



SARHAD RURAL SUPPORT  
PROGRAMME



## Assessing Immediate Impacts of Small-Scale Infrastructure Schemes

SRSP's FATA Local Area Development Programme (FLADP)

## About this Study

This study has been prepared with the financial support of Canadian International Development Agency in collaboration with Sarhad Rural Support Programme (SRSP)

The views, findings, interpretation and analysis expressed in this study may not reflect views of Canadian International Development Agency.

## Cover photograph

Street pavement in Kurram Agency

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# **ASSESSING IMMEDIATE IMPACTS OF SMALL-SCALE INFRASTRUCTURE SCHEMES**

**FATA UNIT  
SARHAD RURAL SUPPORT PROGRAMME  
PESHAWAR, PAKISTAN**

## **ACRONYMS**

CBO	Community Based Organisation
CIDA	Canadian International Development Agency
CO	Community Organisations
CPI	Community Physical Infrastructure
FATA	Federally Administered Tribal Areas
FLADP	FATA Livelihood Area Development Programme
LMST	Leadership Management Skills Training
MCO	Men Community Organisation
MER	Monitoring Evaluation and Research
PKR	Pakistan Rupee
RSPN	Rural Support Programmes' Network
SRSP	Sarhad Rural Support Programme
ToP	Terms of Partnership
WCO	Women Community Organisation

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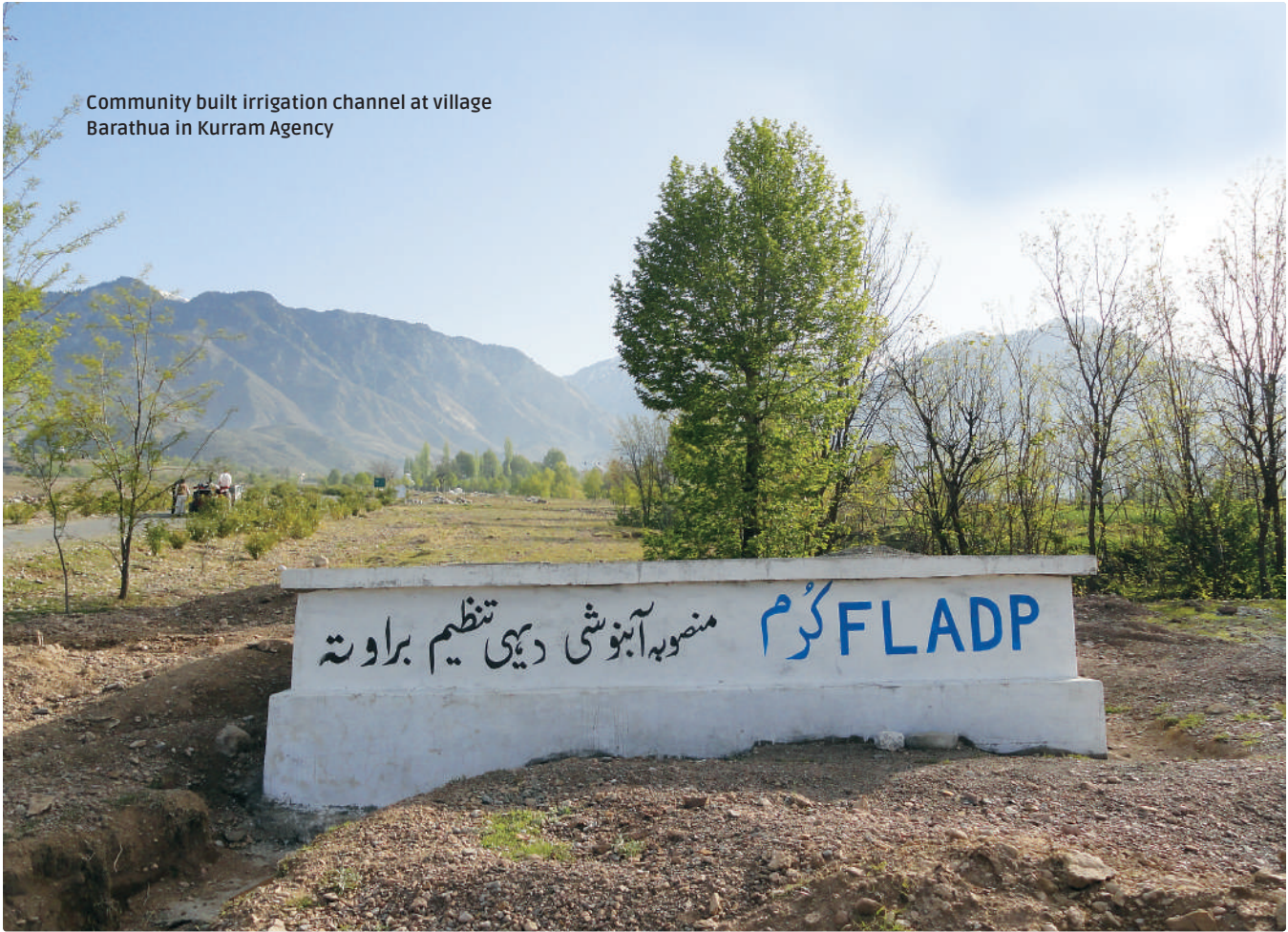


Street pavement in Kurram Agency



This study is aimed at assessing immediate impact of infrastructure schemes undertaken by SRSP's FLAD Programme.

Community built irrigation channel at village  
Barathua in Kurram Agency



## Introduction & Background

Community-initiated and maintained 'enabling infrastructure' has been one of the most important components of SRSP, contributing to socio-economic growth in rural areas, strengthening and improving livelihoods, while bringing together members of community based organisations.

**T**he deteriorating environment and situation in Khyber Pakhtunkhwa and FATA is an open reality. This turbulent environment has forced many development organisations to either shrink or wind up their projects and programmes. Fair enough from the perspective of these organisations as they do not want to take any risk but then the poor communities are also

denied potential opportunities to improve their lives and situation. In such a scenario, the likelihood of poor community members becoming soft targets for radical elements increases substantially. Accepting the dual challenge of working in turbulent areas and improving the livelihoods of these communities, SRSP in partnership with CIDA designed and implemented a distinctive

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Measuring impacts of community physical infrastructure schemes is complex.

programme for reducing poverty through integrated interventions in FR Peshawar and Kurram Agency.

The programme, with a modest pace at an initial phase, has gradually developed its roots in communities.

So far, 141 community based institutions in FR Peshawar and Kurram Agency have been formed. Apart from formation

of CBOs, the programme has taken proactive measures to initiate livelihood activities that include enhancing technical and vocational skills of communities, establishment of community-based schools, and arranging medical camps as per local culture and context. The programme has also been able to engage FATA secretariat and political administration productively. Their support role has been phenomenal in expanding the programme to most difficult and harsh working environment in FATA.

One of the most prominent components of the CIDA-FLADP is initiation of small scale infrastructure schemes at community level. So far, with support of CIDA, a total of 89 such schemes have been initiated and completed in Kurram Agency and FR Peshawar.

Community-initiated and maintained 'enabling infrastructure' has been one of the most important components of SRSP since its inception. The small scale infrastructure schemes, over the years, have contributed to socio-economic growth in rural areas, strengthening and improving livelihoods, bringing together members of community based organisations. The component has grown remarkably<sup>1</sup> in terms of budget allocation, numbers of schemes, outreach, and diversity.

Over the years various studies have been conducted to assess the impact of small scale infrastructure schemes. This study is continuation of such efforts and is aimed at assessing immediate impact of infrastructure schemes undertaken by SRSP's FLAD Programme in Kurram Agency.

## Objectives of the Study

The overall aim of the exercise was to assess immediate impacts, efficiency, effectiveness, relevance and sustainability or lack thereof of community-built and maintained infrastructure schemes towards expected outcomes envisaged in project document. Some of the specific questions related to immediate impact assessment of these CPIs included:

- » Are these CPIs on ground and operational and what is the condition of these CPI schemes?
- » Did the project follow original design for respective schemes, costs, implementation and management as envisaged in project documents?
- » Did CPI schemes address intended target group and what was the actual coverage?
- » What immediate change intended/unintended has been observed in the lives of beneficiaries of these projects?
- » What is the level of satisfaction of beneficiaries with services provided?
- » Cost-benefit Analysis of selected types and sub-types of CPI schemes?

Type	CPI Initialed (Nos)	Total Cost (PKR in M)	Donor Share (PKR in M)	CO Share (PKR in M)	Beneficiaries (Nos)		
					H.H (Nos)	Persons (Nos)	
						Male	Female
DWSS	13	10.98	9.78	1.20	527	2,016	2,464
Irrigation	6	6.62	5.47	1.41	208	796	972
Others	3	2.19	2.04	0.15	1270	4,858	5,937
Sanitation	16	16.17	14.15	2.01	769	2,941	3,595
Soil Conservation	2	1.89	1.70	0.19	63	241	295
Roads & Bridges	1	1.03	0.92	0.10	29	111	136
<b>Kurram Total</b>	<b>41</b>	<b>38.89</b>	<b>34.09</b>	<b>4.79</b>	<b>2866</b>	<b>10,962</b>	<b>13,399</b>
DWSS	33	13.97	12.25	1.72	1616	5,818	6,302
Sanitation	3	2.63	2.41	0.27	574	2,196	2,683
Roads & Bridged	3	4.30	3.87	0.43	153	585	715
Irrigation	9	13.12	11.81	1.31	535	2,046	2,501
<b>FR Pesh Total</b>	<b>48</b>	<b>34.08</b>	<b>30.35</b>	<b>3.78</b>	<b>2878</b>	<b>10,645</b>	<b>12,202</b>
<b>Grand Total</b>	<b>89</b>	<b>72.97</b>	<b>64.44</b>	<b>8.52</b>	<b>5,744</b>	<b>21,607</b>	<b>25,601</b>

The study covered the following types of schemes:

1. Drinking Water Supply and Sanitation
2. Irrigation Schemes
3. Transportation (Link Road)
4. Sanitation (Street Pavement and Drainage)

1. As of December 2012, SRSP, since inception, has initiated and completed over 7,770 small scale infrastructure schemes with a cost of 3.8 billion PKR. These schemes are benefiting over 1.5 million men and women population. SRSP's small scale infrastructure portfolio comprises drinking water supply schemes, irrigation schemes, integrated projects, soil conservation schemes, sanitation schemes, micro hydro projects, roads and bridges, solar energy projects and bio-gas plants.

# Approach and Methodology

**M**easuring impacts of community physical infrastructure schemes is complex, time consuming and resource intensive. The standard method to reach plausible conclusion include collection of baseline information of treatment and control groups. Secondly, it would be normal to allow a reasonable time (at least 5 years) between baseline surveys and impact assessment. In case of FATA (Kurram Agency), the programme had not been able to collect specific or general baseline information before initiation of the programme and secondly since FLAD Programme is still under implementation and CPI schemes have been completed recently (one year before this assessment survey), therefore measuring long-term impacts in terms of changes in socio-economic welfare indicators (e.g. income, livelihoods, health, education, etc) would have been a complex process. Conversely, based on RSPN's<sup>2</sup> experience, the proposed validation and evaluation focused on direct and immediate impacts of the CPI. To this end, the following simple process was adopted:

## Immediate Impact of CPIs = No. of Beneficiary HHs x Direct Benefits per HH

Valuing Direct Benefit per Household depends on types of schemes. Using this approach, an aggregate impact was estimated by first measuring direct benefits accrued to a typical household from a scheme subtype and then multiplying it by average number of households benefitted by a scheme of that sub-type. If we apply the same to Drinking Water Supply Schemes, the benefits are likely to comprise two main elements both of which can be measured and valued without any difficulty i.e. savings in time to collect water and improvement in quality of water.

