participants**

Representation from	Age	Position held in the community	No. of years in the position	Contact Number
1.				
2				

3				
4				
5				
6				
7				
8				

Before starting the discussion, facilitator needs to allow time for the invited participants to settle in and start with an informal chat to each of them asking: How are you today? How was your travel to this meeting place? Offer a soft drink and if possible small cookies or chocolate with the budget you were provided with for each focus group discussion. A bit more can go on about how far did they travel and what mode of transport they used.

FGD Guiding questions:

1. <u>General</u>

A. What do you think about the general conditions of accessibility in the local communities?

B. What do you think are the key challenges in improving access to services and institutions for rural population?

C. Can you expand on what kind of rural access improvement projects/activities have been completed recently or are on-going in your area?

D. Are you aware of UNOPS implemented "Rural Access Improvement Project"? If so, can you tell me a bit more about the project?

Note: if some or all participants are not aware of the project facilitator should give a brief synopsis on what investments have been made and what activities have been completed under UNOPS implemented project.

E. Now, I hope you have some idea about the project. Was there any issue during road construction stage?

Probe: level of consultation with the intended beneficiary groups and community leaders during design, disputes during construction award, dispute associated with loss of land and dispute resolution mechanism adopted.

2. <u>Roads</u>

A. Would you like to comment on the quality of road construction? How do they compare with roads constructed by other agencies?

Probe: road surface, width, gradient, state of maintenance etc.

B. Can you elaborate on how this project has benefited local communities?

Probe: benefit should be discussed in terms of employment, income generating activities, improved access to health and education as well as other social services, gender empowerment, access to market and transportation costs as well as transport mode and costs

C. Has the road constructed under the project has led to undesirable outcomes?

Probe: accidents, illicit activities, environmental degradation, natural resources mismanagement etc.

D. Has anyone adversely affected by the road? If so, in what ways?

Probe: loss of land, physical inconvenience etc.

E. What is the security on the road?

Probe: Are people able to travel without fear? Are there any disputes or tensions between different communities regarding the use of road? Are there criminal gangs operating around the road corridor? Is road monopolized by transport operator? Have women been targeted for one or another reason? What has been done to overcome these obstacles?

F. How do you see the condition of the road?

Probe: how is the road maintained? Who is involved? How is it funded? Who are heavy users? Are local communities involved? If yes, in what ways (discuss forms of contributions)? If not, why not? Is there a management committee for road maintenance? If yes, who are on the committee? How is the government contributing to road maintenance? Is anyone responsible for revenue collection for road maintenance?

3. <u>Transport Services</u>

A. Who are the primary users of road?

Probe: type of people using the road, including but not limited to local people for movement and goods transport, visitors, school children and teachers, government officials, health workers, security personnel, etc

B. With road improvement do you see more vehicle plying on the road? If so, what kind of vehicles do you see more often; if not, why is it not that more vehicles are on the road?

C. What is the Government doing to improve transport services on the road? I

Probe: security, regulations, avoiding collusion, encouraging private sector etc.

D. What about the quality of transport vehicles? Are they in better conditions now than few years ago? If yes, in what ways; if not, then why has not the quality of transport services improved?

E. Are vehicles available when people in the community need them? If so, what has helped the situation; if not, then how do people manage?

4. Travel Patterns

A. Are more people traveling on the road? If so, for what reason; if not, what are the problem?

B. Are people taking more number of trips on the road than before road construction or improvement? If yes, for what reason; if not why not?

C. What about women? What about school girls? Do you see more of them traveling these days? If yes, what are enabling factors? Any change in perception? If not, what are the critical constraints?

5. Employment

A. Please recall the period during road construction. Did local people get job at that time?

Probe: what kind of job? Who were primary beneficiaries? What happened to the people employed then after road construction was completed? Has there been any additional jobs created after the road completion? If so, what kind of job? Who are employed?

B. Has there been any change in daily wage rates in past couple of years? If so, what kind of jobs has had the most increase? Any particular reason(s) for wage increase
Probe: shortage of labour in certain areas?

C. Who are main employers in the area?

Probe: type of business/operation, type of employment, commuting distance for employees, etc., are these attributable to improved access?

6. Production including diversification or specialization

A. Has there been any change in demand for local produce? If so, what kind of produce? Where is demand coming from?

B. Are farmers producing any new crops? Are they diversifying use of their farming land (e.g. growing more numbers crops)? Are they specializing in any particular crop? If so, what are the reasons?

C. What do you think about volume of production of various commodities in the road corridors?

Probe: production pattern of key commodities as well as new commodities

D. What do you think about agricultural extension and veterinary services?

Probe: use of new technology, frequency of visits from agricultural extension and veterinary workers, timely availability of production inputs etc.

7. **Transportation, storage and marketing**

A. How do local people take their farm produce to markets?

Probe: mode of transport for different types of commodities, distance to market, role of middlemen, etc.

B. What are common transport modes used by people?

Probe: mode by purpose, frequencies of use, transport cost, etc.

C. What do you think about volume of marketable surplus in recent years along the road corridors?
Probe: trend in production, including any marked deviation from the normal pattern

D. What is common marketing channel?

Probe: the role of middlemen wholesale agents, marketing margins at different levels, local mills, etc.

E. How are different products stored?

Probe: existence of forms of storage facilities, loss in storage, owners of storage facilities and terms and conditions of storage, storage cost etc.

