

Socio Economic Baseline Survey of Rural Households in District Pishin, Balochistan



Impact Assessment Unit
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Author: Mohammad Asif Khan

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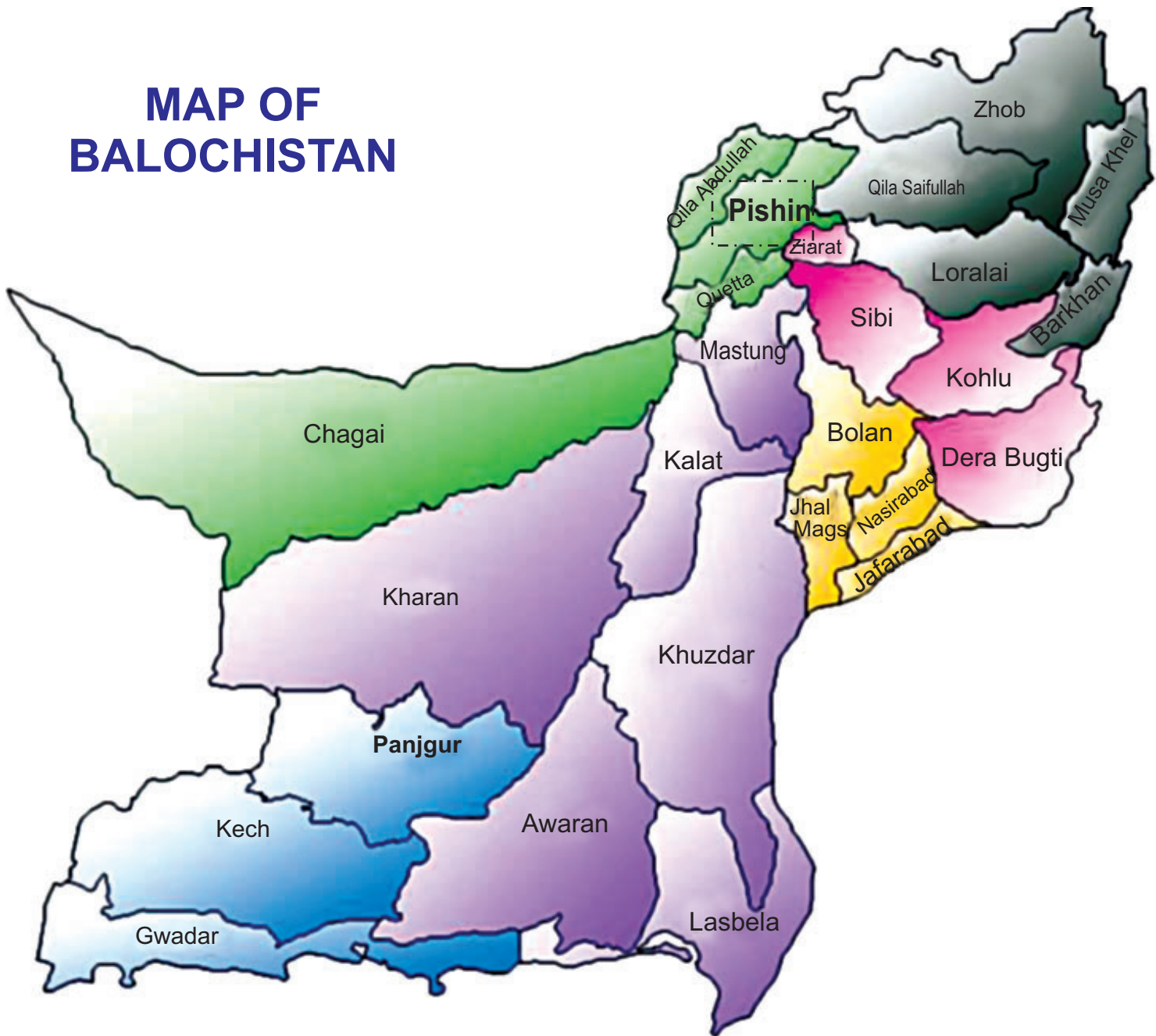
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House No 7, Street 49, F-6/4, Islamabad

Tel: 92-51-2821736, 2826792, 2829556, Fax: 92-51-2829115

www.rspn.org

MAP OF BALOCHISTAN



AREA	347,190 Km ² (44% of Pakistan)
POPULATION (1998)	6.511 Million (5.1% of Pakistan)



Balochistan Rural Support Programme

Baseline Socio Economic Survey **Pishin, Balochistan**

Mohammad Asif Khan, Agricultural Economist

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Mohammad Asif Khan

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ABSTRACT - Pishin District

A - Secondary Sources					
Land Utilization		Crop area as % of Province		Area	Production
Geographical area - million acres	1.9	Wheat		0.69	0.68
Cultivated area - % of Geographical area	7.8	Onion		0.47	0.47
Cropped area - % of Province area	2.2	Potato		10.23	13.16
Area irrigated by Karezes - %	10.0	Chillies		3.29	3.53
Area irrigated by Tubewells - %	87.5	Tomato		4.93	3.15
Livestock		Almond		2.94	1.88
Livestock population, 2006 - million heads	1.99	Apple		5.46	13.66
Livestock density/ Km2 - No	131	Apricot		3.37	3.52
Proportion of goat/sheep	92%	Grapes		64.21	70.79
Cattle - % of Province	4.1	Peaches		3.86	13.65
Goat - % of Province	4.3	Plums		11.84	7.78
Sheep - % of Province	6.5	Pomegranate		3.79	13.85
B - Findings of the Survey					
	Male	Female		Non Poor	Poor
Demography			Income per Household		
Household size - No	5.3	5.0	Income/capita/month - Rs	2,942	749
Adults/ HH - No	2.94	2.18	Farming - %	53.7	16.1
Male : Female	133:100		Livestock - %	5.0	3.7
Dependency ratio -%	47%		Service/job - %	23.7	20.5
Schooling of Children - %			Monthly food expenditure/capita - Rs	845	710
% of Children not in School	18.6	66.9	Monthly total expenditure/capita -Rs	1,384	1,049
% ">5 to 10" years	40.2	22.6	Loan amount and Source		
% ">10 to 18" years	29.5	43.1	% HHs taken Loan	42.4	68.0
% ">18 to 25" years	34.4	34.5	Average amount/HH -Rs	50,142	65,361
Literacy			Loan from Non-Institutional sources - %	95.2%	96.0%
Adult Literacy - %	77.7	14	Asset Value & Share		
Percent of Literate			Assets per HH - 000 Rs	133	61
Primary School	25.5	41.2	Share of land - %	56	50
Middle School	11.7	13.4	Share of livestock - %	4	5
High School	28.9	24.4	House & Other structures - %	22	36
Post Matriculation	21.9	10.9	Cropping intensity/ Land Ownership		
No Schooling	12.0	10.1	Cultivated area/ farm - acres	4.21	1.56
Work Status			Cropping Intensity - %	138%	102%
% Not working (>10 yr)	31.8	8.2	% area under High Value crops	47.6	3.5
% doing HH Work	3.6	90.1	Revenues/ cropped acre - Rs	36,837	5,188
% Working other than HH work	64.5	1.7	% of farms up to 5 acre	71.3	75.8
% Own farm	21.8	9.1	% area for up to 5 acre farms	32.7	33.9
% Farm labour	3.6	0.0	% of farms ">=12.5" acre	10.5	4.8
% Service/ Job	26.4	90.9	% area for ">= 12.5" acre farms	39.9	25.2
% Off farm labour	37.4	0.0	Livestock		
% Business	9.2	0.0	No of Livestock Heads per HH	8.4	5.5
% Multiple works	1.5	0.0	Cattle	0.9	0.3
Very Serious Constraints			Goat	4.8	3.6
Education facilities -%	8%	8%	Sheep	2.7	1.6
Water supply - %	41%	46%	Lactation period - months		
Healthcare facilities - %	14%	22%	Cow	8.91	8.6
Employment opportunities -%	7%	8%	Goat	4.6	4.2
Electricity - %	9%	6%	Sheep	4.3	4.0
Amenities			Daily Milk yield- Liters		
% HHs getting Water from karez	23.8%		Cow	6.9	5.6
% HHs getting Water from Well	21.3%		Goat	0.8	0.6
% Houses electrified	87.7%		Sheep	0.9	0.6
Livestock Mortality & Expenditure			Mutton/Beef production/HH - kg	61	
Mortality for goat and sheep - %	7.1% & 6.4%		Poverty		
Mortality for cattle - %	3.6%		% HHs below Poverty line of Rs 1,036	38%	
Fodder per annum - Rs	3218		% HHs below 'Two \$' per capita/day	63%	
Fodder purchased - % of total	66%		Gini - Income distribution	45%	
Concentrates per annum - Rs	2,776		PGR	0.29	
Veterinary medicines/annum - Rs	75		SOP	0.13	

Executive Summary

This survey, conducted in 2007 for the production year 2006-07, with 2 weeks of fieldwork in July 2007, was commissioned by the Rural Support Programmes Network and the Balochistan Rural Support Programme (BRSP). The objective was to gain the best possible understanding of the socio-economic situation in the District prior to any development interventions by BRSP. The specific objectives of the survey were to establish benchmarks for (i) future assessment of the BRSP impact in the newly included Districts and (ii) livestock population and productivity. The findings will also feed into programme planning and implementation. An additional objective was to give the BRSP M&E staff on-the job exposure to research concepts and methods to enable them to conduct similar surveys in the future.

A team of 11-persons (8 men and 3 women) conducted the survey. The methodology included multi-stage random sampling, conducting interviews and administering questionnaires. One problematic factor in conducting the fieldwork was that women could only be interviewed by other women and men could only be interviewed by men. Women enumerators were included in the survey team to overcome this limitation.

Pishin District at a Glance

Pishin District encompasses 2.27% of the geographical area of Balochistan; 7.76% of the cultivated area and 2.17% of the cropped area (1945,666 acres). Irrigation is by tube wells (88%) and *karez*s (10%). Land ownership is highly skewed with 15% of farms of less than 2.5 acres occupying 1% of the farm area; 60% of the farms up to 12.5 acres accounting for 22% of the farm area and the remainder 40% of farms owning 78% of the farm area.

The population of Pishin (1998 Population Census) was 367,183 with a male:female ratio of 115:100. The population density was 47 per Km². It is a major fruit and vegetable growing area. The livestock population in the District is 5.2 percent of the Province's total.

Infrastructure and services of surveyed villages

Ninety percent of the villages have access to a paved road 3 Km. Facilities for elementary education are available in all the sample villages for boys and in 80% of villages for girls within 3 Km. There is a wide disparity in access to education and therefore in literacy, with 78% of adult men being literate and only 14% of women. Forty one percent of all school aged children are not in school, with a higher proportion of girls out of school. Higher education facilities for boys are available within a reasonable distance. A *madrassah* exists within 5 Km of 90% of the sample villages.

Veterinary hospitals and Centres exist in the area, as do the offices of the Agriculture Department. Twenty nine of the 30 villages have electricity; telephone facilities exist in 19; mobile phones work in most of the area and drinking water is available from the *karez*, tube wells and hand pumps/wells.

Profile of Selected Households

The male to female ratio for the surveyed households is 133:100 for adults and 135:100 for children (<= 18 years). Twenty eight percent of the population falls in the age group of <10 years and the average household size is 10.2. Poor households are 37.6% of all households and the dependency ratio is 58%. Sixty five percent of males and 1.7% of females 10 years and above work for wages. The employment pattern for working males includes 37.4% as off farm labour, 26.4% in service/job. Out of 22 working females, 18 are in service/hold a job.

⁽¹⁾ A *karez* is a gravity-fed system of wells and underground watercourses through which rainwater is channelled.

Household work is entirely in the domain of girls and women (90%). One fifth of all household members are not working; these include aged and/or sick family members.

Women are actively involved in livestock management including chopping fodder, feeding and milking. Women sell milk, poultry or eggs. The men take strategic decisions regarding seeking and repaying loans, the purchase and sale of assets and whether or not to educate of girls. Women's involvement in these decisions is minimal to non-existent.

Livestock

Two-third of the households (64%) own some animals. Non-poor households own an average of 8.37 against 5.47 for poor HHs, or an average of 7.27 animals. One-third of the total animals are milking, 25% are dry and 37% are young stock. The expenditure on fodder is Rs 3,218, of which 66% is the cost of purchased fodder, generally wheat straw.

