



**WINROCK**  
INTERNATIONAL  
Putting Ideas to Work



# BASELINE SURVEY REPORT

Energy Utilization and Demand Baseline Assessment (2009)



Rural Support Program Network  
Head Office, House # 7, Street 49, F-6/4  
Islamabad Pakistan.  
Tel: (+92-51) 2822476, 2821736  
[www.rspn.org](http://www.rspn.org)



Pakistan Domestic Biogas Programme  
Plot #1, Rose Valley,  
Amin Town, Faisalabad.  
Tel: (+92-41) 8850371-3

# Table of Contents

## Executive Summary

### 1 INTRODUCTION 1

1.1	Background .....	1
1.2	Objectives of the Survey .....	1

### 2 SURVEY APPROACH & METHODOLOGY 3

2.1	Approach .....	3
2.1.1	Primary Data Collection Tools.....	3
2.1.2	Sampling Methodology.....	4
2.1.2.1	Sample Size .....	4
2.2	Study Methodology .....	5
2.2.1	Planning Meeting with Client.....	5
2.2.2	Development/Pre-testing/Finalization of Information Collection Tools .....	5
2.2.3	Hiring and Training of Enumerators .....	5
2.2.4	Field Survey .....	5
2.2.4.1	Steps for Selection of Sampled Villages and Households:	5
2.2.4.2	Women's FGDs .....	6
2.2.5	Quality Assurance .....	6
2.2.6	Data Entry/Cleaning/Processing .....	7
2.2.7	Report Writing (First Draft) .....	7
2.2.8	Final Report.....	7

### 3 AREA PROFILE 8

3.1	Sample Population .....	8
3.2	Facilities .....	8
3.2.1	Educational Facilities .....	8
3.2.2	Other Facilities .....	9
3.3	Type of Houses .....	10
3.4	Water Sources.....	11
3.5	Livestock .....	11
3.6	Economic & Community Groups .....	12
3.7	Energy Sources.....	13
3.8	Awareness about Bio-gas and willingness to opt Bio-gas .....	15
3.9	Access to Credit .....	16

### 4 HOUSEHOLD SURVEY FINDINGS 17

4.1	Characteristics of Respondents .....	17
-----	--------------------------------------	----

4.1.1	Age of Respondents.....	17
4.1.2	Respondents Literacy Level.....	17
4.1.3	Respondents Employment Levels.....	18
4.2	Social Characteristics.....	18
4.2.1	Household Type and Size .....	18
4.2.1.1	Family Size	18
4.2.1.2	Age	18
4.2.1.3	Education	18
4.2.1.4	Hours Spent by Children Doing School Work	20
4.2.1.5	Division of Labour in the Household	20
4.2.1.6	Women Mobility	21
4.2.1.7	Decision Making	23
4.2.1.8	Health and Hygiene	24
4.2.1.9	Water Availability	25
4.3	Economic Characteristics.....	27
4.3.1	Household Monthly Income & Expenditure .....	27
4.3.2	Access to Credit .....	28
4.3.2.1	Occupation and Entrepreneurship	29
4.3.2.2	Type and Size of the House	30
4.3.2.3	Livestock and Land Holdings	31
4.3.2.4	Use of Fertilizer	32
4.4	Access and Usage of Energy Sources .....	33
4.4.1.1	Available Energy Sources & Fuel Usage	33
4.4.1.2	Manure Availability and Use	36
4.5	Community Awareness about Bio-Gas .....	37
4.5.1.1	Knowledge of bio-gas and sources of information	37
4.5.1.2	Perception/Views about Bio-gas	37
4.5.1.3	Willingness to Promote Bio-gas	39
5	CONCLUSIONS & RECOMMENDATIONS	40
6	FOCUS GROUP DISCUSSION ON BIOGAS WITH WOMEN – A SUMMARY	42

## Appendix: Tables

### Annexes:

*Annex-1: Survey Tools*



*Annex-2: Women's Focus Group Discussions*



*Annex-3: Faisalabad and Vehari Districts Statistics*



## EXECUTIVE SUMMARY

SNV (Netherlands Development Organization) and Winrock International are providing technical support for launching a national level Pakistan Domestic Bio-gas Program (PDBP) in Pakistan through the Rural Support Program Network (RSPN). RSPN contracted SEBCON to carry out the Energy Utilization of Demand Baseline Amount in order to understand the energy demand and utilization patterns of rural farmers, the project's economic and social impacts, to estimate the impact of the project as economic and social indicators to enable it to measure the market and non-market benefits of domestic gas.

A socio-economic profile of the surveyed areas has been drawn from primary data collected through key informants at the village and household levels. In terms of number of households, the average number of total households per village in Distt. Faisalabad is around 780, and 633 households for Distt./Tehsil Vehari. All villages in both districts have access to electricity and around a fifth have access to water supply in both the districts. Only 20% villages in Distt. Faisalabad have gas in the form of cylinders while none of the villages in Vehari have this facility. Around 4/5th of the villages in both districts have a drainage system, while only 20% villages in Distt. Faisalabad had a bank.

The most common type of house construction was bricked with cement construction in both the districts, Hand-pumps are the main source of water in the villages in Distt. Faisalabad, followed by electric pump. In Vehari, most of the households in the sampled villages used electric pumps as their main source of water, followed by hand-pumps.

Majority of the working population in the villages belonged to agriculture and livestock related professions/occupations. All villages covered in Distt. Faisalabad have access to/availability of dung cakes within their village as a source for fuel (for cooking). The second most accessible energy source was electricity (for lighting purposes), and third was kerosene oil followed by firewood. In Distt. Vehari, all villages have access to dung cakes and electricity as an available energy source within their villages, followed by kerosene oil. Similar results can also be seen in the data from the National Census Report (see annex 4).

Banks were the most popular in both districts and personal loans were the second most accessible source for credit in the Faisalabad region. The main purpose behind the bank loans as well as those from other sources in both districts was for use in agriculture/livestock, while personal consumption/social needs were the main purposes behind the personal loans. The major constraints as cited in both districts included high mark-up rates as well as no collateral.

As part of the Baseline Assessment a survey was also conducted at the household (HH) level at each of the sampled villages in both districts, one component consisting of interviews with head of households and the other component consisting of interviews with female respondents. According to the women's responses in both districts, most of the domestic work was the women's responsibility with the help of the female child in some cases. The outside work was chiefly carried out by the men with the help of the male child in some cases. The results were again very similar for both the districts in terms of the average number of hours spent on the various tasks identified. Cooking and cleaning the house took around 3.5 hours, while making dung cakes took just over an hour, as did caring for children. Comparatively, the men spent

around 21/2 hours involved in agriculture or livestock, wood collection or preparation, and around an hour in buying food or social activities.

In terms of mobility, majority of the women faced few constraints and were quite free to move around for various purposes, and the women confirmed this in the FGDs as well. Work was the most common purpose for going out of the house with an average of 35% citing this as their main reason in Faisalabad, and 40% for Vehari. Most of the women in both districts were not accompanied by anybody when going out but sometimes they were accompanied by either a young male member of the household or an adult male or the HoHH.

Men dominated by being the main decision-makers in most areas, making decisions regarding agriculture, livestock, and purchase and sale of assets. Decisions about children's education were jointly made, as were decisions about health, marriage and other social areas. According to the observations made by the interviewers in the women's survey, overall cleanliness in the houses ranged from good to fair for majority of the houses surveyed in both the districts. Regarding the health of women involved in cooking in the households, the health status ranged from good to fair in both districts.

Food constituted the largest proportion of average monthly expenditure for both districts, and this was followed by transport, and electricity took up 8% of the average monthly expenditure for both the districts. Expenditure on other sources of fuel amounted 5% of the total for Faisalabad, while in Vehari it amounted to 3.8%. The available energy sources at present include firewood, crop residue/grass, dung cakes, kerosene oil, coal, LPG, and electricity. Firewood is the most used form of fuel for cooking, followed by dung cakes, and LPG in both districts.

The average daily production of manure across the surveyed households in Distt. Faisalabad is 83 Kg, whereas it is 111 Kg for Vehari. The most common uses of manure across Faisalabad region are for composting and burning, whereas for Vehari the most common use is for burning followed by composting.

According to the responses from the male FGDs, there is quite a high level of awareness about bio-gas as an alternate source of energy in both the districts, with most of those aware of bio-gas in Faisalabad district hearing about it from friends, relatives and other villagers. The majority of communities in both districts are of the opinion that communities with livestock would like to opt for bio-gas as an alternate source of energy. On the other hand, the HH survey results are quite different from the FGD responses. Only about a third of the HH survey respondents in both districts are aware about bio-gas, the majority hearing about it through friends/relatives. Only a third of those aware of bio-gas have ever seen a bio-gas plant. Among the women, less than a fifth had heard about bio-gas as an energy source. There is a strong willingness to opt for bio-gas for their houses, with 60% of men and women willing to do so in both districts. The most obvious benefit of bio-gas as perceived by 93% of the women surveyed in Faisalabad Distt. and 95% in Vehari is the fact that it is time-saving. This was followed by the fact that it's a healthier source of energy and is also more cost efficient, opinions most likely based on second-hand information from those who are aware of bio-gas technology.

56% of the women in both districts would like to opt for bio-gas but the initial high cost of set-up was considered as a major source of constraint and hindrance, saying the men would never agree to spending so much. 83% of the women in both districts identified the HoHH as the person who will decide whether or not to opt for bio-gas. The fact that some of the villages would eventually be supplied with much-awaited sui-gas, there are those who don't see any point in spending on bio-gas. This seems to be more of a hope than a fact, if they live in remote villages. It would be useful to add this observation. Around 63% of the female respondents in both districts cited self-financing as the primary source of financial arrangements for bio-gas. Similar figures resulted in the general survey findings as well, with 70% of the respondents identifying personal savings as the main source for financing the construction of a bio-gas plant. There is nevertheless a strong willingness among the women to setup bio-gas plants. They feel women should be made responsible for the repair and maintenance of bio-gas plants in order to ensure the project's sustainability and better results.

## 1 INTRODUCTION

### 1.1 Background

The development and exploitation of bio-gas sources can provide a sustainable solution to growing energy demands. Utilization of bio-gas will not only reduce dependence on expensive (and fast rising cost) of fossil fuel, but will enhance environmental quality and provide better opportunities for agriculture production. Other benefits are improved health and sanitation.

The Government of Pakistan plans to electrify 7000 remote villages (to serve 10 million citizens) in Pakistan using off-grid renewable energy technologies including use of Bio-gas. The potential for Bio-gas can be assessed by the fact that Pakistan has an estimated 24 million buffaloes and 22 million cattle. The largest member of this livestock is located in mid and south Punjab.

The key factors in making the bio-gas project successful are;

- Economic perception and realities of the farmers.
- Access to technical resources.
- Bio-physical resource appropriate to the technologies being used and
- Effective leadership especially at the initial stage.

SNV (Netherlands Development Organization) and Winrock International are providing technical support for launching a national level Pakistan Domestic Bio-gas Program (PDBP) in Pakistan through the Rural Support Program Network (RSPN). Over a period of four years the program targets to construct 30,000 domestic bio-gas plants. RSPN contracted SEBCON to carry out the Energy Utilization of Demand Baseline Amount in order to understand the energy demand and utilization pattern of rural farmers, the projects economic and social impacts, to estimate the impact of the project as economic and social indicators to enable it to measure the market and non-market benefits of domestic gas.

### 1.2 Objectives of the Survey

The Baseline Assessment is part of the Monitoring & Evaluation Framework of the PDBP. The Framework envisages that evaluations will be conducted as i) Baseline (at the start of the project), ii) User surveys (at the end of year 1 to year 3), and iii) Final (at the end of year 4). Study and sample designs of the Baseline Assessment will enable comparisons of the baseline information with user surveys and the Final Assessment. Important gender mainstreaming indicators are also a part of the Baseline Assessment design and the methodology is gender inclusive and friendly.

The study would assist RSPN in estimating and studying the change in energy utilization and demand patterns for a rural household after it has installed and operated a domestic biogas plant for a significant period of time (2 years or more). In addition, it would also help to estimate the impact of installing a domestic biogas plant on economic and social indicators such as income levels, energy & other expenditures, health & sanitation, social status of women in a

household, time utilization, etc. Thus, this survey would be very instrumental in measuring the market & non-market benefits of domestic biogas.

An indicative list of variables on which information is required is listed below:

- 1) What energy sources (firewood, dung patties, agri residue, LPG, candles, kerosene and/or electricity) do the households currently use for cooking, lighting, heating, entertainment (TV and radio) and in what quantities for what purposes?
- 2) Is electricity available? For how many hours per day? How far away is the nearest Sui Gas pipeline? How far is the LPG, kerosene, firewood dealer? In case of firewood do they collect it for free (from where, how far) or buy (at what rate)?
- 3) Annual household expenditure with special focus on fuel consumption and expenditure (by fuel and in standardized units of consumption).
- 4) Annual household income from agriculture, employment, rents, remittances and other income generating sectors – this information can be triangulated from surveys such as Pakistan Integrated Household & Income Surveys
- 5) Households perceptions about success of biogas plants and their willingness to pay
- 6) Household member data by age, sex and relationship to the head of household. Education level of household members, number of hours spent by girls and boys doing school work.
- 7) The general division of labor in the household between women, men and girls and boys.
- 8) Work load analysis (economic & social) of the women and girls in the households; average time per day spent accomplishing various tasks including fuel collection, cooking, cleaning, etc.
- 9) Cleanliness level of kitchen & utensils with different fuel types being used
- 10) Cases of respiratory, digestion, eye, etc related diseases in a family especially in women and children
- 11) Number of animals in the household (dairy, non-dairy, sedentary, mobile)
- 12) Current use of animal manure (amount used for burning, fertilizer, composting, etc)?
- 13) Use of manure and commercial fertilizer in farming (types and quantities)
- 14) Households' knowledge of biogas plants
- 15) What are the views of men and women on the value of the proposed energy technology and what are their priorities?
- 16) Availability of credit with source and utilization? Willingness to go for a credit?



## 2 Survey Approach & Methodology

### 2.1 Approach

A baseline survey greatly supports project in efficient and effective planning, monitoring and evaluation of a project. Thus a clear and mutual understanding among the project and consultant over the project progress and performance and impact indicators is very necessary in order to obtain relevant and useful primary data. Therefore SEBCON kept a close liaison with the client throughout the course of this assignment.

SEBCON approached the study by firstly apprehending in detail the project expectations from the baseline survey and making further SMART the following indicators that the survey intended to cover:

- Socio-economic indicators (income & expenditure / education / health & sanitation)
- Demographic indicators
- Infrastructure
- Gender
- Energy – sources
- Livestock / Agriculture

The socio-economic analysis covered the following;

- Socio-economic profile of the village including information, age, gender, education (structure), number of HHs, education & culture facilities, economic activities, luxuries, employment, poverty, decision making at HHs level.
- Perceived social & economic benefits of bio-gas – economic (expenditures), health environment and impact on agriculture production by increased availability of manure.
- Willingness to pay including capacity to pay and the number of such households in the villages.
- Access to credit both formal & informal.
- Institutional arrangements – if any NGO is operational in the target area. Not clear

#### 2.1.1 Primary Data Collection Tools

Based on the final list of indicators, in close consultation with RSPN (including a gender expert), the following four tools (see annex-1 for details) were developed to collect quantitative and qualitative data:

- 1) Village Profile [to study the general characteristics of the village which mainly included housing, population, access to facilities, livelihood, livestock, available energy sources, awareness about bio-gas, available credit sources, sources of information].
- 2) Household Questionnaire [the questionnaire included socio-economic characteristics of the sample HHs. The information collected through this questionnaire comprised type,

size and ownership of house; water sources, division of labour in the household, education and employment; use of energy sources, awareness and perception about change in forests in the surrounding areas; livestock and agricultural land, use of manure; HH income and expenditure; awareness about and willingness to opt bio-gas; health; credit; and decision making]

- 3) Women's Questionnaire [the questionnaire was designed to capture women's perspective about some specific issues which included division of labour; sources of water, women's mobility, cooking places and type of fuel used for cooking; women's education; children's schooling; health, awareness about bio-gas; decision making; livestock management, and hygienic conditions of the house]
- 4) Women's FGD Checklist [awareness, perceptions and willingness regarding bio-gas; women's mobility; decision making; empowerment; and possibility of women's involvement in promoting bio-gas in the area]

### 2.1.2 Sampling Methodology

As suggested in the ToRs, the survey was conducted in Faisalabad and Vehari districts of the Punjab province. Faisalabad was the intervention group while Vehari the control group for the study, again based on RSPN requirements as outlined in the TORs.

A total of 21 villages were surveyed in the baseline study. 8 villages in Samundri and 7 in Jaranwala Teshils of District Faisalabad were randomly selected for the survey as the intervention group (project focus group), whereas 6 villages from Vehari Tehsil were randomly surveyed as the control group. The sampled villages of Faisalabad district were located on an average distance of 16 km from their respective tehsils, while the average distance of the sampled villages of Vehari from the nearest main town was 9 km.

#### 2.1.2.1 Sample Size

Considering the time and cost limitations, about 20 randomly selected HHs from each sampled village were considered representative of the Samundari and Jaranwal Teshils and sufficient to provide valid estimates of the desired indicators, thus at 95% confidence level and around confidence interval of 6, a sample of 300 HHs from the two tehsils of Faisalabad district and 120 HHs from Vehari district were interviewed.

Placed below is the formulas used in our Sample Size Calculation.

Sample Size

$$SS = \frac{Z^2 * (p) * (1-p)}{c^2}$$

Where:

Z = Z value (1.96 for 95% confidence level)

p = percentage picking a choice, expressed as decimal  
(.5 used for sample size needed)

c = confidence interval, expressed as decimal (.06 = ±6)

Two-stage sampling method was used in the survey. At the first stage the required sample of villages was randomly selected while in the second stage eligible HHs were selected for the HH survey.

## **2.2 Study Methodology**

### **2.2.1 Planning Meeting with Client**

Although the ToRs broadly explained the scope of work, yet before starting work on the aforesaid tasks, mentioned in ToRs as well, a planning meeting with the client was held. In the meeting the consultants shared their planning with RSPN. It helped both the parties get a better understanding of the assignment.

### **2.2.2 Development/Pre-testing/Finalization of Information Collection Tools**

After the meeting with the RSPN team, SEBCON developed the survey data collection tools which included two household questionnaires (household questionnaire and women's questionnaire), village profile checklist and the checklist for the Women's Focus Group Discussions. The women's FGD checklist was prepared at RSPN. These draft tools were shared with the RSPN team and management to get their feedback. The approved questionnaires and checklists were finalized after pre-testing.