F. Where do producers source production inputs?

Probe: access to seeds, fertilizers, farm chemicals, labour, draft animal labour, credit or loan, feed, fodder, raw materials for microenterprises, terms of loan/credit, main suppliers of inputs etc

8. Access to education, health and social services

A. What kind of social services are available in the communities?

Probe: education, health, police, community based activities, religious activities etc

B. How do children go to school?

Probe: common mode, distance, transport fares, proportion of school age boys and girls going to school, security of children on the road, trends in the number of children attending school, commuting distance for teachers and school staff, availability of electricity in schools and source, enrolment pattern, dropout rates for boys and girls at different levels of school, reasons for dropouts from schools, any change in parents' perception about sending boys and girls to school, etc.

C. How has road helped in access to education?

Probe: time to reach schools, reliability of transport services, safety on road, transportation costs etc.

D. How do sick people access health services?

Probe: roles of TBAs, midwives, nurses, family support, vaccination, pre-natal and post-natal care, communicable diseases, chronic diseases etc; transport mode used for different kinds of illness; transport cost for different modes; safety on road for sick people to travel to health facilities; availability of medicines; cost of medicines, infant and maternal mortality and death due to accidents etc.

E. How has road helped in accessing health services?

Probe: time to reach BHCs and CHCs, transport availability, transportation costs, safety in road travel, impediments/ constraints in using roads by local people etc.

F. How has road helped in local security?

Probe: visibility of police in local areas, trends in crimes {theft, violence, murder), ethnic conflicts, family conflicts etc.

G. How has road helped in strengthening community cohesion?

Probe: trend in visitations, social interaction, attendance at local community meetings and events, activeness of community organizations, role of NGOs etc.

H. How has road helped in improving access to potable water?
Probe: distance to fetch water, role of households in fetching water, physical exertion in fetching water, frequency of fetching water etc.

I. How has road helped in improving access to public services?

Probe: types of public services, frequency of visits to these service organizations, availability of staff at these organizations etc... This could include services such as access to ID card, access to justice officials, involvement of the District administration in conflict resolution…

9. Micro-enterprises and Gender Issues

A. What are common micro-enterprises in the communities? Can you give examples?

B. Who runs these enterprises?

Probe: Are these mostly home based or outside home? How do the entrepreneurs get raw material (inputs)? Who is responsible for handling money? Who is responsible for selling the products? Who controls the money?

C. Has road contributed in any way in promoting micro-enterprises? If so, can you elaborate on this in what ways?

Probe: improved access to market and raw materials, contact with traders or other entrepreneur, access to technical know-how etc.

D. Have you heard about income generating activities (micro-enterprises) supported by UNOPS? If so, can you tell me a bit more on what kind of activities are these?

Probe: Who runs these activities, are these primarily home-based or outside home? How do you get raw materials and who bring them? Who takes the products to market? Please also explore all kinds of activities including some that may not be supported by UNOOPS? Checklist should include poultry, small livestock (goats, sheep) bakery, handicrafts, weaving, tailoring, embroidery, and similar other products. Also, ask what the respondents think about the importance of such activities and dwell on reasons behind them.

E. For what purpose do you think women should work?

Probe: Dig more on reasons, motivation, and driver as well including need for additional income for the household or women's needs.

F. Do you think that women's and girls' involvement in such activities drives them away from ay from their traditional role which is to run the house

G. Can you tell me what kind of infrastructure is important for women and girls?

Probe: focus on types of infrastructure that are small scale but doable such as access and supply of drinking water supply, lighting in public spaces, provision of toilets in public places, lighted footpaths, bridges, culverts etc. Also discuss how these would help them and take note of specific benefits/advantages.

F. Case Studies (General)

CASE STUDY DESCRIPTION AND GUIDANCE

- A list of six case studies will be conducted to demonstrate case impact of improved access (the project) on poverty in the four provinces. These cases will present personal stories of beneficiaries.
- ATR researchers will be responsible for the task. The researcher will explain the purpose of the interview, why the participant was chosen, the duration of the interview and how the data will be recorded and stored. The researcher will only proceed when they have received informed consent from the interviewee.
- Each case study will be presented in the impact study report as a text box. Each case study write up should not be more than half a page and cover their situation before and after the road.
- The selection of cases will be done in close consultation with UNOPS staff involved in project implementation.

Types of Cases

1. A farmer
2. A transport operator involved in moving agricultural produce
3. A female microenterprise owner
4. A health clinic worker
5. An education worker
6. A community leader

LIST OF GUIDING QUESTIONS (A comparative analysis before and after road)

A. Farmer (regular crop, cash, or fruit crop)

a. We would first like to ask you about your life before the UNOPS road project began
Probe: Could you please describe the major challenges you and your household faced because of the bad roads? How did the roads affect your ability to access the markets, the school and health clinics, the mosque or visiting your friends and relatives? In what ways did the bad road make life difficult? If it was expensive, slow or dangerous, can you tell us how this impacted the way you lived?

b. What changes have been made that directly affect you and your household?

Probe: If your journey time has changed, in what way? If your journey cost has changed, by how much? If you travel more or less frequently, why is this?

c. How do you see change in your household income due to improved access?

Probe: Can you please describe how the new road has changed life for you and your household? Has it changed the way you can access technology, access market places, access to information, access government services, access social services, access social networks, security?

d. How do you see changes in household members employed?

Probe: Are household members are working longer/shorter hours than before? Are household members more mobile than before and hence can earn more money? Do household members have more/less free time now than before?

e. How would you describe the changes to the way you conduct your farming business?