The lactation period for a cow is 8.88 months; 4.49 months for a goat and 4.21 months for sheep. The weighted average milk yield per day per animal is 6.73 Litres for a cow, 0.72 Litres for a goat and 0.83 Litres for a sheep. Average milk produced per HH is 714 litres for all HHs and 292 litres for poor HHs. The average daily time devoted to livestock activities is 3.79 hours per HH of which 1/3rd is spent grazing the animals. Average meat production is 55 Kg per HH.

Farm Land and crops

The average area owned by the non-poor and poor HHs is 10.50 acres and 6.85 acres respectively and the cultivated area per farmer is 4.21 acres for the non-poor and 1.56 acres for poor farmers. The relatively low proportion of area cultivated can be attributed to the lack of financial resources required to develop farmland and for installing tube wells.

Land distribution is highly inequitable. Non-poor HHs own 82% of the farm land. The top 10% HHs, ranked on the basis of their total income, own 23.2% of the total area of all respondent households, and the cultivated area of these farms is 33.6% of the total cultivated area. The bottom 10% of HHs own 5.3% of the farm land and cultivate only 2.5% of their land. The cropping intensity for non-poor HHs is 138% compared with 82% for poor HHs. The cropping pattern for the non-poor farmers includes a greater proportion of high value crops (47.55%) against 3.50% of poor HHs. Revenues per acre are Rs 36,887 for the non-poor and Rs 5,188 for the poor household farmers.

Income and Poverty

Average monthly per capita income is Rs 35,301 for the non-poor and Rs 8,987 for poor HHs. The income distribution is highly unequal: the top 20% earn 50.33% and the bottom 20% of households earn 5.22 percent of the income. Income sources for the non-poor include: farming (53.7%), service/job (23.7%) and casual labour (10.2%). Income sources for the poor HHs are farming (37.9%), service/job (20.5%) and 16.1% farming. Thirty eight percent of the sample HHs are poor, with per capita average monthly income of Rs 749 compared with the average income of Rs 2,942 for the non-poor HHs. The Gini index is 45%, indicating unequal income distribution.

Per capita monthly expenditure is Rs 1,384 for non-poor households and Rs 1,049 for poor households. Sixty three percent of household expenditure is on food. Average calorie intake is 2,267 for the non-poor and 2,104 for poor households. Overall, 59% of calorie intake is from grains.

Per capita monthly expenditure on food items is Rs 803 for the non-poor and Rs 670 for the poor households.

Assets, Value and Distribution

The average value of assets is Rs 1,399,735 for non-poor and Rs 618,870 for poor households. The share of consumer durables and livestock in the asset value is 25.4% and 3.6% respectively for non-poor HHs compared with 38.9% and 4.6% for poor HHs. Land constitutes 55.8% and 50.2% of the assets owned by non-poor and poor households. The poor households own fewer consumer durables.

Household Loans

The average loan amount in 2006/207 was Rs 55,878 per household, with the larger share borrowed by poor households. Friends and relatives are the major source of loan (69%); shopkeepers meet 19.7% of credit requirements and the banks 4.4%. Debt payable is Rs 48,415 per household. Only 31% of loans are used for productive purposes and 44% are used to meet consumption needs. Loans taken for education and health account for 20% of the total. The majority of borrowers prefer credit from banks and friends or relatives.

Both women and men identify water supply as a 'very serious problems' (46%) followed by healthcare (22%), education (8%) and jobs/employment (8%).

1. Introduction

1.1 Background

The RSPs were established in Pakistan with the financial support of the Federal or Provincial Governments and international donors. The first RSP was the Aga Khan RSP, established in 1982 in the Northern Areas. The most recent RSP to be established was the Sindh Rural Support Organisation in 2003. The essence of the RSPs' methodology is to establish partnerships with communities so that people's needs and opportunities of various kinds can be identified. Presently there are 9 RSPs working in various parts of the country, covering 93 Districts.

BRSP was created in 1983, when the Pak-German Self-Help Project was launched with the financial and technical support of GTZ (a German donor agency) to focus on rural development in Balochistan. In 1991 the project was transformed into the Balochistan Rural Support Programme which was registered under Section 42 of the 1984 Companies Ordinance as a non-profit organization dedicated to rural development. By the mid-1990s BRSP had extended its operations to 13 Districts. However, the programme then had to be scaled down substantially in subsequent years as GTZ withdrew its support. After a long interval, during which only limited implementation was possible, BRSP was able to resume broader-scale operations in 2001, with financial support from PPAF.

The year 2006 was a year of expansion. With the support of Government of Pakistan, BRSP expanded its outreach to five new Districts (Kalat, Killah Saifullah, Mastung, Pishin and Zhob) with a special focus on improving the living conditions of the poor livestock farmers by enhancing the production and productivity of their livestock assets.

1.2 The Baseline Survey

Although District profiles, the Population Census, the Agriculture Census and statistical reports compiled by Provincial Departments do exist, the figures given in the Census cannot be used for establishing a baseline or for planning, primarily because: a) the livestock population at household level can not be derived, and b) there is a huge influx of migratory herds from Afghanistan which cannot be segregated from the figures given. The Baseline Survey therefore encompasses various physical, social and economic aspects, based on primary data with the objective of planning interventions based on resource availability.

1.3 Objectives

The overall objectives of the baseline survey were to highlight the social and economic factors of the District economy; to gain an understanding of people's activities and to compile a baseline profile of the area where the BRSP aims to enhance the livelihoods of people. The specific objectives of the survey are:

- To establish benchmarks for future assessment of the BRSP impact on the standard of living of households in the newly included Districts;
- To establish benchmarks for livestock population and its productivity;
- Capacity building of the BRSP M&E staff by providing on-the-job training in survey concepts, implementation and analysis.

- To estimate the poverty rates and the socio-economic characteristics of poor and non-poor residents.

1.4 Survey Methodology

BRSP initially collected some District level information from secondary sources, including household size and the names and population of various settlements. Relevant files and reports were reviewed to gain an overview of the District. The information available with the Provincial Departments of Livestock & Animal Husbandry and the Department of Agriculture was reviewed. Discussions were held with the staff and then the operational framework, institutional arrangements and the BRSP activities were discussed.

1.4.1 Sampling

The physical conditions within the district vary primarily with reference to the existence of irrigation water availabilities and employment opportunities particularly in the mining sector. In order to capture the effect of all these factors and to minimize the sampling variation, multi-stage random sampling technique was adopted. A Tehsil-wise list of all UCs in the District was prepared. Ten UCs were randomly selected from the list, then 3 villages were randomly selected from each UC. The list of villages is attached as Annex 5.

Finally 13 respondent households, each with 2 respondents, were randomly selected from each selected village.

The women in the District are confined to their homes and cannot be interviewed by men. Since some of the required information pertains to women, female respondents (one per household) were interviewed by the three women team members. This gave a total of 390 households and 780 respondents (390 men and 390 women).

The sample frame is drawn from the Pakistan Census 1998 data for Pishin District. The household sample was based on Gilroy [2001] using the following formula:

$$n = (Z * Cv / X)^2$$

Where,

z	=	Value of the confidence level
Cv	=	Coefficient of Variation
X	=	Precision level or the acceptable amount of error (expressed in %) or the difference between the averages calculated from the sample data and the population data

Coefficient of variation (Cv) or the 'Standard Deviation (SD) as % of Mean' could not be calculated due to the lack of data. However, as mentioned by Gilroy, SD was assumed as 100% of the mean, which is the maximum and is expected to capture the variation in the target population from which the sample is drawn. With 95% confidence level, 10% precision level and 100% coefficient of variation, total sample size was calculated to be 384 $[(1/96 * 100/10)^2 = 384]$ households. In order to minimise the risk of non-sampling errors in the data collection, the sample size was further increased by 1% or roughly a total of 390 respondent households from the District.

At the time of data cleaning some questionnaires did not reflect coherent data and were substituted by respondents selected in a subsequent visit or discarded.

1.4.2 Questionnaires and Focus Group Discussions

Two structured questionnaires, one for the village and one for the household, were prepared. These addressed the socio-economic conditions of the target population. The questionnaire focussed in particular on the objectives of the PM's Livestock Initiative. The village level questionnaire (Annex 1) was used to collect general information about social and physical infrastructure and the availability of services, as well as prices and unit rates. It was filled in by the male interviewers in focus group discussions.

The household Questionnaire was divided into two parts, one for men and one for women. The questions for women (Annex 3) were those considered to be 'gender sensitive' and to which the men would not respond or would give biased information. This included literacy levels, constraints and problems and data on women's involvement in day to day economic activities and decisions related to the household.

The questionnaire, designed by M. H. Khan (2004) for similar surveys, has been tested frequently, and was thus considered effective for this baseline survey. It was, however, slightly amended keeping in view the specific survey objectives related to livestock. Livestock is a major economic activity in the area and the main project implemented by BRSP is the PM's Livestock Initiative. The questionnaires were pre-tested in the selected area and modified as required. The household level information was collected using the questionnaire (men's section) attached as Annex 2. The subjects include the following:

- Resource availability (earnings, land and livestock) and assets owned (productive, consumer and savings);
- Cropping patterns, production and returns;
- Prices of farm and non-farm commodities;
- Livestock raising (herd composition, lactation periods, milk yields, animal weights, animal sales and purchase, expenditures on veterinary medicines and fodder purchase, veterinary facilities available and livestock feeding practices.
- Household consumption of food items;
- Influence on income and expenditures of various preferences and external factors;
- Extent of indebtedness, credit sources, future credit needs and credit use;
- Amenities available at the HH level (water supply, electricity, fuel used, house structure);
- Existing infrastructure and amenities;
- Women's involvement in decision making within the household and concerning development activities.

1.4.3 Staff Capacity Building

In keeping with BRSP's objective of undertaking small interventions with community participation, and with a view to selecting and implementing interventions based on the lessons learnt from monitoring and evaluation, there is a need to build staff capacities

for conducting surveys. The field team was selected from amongst the District level staff, after they had been interviewed by the Consultant and the RSPN MER team to determine their aptitude.

A team of 8 male and 3 female enumerators was selected (Annex 4) to administer the questionnaire. A 3-day intensive orientation was conducted at the BRSP Head Office, comprising both classroom training and field testing. The first two days focussed on concepts, including explaining the questionnaires, the survey codes, and the ethics and responsibilities of the enumerators. The third day was used to field test the questionnaires, enabling the enumerators to gain experience in data collection. The actual field survey was conducted for two weeks in July 2007.

1.4.4. Data Collection

Secondary data was collected from various Federal and Provincial Census reports. These included the Agriculture Census, Livestock Census, Population Census, Agriculture Statistics and/or the data compiled by the Departments of Livestock & Animal Husbandry, Planning & Development Irrigation. The information pertained to:

- Land utilization, cropped areas and yields
- Livestock population and trends
- Household size, employment patterns and literacy levels.

2. Pishin District at a Glance

2.1 Land Use

Pishin District encompasses 2.27 percent of the geographical area of the Province (1,945,665 acres). The cultivated area is 7.76 percent and the cropped area is 2.17 percent of the entire Province (Table 1). The cropped area is only 16% of the District's cultivated area. Irrigation is by tube wells (88%), *karez*s (10%) and wells/canal (2%).

The population of the District in 1998 (Population Census) was 367,183, with a male to female ratio of 115:100. There were 51,520 households at that time. The population density was 47 persons per square Kilometre in 1998 against a national average of 166.3 persons. Only 6.3% of the population lived in urban areas. Nomadic intra and inter-District transhumance is common. Land ownership is highly skewed with 15% of farms 2.5 acres or less in size occupying one percent of the farm area; 60 percent of farms up to 12.5 acres having 22 percent of the farm area and the remaining 40 percent of farms occupying 78 percent of the farmed area^[1].

Table 1: Index of Area in BRSP Selected Districts

District	Geographical area (%)	Reported area (%)	Cultivated area (%)	Cropped area (%)	Cropped : Cultivated
1	2	3	4	5	6=5/4
Killa Saifullah	1.97	2.43	7.49	11.77	89%
Zhob	5.85	1.33	2.41	1.26	30%
Pishin	2.27	1.72	7.76	2.17	16%
Kalat	1.91	3.69	5.52	2.12	22%
Mastung	1.98	1.89	10.52	2.44	13%
All 5 districts	13.96	11.06	33.71	19.77	33%
Balochistan	100.0	100.0	100.0	100.0	57%
100 M acres/No.	85.791	42.313	4.772	2.704	-

Source: Agricultural Statistics Balochistan, 2005-06

The District experiences periodic droughts. The extensive drought of 1998 to 2004 killed a very large number of livestock, dried up the *karez*s and reduced water flows. It also degraded the rangelands and caused immense suffering for the livestock-dependent communities.