### **2.2.3 Hiring and Training of Enumerators**

Two teams comprising five members each (two males and three females) were hired for the HH survey. The minimum academic qualification of graduation and previous experience of survey, especially in similar cultural and geographical communities were given preference in the selection of the field teams. However, for maximal output, a training session was conducted for the enumerators' team. A survey guide was developed and fine tuned which directed the team throughout the survey and provided basic information and instructions.

### **2.2.4 Field Survey**

The field survey was directed and guided by a plan shared and submitted to the RSPN prior to the deployment of the team. One village was covered by one team daily, besides development of the village profile.

#### **2.2.4.1 Steps for Selection of Sampled Villages and Households:**

- 1) 15 villages (8 from Samundri & 7 from Jaranwala Tehsils) from the Faisalabad district villages list, and 6 villages from Vehari district list were randomly selected using the list of villages available on the Website of the Faisalabad District Government and 1998 Census Report of Vehari District. Before the household survey, it was ensured through phone calls and physical visits to the selected villages before the field survey that these villages do not, currently or in the near future, have access to sui-gas.

- 2) In each selected village, with the help of the villagers, a sample of 20 eligible HHs (who have two or more buffaloes/cows/large ruminants) was randomly picked for the HH survey.
- 3) In each sampled household, both household and women's questionnaires were filled.

**Table A: List of Sampled Villages and # of HHs Covered in the Survey**

District	Tehsil/Vilalge	Houshold Questionnaire	Women Questionnaire	Village Profile	Women FGD
Faisalabad	<b>Jaranwala</b>				
	Chak 030 GB	20	20	1	0
	Chak 064 GB	20	20	1	0
	Chak 067 RB	20	19	1	1
	Chak 101 GB	20	20	1	1
	Chak 105 RB	20	20	1	0
	Chak 280 GB	20	20	1	1
	Chak 626 GB	20	20	1	1
	<b>Total</b>	<b>140</b>	<b>139</b>	<b>7</b>	<b>4</b>
	<b>Samundari</b>				
	Chak 048 GB	20	20	1	1
	Chak 168 GB	20	20	1	0
	Chak 172 GB	20	20	1	1
	chak 206 GB	20	19	1	0
	Chak 445 GB	20	20	1	1
	Chak 475 GB	20	20	1	0
	Chak 485 GB	20	19	1	0
	Chak 527 GB	20	20	1	0
	<b>Total</b>	<b>160</b>	<b>158</b>	<b>8</b>	<b>3</b>
Vehari	<b>Vehari</b>				
	Chak 005 WB	20	20	1	0
	Chak 053 WB	20	20	1	1
	Chak 075 WB	21	20	1	0
	Chak 097 WB	19	20	1	0
	Chak 216 EB	20	20	1	1
	Chak 228 EB	20	19	1	1
	<b>Total</b>	<b>120</b>	<b>119</b>	<b>6</b>	<b>3</b>
<b>Total</b>	<b>420</b>	<b>416</b>	<b>21</b>	<b>10</b>	

#### 2.2.4.2 Women's FGDs

In every second sampled village, Women's FGDs were conducted by SEBCON's gender experts/Survey Team Leaders with an average of eight women per FGD.

#### 2.2.5 Quality Assurance

The Field Team Supervisor rechecked and reviewed all the questionnaires before leaving the villages to ensure accuracy and quality of the data collected. SEBCON's monitoring expert also joined the survey team in their first day field work and oversaw the field consultation process. A

review meeting was held on the completion of the first day field work in order to ensure that all the survey teams understood the questionnaire perfectly and carried out the HH interviews according to the survey guidelines.

### **2.2.6 Data Entry/Cleaning/Processing**

SEBCON has an in-house data entry staff and the required data entry hardware. The data analyst supervised data entry and carried out data cleaning by using different tests like range tests, etc., to ensure accuracy of data.

### **2.2.7 Report Writing (First Draft)**

A draft report has been developed on an agreed format highlighting the major findings of the baseline survey. The report follows the format indicated in the ToRs. The draft will be shared with the RSPN to get their feedback and comments, which will be incorporated in the Final Draft.

### **2.2.8 Final Report**

After the feedback and comments of the client, the required changes will be made to the report and a final version of the assessment report will be submitted to the RSPN. Baseline survey material and filled questionnaires will be submitted to the client once they have accepted the Final Report.

### 3 AREA PROFILE

A socio-economic profile of the surveyed areas has been drawn from primary data collected through key informants at the village level, providing us with information regarding the demographic and general social characteristics of the villages in the surveyed areas. The fact that there is a control group of 6 villages (in District Vehari) as well as a project focus/intervention group of 15 villages (in District Faisalabad) being covered by the survey, will allow interesting comparisons to be made with indicative results. This Area Profile has been based on information gathered at a village-level scale through a group of representatives of the community as a whole and do not necessarily reflect the characteristics at the household level. Supporting data on various indicators has also been extracted from the National Census Report 1998 and is attached as Annex 4

#### 3.1 Sample Population

As reported by the respondents interviewed, in terms of number of households, the average number of total households per sample village in Distt. Faisalabad is around 780 (600 for villages in Jaranwala Tehsil, and 938 for Samundri Tehsil), and it is 633 households on average for Distt./Tehsil Vehari. Population-wise the average total population in the sample village including children is 5,926 for Distt. Faisalabad (4324 for Jaranwala and 7337 for Samundri), and 4950 for Vehari.

**Table 3.1: Average # of HHs and Population in Sampled Villages**

Description	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundri	Total	
	Numbers			
Houses	600	938	780	633
Population	4,314	7,337	5,926	4,950

Source: EUDBA Survey, Group Discussion

#### 3.2 Facilities

##### 3.2.1 Educational Facilities

Based on FGD findings, in terms of education in District Faisalabad, there are separate primary schools for girls and boys in 86.7% of the communities, and a co-education primary school in 53.3% of the communities. There is no middle school for boys in any of the communities, while there is a middle school for girls in 53.3%, and a co-education middle school in 26.7% of the communities. There is a high school for boys in 40% of the communities, for girls in 13.3%, and a co-educational in 13.3% (only one village). Only 13.3% of the communities have a girl's college and 6.7% a co-education college. There are no technical institutes for either girls or boys in any of the villages. (Source: EUDBA Survey, Group Discussion)

In District Vehari the figures are comparatively lower, with separate primary schools for girls and boys respectively in 16.7% and 33.3% of the communities, and a co-education primary school also in 16.7% of the communities. There is a middle school for boys in 50% of the communities, while there is a middle school for girls in 66.7%, and no co-educational middle schools in any

community. 16.7% of the communities have separate high schools for boys and girls, and no co-educational ones. None of the communities have any girls or co-education colleges, and only 16.7% have technical institutes for girls and boys.

**Table 3.2: Details of Educational Institutes in Villages**

Types of Institutes	Project Focus Area: Faisalabad									Control Area Vehari		
	Jaranwala			Samundari			Total			Boys	Girls	Joint
	Boys	Girls	Joint	Boys	Girls	Joint	Boys	Girls	Joint			
<b>Percentages</b>												
Primary	86	86	43	88	88	63	87	87	53	33	17	17
Middle	0	57	14	0	50	38	0	53	27	50	67	0
High	14	0	14	63	25	13	40	13	13	17	17	0
College	0	0	0	0	25	13	0	13	7	0	0	0
Technical/Vocational	0	0	0	0	0	0	0	0	0	0	0	17
<b>Number of Villages</b>	<b>7</b>			<b>8</b>			<b>15</b>			<b>6</b>		

Source: EUDBA Survey, Group Discussion

### 3.2.2 Other Facilities

Regarding availability of other services/facilities in the sampled villages, all the villages covered in both districts have access to electricity and shops. 20% on average per village have access to water supply (i.e. connections to the direct government water supply scheme) in Distt. Faisalabad, whereas this figure is 17% for Distt. Vehari, with the remaining relying on water from private sources such as wells or tube-wells, etc., (as detailed later on in section on Water Sources).

The average distance from the villages in Tehsil Jaranwala to the tehsil headquarters is 18KM, and the average distance to the district headquarters of Faisalabad is 33.3KM. The average distance for villages in Tehsil Samundri to tehsil and district headquarters is 14.6KM and 47.3KM respectively. Vehari being the tehsil as well as district headquarters, the average distance from the villages is 8.8KM.

**Table 3.3: Average Distance (KM) from Tehsil/District Headquarter**

Description	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundri	Total	
	KM			
Tehsil Headquarter	18.0	14.6	16.2	8.8
District Headquarter	33.3	47.3	40.7	8.8

Source: EUDBA Survey, Group Discussion

Only 20% villages in Distt. Faisalabad have gas in the form of cylinders while none of the villages in Vehari have this facility. 80% of the villages in Distt. Faisalabad and 83% in Vehari have some sort of a drainage system in the villages and 63% villages in Faisalabad and 65% in Vehari have paved streets. 93% on average per village have paved roads in Distt. Faisalabad, whereas 100% have them in Distt. Vehari. 67% of the villages in both districts have telephone lines, while 87% of the villages around Faisalabad and 83% around Vehari have PCOs as well. 53% villages in Distt. Faisalabad and 33% in Vehari have post offices, while only 20% villages in Distt. Faisalabad have a bank. 47% and 33% of the villages in Faisalabad and Vehari

respectively have hospitals. 33% of the villages in both districts have bus stops while none of the villages have any market/mandi or are near any major town.

**Table 3.4: Available Services/Facilities**

Type of Facility	Project Focus Area: Faisalabad						Control Area Vehari	
	Jaranwala		Samundari		Total		In Village (%)	Distance (KM) (Outside Village)
	In Village (%)	Distance (KM) (Outside Village)	In Village (%)	Distance (KM) (Outside Village)	In Village (%)	Distance (KM) (Outside Village)		
Hospital*	29	2.8	63	3.3	47	3.0	33	4.5
Nearest town	0.0	11.8	0.0	10.8	0.0	11.2	0.0	7.3
Market/Mandi	0.0	12.6	0.0	12.1	0.0	12.4	0.0	8.8
PCO	71	10.0	100	0.0	87	10.0	83	3.0
Post Office	57	3.3	50	6.3	53	5.0	33	7.3
Bank	14	6.1	25	5.3	20	5.7	0	5.4
Bus Stop	29	2.5	38	4.1	33	3.3	33	1.0
Shops	100	0.0	100	0.0	100	0.0	100	0.0
Paved Road	86	2.0	100	0.0	93	2.0	100	0.0
Electricity	100	0.0	100	0.0	100	0.0	100	0.0
Cylinder Gas	14	6.4	25	7.2	20	6.8	0	6.3
Telephone	43	8.8	88	3.0	67	7.6	67	2.5
% Street(Paved)	44	0.0	79	0.0	63	0.0	65	0.0
Water Supply	14	2.0	25	3.8	20	3.3	17	7.5
Drainage System	57	0.0	100	0.0	80	0.0	83	0.0
# of Villages	7		8		15		6	

\* BHU/RHC/THQ/HDQ/MD/Private Hospital/Quake  
Source: EUDBA Survey, Group Discussion

### 3.3 Type of Houses

Type/construction of house is an important indicator for estimating economic status of the target area. The most common type of house construction is bricked with cement construction in both the districts (with an average of 67.8% houses in villages in Faisalabad and 52.5% in Vehari), followed by mixed (19.9% on average in Faisalabad and 37.5% in Vehari), and bricked with mud (12.5% in Faisalabad and 10% in Vehari).

**Table 3.5: Type of House Construction**

Description	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundri	Total	
	Percentages			
Bricked/Mud	8	17	13	10
Bricked/Cement	63	72	68	53
Mixed	29	12	20	38
Total	100	100	100	100

Source: EUDBA Survey, Group Discussion



### 3.4 Water Sources

Hand-pumps are the main source of water for 69.3% of houses on average in the villages in Distt. Faisalabad, followed by electric pumps in 24% of the houses on average, while none of the houses in Tehsil Jaranwala have access to piped water and only 12.5% have access in Tehsil Samundri. In Vehari, 69.2% of the households in the villages on average use electric pumps as their main source of water, followed by hand-pumps by 17.5%, and piped water by 13.3%.

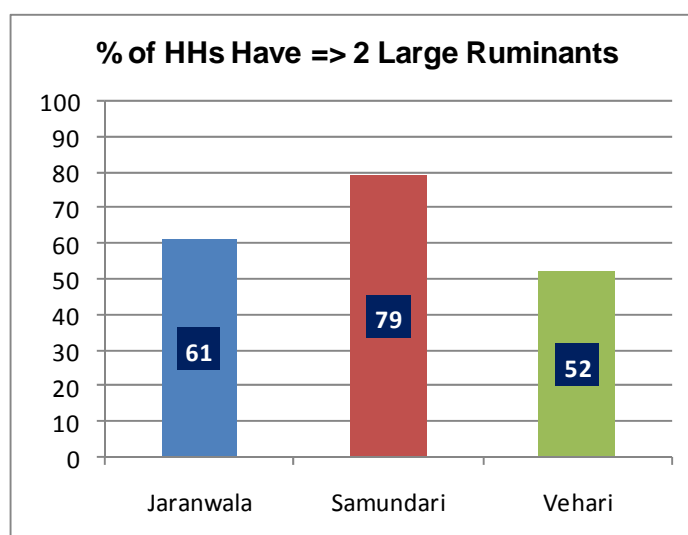
**Table 3.6: Water Sources (% of house)**

Source	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundri	Total	
	Percentages			
Hand pump	74	65	69	18
Piped Water	0	13	7	13
Electric Pump	26	23	24	69
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: EUDBA Survey, Group Discussion

### 3.5 Livestock

Villages in Distt. Faisalabad have an average of 554 households having 2 or more large ruminants (an average of 364 for villages in Jaranwala and 743 in Samundri), whereas Vehari has an average of 326 households.



In terms of the average number of livestock in the sampled villages, Tehsil Samundri relatively has higher averages for almost all categories of animals in the villages than Tehsil Jaranwala (see Table 3.7). The average number of bulls/ox in the villages in Distt. Faisalabad is around 307 (an average of 312 in villages in Jaranwala, and 302 in Samundri), compared to an average

of 203 in Vehari. The average number of buffalos is 2183 in Distt. Faisalabad (1050 in Jaranwala and 3175 in Samundri), compared to 1267 in Vehari. The average number of cows is 372 in Distt. Faisalabad (129 in Jaranwala and 585 in Samundri), and it is 265 in Vehari. The average for sheep/goats is 2347 in Distt. Faisalabad (973 in Jaranwala and 3550 in Samundri), whereas it is 1108 in Vehari.

**Table 3.7: Average Number of Livestock Per Sampled Village**

Type of Animal	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundri	Total	
	Numbers			
Bull/Ox Adult	124	116	120	80
Bull/Ox Young	188	186	187	123
<i>Bull/Ox Total</i>	<b>312</b>	<b>302</b>	<b>307</b>	<b>203</b>
Buffalo Adult	650	1,963	1,350	867
Buffalo Young	400	1,213	833	400
<i>Buffalo Total</i>	<b>1,050</b>	<b>3,175</b>	<b>2,183</b>	<b>1,267</b>
Cow Adult	59	370	225	162
Cow Young	71	215	148	103
<i>Cow Total</i>	<b>129</b>	<b>585</b>	<b>372</b>	<b>265</b>
Sheep/Goat Adult	429	1,744	1,130	567
Sheep/Goat Young	544	1,806	1,217	542
<i>Sheep/Goat Total</i>	<b>973</b>	<b>3,550</b>	<b>2,347</b>	<b>1,108</b>
Horse Adult	2	10	7	9
Horse Young	3	1	2	1
<i>Horse Total</i>	<b>6</b>	<b>11</b>	<b>8</b>	<b>9</b>
Donkey Adult	67	150	111	67
Donkey Young	109	70	88	30
<i>Donkey Total</i>	<b>176</b>	<b>220</b>	<b>199</b>	<b>97</b>

Source: EUDBA Survey, Group Discussion

### 3.6 Economic & Community Groups

Majority of the working male population in the surveyed villages belongs to agriculture and livestock related professions/occupations, with an average of 67% for Distt. Faisalabad and 75% for Vehari, followed by 'employment' (Govt and private) for Faisalabad (14%) and 'unskilled worker/daily wager' for Vehari (13%). The FGD results indicate that 15% of the female population is involved in agriculture and livestock related work and similarly 15% female are worked as daily wager.

**Table 3.8: Major Economic Groups of the Village**

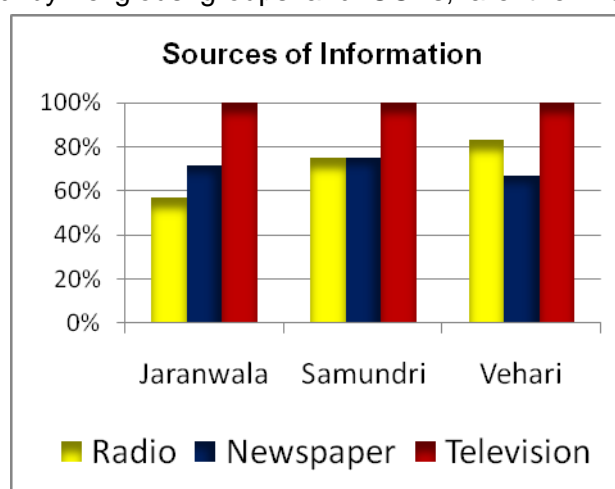
Economic Groups	Project Focus Area: Faisalabad										Control Area Vehari	
	Jaranwala			Samundri			Total					
	Percentages (multiple response)											
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Agriculture/Livestock	69.3	56.6	12.7	65.0	44.2	20.8	67.0	50.6	16.4	75.2	65.1	10.0
Unskilled Worker	11.6	9.0	2.5	10.1	8.1	2.0	10.8	8.5	2.3	12.5	7.9	4.6
Construction related Skills	4.0	4.0	0.0	3.4	3.4	0.0	3.7	3.7	0.0	1.4	1.4	0.0
Overseas	0.4	0.4		0.7	0.7		0.5	0.5		0.9	0.9	
Employment	12.4	12.0	0.4	14.8	14.2	0.5	13.6	13.2	0.4	5.2	4.6	0.6
Self Employee	4.1	4.0	0.0	4.6	4.6	0.0	4.3	4.3	0.0	2.3	2.3	0.0

Source: EUDBA Survey, Group Discussion

Distt. Faisalabad has a higher number of community organizations functional in the villages than Distt. Vehari. Political groups (in 40% of the villages covered) are the most popular followed by CCBs/CBOs and religious groups (both in 33% villages). Distt. Vehari only has religious groups functioning in 50% of the villages, followed by CCBs/CBOs in 16.7% of the villages.