To undertake this evaluation, set of questionnaires (a sample questionnaire of one subtype - DWSS- is attached as annex), keeping in view types and sub types of schemes, were developed and shared with relevant sections at SRSP. The same set was also shared and reviewed by Knowledge Management Specialist and MER at RSPN. After incorporating views and comments of all relevant sections and Chief Executive Officer, the survey instruments were shared with

CIDA for their review and comments. Accordingly, the survey was segregated into three major components:

- i) **Technical Survey:** Technical assessment survey of all selected schemes to be conducted by qualified engineers, focusing an in-depth assessment of community records, engineering design and implementation of respective schemes, current condition of respective schemes, functionality and operational effectiveness of the schemes.
- ii) **Focus Group Discussion:** A focus group with members of community based organisation was conducted by field supervisors to assess institutional aspects of implementation and management of CPIs.
- iii) **Community Questionnaire:** An interview questionnaire with households benefitting from CPIs was to be conducted by field team to assess level of participation in implementation of CPIs and its impact on livelihoods of member households.

To be able to gather all relevant information, a team comprising independent consultants, field engineers, field supervisors, enumerators and data punching professionals was hired and extensively trained on set of questionnaires. The field team was then split and exposed to real life situations through placement in field unit in SRSP programme areas. The learnt skills and instruments were used in field areas. The feedback from team was incorporated in questionnaires and finalised set of questionnaires, tools and techniques were shared with all stakeholders, including CIDA. The field engineers, field supervisors and enumerators were placed in Agency Programme Office, Kurram Agency. A detail work-plan was developed and shared with Head Office to carry out field work in stipulated time. In order to optimise results, two teams comprising a field engineer, field supervisor, four enumerators were constituted in Kurram Agency. These teams were duly supported by social organisers and Community Resource Persons at field level, while Agency Programme Officer, Kurram Agency took an overall lead on coordination, logistics and placements of these teams to conduct evaluation exercise.

The data on sets of three questionnaires was compiled on weekly basis. The data was initially reviewed by Agency Programme officer for any missing information. The set of complete questionnaires were then shared with Head Office SRSP on weekly basis. Completion of data set was followed by data punching and initial review. Based on the data, a detailed

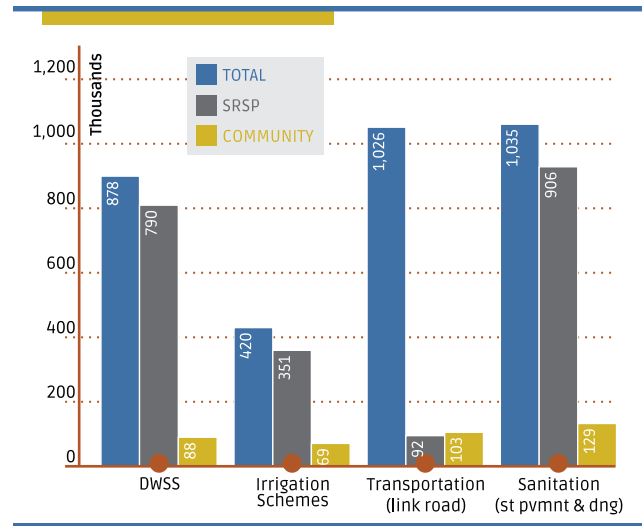
2. Rural Support Programmes Network (RSPN) conducted a similar study in 2010. The details can be viewed at [www.rspn.org](http://www.rspn.org).

analysis was conducted by SRSP's Programme Manager, PMER and was shared with all relevant sections and CIDA. The views and comments of relevant sections helped in further improving quality of the document.

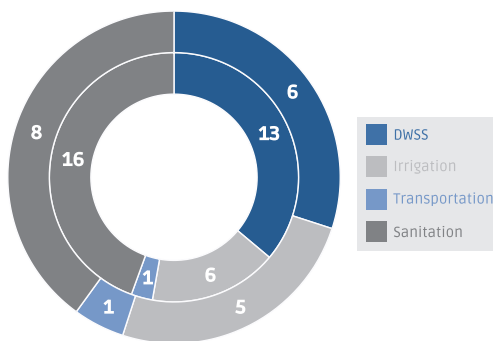
### Sample Selection

In case of Kurram Agency, 41 small scale infrastructure schemes have been initiated and completed. Given the number of different sub-types, it was decided to select sample of most important sub-types in each category. The figure below summarises the sampling frame. The inner circle in figure below represents the total number while the outer circle represents the number of schemes selected for the study through random sampling (list of schemes selected as sample is attached as annex).

The average cost of the schemes and other relevant details of selected schemes (sample) are presented in table and charts.



Types of Schemes	Population	Sample	Types selected	Remarks
Drinking Water Supply Schemes	13	6	Gravity flow sch.	All schemes randomly selected
Irrigation Schemes	6	5	3 tube-wells & 2 water course	
Transportation	1	1	Link Road	
Sanitation	16	8	St. pavement & drainage	
Others	5	-	-	
<b>Total</b>	<b>41</b>	<b>20</b>		





MCO Barautha participates in installation of  
Drinking Water Supply Scheme (Gravity Flow) in  
Upper Kurram (Kurram Agency, November 2010)

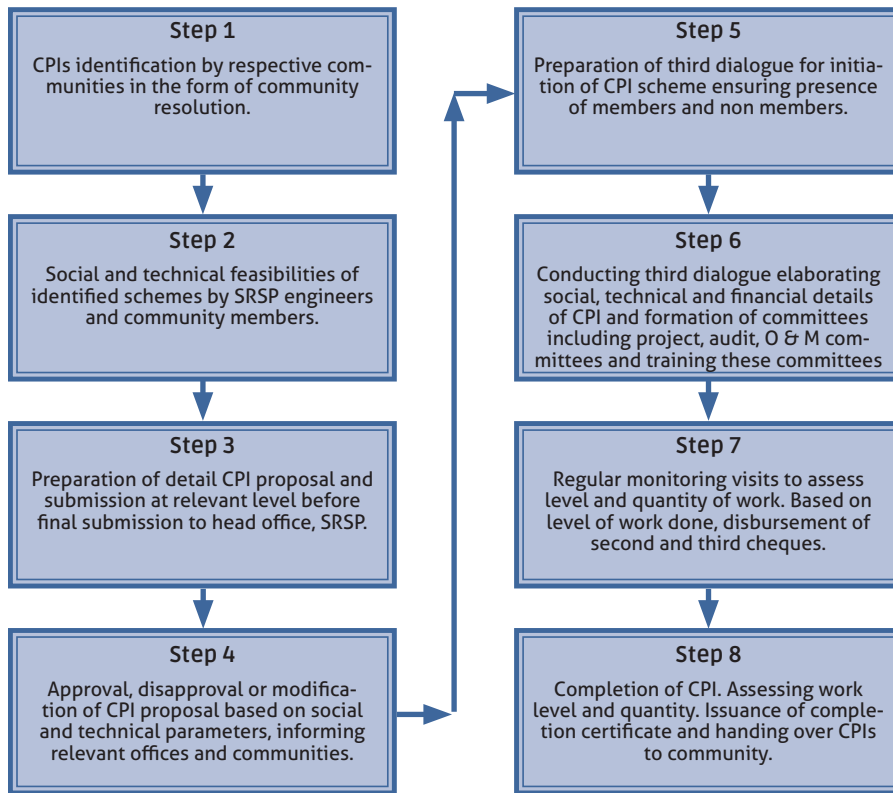


## Designs & Structures

### CPI Schemes Construction

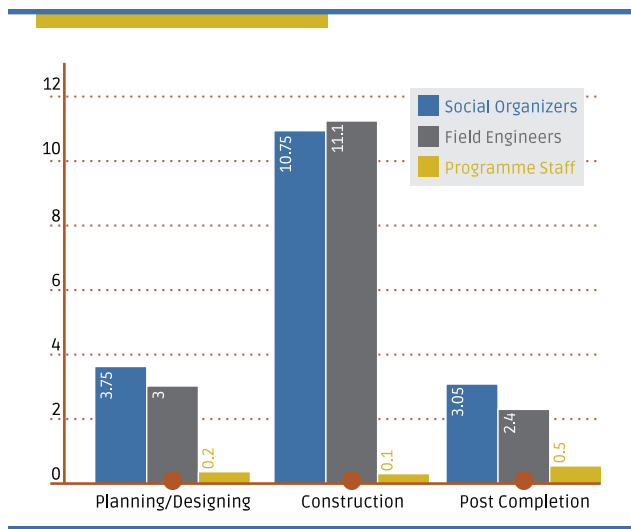
Over decades of investment in development of small scale rural infrastructure schemes, SRSP's engineering section had developed comprehensive Standard Operating Procedures from identification to implementation, completion and handing over of these small scale infrastructure schemes to respective community based organisations in rural areas.

In case of SRSP's FLADP, the following generic steps were followed for implementation of CPIs:



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Apart from high degree of compliance in terms of structures and designs, these schemes were highly efficient.

The process mentioned above entails rigorous efforts of social organisers, engineers and programme staff during planning, designing, construction and post completion. As per evaluation, the average number of visits of programme staff during various stages has been mentioned in the figure below:



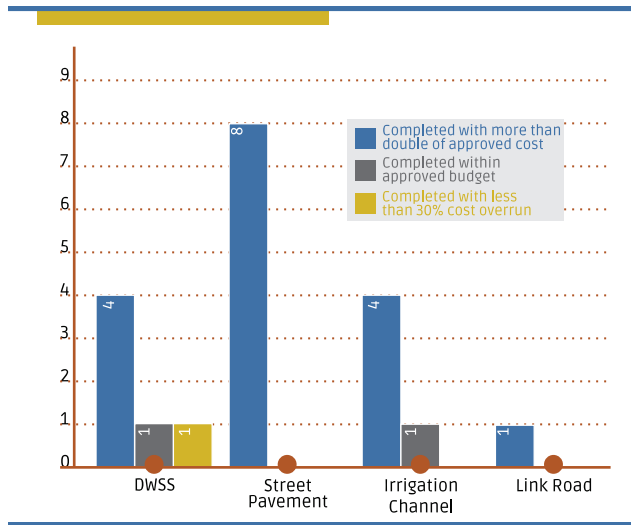
### Compliance with Designs and Layouts

The design of CPI schemes on paper and on-ground presents an interesting picture. Almost 97% of the schemes are exactly the same or with some positive changes as mentioned in CPIs proposal. Since these schemes are implemented in collaboration with communities, therefore communities contribute positively in either cash or kind. Very few schemes (3%) were found with deviation in implementation.

### High Degree of Efficiency

Apart from high degree of compliance in terms of structures and designs, these schemes were highly efficient. As much as 85% of the schemes were completed within approved budget, while only 10% of the schemes were completed with less than 30% cost overrun. One scheme (DWSS) was not able to be completed within approved budget due to a conflict in the area. The efficiency details of the schemes are presented in figure below.

Apart from adherence to approved budget, these schemes (95%) were completed within approved time lines as presented in table.



Technical Support provided to MCO Sro Gharugo 1 during survey for lining of water course in Lower Kurram (Kurram Agency, August 2009)

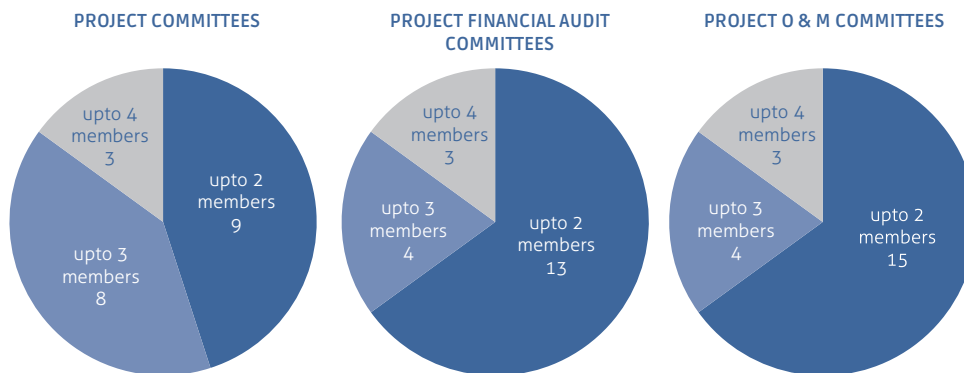


Types of Schemes	Completed within approved project completion date	Completed with delay of less than one year	Completed with delay of more than one year
DWSS	5	1	0
Street Pavement	8	0	0
Irrigation Schemes	5	0	0
Link Road	1	0	0
<b>Total</b>	<b>19</b>	<b>0</b>	<b>0</b>

## Function-Specific Committees Ensuring Compliance and Efficiency

In case of all these 20 schemes, as per results, three types of committees i.e. Project Implementation, Finance and Audit and O & M were formed at community level. To constitute these committees, all members of respective organisations were taken on board. An active participation of community members and their role in formation of respective committees has positively contributed to following project designs and adherence to timelines and cost. Almost all committees received function-specific training and when asked, all community members unanimously showed their satisfaction with the roles assigned and roles performed by respective committees.