Traditionally Pishin District has depended on livestock grazing but with the introduction of a tube well subsidy in 2005 farmers have installed electric pumps for tube wells. This and the efficient use of *karez* water through small irrigation schemes have made the District a major producer of fruits and vegetables.

2.2 Crop Area and Production

Agriculture is an important source of livelihood. A number of small irrigation schemes supply *karez* water to farms where good quality high-value fruits (e.g. apples, pomegranates, peaches) and potatoes are produced. It is also an important vegetable growing area. Grapevines account for 64 percent of the provincial acreage and produce 71% of the Province's crop. Despite the high rates of production there is no value addition for any of the farm produce.

^[2]Geographical area is the area which has been surveyed and calculated by the Survey of Pakistan. Reported area is the total physical area of the village/Deh/Tehsil or District. Cultivated area is the farm area sown at least once during the year under reference or during the previous year (cultivated area = net area sown + current fallow). Cropped area is the aggregate area of crops raised during the year under reference including the area under fruit trees.

^[3]A farmer owing an electric tube well pays Rs 4,000 per month irrespective of the utilization rate, as electricity charges.

Table 2: Crop Area and Production, Pishin District

Crop	Area – acres		Production		% of Balochistan	
	Balochistan	Pishin	Balochistan	Pishin	Area	Production
Wheat	765,928	5,253	649,852	4,396	0.7	0.7
Onion	94,088	445	700,769	3,275	0.5	0.5
Potato	6,909	707	41,478	5,458	10.2	13.2
Chillies	6,380	210	3,797	134	3.3	3.5
Tomato	37,992	1,873	193,633	6,090	4.9	3.1
Other veg	57,495	3,025	292,065	14,053	5.3	4.8
Melons	30,339	1,925	140,923	8,593	6.3	6.1
Pulses	144,173	-	43,539	-	0.0	0.0
Oilseeds	87,926	-	21,758	-	0.0	0.0
Almond	24,725	726	21,883	412	2.9	1.9
Apple	252,717	13,786	220,896	30,170	5.5	13.7
Apricot	65,719	2,214	178,694	6,282	3.4	3.5
Grapes	31,841	20,445	47,449	33,590	64.2	70.8
Peaches	23,509	907	18,233	2,488	3.9	13.6
Plums	9,620	1,139	26,454	2,057	11.8	7.8
Pomegranate	26,504	1,006	31,661	4,386	3.8	13.9
Other fruits	142,006	684	293,976	1,127	0.5	0.4
Fodders	104,276	1,544	1,296,849	28,690	1.5	2.2

Source: Agri. Statistics Balochistan 2005-06, Agriculture Department, Balochistan, Quetta

The Directorate of Agriculture Marketing Punjab reports that potatoes and onion are scarce in Punjab when they are plentiful in Balochistan (Table 3). High prices and good markets for these crops attract farmers.

Table 3: Production Cycle for selected produce and High price period

	Availability months		Short supply period in Punjab	Remarks
	Punjab	Pishin		
Onion	May-July	August-October	August-October	High prices at times of Balochistan harvest
Potato	Nov – June	August-October	August-October	Supplies from Cold storages
Tomato	April-July	Nov- February	January – March	High prices at times of Balochistan harvest, no processing

Source: Agriculture Marketing Information, Directorate of Agriculture (Econ & Marketing), Punjab, Lahore

2.3 Livestock

The practice of livestock raising has a long history in Pishin District. It is an integral part of the socio-economic activities of the rural areas and plays a key role in mitigating the effects of poverty by providing meat and milk for daily use. Livestock provide a steady stream of food and ready cash in times of need and is provides security for the rural poor when they need cash quickly. Livestock, especially sheep and goats, provide a cushion to agro-pastoralists in case of crop failures. These are reared mostly in small herds as an essential part of small farming systems. For some it is the only mean of asset accumulation and risk diversification that prevents a slide into abject poverty in marginal areas. The animals are reared by landless households to substantiate their livelihood, using the fodder amply available for free in orchards and pastures.

Of Balochistan's total geographical area of 34.73 million hectares, 93% is classified as rangeland. Of this, 10 million Ha (31%) is unproductive, 12 million hectares (37%) has little grazing and 1.6 million hectares (5%) are under grazed because the pasture is in inaccessible hills and suffers from lack of water. The rangelands had traditionally supported around 22.5 million animals during the pre-drought period (Ahmad, 2007). The Livestock Census (2006) gives a livestock population of 28.08 million. This includes 2.25 million cattle, 12.8 million sheep, 11.78 million goats, 0.319 million buffaloes and 0.92 million other animals like camels, horses, mules and asses.

The livestock population in Pishin District numbers 1.46 million. Given the importance of cattle (generally Friesian cows) in the economy of the District, the Department of Livestock and Animal Husbandry has selected Pishin for milk collection from small and landless farmers. The livestock density is 131 per Km² of which 92% are ruminants.

Over the years the rangelands have been degraded by overgrazing, extraction of fuel wood and persistent drought. The influx of a large number of Afghan refugees, along with their livestock, put tremendous pressure on grazing lands: this pressure was further aggravated by persistent drought from 1998 to 2006. Vast areas were denuded and the carrying capacity was reduced considerably. The stock build-up capacity is now improved and flock replacements are becoming available to many graziers.

2.4 Migratory Herds

The District is traditionally a thoroughfare for transhumant nomads who drive their large herds from Districts Zhob and Killa Saifullah and from Afghanistan on their way to Sibi. Because of the cold, winter weather conditions are hard, fodder becomes scarce and many animals fall prey to diseases. The nomads return to their home pastures by the middle of August, before the flood season begins.

There is very little data available on the migratory livestock population in Balochistan. The most recent study to assess the level of movement of migratory herds and their impact on the economy of the area was conducted by the Agricultural Census Organization in 1986. That survey found that:

- In 1986 the animals in those herds numbered 1,492,586. The average size of a single herd was 193 animals. Forty six of the herds had 1 to 30 animals , accounting for 4% of the total animals in the migratory herds. Seventy percent of the animals were sheep and 24 percent goats.
- Nineteen percent of the herds had more than 251 animals: these accounted for 65% of the total.

2.5 Livestock population

Approximately 5.2% of the livestock in Balochistan are raised in Pishin District. The most recent Livestock Census was conducted in 2006. The methodology was as follows:

- One hundred percent of the National Certainty Holdings were counted, including Government, Semi Government, Army livestock and dairy farms;

- Sample Livestock Households from the settled areas were selected and their livestock counted;
- The Raising Factor for aggregated groupings and species was calculated, to extrapolate the sample figures for the entire population at district level; and
- The District figures were aggregated to derive the Provincial total.

The number of livestock-raising households varies for different kinds of animals. Since the denominator (the household size) varies for each kind of animal, the resultant figure of livestock heads per household cannot logically be deduced. The 2006 Census does not include the migratory herds, nor does it make it possible to analyse trends in rearing practices. However, based on the number of animals and the number of households as given in the Agricultural Census and Livestock Census reports, it is possible to gain some idea of the livestock population in the area (Table 4).

Table 4: Estimated No. of Animals per Household in Pishin District

Livestock	1990	1996	2000	2006
Cattle	2.81	5.16	3.24	4.00
Buffalo	5.50	3.17	4.94	2.23
Sheep	23.72	50.03	15.44	37.80
Goat	23.25	38.25	13.79	21.22
Camel	2.20	7.92	2.00	3.27
Horses	1.59	1.53	4.01	1.68
Mules	2.46	1.85	1.01	3.99
Asses	2.03	1.72	1.69	1.50

Sources: 1- Livestock Population Census (various issues), Tables 1 to 7

2- Agri Census 2000 Tables 11.3 to 11.6.

3. Results of the Survey: Profile of Sample Villages

3.1 Infrastructure and Services Available

Physical and economic infrastructure and social services have a direct bearing on the quality of life. As shown in Table 5, sixty seven percent sample villages have an asphalt road of reasonable quality within one Km and people can travel by bus or wagon. Ninety percent of villages have access to a road transport system within 3 Km. There is no railway connection in the area. A Utility Store exists in only one of the sample villages, although there is a livestock market, a Utility Store, 16 PCOs and 8 Post Offices within 5 Km of each sample village. Ninety seven percent of the villages have electricity. Telephone facilities are available in 63% of villages and there is wide coverage (80%) of mobile phone service.

There is widespread lack of sanitation in the villages with no drainage or in-house supply of water (Table 6). An extensive electricity grid provides tube well and household electricity needs under various developmental programs. The *karez* and the tube wells are important sources of drinking water, while 70% of villages have hand pumps and wells. No village has *pacca* drains.

Seventy seven percent of sample villages have a Boys' High School within 5 Km. The figure is 50% for Girls' High Schools. There are 2 private Primary Schools for boys and two for girls; 2 private High Schools for boys and one for girls and 2 private Colleges, all within 5 Km of the sample villages. *Madrasahs* also offer religious education.

The offices of the Agriculture Department and Livestock/ Animal Husbandry are adequately

established. Dispensaries and BHUs are available within a reasonable distance of each village. There are 30 *karezes* to irrigate farm land and meet domestic water needs.

Table 5: Physical and Social Infrastructure and Social Services for Sample Villages, 2007

Infrastructure/ Services	Number of villages within a distance of				Percent of Sample Villages within			
	0-1 Km	1-3 Km	3-5 Km	>5 Km	0-1 Km	1-3 Km	3-5 Km	>5 Km
Road	20	7	0	3	67	23	0	10
Stop	22	5	0	3	73	17	0	10
Railway Station	-	-	-	-	-	-	-	-
Grain Market	0	1	1	28	0	3	3	93
Utility store	0	0	1	29	0	0	3	97
Livestock Market	0	0	1	29	0	0	3	97
Post Office	2	4	2	22	7	13	7	73
PCO	10	4	2	14	33	13	7	47
Bank	0	0	1	29	0	0	3	97
NGO	0	0	1	29	0	0	3	97
Agri. Extension Office	0	3	2	25	0	10	7	83
Livestock & A.H Office	6	4	3	17	20	13	10	57
Dispensary	11	9	4	6	37	30	13	20
BHU	7	7	4	12	23	23	13	40
Medical Store	10	8	3	9	33	27	10	30
Clinic	11	5	3	11	37	17	10	37
Lady Health Visitor	8	9	4	9	27	30	13	30
Veterinary Store	4	4	3	19	13	13	10	63
Primary School – Boys	29	1	0	0	97	3	0	0
Primary School – Girls	22	2	1	4	73	7	3	13
Primary School – Mixed	0	0	0	0	0	0	0	0
Middle School – Boys	12	4	4	8	40	13	13	27
Middle School – Girls	10	6	2	8	33	20	7	27
Middle School – Mixed	0	0	0	0	0	0	0	0
High School – Boys	11	6	6	5	37	20	20	17
High School – Girls	4	9	2	13	13	30	7	43
High School – Mixed	0	0	0	0	0	0	0	0
Govt College – Boys	2	2	2	22	7	7	7	73
Govt College – Girls	1	2	1	24	3	7	3	80
Govt College – Mixed	0	0	0	0	0	0	0	0
Private Primary School for Boys	0	0	2	27	0	0	7	90
Private Primary School for Girls	0	0	2	26	0	0	7	87
Private High School for Boys	1	0	1	21	3	0	3	70
Private High School for Girls	0	0	1	13	0	0	3	43
Private College	0	2	0	14	0	7	0	47
<i>Madrassah</i>	5	4	4	11	17	13	13	37

Table 6: Village Infrastructure and Amenities, 2007

Infrastructure/ Amenities	Yes		No	
	Number	Percent of total	Number	Percent of total
Electricity	29	97%	1	3%
Telephone	19	63%	11	37%
Mobile	24	80%	6	20%
Internet	0	0%	30	100%
Grocery shop	15	50%	15	50%
Meat shop	13	43%	17	57%
Water supply	17	57%	13	43%
Hand pumps	5	17%	25	83%
Well	3	10%	27	90%
Pacca Drain	0	0%	30	100%
Street pavement	0	0%	30	100%
Tailor shop	7	23%	23	77%

3.2 Results of the Survey: Profile of Sample Households

3.2.1 Age of respondents

Of the 780 respondents (390 men and 390 women) 71% are 26 to 55 years old. Four percent of the respondents are over 65. The average age of male and female respondents is 42 and 37 years respectively (Table 7). Twenty eight percent of the population of surveyed households are <10 years old. Overall, 12.8% of HH members are over 55.