Probe: change should reflect types of crops grown, marketable surplus, market prices, cropping pattern and cropping area, access to input and irrigation, use of extra income (expenditure pattern including any investment in productive assets. Ensure that these are as a result of improved access but not any other interventions. Would it have been the same or different? In what ways?

B. Transport Operator

a. Please describe your current business- what do you do?

b. How has the road (give the name of the road) been for you and your household?

Probe: What were you doing before? How busy are you these days compared to the time when road was not improved? Any change in working hours? Any change in vehicle type?

c. What were you doing before?

Probe: Are you in the same occupation? Or has changed? If so, from what kind of job?

d. How is your vehicle operating cost these days?

Probe: ask about vehicle maintenance cost now compared to before access improvement? Discuss a bit more in terms of fuel consumption, need for repairs (frequency and cost), vehicle wear and tear etc.

e. How is your financial position these days?

Probe: Ask if he has seen increase in his daily/weekly/monthly income, expenditure pattern (use of income).

f. What would have happened if access was not improved? Can you tell me?

C. **Micro-enterprise Operator** (women entrepreneur involved in bakery and food item, weaving, knitting, embroidery etc.)

a. Please describe your current employment or business

Probe: What were you doing before improved access? How did you come to be involved in this enterprise? Do you mostly operate from home or outside home? Who are your buyers, how do you sell your product? Where do you get materials for your production?

b. Is this something you wanted to do or you were told by someone else to do? If you did not, then who encourage you? Is this something that other members in the household doing before?

c. Do you find this work interesting? If so, in what ways? If not, why not?

d. How much do you earn in a day (or week) nett of material and labour expenses?

Probe: What do you do with the income? Who keeps the cash? Do you also sell your product on credit? If so, how do you recover? What do you do with wastage (in some enterprises such as bakery)?

e. How did you acquire skills necessary? Were you allowed from home to attend any training?

Probe: Is it something you have been doing in the past? If not, did you attend any training program? If you did, can you tell me a bit more about the training (who provided, duration, quality of trainers etc).

f. Do you know anyone from the road project who helped to start your business?

Probe: Can you elaborate on project staff's role? Was it helpful?

g. Has improved access been of any help to you and your household? If so in what way?

h. If road was not there or (not improved), how different life would have been?

D. **Health Worker (Nurse/midwife/medical doctor) at CBC receiving solar powered electricity?**

a. How would you describe the visitation rates at the health centre before the road construction?

Probe: Please describe patient numbers before the road project. What prevented people coming to the clinic before the road? How did the bad road affect the ability of staff to carry out their work before the UNOPS project? What kind of treatment people are seeking now?

b. How would you describe the visitation rates at the health centre after the road construction?

Probe: Please describe patient numbers after the road project. What now prevents people coming to the clinic? How has the road project affected the ability of staff to carry out their work? How has it changed the type of treatment people are seeking?

c. How far do patients travel from?

Probe: Where are patients coming from? What kind of mode do they use while coming to CBC? Do many use their own transport? Do they face difficulties with payment for transport? If so, how do they manage? Do you hear anything about difficulty from patients and their relatives regarding transport difficulties? If so, can you elaborate a bit more?

d. Are there some expectations in patients or their relatives that CBC cannot provide? If so, what would these be?

e. Do patients come for follow up visit when asked by medical staff? If yes, what are the reasons for? If not, why not? Do you hear any difficulty with road, transport, or security issue?

f. How would you rate service quality of CBC now on a scale of 1 to 5 compared to the time when access was limited?

Probe: Service quality should reflect attendance of medical staff, waiting time, availability of medicines, pre-natal and post-natal care, elderly care, and other diseases?

g. Do medical staff come on time?

Probe: Reasons for any delay including road conditions, availability of transport etc.

h. How is maternal care service at CBC?

Probe: What was it like before? Is there any change in recent years? Visits by expectant mothers? Would you like to comment on public perception in seeking medical attention at CBC? Any changes in perceptions?

i. Can you please describe the child health services in CBC before and after the road project?

Probe: What was it like before? Is there any change in recent years? No. of visits by children? Would you like to comment on public perception in seeking medical attention at CBC? Any changes in perceptions?

j. What is your opinion on infant and child mortality in the community?

Probe: Have you noticed any recent trends in infant and child deaths? Reasons associated with deaths? Any link to road or transport?

k. What is your opinion on maternal mortality rates in the community?

Probe: Trend in maternal deaths? Reasons associated with deaths? Any link to road or transport?

l. Does CBC practice patient referral service? How does it work?

m. Did the project support solar powered electricity at CBC?

Probe: If yes, is it functioning?; if not, what is the problem?

n. What would it have been like if access was not improved?

Probe: dependence on local hakims, quack doctors, more deaths

o. Please describe the medicine availability situation in the local communities?

Probe: How far people travel to get medicine? Is access a problem for people in the community? Are there enough drug dispensing units, shops, pharmacies? Do medicine prices vary a lot from one location to the next? Is it due to access issues?

E. **Primary Girls' School Teacher/Head Master – receiving solar power based electricity**

a. Please describe the education situation before the road project began

Probe: school enrolments rate, grade completion rate, absenteeism rate, dropout rate. Also, explore reasons associated with absenteeism and drop out.

b. Please can you talk about how these issues were affected by the road project began

Probe: school enrolments rate, grade completion rate, absenteeism rate, dropout rate now compared to the time when access was not improved. Also, explore reasons associated with absenteeism and drop out.

c. Where far do the children now come from?