An active participation in these committees was observed during this evaluation as mentioned in the figure below:



The committees were given specific tasks and responsibilities during implementation of the schemes. Some of the generic tasks related to the committees are explained below:

<p><b>Project Committee</b></p> <ul style="list-style-type: none"> <li>- Timely completion of work according to design of respective scheme</li> <li>- Procurement and arrangement of material and labour as required</li> <li>- Oversight of work during implementation and maintainance of records</li> <li>- Informing CO members/ SRSP staff periodically on implementation work and expenses</li> </ul>	<p><b>Finance and Audit Committee</b></p> <ul style="list-style-type: none"> <li>- Monitoring and keeping a check on financial transactions of infrastructure projects</li> <li>- Verification of receipts and expenditures</li> <li>- Ensuring transparent expenditures</li> <li>- Collaborate and work in harmony with project committee for quality assurance</li> </ul>	<p><b>Operation and Maintenance Committee</b></p> <ul style="list-style-type: none"> <li>- Develop a consensus amongst community about O &amp; M of CPIs and implementation of the system.</li> <li>- Completion of left-over part (if any) or complete or rebuild damaged segment of the scheme</li> <li>- Creation of a fund for sustaining the scheme in long run.</li> </ul>
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↑ Survey for Drinking Water Supply Scheme (Gravity flow) identified by WCO Basoo in Upper Kurram (Kurram Agency, December 2011)

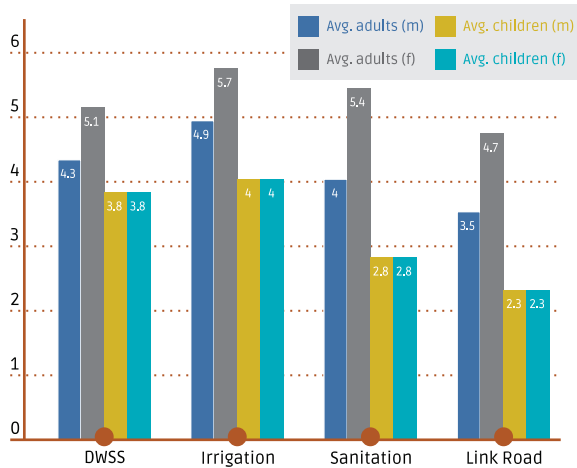
When asked about ability of these three types of committees to perform their designated roles and responsibilities, almost 95% of community members rated them 'good'. The remaining 5% either rated their performance satisfactory or they had no idea of their roles in implementation of CPIs. The technical support extended by SRSP engineers during implementation of CPIs was also appreciated by community members. Almost 98% community members rated engineers' support to be good and timely.



Third Dialogue with MCO Barautha for construction of Drinking Water Supply Scheme (Gravity Flow) in Upper Kurram (Kurram Agency, November 2010)

# Household Participation

The extended families structure in Kurram Agency meant high number of beneficiaries per scheme. On an average, these types and subtypes of CPIs benefitted 12 to 21 members per household. The details of beneficiary households of various types of CPIs are mentioned in the given figure.



## Participation at Planning and Design Stage

The evaluation revealed significant participation in planning and designing of these CPIs. Apart from few CPIs, in which a dominant role of SRSP engineers was visible, all other CPIs ensured active participation of community members as shown in the given table:

	Percentage of participation in planning and design of CPIs
Only CO/VO office bearers were involved	0
All CO Members	85%
Mostly SRSP Engineer and SO	15%
Specify If any other	0
<b>Grand Total</b>	<b>100%</b>

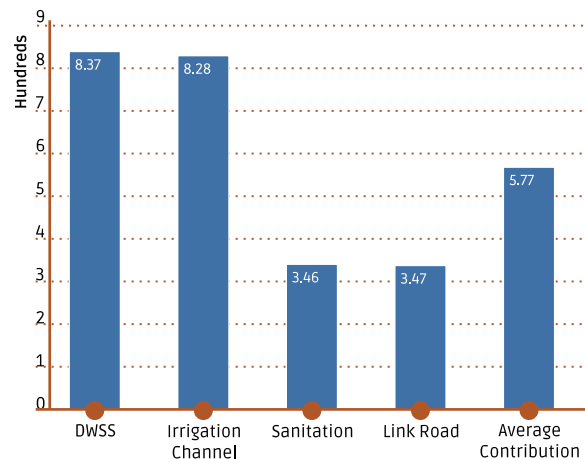
2nd installment for MCO Khawar Colony-2



## Participation at Implementation Stage

A very healthy trend of household participation was observed in implementing these CPIs. The trends show 98% participation of men members in implementation of the CPIs, while only 2% households did not participate in CPIs' implementation. In terms of construction, the beneficiary households have contributed in cash, kind and labor. The average overall amount contributed to CPIs construction in cash was found to be Rs. 577 per household. The bifurcation of cash contribution according to types and sub types is presented in the given figure:

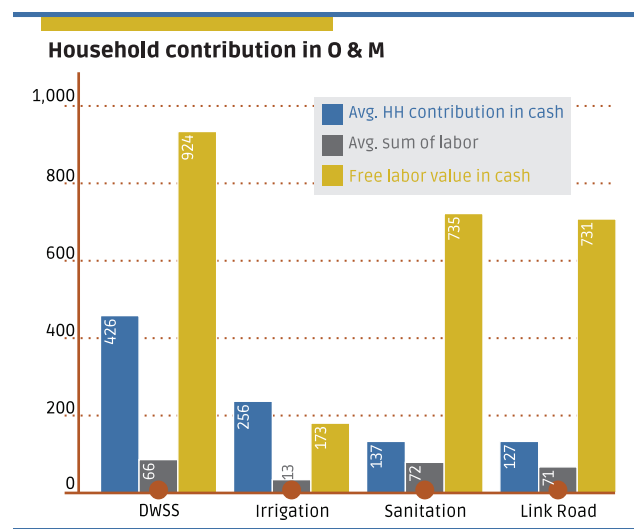
## Cash contribution in construction of CPIs



Apart from cash contribution, community has also contributed in terms of paid and free labour. The numbers of days vary according to the schemes. Overall, on an average, a contribution of 13 days of paid and 27 days of free labour was observed in all schemes undertaken by SRSP's FLADP. Combining the figures of paid and unpaid labour and converting them into monetary terms, on an average Rs. 4,143 have been contributed by beneficiary households in construction of the schemes. One of the recent third party evaluations<sup>3</sup> conducted by an independent firm in selected seven districts of KP regarding CPIs observed that over 95% of the schemes have been well-maintained by local communities. Now looking at the figures of cash contribution, paid and free labour related to CPI schemes in Kurram Agency, one can easily deduct that likelihood of maintenance of these schemes would be high as communities had a stake in it.

### Participation in Maintenance of CPIs

The maintenance of CPIs at community level presented a diversified picture. While some CPIs demanded regular operation and maintenance others were less prone to break ups. Amongst four major types and sub types, irrigation schemes seemed to have less break-ups and required less effort at community level. On the contrary, the DWSS, sanitation, and link road required more rigorous efforts for maintenance. The details of contribution of beneficiary households for operation and maintenance of the schemes in last one year are presented below:



3. Evaluation conducted by an international firm in seven districts of Malakand, Division in 2013.

↓ MCO Bushara participates in implementation of Sanitation Scheme in Upper Kurram (Kurram Agency, June 2012)



## Functionality and Performance of CPI Schemes

### Functionality of Schemes

The perceptions of beneficiary households on functionality of the schemes may vary and differ, nevertheless, a very high percentage (95%) of schemes in view of community were fully functional and providing requisite services to communities in target areas. Out of the total sample of 20 schemes, the field engineers were able to inspect and verify that 19 schemes were fully functional and provided services to the communities. Only Drinking Water Supply Scheme had a dispute during time of evaluation.

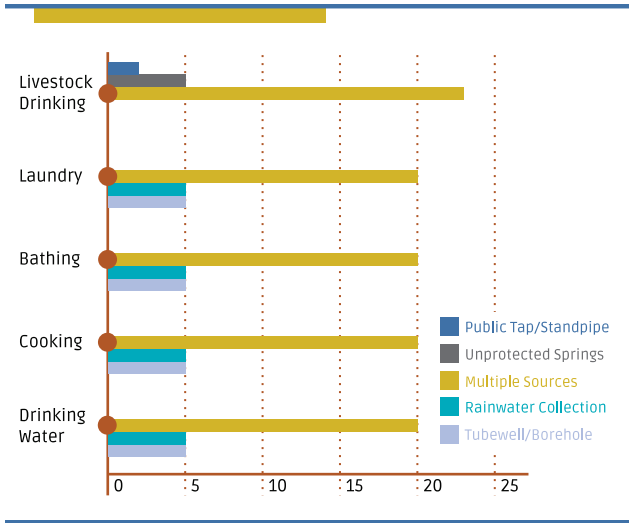
### Performance of Schemes

The detail household responses also revealed that 100% of community members were satisfied with performance of CPIs with few suggestions for improvement especially with respect to gradient and slopes of link road to avoid inconvenience in the rainy season.

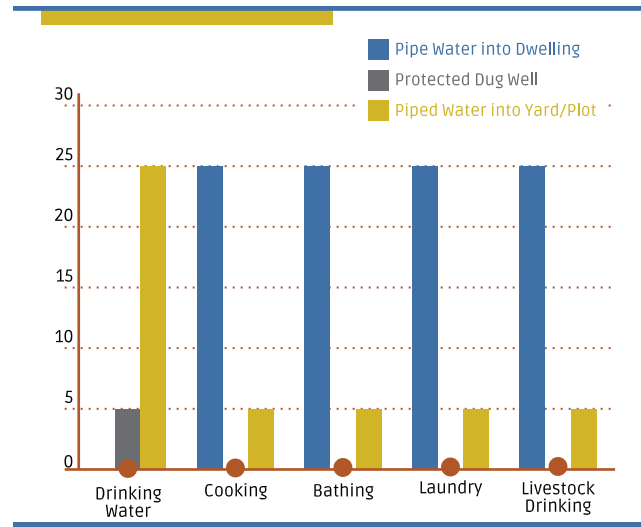
# Immediate Impacts of Infrastructure Schemes

## Drinking Water Supply Schemes

Not surprisingly, the response analysis showed that women were mainly responsible for fetching water as has been a practice elsewhere in Khyber Pakhtunkhwa and FATA. Before implementation of the scheme, mostly women (80%) had been given responsibility to fetch potable water from far flung distances, while only 17% men assumed this important role. Only 3% households in target areas had access to clean water at the household level. Some of the common problems with previous water sources were long distances, poor quality of water, less quantity of water and occasional conflicts over this precious resource. The sources of water for multiple purposes before implementation of SRSP schemes in the area are presented in the given table:



After completion of CPI schemes, the primary source for multiple purposes including drinking, cooking, bathing, laundry and livestock is presented below in the figure.



## Immediate Impacts of DWSS Schemes

One of the most significant and immediate impacts of DWSS schemes is reducing the time and effort taken to get to the water source. Overall, before implementation of DWSS CPIs, the average time taken to reach water source and come back was 120 minutes, which after implementation of DWSS CPIs has drastically reduced to 6 minutes. Saving this time meant allowing women (since they were responsible for fetching water) to allocate their time to other important productive tasks at the household level. The availability of water at either household level or at a convenient location has considerably reduced the work load on women.

Before implementation of DWSS schemes, the heavy pitchers of water were carried by women on their heads. After implementation of the schemes, the physical stress on women has also been reduced. In addition, DWSS scheme has increased ease of accessibility. This has considerable impact on daily routines of women in target areas. The percentage distribution of tasks undertaken by women in a typical day

shows allocation of time to household chores and income generating activities supported by FLADP which essentially has contributed to an enhanced income level.