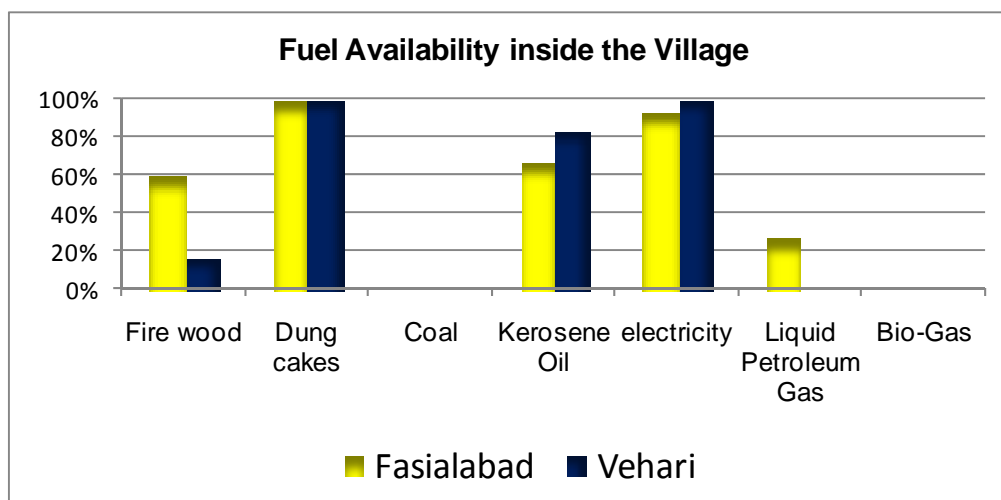
In Distt. Faisalabad, political groups followed by religious groups and CCBs, are the most popular forums in priority order at which the male villagers generally discuss community-level issues. In Vehari, religious forums are the most commonly used platform followed by CCBs.

The most popular source of information for communities in Distt. Faisalabad is television (for 100% of communities), followed by newspaper (73.33%), and radio (66.67%). Television is the most popular for 100% of the communities in Vehari as well, followed by radio (83.33%), and newspaper (66.67%).



### 3.7 Energy Sources

All fifteen villages covered in Distt. Faisalabad have access to/availability of dung cakes within their village as a source for fuel (mainly for cooking and heating) and none have access to bio-gas as an energy source. The second most accessible energy source is electricity (used for lighting), with 14 villages having electricity in households. Third was kerosene oil (10 villages), followed by firewood (9 villages). Only four villages have access to Liquid Petroleum Gas (LPG) within their villages, while three have access to crop residue and grass as an alternate energy source, and coal is not available within any of the villages.



In Distt. Vehari, all six villages have access to dung cakes (for cooking and heating) and electricity (for lighting) as an available energy source within their villages, followed by kerosene oil available at five of the villages. Only one village has access to fire wood within the vicinity, while none of the villages have crop residue/grass, coal, LPG, or bio-gas available within their villages as an alternate energy source.

For fuel sources accessible outside the villages in Distt. Faisalabad, the average distance travelled is 2.92 KM for fire wood, 8.40KM for coal, 8KM for kerosene oil, and 6.50KM for LPG. For fuel sources accessible outside the villages in Distt. Vehari, the average distance travelled is 4KM for fire wood, 6KM for coal, and 6.33KM for LPG.

**Table 3.9: Average Distance Travelled to Access Fuel**  
(Villages where fuel not available in the village)

Type of Fuel	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundri	Total	
	KM			
Fire wood	3.13	2.50	2.92	4.00
Coal	3.00	9.75	8.40	6.00
Kerosene Oil	3	13	8	.
Liquid Petroleum Gas	6.42	6.60	6.50	6.33

Source: EUDBA Survey, Group Discussion

The average prices in Distt. Faisalabad for the various fuel sources are Rs.231.3/maund (1 maund = 40 kg) for firewood, just under Rs.1 per dung cake, almost Rs.21.7/kg for coal, Rs.67.9/litre for kerosene oil, Rs.5.6/unit for electricity, and Rs.74.7/kg for LPG.

The average prices in Distt. Vehari are comparatively higher for the various fuel sources, with Rs.279.2/maund for firewood, just under Rs.1 per dung cake, Rs.22/kg for coal, Rs.74/litre for kerosene oil, Rs.7/unit for electricity, and Rs.83/kg for LPG.

**Table 3.10: Average Price\* of Fuel  
(Villages where fuel not available in the village)**

Type of Fuel	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundri	Total	
	Rs			
Fire wood (Rs/Maund**)	245.7	218.8	231.3	279.2
Crop residue/grass (Rs/Kg)	.	.	.	.
Dung cakes (Rs/#)	0.9	0.9	0.9	0.9
Coal (Rs/Kg)	20.0	22.5	21.7	22.0
Kerosene Oil (Rs/Liters)	68.0	67.9	67.9	74.0
Electricity (Rs/Units)	5.4	5.8	5.6	7.0
Liquid Petroleum Gas (Rs/Kg)	72.3	77.1	74.7	83.0

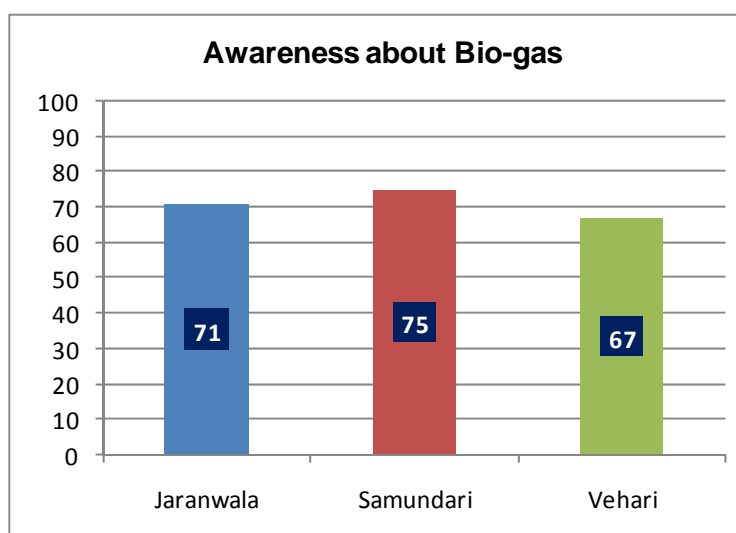
Source: EUDBA Survey, Group Discussion

\*Average of prices at the time of survey October 2009

\*\*1 Maund = 40KG

### 3.8 Awareness about Bio-gas and willingness to opt Bio-gas

There is quite a high level of awareness about bio-gas as an alternate source of energy in both the villages, with 73.3% of the villages aware in Distt. Faisalabad and 66.7% of the villages in Distt. Vehari. 45.5% of those aware of bio-gas in Faisalabad district had heard about it from friends, relatives and other villagers, while the figure for the same category stood at 50% for villages in Vehari, while 25% in the area had also heard about bio-gas through NGOs/projects. Whether anybody had tried to obtain information regarding establishment of bio-gas at the domestic level, person(s) in only 33.3% of the villages had tried in Faisalabad, while the figure is even lower for villages in Vehari with 16.7%.



Only one villager from the communities covered by the village profile survey in Distt. Faisalabad and one in Vehari have tried to establish a bio-gas plant. The major reason cited for not being able to establish more bio-gas plants include lack of sufficient information to help make a decision (according to 43% of the village in Faisalabad district, and 40% in Vehari).

However, the majority of male FGD respondents in both districts (80% in Faisalabad, and 83% in Vehari) are of the opinion that communities with livestock would like to opt for bio-gas as an alternate source of energy. However, the HH survey response was slightly different from the FGDs findings. About 70% male respondents in both districts were willing to opt for bio-gas as an alternate source of energy while 57% women in district Faisalabad and 54% in district Vehari were in favor of this option.

### 3.9 Access to Credit

Regarding the available credit sources for the villagers in terms of the maximum amount allowed, banks are the most popular credit-lending source in both districts with an average credit limit of Rs. 105,928 for Distt. Faisalabad (Rs. 37,166 for villages in Tehsil Jaranwala, and Rs. 157,500 for villages in Samundri), and an average credit limit of Rs. 62,500 for villages in Distt. Vehari. Personal loans are the second most accessible source for credit in the Faisalabad region with an average limit of up to Rs. 17,143 (Rs. 10,000 for villages in Jaranwala, Rs. 26,666 in Samundri). NGOs are the second and personal loans the third most accessible sources of credit for villages in Vehari with an average limit of up to Rs. 20,000 for both. Informal sources came in third for villages in Faisalabad with a credit limit of up to Rs. 50,000.

**Table 3.11: Available Credit Sources and Average Credit Amount (Multiple Responses)**

Source	Project Focus Area: Faisalabad						Control Area Vehari	
	Jaranwala		Samundari		Total		Amount(Rs)	% of Villages
	Amount(Rs)	% of Villages	Amount(Rs)	% of Villages	Amount(Rs)	% of Villages		
Bank	37,167	6	157,500	8	105,929	14	62,500	4
Cooperatives	.		50,000	1	50,000	1	25,000	1
NGOs	.		15,000	2	15,000	2	20,000	3
Personal Loan	10,000	4	26,667	3	17,143	7	20,000	2
Informal Source	50,000	1	50,000	3	50,000	4	50,000	1
Money Lenders	.		50,000	1	50,000	1	.	

Source: EUDBA Survey, Group Discussion

In both districts, the bank loans as well as credit from other sources are mainly used for agriculture/livestock, while personal loans are mainly used for personal consumption/social needs. Villagers in both districts cited high mark-up rates as well as no collateral as major constraints in obtaining loans.

## 4 HOUSEHOLD SURVEY FINDINGS

In addition to the Village Profile of both districts, a survey was conducted for a Baseline Assessment at the household (HH) level at each of the villages in the controlled group of six villages in Distt. Vehari as well as the intervention group of 15 villages across two tehsils (Jaranwala and Samundri) in Distt. Faisalabad. In each selected village, a list of all the eligible HHs (who have two or more buffalos/cows and have a bio-gas unit installed) was prepared with the help of the villagers. Using the HH list a sample of 20 HHs in each village was randomly picked for the HH survey, thus 300 HHs from Faisalabad district and 120 HHs from Vehari district were interviewed.

There were two components to the survey questionnaire – the general household questionnaire filled with responses from the male head of HH (HoHH), and the other a women’s questionnaire filled with responses from the spouse of the HoHH. Because of the different size and nature of the samples used in both the components of the survey, there may be variation in the responses to some of the indicators and it is not necessary they will reflect the exact same trends. The same will be the case when comparing the responses from this survey with the information gathered in the Area Profile, as the information has been collected from two different sources i.e. group interviews and individual interviews.

### 4.1 Characteristics of Respondents

#### 4.1.1 Age of Respondents

43% of the general questionnaire interviewees in Faisalabad and 30% in Vehari were between the ages of 16 and 39, while 46% and 54% respectively in the 40-60 years age group, and 10% in Faisalabad and 16% in Vehari above the age of 60.

The figures from the women’s survey indicate that 68% and 71.4% of the respondents in Faisalabad and Vehari respectively were spouses of the HoHH. 48% of those interviewed in the area of Faisalabad were in the 16-39 age group, while 46.6 were in the 40-60 years age group. In Vehari, 43.7% were in the former age group, while 53% were in the latter.

#### 4.1.2 Respondents Literacy Level

31% of the interviewees in Faisalabad district and 39% in Vehari are illiterate, 35% and 33% respectively have primary-level education, 24% and 18% have matric-level education, and 9% and 10% have education till intermediate level or above.

The level of education of the female respondents was worse with 55% in Faisalabad and 65.5% in Vehari district being illiterate, and only 29.4% and 26% having education up to primary level in each district respectively.

### 4.1.3 Respondents Employment Levels

63% of the respondents were employed in District Faisalabad while the figure was 74% for Vehari, whereas according to the female respondents, 14.9% of the women were employed in District Faisalabad and 13.4% in Vehari.

## 4.2 Social Characteristics

This section will focus on the demographic and social characteristics of the households based on findings of the survey.

### 4.2.1 Household Type and Size

#### 4.2.1.1 Family Size

The average family size in Distt. Faisalabad is 7.2 (with a 4.0 male and 3.2 female aspect), whereas it's 6.8 for Vehari (3.6 male and 3.2 female).

#### 4.2.1.2 Age

In Distt. Faisalabad 33% of the family members (32% male and 35% female) fall in the 21-40 years age group, 29% (30% male and 28% female) in the 10-20 years age group, 14% in the 41-60 years age group, 9% in the 5-9 years age group and 7% in the under-5 age group. Compared to this in Distt. Vehari, 33% of the family members (32% male and 35% female) fall in the 10-20 years age group, 30% (32% male and 29% female) in the 21-40 years age group, 16% in the 41-60 years age group, 12% in the 5-9 years age group and 4% in the under-5 age group.

#### 4.2.1.3 Education

In terms of education levels of family members in the Faisalabad area, 28% (19% male and 39% female) family members aged 10 and above do not have any education, while 26% are educated up to primary-level (22% male and 30% female), 21% (26% male and 14% female) up to middle school, 15% (19% male and 10% female) up to matric, and 13% (13% male and 11% female) are educated up to intermediate level or above.

The situation in villages in Vehari is slightly better in some aspects. 27% (17% male and 38% female) family members aged 10 and above do not have any education, while 20% are educated up to primary-level (21% male and 19% female), 16% (17% male and 14% female) up to middle school, 22% (27% male and 15% female) up to matric, and 9% (13% male and 7% female) are educated up to intermediate level or above.

In terms of the highest level of education attained by a woman in each household, almost 26% of the households in the Faisalabad area stated primary-level, 20.5% stated matric, 14% stated middle-school, and almost 23% stated intermediate level or above as the highest level of education amongst the women in the household. For Vehari, the results are 31.5% stating primary-level, 21.3% stating middle, 13.5% stating matric, and just over 21% stating intermediate level or above as the highest level of education amongst the women in the



household. None of the women are literate in 14% of the households in Faisalabad district, while this is the case in only 4.5% of the households in Vehari.

The average number of children going to school per household is around 2 for both Faisalabad and Vehari districts, and in response to whether all school-aged children in the household go to school, around 84% of the respondents in both the districts said yes.

**Table 4.2: Family Profile**

Characteristics	Project Focus Area: Faisalabad									Control Area Vehari		
	Jaranwala			Samundari			Total			Male	Female	Total
	Male	Female	Total	Male	Female	Total	Male	Female	Total			
<b>A. POPULATION</b>												
Average Family Size	3.9	3.2	7.0	4.2	3.2	7.4	4.0	3.2	7.2	3.6	3.1	6.8
<b>Age Groups</b>												
Less than 5 Years	5%	6%	6%	9%	9%	9%	7%	8%	7%	4%	4%	4%
5 to 9 Years	9%	13%	11%	9%	6%	8%	9%	9%	9%	11%	13%	12%
10 to 20 Years	31%	29%	30%	30%	28%	29%	30%	28%	29%	32%	35%	33%
21-40 Years	32%	31%	32%	32%	38%	35%	32%	35%	33%	32%	29%	30%
41-60 Years	15%	14%	15%	14%	13%	14%	15%	14%	14%	16%	16%	16%
Above 60 Years	7%	7%	7%	5%	4%	4%	6%	5%	6%	6%	3%	5%
Age not specified	0%	0%	0%	1%	1%	1%	1%	1%	1%	0%	0%	0%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>B. EDUCATION (10 Years and Over)</b>												
None	25%	48%	35%	14%	32%	22%	19%	39%	28%	17%	38%	27%
Madrassa School	2%	2%	2%	2%	1%	1%	2%	1%	2%	3%	2%	2%
Primary	21%	18%	20%	21%	20%	20%	21%	19%	20%	22%	30%	26%
Middle	18%	15%	17%	16%	13%	15%	17%	14%	16%	26%	14%	21%
Matric	22%	10%	16%	32%	20%	27%	27%	15%	22%	19%	10%	15%
Intermediate/Diploma	7%	6%	7%	11%	8%	10%	9%	7%	9%	8%	4%	6%
BA/BSc	3%	1%	2%	2%	4%	3%	2%	3%	3%	3%	2%	2%
Post Graduate	2%	0%	1%	1%	2%	2%	2%	1%	1%	2%	1%	1%
Professional	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>Currently Enrolled Students / Average hours/day spent on doing school work</b>												
Primary	2.3	2.0	2.2	1.6	1.9	1.7	1.9	2.0	1.9	1.6	1.9	1.8
Middle	2.2	3.0	2.6	2.2	2.2	2.2	2.2	2.6	2.4	2.0	2.2	2.0
Matric	3.0	3.8	3.2	2.3	2.6	2.4	2.5	2.9	2.6	2.3	2.4	2.3
Intermediate/Diploma	4.0	3.6	3.9	3.5	3.1	3.3	3.7	3.2	3.4	3.3	2.5	2.9
BA/BSc	2.5	2.0	2.3	4.3	3.6	3.9	3.7	3.1	3.4	3.2	2.0	3.0
Post Graduate	1.0	.	1.0	1.0	2.7	2.3	1.0	2.7	2.0	.	.	.
Professional	2.5	.	2.5	.	.	.	2.5	.	2.5	.	.	.

Source: EUDBA Survey, Household Survey

#### 4.2.1.4 Hours Spent by Children Doing School Work

The average number of hours children spend per day in the Faisalabad region on doing school work varies with the class level as follows: at the primary level it's almost 2 hours, middle is almost 2½ hours, matric is just over 2½ hours, at intermediate/diploma/BA/BSc level it is almost 3½ hours, and post graduate is 2 hours. The average number of hours children spent per day in Vehari on doing school work is almost 2 hours at the primary level, middle is 2 hours, matric is 2.3 hours, at intermediate/diploma level it is almost 3 hours, and at BA/BSc level it's 3 hours.

#### 4.2.1.5 Division of Labour in the Household

According to the women's responses in both districts (results being very similar), most of the domestic work is the women's responsibility with the help of the female child in some cases, (such as cleaning of the house, cooking, washing utensils, caring for children, making dung cakes, and even helping the men out with the livestock). Moreover, the responsibility of cooking in the household goes to mainly the women in most cases across the two districts (71% in Faisalabad and 88% in Vehari).

The men mainly carry out the outside work with the help of the male child in some cases (agriculture and livestock care, wood collection & preparation, purchase of fuel, buying food, minor house repairs and other social activities).