Table 7: Age of Respondents

Respondent	Male	Female	Total
Average age - years	39.5917	39.3876	39.4897
Total No of respondents	390	390	780
Respondents in age group- %			
16-25	17.9	14.6	16.3
26-35	26.7	35.1	30.9
36-45	26.2	25.9	26.0
46-55	16.7	11.3	14.0
56-65	9.2	8.5	8.8
>65	3.3	4.6	4.0

3.2.2 Literacy levels

27.4% of male and 93.6% of female respondents are not literate (Table 8). Overall, 60.5% of all respondents are not literate while another 6.2% say they are literate but do not have any formal schooling. Of the literate respondents who have been to school, 10.3% reached the Matriculation level. A small proportion (4.6%) studied beyond intermediate level. Of these, 8.7% are men and only 0.5% are women.

Table 8: Literacy Level of Respondents - %

Literacy level	Male	Female	Total
Not Literate	27.4	93.6	60.5
Literate but no Schooling	11.0	1.3	6.2
Schooling	61.5	5.1	33.3
Primary	16.4	2.3	9.4
Middle	7.7	0.5	4.1
Matric	18.7	1.8	10.3
Intermediate	10.0	0.0	5.0
Post Intermediate	8.7	0.5	4.6

3.2.3 Professions

Thirty percent of male respondents are in service include both govt. and private employment followed by farming (25%) and labour (24%). 96% of women respondents identify household work as occupying most or all of their time. Five percent of the respondents are not doing any work.

Table 9: Profession of Respondents - %

Profession	Male	Female	Total
Farming	25	0	13
Labour	24	0	12
Services	30	2	16
Business	7	0	4
Household work	3	96	49
Other works	1	0	1
Not Working	9	2	5

3.2.4 Demography

The male to female ratio for the 390 surveyed households is 133:100 for adults and 135:100 for children 18 and under. The overall ratio of 131:100 for the entire population is much higher than the national ratio of 109.49^[2]. Based on the 1998 Population Census figures the male to female ratio for rural areas in Pishin is 124:100 for children and 115:100 for the whole population.

The average household size is 10.28. It is higher by 41% than the average of 7.28 for rural Balochistan (HIES 2005-06), which may probably be attributed to living in joint families. The 2005-06 PSML cites an average household size of 6.9 for the rural areas of Balochistan.

The number of poor households is 147 (37.7%) with a population of 1,503 individuals. The dependency ratio of non-earning members (<=10 year + over 55 years) to earning individuals is very high at 47% for the sample households (Table 10).

Table 10: Demographic Composition of Households

	Male	Female	Total
Number of Households	390	390	778
Total population	2,305	1,734	4,039
Male : Female	133		
Adult	1,147	850	1,997
% of total population	49.8	49.0	49.4
Male : Female	135		
Over 55 years - %	9.8	7.88	8.96
Children	1,158	884	2,042
% of total population	50.2	51.0	50.6
Male : Female	131		
up to 10 Year in population - %	29.6	25.3	27.8
Average size of HH	5.3	5.0	10.3
Adults/ HH	2.9	2.2	5.1
Number of :			
Poor HHs	147		
Poor population	779	724	1,503
Average size of Poor HHs	5.3	4.9	10.2
Dependency ratio	47%		

3.2.5 Work status

In rural Pakistan people 10 years old and above are economically active, usually in un-skilled labour. Even children 6 to 10 years old work in livestock related activities like grazing animals, cutting fodder, and feeding and watering animals. In the surveyed households 64.5% of men aged 18 to 55 work for wages and 90% of women do unpaid household work. A very few women (1.7%) also work outside the home for wages (Table 11).

⁽⁸⁾The poor were identified using the national poverty line of Rs 879 per capita per month (Economic Survey, 2005-06). The inflation adjusted figure for 2007 works out to Rs 1,036 per capita.

⁽⁹⁾Ratio of population in the age group of up to 10 years + over 55 years to those in the age group of over 10 to 55 years.

Table 11: Work status

	Male	Female	Total
All over 10 years	1618	1295	2913
Not Working	515	106	621
= %	31.8	8.2	21.3
>55 years	29	6	35
>18 to 55	129	14	143
>10 to 18	357	86	443
HH Work	59	1167	1226
= %	3.6	90.1	42.1
>55 years	30	61	91
>18 to 55	19	752	771
>10 to 18	10	354	364
Working	1044	22	1066
= %	64.5	1.7	36.6
>55 years	53		53
>18 to 55	884	17	901
>10 to 18	107	5	112
% Own farm	21.8	9.1	21.6
% Farm labour	3.6		3.6
% Service/ job	26.4	90.9	27.8
% Off farm labour	37.4		36.6
% Business	9.2		9.0
% Multiple works	1.5		1.5

Table 12: Adult Literacy levels

Literacy level	Male			Female			Both sexes		
	Non Poor	Poor	All	Non Poor	Poor	All	Non Poor	Poor	All
No. of Non Literate adults	118	137	255	333	398	731	451	535	986
% of adults not literate	17.3	29.7	22.3	79.9	91.9	86.0	41.0	59.8	49.4
No. of literate adults	565	325	890	84	35	119	649	360	1009
% of adults	83	70	78	20	8	14	59	40	51
Percent of Literate:									
Primary School	19.5	36.0	25.5	39.3	45.7	41.2	22.0	36.9	27.4
Middle School	11.9	11.4	11.7	10.7	20.0	13.4	11.7	12.2	11.9
High School	32.7	22.2	28.9	27.4	17.1	24.4	32.0	21.7	28.3
Post Matriculation	27.6	12.0	21.9	13.1	5.7	10.9	25.7	11.4	20.6
No Schooling	8.3	18.5	12.0	9.5	11.4	10.1	8.5	17.8	11.8

Out of a total of 2,754 children, 511 (18.5%) are less than 5 years old. Of the population who are 5 to 25 years old, 920 (41%) have never been to school (Table 13). 26.8% of 5-10 years olds are not in school. 39.8% of 10 to 18 year olds and 34.5% of 18 to 25 year olds are not in school.

The proportion of out of school girls is much higher (66.9%) than boys (18.6%), because of *purdah* and seclusion. Girls from poor families are much less likely than girls in non-poor families to be out of school. The proportion of poor children not in school is 51.4% and conspicuously higher for poor girls (80.3%). Poverty is a significant factor in preventing girls from attending school.

Table 13: School Attendance

Children in School	Boys	Girls	Total
All children	1,550	1,204	2,754
Children in '<=5 year' age*	348	163	511
Percent of all children in '<=5 year' age	22.45	13.54	18.55
Children in School age*	1,202	1,041	2,243
Children not in School (from School age)	224	696	920
% of all School age children 'not in School'	18.6	66.9	41.0
>=5 to 10 years	40.2	22.6	26.8
>=10 to 18 years	29.5	43.1	39.8
>=18 to 25 years	34.4	34.5	34.5
No. of children Not in School in Poor Households	91	350	441
% of Children of Poor Households not in School	21.6	80.3	51.4

*- 10 students in '<=5 year' are also going to school.

3.2.6 Health status and mortality

The health of household members was classified as good, fair or poor (Table 14). Poor health indicates a chronic or acute ailment. 93% of household members said they are in good health. More men than women are in good health.

The number of reported deaths in 2006-07 constitutes 1.7 percent of adults and 0.6 percent of children. Infant mortality as reported in the PSLM 2005-06 is 0.82 for the rural areas of Balochistan.

Table14: Health Status of Household Members

Health status	Male	Female	All
Percent in good health			
Adults	93.8	93.1	93.5
Children	93.3	92.4	92.9
All ages	93.6	92.8	93.2
Percent in fair health			
Adults	4.2	4.7	4.4
Children	4.5	7.1	5.6
All ages	4.3	5.8	5.0
Percent in poor health			
Adults	2.0	2.1	2.1
Children	2.2	0.5	1.5
All ages	2.1	1.4	1.8
Percent died (2006-07)			
Adults	1.4	2.0	1.7
Children	0.7	0.4	0.6
All ages	1.1	1.3	1.2

3.2.7 Physical environment

The physical environment and amenities of life are inadequate both in numbers and quality. The majority of houses are made of stone and mud, although some well to do families have built brick houses. There is little visible difference in the housing for poor or non-poor households, primarily because the poor carry stones themselves and the non-poor pay for labour. One-fourth of the houses are kacha. Forty eight percent of the houses have 3 to 4 rooms; 22% have =>5 rooms and the remaining 30 percent = <2 rooms. The average number of rooms is 3.8 for non-poor and 3.2 for poor households.

A supply of potable water and proper sanitation are critical factors in maintaining good health. The availability of drinking water is a big problem in some parts of the District. In some areas, unhygienic water is transported through rusty/leaky pipes and stored in tanks that have not been cleaned for years.

Forty five percent of houses have a water supply; 23.8 percent get their water from karez streams and 21.3 percent get water from wells. Ten percent of the villages get their water from tanks, ponds or streams. In places where chronic water shortages prevail, people are forced to buy water that costs approximately Rs 1,000 to Rs 1,200 per 250 gallons. Livestock needs in these areas are met from streams that in some instances are 8 to 10 Km away from people's homes. Sixty one percent of households have indoor latrines.

Eighty percent of the houses are connected to the electricity grid which supplies subsidized electricity to the tube wells. Fuel wood/ dung cake is commonly used and some households have gas cylinders.

Table 15: Facilities for Household Members

House Facilities	Non Poor	Poor	All HHs
All Households	243	147	390
% Pucca structures	0.4	1.4	0.8
% Kacha structures	98.4	98.6	98.5
% Pucca + kacha structures	1.2	0.0	0.8
Average No. of rooms	3.8	3.1	3.5
% up to 2 rooms	22.6	42.2	30.0
% 3-4 rooms	49.8	46.3	48.5
% 5 or more rooms	27.6	11.6	21.5
Water supply			
% Piped	45.7	43.5	44.9
% Karez	24.3	23.1	23.8
% Well	22.6	19.0	21.3
% Others	7.4	14.3	10.0
Latrine			
% Inside	62.6	59.9	61.5
% Outside	37.4	40.1	38.5
Drainage			
% Yes	6.6	12.2	8.7
% No	93.4	87.8	91.3
Electricity			
% Yes	89.3	85.0	87.7
% No	10.7	15.0	12.3
Fuel used			
% Wood/ dung cake	78.2	76.2	77.4

⁽¹⁰⁾ A flat rate of Rs 4,000 per electric tube well is fixed irrespective of the motor horse power or the tube well utilization rate.

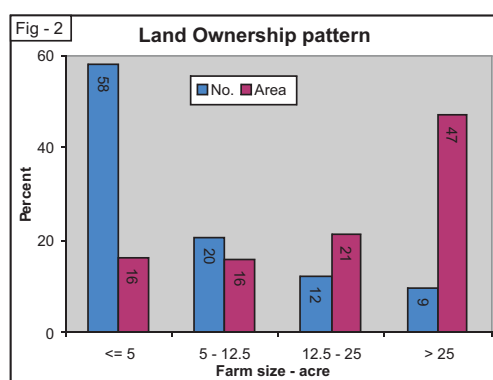
3.3 Farm Income

3.3.1 Land Ownership and Farm size

Of the 390 respondents, 9 were share-cropping tenants and 2 were leasing the land they cultivated. Two systems exist for share cropping: in one the produce is shared equally (either in-kind or in monetary value) and in the other 1/3rd of the produce is exchanged for tube well water.

Of the sample households, 15.6 percent households do not own any land. Some people own land that is not cultivable or is not cultivated primarily due to lack of water. Installing a tube well requires a capital investment of over one million Rupees. Overall, 37.7% of sample households do not farm because they own no land, water is scarce or too expensive and/or financial limitations prevent them from investing in the necessary resources.

The average area owned by the non-poor farmers is 10.50 acres and 6.85 acres for poor farmers. The distribution of land amongst the sample households is highly inequitable (Table 16 and Fig 2). Only 28% of the total of 3,560 acres owned by the sample households is owned by poor households. Sixteen percent of the cultivated farm area (≤ 5 acres) is owned by 58% of the sample households. Forty seven percent of the cultivated farm area (≥ 25 acres) is owned by 9 percent of households. Non-poor households cultivate 40% of the area they own. And poor households cultivate 23% of the land they own. The Gini coefficient for land owned is 0.15.