With regards to households, using any additional water treatment method for drinking water after the implementation of DWSS CPI scheme, a 100 percent claim of no water treatment was reported - thus reducing water borne diseases as explained in preceding sections. Before implementation of DWSS CPIs, the communities would have access to water on either intermittent basis or on alternate days. In extreme cases, community would only have an access twice a week, which would create problems for local communities. After implementation of schemes, as per the study, on an average 1,555 litres of water is available per household per week. With an average, 11 household size, at least 20 litres of water per person is available in areas where DWSS schemes have been implemented. The satisfaction in terms of quantity, quality, taste and appearance of water (based on responses of beneficiary households) is presented in tables below:

#### Satisfaction Level with Water

Satisfaction	No. of Households	
	Quantity	Quality
Highly Satisfied	30	29
Satisfied	0	1
Not Satisfied	0	0
<b>Total</b>	<b>30</b>	<b>30</b>

#### Perception about Appearance, Taste & Odour

Perceptions of community		Responses
Appearance	Clear	30
Taste	Sweet	30
Odour	Odourless	30
<b>Total</b>		<b>30</b>

The tables clearly show that satisfaction levels with the new DWSS schemes were 100 percent for male and female members. Another reason for high level of satisfaction was that the frequency of regular water availability was also raised by 100 percent after the implementation of the DWSS scheme. Overall, the benefits due to DWSS schemes in terms of health, education and leisure time is presented in table below:

Benefits	Health		Education		Leisure time	
	Children	Women	Girls	Boys	Women	Children
Large Benefits	29	29	16	13	15	13
Some Benefits	1	1	8	13	14	12
No benefits	0	0	4	2	1	3
Don't Know	0	0	2	2	0	2
<b>Total</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>

#### Cost Benefit Analysis of Drinking Water Supply Schemes

During the survey, it was realised that there exists a significant diversity within the various categories of CPIs, therefore, an overall assessment and analysis of cost and benefits was not possible. Hence, for cost-benefit analysis, the NPV (Net Present Value) methodology was used by calculating costs of deploying and maintaining an infrastructure and comparing those costs with benefits accrued over fifteen years. The discount rate used was 9.5% as described by State Bank of Pakistan<sup>4</sup>. The high and low case scenarios were developed to provide an assessment of the potential range of outcomes as many of the assumptions are uncertain in nature, especially over a long period of time. In Drinking Water Supply Schemes, the principal benefit came from productive time gained or labour effort saved in fetching water and utilisation of gained time in income generating activities.

According to the survey, the beneficiaries now have uninterrupted access to water facility, which is healthier, resulting in income savings on health. As shown in the table below, both in high and low cases, the project has yielded benefits and as the payback period falls in the first year of the project implementation, thus investment on such schemes would be beneficial.

<sup>4</sup> [http://www.sbp.org.pk/m\\_policy/2013/MPS-Apr-2013-Eng.pdf](http://www.sbp.org.pk/m_policy/2013/MPS-Apr-2013-Eng.pdf)

Estimated Parameters	High Case	Low case
Project Cost (PKR) of all 6 schemes studies	5,184,153	5,184,153
Maintenance and Operating Cost (PKR)	136,800	136,800
Avg. time Saved in fetching water per day (Hours)	60	38
Total Number. of Labor Days	7.48	4.75
Productive Days Gained from Fetching Water in a year and Time Saving (353 HH)	14,360	3,563
Value of Productive Days (@225 PKR Per day)	3,231,000	801,563
Incremental Benefits on Health (6% of total Benefits)	193,860	48,094
Inter Rate of Return (IRR)	173.412	13.097
Net Present Value (NPV)	23,000,609	926,345
Benefit Cost Ration (BCR)	4.62	1.15

Analysing the information of pay back periods more thoroughly in the high case scenario, there are some important qualifications to consider:

- I) Survey estimates of beneficiary numbers come from household interview and focus group discussions. An element of over-estimation is probable. Added to which the statistical margin of error is high. For this reason alone, the real figures may be as much as 30% lower (or higher).
- II) Estimates of water consumption, and hence the number of trips per day, are quite imprecise.
- III) The calculation assumes that 100% of beneficiaries use CPIs 100% of the time.
- IV) The opportunity cost for family labour is likely to be well below the market wage used in the calculation.

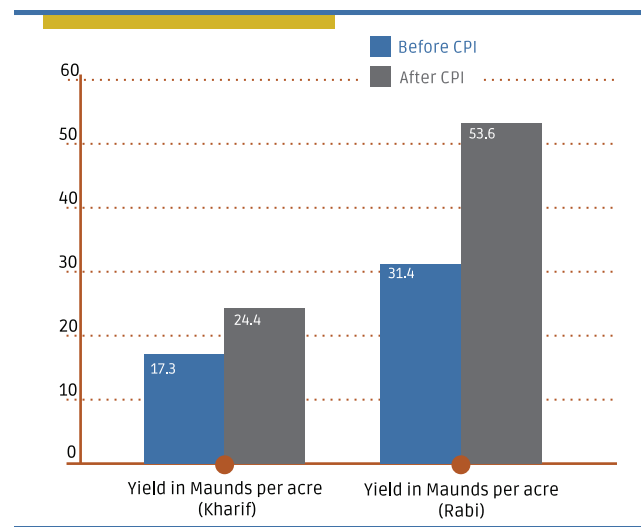
To take account of these qualifications, the Low Case estimate reflects adjustments to the survey estimates. It can be noted how relatively small reductions in the different parameters add up to a very substantial reduction in the Net Annual Benefit.

## Irrigation Schemes

The Irrigation schemes had significant immediate impacts in target areas. On an average, an increase of 17% in farm land (from 3.62 acres to 4.25 acres) was observed in areas where irrigation schemes were implemented. Over 62% of the land in target areas has been irrigated using CIDA-FLADP schemes as primary source, while remaining used it as secondary source. One of the main reasons for using CIDA-FLADP schemes as secondary source was access to other irrigation water sources. Few farmers also mentioned delays

in receiving water and low quantity of water from irrigation schemes implemented by CIDA-FLADP.

The household survey results showed that there had been a remarkable increase in crop production of community members owing to the implementation of irrigation scheme. The per acre yield in 'Kharif' and 'Rabi' seasons is reflected in the figure below:



The response analysis showed that 100% of farmers reported an increase in irrigation water in target areas, while 97% of beneficiaries of the schemes reported an increase in farm revenue. This is a substantial outcome of the irrigation CPI scheme, raising the economic empowerment of beneficiaries working on agricultural land. Since water is

- ↓ Communities access clean drinking water after installation of tube well and overhead storage tank in Khawar Colony 2, tehsil Upper Kurram (Kurram Agency, November 2011)



available adequately, therefore not surprisingly 77% of the farmers reported drastic drop in water-related conflicts. The overall cost of irrigation water for almost 70% of farmers has also been reported to be decreased.

Almost 100% respondents reported an increase in crop production, while 97% reported an increase in vegetables. Fruits comparatively did not witness such levels of increase in production and it seemed that availability of water has influenced the farmers to opt for cash or less intensive crops. With availability of water, 83% of farmers reported an increase in fodder thereby an increase in livestock rearing practices as well. The impact of CPLs on asset as per community perception is presented in table below:

	HH farm revenue	HH food Availability	Milk and Dairy products	Housing
Large benefits	24	25	14	5
Some benefits	6	5	15	16
No benefits	-	-	-	7
Negative impacts	-	-	-	-
Don't know	-	-	1	2
<b>Total</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>

## Cost Benefit Analysis

For cost-benefit analysis, the NPV (Net Present Value) methodology was used by calculating the cost of deploying and maintaining an infrastructure and comparing those costs against the benefits accrued over fifteen years. The discount rate used is 9.5% as described by State Bank of Pakistan<sup>5</sup>. The high and low case scenarios were also developed to provide the assessment of the potential range of outcomes as many of the assumptions are uncertain in nature, especially over a long period of time. Benefits from improved irrigation systems can be labeled under the following three categories and levels.

- i. Increase in irrigation land or area
- ii. Land use pattern and increase in cropping intensity
- iii. Incremental increase in production

Although there has been no or minor increase in the irrigation land or area, however, the cropping intensity has increased both in the *Kharif* and *Rabi* Seasons as a result of the irrigation projects. In other words, less land is left fallow and more cropped in each season. Further, the cropping intensity for both seasons has also witnessed an increase i.e. *Kharif* Production has increased from 88% to 100 %, and the cropping intensity in *Rabi* season has increased from 87% to 99%.

<sup>5</sup> [http://www.sbp.org.pk/m\\_policy/2013/MPS-Apr-2013-Eng.pdf](http://www.sbp.org.pk/m_policy/2013/MPS-Apr-2013-Eng.pdf)

The following table provides details of cost benefit analysis of the irrigation channels.

Estimate Parameters	High Case	Low Case
Project Cost (PKR)	5,243,092	5,243,092
Maintenance and operating Cost (PKR)	135,360	135,360
Primary Beneficiary Households 1 (Average)	29	-
Primary Beneficiary HH 2 (50% of Avg. Number of Beneficiaries of High Case)	-	14.5
Incremental increase in production (PKR)	5,475,615.98	2,805,939.31
Net Present Value (NPV)	25,747,325	10,060,990
Benefit Cost Ratio (BCR)	2.40	1.80
Internal Rate of Return (IRR)	113.60	43.41

Based on the magnitude of benefits i.e. increase in production, the internal rate of returns stands high enough in both the cases and the payback period of investment has been estimated in the first six months of project completion.

### Link Roads

The impact of implementation of CPI schemes of link roads, in other words, communication infrastructure has remarkably decreased the average time taken for community members to avail essential daily requirements including access to the nearest drinking water supply, distance to grocery shopping, distance to girls' and boys' schools, access to hospital and distance to the nearest local Tehsil administration:

	Time in minutes	
	Before implementation of CPI	After Implementation of CPI
Supply of Drinking Water	10	0
Groceries shop/ general store	63	39
Public Transport Access point	21	6
Nearest Boy School	36	18
Nearest Girl School	27	10
Health Clinic or hospital	59	33
Separate Family Planning Services	59	34
Nearest Tehsil Administration	65	36

Amongst above listed facilities, a major shift was witnessed in mode of transport used to gain access to these nearest facilities/services. Comparing before and after CPI construction cases, the mode of transport 'on foot' decreased radically while the usage of motorbikes, bicycles and four wheel engine vehicles increased as is evident in some of the following tables:

**Table: Mode of transport to grocery/general stores before and after link Road**

	Before implementation of CPI	After implementation of CPI
Bicycle/animal	2	1
Public Transport	12	12
Four Wheel Vehicle	16	17
<b>Grand Total</b>	<b>30</b>	<b>30</b>

**Table: Mode of transport to gain an access to public transport before and after link Road**

	Before implementation of CPI	After implementation of CPI
On foot	23	0
Bicycle/animal	0	8
Public Transport	2	5
Motor Bike	0	1
Four Wheel Vehicle	4	16
<b>Grand Total</b>	<b>30</b>	<b>30</b>

The usage of four wheel, motor bikes and bicycles to gain an access to public transport access points has increased drastically. Before implementation of link road CPI, community members (76%) would travel by foot to any suitable access PT access point.