Probe: distance travel, mode of travel, persons accompanying children

d. Did the project support solar powered electricity at this school?

Probe: If yes, is it functioning? If not, what is the problem? Who is primarily benefitting? In what ways?

e. How far do teachers in school now travel from?

Probe: distance, time, mode of travel, any issues with road conditions or transport services?

f. Are children using roads much? If so, what kind of transport do they use?

Probe: public transport, private transport, still walking; any complain associated with safety on road (crime, accidents, undesirable gesture etc).

g. Do you keep in contact with UNOPS project staff? If so, how often and for what reason.

h. To what extent has the road affected access to school?

Probe: What would have happened if access was not improved? To what extent has improved access changed parents' attitude towards girls' and children' basic right to education?

F. **Community Leader (an influential person in the community)**

a. Please describe the challenges the community faced before the road project

Probe: Conditions of roads, drainage, sanitation, mobility of people from one place to another, reasons for travel, common travel/transport modes used, use of public transport tec.

b. When you think about these issues, can you please tell me how they have changed since the road construction?

Probe: Conditions of roads, drainage, sanitation, mobility of people from one place to another, reasons for travel, common travel/transport modes used, use of public transport tec.

c. To what extent has the road (name of the road) affected the local community?

Probe: use of road for passenger travel, goods movement, transport costs, social visits, travel and transportation time, kinds of goods transported, establishment of local businesses along the road corridor etc.

d. To what extent has the road encouraged local community to take up community development activities?

Probe: Could you please give some examples? Has there been any new community initiative after road completion?

e. Please describe the security and safety situation around the road

Probe: crime incidence, accidents, community vigilance, girls going to school, women traveling within and outside community. Also, probe what has been done though community and other avenues to address these issues.

f. How is the road maintained?

Probe: Discuss timely road maintenance mechanism, drainage clearing initiatives etc.

g. What do you think about project's support for small infrastructure?

Probe: Do you have any small infrastructure built or established by the project support?

Can you give some examples? How have these affected the community? What else could have been done?

h. Do you have anyone in the community participating in micro-enterprise initiative in the community? These would include but not limited to carpet weaving, knitting, bakery, etc.

Probe: What do you think about these enterprises? How does the community view women and girls involvement in these activities? Discuss social restriction and if any change in attitude about gender role.

i. Suppose the road access improvement was not undertaken in your community, what would have been the situation?

G. Case Studies (Capacity Building)

CAPACITY BUILDING CASE STUDY DESCRIPTION AND GUIDANCE

- Six case studies will be conducted to demonstrate the impact of different types of capacity development which has taken place under RAIP. These cases will present personal stories of beneficiaries from local government and the community.
- ATR researchers will be responsible for the task. The researcher will explain the purpose of the interview, why the participant was chosen, the duration of the interview and how the data will be recorded and stored. The researcher will only proceed when they have received informed consent from the interviewee.
- Each case study will be presented in the impact study report as a text box. Each case study write up should not be more than half a page and cover their situation before and after the training.
- The selection of cases will be done in close consultation with UNOPS staff involved in project implementation.

Types of Cases

7. Two government officials who has participated in the capacity development training, ideally Department of Public Works staff
8. One local contractor
9. One male shura member who has participated in the capacity development training
10. One female shura member who has participated in the capacity development
11. One female engineering student from Jawzjan University

LIST OF GUIDING QUESTIONS (A comparative analysis before and after road)

G. Government staff trained as part of RAIP capacity development

a. Please describe your working environment before you took part in the training

Probe: when did you join the department? What training had you received before you started the job? What made you want to work for this department? Did you receive any training in your job before UNOPS? Please describe any other training you might have had before UNOPS. What are you currently responsible for? What challenges did you face in your job, what made it hard for you to complete your work before the training?

b. Please can you now tell us about your experience of the training from UNOPS

Probe: How were you selected for this training? How did you hear about it? How many others from your department took part? How long did the training last? Please tell us everything you can remember about what you were taught. Was the training suitable for your job? Do you feel you were given a chance to tell the teachers your feedback? Do you feel they took your experience into consideration or not?

c. Since you completed the training how has it changed your way of working?

Probe: what skills, if any, have you been able to take from the training and use in your daily work? What topics from the training were most useful? Please can you tell us some examples of types of lessons you found helpful, and some that you found unhelpful? How could the training be improved in the future to help staff like you?

d. What was the result for your department?

Probe: Are staff members are working longer/shorter hours than before? Are staff members more active than before? In what ways do you think your colleagues are applying the lessons? If they are not, why do you think this is?

e. Let us now try to summarise the impact of the training

Probe: Would your job have been the same or different without the training? In what ways? Do you feel more or less likely to stay in your job now? In what ways has your job changed? What feedback would you like to give to the people who organise this training?

H. Contractor

a. Please describe your working environment before you took part in the training

Probe: when did you join your construction business? What was your current role? What challenges did you face in your job, what made it hard for you to complete your work before the training?

b. Please can you now tell us about your experience of the training from UNOPS

Probe: How were you selected for this training? How did you hear about it? How many others from your business took part? How long did the training last? Please tell us everything you can remember about what you were taught. Was the training suitable for your job? Do you feel you were given a chance to tell the teachers your feedback? Do you feel they took your experience into consideration?

c. Since you completed the training how has it changed your way of working?