The cultivated area per farm is 4.21 acres for the non-poor and 1.56 acres for the poor households. The poor households do not have the financial resources required for land development, inputs, machinery and tube well installation.

Table 16: Land Holdings for Sample households

Land Holdings	Non Poor		Poor		All	
% of households not owning land	12%		21%		16%	
% of households not cultivating land	26%		58%		38%	
	Count	Acres	Count	Acres	Count	Acres
Area owned per household	213	10.50	116	6.85	329	9.13
Area cultivated per household	181	4.21	62	1.56	243	3.21
Cultivated area by Farm size:						
≤ 1.0 acre	22	0.95	15	0.87	37	0.92
1.0 to 2.0 acre	26	1.90	18	1.92	44	1.91
2.0 to 5.0 acre	73	4.21	37	4.16	110	4.20
5.0 to 12.5 acre	43	8.53	24	8.08	67	8.37
12.5 to 25 acre	27	18.9	13	18.23	40	18.7
> 25 acre	22	59.0	9	41.7	31	53.9

3.3.2 Cropping intensity and patterns.

With more productive resources in the form of irrigated land (by *karez* or tubewell) the cropping intensity for non-poor households is much higher (138%) than that of poor households (102%). The cropping pattern for the non-poor farmers includes a greater proportion of high value crops (48%) such as onions, tobacco, grapes and apples compared with the poor farmers (3.5%). The poor farms grow a higher proportion of low value and rain-fed crops like wheat and cumin.

3.3.3 Crop Yields and Returns.

As shown in Table 17, the average yield of apples for non-poor farmers is 6,328 Kg against 6,750 Kg for the poor farmers. The yield of melons 7,618 Kg and 6,833 Kg for non-poor and poor farmers respectively. Weighted average revenues per cropped acre are substantially higher for the non-poor (Rs 36,837) compared with Rs 5,188 for the poor households. The average revenues per cultivated acre are Rs 27,761 across the board.

Table 17: Average Area, Cropping intensity and Yields

Crop	Non Poor farmers			Poor farmers		
	Area planted (acres)	Cropping intensity (%)	Average Yield (Kg/acre)	Area planted (acres)	Cropping intensity (%)	Average Yield (Kg/acre)
Jowar/ Bajra grain	0.003	0%	400	-	-	-
Fodder	0.14	2%	2,878	-	-	-
Onion	0.02	0%	6,300	-	-	-
Tobacco	0.47	9%	1,710	0.03	1%	1,933
Cumin	0.02	0%	133	0.12	4%	113
Wheat	1.69	31%	768	2.01	66%	750
Melons	0.27	5%	7,618	0.07	2%	6,833
Other Vegetables	0.29	5%	2,899	0.20	6%	3,049
Tomatoes	0.36	7%	4,186	0.14	5%	4,357
Grapes	0.12	2%	4,078	0.02	1%	4,875
Apples	2.00	36%	6,328	0.05	2%	6,750
Trees for Fuelwood	0.03	0.5%	1,600	0.20	7%	745
Total	5.41	138%	-	2.85	102%	-

Note: Fruits are counted twice to calculate cropping intensity

- Cultivated area for non-poor household farmers is 4.21 acres against 1.56 acres of poor household farmers.
- Cropping intensity for the non-poor farmers is 138% against 102% for the poor farmers.
- Area under high value crops is 47.5% at the farms owned by non-poor households against 3.5% of poor household farms.
- Revenues per cropped acre are Rs 36,837 for non-poor farms against Rs 5,188 for poor farms.

3.4 Livestock of Sample Households

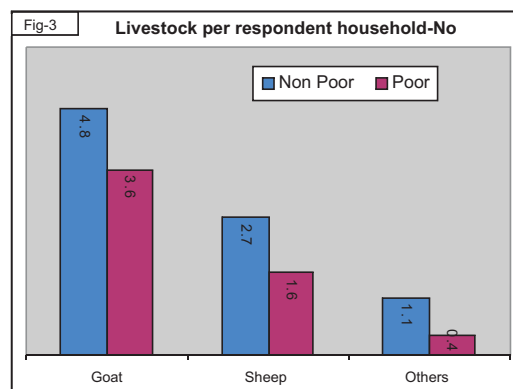
3.4.1. Livestock Inventory

The 1998 Population Census listed 54,048 households in Pishin District, 51,52.0 of them in rural

⁽¹¹⁾ Cropping intensity is the ratio of area cropped in Kharif + Rabi divided by cultivated area.

areas. Thirty six percent of the over all sample households and 46% of poor households do not own any livestock. The remainder own goats (35% of households), sheep (20% of households) and cattle (28% of households) (Table 18). The breeding season for sheep and goats is October to November and the birthing season is March to April.

Average number of animals for non-poor household is 8.58 against 5.54 for the poor households, or an average of 7.27 animals per household on overall basis. Average number of poultry birds domesticated by the households is 9.4, to meet family needs of eggs and chicken. Thirty five percent of the animals are milking, 25 percent are dry and 37 percent is the young stock. Around 2.5 percent of all animals were slaughtered or sold during the year preceding the Survey. Sheep and goats are sold to meet cash needs.



Distress sale of stock frequently force the poor flock owners to sell their stock at low price. Fifty three percent of the farmers prefer to sell their animals in the village to individual traders because (i) they get a better price, (ii) they lack negotiating power or (ii) they face exploitation at the hands of middlemen.

Animals are slaughtered by poor and non-poor households for domestic consumption and on the occasion of *Eid-ul-Azha*.

Table 18: Livestock per Household in Sample villages

Description	Cow	Goat	Sheep	Others	Total
Percent of Households not owning Livestock					
All Households	72%	65%	80%	92%	36%
Poor Households	90%	62%	83%	94%	46%
Average number of Livestock per HH					
All Households	0.67	4.34	2.27	0.16	7.27
Milking	0.27	1.62	0.65	0.16	2.71
Dry	0.10	0.97	0.74		1.81
Young	0.26	1.65	0.83		2.74
Slaughtered/ gifted/sold	0.03	0.09	0.05		0.18
Poor Households	0.30	3.59	1.59	0.07	5.54
Milking	0.10	1.41	0.56	0.07	2.14
Dry	0.07	0.75	0.33		1.16
Young	0.11	1.34	0.67		2.12
Slaughtered/ gifted/sold	0.02	0.09	0.03		0.14
Non Poor Households	0.89	4.79	2.68	0.21	8.58
Milking	0.38	1.75	0.71	0.21	3.05
Dry	0.12	1.10	0.98		2.20
Young	0.35	1.84	0.93		3.12
Slaughtered/ gifted/sold	0.04	0.10	0.07		0.21

3.4.2 Livestock Breeds.

The most common sheep breed is Baluchi, estimated as 87% (Table 19). Other sheep breeds found in the area include *Harnai*, *Lohi* and *Damni*. *Khurasani* goats are owned by 83% of farmers: some raise *Burbury* goats, especially in areas with limited grazing. *Fresian* and *Sahiwal* cows are liked by the farmers due to their high milk yields and longer lactation periods. *Pishin* is a milk producing area and farmers are very progressive, with most having comparatively better awareness about livestock health.

Table 19: Livestock Breeds

Description	Goat	Sheep	Cow
Common Breeds	Khurasani	Baluchi	Foreign/Sahiwal
Improved Breeds	Burbury	Harnai	Red Sindhi/Cross
Proportion of - %			
Common Breeds	83	87	47
Improved Breeds	17	13	53

3.4.3 Morbidity and Mortality.

Common animal diseases in the area include: Anthrax, Sheep Pox, Liver Fluke, Lung worms, Mange, Ticks, *Enterotoxaemia*, Foot & Mouth and Contagious Caprine Pleuro Pneumonia (CCP). The mortality caused by various diseases (Table 20) is 6.5% for the sample households. The mortality is higher for the young stock (8.4%) than the mature animals (5.4%). *Enterotoxaemia* and Contagious Caprine Pleuro-pneumonia are highly infectious and have high mortality rates, especially for sheep. When CPP breaks out the Provincial Department of Livestock and Animal Husbandry takes preventive measures by establishing mobile Units at entry posts from across the District borders.

Table 20: Livestock Mortality for Sample Hhs

Description	Cattle	Goat	Sheep	Donkey	Camel	Horse	Overall
Total No of mature animals	147	1010	542	29	15	9	1752
Total No. of young animals	101	644	323	3	4	2	1077
Mortality during the year							
Mature animals as % of mature	4.1	5.8	4.8	3.4	6.7	11.1	5.4
Young animals as % of young	3.0	9.0	9.0		25.0		8.4
All animals as % of all animals	3.6	7.1	6.4	3.1	10.5	9.1	6.5

Foot & Mouth is the major cause of death for cattle, as diagnosed by 63% of cattle owners and *Enterotoxaemia* by 18% of goat owners and 20% of sheep owners (Table 21).

Table 21: Livestock Mortality causes (%)

Disease	Cattle	Goat	Sheep
Anthrax		2	5
Sheep Pox		2	10
Liver Fluke		16	10
Lung worms	13	18	10
Mange		5	15
Ticks	25	7	
Enterotoxaemia		18	20
Foot & Mouth	63	20	20
Contagious Caprine Pleuro Pneumonia		11	10

3.4.4 Feed and Fodder

Livestock raising is a family enterprise, though some of the households “rent” their animals to shepherds. The prevailing cost for the rental grazing is Rs 40 to Rs 50 per month for large animals and Rs 8 to Rs 10 for sheep or goats. Animals are also given for grazing on a share basis (50% of value on maturity). Grazing is the major source of fodder for all animals. Concentrates like cottonseed cake and *choker* (wheat bran, dried bread and husks) are fed to milking animals. In rare cases, cottonseed cake and 'choker' is fed to the same animal.

Dropped leaves, damaged or spoiled fruit, weeds from orchard fields and fodders intercropped in orchards are the important supplemental sources of feed. The average annual expenditure per household on livestock is Rs 2,776 for concentrates, Rs 75 on veterinary treatment and Rs 3,218 on fodder (including own farm produce) or a total of Rs 6,068 per household per year. Sixty six percent of the fodder (primarily wheat straw) is purchased rather than grown.

All household members contribute to the tasks required for raising animals. The activities outside the house (fodder cutting and grazing) are generally performed by men or children while women look after the animals inside the house. Children usually take the animals out for grazing although some women also do this.

The acute fodder scarcity period is November to February. Small quantities of fodder and grasses are stored for the off season by 44% of the livestock farmers. The fodder is not stored as silage but it is heaped and covered with mud to protect it from rain.

3.4.5 Milk and Beef or Mutton Production

Pishin is a major milk producing area of the Province, with genetically superior cattle breeds. The average lactation period is 8.88 months for cows, 4.39 months for goat and 4.21 months for sheep. Total milk produced per household 492 litres from cows, 153 litres from goats and 69 litres from sheep: this totals 714 litres per annum per household (Table 22). This excludes the milk fed to calves or young stock, which is about 15% for cows and 35% for goats and sheep.

Beef/mutton production is calculated based on estimated weights per head: 145 Kg for cattle, 17 Kg for goats and 19 Kg for sheep. The off-take rate is assumed as the potential for the animals that can be sold in a normal year and not the one reported in the year preceding the Survey (*i.e.* 2006) when it was very low because of the persistent drought and resulting poor animal health and price levels. The off-take rate is calculated as 15% for cattle and 35% for goat and sheep. Annual beef/mutton production per household is 14.6 Kg for cattle, 25.8 Kg for goats and 15 Kg for sheep (a total of 55 Kg per household).

Table 22: Milk and Beef/Mutton Production per Household

Description	All Households			Poor Households		
	Cow	Goat	Sheep	Cow	Goat	Sheep
No of in-milk animals	0.27	1.62	0.65	0.1	1.4	0.6
Lactation period – months	8.88	4.39	4.21	8.60	4.16	4.00
Daily milk yield/ animal	6.7	0.7	0.8	5.6	0.6	0.6
Annual Milk production/HH – litres	492	153	69	139	111	43
B- Beef/Mutton Production						
No of animals	0.67	4.34	2.27	0.10	1.41	0.56
Animals sold/slaughtered annually – No	0.10	1.52	0.79	0.01	0.49	0.20
Annual beef/mutton produced per HH	14.6	25.8	15.1	2.1	8.4	3.7

3.4.6 Time and Labour for livestock.

The average time devoted for livestock activities is 3.8 working hours per household per day. Most of this time (33%) is spent grazing the animals. With an average of 7.3 animal heads per household (Table 18), the time per animal per day is about half an hour. The time per animal however, decreases with the increase in herd size.