**Table 4.3a: Division of Labor in the HH  
(Primary Responsibility)**

Activities	Project Focus Area: Faisalabad								Control Area Vehari			
	Jaranwala				Samundari							
	Male	Female	Male Child	Female child	Male	Female	Male Child	Female child	Male	Female	Male Child	Female child
Percentages												
Cleaning of House	1.4	93.5	0.0	20.1	0.0	94.9	0.0	18.5	0.0	95.0	0.0	11.8
Cooking	0.7	92.8	0.0	14.4	0.0	96.2	0.0	15.3	0.0	96.6	0.0	10.9
Washing Utensils	1.4	92.8	0.0	18.7	0.0	93.0	0.0	14.0	0.0	93.3	0.0	7.6
Making Dung Cakes	0.0	88.5	0.7	8.6	12.1	89.2	0.6	5.7	10.1	94.1	0.0	4.2
Purchase of Fuel	67.6	13.7	3.6	0.0	57.3	6.4	5.7	0.0	57.1	10.9	1.7	1.7
Caring for Children	13.7	74.8	0.0	2.2	7.0	71.3	0.6	4.5	4.2	70.6	0.8	0.8
Water Fetching	13.7	7.2	3.6	2.9	16.6	6.4	7.6	3.8	8.4	3.4	1.7	0.0
Livestock care	90.6	31.7	7.9	0.7	94.3	35.0	9.6	3.2	95.8	32.8	5.9	2.5
Agriculture	89.9	15.1	7.2	0.7	88.5	12.7	8.9	0.6	85.7	5.9	4.2	2.5
Social Activities	83.5	55.4	4.3	1.4	85.4	50.3	2.5	2.5	87.4	33.6	2.5	0.0
Educating Children	46.8	24.5	1.4	0.0	39.5	29.9	0.6	1.3	34.5	16.8	1.7	4.2
Buying Food	83.5	24.5	5.8	1.4	94.3	12.1	5.7	1.3	95.8	5.0	5.0	1.7
Minor House Repair	85.6	16.5	2.2	0.0	93.6	5.1	1.9	1.3	97.5	4.2	2.5	0.8
Wood Collection	87.8	10.1	5.8	0.7	93.0	5.7	9.6	1.3	89.9	8.4	4.2	0.8
Wood Preparation	89.9	15.8	6.5	0.7	94.9	7.0	8.9	0.6	89.9	9.2	4.2	0.8

Source: EUDBA Survey, Household Survey – Women Interview

The results are very similar for both the districts in terms of the average number of hours spent on the various tasks identified. Cooking and cleaning the house took around 3.5 hours, while making dung cakes took just over an hour, as did caring for children. Comparatively, the men spent around 2 1/2 hours involved in agriculture or livestock, wood collection or preparation, and around an hour in buying food or social activities.

Female adults (at 96% and 95% of the households in Distts. Faisalabad and Vehari respectively) are responsible for the regular maintenance of cooking stoves, and in the case of LPG stoves, the women (62% in Faisalabad and 72% in Vehari) share the maintenance with the male adult members in the household (36% and 25% for Distts. Faisalabad and Vehari respectively).

**Table 4.3b: Division of Labor in the HH (Average Time Spend)**

Activities	Project Focus Area: Faisalabad								Control Area Vehari			
	Jaranwala				Samundari				Male	Female	Male Child	Female child
	Male	Female	Male Child	Female child	Male	Female	Male Child	Female child				
	Average # of hours Daily											
Cleaning of House	0.0	1.6	0.0	0.2	0.0	1.4	0.0	0.2	0.0	1.6	0.0	0.2
Cooking	0.0	1.8	0.0	0.2	0.0	2.2	0.0	0.2	0.0	2.4	0.0	0.2
Washing Utensils	0.0	1.1	0.0	0.1	0.0	0.9	0.0	0.1	0.0	1.2	0.0	0.0
Making Dung Cakes	0.1	1.1	0.0	0.1	0.2	1.0	0.0	0.0	0.2	1.1	0.0	0.0
Purchase of Fuel	0.8	0.2	0.0	0.0	0.6	0.1	0.1	0.0	0.6	0.2	0.0	0.0
Caring for Children	0.1	1.1	0.0	0.0	0.1	1.1	0.0	0.0	0.0	1.0	0.0	0.0
Water Fetching	0.1	0.2	0.0	0.0	0.2	0.1	0.0	0.0	0.4	0.1	0.0	0.0
Livestock care	2.4	0.9	0.3	0.0	2.5	0.7	0.2	0.0	2.8	0.8	0.1	0.0
Agriculture	2.3	0.5	0.3	0.0	2.9	0.2	0.3	0.0	3.1	0.2	0.1	0.0
Social Activities	1.0	0.6	0.0	0.0	0.9	0.4	0.0	0.0	1.1	0.4	0.0	0.0
Educating Children	0.4	0.2	0.0	0.0	0.4	0.4	0.0	0.0	0.3	0.3	0.0	0.0
Buying Food	0.8	0.3	0.0	0.0	0.7	0.2	0.1	0.0	0.9	0.1	0.0	0.0
Minor House Repair	0.6	0.1	0.0	0.0	0.6	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Wood Collection*	2.1	0.1	0.1	0.0	2.8	0.2	0.3	0.0	3.0	0.1	0.2	0.0
Wood Preparation*	1.6	0.1	0.1	0.0	2.0	0.1	0.1	0.0	2.0	0.0	0.1	0.0

\* Average hours per week Source: EUDBA Survey, Household Survey – Women Interview

#### 4.2.1.6 Women Mobility

In terms of mobility, majority of the women face few constraints and are quite free to move around for various purposes, and the women confirmed this in the FGDs as well. Of the total responses for Faisalabad district, just over 70% of women belonging to all the groups identified (married and unmarried) went out on a daily basis, while the figure is 75.4% for Vehari.

Work is the most common purpose for going out of the house with an average of 35% citing this as their main reason in Faisalabad, and 40% for Vehari. This is followed by over 29% in Faisalabad and almost 35% in Vehari claiming to go out for health treatment purposes (child and/or self), followed by 13.6% and 11.3% going out to purchase goods, and 13.4% for social obligations in Faisalabad and 18.2% for social calls in Vehari district. Relatives' houses are the most popular destinations in both districts, followed by houses of other villagers, and shops within the villages.

**Table 4.4a: Women Mobility**

		Faisalabad																	Vehari						
		Jaranwala					Samundari					Total													
		Mobility					Mobility					Mobility					Mobility								
		Daily	Weekly	Monthly	Other	Total	Responses	Daily	Weekly	Monthly	Other	Total	Responses	Daily	Weekly	Monthly	Other	Total	Responses	Daily	Weekly	Monthly	Other	Total	Responses
%					%					%					%										
<b>GROUPS</b>	Married Women Age >12 and <18 Years	61.3	6.5	32.3	0.0	100	31	50.0	19.0	31.0	0.0	100	42	54.8	13.7	31.5	0.0	100	73	40.0	28.0	32.0	0.0	100	25
	Married Women Age >18 and < 40 Years	60.0	16.9	20.0	3.1	100	65	59.2	22.5	14.1	4.2	100	71	59.6	19.9	16.9	3.7	100	136	76.1	13.0	8.7	2.2	100	46
	Married Women Age 40 Years and Above	74.1	8.6	17.3	0.0	100	81	75.6	7.3	14.6	2.4	100	72	74.8	8.0	16.0	1.2	100	163	79.7	5.1	15.3	0.0	100	59
	Un-married Women Age > 12 and < 18 Years	73.3	11.1	13.3	2.2	100	45	88.5	1.9	9.6	0.0	100	52	81.4	6.2	11.3	1.0	100	97	84.4	6.3	6.3	3.1	100	32
	Un-married Women Age 18 and < 40 Years	59.3	14.8	25.9	0.0	100	27	77.1	18.8	4.2	0.0	100	49	70.7	17.3	12.0	0.0	100	75	76.7	13.3	6.7	3.3	100	30
	Un-married Women Age 40 years and above	100.0	0.0	0.0	0.0	100	9	100.0	0.0	0.0	0.0	100	15	100.0	0.0	0.0	0.0	100	24	100.0	0.0	0.0	0.0	100	11
<b>Total</b>		<b>68.2</b>	<b>11.2</b>	<b>19.4</b>	<b>1.2</b>	<b>100</b>	<b>258</b>	<b>71.9</b>	<b>12.9</b>	<b>13.5</b>	<b>1.6</b>	<b>100</b>	<b>301</b>	<b>70.2</b>	<b>12.1</b>	<b>16.2</b>	<b>1.4</b>	<b>100</b>	<b>568</b>	<b>75.4</b>	<b>10.8</b>	<b>12.3</b>	<b>1.5</b>	<b>100</b>	<b>203</b>

Source: EUDBA Survey, Household Survey – Women Interview

**Table 4.4b: Women Mobility - Place**

Place	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundri	Total	
	Percentages (Multiple Response)			
Relatives house	39.69	48.20	44.31	54.85
Other villagers house	35.02	39.34	37.37	42.72
Shop in the village	21.40	20.33	20.82	24.27
Shop outside the village	5.84	12.79	9.61	9.22
Training center/school in the village	6.23	8.85	7.65	10.19
Training center/school outside the village	3.50	7.54	5.69	4.37
Outside the village any other purpose	12.45	6.89	9.43	6.31
All	19.07	18.03	18.51	14.56

Source: EUDBA Survey, Household Survey – Women Interview

**Table 4.4b: Women Mobility Purpose**

Purpose	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundri	Total	
	Percentages (Multiple Response)			
For work	35.32	35.29	35.30	40.39
Children health treatment	17.86	16.01	16.85	19.21
Self health treatment	11.51	12.75	12.19	15.76
Purchase of goods	11.51	15.36	13.62	11.33
Social obligations	11.11	15.36	13.44	15.76
Children school/education	7.54	13.07	10.57	11.33
Social calls	11.90	11.76	11.83	18.23
Leisure	0.79	0.65	0.72	0.99
Other	3.17	0.98	1.97	0.49
All	14.68	14.05	14.34	10.84

Source: EUDBA Survey, Household Survey – Women Interview

Most of the women in both districts are not accompanied by anybody when going out but sometimes are accompanied by either a young male member of the household or an adult male or the HoHH.

#### 4.2.1.7 Decision Making

Regarding decision-making in the house, men dominate this aspect being the main decision-makers in most areas. In both Faisalabad and Vehari, around 86% of those surveyed (in both the general and women's questionnaires) make the decisions regarding agriculture, and around 84% for livestock. Men also make the decisions about the purchase and sale of assets in around 79%/80% of the households. Decisions about children's education are jointly made in 55% to 58% of the households in Faisalabad, and almost 50% of the households in Vehari district, followed by men making the decision in around 27% and 34% of the households in both the districts respectively.

Decisions about health are jointly made in 56.6% and 53% of the households in Faisalabad and Vehari districts respectively (59% and 54% in the women's survey), followed by men deciding in 26% and 28% of the households respectively (24% and 30% in the women's

survey). Decisions regarding marriage also followed a similar story, with 60% in Faisalabad and 52% in Vehari making the decision jointly (62% and 54% in the women's survey), whereas men decided in 19.5% and 22.7% of the households (18% and 20% in the women's survey).

Men and women jointly make decisions regarding other social areas in 51.6% and 42.4% of the households in Faisalabad and Vehari (51% and 45% in the women's survey), whereas 27.7% and 30.5% households respectively still have men making these decisions (28% and 32% in the women's survey).

**Table 4.5: Decision Making In the House**

Issues	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundri	Total	
Percentages				
<b>AGRICULTURE</b>				
Male's Decision	82.5	89.5	86.2	86.7
Females' Decision	0.7	0.0	0.3	0.9
Joint	10.2	7.2	8.6	3.5
Joint but more male domination	6.6	3.3	4.8	8.8
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
<b>LIVESTOCK RELATED</b>				
Male's Decision	82.0	87.4	84.9	84.0
Females' Decision	0.7	0.0	0.3	1.7
Joint	10.8	8.8	9.7	4.2
Joint but more male domination	6.5	3.8	5.0	10.1
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
<b>PURCHASE OF ASSETS</b>				
Male's Decision	77.0	82.4	79.7	79.8
Females' Decision	1.5	0.0	0.7	1.0
Joint	13.3	13.2	13.3	7.7
Joint but more male domination	8.1	4.4	6.3	11.5
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
<b>SALE OF ASSETS</b>				
Male's Decision	78.4	82.4	80.4	78.4
Females' Decision	1.5	0.0	0.7	2.0
Joint	11.9	13.2	12.6	7.8
Joint but more male domination	8.2	4.4	6.3	11.8
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Source: EUDBA Survey, Household Survey

#### 4.2.1.8 Health and Hygiene

According to the observations made by the interviewers in the women's survey, overall cleanliness in the houses ranged from good to fair for majority of the houses surveyed in both the districts. The floor of the kitchen was clean in around two-thirds of the houses surveyed in both districts, but the walls and roof of the kitchen/cooking area at almost the same number of houses in both districts had black patches built up and only around a third were clean. The

cooking pans/pots that could be seen were clean for over 40% of the houses surveyed in both districts.

Regarding the health of women involved in cooking in the households, the health status ranged from good to fair in both districts (52% good and 25% fair in Faisalabad, and 52% good and 17% fair in Vehari). The majority had not faced any health problems in the last 15 days (64% in the Faisalabad region, and 76% in Vehari according to the women's survey, and 71% and 75% according to the general survey results), or in the last 3 months (76% in Faisalabad and 86% in Vehari according to the women's survey, and according to the general survey, 80% and 88%). The women who had faced health problems mainly complained about cold/cough/respiratory infections over the last 15 days and the last 3 months, indicating the possible health hazards being caused by smoke from burning firewood.

**Table 4.6: General Health Status of the Women who normally Cooks Food**

Health Status*	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundri	Total	
Percentages				
Very Good	8.6	7.5	8.0	11.7
Good	47.9	55.0	51.7	52.5
Fair	23.6	26.3	25.0	16.7
Poor	9.3	2.5	5.7	6.7
Not specified	10.7	8.8	9.7	12.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: EUDBA Survey, Household Survey

\*Very Good: Never fell ill during last one year

Good: Very rare illness but not requiring special treatment

Fair: Fell ill a few times last one year but not of a serious nature

Poor: Frequently fell ill

#### 4.2.1.9 Water Availability

Drinking water is available inside the house in 80% and 97% of the houses in Faisalabad and Vehari districts, and water for other purposes is also available inside the houses in 98% and 100% of the houses in both districts respectively.

**Table 4.7: Water Availability inside the House**

Purpose	Project Focus Area: Faisalabad						Control Area Vehari	
	Jaranwala		Samundari		Total		%	#
	%	#	%	#	%	#		
<b>Drinking</b>								
Yes	88	123	73	116	80	239	97	116
No	12	17	27	43	20	60	3	4
<b>Total</b>	<b>100</b>	<b>140</b>	<b>100</b>	<b>159</b>	<b>100</b>	<b>299</b>	<b>100</b>	<b>120</b>
<b>Other Purpose</b>								
Yes	98	136	97	155	98	291	100	119
No	2	3	3	4	2	7	0	0
<b>Total</b>	<b>100</b>	<b>139</b>	<b>100</b>	<b>159</b>	<b>100</b>	<b>298</b>	<b>100</b>	<b>119</b>

Source: EUDBA Survey, Household Survey

In order to fetch water, the closest water source is at an average distance 2.1km from houses in Faisalabad Distt., whereas it is at a distance of 0.5km in Vehari. The average time taken for a round trip is around 27mins for Faisalabad Distt., whereas it is 20mins for Distt. Vehari.

### 4.3



## Economic Characteristics

This section will focus on the economic characteristics of the households based on findings of the survey.

### 4.3.1 Household Monthly Income & Expenditure

The total monthly income per household on average for Distt. Faisalabad is Rs. 23,815. Breaking this down into cash income and income in-kind/consumed, total cash income of Rs. 15,716 constitutes 66% of the total monthly income, whereas the remainder is total income in-kind/consumed amounting to a total of Rs. 8,098. Sale of milk from livestock contributes 35% of the total monthly income on average, followed by off-farm sources (34%), agriculture/crops (26%), and sale of animals/livestock (6%).

For Distt. Vehari, the total monthly income per household on average is Rs. 26,306. Breaking this down into cash income and income in-kind/consumed, total cash income of Rs. 18,225 constitutes 69% of the total monthly income, whereas the remainder 31% is total income in-kind/consumed amounting to a total of Rs. 8,081. Sale of milk from livestock contributes 44% of the total monthly income on average, followed by off-farm sources (32%), agriculture/crops (17%), and sale of animals/livestock (6%).

**Table 4.8: Household Average Monthly Income (Rs)**

Source of income	Project Focus Area: Faisalabad						Control Area Vehari	
	Jaranwala		Samundari		Total		Income	%
	Income	%	Income	%	Income	%		
<b>Cash Income</b>								
Off-farm	5,287	35%	5,583	35%	5,444	35%	6,519	36%
Livestock - Sale of Milk	5,047	33%	3,832	24%	4,406	28%	7,234	40%
Livestock Sale of Animals	1,033	7%	1,284	8%	1,166	7%	1,240	7%
Agriculture-Crop	3,954	26%	5,341	33%	4,700	30%	3,233	18%
<b>Total</b>	<b>15,320</b>	<b>100%</b>	<b>16,040</b>	<b>100%</b>	<b>15,716</b>	<b>100%</b>	<b>18,225</b>	<b>100%</b>
<b>In Kind/Consumed</b>								
Off-farm	1,341	21%	3,628	38%	2,561	32%	1,996	25%
Livestock - Sale of Milk	3,581	55%	4,377	46%	4,004	49%	4,470	55%
Livestock Sale of Animals	101	2%	200	2%	154	2%	417	5%
Agriculture-Crop	1,494	23%	1,278	13%	1,379	17%	1,199	15%
<b>Total</b>	<b>6,517</b>	<b>100%</b>	<b>9,482</b>	<b>100%</b>	<b>8,098</b>	<b>100%</b>	<b>8,081</b>	<b>100%</b>
<b>Total Cash +In Kind</b>								
Off-farm	6,627	30%	9,211	36%	8,005	34%	8,514	32%
Livestock - Sale of Milk	8,627	40%	8,208	32%	8,410	35%	11,703	44%
Livestock Sale of Animals	1,134	5%	1,484	6%	1,320	6%	1,656	6%
Agriculture-Crop	5,448	25%	6,619	26%	6,079	26%	4,432	17%
<b>Total</b>	<b>21,837</b>	<b>100%</b>	<b>25,522</b>	<b>100%</b>	<b>23,815</b>	<b>100%</b>	<b>26,306</b>	<b>100%</b>

Source: EUDBA Survey, Household Survey

The total average monthly expenditure is Rs.13,858 for Faisalabad, and it is Rs.14,142 for Vehari. Food constitutes the largest proportion of average monthly expenditure for both

districts, amounting to 47% and 44% of the total in Distt. Faisalabad and Distt. Vehari respectively, and this is followed by transport taking up 15% and 13.4% of the average monthly totals of the two districts respectively. Electricity takes up 8% of the average monthly expenditure for both the districts. Expenditure on other sources of fuel amount to 7% of the total for Faisalabad, while in Vehari it amounts to 4.7%.