**Table: Mode of transport to nearest boys schools before and after link Road**

	Before implementation of CPI		After implementation of CPI	
	Boys	Girls	Boys	Girls
On foot only	28	30	7	7
Public Transport	1	0	8	7
Four Wheel Vehicle	1	0	15	16
<b>Grand Total</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>

**Table: Mode of transport to health services/facilities before and after link Road**

	Before implementation of CPI	After implementation of CPI
Bicycle/animal	2	0
Public Transport	9	9
Four Wheel Vehicle	19	21
<b>Grand Total</b>	<b>30</b>	<b>30</b>

**Table: Mode of transport to Tehsil/political administration before and after link Road**

	Before implementation of CPI	After implementation of CPI
Public Transport	9	10
Four Wheel Vehicle	11	20
<b>Grand Total</b>	<b>30</b>	<b>30</b>

The newly constructed road is regularly used by 97% of community members with a reasonably high level of satisfaction (87%) in terms of its quality. In addition to above mentioned impacts, the travelling trips have been decreased by 44%, which has also reduced the travelling cost and efforts. In addition, a 43% reduction in cost of freight transport has been recorded, which essentially has increased farm income in target area. The perceived benefits of the link road are presented in the given table:

	HH Health	Girls Education	Boys Education	Agri. product Mktng	Cost of farm inputs	Business opportunity	Women Mobility
Large Benefits	24	27	27	23	27	29	4
Some Benefits	6	3	2	7	3	1	17
No Benefits	0	0	1	0	0	0	9
<b>Total</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>

## Street Pavement and Drainage

The response analysis clearly showed lack of paved street and drains in target areas. Over 87% respondents indicated either lack of paved streets or paved drains in the area. Moreover, the respondents (70 %) agreed that their streets had stagnant water with no effective way of its disposal before implementation of street pavement and drainage scheme. The waste water from cleaning utensils, laundry, washing and rain water from roofs would be channelised to street before construction of the scheme. The situation positively reversed with approximately 90 % of the respondents indicating that water is now properly disposed off to paved drains.

The issue of stagnant water in the streets had either been completely or partially eliminated, with majority leaning towards complete elimination. Hence, the SPD CPI scheme has been a source of great convenience for the beneficiaries in terms of time saving and reducing diseases springing from stagnant water in the street especially in wet season. Surprisingly, the evaluation indicated a more responsible behaviour of community members in properly disposing off waste water from WCs into Cesspits/Septic tanks. Generally, the practice in rural areas is to dispose excreta and waste water from WCs into open drains, which is hazardous to health of local population.

Another interesting aspect is cleaning of drains and street by community members before and after implementation of street pavement and drainage CPIs. There is a significant change in behaviour and practice in terms of cleaning the drains. Before implementation of the CPI, 43% of households in a *mohallah*/street did not actively take part in cleaning the drains but post CPI there is a sense of responsibility at *mohallah*/street level as 100% beneficiary household now are regularly cleaning the drains. The data shows no significant change in street cleaning practices. At least 93% households (before and after CPIs) were involved in cleaning streets. Some of the other major benefits as a result of the scheme are presented in the given table:

**Table: Major Benefits of Street Pavement and Drainage**

Benefits	Children health	Women Health	Girls Education	Boys Education	Women Free time	Children Free time
Large benefits	28	28	11	6	11	7
Some benefits	2	2	19	24	18	20
No benefits	0	0	0	0	1	3
<b>Grand Total</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>

Inauguration of Irrigation Tube well for MCO Hussainabad  
in Upper Kurram (Kurram Agency, April 2010)



## Major Findings

### Findings of the Evaluation

1. Almost 97% of the schemes are exactly the same or with some positive changes as mentioned in CPIs proposal. The documentation of CPIs was found to be adequate during field assessment. Very few schemes (3%) only were found with deviation in implementation.
2. The schemes were found to be highly efficient. As much as 85% of the schemes were completed within approved budget. Apart from adherence to approved budget, these schemes (95%) were completed within approved timelines.
3. An active participation of community members and their role in formation of respective committees has positively contributed to following project designs and adherence to timelines and cost. Almost 95% of community members rated performance of function specific committees to be good.

4. The evaluation revealed significant level (85%) participation in planning and designing of these CPIs. Apart from few CPIs, in which a dominant role of SRSP engineers was visible, all other CPIs ensured active participation of community members. Even a healthy trend of household participation (98%) in implementing these CPIs was observed. In terms of construction, the beneficiary households have contributed in cash, kind and labour. Combining the figures of cash, paid and unpaid labour and converting them into monetary terms, on an average Rs. 4,720 has been contributed by beneficiary households in construction of the schemes.
5. An average of Rs. 1,350 for DWSS, 429 for irrigation schemes, 872 for sanitation, and 858 for link road has been contributed by community members in the last one year for operation and maintenance of CPIs schemes. In addition, 66 days of free labour for DWSS, 13 days for Irrigation schemes, 72 days for sanitation schemes and 71 days for link roads has also been contributed in kind by community members.
6. A very high percentage (95%) of schemes in view of community were fully functional and providing requisite services to communities in target areas. The detail household responses also revealed that 100% of community members were satisfied with performance of CPIs with few suggestions for improvements.
7. One of the most significant immediate impacts of DWSS schemes was reducing the time and effort taken to get to the water source from 120 minutes to 6 minutes only. Saving this time meant allowing women to allocate their time to other important productive tasks at household level, thereby increasing household income. 100% satisfaction was observed at community level with quantity and quality (taste, odour and appearance) of water.
8. On average, an increase of 17% in farm land (from 3.62 acres to 4.25 acres) was observed in target areas due to implementation of irrigation schemes. The household survey results showed that there had been a remarkable increase in crop production (from 17.3 to 24.4 *maunds* in *Kharif* and 31.4 to 53.6 *maunds* in *Rabi* season). Since water is available adequately, therefore not surprisingly 77% of the farmers reported drastic drop in water related conflicts. The overall cost of irrigation water for almost 70% of farmers has also been reported to be decreased.
9. The communication infrastructure (Link Road) has remarkably decreased the average time taken for community members to avail essential daily facilities/ services. The newly constructed road is regularly used by 97% of community members. The travelling trips have been decreased by 44%, which has also reduced the travelling cost and efforts. In addition, a 43% reduction in cost of freight transport has been recorded, which essentially has increased farm income in target area.
10. The issue of stagnant water in the streets had either been completely or partially eliminated, with majority leaning towards complete elimination. Hence, the Street Pavement and Drainage CPI scheme has been a source of great convenience for the beneficiaries in terms of saving their time and reducing diseases springing from stagnant water in the street especially in wet season.

## Conclusion of Evaluation

In view of the difficult geographic terrain, uncertain social and political environment and precarious security situation for implementing CIDA-FLADP's CPI schemes in Kurram Agency, their wider benefits accruing to the communities are commendable. These schemes have been implemented in areas where many development organisations or even public institutions have limited outreach and presence. Overall quality of work is of very high standards. The outcomes in terms of CPI schemes seem to be well on track and realised in an efficient and effective manner.

- » Community's participation in planning and designing and later on studies on the implementation of all schemes strongly suggest that all these schemes were in relevance to the needs identified by the communities.
- » The evaluation also strongly suggests, based on the figures mentioned in earlier sections, that a high degree of efficiency has been achieved in executing all these schemes.
- » The effectiveness of these CPI schemes can be assessed by looking at the benefits of the schemes and its ownership by local communities.
- » A full section on immediate impact strongly suggest that all these types and subtypes of CPIs have been able to benefit communities (men, women, children) socially and economically. The participation at all stages of implementation and post completion contribution by communities in cash, kind or labour in last one year supports the argument that these schemes would be sustained locally.

# Annexes

## Annex 1

### Assessment of Immediate Impacts of Community Physical Infrastructure (CPI) Projects under CIDA's FLADP

#### 1. An assessment of immediate impacts of CPIs under FLADP

The overall aim of the exercise is to assess immediate impacts, efficiency, effectiveness, relevance and sustainability or lack thereof of community built and maintained infrastructure schemes towards expected outcomes envisaged in respective CPI project proposals. The recommendations will aim to improve strategies, implementation mechanism, and management efficiency of CIDA's funded CPI schemes. It will also present key findings, draw lessons and highlight unexpected results (positive or negative).

#### 2. Evaluation Questions

Some of the specific question related to immediate impact assessment<sup>6</sup> of these CPIs would include:

- Are these CPIs on ground & operational & what is the condition of these CPI schemes?
- Did the project follow original design for respective schemes, costs, implementation and management as envisaged in project documents?
- Did the CPI schemes address the intended target group and what was the actual coverage?
- Who were the direct and indirect/wider beneficiaries (men/women) of the CPIs? Were these CPIs designed to provide equal participation and benefits to women and men?
- What immediate change intended or unintended has been made to the lives and environment of beneficiaries from the project? Compare the impact on men and women and specific vulnerable groups?
- Have these projects contributed in institutional strengthening at the community level?
- What is the level of satisfaction of beneficiaries with services provided?
- What are the costs and benefits of selected types and sub types of CPI schemes? Or Cost Benefit Analysis of various selected types and sub-types of CPIs schemes?
- What is the mechanism/system for sustainability of the schemes and services provided at community level?

The assessment exercise would cover the following types and sub-types of CPI projects undertaken by FLADP in Kurram Agency. Other possible set of indicators which this assessment exercise should cover are as follows:

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6. Since the programme is under implementation and CPI schemes have been completed recently therefore measuring the long-term impact in terms of changes in socio-economic welfare indicators (e.g. income, livelihoods, health, education, etc) would be a complex process demanding rigorous pre and post project data collection for treatment and control groups. Conversely, the proposed validation and evaluation exercise can focus on direct and immediate impacts of the CPI. To do so the following simple process can be adopted:

Parameter(s)	Possible indicators
<b>Spatial</b>	Location, Component wise specification and cost of the project (size, volume, quantity, design, maps, SRSP and or community share etc)
<b>Physical Condition/ Operation and Maintenance</b>	Design and technological appropriateness, dates (initiation, completion), components/dimensions, functionality, quality, technical support to communities in execution of the CPIs by field staff and engineers
<b>Beneficiaries</b>	No of men and women beneficiaries, beneficiary villages, hamlets or areas types/purpose of use, quantity of use
<b>Community Participation</b>	Management, Operation and Maintenance mechanisms (project committees, Finance Committee, Audit Committee) Community participation and contribution (cash, labor etc), Criteria of contribution (equal share, ability to pay, etc)
<b>Direct and Indirect Benefits</b>	Benefits at the household level, accessibility, regularity, reliability, affordability, quality and equity
<b>Immediate/Perceived Impacts</b>	Education, Health, Economic Wellbeing, Social Wellbeing, etc.
<b>Issues and Challenges</b>	Issues and challenges before and after implementation of schemes

### 3. Evaluation Methodology and Approach

In terms of information and data collection, the assessment exercise will use multiple method approach that will include document reviews, group and individual interviews, focus group discussion and field visits as appropriate. SRSP will use a variety of methods to ensure that the data is valid, including triangulation. An inclusive approach is expected to be followed, which would require participation of major stakeholders including beneficiaries of CPIs including men and women community members, community leaders, local leadership, relevant line agencies and Civil Society Organisations, etc.

### 4. Outcome of the Exercise

An analytical report would be produced providing quantitative and qualitative analysis on relevance, efficiency, effectiveness, impact and sustainability of the CPIs undertaken by CIDA-FLADP as well as evidence-based clear recommendations for further improvement in CPI component of SRSP.

### 5. Quality Checks and Controls

To ensure and process quality information, SRSP would ensure placement of quality controls in data collection and entry process. CEO alongwith SRSP's relevant sections in the FATA Unit and Agency Offices will oversee process of information flow during the exercise.