Probe: what skills, if any, have you been able to take from the training and use in your daily work? What topics from the training were most useful? Please can you tell us some examples of types of lessons you found helpful, and some that you did not think were helpful? How could the training be improved in the future to help staff like you?

d. What was the result for your business?

Probe: In what ways do you think the people you work with are applying the lessons? If they are not, why do you think this is?

e. Let us now try to summarise the impact of the training

Probe: Would your job have been the same or different without the training? In what ways? Do you feel more or less likely to stay in your job now? In what ways has your job changed? What feedback would you like to give to the people who organise this training?

I. **Male shura member**

a. Please describe the road situation before the RAIP project

Probe: What problems did your community face because of the poor roads? What problems did others from the community such as women and children face? How long did it take to reach the nearest school or health clinic? What effect did this have on people? Please describe some examples. ***Did anyone in your community work on the roads or have knowledge of how to repair them? Did anyone try to fix parts of the road or get help from the government?***

b. When the RAIP project started, how did you identify the problems facing your community?

Probe: who decided ***where*** *the project should work? Did everyone in the community agree or were there people who felt RAIP should help somewhere else? How did you come to this decision?*

c. Let's talk about the training you received as part of the project to help you care for the roads.

Probe: How were you selected for this training? How did you hear about it? How many others from your department took part? How long did the training last? Please tell us everything you can remember about what you were taught. Was the training suitable for your community? Do you feel you were given a chance to tell the teachers your feedback? Do you feel they took your local knowledge into consideration?

d. We would now like to learn more about the maintenance committees and their activities

Probe: How was the village maintenance team formed? Who decided who would take part in this? Has everyone in the team been equally involved? How many women were involved in your community? Did your community receive a contract from UNOPS for road improvement and repair?

e. What was the result of this?

Probe: how many men and women received training? In what ways were they able to use new skills? How did different people in your community use the skills? Where could the training have done more for you?

f. Let us now talk about the overall impact of the training

Probe: How do you feel the training changed the community? Do people still use the skills they learned? If not, why not? Have those people moved away, for example? Do you think the training has made the community able to repair the roads or not? What future training would you need? What feedback would you like to give to those who organised the training?

J. **Female shura member**

a. Please describe the road situation before the RAIP project

Probe: What problems did you face? What problems did other women face? How about children? How long did it take to reach the nearest school or health clinic? What effect did this have on women

specifically? Please describe some examples. ***Did anyone in your family work on the roads or have knowledge of how to repair them? Did anyone try to fix parts of the road or get help from the government?***

b. When the RAIP project started, how did you identify the problems facing your community?

Probe: who decided ***where*** *the project should work? Did everyone in the community agree or were there people who felt RAIP should help somewhere else? How did you come to this decision? Do you think women were able to have a say in the decision making or not? Do you feel UNOPS staff listening to women in the community or was it only men who spoke to UNOPS staff? If you interacted with female UNOPS staff please describe if this helped the interaction or not?*

c. Let's talk about the training you received as part of the project to help you care for the roads.

Probe: How were you selected for this training? How did you hear about it? How many others from your department took part? How long did the training last? Please tell us everything you can remember about what you were taught. Was the training suitable for your community? Do you feel you were given a chance to tell the teachers your feedback? Do you feel they took your local knowledge into consideration? Did they listen to men as much as women or more?

d. We would now like to learn more about the maintenance committees and their activities

Probe: How was the village maintenance team formed? Who decided who would take part in this? Could women also become involved in your community? Did your community receive a contract from UNOPS for road improvement and repair? If you or other women received training while you/ they were working on the road, could you please describe this for us?

e. What was the result of this?

Probe: how many men and women received training? In what ways were they able to use new skills? How have men and women benefited in different ways? How did different people in your community use the skills? Where could the training have done more for women in your community?

f. Let us now talk about the overall impact of the training

Probe: How do you feel the training changed the community? Do people still use the skills they learned? If not, why not? Have those people moved away, for example? Do you think the training has made the community able to repair the roads or not? What future training would you need? What feedback would you like to give to those who organised the training?

K. **Female engineering graduate**

a. To start, I would like to ask you about your situation before you took part in the UNOPS training.

Probe: Please describe the engineering course you had recently completed- to what extent did you feel ready to begin work after finishing the degree? Which areas were you strongest in, and which areas of work did you feel improvement was needed? What motivated you to study engineering?

b. Next we would like to discuss the UNOPS training specifically

Probe: How were you selected for this training? How did you hear about it? How many others from your university course took part? How long did the training last? Please tell us everything you can remember about what you were taught. Was the training suitable for your job? Do you feel you were given a chance to tell the teachers your feedback? How much do you feel they took your previous studies into consideration?

c. Since you completed the training how has it changed your professional life?

Probe: Are you currently employed? What type of work do you do? Has the training made it easier to find work or not? What skills, if any, have you been able to take from the UNOPS training and use in your daily work? What topics from the training were most useful? Please can you tell us some examples of types of lessons you found helpful, and some that you did not think were helpful? How could the training be improved in the future to help women specifically? If you had to overcome challenges and difficulties to work, could you please tell us how you did this?

d. If you are not currently working can you please tell us why?

Probe: Are you not looking for work? Would you prefer to continue studying? Will you move outside of Afghanistan for work or study? Would you prefer to teach? Are your family supportive of your decision to work or not? What obstacles do female graduates face that are different from their male counterparts?

e. Let us now try to summarise the impact of the training

Probe: Would your current employment situation have been the same or different without the training? In what ways? Finally, what feedback would you like to give to the people who organise this training- how could they improve it for other women?