**Table 4.9: Household Average Monthly Expenditure**

Item	Project Focus Area: Faisalabad						Control Area Vehari	
	Jaranwala		Samundari		Total		Avg. Monthly Expenditure	%
	Avg. Monthly Expenditure *	%	Avg. Monthly Expenditure	%	Avg. Monthly Expenditure	%		
Food	6,129	45.41%	6,812	48.16%	6,492	46.85%	6,206	43.88%
Transport	2,202	16.31%	1,990	14.07%	2,089	15.07%	1,901	13.44%
Fuel wood for cooking	601	4.45%	469	3.32%	547	3.95%	299	2.11%
Kerosene for cooking	60	0.44%	23	0.16%	41	0.30%	25	0.18%
Kerosene for lighting	13	0.10%	18	0.13%	15	0.11%	17	0.12%
Electricity	1,138	8.43%	1,070	7.57%	1,102	7.95%	1,123	7.94%
LPG	222	1.64%	251	1.77%	237	1.71%	326	2.31%
Batteries	4	0.03%	9	0.06%	7	0.05%	24	0.17%
Tobacco	242	1.79%	226	1.60%	234	1.69%	253	1.79%
Drinking	34	0.25%	462	3.27%	261	1.88%	434	3.07%
Education	751	5.56%	587	4.15%	664	4.79%	424	3.00%
Health	426	3.16%	537	3.80%	485	3.50%	449	3.17%
Clothes	593	4.39%	688	4.86%	644	4.65%	898	6.35%
Crockery/Utensils	147	1.09%	138	0.98%	142	1.02%	110	0.78%
Social Obligation	644	4.77%	809	5.72%	732	5.28%	1,231	8.70%
Loan repayment	292	2.16%	55	0.39%	166	1.20%	422	2.98%
<b>Total</b>	<b>13,498</b>	<b>100.0%</b>	<b>14,144</b>	<b>100.0%</b>	<b>13,858</b>	<b>100.0%</b>	<b>14,142</b>	<b>100.0%</b>

Source: EUDBA Survey, Household Survey

\*average year 2009 prices

### 4.3.2 Access to Credit

Only 14% of the households covered in Distt. Faisalabad and 11% of those in Vehari have obtained any credit over the past 3 years. The average loan amounts to Rs. 331,709 in Distt. Faisalabad, and Rs. 202,308 in Distt. Vehari. The average outstanding loan amounts to Rs. 121,605 for Distt. Faisalabad and Rs. 91,538 for Distt. Vehari.

The main purposes credit is obtained for include agriculture/livestock (55% in Faisalabad and 69.2% in Vehari), followed by personal consumption (27.5% for Faisalabad and 23.1% for Vehari), and for obtaining new technology (7.5% for Faisalabad and 7.7% in Vehari). The main sources identified for credit-lending are banks (72.1% for Faisalabad and 84.6% for Vehari), and friends (20.9% for Faisalabad and 15.4% for Vehari).

High mark-up rates is the foremost constraint identified by the respondents in both districts (by 43.3% in Faisalabad and 70% in Vehari), followed by no collateral (by 26.7% in Faisalabad and 10% in Vehari), and harsh loan terms (by 6.7% in Faisalabad and 10% in Vehari).

**Table 4.10: Sources and Purpose of Credit Obtained by Sampled Households**

Description	Project Focus Area: Faisalabad						Control Area Vehari	
	Jaranwala		Samundari		Total		#	%
	#	%	#	%	#	%		
<b>Source</b>								
Banks	21	70.0	10	76.9	31	72.1	11	84.6
NGOs	0	0.0	1	7.7	1	2.3	0	0.0
Friends	8	26.7	1	7.7	9	20.9	2	15.4
Money Lenders	1	3.3	1	7.7	2	4.7	0	0.0
<b>Total</b>	<b>30</b>	<b>100.0</b>	<b>13</b>	<b>100.0</b>	<b>43</b>	<b>100.0</b>	<b>13</b>	<b>100.0</b>
<b>Purpose</b>								
Personal Consumption	8	29.6	3	23.1	11	27.5	3	23.1
Agriculture/Livestock	14	51.9	8	61.5	22	55.0	9	69.2
Get new technology	2	7.4	1	7.7	3	7.5	1	7.7
To get off-grid technology	0	0.0	0	0.0	0	0.0	0	0.0
Social needs	1	3.7	1	7.7	2	5.0	0	0.0
Run a business	0	0.0	0	0.0	0	0.0	0	0.0
Other	2	7.4	0	0.0	2	5.0	0	0.0
<b>Total</b>	<b>27</b>	<b>100.0</b>	<b>13</b>	<b>100.0</b>	<b>40</b>	<b>100.0</b>	<b>13</b>	<b>100.0</b>
<b>Constraints</b>								
High Mark-up	8	44.4	5	41.7	13	43.3	7	70.0
No collateral	6	33.3	2	16.7	8	26.7	1	10.0
Cumbersome and long procedure	1	5.6	0	0.0	1	3.3	0	0.0
Harsh loan terms	1	5.6	1	8.3	2	6.7	1	10.0
Other	2	11.1	4	33.3	6	20.0	1	10.0
<b>Total</b>	<b>18</b>	<b>100.0</b>	<b>12</b>	<b>100.0</b>	<b>30</b>	<b>100.0</b>	<b>10</b>	<b>100.0</b>

Source: EUDBA Survey, Household Survey

#### 4.3.2.1 Occupation and Entrepreneurship

Occupation-wise in Faisalabad, 38% (10% male and 81% female) of the family members over the age of 10 and under the age of 60 (excluding students) do not work, 38% (54% male and 13% female) are either self-employed, have a business or are involved in agriculture/livestock, 17% are working in the private sector, and 7% are employed with the Government.

**Table 4.11: Occupation and Place of Work (Age between 10-60 Years)**

Characteristics	Project Focus Area: Faisalabad									Control Area Vehari		
	Jaranwala			Samundari			Total			Male	Female	Total
	Male	Female	Total	Male	Female	Total	Male	Female	Total			
<b>Occupations</b>	Percentages (%)											
Govt. Servant	10	1	7	11	4	8	11	3	7	8	3	6
Private Service Worker	32	3	20	21	3	14	26	3	17	18	2	11
Self employed*	48	15	34	59	12	41	54	13	38	64	6	40
No work	11	81	39	9	82	38	10	81	38	10	89	43
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Place of Work</b>												
In village	71	96	73	68	81	69	69	88	71	79	81	79
Outside village	27	4	25	25	19	25	26	12	25	20	19	20
Abroad	2	0	2	7	0	6	5	0	4	1	0	1
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

\* Business/Shop/Agriculture/Livestock Source: EUDBA Survey, Household Survey

The situation for Vehari is not remarkably different with 43% (10% male and 89% female) household members having no work, 40% (64% male and 6% female) self-

employed/business/agriculture/livestock, 11% working in the private sector, and 6% are Government servants.

In Distt. Faisalabad, 71% of those working did so within their villages, 25% work outside their villages, and 4% work abroad, whereas in Vehari 79% work within their villages, 20% outside their villages, and only 1% work abroad.

The women in the villages are quite entrepreneurial according to the FGDs, involving themselves in decorating shoes, embroideries on bed covers and shawls, making and selling dung cakes, etc.

#### 4.3.2.2 Type and Size of the House

Type/construction of house is also an important indicator for estimating economic status of the target area. The most common plot size for houses is the 5 to 10 marlas with 47% of the houses surveyed in Faisalabad based on a plot size within these dimensions, and 36% of those in Vehari. Bricked with cement is the most common type of construction base for the houses surveyed, with 53% in Faisalabad and 47% in Vehari, and the houses are mostly self-owned (87% in Faisalabad and 96% in Vehari).

**Table 4.12: Characteristics of the House**

		Faisalabad						Vehari	
		Jaranwala		Samundari		Total		%	#
		%	#	%	#	%	#		
<b>Plot Size of the House</b>	Up to 5 Marlas	21	30	16	26	19	56	13	16
	Above 5 and up to 10 Marlas	43	60	50	80	47	140	36	43
	Above 10 and up to 15 Marlas	18	25	14	22	16	47	13	16
	Above 15 and up to 20 Marlas	13	18	17	27	15	45	24	29
	Above 20 Marlas	5	7	3	5	4	12	13	16
	<b>Total</b>	<b>100</b>	<b>140</b>	<b>100</b>	<b>160</b>	<b>100</b>	<b>300</b>	<b>100</b>	<b>120</b>
<b>Type of House</b>	Katcha (mud+stone)	19	27	9	15	14	42	16	19
	Pacca (Bricked/cemented)	53	74	53	84	53	158	47	56
	Pacca/Katcha (bricks+mud)	27	38	38	60	33	98	37	44
	Not Specified	1	1	1	1	1	2	1	1
	<b>Total</b>	<b>100</b>	<b>140</b>	<b>100</b>	<b>160</b>	<b>100</b>	<b>300</b>	<b>100</b>	<b>120</b>
<b>Ownership Status of House</b>	Self Owned	78	109	94	151	87	260	96	115
	Rental	0	0	0	0	0	0	0	0
	Joint Ownership	13	18	5	8	9	26	3	4
	Relative's House	0	0	0	0	0	0	1	1
	Leased	0	0	0	0	0	0	0	0
	Free on Landlord Property	9	12	1	1	4	13	0	0
	Other	1	1	0	0	0	1	0	0
	<b>Total</b>	<b>100</b>	<b>140</b>	<b>100</b>	<b>160</b>	<b>100</b>	<b>300</b>	<b>100</b>	<b>120</b>
<b>Bed Rooms</b>	Up to 3 rooms	72	101	69	111	71	212	69	83
	Between 4-6 rooms	24	33	26	42	25	75	26	31
	Above 6 rooms	4	6	4	7	4	13	5	6
	<b>Total</b>	<b>100</b>	<b>140</b>	<b>100</b>	<b>160</b>	<b>100</b>	<b>300</b>	<b>100</b>	<b>120</b>
<b>Separate Room for Kitchen</b>	Yes	60	84	70	112	65	196	77	92
	No	40	56	30	48	35	104	23	28
	<b>Total</b>	<b>100</b>	<b>140</b>	<b>100</b>	<b>160</b>	<b>100</b>	<b>300</b>	<b>100</b>	<b>120</b>
<b>Bathroom</b>	Yes	75	105	94	150	85	255	95	114
	No	25	35	6	10	15	45	5	6
	<b>Total</b>	<b>100</b>	<b>140</b>	<b>100</b>	<b>160</b>	<b>100</b>	<b>300</b>	<b>100</b>	<b>120</b>
<b>Spare Land</b>	For constructing BGP (Marlas)	<b>4.25</b>		<b>4.00</b>		<b>4.12</b>		<b>5.97</b>	

Source: EUDBA Survey, Household Survey

Around 70% of houses in both districts have up to three bedrooms, 65% in Faisalabad and 77% in Vehari have a separate room for the kitchen, and 85% of the households surveyed in Faisalabad and 95% in Vehari have a separate room for the bathroom. 87% of the houses surveyed in Faisalabad and 88% in Vehari have toilets in the house.

**Table 4.13: Percentage of Houses Having Toilets**

Toilets in House	Project Focus Area: Faisalabad						Control Area Vehari	
	Jaranwala		Samundari		Total		#	%
	#	%	#	%	#	%		
Yes	79	111	94	150	87	261	88	105
No	19	27	5	8	12	35	6	7
Not specified	1	2	1	2	1	4	7	8
<b>Total</b>	<b>100</b>	<b>140</b>	<b>100</b>	<b>160</b>	<b>100</b>	<b>300</b>	<b>100</b>	<b>120</b>

Source: EUDBA Survey, Household Survey

Of the houses surveyed in both districts, almost 82% in Faisalabad region and 90% in Vehari have their cooking place based outdoors in the summers. In the winters in both districts, around 31% in Faisalabad and 37.6% in Vehari move the kitchen to either a separate building used as a kitchen (23% in both districts), or a separate room in the same building used as a kitchen (24.4% in Faisalabad and 20.5% in Vehari), or a room used for living and sleeping (1% for both districts).

**Table 4.14: Cooking Place**

Cooking Place	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundri	Total	
Percentages				
<b>Cooking Place in Summer</b>				
In a room used for living or sleeping	0.7	0.6	0.7	0.0
In a separate room in same building used as kitchen	8.8	5.8	7.2	2.6
In a separate building used as a kitchen	15.4	5.2	10.0	6.9
Outdoors	74.3	88.4	81.8	89.7
Other	0.7	0.0	0.3	0.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Cooking Place in Winter</b>				
In a room used for living or sleeping	2.2	0.0	1.0	0.9
In a separate room in same building used as kitchen	22.1	26.5	24.4	20.5
In a separate building used as a kitchen	25.7	21.9	23.7	23.1
Outdoors	49.3	51.6	50.5	52.1
Other	0.7	0.0	0.3	3.4
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: EUDBA Survey, Household Survey

#### 4.3.2.3 Livestock and Land Holdings

The average number of livestock in the sampled households of Distt. Faisalabad includes one bull, 5.28 buffaloes, 1.8 cow, and 3.2 sheep/goat. In Vehari, the average number stands at 1.24 bull, 6.78 buffaloes, 2.38 cows, and 4 sheep/goat. Regarding their feeding arrangement, staff-fed is the most common form of feeding arrangement for the animals in both the districts, followed by a mixture of staff-fed and grazing.

**Table 4.15: Average Number of Livestock Per HH**

Type of Animal	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundri	Total	
	Numbers			
Bull	0.79	1.25	1.03	1.24
Buffalo	4.78	5.73	5.28	6.78
Cow	1.82	1.78	1.79	2.38
Sheep/goat	2.56	3.67	3.15	4.04
Horse	0.01	0.01	0.01	0.01
Donkey	0.30	0.18	0.23	0.06

Source: EUDBA Survey, Household Survey

Bulk of the responsibility for maintaining livestock falls on the male members of the household as highlighted in section 4.2.1.5 as well as in Table 4.3a from the women's survey. The male members of the family take most of the responsibility for livestock in both districts, including collecting/cutting fodder, feeding, grazing, preparing farmyard manure as well as any other livestock tasks. Collection of dung and making dung cakes are two areas in which women take the main responsibility.

In terms of land holdings, 87.5% of the surveyed households in Distt. Faisalabad have agricultural land, as do 81% in Vehari. The majority (58%) of those surveyed in Faisalabad have on average farms up to 5 acres, whereas in Vehari the figure is 55% having farms up to 5 acres

**Table 4.16: Average Land Holding\***

Farm Size	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundri	Total	
	Percentages			
Upto 5 Acres	62.7	53.1	57.5	54.6
Above 5 and Upto 10 Acres	21.2	23.1	22.2	19.6
Above 10 and Upto 15 Acres	7.6	10.5	9.2	10.3
Above 15 and upto 20 Acres	4.2	3.5	3.8	4.1
Above 20 Acres	4.2	9.8	7.3	11.3
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

\* Landless are excluded

Source: EUDBA Survey, Household Survey

#### 4.3.2.4 Use of Fertilizer

Regarding the use of fertilizers in farming, the results indicate that two main types of fertilizers – DAP and Urea – are being used (based on usage pattern of the last crop), and of the two, although the use of urea is greater, the annual expenditure on DAP is far more than on urea as it is more expensive.

Utilization is greater in Distt. Faisalabad as compared to Distt. Vehari, due to the greater number of farms there, majority being up to a size of 5 acres. There are 192 (102 of which are up to 5 acres in size) in Distt. Faisalabad that are using DAP fertilizer on which they are spending an average of Rs.17,164 annually per farm, while 218 farms (120 up to 5 acres in size) using urea worth Rs.11,881 on average per farm on an annual basis.

Compared to this, there are 78 farms (43 up to 5 acres in size) in Distt. Vehari using DAP who are spending, on average, Rs.25,989 on annual basis on this fertilizer, while 94 farms (52 up to 5 acres) are using urea, spending on average Rs.15,903 on an annual basis.

**Table 4.17: Use of Fertilizer by Farm Size**

Farm Size	Project Focus Area: Faisalabad											
	Jaranwala						Samundri					
	DAP			Urea			DAP			Urea		
	Qty (Maund)	Average Cost*	# of Farms	Qty (Maund)	Average Cost	# of Farms	Qty (Maund)	Average Cost	# of Farms	Qty (Maund)	Average Cost	# of Farms
Up to 5 Acres	2.7	8,314	48	12.2	9,743	53	2.7	8,408	54	9.1	7,262	67
Above 5 and Up to 10 Acres	3.8	11,760	19	8.9	7,083	24	6.1	18,826	27	8.2	6,556	27
Above 10 and Up to 15 Acres	5.9	18,400	5	14.7	11,793	8	10.4	32,157	14	20.3	16,213	15
Above 15 and up to 20 Acres	15.0	46,600	5	28.1	22,500	4	8.9	27,523	4	20.4	16,300	5
Above 20 Acres	30.6	94,920	5	54.2	43,333	3	10.3	31,891	11	62.6	50,088	12
<b>Total</b>	<b>5.6</b>	<b>17,343</b>	<b>82</b>	<b>13.6</b>	<b>10,877</b>	<b>92</b>	<b>5.5</b>	<b>17,031</b>	<b>110</b>	<b>15.8</b>	<b>12,614</b>	<b>126</b>

Farm Size	Control Area Vehari					
	DAP			Urea		
	Qty (Maund)	Average Cost*	# of Farms	Qty (Maund)	Average Cost	# of Farms
Up to 5 Acres	2.3	7,241	43	8.6	6,881	52
Above 5 and Up to 10 Acres	4.1	12,746	14	16.5	13,186	18
Above 10 and Up to 15 Acres	7.0	21,581	8	16.9	13,508	10
Above 15 and up to 20 Acres	14.3	44,467	3	16.5	13,225	4
Above 20 Acres	39.7	123,125	10	89.0	71,175	10
<b>Total</b>	<b>8.4</b>	<b>25,989</b>	<b>78</b>	<b>19.9</b>	<b>15,903</b>	<b>94</b>

Source: EUDBA Survey, Household Survey

\*Average of prices at the time of survey

## 4.4 Access and Usage of Energy Sources

### 4.4.1.1 Available Energy Sources & Fuel Usage

The available energy sources at present include firewood, crop residue/grass, dung cakes, kerosene oil, coal, LPG, and electricity.

According to the women's survey, firewood is the most used form of fuel for cooking (by 95% of the households in both districts). This is followed by dung cakes, used by 88% in Faisalabad and 93% in Vehari, and LPG by 13% in both districts. Though kerosene for cooking purposes has been mentioned in the fuel budget this was ignored when asked the principal source of fuel used for cooking. These findings are supported by the results of the general survey as well, with firewood being the most used source of fuel, followed by dung cakes and LPG.

Electricity is the main source of energy used for lighting purposes.