## Annex 2

### Sampled Schemes for Evaluation under FLADP Kurram

#	Tehsil/Khel	Village	Name of CO	Type of Scheme	# of Beneficiary Hhs	Physical Progres
1	Upper Kurram	Zeran	Hassanzai Sehra	Gravity Flow	40	100%
2	Upper Kurram	zeran	Barautha	Gravity Flow	34	100%
3	Upper Kurram	Pewar	Ghundi Khel 1	Gravity Flow	33	100%
4	Upper Kurram	Sultan Azbak	Sultan Azbak Committee	Gravity Flow	32	100%
5	Upper Kurram	Mullana	Syed Mian Akbar Shah Kaley	Gravity Flow	40	100%
6	Upper Kurram	Basoo	WCO Basoo Kaley	Gravity Flow	34	100%
7	Upper Kurram	Arkhi	Arkhi	Irrigation Channel	27	100%
8	Upper Kurram	Kirman	Gram Kaley	Irrigation Channel	37	100%
9	Lower Kurram	Spina Tarah	Muhallah Spina Tarah	Irrigation Channel	18	100%
10	Upper Kurram	Kirman	MCO Nawalay Kalay	Irrigation tube well	26	50%
11	Upper Kurram	Pewar	Quaid Abad Pewar	Irrigation tube well	30	100%
12	Upper Kurram	Bashara	Bashara Dander Kaley	Street Pavement and Drinage	28	100%
13	Upper Kurram	Kirman	Dopak Kirman	Street Pavement and Drinage	30	100%
14	Upper Kurram	Zeran	Zeran Zoor Kaley Bar Milet	Street Pavement and Drinage	27	100%
15	Upper Kurram	Zeran	Zeran Tajak No. 1 & 2	Street Pavement and Drinage	70	100%
16	Upper Kurram	Zeran	Alam Kas Zeran	Street Pavement and Drinage	26	100%
17	Upper Kurram	Baggun	Baggun Dogo Kaley	Street Pavement and Drinage	26	100%
18	Central Kurram	Baggun	Baggun Koz Kaley	Street Pavement and Drinage	25	100%
19	Lower Kurram	Yaqoobi	Yaqoobi Kaley Committee	Street Pavement and Drinage	25	100%
20	Upper Kurram	Agra	Chaka Agra	Link Road	29	100%



گروپ ممبران میں سے کتنے لوگ کمیٹی کے کام سے مطمئن تھے؟		
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**Participation and Contributions**

B7. Who participated in:	کون شامل ہوا تھا؟
a. Need identification/prioritisation	(آغاز میں ضرورت کے تعین کے وقت)
b. Planning and design of the CPI	(سی پی ائی کی منصوبہ بندی / ڈیزائن کے وقت)
c. Implementation of the CPI	(سی پی ائی پر عملدرآمد کے وقت)
d. Operation and maintenance of the CPI	(سی پی ائی کے آپریشن اور مرمت کے وقت)
Codes: Only CO/VO office bearers were involved=1; all CO members=2; Mostly done by SSRS Engineer/SO=3, Anyone else (specify.....)=4	

B8. Have the CO/VO contributed in the construction of the scheme?*	
(Yes=1, No=2) (کیا سکیم کی تعمیر میں تنظیم نے اپنا کردار ادا کیا ہے؟)	
B9. If Yes, How did the CO/VO decide the contribution paid by each member/beneficiary?*	اگر ہاں تو: تنظیم نے ہر ممبر کے مالی حصے کا کیسے فیصلہ کیا؟
Codes: Equal Share =1, Ability to Pay =2, Share of Benefits =3, Other (Specify.....)=4	

In table below, list groups of contributors to the community's share of the costs (incl. ext. contributions), from government, politicians, other projects etc. (Please cross check with the CPI and/or CO Records)

درج ذیل ٹیبل میں ان مختلف گروپوں کی طرف سے ڈالے گئے حصے کو بیان کریں، اس میں بیرونی طور پر امداد دینے والوں مثلاً حکومت، سیاستدان اور دیگر منصوبہ جات کا ذکر بھی کریں۔ (برائے مہربانی سی پی ائی اور سی او کے ریکارڈ سے موازنہ کریں۔)

Contributing Group (حصہ ڈالنے والے گروپ)	B9. Number of contributing households (حصہ ڈالنے والے گھرانوں کی تعداد)	B10. Total Cash contributed (Rs) (حصہ ڈالی گئی تمام رقم)	B11. Total Labor contributed (Person Days) (افراد کی قوت کی شکل میں ادا کیا گیا حصہ/دن)	B12. In Kind contributed (درج ذیل اقسام میں حصہ ڈالا گیا قدر / مالیت) (Rs) (حصہ/دن)
1. CO Members (تنظیم کے ممبران)				
2. Other Beneficiaries (دیگر استفادہ حاصل کرنے والے)				
3. External (specify) (بیرونی - مواضع کریں)				

B13. Was any money borrowed to pay for the CPI? (Yes=1, No=2) (کیا سی پی ائی کی ادائیگی کے لیے کوئی رقم قرض میں لی گئی تھی؟)	B14. How much (Rs) (کتنی رقم روپیوں میں)	B15. From Where (یا کہاں سے لیا گیا) (Code: Bank=1, Money Lender=2, CO Saving=3, Other=4 (Specify.....))

**C. CPI Operation and Maintenance**

	C1. Jan	C2. Feb	C3. Mar	C4. Apr	C5. May	C6. Jun	C7. Jul	C8. Aug	C9. Sep	C10. Oct	C11. Nov	C12. Dec
Number of days non-operational (سکیم کتنے دن غیر فعال رہی)												
C13. If non-operational reasons for non-operational of the CPI (اگر سی پی ائی غیر فعال ہے تو اس کی وجہ لکھیں)												
a. _____												
b. _____												
c. _____												

C14. Does the scheme have any regular operating costs? (Yes=1; No=2) (کیا سکیم کو چلانے کے لیے مستقل کوئی خرچہ ہے؟)		
C15. If yes, how much (If no go to C22) (اگر ہاں تو کتنا، اگر نہیں تو سی ۲۲ پر جائیں)	a. Fuel/utility bills (Rs/month) (لیندھن - روپے/ماہانہ)	b. Labour (مزدوری) Paid Rs/month (ادا کئے گئے) (رقم مہینے کے حساب سے) Non-paid days/month (نہیں ادا کئے گئے) (دن/مہینے کے حساب سے)
	c. Other (Specify.....) (دیگر (وضاحت) (مہینے کے حساب سے)) Paid Rs/month (ادا کئے گئے) (رقم مہینے کے حساب سے) Non-paid Rs/month (value) (نہیں ادا کئے گئے) (دن/مہینے کے حساب سے)	

How do you collect the money for meeting the regular operating costs? (اب نے اخراجات کو پورا کرنے کے لیے رقم کیسے اکٹھی کی؟)

C16. Basis for operating cost recovery* (کن بنیادوں پر چلانے کے اخراجات کو اکٹھا کیا گیا)	Level of operating cost (چلانے کے لیے لاگت خرچہ)		C17. % of household paid their dues last year (کتنے فیصد لوگوں نے پچھلے سال اپنے ذمہ واجب الادا رقم ادا کی)
	C18. Unit of measurement (eg. Per hour, month, etc) (ماپنے کے لیے) (یونٹس)	C19. Cash (Rs.) (normal rate) (رقم - روپے)	
Codes: Proportional to use/Benefits = 1, Ability to pay =2, Fixed charges =3, Not applicable=4,			

Other standard =5(Specify.....)

C20. Who decides about the rate of user fee for recovering operating costs * (سکیم کو چلانے کے اخراجات کو پورا کرنے کے فیس کا تعین کون کرتا ہے/تھا؟)	C21. Who collects and manages the operating costs* (سکیم کو چلانے کے اخراجات کی رقم کون اکٹھا کرتا/اس کا نظام و انصرام کون کرتا ہے/تھا؟)
Codes: The operation and maintenance committee=1; The CO leaders=2; the SRSP staff=3; all CO members=4; All beneficiaries=5; The owner of the tubewell/motor =6; Contractor=7; Other=8 (Specify.....)	
C22. Were any maintenance works done on the scheme last year? (Yes=1; No=2) (پچھلے سال کسی قسم کی مرمت/ دیکھ بھال کا کوئی کام ہوا؟)	

Give details in the table

C23.	How does the CO collect money for maintenance?* (Regular Charges =1, When Needed =2) سی او اپنے اخراجات کے لئے پیسے کیسے اکٹھے کرتی ہے؟	
C24.	Who pays?* وہ پیسے کون ادا کرتا ہے؟	1. CO Members (سی او ممبرز)
	Codes: All=1, Most 2, Some=3, None =4 3. Anyone else (specify) (دیگر وضاحت کریں)	2. Other beneficiaries (دیگر مستفید ہونے والے)
C25.	How are the maintenance contributions shared?* (Cross check with CPI and CO records, usually the CO keeps around 3% of the total cost as maintenance fund in CO account) (دیکھ بھال کی غرض سے اے والے خرچ کو کیسے ایک دوسرے پر تقسیم کیا جاتا تھا؟) سی پی اینی اور سی او ریکارڈ کے ساتھ موازنہ کریں۔ عام طور پر سی او اپنی لاگت کا 3 فیصد او اینڈ ایم فنڈ اپنے بنک اکاؤنٹ میں رکھتے ہیں۔ Code: Equal = 1, Ability to pay = 2, Proportional to use/Benefits = 3, Other=4 (Specify.....)	
C26.	Does the CO have Maintenance fund?* (Yes=1, No=2, Don't know =3) (کیا سی او کے پاس او اینڈ ایم فنڈ ہے؟)	
C27.	Where is it maintained? * وہ فنڈ کہاں رکھا جاتا ہے؟ Codes: in CO bank Account=1, With Project Committee=2, With the CO Manager=3, With the SRSP=4, Don't Know=5, Other=6(Specify.....)	
C28.	What is the amount of maintenance fund currently available (if yes in C25)? (Rs.) (اس وقت دیکھ بھال کے لیے کتنی رقم موجود ہے؟)	
C29.	When it was last used? (آخری وقت اس کو کب استعمال کیا گیا تھا) (Month and year )	
C30.	How the decisions about the utilization of the O&M fund are made? * او اینڈ ایم فنڈ کو استعمال کرنے کا فیصلہ کیسے کیا جاتا ہے؟ Codes: The Operation and Maintenance Committee=1; The CO Leaders=2; The SRSP staff=3; All CO Members=4; All Beneficiaries=5; The owner of the tubewell/motor =6; Contractor=7; Other=8(Specify.....)	
C31.	To what extent does the O&M fund (if any) cover the maintenance costs? * Codes: All=1, Most=2, Some=3, None=4 (آپ کے خیال میں او اینڈ ایم فنڈ کس حد تک دیکھ بھال کی لاگت/ خرچے کو پورا کرتا ہے؟)	
C32.	Comments (if any) (آپ کی اگر مزید رائے اگر ہو تو)	

**D. Scheme Use**

D1.	Total number of targeted households as per project digest/records پراجیکٹ کے رکارڈ کے مطابق ذیر اثر افراد کی کل تعداد	
D2.	Number of households using the CPI as a primary source سی پی اینی کو بنیادی ذریعے کے طور پر استعمال کرنے والے گھرانوں کی کل تعداد	
D3.	Number of households using the CPI as a secondary source سی پی اینی کو ثانوی طور پر استعمال کرنے والے گھرانوں کی کل تعداد	
D4.	What is the main reason for the households not using the CPI or using it as a secondary source (if any)? Code: Have access to another source =1, Household(s) is/are not member of the CO =2, The household (s) is/are from another caste/tribe/social class =3, Low quality of output from the CPI =4, High cost/user fee for the CPI =5, Not applicable =6, The House is far away from the CPI location=7, Others=8(specify.....) گھرانوں کی سی پی اینی کو ثانوی درجہ پر استعمال نہ کرنے کی بنیادی وجہ؟	

**E. List the main benefits of the scheme**

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

**F. Problems and conflicts**

F1.	Did any conflicts related to the distribution of the benefits/usage of the CPI arise among the households occurred in the last 12 months? (Yes=1, No=2) پچھلے 12 مہینوں میں سی پی اینی کے استعمال سے مفید ہونے کے حوالے سے گھرانوں میں کوئی مسئلہ پیدا ہوا؟	
F2.	If yes, what were the main problems? اگر ہاں، تو وہ کیا مسائل تھے؟ a. _____ b. _____ c. _____	

F3.	<p>Did any problems arise during the implementation of the scheme? کیا سکیم کو مکمل کرنے میں کوئی مسائل درپیش ہوئی؟</p> <p>a. _____</p> <p>b. _____</p> <p>c. _____</p>
F4.	<p>Are there any problems at the time of interview? کیا انٹرویو کے وقت سکیم کو مسائل درپیش تھے؟</p> <p>d. _____</p> <p>e. _____</p> <p>f. _____</p>
F5.	<p>How is the role of the CO/schemes committees in resolving scheme related conflicts and problems?*</p> <p>سکیم سے متعلق مسائل اور تنازعات کو کو سی او کمیٹی کیسے حل کرتی ہے؟</p> <p>Codes: Effective =1, Ok =2, Not effective =3, Don't know =4</p>
F6.	<p>Note: How the Conflict/ Problems (if any) was resolved? نوٹ: اگر کوئی مسئلہ یا تنازعہ ہوا تھا تو اسے کیسے حل کیا گیا تھا؟</p>