Table 23: Time spent on various Livestock activities (hours per day)

Activity	Men	Women	Children	Total	
				Hours	% of total
Cutting fodder	0.74	0.02	0.30	1.06	28%
Chopping fodder	0.03	0.09	0.02	0.13	4%
Feeding animals	0.32	0.43	0.01	0.75	20%
Watering	0.19	0.35	0.03	0.58	15%
Grazing	0.79	0.18	0.29	1.26	33%
All activities	2.07	1.07	0.65	3.79	100%

3.4.7. Livestock/ Animal Husbandry services

The provincial Livestock and Animal Husbandry Department has a well distributed network of Livestock Extension offices throughout Pishin District. The stock assistants are posted in the field areas for extension advice. However, the farmers say they are not satisfied with the quality of services and do not use them.

Seven percent of livestock holders have used artificial insemination for cows. The success rate is 68%. The cost for A.I are Rs 165 per cow at the Civil Veterinary hospital and Rs 209 at the private clinics.

The Department has established 7 Veterinary hospitals, 27 Dispensaries and 14 AI Centres in the District. Mobile camps are established seasonally where the migratory animals enter or leave the District. Free vaccination services are provided along with parasitic control measures.

⁽¹²⁾Silage is the product resulting from storage and fermentation of fresh forage including grasses under anaerobic conditions producing more forage and nutrients per unit area than the same crop converted into grain and crop residue increasing the carrying capacity of farm land.

BRSP has also undertaken a large-scale PM's Livestock Project in selected Districts (Matung, Pishin, Qillasaifullah, Zhob, Qalat) by establishing 42 Veterinary Field Units. In addition to these, the UNDP Area Development Programme has trained in vaccination and curative methods. These people serve the local farmers at their door steps in a few localities in addition to supplying veterinary medicines.

Table 24: Livestock services utilised

Green fodder is scarce in winter months	77%
Store fodder as Silage for Winter months	44%
Veterinary medicines purchased from open market	17%
Get cows fertilized by Artificial Insemination	7%
Success rate of A.I	68
Average charges per cow for A.I – Rs	65
Average A.I charges per cow at Private Vet Centre – Rs	150
Charges for Sire for cow fertili zation – Rs	209
Take animals to Private Vet Centre	13%
Prefer Civil Veterinary Hospital	23%
Women take animals to Veterinary Hospital, if needed – % 'Yes'	None
Practice de-worming of animals – % 'Yes'	None
Livestock Extension staff visits the farm	14%
Private Livestock Centres exist in the area	8%
Private Livestock Extension advice providers are preferred – % 'Yes'	12%
Prefer to sell animals to individual traders	53%
Do not use Balanced feed	76%
Grazing land is managed by a Committee	-
Rotational grazing is practised	-
Animals are given on share basis	0%
The floor in Sheds is <i>kacha</i>	52%

3.5 Income, Poverty and Expenditure

The following section discusses poverty status, income sources and distribution and poverty analysis. Household expenditure, food consumption, value and distribution of assets, indebtedness and loan utilization and the relationship of land to poverty are also analysed.

3.5.1. Incomes and income distribution

The average annual income for the non-poor households is Rs 371,185 and Rs 91,888 for poor households (Rs 265,911 across the board). This is Rs 30,932 per household per month for the non-poor compared with Rs 7,657 for the poor households. Average per capita income of the poor households is about 1/4 that of the non-poor households. Table 11 of the GoP Household Integrated Economic Survey (HIES) 2005-06 reports average monthly incomes ranging from Rs 5,760 to Rs 15,019 for various quintiles. Using the household size figures given in HIES Table 1 (8.66 and 5.28), per capita income works out to Rs 665 for the 1st quintile and Rs 2,845 for the 5th quintile. Per capita income based on the Baseline Survey is Rs 749 for the poor and Rs 2,942 for non-poor members.

The contribution of farm income is much higher for the non-poor (53.7%) than for poor households

⁽¹³⁾ The private veterinary hospital if any is run by the persons employed in the civil veterinary hospital.

(16.1%). This wide gap in income is attributed to the larger cultivated area (4.21 acres for non-poor and 1.56 acres for poor) and the high value crops (47.55%) in the cropping pattern by non-poor farmers compared with the poor household farmers (3.50%).

The contribution of service/job is also evident: this contributes 23.3 percent to the income of a household. Casual labour is a major contributor to family income for poor households (37.9%) compared with its share in the income of the non-poor (10.2%). Livestock adds only marginally (4.9%) to income, whether the household is non-poor or poor. Other sources like selling petty articles on hand-driven carts, making crates for packing fruit, selling milk and eggs, buying and selling fruit packing paper, and drying fruits contribute handsomely (12.3%) to the income of poor households.

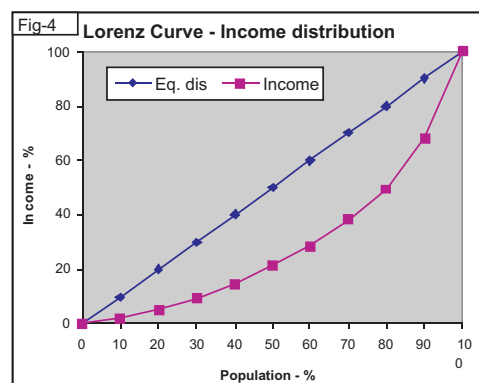
Table 25: Household Income, 2006/2007

Household Income	Non Poor	Poor	All
Average/ HH per annum – Rs	371,185	91,888	265,911
Average/HH per month –Rs	30,932	7,657	22,159
Average/Capita/annum – Rs	35,301	8,987	25,875
Per Capita/month – Rs	2,942	749	2,156
Percent households with income of:			
Up to Rs 518	0	21	8
Rs 518 – 777	0	33	13
Rs 777 – 1036	0	46	17
Rs 1036 – 1295	8	0	5
Rs 1295 – 2072	42	0	26
Higher than 2072	50	0	31
Percent share in income:			
Farming	53.7	16.1	48.8
Livestock	5.0	3.7	4.9
Service/job	23.7	20.5	23.3
Pension	0.1	0.0	0.1
Casual labour	10.2	37.9	13.8
Remittances	1.1	0.0	1.0
Business	4.9	9.2	5.5
Rents	0.7	0.1	0.7
Gift/cash	0.0	0.2	0.0
Other sources	0.6	12.3	2.1

The average annual salary per employee is Rs 59,292 for government employees but much higher (Rs 97,364) for private jobs. This difference in salary structure is attributed to higher literacy rate in this District and better qualifications. The number of employed persons from the sample households is 195 in private jobs and 72 in government jobs. Nineteen women also earn a living in private-sector jobs. The average annual income from skilled and unskilled labour is Rs 44,826 and Rs 37,919 respectively.

The sample data shows that the distribution of income among the surveyed households is highly unequal. The Gini Index for the sample households is 45% indicating inequality in income distribution. Typically it lies between 20 to 35 for countries with relatively equitable income distribution and from 50 to 70 highly unequal distribution (Todaro and Smith 2003). The income share of top 20 per cent of sample households is 50% while the share of the bottom 20 percent of households is only 5.22 percent (Fig. 4).

Bottom 10%	1.76%
Bottom 20%	5.22%
Bottom 30%	9.37%
Middle 30% to 70%	29.04%
Top 30%	61.59%
Top 20%	50.33%
Top 10%	32%



Economic vulnerability is defined in relation to position above or below the official poverty line. Those closer to the poverty line are vulnerable to external shocks, such as a major illness or the loss of an asset. The distribution of the sample households in various income bands indicates that 17.2% are 'Transitory poor' (income range of Rs 777 to Rs 1,036) and 5.1% fall in the 'Transitory Vulnerable' category. Eight percent of households are in the 'Extremely poor' category with per capita incomes below Rs 518 (50% of the poverty line).

- Monthly income of non-poor households is Rs 30,932 against Rs 7,657 of poor households or per capita income of Rs 749 for poor and Rs 2,942 for non-poor.
- The wide gap in the income level of poor and non poor is primarily due to the greater proportion of high value crops.
- Top 20 percent non-poor households own 50.3% of total income of sample households against 7.98% of bottom 20 percent.
- Gini coefficient for sample households is 0.45 indicating highly unequal income distribution.

In 2000-2001 the official poverty line was revised by the validation committee of the Government of Pakistan, adjusting for inflation, as Rs 723. The figure was calculated as Rs 878.6 for the year 2004-05. Inflation for rural areas was 10.2% and 7% for FY 2005-06 and 2006-07 respectively [Economic Survey 2006-07]. The threshold level thus, is Rs 1,036 per capita per month or Rs 12,432 per annum.

The extent and severity of poverty for the sample households has been calculated using the methodology of Foster, Greer & Thorebecke (FGT). All the measures of FGT methodology: Head Count Index (HCI), Poverty Gap Ratio (PGR) and Severity of Poverty (SOP) have been calculated. HCI has been measured on the basis of per capita income. The various measures derived with reference to the poverty line are:

- Incidence of poverty - Head Count Ratio (age of population/households with per capita income below the national poverty line;

⁽¹⁴⁾The CPRID study defines 'extremely poor' households as those with an income less than 50% of the poverty line, 'Chronically poor' as the ones within 50% to 75% and the 'transitory poor' as those within 75% to 100%. On the same analogy, 'Transitory vulnerable' were defined as with the income range of 100% to 125%, 'Transitory' in the income band of 125% to 175% and non poor as above 175% of the poverty line.

- (ii) Depth of Poverty/Poverty Gap Ratio - Ratio of the average income of the poor to the poverty line;
- (iii) Severity of Poverty - Income distribution among the poor; and
- (iv) Gini Coefficient - measure of income inequality.

In the overall sample of 390 households, 147 (37.69%) can be termed poor. Based on the generally referred to criterion of USD 1 per day, the poor households are 63.1%. However, in view of the decreased purchasing value of the dollar and general price hikes, the poverty yardstick will not be less than USD 2 per day, with the poverty figure increasing to 84.4%. The average monthly per capita income of the poor households is Rs 749, significantly lower than the average income of non-poor households (Rs 2,942). This difference is reflected in the estimates of the poverty gap ratio (PGR), calculated to determine the extent of income transfer to the poor households to eliminate their poverty. The value of PGR is 29% of the sample and the Severity of Poverty is 13%. The Gini coefficient of income distribution, based on data classification by deciles, is 0.45, indicating high inequality of income. The major factors contributing to poverty include lack of employment opportunities and the immutability of traditions relating to women being ill suited to earn a better living. This is despite the fact that the District is comparatively better off, especially in terms of girls' levels of education.

Table 26: Incidence, Depth & Severity of Poverty of Hhs

Poverty status	Results
All Households	390
Poor Households	147
Total population	4,039
Poor population	1,503
% of Households in poverty	37.69
Poverty Gap ratio	29%
Severity of Poverty	13%
% of population in poverty	37.21
% Households below one \$ a day	63.1%
% Households below 2 \$ a day	84.4%

The income shortfall defined as the difference between the poverty line and the income per capita of each poor household, is Rs 46,224 per month. With an average household size of 10.28 persons, this translates into a total revenue transfer of Rs 475,025 per month or Rs 5.7 million per annum to get the poor out of poverty.

- Thirty eight percent of the population of sample households is below the poverty line of Rs 1,036 per capita per month. It rises to 63% on 'USD1 a day' and 84% based on 'USD 2 a day' criteria.
- The Poverty Gap Ratio is 29% for the sample households and the Severity of Poverty is 12 percent.
- The Gini coefficient is 0.45 indicating highly unequal income distribution.

3.5.2 Household expenditure

Annual expenditure of sample households is Rs 156,110 per household; a little less for poor households at Rs 128,662 than the non-poor households. Per capita monthly expenditure is Rs 1,384 for non-poor and Rs 1,049 for poor households. On the basis of (i) the expenditure figures

⁽¹⁵⁾ State Bank of Pakistan Annual Report for 2006-07, page 182

⁽¹⁶⁾ The poverty line throughout the analysis made in this report is taken as Rs 1,036 based on SBP figures.

given in HIES 2005-06, Table 15, and (ii) household size, the monthly per capita expenditure is Rs 653 for the 1st quintile and Rs 2,406 for 5th quintile. The per capita expenditure on food items for the non-poor is Rs 10,145 against Rs 8,524 for the poor households indicating different food priorities.