**Table 4.18: Principal Fuel for cooking (multiple responses)**

Type of Fuel	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundri	Total	
	Percentages (HH)			
Fire wood	94.93	95.54	95.25	94.96
Crop residue/grass	2.90	6.37	4.75	5.88
Dung cakes	86.23	90.45	88.47	93.28
Coal	0.72	0.00	0.34	3.36
Kerosene Oil	0.00	0.00	0.00	0.00
Electricity	0.00	0.64	0.34	0.00
Liquid Petroleum Gas	10.14	15.29	12.88	12.61
<b>Total number of HHs</b>	<b>139</b>	<b>157</b>	<b>296</b>	<b>119</b>

Source: EUDBA Survey, Household Survey – Women Interview

The average monthly use of firewood at the household level is 6.6 Maunds for Faisalabad region (35% of which is purchased and 65% is collected for free), and 6.4 Maunds for those surveyed in Vehari (of which 17% is purchased and 83% is collected for free). Private forests (their own in almost all the cases) are the main source for firewood collection (used by 57% in Faisalabad and 48% in Vehari), followed by transboundary forests (used by 15% and 19% respectively in the two districts), and purchased from the market (used by 14% in both districts).

**Table 4.19: Per Household Average Monthly Use of Firewood**

Description	Project Focus Area: Faisalabad						Control Area Vehari	
	Jaranwala		Samundri		Total		Qty. (Maunds)	%
	Qty. (Maunds*)	%	Qty. (Maunds)	%	Qty. (Maunds)	%		
Purchased	2.4	36%	2.2	34%	2.3	35%	1.1	17%
Collected Free	4.3	64%	4.3	66%	4.3	65%	5.3	83%
<b>Total</b>	<b>6.7</b>	<b>100%</b>	<b>6.5</b>	<b>100%</b>	<b>6.6</b>	<b>100%</b>	<b>6.4</b>	<b>100%</b>

Description	Overall Sample	
	Qty. (Maunds)	%
Purchased	1.9	29%
Collected Free	4.6	71%
<b>Total</b>	<b>6.5</b>	<b>100%</b>

\*1 Maund = 40KG

Source: EUDBA Survey, Household Survey

According to the respondents, 61% and 49% (in Faisalabad and Vehari) of those collecting firewood from their own forests have noticed no change in forest coverage over the last 5 years. However, the remaining respondents stated that the increased firewood need of the community is a major cause of decreasing forest trees.

The survey results indicate a high trend in change in the firewood price over last two years. Nearly 50% yearly increase in the firewood price was reported by the respondents in both districts. The per mound price at the time of survey in Faisalabad was Rs. 219 while in Vehari district the price was Rs. 237.



**Table 4.19b: Firewood Price (per maund) Trend**

Item	Project Focus Area: Faisalabad						Control Area Vehari	
	Jaranwala		Samundari		Total		Average Price	% Change
	Average Price	% Change	Average Price	% Change	Average Price	% Change		
Two Years Ago*	123.18	-	111.67	-	118	-	114	-
Last Year	169.09	37%	161.11	44%	165.5	40%	172.67	51%
This Year (2009)	225	83%	211.67	90%	219	86%	236.67	108%

\* Base Year

Source: EUDBA Survey, Household Survey

For fuel wood collection, on an average the household members travel on average 1 and half km which takes nearly 1 hour to cover this distance.

**Table 4.19c: Distance and Time in Collecting Fuel Wood**

Farm Size	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundri	Total	
Distance (Km)	1.2	1.6	1.4	1.6
Time (Minutes)	73	39	56	47

Source: EUDBA Survey, Household Survey

**Table 4.19d: Household Average Monthly Expenditure on Fuel**

Item	Project Focus Area: Faisalabad									Control Area Vehari		
	Jaranwala			Samundari			Total			Average Quantity	Avg. monthly Expenditure	%*
	Average Quantity	Avg. monthly Expenditure	%*	Average Quantity	Avg. monthly Expenditure	%*	Average Quantity	Avg. monthly Expenditure	%*			
Fuel wood for cooking	2.4 Maunds	601	29.5	2.2 Maunds	469	25.5	2.3 Maunds	547	28.1	1.1 Maunds	299	16.5
Kerosene for cooking	0.9 Liters	60	2.9	0.3 Liters	23	1.3	0.6 Liters	41	2.1	0.3 Liters	25	1.4
Kerosene for lighting	0.2 Liters	13	0.6	0.3 Liters	18	1.0	0.2 Liters	15	0.8	0.2 Liters	17	0.9
Electricity	211 Units	1,138	55.8	185 Units	1,070	58.2	197 Units	1,102	56.6	160 Units	1,123	61.9
LPG	3.1 Kg	222	10.9	3.3 Kg	251	13.6	3.2 Kg	237	12.2	3.9 Kg	326	18.0
Batteries	-	4	0.2	-	9	0.5	-	7	0.4	-	24	1.3
<b>Total</b>		<b>2,038</b>	<b>100</b>		<b>1,840</b>	<b>100</b>		<b>1,949</b>	<b>100</b>		<b>1,814</b>	<b>100</b>

Item	Overall Sample		
	Average Quantity	Avg. monthly Expenditure	%*
Fuel wood for cooking	1.9 Maunds	467	24.5
Kerosene for cooking	0.5 Liters	36	1.9
Kerosene for lighting	0.2 Liters	16	0.8
Electricity	184 Units	1108	58.3
LPG	3.5 Kg	263	13.8
Batteries	-	12	0.6
<b>Total</b>		<b>1,901</b>	<b>100.0</b>

Source: EUDBA Survey, Household Survey

\* Percentage of total expenditure on fuel

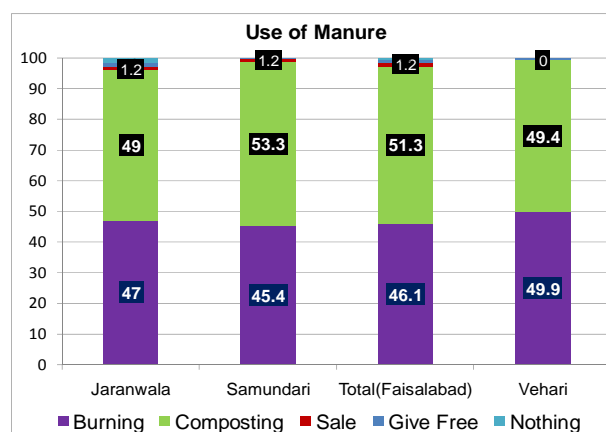
The household average monthly expenditure on energy sources is around Rs. 1901 in the 420 sampled household (Rs.1949 for Distt. Faisalabad and Rs.1814 for Vehari). Expenditure on cooking is around Rs.766 (Rs. 825 in Faisalabad and Rs.650 in Vehari), while for lighting it is Rs.1136 (Rs. 1124 in Faisalabad and Rs.1164 in Vehari - electricity, kerosene and batteries combined for both districts).

A major proportion of the expenditure on energy sources is on electricity/lighting, constituting for 57.6% of the total average expenditure in Distt. Faisalabad (56.4% on electricity, 0.8% on kerosene and 0.4% on batteries), and 64.1% of the total average expenditure in Vehari (61.9% on electricity, 1.3% on batteries and 0.9% on kerosene). Fuel for cooking constitutes 42.4% of the total average expenditure on energy (28.1% on fuel wood, 2.1% on kerosene and 12.2% on LPG) in Distt. Faisalabad, while in Vehari it is around 35.9% (16.5% on fuel wood, 1.4% on kerosene and 18% on LPG).

#### 4.4.1.2 Manure Availability and Use

Based on the number of large animals available, the average daily production of manure in both the district ranges from 47KG from up to 4 large ruminants, to around 300 KG from more than 20 large animals. The average daily production of manure across the surveyed households in Distt. Faisalabad is 83 KG, whereas it is 111 KG for Vehari.

The most common uses of manure across Faisalabad region are for composting (51%) and burning (46%), whereas for Vehari the most common use is for burning (50%) followed by composting (49.4%). Most of the manure is stored in the form of piles (by 51% in Faisalabad and 62% in Vehari).



**Table 4.20: Daily Production of Animal Manure by Number of Animals**

Number of Large Animals	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundri	Total	
Average Daily Production (Kg)				
Upto 2	29	22	24	26
2-4	53	55	51	54
5-6	54	58	52	56
7-8	66	75	72	71
9-10	78	72	79	74
10-20	143	108	178	124
> 20	216	381	297	315
<b>Total</b>	<b>77</b>	<b>88</b>	<b>111</b>	<b>83</b>

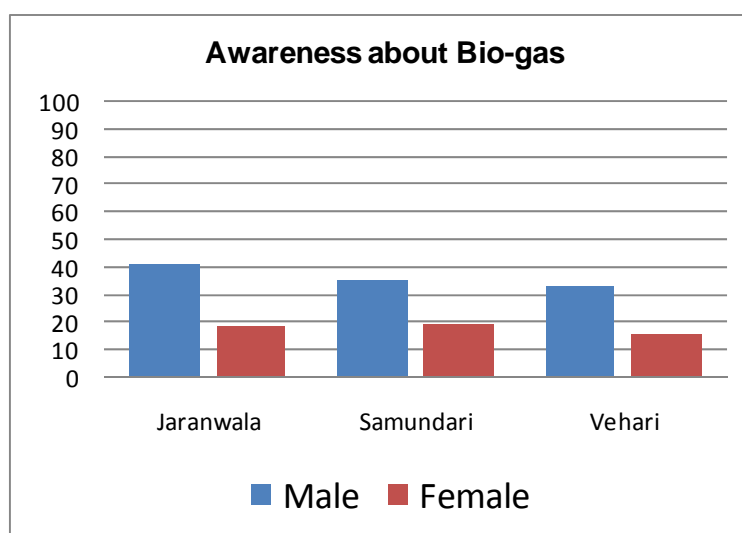
Source: EUDBA Survey, Household Survey

## 4.5 Community Awareness about Bio-Gas

### 4.5.1.1 Knowledge of bio-gas and sources of information

Currently, only about a third of the surveyed population in the two districts is aware about bio-gas, and the majority of them heard about it through friends/relatives (76% and 92% in Faisalabad and Vehari respectively). Only around a third of those aware of bio-gas have ever seen a bio-gas plant, that too within their village (for 60% in Faisalabad and 69% in Vehari), while 40% and 31% (Faisalabad and Vehari) saw it outside their village at relatives' places (54% for Faisalabad) and friends places (44% in Vehari).

Among the women, only 18% (Faisalabad) and 13% (Vehari) have heard about bio-gas as an energy source, and from these women, 78% (Faisalabad) and 56% (Vehari) have heard about it through friends and relatives. Only 24% in the Faisalabad region and 50% in the Vehari region have seen a bio-gas plant. Naturally, 95% of the respondents across both the districts don't know how to operate a bio-gas plant. Only 22% in Faisalabad Distt. and 11% in Vehari have tried to obtain information about establishing a bio-gas plant.



### 4.5.1.2 Perception/Views about Bio-gas

There is a strong willingness among those surveyed to opt for bio-gas as an alternate source of energy for their houses, with 60% willing to do so in both districts. The most obvious benefit of bio-gas perceived by 93% of the women surveyed in Faisalabad Distt. and 95% in Vehari is that it is time-saving, and that it's a healthier source of energy and is also more cost efficient.

As a result, an encouraging 56% of the women in both districts would like to opt for bio-gas but the initial high cost of set-up is a major source of constraint and hindrance, as well as lack of information and illiteracy, as also expressed by the women in the FGDs, saying the men would never agree to spending so much and that they would have been able to manage raising the funds had the cost been a little less.

The willingness to opt for bio-gas by female respondents is somewhat less than the overall HH response indicating men are more keen to opt for bio-gas. 83% of the women in both districts identified the HoHH as the person who will decide whether or not to opt for bio-gas. Also brought up in FGDs is the fact that some of the villages would eventually be supplied with much-awaited sui-gas, thus there are those who don't see any point in spending on bio-gas.

**Table 4.21a: Willingness to Opt for Bio-Gas  
(Household Response)**

Willingness	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundri	Total	
Percentages				
Yes	61.4	58.8	60.0	59.2
No	33.6	38.1	36.0	39.2
Don't know	5.0	3.1	4.0	1.7
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: EUDBA Survey, Household Survey

**Table 4.21a: Willingness to Opt for Bio-Gas  
(Women Response)**

Willingness	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundri	Total	
Percentages				
Yes	58.3	55.4	56.8	55.5
No	39.6	43.3	41.6	39.5
Don't know	2.2	1.3	1.7	5.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: EUDBA Survey, Household Survey – Women Interview

Thus, a lot of mobilization is required to create awareness about bio-gas and its benefits. This aspect has also been emphasized on in the FGDs, along with the fact that in order to enable maximum women to participate in such project activities, several sessions should be organized with the men to give them maximum information as they are the main decision-makers. Also, technical, financial and functioning details would be required before deciding if they liked the idea. The villagers also stated that they would need to see a bio-gas plant functioning to help them make a decision.

Around 63% of the female respondents in both districts cited self-financing as the primary source of financial arrangements for bio-gas. Similar figures resulted in the general survey findings as well, with 70% of the respondents identifying personal savings as the main source for financing the construction of a bio-gas plant, followed by credit from a formal source (17% for Faisalabad and 20% for Vehari), and credit from relatives as a third option.

#### 4.5.1.3 Willingness to Promote Bio-gas

There is nevertheless a strong willingness among the women to setup bio-gas plants as can be gauged by their responses to some of the survey questions and in the FGDs. According to them, once a few families have installed the plant in their villages, it would then be easier for others to follow. Women should be made responsible for the repair and maintenance of bio-gas plants in order to ensure the project's sustainability and better results. 55% and 51% of the women (for Faisalabad and Vehari) are willing to mix the dung and water. 37% from both districts stated that another woman can do the mixing as well. 46% and 50% from Faisalabad and Vehari are willing to attend User Training, with the most popular choice of a convenient location being their own houses, followed by the village hall, for the Training Program. However, as expressed in the FGDs, the women would not be willing to attend trainings conducted by men so female trainers would have to be used.

## **5 CONCLUSIONS & RECOMMENDATIONS**

- Overall, both men and women expressed strong interest in and willingness to opt for bio-gas technology, provided the financial and technical constraints are addressed appropriately.
- Mobility of women is not an issue in either of the districts. The women are willing to attend any training in and outside the village, as long as the trainings are provided by women. Once the plants have been installed, women should be made responsible for their repair and maintenance for better results and better sustainability.
- In order to enable the maximum number of women to participate in project activities, several introductory sessions should be organized with the men, especially on bio-gas technology, to give them maximum information. As expressed in the FGDs and also indicated in the survey findings, men are still the major decision-makers at the household level so they need to be informed about the technology first in order to tap into their investment capabilities.
- Considering that a large number of those interviewed want to see a functioning bio-gas plant before making a decision, it is recommended model bio-gas plants be set-up at key areas to demonstrate to the people how the technology works. Considering the low education levels, exposure in this manner would be more convincing. Media could be used for information dissemination as well. Also, technical, financial and functioning details would be required to help them decide whether they like the idea.
- A lot of mobilization is required to create awareness about bio-gas and its benefits. There is evidence of NGO presence in some villages in Samundri (as NGOs are a source of credit for some of the villages there), thus the networking of such NGOs can be tapped into.
- The cost of bio-gas plant installation is high, meaning most of our rural and potential communities will be deprived of benefiting from the project. In order to involve middle and low income groups, grant or microcredit mechanisms should be worked out to allow the maximum number of families to benefit from the project. A mechanism should also be worked out to involve most vulnerable communities in this project through donor funding and minimum community contribution.
- It was found during the visits that most of the villages closer to the main towns of Jaranwala and Samundri either already have sui-gas connections or have been promised by their politicians that they will get sui-gas within months, hence their reluctance to consider bio-gas as an alternate source of energy. Thus while selecting project areas for installation of

bio-gas plants, remote villages away from the main towns should be selected for effective implementation of the project. The sampled villages of Faisalabad districts were located on an average distance of 16 km from their respective tehsils, while the average distance of the sampled villages of Vehari from the nearest main town was 9 km.

## **6 Focus Group Discussion on Biogas With Women – A Summary**

### **General observations:**

- Most of the villages had no organizations like NGOs or committees operating in the area.
- Women in all the villages were generally very entrepreneurial, involved in agriculture and livestock as well as small-scale work at home such as embroidery, etc. They were free to move around – mobility was not an issue for them.
- Cow dung was the main source of fuel for the kitchen, followed by agri-residue and firewood.

### **Question: Did you find the poster easy to understand?**

The posters were self-explanatory and easy to understand, generating a lot of questions and discussions regarding the technicalities of bio-gas, its advantages and disadvantages, and the issue of why switch to biogas when they'll be getting sui-gas soon.

### **Question: What kind of information would you like to have, before installing a Biogas plant?**

Technical, financial and functioning details would be required before the villagers could decide if they liked the idea. They would also like to first see a plant functioning.

### **Question: Perceived benefits of bio-gas plant**

Participants were aware of the smoke-related and other health hazards of burning firewood and crop-residues and were aware of the financial, health, and environmental benefits of biogas. They discussed how easy it was to make a fire and clean dishes with bio-gas. They were happy to hear about this alternate energy proposal but at the same time they repeatedly compared it with sui-gas. They were very aware of the fact that if they had gas, it would save their time, money and reduce the workload on families and women in particular but were not that concerned about the longer-term benefits, repeatedly insisting on sui-gas.

### **Question: How would you tell other women about the benefits of installing a biogas plant?**

#### **What kind of information would they need?**

The women promised to mention to the other women about this meeting and the topic of discussion. They said they would talk to other village women about the project and provide them with all the information they had about how it worked and its benefits. They would need to know the exact cost of the plant and stated that it would be very difficult for their men to spend this large amount on biogas. They also mentioned that the best way to communicate information about the project would be through a demo of a successful plant.



**Question: Who are the people in your *mohallah* or village who would need special help in order to take part in the Biogas Project and to benefit from it?**

Almost all of the participants stated that most of the villagers were poor, many working on farms or raising livestock on behalf of the landlords so it would be very difficult for them to raise the large amount of money needed to finance the bio-gas plant – they would never be able to do it. Thus special help would be needed in terms of financing – either in the form of loans or grants or perhaps having RSPN install the plant and deduct the cost through easy installments.

**Question: When you go out, who do you usually go to see? (family members, health professionals, teachers, LHWs, others)**

Mobility of the women was not an issue. Women freely move within and outside their villages, when and where required: they go out to visit each other, visit their children's teachers, visit doctors and their relatives – they freely travel when and where required sometimes alone and sometimes with other women or male/female family members.

**Question: Do you think you would be able to take part in a mason's training for a Biogas plant? (would you want to? Would anyone object?)**

According to most of the participants, they would not like to participate in any training that is conducted by men but if there is a female trainer, it would be possible. However, they would not like to work with bricks, mud and cement, especially in the presence of masons – such training would be difficult as this is perceived to be a man's job and the men would not like them to participate in such activities. Training on repair and maintenance of the bio-gas would be good to learn though, and training on the functioning of the plant would also be of their interest.