#### List of FGD participants

S.No سیریل نمبر	Name of Participant شرکاء کے نام	Status in CO سی او میں حیثیت Member=1, Non-member =2, CO office bearers =3	CPI User سی پی اینی استعمال کرتے ہیں User=1, Non-user =2
1			
2			
3			
.			
.			
.			
20			

#### G. Water Distribution (Only for Drinking Water)

G1.	<p>How the decisions about water distribution are made? پانی کی تقسیم کے بارے میں فیصلہ جات کیسے کیے جاتے ہیں؟</p> <p>Codes: The Operation and Maintenance Committee=1; The CO office bearers=2; the SRSP staff=3; All CO members=4; All Beneficiaries=5; The owner of the tube well/motor =6; Contractor=7; Other=8 specify.....)</p>	
G2.	<p>Is there any difference in <b>water quantity</b> between the household near the scheme source and the household far from the scheme? کیا سکیم کے نزدیک اور دور کے گھرانوں میں پانی کی مقدار میں کوئی فرق ہے؟</p> <p>Code: No difference =1; The tail end households get less water=2; Any other (specify)=3 (Specify.....)</p>	
G3.	<p>Is there any difference in <b>water quality</b> between the household near the scheme source and the household far from the scheme? کیا سکیم کے نزدیک اور دور کے گھرانوں میں پانی کی کوالٹی میں کوئی فرق ہے؟</p> <p>Code: No difference =1; The tail end households get low quality of water=2, Any other (specify)=3 (Specify.....)</p>	

#### H. Water Distribution (Only Irrigation)

H1.	<p>How the decisions about water distribution are made? پانی کی تقسیم کے بارے میں فیصلہ جات کیسے کیے جاتے ہیں؟</p> <p>Codes: The Operation and Maintenance Committee=1; The CO Leaders=2; the SRSP staff=3; All CO members=4; All Beneficiaries=5; The owner of the tube well/motor =6; Contractor=7; Other (specify)=8 (Specify.....)</p>	
H2.	<p>How are the farmers informed about the timing of the release of irrigation water? کسانوں کو پانی کے جاری کیے جانے کے بارے میں کیسے اطلاع دی جاتی ہے؟</p> <p>Codes: Farmer gets water when needed=1; The committee informs the farmer about the time=2; Farmer gets water according to pre-determined schedule=3, Not applicable=4, Other (specify)=5 (Specify.....)</p>	
H3.	<p>What is the standard for calculating the quantity of water to be distributed? پانی کی تقسیم کی مقدار ناپنے کے لئے کیا معیار رکھا گیا ہے؟</p> <p>Codes: Hour per kanal/acre =1; Hours per household=2; Farmer gets water as needed =3 Not applicable=4, Other (specify) =5 (Specify.....)</p>	
H4.	<p>Is there any difference in <b>water quantity</b> between the household near the scheme source and the household far from the scheme? کیا سکیم کے نزدیک اور دور کے گھرانوں میں پانی کی مقدار میں کوئی فرق ہے؟</p> <p>Code: No difference =1; The tail end households get less water=2, Any other=3 (Specify.....)</p>	
H5.	<p>What provisions are made by the management if there is <b>less quantity</b> of irrigation water available to the tail end farmer? اگر سکیم کے آخری کسانوں کو پانی کی مقدار کم ملے تو انتظامیہ کیا اقدامات کرتی ہے؟</p> <p>Code: No provision=1; Provide extra hours of water=2; Lower charges=3; , Not applicable =4, Other =5 (Specify.....)</p>	

#### I. Access (Only for Link Road)

	Before CPI	After CPI
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i.1	Before the CPI, was there a pre-existing route? Code: Yes =1, No=2 سی پی ائی سے پہلے، کیا یہاں پر باضابطہ سڑک تھی؟		
i.2	Can a four-wheeler with out four-wheel-drive pass though the CPI Code: Yes=1, No=2 کیا سی پی ائی کے ساتھ سے کوئی 4*4 کے علاوہ کوئی گاڑی جا سکتی ہے؟		
i.3	If 'Yes', is it accessible during all months, except for predictable interruptions of less than two weeks during severe weather (heavy rains)? Code: Yes =1, No=2 اگر ہاں، تو کیا وہ سب مہینوں میں قابل رسائی رہتی ہے؟ ناموزوں حالات (زیادہ بارشوں) کی صورت میں دو ہفتوں سے کم کے علاوہ؟		

**PART II: TECHNICAL ASSESSMENT**  
**(This section to be filled by an Engineer/Sub-engineer)**

Note:

- a. For section A, B and C consult CPI file. Use appropriate codes wherever applicable, the questions requiring codes are indicated by the sign\*.  
b. Shaded answer boxed indicates compulsory question that must be answered

**B. Scheme description (As shown in RSP CPI Files)**

A1. Ag/FR		A2. Unit		A3. Div	
A4. Village		A5. CO/VO Name		A6. Type of CPI*	
		A7. Date of Initiation	/ / (dd/mm/yy)	A8. Date of Completion	/ / (dd/mm/yy)

\* Type code: Gravity =1; Mechanised =2; Dug Well =3; DWS Reservoir=4; Other =5(Specify.....)

**C. Scheme Costs (As shown in RSP CPI Files)**

Cost Items		Total Costs of completion (Rs)	RSP/Donor Contribution (Rs)	Community Contribution (Rs)
B1.	Construction Material			
B2.	Equipment/Machinery			
B3.	Labour	Skilled		
		Unskilled		
B4.	Others (specify) e.g carriage, transportation etc.			
B5.				
B6.				
<b>B7.</b>	<b>Grand Total</b>			

**D. Scheme design and actual specification**

(From design specifications, use data available in the CPI Files. The Actual Assessment must be done on the basis of engineer's measurements and assessment. The match column should follow the codes Code: Exact =1, Equivalent =2, Partial =3, No match =4, Does Not Exist =4, Not applicable =5)

	Specification		Match and Condition		
	Units	C1. Design	C2. Actual (2009)	C3. Match*	Description (Give details)
1. Pipe	i. Length (m)				
	ii. Diameter (cm)				
	ii Type of Material Code: PVC=1, HDPE=2, GI=3, MS=4, RCC=5, Others (specify.....)=6				
2. Channel	i. Length (m)				
	ii Type of Material Codes: Brick Masonry=1, Stone/Rubble Masonry=2, PCC =3, Earthen=4, Others (specify.....) =5				
3. Dug Well	i. Depth (m)				
	iii. Diameter (m)				
	iii. Type of Material Codes: Earthen =1, Stone lined=2,				

	<i>Brick lined =3, Others (specify.....)=4</i>				
4. Pump and Motor	i. Type <i>Code: Electric Submersible =1, Tractor driven Submersible =2, Electric Centrifugal =3, Diesel Centrifugal =4, Electric Turbine =5, Diesel Turbine =6, Others=7 (specify.....)</i> ii. Capacity (Horse Power)				
5. Tank	Volume (circle appropriate unit) i. Litre ii. Gallons				
6. Distribution Line	i. Length(m)				
	ii. Diameter of main distribution line (cm)				
	iii. Material <i>Code: PVC=1, HDPE=2, GI=3, MS=4, RCC=5, Others (specify.....)=6</i>				
7. Stand post	Numbers				
8. Discharge /withdrawal	Litres/second				
9. Beneficiary Households	Numbers				
10. Others (specify)					

**E. Overall Assessment of Project Design**

D1.	<b>Functionality of the scheme (LAST ONE YEAR)</b> Fully functional (at least 70% of the targeted households are utilizing the scheme) = 1 Partially functional (40-70% of the targeted households are utilizing the scheme) = 2 Limited functional (10-40% of the targeted households are utilizing the scheme) = 3 Not functional (less than 10% of the targeted households or never used in the last 3 month) = 4	
D2.	<b>Maintenance of the scheme</b> Fully maintained (no water losses without any physical damage) = 1 Partially maintained (the physical condition is poor and up to 33% water losses) = 2 Limited maintenance (more than 33% water losses) = 3 Not maintained (scheme not working for last 3 months) = 4	
D3.	<b>Adherence to approved timeline</b> Completed before or within the approved project completion date = 1 Completed with delay of less than one year = 2 Completed with delay of more than one year = 3 Not completed = 4	
D4.	<b>IF the Scheme is not completed within the approved timeline, what was the main reason?</b> Code: Conflict over the CPI=1, Delay in fund disbursement=2, Conflict in the Area=3, Other (specify)=4 (Specify.....)	
D5.	<b>Adherence to Approved Costs</b> Completed within the approved budget =1 Completed with less than 30% cost overrun from the approved budget = 2 Completed with more than 30% cost overrun but less than double of the approved budget = 3 Completed with more than double of the approved budget = 4	
D6.	<b>If not Completed within the approved budget, what was the main reason?</b> _____ _____	

**D7. Overall Assessment/Any Other Comments**

If there is any difference between the design and actual project specification, indicate the implications on the scheme performance? Or if the design is not adequate what is its implication and how to improve it (please use separate sheet if needed)

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**F. Scheme map (Assessment of Proximity of water sources)**

Map the scheme and the closest alternative sources of water relative to the streets and house compounds of the community. Number each source and note which ones were there before the DWSS was built and which ones were build after the DWSS. Identify the CO member and non-member beneficiaries.

**PART III: HOUSEHOLD QUESTIONNAIRE**  
(This questionnaire will be filled with an adult female member of the household)  
(یہ سوالنامہ گھرانے کی بالغ عورت کی مدد سے پر کیا جائے)

**Introductory Statements to potential respondents**

We are representing SRSP-FLADP working in FR Peshawar and Kurram Agency. SRSP-FLADP is working for improving and strengthening livelihoods and poverty alleviation in selected agencies and FR regions. To enable SRSP-FLADP to better plan and design their future activities especially with regards to CPIs, we are conducting a short survey of community infrastructure projects. The survey includes questions about household composition, demography, your participation and contribution in the CPI (name of CPI), your opinion about the benefits of the scheme and problems with the scheme. If you agree to participate in this survey, it should take only about 30-40 minutes, and all the information that you give us will be confidential.

Are you happy that we proceed by asking some simple question that should take about 30-40 minutes?*		(اگر آپ کی رضا)	
(مندی سے تو یہ آپ سے چند سادہ سوالات پوچھنا شروع کریں اس میں ۳۰ سے ۴۰ منٹ کا وقت درکار ہو گا) Code: Yes=1, No=2			
If = No Politely thank them for their time and proceed with the identification Of a replacement scheme as per instructions (اگر نہیں ہو تو: خاموشی کے ساتھ ان کا شکریہ ادا کریں اور جواب دہندہ کی تبدیلی کے لیے پہلے سے موجود ہدایات پر عمل کریں)	If = Yes Thank the respondent for agreeing to participate and proceed with a Questionnaire. (اگر ہاں ہو تو: جواب دہندہ کا شکریہ ادا کریں کہ اس نے سروے میں شمولیت پر رضامندی کا اظہار کیا ہے اور سوالات کا آغاز کریں۔)		
Record the start time of this interview	(اس انٹرویو کا وقت ریکارڈ کریں)	Hour	Minutes
		AM	PM

CPI ID:	Date (dd/mm/yy)	/	/
Name of interviewer (انٹرویو کرنے والے کا نام)			

**Note:** a. Use appropriate codes as mentioned while answering. Shaded boxes indicate compulsory questions.

نوٹ: الف). برائے مہربانی موزوں ترین کوڈز کا استعمال کریں، جن سوالات میں کوڈز کی ضرورت ہے وہاں پر \* کا موجود ہے۔  
ب). رنگ دار جواب کا خانہ اس بات کی نشاندہی کرتا ہے کہ یہ سوال تمام گھرانوں کے لیے لازمی پوچھا جائے گا اور یہ ضروری ہے۔