The per capita income level of 48% of poor households is less than the average income of all poor households (Rs 749). The gap in income and expenditure is met by loans, sale of assets and/or by illegal trade across the border. It was also found during group discussions that it is a common practice to get bride money by marrying adolescent daughters. This money is not considered as an income source as it is supposed to be the cost of dowry. However, part of the money is used to pay off debts and to meet other consumption needs.

Sixty three percent of the household expenditure is on food items (Table 27). The share of clothing, healthcare and transport is 10.9%, 5.1% and 4.5% respectively. The expenditure on utilities is 5 percent of total expenditure. There is not much difference in the pattern of expenditure for the poor and the non-poor households. For the sake of reference it may be mentioned that the Household Integrated Economic Survey (HIES) reported a figure of 54% expenditures on food in rural areas of Pakistan. The higher proportion of expenditure on food in successive years is attributed to rising prices of essentials, especially sugar, in the last year.

Table 27: Household expenditure, 2006/2007

Household Expenditure	Non Poor	Poor	All HHs
Average expenditure per HH – Rs	174,658	128,662	156,110
Average expenditure/ Capita – Rs	16,611	12,584	15,191
Average per Capita per month	1,384	1,049	1,266
Percent share of household expenditure			
Food	61	68	63
Clothing	11.1	10.3	10.9
Housing	2.4	2.1	2.3
Healthcare	4.7	6.1	5.1
Education	3.6	2.1	3.1
Social functions	3.7	2.0	3.2
Transport	4.5	4.2	4.5
Remittance	0.3	0.0	0.2
Utilities	5.2	4.4	5.0
Other purposes	3.6	1.1	2.8

3.5.3 Food Consumption.

The data on monthly food consumption was collected for each sample household. Given the size of the household, the daily per capita food intake is estimated separately for each category of food. Using the price data for food items collected in each sample village, the average daily expense for food consumed per capita is estimated. Finally, the daily per capita calories intake is estimated, using the estimated value of each food item in terms of its contribution. The pattern of expenditure for the non-poor or poor households is not much different, as can be seen from Table 28.

Table 28: Daily food consumption and monthly expenditure

Item	Nutritional		Food intake per capita per day									Rate/ kg (Rs)	Exp/ capita/ month - Rs		
	Weight-gms	Calories	Non Poor			Poor			All HHs				Non Poor	Poor	All
			Grams/ capita/ day	Eq Calories	% Share	Grams/ capita/ day	Eq Calories	% Share	Grams/ capita/ day	Eq Calories	% Share				
Flour	120	407	365	1238	55	353	1196	57	360	1223	55	17	181	175	178
Rice	185	675	21	78	3	20	72	3	21	76	3	28	18	17	18
Pulses	100	150	15	22	1	15	22	1	15	22	1	49	21	21	21
Fats/oils	14	124	37	325	14	34	299	14	36	315	14	88	97	89	94
Veg	100	38	109	41	2	85	32	2	100	38	2	15	50	39	46
Fruit	138	81	42	25	1	25	15	1	36	21	1	23	29	17	24
Beef	100	310	34	105	5	25	77	4	31	95	4	119	121	89	109
Mutton	100	200	3	6	0	1	2	0	2	5	0	221	21	5	15
Chicken	100	119	13	15	1	2	2	0	9	11	0	105	41	6	28
Eggs	50	75	0.20	0.3	0.01	0.21	0.3	0.0	0.21	0.3	0.01	47	24	24	24
Sugar	5	17	89	302	13	84	286	14	87	296	13	37	99	94	97
Milk	244	157	167	107	5	156	100	5	163	105	5	20	100	94	98
Tea			6			6			6			245	43	41	42
Total calories/capita/day				2267	100		2104	100		2207	100	Total	845	710	796
% from grains					58			60			59		24%	27%	25%
% from grains + oil					72			74			73		35%	39%	36%
Daily expenditure per capita per day - Rs													28	24	27

The usual diet of rural households in Pishin District consists of wheat, bread and milk. pulses? This is supplemented by seasonal fruits and vegetables, plus meat and milk from their own livestock. Meat is usually consumed as laandi (dried meat). Tea is frequently drunk without milk. The food consumption pattern for the sample households is slightly different for a few food items compared with the HEIS figures released for 2005-06. The consumption of wheat & rice is 381 grams per capita compared with 332 grams (9.37 kg/month) reported in *HEIS* Table 23.

The high consumption of cereals is attributed to the inherent tradition of hospitality toward visitors who are served with food and tea. *Chapaties* are frequently made in excess of family needs and later fed to animals and chickens if not consumed. The per capita consumption is 0.44 Kg for pulses (15 gms/day), 1.07 Kg of fat/oil (36 gms/day) and 2.61 Kg of sugar (87 gms). The HEIS figures are 0.34 Kg pulses, 0.94 Kg fat/oil and 1.34 Kg sugar.

Assigning equal weights to every person irrespective of age and gender, average calorie intake is calculated as 2,267 for the non-poor and 2,104 for poor household members. Overall, 59% of calorie intake is from grains: this increases to 73% with the addition of oil. Per capita monthly expenditure on food items is Rs 845 for the non-poor and Rs 710 for the poor households. Chicken and eggs are generally from domestic poultry. Milk is also from own animals for majority of households (cow, goat or sheep) but in some cases is also purchased. The expenditure on these three items is 19% of the total food expenditure. Average daily per capita food expenditure is Rs 28 for the non-poor and Rs 24 for the poor households, with an average expenditure of Rs 27.

- Total calorie intake is 2,267 for the non-poor and 2,104 for poor households.
- Cereals constitute 59 percent of the average calorie intake.
- Average expenditure per capita per day is Rs 28 for the non-poor and Rs 24 for poor households.

3.5.4 Assets, Value and Distribution

The sample households own a variety of assets with every family owning a house. Seventy five percent of the assets of all sample households are owned by the non-poor households. The value of assets per household is Rs 1,399,735 for the non-poor and Rs 618,870 for the poor households or a weighted average figure of Rs 1,105,409 per household for the entire sample.

Land is the most valuable asset for all households. There is wide gap in productive assets (land, farm machinery/tools, tube wells, livestock and vehicles) owned by non-poor and poor households. The average value of productive assets for the non-poor household is Rs 1.0 million against Rs 0.37 million for the poor household. The consumer durables account for 28.3% and savings (cash, jewellery, loans) are 2.8% of the asset value. The proportionate share of livestock is a little higher (4.6%) for the poor households than the non-poor households

Table 29: Household Assets

Asset	Non Poor	Poor	All HHs
Value of Assets –Rs			
Per HH	1,399,735	618,870	1,105,409
Per capita	133,121	60,528	107,566
Value of Assets			
% Productive	71.4	59.8	69.0
Land	55.8	50.2	54.6
Livestock	3.6	4.6	3.8
Cows	1.2	0.8	1.1
Goat	1.5	2.5	1.7
Sheep	0.9	1.3	1.0
Others	-	-	-
Machinery	10	3	8
Business	2.3	2.0	2.2
% Consumer durables	25.4	38.9	28.3
House and other structures	22.1	36.0	25.0
Other	3.3	2.9	3.2
% Savings	3.2	1.3	2.8
Savings in banks	1.4	0.5	1.2
Jewellery	1.2	0.8	1.1
Loans given to others	0.6	0.0	0.5
Total	100.0	100.0	100.0
Percent of Households:			
Purchased assets	12.8	8.8	11.3
Sold assets	1.6	1.4	1.5
Value of Assets per Household – Rs			
Purchased	186,371	47,923	145,466
Sold	57,500	175,000	96,667

The non poor own a higher proportion of assets which have elastic demand, such as televisions, computer, mobile phones, motorcycles, refrigerators and washing machines.

Table 30: Consumer Durables and other Selected Household assets

Durable	No. per Household		Average Value-Rs	
	Non Poor	Poor	Non Poor	Poor
Radio/Tape Recorder	0.77	0.48	1,027	893
Television sets	0.32	0.07	7,403	4,927
VCR/CD Player	0.08	0.01	2,247	3,000
Computer	0.07	0.01	10,631	3,750
Mobile phones	0.85	0.41	3,540	2,722
Refrigerator	0.42	0.12	11,607	8,472
Washing machine	0.73	0.40	5,092	4,068
Generator	0.03	-	4,214	-
Electric fans	2.78	1.78	1,223	1,141

Eleven percent of the sample households purchased assets in the preceding one year period: a slightly higher proportion for the non-poor (12.8%) than the poor households (8.8%). 1.6% of the non-poor households sold assets of some kind in this period against 1.4% of poor households. However, the average value of assets purchased belonging to non-poor households was Rs 186,371 against Rs 47,923 for the poor households. Sometimes the assets are purchased on instalment at exorbitant rates. This translates to Rs 23,776 per sample non-poor household and Rs 4,238 per poor household.

The average value of assets sold by the non-poor household was Rs 57,500 and Rs 175,000 for poor household seller. The sale and purchase of assets by the non-poor households is attributed to reshuffling of the asset portfolio, while the poor household members frequently sell their assets to meet urgent family needs. There is little evidence of saving or using banks, especially for the poor households.

- The value of per household assets for non-poor and poor households is Rs 133,121 and Rs 60,528 respectively.
- Land constitutes 54.6% of total assets.

3.5.5 Unit prices

The prices of various productive assets in the Study area are derived on the basis of information gathered from the respondents. The average price of land owned by poor households is less than half (Rs 20,398) of the unit value for non-poor household (Rs 55,011) owing to the higher productive value, primarily attributed to the availability of water from a *karez* or a tube well. The following average unit prices are derived for the non-poor and poor households for productive assets:

Table 31: Unit prices for various Assets (Rs)

Asset	Non Poor	Poor	All HHs
Land per acre	74,641	45,593	66,422
Tubewell/pump	248,882	75,000	239,454
Thresher	88,333	88,333	88,333
Car/jeep	238,043	220,833	236,058
Motorcycle	28,152	21,763	27,059
Bicycle	2,320	2,108	2,238
Cart/Trolley	1,367	1,761	1,456
Radio/Tape Recorder	1,027	893	990
TV	7,403	4,927	7,093
VCR/CD Player	2,247	3,000	2,285
Computer (#)	10,631	3,750	9,867
Mobile phone (#)	3,540	2,722	3,354
Fan	1,223	1,141	1,200

3.5.6 Household Loans, Utilization and Sources

Average amount of money borrowed during 2006/07 is Rs 55,878 per household, with the larger proportion of loans taken by the poor households (68% against 42% of the non-poor). The loan amount is 37% of the expenditure and 21% of household income across the board. This figure is 71.13 % for poor households. Friends and relatives are the major source of loan (69%). Shopkeepers meet 22.3% of credit needs of non-poor and 17% of poor households. Loan taken by the non-poor are generally seasonal credit for farm inputs, livestock concentrates and veterinary medicines, or purchases from shopkeepers to meet daily consumption needs. Forty four percent of poor households borrow to meet consumption needs. 31% of all loans are for productive purposes. Twenty percent of borrowers use their loans either to educate their children (predominantly their sons) or to meet healthcare needs. Nine percent of loans are taken to purchase farm inputs.

Only 4.4% of all credit is borrowed from the banks. Many farmers are in a state of permanent indebtedness because of financial losses from natural or man-made disasters and urgent health needs. Most farmers who get inputs on credit remain in debt till the next crop. The majority of borrowers prefer credit from non-institutional sources for want of tangible security and collateral and the lengthy and time consuming formalities. The Banks are reluctant to extend credit in view of high defaults in the past.

Table 32: Loan taken by the Households in 2006/2007

Loans	Non Poor	Poor	All HHs
Average amount of loan per HH (Rs)	50,142	65,361	55,878
% of HH taken loan	42	68	52
Loan as % of expenditure	30	53	37
Loan as % of income	13.51	71.13	21.01
% of Loan amount from:			
Friends and relatives	62.1	76.0	69.0
Shopkeepers	22.3	17.0	19.7
Banks	4.9	4.0	4.4
NGO	1.0	0.0	0.5
Other sources	9.7	3.0	6.4

Table 33: Use of Loan by Households

Purpose	Non Poor	Poor	All HHs
Productive purposes	35%	27%	31%
Land	4%	7%	5%
Livestock	2%	4%	3%
Machinery	10%	2%	6%
Farm Inputs	11%	7%	9%
Business	9%	8%	8%
Consumption & social functions	45%	44%	44%
Housing	1%	3%	2%
Education & Health	14%	26%	20%
Repay loan	3%	1%	2%
Other purposes	2%	0%	1%

- Average amount of per household loan is Rs 55,878.
- The share of friends and relatives in the loan portfolio is 69%. The share of shopkeepers is 19.7 percent.
- Forty four percent of borrowers used loans to meet consumption needs and 31% used it for productive purposes.