APPENDIX 3 – SUMMARY OF KEY PERFORMANCE INDICATORS

The below table summarises the key findings for each of the indicator variables presented under the conceptual framework (See section 2A - Conceptual Framework). For ease of reference, the findings are colour coded, as follows:

- Evidence of positive impact for the indicator variable/indicator measurement
- No evidence of any impact, neither negative nor positive
- Evidence of negative impact
- Indicator could not be measured

Direct effect: Transport output		
Indicator variables	**Findings**	**Comments / Interpretation**
Traffic Density	FGDs participants reported that traffic density had increased.	In the absence of a baseline, increased traffic density cannot be proven through quantitative methods. The triangulation of qualitative data with the higher ratio of households owning a vehicle (HH survey) and an increased usage of vehicle (transport owner survey) suggest traffic density has increased.
Road Passability	FGD participants report good to very good quality of RAIP roads.	This indicator was not measured in the survey. However, FGD participants consistently provided positive remarks on road conditions of RAIP roads, indicating a positive result on this indicator.
Transport Cost/Fares	Treatment communities' travel cost to the nearest BCH was significantly less than the comparison communities' cost of travel (28 Afs vs. 85 Afs).	Conclusions are compromised by low sample size (because of high non-response or invalid response rates) and external factors, namely proximity to health centres.
	Transport cost to school or for transporting agricultural products or goods produced through micro-enterprises could not be established due to low response rate (5% and less than 2% respectively).	
	The proportion of respondents who "strongly agreed" or "agreed" that freight and passenger costs had decreased significantly in the past 3-5 years were significantly higher in the treatment group (68% and 69% compared to 43% and 37%, respectively).	
Transport Patterns	**Increased means of transport to schools** Over 98% of respondents from both the treatment and comparison groups travel to school by foot so no quantitative data could be interpreted.	
	Reduced travel time The study revealed that travel time to various places (school, clinic, workplace…) was not an appropriate indicator in the rural context of Afghanistan, as people have little idea of time as a concept.	
	Road usage While road usage was surveyed, the lack of baseline data prevents the measurement of changes.	
Vehicle Ownership	Treatment group owns significantly more motorised vehicles compared to comparison group. 25% possess at least one motorbike compared to 17% in comparison group. 13% possess at least one car compared to 9% in the comparison group.	This suggests that the treatment group has a higher propensity for mobility, which can possibly be attributed to better roads.

Accidents	FGD participants noted that, with road improvements, accidents had increased, mainly due to inexperienced drivers and fast driving.	While roads have improved people's lives in many ways, improving roads seems to have resulted in the unintended, negative impact of increased accidents.

Direct effect: Transport outcome		
Indicator variables	**Indicator variables**	**Indicator variables**
Access to Education	Enrolment from RAIP households is higher than in comparison groups (70% vs. 54% for boys and 45% vs. 35% for girls). Disaggregated by school type, these differences are significant for community-based and primary schools for boys and girls, and for boys in high school.	Access to education is influenced by a number of factors, including socio-economic and cultural trends. Improved road access does seem to influence higher enrolment, but differences in absenteeism and dropouts are not significantly different. However, qualitative data does show more positive results.
	No statistically significant differences in absenteeism rates.	
	Differences in dropout rates were minimal and not statistically significant.	
	FGD respondents said that travel was easier and schools were easier to access for children in remote areas, especially when the weather was not good (heat or rain).	
Quality of Education	Interviewees reported that teachers were able to travel more easily to school and arrive on time more often.	No quantitative data available on teacher absenteeism so no strong conclusions can be drawn. No qualitative or quantitative data on school supply availability. This is not within the scope of research tools.
	Availability of school supplies was not measured.	
Access to healthcare facilities	Treatment communities visit BHCs and CHCs for infant or child illnesses more than in the comparison group. 12% and 22% of respondents visited a BHC or CHC either 3 times or more or 1-2 times respectively, compared to 6% and 12% in the comparison group. These results were not statistically significant.	Increased number of visits for both infant and child illnesses and maternal health, combined with reduced travel time to health centres, indicates that better roads have increased access. However, lack of statistical significance in some indicators limits conclusions drawn. Case studies and FGDs, though positive about increased access to health centres, note continued barriers to access such as cost of transport and lack of ambulances.
	Women visit a BHC or CHC significantly more in the treatment group than in the comparison group. In the treatment group, over 10% of respondents visited a CHC more than 3 times in the past 12 months and over 25% visited a BHC in the same time period.	
Quality of healthcare facilities	Treatment group respondents were significantly more positive about the quality of healthcare services with 37% qualifying services as 'good' and only 6% qualifying services as 'bad.' 29% and 14% of comparison group respondents answered the same, respectively.	RAIP beneficiaries are much more positive about healthcare quality, though this cannot be directly attributed to road improvements.
Access to markets	For the top five items bought by respondents, treatment group respondents bought seeds, clothes and shoes more often from both local and distant markets (16% and 57% compared to 10% and 49% for distant markets, respectively, and 16% and 25% compared to 5% and 16% in local markets, respectively). Treatment group respondents bought meat and dairy in distant markets more often (38% and 30% compared to 29% and 18%). These differences were statistically significant	Statistically significant, higher usage of local and distant markets by the treatment group in many categories suggests that road access has improved market access. Expected lower prices in larger markets will likely lead to income benefits for the treatment group.
Prices	Though not measured directly, increased access to local and distant markets to sell products is expected to allow populations to purchase and sell goods at higher prices.	Given only inferential analysis, this measure is difficult to assess though expectations would be expected to hold true.