**Question: Do you think that you or other women would be able to become a 'mobiliser' for the Biogas project? What would be necessary to make this possible for yourself? For other women?**

There was no hesitation among women on mobilizing communities. They did feel though that women could be the best mobilizers only for women, a lot of work needed to be done for the men since they were actually the decision makers. They also felt that a plant should be installed in villages for demonstrative purposes so that others could see it working, only then would it be possible for them to talk about bio-gas and its advantages. They said working as mobilizers for this project would be no problem and that they would talk to women of their village and other villages where they have access, but only once they have experienced that it works and they have sufficient information about it.

**Question: In your opinion, what are the 2 or 3 most significant problems faced by women in your village, that affect their ability to take part in projects like this one, or any other initiative?**

Illiteracy, lack of information and technical know-how, and most of all financial constraints are the major issues faced by women that hinder their participation in most of the projects like this. Remoteness of the area they live in and ownership of land and houses are also issues for

communities here while considering such projects. Culturally, the men were the main decision-makers, especially where money was involved so it would be better to conduct several sessions with men to involve them in project activities before getting the women to participate.

**Question: Which factors, if any (social, technical, financial, communication, literacy) would make it easy or difficult for women to become involved in any aspect of the biogas technology?**

In order to help participation of women in this project, there is a need to work with the men as they were the decision makers, having control over resources. This was an expensive project and required to convince the men – the women would not be able to get involved in any aspect until the men were not convinced. Many of the women believed this project would help solve most of their problems but they will not be able to raise the large amount needed for the project at once. They would be very happy to have the biogas plants installed but that would only be possible if they were given the plants on loan and with repayments on easy installments. +

**Question: Do you think that this project can do anything to increase any aspect of women's and girls' empowerment (for example, increased ability to contribute to decisions)? If No, why not? If yes, what would you suggest?**

Income generating projects only for women enabling them to contribute to their families' income would strengthen their positions within the families and the communities. To enable maximum number of women to participate in project activities, several sessions should be organized with men to give them maximum information. Once a few families have installed it in the village then it would be easier for the others to follow. Loan or grants with easy repayment installments for the installation of biogas plants would be one aspect and the other would be to train women and girls for its repair and maintenance. Women should be involved in site selection for installation of biogas plants, and they should be made responsible for the repair and maintenance and financial management of biogas plants in order to ensure project sustainability and better results. This would improve the women's ability to participate in decision making for such projects.

### Q18 Major Sources of Firewood

	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundari	Total	
	Percentages %			
Community Forest	13.43	4.52	8.65	4.27
Public forest (National Forest)	5.97	8.39	7.27	5.98
Private Forest	58.21	56.77	57.44	47.86
Transboundary	11.19	17.42	14.53	18.80
Purchased from the market	16.42	11.61	13.84	13.68
Other	4.48	6.45	5.54	9.40
Don't know/not specified	0.00	1.29	0.69	1.71
Total Respondents	134.00	155.00	289.00	117.00

Sebcon's UDBA Survey (Household Response)

### Q18.1 Firewood per Maund Price

	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundari	Total	
	Mean			
Two Years Ago	123.18	111.67	118.00	114.00
Last Year	169.09	161.11	165.50	172.67
This Year	225.00	211.67	219.00	236.67
Total Respondents	22.00	18.00	40.00	16.00

Sebcon's UDBA Survey (Household Response)

### Q18.2 Percentage of firewood get from Private Forest

	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundari	Total	
	Mean			
Q182	91.95	97.83	95.00	100.00

Sebcon's UDBA Survey (Household Response)

### Q18.3 Distance of Forest from Home to Collect Fire woods

	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundari	Total	
	Mean			
Q183_distance_meters	1,223.86	1,576.29	1,396.52	1,635.00
Q183_time	72.56	38.62	55.59	47.00

Sebcon's UDBA Survey (Household Response)

### Q18.6 Change in the Forest Coverage of the Locality is last 5 years

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Percentages %			
Change in Forest Coverage Since Last five Years	Increasing	2.6	0.8	1.6	0
	No change	54.3	66.9	61	48.9
	Slightly decreasing	12.9	5.4	8.9	6.7
	Rapidly decreasing	14.7	3.8	8.9	16.7
	Don't know	15.5	23.1	19.5	27.8
	<i>Total</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>
	Total Respondents	116	130	246	90

Sebcon's UDBA Survey (Household Response)

### Q18.6.1 Major Causes of Decreasing Forest

	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundari	Total	
	Percentages %			
Increased firewood need of community	81.3	33.3	68.2	38.1
Logs used in community	3.1	25.0	9.1	19.0
Firewood sold outside the community	3.1	25.0	9.1	19.0
Logs sold outside the community	3.1	0.0	2.3	9.5
Fodder needs of the community	3.1	0.0	2.3	4.8
Others	0.0	8.3	2.3	4.8
Don't know	6.3	8.3	6.8	4.8
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Total Respondents	32.0	12.0	44.0	21.0

Sebcon's UDBA Survey (Household Response)

### Q18.7 Details about Rules imposed by Govt. to collect fire woods from Forest

	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundari	Total	
	Percentages %			
Bring firewood from the forest in not allowed	40.9	40.4	40.7	48.7
Allowed for limited and prescribed time	7.6	5.8	6.8	2.6
Its free, no rule at all	51.5	53.8	52.5	48.7
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Total Respondents	66.0	52.0	118.0	39.0

Sebcon's UDBA Survey (Household Response)

### Q19 Responsibility for the Stove Maintenance

		Faisalabad			Vehari
		Jaranwala	Samundari	Total	
		Percentages			
Who is responsible for the stove maintenance	Male Members	2.9	0.6	1.7	0.8
	Female Members	95.0	97.5	96.3	95.0
	Not specified	2.1	1.9	2.0	4.2
	<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
	Total Respondents	140.0	160.0	300.0	120.0

Sebcon's UDBA Survey (Household Response)

### Q20.1: Health status of women involve in cooking

#### Last 15 days (Multiple Responses)

	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundari	Total	
	Percentages %			
Coughs/Cold/Respiratory Infections	22.14	14.38	18.00	13.33
Malaria	9.29	3.13	6.00	9.17
Skin Infection	3.57	1.88	2.67	0.00
Eye infection	0.71	0.63	0.67	3.33
Injuries	0.71	0.63	0.67	3.33
Burns	0.71	0.00	0.33	0.00
Other	7.14	4.38	5.67	2.50
No disease	64.29	76.25	70.67	75.00

Sebcon's UDBA Survey (Household Response)

### Q20.1: Health status of women involve in cooking Last 3 months (Multiple Responses)

	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundari	Total	
	Percentages %			
Coughs/Cold/Respiratory Infections	12.86	6.25	9.33	6.67
Malaria	10.00	3.75	6.67	2.50
Skin Infection	3.57	0.63	2.00	0.83
Eye infection	0.71	0.63	0.67	0.83
Injuries	0.71	0.63	0.67	0.83
Burns	0.00	0.00	0.00	0.00
Other	5.00	2.50	3.67	0.83
No disease	72.86	86.88	80.33	88.33

Sebcon's UDBA Survey (Household Response)

### Q21 livestock inventory

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Mean			
Bull Adult		0.49	0.74	0.62	0.68
Bull Young		0.29	0.51	0.41	0.57
<i>Bull Total</i>		<i>0.79</i>	<i>1.25</i>	<i>1.03</i>	<i>1.24</i>
Buffalo Adult		2.86	3.27	3.08	3.98
Buffalo Young		1.91	2.46	2.20	2.81
<i>Buffalo Total</i>		<i>4.78</i>	<i>5.73</i>	<i>5.28</i>	<i>6.78</i>
Cow Adult		1.14	1.03	1.08	1.33
Cow Young		0.68	0.75	0.72	1.05
<i>Cow Total</i>			<i>1.78</i>	<i>1.79</i>	<i>2.38</i>
Sheep/goat Adult		1.99	2.41	2.21	2.57
Sheep/goat Young		0.57	1.26	0.94	1.48
<i>Sheep/goat Total</i>			<i>3.67</i>	<i>3.15</i>	<i>4.04</i>
Horse Adult		0.01	0.00	0.01	0.00
Horse Young		0.00	0.01	0.00	0.01
<i>Horse Total</i>			<i>0.01</i>	<i>0.01</i>	<i>0.01</i>
Donkey Adult		0.26	0.14	0.20	0.02
Donkey Young		0.04	0.03	0.04	0.04
<i>Donkey Total</i>			<i>0.18</i>	<i>0.23</i>	<i>0.06</i>

Sebcon's UDBA Survey (Household Response)

### Q21 Livestock Feeding

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Percentages %			
Bulls	Grazing	10.6	7.1	8.5	0.0
	Staff-fed	44.7	52.9	49.6	60.3
	Both	44.7	40.0	41.9	39.7
	<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Buffalos	Grazing	7.8	3.1	5.3	0.0
	Staff-fed	51.7	60.2	56.1	69.2
	Both	40.5	36.7	38.5	30.8
	<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Cows	Grazing	7.2	1.3	4.2	0.0
	Staff-fed	53.6	66.7	60.4	65.3
	Both	39.1	32.0	35.4	34.7
	<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Sheeps/Goats	Grazing	19.7	8.0	13.5	23.2
	Staff-fed	39.5	48.3	44.2	42.0
	Both	40.8	43.7	42.3	34.8
	<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Horses	Grazing	66.7	0.0	50.0	50.0
	Staff-fed	33.3	0.0	25.0	0.0
	Both	0.0	100.0	25.0	50.0
	<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Donkey/Mule	Grazing	13.8	22.2	17.0	28.6
	Staff-fed	58.6	38.9	51.1	42.9
	Both	27.6	38.9	31.9	28.6
	<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Sebcon's UDBA Survey (Household Response)

### Q22.1

#### Cross Tab: Number of animals by daily production of animal manure

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Q221_Kg	Q221_Kg	Q221_Kg	Q221_Kg
		Mean			
Number of Large Animals	Upto 4	47.05	46.32	46.72	47.79
	5-6	54.41	58.46	56.15	51.96
	7-8	66.06	74.50	71.33	72.00
	9-10	78.33	72.41	74.15	79.17
	10-20	142.62	107.50	123.89	178.00
	> 20	216.17	381.11	315.13	297.00
	<i>Total</i>	76.99	88.03	82.89	111.25

Sebcon's UDBA Survey (Household Response)

### Q22.2 use of Manure

	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundari	Total	
	Percentages %			
Burning	47.0	45.4	46.1	49.9
Composting	49.0	53.3	51.3	49.4
Sale	1.2	1.2	1.2	0.0
Give Free	1.2	0.2	0.7	0.6
Nothing	1.6	0.0	0.8	0.0

Sebcon's UDBA Survey (Household Response)

### Q22.3 Manure management

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Percentages %			
		Percentages %			
Management of cattle Dung	Store as pile	47.1	55.0	51.3	62.5
	In the pit	1.4	5.6	3.7	1.7
	Scattered directly into farms	14.3	11.3	12.7	0.0
	Other method	0.0	0.0	0.0	0.0
	Store as pile + In the pit	24.3	13.8	18.7	19.2
	Store as pile + Scattered directly into farms	10.7	12.5	11.7	10.0
	In the pit + Scattered directly into farms	0.0	0.6	0.3	4.2
	Not specified	2.1	1.3	1.7	2.5
	<i>Total</i>	100.0	100.0	100.0	100.0

Sebcon's UDBA Survey (Household Response)



### Q23 Holding of Agricultural Land

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Percentages %			
Have Agricultural Land	Yes	85.0	90.0	87.7	80.8
	No	15.0	10.0	12.3	19.2
	Total	100.0	100.0	100.0	100.0

Sebcon's UDBA Survey (Household Response)

### Q 27 Awareness about Bio-Gas 27.1 Source of Information and 27.2 Sight of Bio-Gas

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Percentages %			
Awareness about Bio-gas	Yes	40.7	35.0	37.7	32.5
	No	58.6	64.4	61.7	66.7
	Not responded	0.7	0.6	0.7	0.8
	Total	100.0	100.0	100.0	100.0
Sources Information of	Radio/TV	5.6	5.9	5.7	3.8
	Newspaper	3.7	7.8	5.7	3.8
	Friends/Relatives	81.5	70.6	76.2	92.3
	Govt.	1.9	0.0	1.0	0.0
	NGO/Project	1.9	3.9	2.9	0.0
	Other	0.0	2.0	1.0	0.0
	Newspaper Friends	3.7	3.9	3.8	0.0
	Friends+NGO/Project	1.9	0.0	1.0	0.0
	Radio/TV/Newspaper Friends	0.0	5.9	2.9	0.0
Total	100.0	100.0	100.0	100.0	
Seen a Biogas Plant	Yes	31.6	30.4	31.0	35.1
	No	68.4	69.6	69.0	64.9
	Total	100.0	100.0	100.0	100.0

Sebcon's UDBA Survey (Household Response)

### Q 27.2.1.1 Land Site and Q27.2.1.2 Ownership of House

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Percentages %			
Where was the land	In the village	66.7	52.9	60.0	69.2
	Outside village	33.3	47.1	40.0	30.8
	<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Whose House	Relatives	53.8	54.5	54.2	22.2
	Friends	30.8	36.4	33.3	44.4
	Others	15.4	9.1	12.5	33.3
	<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Sebcon's UDBA Survey (Household Response)

### Q 29 Health of House Hold

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Percentages %			
HH suffered from health problem	Yes	49.3	25.0	36.3	21.7
	No	50.7	75.0	63.7	78.3
	<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

Sebcon's UDBA Survey (Household Response)

### Q 31 & 32 (Faisalabad)

			Gender								
			Male				Female				
			Q31. Village committee of Male		Q32. Village committee of Female		Q31. Village committee of Male		Q32. Village committee of Female		
			Yes	No	Yes	No	Yes	No	Yes	No	
			Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	
District	Faisalabad	Village	Chak 101 GB	55.6%	44.4%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
			CHAK 105 RB	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
			chak 168.gb	0.0%	100.0%	10.0%	90.0%	10.0%	90.0%	10.0%	90.0%
			Chak 172 GB	53.8%	46.2%	0.0%	100.0%	57.1%	42.9%	0.0%	100.0%
			chak 206 Gb	69.2%	30.8%	7.7%	92.3%	14.3%	85.7%	0.0%	100.0%
			Chak 216 EB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			Chak 228 EB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			chak 280.gb	35.7%	64.3%	10.0%	90.0%	33.3%	66.7%	16.7%	83.3%
			chak 30.chak	90.9%	9.1%	90.9%	9.1%	11.1%	88.9%	14.3%	85.7%
			chak 445 GB	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
			CHAK 475 gb	0.0%	100.0%	0.0%	100.0%	80.0%	20.0%	0.0%	100.0%
			chak 48 GB	46.2%	53.8%	7.7%	92.3%	57.1%	42.9%	0.0%	100.0%
			chak 485.gb	8.3%	91.7%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
			chak 5.wb	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			Chak 527 GB	50.0%	50.0%	0.0%	100.0%	60.0%	40.0%	0.0%	100.0%
			Chak 53 WB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			chak 626.gb	30.8%	69.2%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
			chak 64 GB	13.3%	86.7%	23.1%	76.9%	0.0%	100.0%	0.0%	100.0%
			Chak 67 RB	73.3%	26.7%	6.7%	93.3%	60.0%	40.0%	0.0%	100.0%
			chak 75.wb	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			chak 97.wb	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

### Q 31 & 32 (Control Area Vehari)

				Gender							
				Male				Female			
				Q31. Village Committee of Male		Q32. Village Committee of Female		Q31. Village Committee of Male		Q32. Village Committee of Female	
				Yes	No	Yes	No	Yes	No	Yes	No
				Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %
District	Vehari	Village	Chak 101 GB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			CHAK 105 RB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			chak 168.gb	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			Chak 172 GB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			chak 206 Gb	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			Chak 216 EB	63.6%	36.4%	44.4%	55.6%	44.4%	55.6%	16.7%	83.3%
			Chak 228 EB	27.3%	72.7%	0.0%	100.0%	55.6%	44.4%	0.0%	100.0%
			chak 280.gb	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			chak 30.chak	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			Chak 445 GB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			CHAK 475 gb	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			chak 48 GB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			chak 485.gb	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			chak 5.wb	0.0%	100.0%	12.5%	87.5%	0.0%	100.0%	0.0%	100.0%
			Chak 527 GB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			Chak 53 WB	55.6%	44.4%	0.0%	100.0%	36.4%	63.6%	0.0%	100.0%
			chak 626.gb	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			chak 64 GB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			Chak 67 RB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
			chak 75.wb	26.3%	73.7%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
chak 97.wb	31.3%	68.8%	0.0%	100.0%	33.3%	66.7%	0.0%	100.0%			

### Q 7 Accompany (Women Mobility)

	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundari	Total	
	Mean			
HoHH	12.30	15.41	14.00	11.56
Adult male	11.51	18.69	15.44	10.05
Adult female	10.32	12.79	11.67	7.04
Young male	14.29	19.67	17.24	12.56
Young female	3.57	3.28	3.41	1.01
Small children of the HH	8.33	8.20	8.26	10.05
None	46.83	44.92	45.78	59.30

Sebcon's UDBA Survey (women Response)

### Q 8 Cooking Place

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Percentages %			
Cooking Place in Summer	In a room used for living or sleeping	0.7	0.6	0.7	0.0
	In a separate room in same building used as kitchen	8.8	5.8	7.2	2.6
	In a separate building used as a kitchen	15.4	5.2	10.0	6.9
	Outdoors	74.3	88.4	81.8	89.7
	Other	0.7	0.0	0.3	0.9
	Total	100.0	100.0	100.0	100.0
Cooking Place in Winter	In a room used for living or sleeping	2.2	0.0	1.0	0.9
	In a separate room in same building used as kitchen	22.1	26.5	24.4	20.5
	In a separate building used as a kitchen	25.7	21.9	23.7	23.1
	Outdoors	49.3	51.6	50.5	52.1
	Other	0.7	0.0	0.3	3.4
	Total	100.0	100.0	100.0	100.0

Sebcon's UDBA Survey (women Response)

### Q 9 Fuel for Cooking

	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundari	Total	
	Mean			
Fire wood	94.93	95.54	95.25	94.96
Crop residue/grass	2.90	6.37	4.75	5.88
Dung cakes	86.23	90.45	88.47	93.28
Coal	0.72	0.00	0.34	3.36
Kerosene Oil	0.00	0.00	0.00	0.00
Electricity	0.00	0.64	0.34	0.00
Liquid Petroleum Gas	10.14	15.29	12.88	12.61
Bio-gas	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00