**A. Household (HH) Identification**

A1. Household No (گھرانہ نمبر)	A2. Name of Household Head (گھرانے کے سربراہ کا نام)	A3. Mohalla (محلہ)	
A4. Village (گاؤں)	A5. Community Organisation membership* (سی او ممبر شپ) (Yes=1, No=2)	A6. Respondent (if other than head of HH)	
A7. Total Number of households members (گھرانے کے کل افراد کی تعداد)			
A8. Male adults (18 & above) (بالغ مرد (۱۸ سال سے زیادہ))	A9. Female Adults (18 & above) (بالغ عورتیں (۱۸ سال سے زیادہ))	A10. Male Children (upto 18 years) (بچے (۱۸ سال تک کی عمر کے))	A11. Female Children (upto 18 years) (بچیاں (۱۸ سال تک کی عمر کے))

**B. Participation and contribution to the SRSP supported CPI project**

(Note: For this section take assistance from the male member of household)

نوٹ:- اس سیکشن کو مکمل کرنے کے لیے گھرانے کے مرد افراد سے مدد لیں

B1. Did anyone from the household participate in planning of the CPI?*	(سی پی ای کی منصوبہ بندی میں گھرانے کے کسی فرد نے شرکت کی؟)
Codes: Yes=1; No=2	
B2. Who was he/she? (وہ کون تھا / تھی؟)	
Codes: Male = 1, Female =2, Both=3, Dont'know=4	
B3. Did household contribute to the CPI construction? *	(کیا گھرانے نے سی پی ای کی تعمیر میں حصہ لیا تھا؟)
Codes: Yes=1; No=2	
B4. If yes, Cash?How much? (Rs.)	رقم
B5. Labour? How many days?	مزدوری
B6. Kind? Please Specify?	قسم (کیا) اور وضاحت
B7. How much? (Value in Rs.)	کتنی مقدار؟ (روپیوں میں)
B8. Have you and your household contributed anything to the maintenance of the CPI in the last year?*	(کیا پچھلے سال سی پی ای کی دیکھو؟)
Codes: Yes=1; No=2	

B9.	If yes, Cash? How much? (Rs.)	اگر ہاں ، رقم (روپوں میں)
B10.	Labour? How many days?	مزدوری کتنے دن؟
B11.	Kind? Please Specify?	قسم (کیا) اور
B12.	How much? (Value in Rs.)	کتنی مقدار؟ (روپوں میں)

### C. Household Satisfaction

C1.	How do you rate the performance of the Project Committees? Codes: Good=1; OK=2; Poor=3, Don't Know=4 (کیا سی پی اینی کی کارکردگی کو کیسے دیکھتے ہیں؟)	
C2.	How do you rate the performance of the SRSP support? Codes: Good=1; OK=2; Poor=3, Don't Know=4 (آپ آر ایس پی کی معاونت کی کارکردگی کو کیسے دیکھتے ہیں؟)	
C3.	Is the CPI functional at present? (کیا سی پی اینی اب بھی فعال ہے؟) Codes: Yes=1, No=2, Don't know =3	
C4.	Has number of beneficiary HH changed due to CPI? (کیا سی پی اینی کی وجہ سے مستفید گھرانوں کی تعداد بڑھ گئی ہے؟) Codes: Increased=1, Not changed =2, Decreased =3, Don't know =4	
C5.	Has quantity of water losses/wastage changed due to CPI? (کیا سی پی اینی کی وجہ سے پانی کے ضائع ہونے کی مقدار کم ہو گئی ہے؟) Codes: Increased=1, Not changed =2, Decreased =3, Don't know =4	
C6.	Is the CPI safe from seepage and other risk of closure? Codes: Yes =1, No=2 (کیا سی پی اینی سیم اور ناکارہ ہونے کے دوسری وجوہات سے محفوظ ہے؟)	
C7.	Are you satisfied with the performance of CPI? Codes: Yes=1, No =2 (کیا آپ سی پی اینی کی کارکردگی سے مطمئن ہیں؟)	
C8.	If no, what is the main reason? (اگر نہیں تو اس کی بڑی وجہ کیا ہے؟) Codes: Irregular water-supply=1, Insufficient water-supply=2, Too-expensive=3, Others=4 (specify.....)	
C4.	Were there any problems/issue faced during the construction of the CPI? Codes: Yes=1; No=2; Don't known=3 (کیا سی پی اینی کی تعمیر میں کوئی مسائل پیش آئے؟)	
C5.	If yes, what were they? If no, go to C11 (اگر ہاں تو وہ کیا تھے؟ (نہ کی صورت میں سی 1 پر جائیں)) a. _____ b. _____ c. _____	
C6.	Is there any problem/issue with the scheme at the time of interview? Codes: Yes=1; No=2, Don't know=3 (کیا انٹرویو کے وقت سکیم کو مسائل درپیش تھے؟)	
C7.	If yes, what are they? If No, go to D1 (اگر ہاں تو وہ کیا تھے؟ (نہیں کی صورت میں ڈی 1 پر جائیں)) a. _____ b. _____ c. _____	

### D. Water Supply

D1. What is/was the household's main source of water? (Use codes) (گھرانے میں پانی کی فراہمی کا بنیادی ذریعہ کیا ہے/تھا؟) (Use codes)

	After SRSP scheme (آر ایس پی سکیم کے بعد)	Before the RSP scheme (آر ایس پی سکیم سے پہلے)
	a. Source* (ذریعہ)	b. CPI* (سی پی اینی) (Yes=1, No=2)
1. Drinking (پینے کا پانی)		c. Source (ذریعہ)
2. Cooking (کھانا پکانے کا پانی)		
3. Bathing (نہانے کا پانی)		
4. Laundry (کپڑے دھونے کا پانی)		
5. Livestock (مال مویشیوں کا پانی)		
Codes: Piped water into dwelling=1; Piped water to yard/plot = 2; Public tap/standpipe = 3; tube-well/borehole = 4; Protected dug well = 5; Unprotected dug well = 6; Protected spring = 7; Unprotected spring = 8; Rainwater collection = 9; Bottled water = 10; Cart with small tank/drum = 11; Surface water (river, dam, lake, pond, stream, canal, irrigation channels = 12; multiple sources=13 (specify.....) Other=14 (specify.....)		

D2.	What were the problems (if any) with the previous drinkingwater sources? (پانی کے پچھلے ذریعہ کے ساتھ کیا مسئلہ تھا؟) Codes: Longer distance =1; Poor quality of water=2; Less quantity of water =3; Owned by others=4; Absence of piped water=5; Disconnection of services=6; High cost of water=7; Conflicts of use =8, No problem=9, Other=10 (specify.....)
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D3. Time taken to go to water source and come back? (پانی کے ذریعے تک پہنچنے اور واپس پانی لانے تک کتنا وقت لگتا ہے/تھا؟)

	a. After SRSP scheme (آر ایس پی سکیم کے بعد)	b. Before SRSP scheme (آر ایس پی سکیم سے پہلے)
1. No. of minutes (کتنے منٹ)		
2. (If within premises write 0) (اگر گھر کی حدود میں ہیں تو صفر لکھیے۔)		
3. If time saved what is its major use? (اگر وقت بچتا ہے تو اس کا بڑا استعمال کیا ہے؟) Leisure =1, Income generating activities =2, School activities =3, Community work =4 other household work =5, time not saved = 6		

D4.	Who usually fetch (ed) water for HH use? (عام طور پر گھر کے لئے پانی کون لاتا ہے/تھا؟)
a. After SRSP scheme (آر ایس پی سکیم کے بعد)*	b. Before SRSP scheme* (آر ایس پی سکیم سے پہلے)
Codes: Mainly adult woman=1; Mainly adult man=2; Mainly female child (under 15 years)=3; Mainly male child (under 15 years)=4, Both men and women equally=5; Both male and female children equally=6; All household members equally=7; water into the dwelling=8 Don't know=9, other=10 (specify.....)	

D5. How is/was the water fetched or carried? (پانی کو کیسے لایا کر لایا ہے/تھے؟)

a. After SRSP scheme * (پانی کو کیسے لایا کر لایا ہے/تھے؟)	b. Before SRSP scheme* (پانی کو کیسے لایا کر لایا ہے/تھے؟)
Codes: On head=1, Hand=2, Donkey=3, Horse=4, Car/jeep=4, Motorcycle/Bicycle=5, Not applicable =6, Other=7 (specify.....)	

D6. Do/did HH use any water treatment method for drinking water?

a. After SRSP scheme * (پانی کو کیسے لایا کر لایا ہے/تھے؟)	b. Before SRSP scheme* (پانی کو کیسے لایا کر لایا ہے/تھے؟)
Codes: None=1, Boil=2, bleach/chlorine/Solar disinfection=3, Strain through cloth=4, water filter=5, Let it stand&settle=6, Other=7 (specify.....)	

D7. Quantity of water used Last week?

Water use (پانی کا استعمال)	d. Total quantity (liters)/week (ایک ہفتے میں استعمال کیے جانے والے پانی کی کل مقدار لیٹروں میں)
1. Drinking and cooking (کھانا پکانے اور پینے کے لیے)	
2. Bathing (نہانے کے لیے)	
3. Laundry etc (if taken to source write N/A) (کپڑے دھونے کے لیے)	
4. Livestock (if taken to the source write N/A) (مال مویشیوں کے لیے)	
5. Other (Specify.....) (دیگر وضاحت کریں)	

D8. What is the frequency of water available to HH? (پانی کی کتنی مقدار گھر میں موجود رہتی ہے؟)

a. After SRSP scheme * (پانی کو کیسے لایا کر لایا ہے/تھے؟)	b. Before SRSP scheme* (پانی کو کیسے لایا کر لایا ہے/تھے؟)
Codes: Full time/24 hours=1; Daily intermittently =2; Alternate days=3; Twice a week=4, Once a week=5; Others=6 (specify.....)	

D9. How satisfied are you with quan/qual. of water provided through CPI?

a. Quantity of water* (پانی کی مقدار*)	b. Quality of water* (پانی کا معیار*)
Codes: Highly satisfied=1; Satisfied=2; Not satisfied = 3	

D10. What is your perception about appearance, taste and smell of water you use from the DWS scheme? (ڈی ڈبلیو ایس اسکیم کے تحت فراہم کیے جانے والے پانی، اس کے ذائقے اور بو کے بارے میں آپ کا کیا خیال ہے؟)

a. Appearance * (پانی کا رنگ ظاہری طور پر کیسا ہے؟)	b. Taste* (ذائقہ*)	c. Odour (Smell)* (بو*)
Clear=1; Muddy=2; Other (specify)=3	Sweet=1; Bitter=2; salty=3; sour=4; Others=5 (specify.....)	Odourless=1, Foul Odour=2, Other=3 (specify.....)

D11. Have any of the household members had the diseases given in D12, in the last three month? (کیا پچھلے تین ماہ میں گھر کے کسی فرد کو نیچے دیے گئے کوئی بیماری لاحق ہوئی ہے؟)

Codes: Yes=1; No=2; Don't know=3
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D12. If yes number of household member in each age category? If no, go to D13.

Age Years (عمر سالوں میں)	a. Diarrhea (دست)	b. Hepatitis (ہیپاٹائٹس)	c. Eye disease (آنکھوں کی بیماری)	d. Gastric disease (پیٹ کی بیماری/گیس کی بیماری)	e. Malaria (ملیریا)	e. Renal/ kidney disease (گردے یا پتے کی بیماری)	g. Typhoid (ٹائیفائیڈ)
1 Upto 5 (۵ سال تک کی عمر)							
2 >5-18 (۵ سے ۱۸ سال تک کی عمر)							
3 >18-24 (۱۸ سے ۲۴ سال تک کی عمر)							
4 >24-55 (۲۴ سے ۵۵ سال تک کی عمر)							
5 >55 (۵۵ سال سے زیادہ کی عمر)							

D13. How much would you like to pay/are paying monthly to access piped water at home? (آپ ماہانہ کے ذریعے پانی حاصل کرنے کے لیے کتنے پیسے ادا کریں گے/کرنا چاہیں گے؟)
Codes: Rs 1-50=1; Rs51-100=2; Rs 101-200=3; Rs 201-300=4; More than Rs300=5; Don't know=6; Nothing=7

**E. Opinion of the respondent about the project impacts**