Time use of household members	A much greater proportion of the treatment group (15% against 4% within the control group) use gas. This result is statistically significant.	The higher use of gas in the treatment group (which could be attributed to greater access to goods, thanks to proper roads) decreases the time used for collecting wood or other combustibles. Cooking time is also decreased with gas.
Access to credit	This indicator is difficult to measure as people are uncomfortable reporting about debts. In addition, to be valid, this indicator would need to study the kind of credits that are accessed, to only report on non-usurious loans.	
Access to employment centres	There is a greater mobility of adult males in the RAIP group than in the comparison group, with 10% of treatment group respondents travelling at least one time a week to look for work, 8% travelling twice a week and 11% more than twice a week, compared to 5%, 3% and 7% respectively, in the comparison group.	

Indirect effects: welfare outcome		
Indicator variables	**Indicator variables**	**Indicator variables**
Impact on agricultural activities	Because of a lack of respondents' understanding of the question on crops used, the mix of crops could not be measured with solid statistical results.	Though some indicators related to impact on agricultural activities were not measured directly, the fact that farmers purchase farming inputs from local and distant markets more frequently in the treatment group (with the assumption that markets provide cheaper inputs), and a higher frequency of purchase of farming inputs, indicates that RAIP beneficiaries may have better access to farming inputs that could improve agricultural activities and outcomes.
	Use of inputs was not measured directly but increased frequency of purchase of farm inputs, such as seeds, in the treatment group indicates their higher use (23% vs. 16%).	
	Visits from agricultural extension agents were not measured or discussed.	
Impact on non-agro activities	34% of male treatment group respondents complement their farm income with off-farm income compared to 19% in the comparison group. Female off-farm employment was too small in both groups to compare. In the comparison group 46% of male respondents were entirely dependent on off-farm income compared to 38% in the treatment group.	The fact that treatment group respondents had more diversified income is a positive sign in terms of economic resilience and could indicate that increased mobility has allowed them to access employment more easily.
Income structure	Treatment group respondents reported a higher percentage of income earned through a variety of categories (crops—34% vs. 27%, livestock and dairy—12% vs. 2%, micro-enterprise—10% vs. 6%, remittances—9% vs. 7%, horticulture—8% vs. 2%, hunting—4% vs. 1%, gifts/gratuities—3% vs. 2%). The comparison group was more reliant on employment/pensions (31% vs. 20%).	A deeper analysis of sources of "employment/pensions" reported by the comparison group reveals that a large proportion of these respondents were talking about income derived from seasonal employment, which is more a sign of vulnerability than income stability. Combined with the larger spread in sources of income for RAIP households, the data indicates that RAIP beneficiaries have a more resilient income structure.
Expenditure composition	Share of expenditure by category as a percentage of total income was not measured directly. However, the proportion of "no sale/no response" within the comparison group was higher in all categories of the top five categories for both point of purchase and frequency of purchase of agricultural inputs and consumption items.	Conclusions are not possible to draw without direct measurement. However, the proxy indicator presented here suggests that expenditure is less frequent and on a smaller variety of goods.

Health status	Significantly more respondents in the treatment group reported having at least one child immunized compared to the comparison group (19% vs. 26%).	
	Almost twice as many respondents in the treatment group report using family planning measures (45% vs. 25% among the comparison group.	
	Number of workdays missed was not measured.	
Education status	Literacy and years of education were not measured directly.	Assessing impact in education status is challenging as impacts on literacy levels or increased years of education only materialise after multiple years.
Social Interaction	Respondents from the treatment group reported more people visiting them in the past month (2.9 visits vs. 1.7 visit) and they visited people outside of the community more frequently in the past month (1.7 vs. 1).	
	FGD respondents reported easier ability to travel to social occasions such as weddings, funerals and to visit relatives.	
Civil society/gov. office participation	The treatment group respondents were more likely to belong to some sort of civil society group (26% compared to 14%). Treatment group participants were also much more likely (28% compared to 0%) to travel outside the community to attend civil society groups.	
	Number of visits to government offices was not measured.	

Indirect effect: gender empowerment		
Indicator variables	**Indicator variables**	**Indicator variables**
Gender roles	48% of the treatment group strongly agree or agree with the statement "women should be allowed to travel outside without male accompaniment" vs. 39% in the comparison group, this result was significant.	Given the conservative context of gender roles in Afghanistan, positive responses concerning women's abilities to travel independently signify a shift in cultural attitudes towards female empowerment.
	Other indicators showed no difference of attitude between the treatment and comparison groups.	
Household decision-making	This could not be measured.	Increased female empowerment, demonstrated through both qualitative and quantitative data indicates that females in the treatment group have more opportunities. But it cannot be determined with certainty that this translates in increased household decision-making power.
Asset ownership	Changes in asset ownership were not measured in this study.	
Females' participation in economic activities	The household survey was inconclusive about female participation in income generation activities, as too small a proportion of respondents reported females working.	