Sebcon's UDBA Survey (women Response)

### Q10 & Q11 Regular Maintenance of Cook Stove

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Percentages %			
Responsibility of Maintenance of Stove	Male Adult	0.7	0.6	0.7	0.0
	Female Adult	97.1	99.4	98.3	99.1
	Male Child	1.5	0.0	0.7	0.9
	Female Child	0.7	0.0	0.3	0.0
	Total	100.0	100.0	100.0	100.0
Responsibility of Maintenance of LPG Stove	Male Adult	34.0	37.7	36.2	25.6
	Female Adult	62.0	62.3	62.2	72.1
	Male Child	4.0	0.0	1.6	2.3
	Female Child	0.0	0.0	0.0	0.0
	Total	100.0	100.0	100.0	100.0

Sebcon's UDBA Survey (women Response)

### Q12 Responsibility of Cooking in Household

	Project Focus Area: Faisalabad						Control Area Vehari	
	Jaranwala		Samundari		Total		% *	Count
	% *	Count	% *	Count	% *	Count		
1. Spouse	71.6	96	71.0	110	71.3	206	87.7	100
2. Mother	3.7	5	2.6	4	3.1	9	3.5	4
3. Daughter	12.6	17	12.3	19	12.5	36	4.4	7
4. Sister	0.0	0	3.2	5	1.7	5	0.9	1
5. Other Female Relatives	10.4	14	10.4	17	10.7	31	6.1	7
6. Other	7.4	10	4.5	7	5.9	17	0.9	1
Total	105.7	134	103.9	155	105.2	289	103.5	114
* Multiple Responses								

Sebcon's UDBA Survey (women Response)

### Q13 Details about Women Health Involve in Cooking

		Project Focus Area: Faisalabad						Control Area Vehari	
		Jaranwala		Samundari		Total		%	Count
		%	Count	%	Count	%	Count		
Health problems in last 15 days	1. Coughs/Cold/Respiratory Infections	23.4	30	19.1	29	21.1	59	14.4	16
	3. Skin Infection	4.7	6	2.6	4	3.6	10	4.5	5
	4. Eye Infection	0.0	0	2.0	3	1.1	3	0.0	0
	5. Injuries (cuts)	0.0	0	0.7	1	0.4	1	0.9	1
	6. Burns	0.0	0	0.7	1	0.4	1	0.0	0
	7. Other	7.8	10	5.3	8	6.4	18	3.6	4
	8. No problem	59.4	76	68.4	104	64.3	180	76.6	85
	12.00	1.6	2	0.7	1	1.1	3	0.0	0
	13.00	0.0	0	0.7	1	0.4	1	0.0	0
	15.00	0.8	1	0.0	0	0.4	1	0.0	0
	16.00	0.8	1	0.0	0	0.4	1	0.0	0
	17.00	1.6	2	0.0	0	0.7	2	0.0	0
	Total	100.0	128	100.0	152	100.0	280	100.0	111
Health problems in last 3 months	1. Coughs/Cold/Respiratory Infections	16.5	18	9.0	13	12.3	31	3.9	4
	2.00	3.7	4	1.4	2	2.4	6	1.0	1
	3. Skin Infection	0.0	0	0.7	1	0.4	1	2.0	2
	4. Eye Infection	0.0	0	1.4	2	0.8	2	2.9	3
	5. Injuries (cuts)	0.0	0	0.0	0	0.0	0	1.0	1
	6. Burns	0.0	0	0.7	1	0.4	1	0.0	0
	7. Other	11.0	12	2.1	3	5.9	15	2.9	3
	8. No problem	66.1	72	84.0	121	76.3	193	86.3	88
	13.00	0.9	1	0.7	1	0.8	2	0.0	0
	15.00	1.8	2	0.0	0	0.8	2	0.0	0
	Total	100.0	109	100.0	144	100.0	253	100.0	102

Sebcon's UDBA Survey (women Response)

### Q 14.1 Highest Level of Education attained by woman in HH

	Project Focus Area: Faisalabad						Control Area Vehari	
	Jaranwala		Samundari		Total		%	Count
	%	Count	%	Count	%	Count		
Illiterate	18.1	17	11.1	15	14	32	4.5	4
Madrasa School	6.4	6	0	0	2.6	6	6.7	6
Primary	31.9	30	21.5	29	25.8	59	31.5	28
Middle	11.7	11	15.6	21	14	32	21.3	19
Matric	21.3	20	20	27	20.5	47	13.5	12
Intermediate/Diploma	6.4	6	14.8	20	11.4	26	12.4	11
BA/BSC	4.3	4	11.9	16	8.7	20	6.7	6
Post Graduate	0	0	4.4	6	2.6	6	2.2	2
Professional	0	0	0.7	1	0.4	1	1.1	1
Total	100	94	100	135	100	229	100	89

Sebcon's UDBA Survey (women Response)

### Q15 Average Number of School going Childs in HH

	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundari	Total	
	Mean			
Boys	1.04	1.24	1.15	1.01
Girls	0.85	0.99	0.92	1.09
Total	1.88	2.23	2.07	2.10

Sebcon's UDBA Survey (women Response)

### Q15.1 Do all School aged Childs in HH go to school?

	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundari	Total	
	Percentages %			
Yes	79.3	88.4	84.3	83.6
No	20.7	11.6	15.7	16.4
Total	100.0	100.0	100.0	100.0

Sebcon's UDBA Survey (women Response)

### Q16 Awareness about Bio Gas

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Percentages %			
Have you ever heard about Bio-gas?	Yes	18.0	18.5	18.2	15.1
	No	82.0	81.5	81.8	84.9
	Not specified	0.0	0.0	0.0	0.0
	Total	100.0	100.0	100.0	100.0

Sebcon's UDBA Survey (women Response)



### Q16.1 Source of Information about Bio Gas

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Percentages %			
Source of information	1. Radio/Tv	0.0	3.4	1.9	5.6
	2. Newspaper	4.0	3.4	3.7	0.0
	3. Friends/ Relatives/ Villagers	92.0	65.5	77.8	55.6
	4. Govt.	0.0	0.0	0.0	0.0
	5. NGO/Project	4.0	3.4	3.7	0.0
	6. Other	0.0	3.4	1.9	0.0
	7	0.0	3.4	1.9	0.0
	13	0.0	3.4	1.9	0.0
	23	0.0	0.0	0.0	5.6
	34	0.0	0.0	0.0	5.6
	123	0.0	3.4	1.9	0.0
	Not specified	0.0	10.3	5.6	27.8
	Total	100.0	100.0	100.0	100.0

Sebcon's UDBA Survey (women Response)

### Q16.2 & 16.3 Knowledge about Bio Gas Plant and its Operations

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Percentages %			
Ever Seen a Bio-Gas Plant	Yes	28.0	20.7	24.1	50.0
	No	72.0	79.3	75.9	50.0
	No response	0.0	0.0	0.0	0.0
	Total	100.0	100.0	100.0	100.0
Know how to operate a Bio- Gas Plant	Yes	0.0	10.3	5.6	5.6
	No	100.0	89.7	94.4	94.4
	No response	0.0	0.0	0.0	0.0
	Total	100.0	100.0	100.0	100.0

Sebcon's UDBA Survey (women Response)

### Q16.4 Gathering Information for Establishment of Bio Gas Plant

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Percentages %			
Tried to get Detailed Information about Establishing a Bio-Gas Plant	Yes	28.0	17.2	22.2	11.1
	No	68.0	65.5	66.7	72.2
	Not specified	4.0	17.2	11.1	16.7
	Total	100.0	100.0	100.0	100.0

Sebcon's UDBA Survey (women Response)

### Q17 Willingness to have Bio Gas

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Percentages %			
Opt for bio-gas	Yes	58.3	55.4	56.8	55.5
	No	39.6	43.3	41.6	39.5
	Don't know/not specified	0.0	0.0	0.0	0.0
	9.00	2.2	1.3	1.7	5.0
	Total	100.0	100.0	100.0	100.0

Sebcon's UDBA Survey (women Response)

### Q17.1 Decision making Power for Installation of Plant

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Percentages %			
Who will Decide to opt for Bio-Gas Plant?	1. HoHH	81.5	85.1	83.3	83.3
	2. Adult male members	7.4	1.1	4.2	4.5
	3. Adult female members	1.2	2.3	1.8	3.0
	4. Other	0.0	0.0	0.0	0.0
	Not specified	9.9	11.5	10.7	9.1
	Total	100.0	100.0	100.0	100.0

Sebcon's UDBA Survey (women Response)

### Q17.2 Financial Arrangements for bio Gas

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Percentages %			
Financial Arrangements	1. Self	61.7	64.4	63.1	62.1
	2. Credit from a formal source	8.6	10.3	9.5	16.7
	3. Credit from relatives	7.4	3.4	5.4	3.0
	4. Sale of asset	3.7	4.6	4.2	3.0
	5. Other	6.2	0.0	3.0	3.0
	Not specified	4.9	3.4	4.2	4.5
	12.00	3.7	10.3	7.1	7.6
	13.00	1.2	0.0	0.6	0.0
	14.00	2.5	2.3	2.4	0.0
	24.00	0.0	1.1	0.6	0.0
	Total	100.0	100.0	100.0	100.0

Sebcon's UDBA Survey (women Response)

### Q17.3 Preference of Cooking Stove's Features

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Percentages %			
Preferred Features for Cooking Stove	Single burner stove	66.7	75.9	71.4	72.7
	Double burner stove	28.4	17.2	22.6	25.8
	Not specified	4.9	6.9	6.0	1.5
	Total	100.0	100.0	100.0	100.0

Sebcon's UDBA Survey (women Response)

### Q17.4 Perceived Benefits of Bio Gas

	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundari	Total	
	Percentages %			
Time Saving	93	93	93	95
Convenience	38	41	40	38
Health Benefits	46	55	51	39
Monthly Fuel Cost	46	61	54	35

Sebcon's UDBA Survey (women Response)

### Q18 Responsibility of Livestock in Family

	Project Focus Area: Faisalabad												Control Area Vehari			
	Jaranwala				Samundari				Total							
	Male	Female	Boy	Girl	Male	Female	Boy	Girl	Male	Female	Boy	Girl	Male	Female	Boy	Girl
	Percentages %															
Collecting/Cutting Fodder	88	13	13	1	92	8	6	1	91	10	9	1	86	5	4	0
Feeding	90	19	10	0	96	16	5	1	93	17	7	0	96	8	1	0
Grazing	83	12	9	1	82	11	5	1	82	12	7	1	82	24	1	0
Collecting Dung	37	56	5	3	43	50	3	0	41	53	4	1	45	65	1	1
Making Cakes	22	71	1	1	17	70	1	2	19	71	1	2	21	73	0	0
Preparing Farmyard Manure	81	9	4	0	67	5	0	0	74	7	2	0	77	6	1	0
Any Other Livestok tasks	67	6	4	0	61	8	1	1	64	7	3	0	65	13	1	0

Sebcon's UDBA Survey (women Response)

### Q19 & 20 Willingness to run the Plant and get Training by Program

		Project Focus Area: Faisalabad						Control Area Vehari	
		Jaranwala		Samundari		Total			
		Percentages							
Willing to Mix the Dung and Water.	Yes	55.4		54.8		55.1		51.3	
	No	36.7		31.8		34.1		33.6	
	No response	7.9		13.4		10.8		15.1	
	Total	100.0		100.0		100.0		100.0	
Can Another Woman mix the Dung and Water?	Yes	31.7		41.4		36.8		37.0	
	No	46.0		37.6		41.6		39.5	
	No response	22.3		21.0		21.6		23.5	
	Total	100.0		100.0		100.0		100.0	
Willing to Attend User Training	Yes	45.3		45.9		45.6		49.6	
	No	29.5		29.9		29.7		31.1	
	No response	25.2		24.2		24.7		19.3	
	Total	100.0		100.0		100.0		100.0	

Sebcon's UDBA Survey (women Response)

### Q20.2 Convenient of Location for Training Program

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Count			
Training Location	1. Village Hall	11	21	32	13
	2. At a Neighbor's House that has a Bio Gas Plant	1	6	7	6
	3. Within Your own House	35	33	68	26
	4. Other	1	1	2	1
	12	2	0	2	1
	23	10	9	19	8
	34	0	1	1	0
	123	2	0	2	1
	Not Specified	1	1	2	3
<b>Total</b>		63	72	135	59

Sebcon's UDBA Survey (women Response)

### Q 24 Decision Making Process

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Percentages %			
Agriculture related	Male Members	79	95	87	86
	Female Members	1	0	0	2
	Jointly	13	4	8	4
	Jointly but more Male Domination	8	1	4	8
	<b>Total</b>	100	100	100	100
Livestock related	Male Members	74	94	85	87
	Female Members	1	0	1	2
	Jointly	16	5	10	4
	Jointly but more Male Domination	9	1	5	7
	<b>Total</b>	100	100	100	100
Purchase of asset	Male Members	76	88	82	83
	Female Members	2	1	1	2
	Jointly	16	10	13	7
	Jointly but more Male Domination	7	2	4	8
	<b>Total</b>	100	100	100	100
Sale of asset	Male Members	75	85	80	82
	Female Members	2	0	1	2
	Jointly	16	13	15	8
	Jointly but more Male Domination	7	2	4	8
	<b>Total</b>	100	100	100	100
Children education	Male Members	31	22	26	35
	Female Members	6	1	3	2
	Jointly	50	64	58	50
	Jointly but more Male Domination	13	12	12	14
	<b>Total</b>	100	100	100	100
Health	Male Members	29	20	24	30

	Female Members	9	1	5	2
	Jointly	50	68	59	54
	Jointly but more Male Domination	12	12	12	15
	Total	100	100	100	100
Marriage	Male Members	22	14	18	20
	Female Members	5	1	2	2
	Jointly	56	67	62	54
	Jointly but more Male Domination	18	18	18	24
	Total	100	100	100	100
Other social events	Male Members	30	27	28	32
	Female Members	10	7	8	8
	Jointly	47	55	51	45
	Jointly but more Male Domination	13	12	12	15
	Total	100	100	100	100

Sebcon's UDBA Survey (women Response)

### Q25 Interviewer Observation

		Project Focus Area: Faisalabad			Control Area Vehari
		Jaranwala	Samundari	Total	
		Percentages %			
Overall Cleanliness in the house	Very Good	7	3	5	5
	Good	43	53	48	47
	Fair	27	34	31	33
	Poor	22	10	16	15
	Total	100	100	100	100
Floor of the kitchen	Clean	56	66	61	65
	Dirty	44	34	39	35
	Total	100	100	100	100
Walls and roof of the kitchen/cooking area	Almost Black	5	4	4	7
	Black patches	60	63	62	53
	Clean	36	33	34	40
	Total	100	100	100	100
Cooking pans/pots-outside	Almost Black	11	17	14	17
	Black patches	48	40	44	37
	Clean	41	43	42	46
	Total	100	100	100	100

Sebcon's UDBA Survey (women Response)

### Q5. Available Services/Facilities in the Sampled Villages

	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundari	Total	
	Mean			
Hospital	29	63	47	33
Nearest Town	0	0	0	0
Market Mandi	0	0	0	0
PCO	71	100	87	83
Post Office	57	50	53	33
Bank	14	25	20	0
Bus Stop	29	38	33	33
Shops	100	100	100	100
Paved Road	86	100	93	100
Electricity	100	100	100	100
Cylinder Gas	14	25	20	0
Telephone	43	88	67	67
Street Paved	44	79	63	65
Water Supply	14	25	20	17
Drainage System 1#Yes 2#No	57	100	80	83

Sebcon's UDBA Survey (Village Profile)

### Q5. distance in KM - outside village

	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundari	Total	
	Mean			
Hospital1	2.8	3.3	3.0	4.5
Nearest Town1	11.8	10.8	11.2	7.3
Market Mandi1	12.6	12.1	12.4	8.8
PCO1	10.0	.	10.0	3.0
Post Office1	3.3	6.3	5.0	7.3
Bank1	6.1	5.3	5.7	5.4
Bus Stop1	2.5	4.1	3.3	1.0
Shops1	.	.	.	.
Paved Road1	2.0	.	2.0	.
Electricity1	.	.	.	.
Cylinder Gas1	6.4	7.2	6.8	6.3
Telephone1	8.8	3.0	7.6	2.5
Water Supply1	2.0	3.8	3.3	7.5

Sebcon's UDBA Survey (Village Profile)

### Q 5.1 Average Distance from Tehsil/District Headquarter

	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundari	Total	
	Mean			
Tehsil Headquarter	18.0	14.6	16.2	8.8
District Headquarter	33.3	47.3	40.7	8.8

[Sebcon's UDBA Survey \(Village Profile\)](#)

### Q 6 Type of House Constructions

	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundari	Total	
	Mean			
Tehsil Headquarter	18.0	14.6	16.2	8.8
District Headquarter	33.3	47.3	40.7	8.8
Mixed	29.3	11.6	19.9	37.5

[Sebcon's UDBA Survey \(Village Profile\)](#)

### Q 7. Water Sources (% of Houses)

	Project Focus Area: Faisalabad			Control Area Vehari
	Jaranwala	Samundari	Total	
	Mean			
Handpump	74.3	65.0	69.3	17.5
Piped_Water	0.0	12.5	6.7	13.3
Electric_Pump	25.7	22.5	24.0	69.2

[Sebcon's UDBA Survey \(Village Profile\)](#)

### Q8. Average Number of Livestock in Sampled Villages

	Project Focus Area: Faisalabad			Control Area Vehari	Total
	Jaranwala	Samundari	Total		
	Mean				
Bull Ox Adult	124	116	120	80	108
Bull Ox Young	188	186	187	123	169
Bull Ox Total	312	302	307	203	277
Buffalo Adult	650	1,963	1,350	867	1,212
Buffalo Young	400	1,213	833	400	710
Buffalo Total	1,050	3,175	2,183	1,267	1,921
Cow Adult	59	370	225	162	207
Cow Young	71	215	148	103	135
Cow Total	129	585	372	265	342
Sheep Goat Adult	429	1,744	1,130	567	969
Sheep Goat Young	544	1,806	1,217	542	1,024
Sheep Goat Total	973	3,550	2,347	1,108	1,993
Horse Adult	2	10	7	9	7
Horse Young	3	1	2	1	1
Horse Total	6	11	8	9	9
Donkey Adult	67	150	111	67	99
Donkey Young	109	70	88	30	71
Donkey Total	176	220	199	97	170

[Sebcon's UDBA Survey \(Village Profile\)](#)



**Q9. Average # of HH have 2 or more Large Ruminants**

	Project Focus Area: Faisalabad			Control Area Vehari	Total
	Jaranwala	Samundari	Total		
	Mean				
Large Ruminants	364	743	554	326	494

[Sebcon's UDBA Survey \(Village Profile\)](#)