APPENDIX 4 - SUMMARY OF THE IMPACT STUDY PRESENTATION

Summary of Impact Study Presentation to the Ministry of Public Works, Kabul, Afghanistan, 1 March 2016

Attending organizations:

- ATR
- Australian Embassy
- Ministry of Public Works (MPW)
- Ministry of Rural Rehabilitation and Development (MRRD)
- Ministry of Women's Affairs (MoWA)
- Sida
- UNOPS
- USAID

Meeting summary

The Deputy Minister of Public Works, Engineer Abdul Rahman Salahi gave the opening remarks for the presentation, after which the Director and Representative of UNOPS Afghanistan, Mikko Lainejoki introduced the RAIP project and thanked ATR, the UNOPS project team and the participants in attendance.

Daniel Gronvius, Second Secretary of Sida, the funding agency for RAIP, spoke of the Swedish government's interest in investing in infrastructure projects in Afghanistan, particularly in remote areas where people have limited access to markets, health centres, potable water, schools and other services.

UNOPS Acting Project Manager of RAIP, Shekhar Kumar Shrestha gave a brief presentation of the achievements of the project over the past eight years, before introducing the impact study team, ATR.

ATR presented the evaluation study of the RAIP project, covering the methodology, quality assurance methods, key findings, challenges encountered and conclusions and recommendations from the findings.

Following ATR's presentation, the Deputy Minister of MPW provided some recommendations concerning future projects. A short summary of these recommendations is provided below:

- Infrastructure projects such as RAIP should be expanded beyond the four provinces it has been implemented in.
- Project priorities should be coordinated at both the central and provincial government level and should incorporate the Afghan government's recommendations and priorities to streamline donor projects with national objectives.
- Maintenance of infrastructure investments is essential to the long-term sustainability and success of these projects.
- The next phase of the project should focus on asphalting the roads, many of which are currently gravelled.
- Capacity building programmes should be better incorporated into project design. This is especially important for women.
- Youths should be included as trainees in project activities. This will be beneficial for management procedures and further capacity building.

Questions from the attendees

- *RRD Director of Samangan province: Were the opinions of the males and females in the targeted areas of the four provinces the same?*

Most respondents agreed on the key benefits of the RAIP projects such as improved access to health and education services, increased access to markets for buying and selling inputs and lower transportation costs. The main differences observed were between provinces, rather than between men and women. For instance, in Samangan, where roads were not asphalted, more respondents, (particularly females) were concerned with negative health effects of increased dust from the roads.

- *USAID member: How did ATR attribute outcomes to project activities given that there was no baseline data?*

ATR recognises the complexity of assigning attribution to project activities, particularly in cases where no baseline data is available. In order to best understand how project activities contribute to outcomes, it is essential to triangulate data sources and understand the context in which project activities take place. In terms of triangulation, ATR used a combination of qualitative and quantitative data sources in order to cross-check data collected and reconcile any contradictions. In terms of understanding the context, it is essential to have information about other projects that are happening in conjunction with RAIP. Collecting information on concurrent activities builds an understanding of where the effects of RAIP projects may be either, overstated because of similar projects occurring in RAIP beneficiary communities that enhance project outcomes, or understated in cases where projects external to RAIP are happening in areas used as comparison sites. However, even with a contextual understanding and triangulation of data, ATR recognises that attribution with certainty is still not possible and includes caveats in findings to acknowledge this ambiguity.

- *MRRD M&E manager: I couldn't find any indicators for project outputs as all findings were for project outcomes. Are there any indicators for outputs included in the report?*

Reporting on project outputs was not within the scope of this study. Previous reporting by UNOPS includes output level indicators.

- *MoWA member of Jawzjan province: Neither the gender programme, nor the role of women in the project was discussed sufficiently. Why was this?*

ATR recognises the lack of information available on women's inclusion in project activities or their role within the project. This was a result of gender programming that was not sufficiently streamlined into project activities. A key recommendation of ATR for later phases of the project is to better mainstream gender activities into project activities and develop a more coherent, and culturally appropriate, theory of change concerning women's inclusion in project activities in order to inform project implementers of appropriate and effective ways to incorporate women into project activities.

- *MoPH member to UNOPS representatives: There are no differentiated indicators for the maintenance and the sustainability of the roads. What are the plans that will be taken by UNOPS for the next phase?*

UNOPS recognises the importance of developing ways to support the maintenance and sustainability of infrastructure investments and will ultimately decide on how to better improve plans to contribute to this goal. In light of limited central and provincial government capacity to maintain rural roads, ATR recommends clearly laying out community responsibilities for road maintenance. To better ensure maintenance sustainability, ATR recommends setting up a locally-supported funding mechanism for continued maintenance by beneficiary communities.

- *MRRD RADP member: Does ATR have the records of the how many kilometres of roads have been constructed? (Especially how many families have been beneficiaries of this project?) What is the methodology of ATR for sampling and how did ATR manage it?*

UNOPS provided ATR with records of how many kilometres of roads were constructed. For sampling, ATR employed population proportional sampling relative to the length of roads constructed – i.e. the communities in which more kilometres of road were constructed represented a higher proportion of the total sample population.

- *UNOPS member: In the capacity building component of the project, was there any measurement of training effectiveness? Did MPW like the trainings?*

ATR used strictly qualitative measures to assess the quality of capacity building components. Sources of qualitative data included key informant interviews and case studies to explore the benefits and challenges of capacity building components. ATR has not sought out the opinion of the MPW on their opinions of the capacity building components.

Recommendation from attendees

- UNOPS should coordinate with government ministries and other donors to understand existing projects that could complement UNOPS work. This would include coordination with USAID, who is working on a nationwide project for road maintenance and sustainability.

APPENDIX 5 - MAP OF CONTROL AND TREATMENT AREAS SURVEYED BY ATR