3.5.7 Household Debt.

The average amount of payable debt for sample households is Rs 48,415: lower at Rs 43,603 for the non-poor against Rs 56,371 for the poor households (Table 34). The debt to income ratio is 12% for the non-poor borrowers and 61% for the poor households. The average debt pattern and the amount owed to various debtors follow the same pattern as for loans shown in Table 32 above.

Table 34: Current Debt of Households (July 2007)

Debt	Non Poor	Poor	All HHs
Average amount of debt per HH (Rs)	43,603	56,371	48,415
Debt to Income ratio	12%	61%	18%
% of HH in debt	42	67	52
Percent of debt payable to:			
Friends and relatives	61.8	75.8	68.7
Shopkeepers	22.5	17.2	19.9
Banks	4.9	4.0	4.5
NGOs	1.0	0.0	0.5
Other sources	9.8	3.0	6.5

3.6 Perceptions of Problems.

Men and women, interviewed separately, were asked to list their perceptions of significant household and village-wide problems. The responses were recorded on a scale of 1 to 3, with meaning 'slight', 2 meaning 'serious' and 1 meaning 'very serious'. Tale 35 shows the contrasting responses from women and men.

Table 35: Constraints identified about Household Facilities - 'Yes' response

Constraint	Women's perceptions			Men's perceptions		
	1	2	3	1	2	3
Count for 'Yes' response						
Education	31	60	56	30	40	54
Health care	87	97	88	55	92	63
Water Supply	180	71	38	161	51	32
Drainage	10	15	14	20	30	21
Street Pavement	6	41	16	18	34	29
Transport	3	3	17	1	6	18
Fuel	2	7	15	0	7	14
Electricity	25	20	29	34	26	7
Income (Poverty)	13	16	42	11	35	42
Jobs/Employment	31	51	59	26	44	76
Savings	2	6	5	1	1	1
Access to credit	0	2	6	33	16	25
Social Cohesion	0	0	1	0	5	5
Organisation	0	1	4	0	3	3
Percent of 'Yes' response						
Education	8%	15%	14%	8%	10%	14%
Health care	22%	25%	23%	14%	24%	16%
Water Supply	46%	18%	10%	41%	13%	8%
Drainage	3%	4%	4%	5%	8%	5%
Street Pavement	2%	11%	4%	5%	9%	7%
Transport	1%	1%	4%	0%	2%	5%
Fuel	1%	2%	4%	0%	2%	4%
Electricity	6%	5%	7%	9%	7%	2%
Income (Poverty)	3%	4%	11%	3%	9%	11%
Jobs/Employment	8%	13%	15%	7%	11%	19%
Savings	1%	2%	1%	0%	0%	0%
Access to credit	0%	1%	2%	8%	4%	6%
Social Cohesion	0%	0%	0%	0%	1%	1%
Organisation	0%	0%	1%	0%	1%	1%

For 46% of women respondents water supply is a 'very serious problem'. This is followed by healthcare (22%) and lack of education and employment opportunities (8%). 41% of male respondents indicated the major problem as the water supply (41%), followed by healthcare (14%) and lack of electricity (9%). No-one indicated credit availability, transport accessibility, street pavement or fuel as a serious constraint.

3.7 Women's role in economic activities

Empowerment refers to people's ability to shape decisions that affect their lives and removing discrimination based on gender, race and social status. The women and girls are subservient to men in Balochistan. Deeply-rooted tribal norms and patriarchal traditions mean that girls are viewed as an economic liability and priority is given to educating boys. Women have an active role in economic activity but they are unpaid and their work is undervalued.

3.7.1 Activities undertaken by Women.

As noted above, women are actively involved in livestock management. Most of the work involved in chopping fodder, and feeding and milking the animals is done by women (Table 36). They also collect farm yard manure, clean the animal sheds and process animal products. They sell the milk, poultry and eggs.

Table 36: Activities undertaken by Women

Activity	Number of 'Yes' response			Percent of 'Yes' response		
	Men	Woman	Child	Men	Woman	Child
Fodder Cutting	108	37	17	66.7%	22.8%	10.5%
Fodder chopping	75	78	9	46.3%	48.1%	5.6%
Feeding the animals	9	144	9	5.6%	88.9%	5.6%
Grazing animals	74	40	45	46.5%	25.2%	28.3%
Milking animals	5	156	1	3.1%	96.3%	0.6%
Milk Selling	92	72	0	56.1%	43.9%	0.0%
Egg selling	156	216	7	41.2%	57.0%	1.8%
Poultry selling	160	216	2	42.3%	57.1%	0.5%

3.7.2 Decision making

Men take decisions regarding seeking and repaying loans and the purchase or sale of assets and education of children. Women's socio-economic profile leaves much to be desired. While women have a major share of the work, they have no assets, little income and poor access to social services. The women are not allowed to make decisions regarding economic allocations, as shown in Table 37. Table 38 shows the participation by men and women in non-financial decisions pertaining to the household.

Table 37: Strategic Decisions made by Women

Decision regarding	Number of 'Yes' response			Percent of 'Yes' response		
	Men	Women	Mutually	Men	Women	Mutually
Work outside the house	309	1	29	91.2%	0.3%	8.6%
Take loans	344	2	39	89.4%	0.5%	10.1%
Utilize loans	349	1	35	90.6%	0.3%	9.1%
Plan loan repayment	358	0	26	93.2%	0.0%	6.8%
Purchase Immoveable assets	359	0	24	93.7%	0.0%	6.3%
Purchase Movable assets	335	2	47	87.2%	0.5%	12.2%
Purchase HH Consumable items	334	5	44	87.2%	1.3%	11.5%
Purchase Livestock	353	6	22	92.7%	1.6%	5.8%
Get Vaccination treatment of animals	359	12	14	93.2%	3.1%	3.6%
Sell Immoveable assets	361	5	18	94.0%	1.3%	4.7%
Sell Movable assets	326	11	47	84.9%	2.9%	12.2%
Sell Livestock	342	6	35	89.3%	1.6%	9.1%
Visit Hospital at their own	245	19	124	63.1%	4.9%	32.0%
Decide about Girls education	188	12	186	48.7%	3.1%	48.2%

Table 38: Decision making at Household level

Decision regarding	Number of 'Yes' response			Percent of 'Yes' response		
	Men	Women	Mutually	Men	Women	Mutually
HH Expenditure Planning	273	1	115	70.2%	0.3%	29.6%
Child Education	240	3	143	62.2%	0.8%	37.0%
Family planning	270	5	110	70.1%	1.3%	28.6%
Child rearing	189	32	167	48.7%	8.2%	43.0%
Seek CO membership	231	6	140	61.3%	1.6%	37.1%

Annex A: Questionnaires

Household Questionnaire (For Men)

District .....UC Name Village Name Date							
CO Name .....Name of Enumerator :							
Respondent Name: S/O							
A - Household Demographic Information: (write relationship of family members to the respondent)							
S. No	1	2	3	4	5	6	
	Relation	Age (Years)	Primary Profession ^a	Secondary Profession ^a	Education/ Literacy ^b	Heath Status ^c	
1	Self						
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
a - Primary/ Secondary Profession Codes							
1- Own farming		4- Govt job		7- Business		10- Unemplo yed	
2- Farm labor		5- Skilled off farm labor		8- Student		11- Househol d work	
3- Private job		6- Unskiled off farm labor		9- Other works		12- Child/ Infant (<5)	
b- Education/ Literacy Codes						c- Health Codes	
1- Not Literate		4- Primary	7- Student Class 9-10 10- Intermediate			1- Good	
2- Literate		5- Student 6-8	8- Matric 11- Post Intermediate			2- Fair	
3- Studt upto Class 4		6- Middle	9- Studt Class 11-12			3- Poor	
Deaths in household during last 12 months (Write number)							
Deaths	Under 1 yrs	1 - 5 Yr	6-18 Yr	19-24 Yr	25-55 Yr	>55 Yr	
Males							
Females							

B - Annual Crop Production (for respondents who are farmers as owner, sharecropper or on lease basis)

Total Farm Area (acres) out of which Cultivated area is Acres							
The cultivated farm area consists of acres of owned land + acres of sharecropped land and acres of Lease land, adding up to acres in total.							
S. No	Crop	Area cropped (acres)	Production - maunds	S. No	Crop	Area cropped (acres)	Production- Crates
1	Rice			19	Tomatoes		
2	Maize (grain)			20	Peaches		
3	Jowar/ Bajra grain			21	Plums		
4	Masoor Pulse			22	Pears		
5	Maize fodder			23	Pomegranates		
6	Jowar/ Bajra fodder			20	Grapes		
7	Mong/ Mash pulse			21	Walnuts		
8	Onion			22	Apples		
9	Chillies			23	Apricot		
10	Tobacco			24	Almond		
11	Cumin			25	Olive		
12	Wheat			26	Other fruit trees		
13	Gram			27	Forest trees for timber		
14	Barseem/ Lucern				Trees for fuelwood		
15	Melons						
16	Other Vegetables						
17	Other fodders			Income from Fish ponds (last 2 years) .....Rs			
18	Multi Cut fodders						

C - Livestock reared and Productivity (for respondents who are livestock holders)

Livestock	Matured animals - No		Young animals – No	Milking period - months	Daily Milk Yield/ animal - kg	Concentrates per day - kg			Sold during the year		
	Milking	Dry				Cotton seed cake (Khaal)	Shakrana (Balanced feed)	Others (Choker/ barley, oats, maize, wheat etc)	Milk- Kg	Ghee/ Butter- Kg	Hides/ Skins- No
Cow											
Goat											
Sheep											
Buffalo											
Bull											
Ox											
Donkey/ Mule											
Horse											
Camel - male											
Camel- female											
Note: Non milking mature animals and											
male goat/ sheep etc should be entered in Dry column.											
Poultry birds (#)-domestic											
Birds in the Poultry Farm if any											

Item	Sold		Purchased	
	Area - acres	Value - Rs	Area - acres	Value - Rs
Barseem				
Jowar/ Bajra				
Lucern				
Other Green fodder (.....)				
Maize/ Millet stalk				
Wheat straw				
Other Dry Fodder (.....)				

G - Labour contribution for various operations (for Livestock holders)

Operation	Men	Time spent – hours	
		Women	Children
Fodder cutting/ day			
Fodder chopping/ day			
Feeding (in stall)/ day			
Watering the animals/ day*			
Grazing animals/ day			
Marketing per event			
* -watering during grazing time when the animals are out, is not to be mentioned.			

H- Household Food Consumption per month (all respondents)

Item	Quantity	Item	Quantity
Flour –kg		Beef - kg	
Rice – kg		Mutton (sheep/ goat)-kg	
Bajra –kg		Poultry - kg	
Maize – kg		Fish - kg	
Pulses – kg		Fats/Oil - kg	
Vegetables –kg		Milk - kg	
Fruit-kg		Eggs - No	
Sugar – kg		Tea-250 gm packet Nos.	

I - Assets Acquired and Disposed off or Sold in last 12 months (all respondents)

Assets Purchased -Rs. (tick source)			Assets Sold -Rs. ....(tick purpose)		
<u>Loan</u>	<u>Cash/Saving</u>	<u>Gift</u>	<u>Meet Expenditure</u>	<u>Repay Loan</u>	<u>Purchase other asset</u>
.....

J - Loans Taken in last 12 months and Outstanding Debt-Rs. (all respondents)

Friends/Relatives -Rs.		Shopkeepers - Rs.		Banks - Rs.	
<u>Amount taken</u>	<u>Amount owed</u>	<u>Amount taken</u>	<u>Amount owed</u>	<u>Amount taken</u>	<u>Amount owed</u>
.....
NGOs –Rs.		Community Org.-Rs.		Others -Rs.	
<u>Amount taken</u>	<u>Amount owed</u>	<u>Amount taken</u>	<u>Amount owed</u>	<u>Amount taken</u>	<u>Amount owed</u>
.....

K – Use of Loan - tick the purpose (all respondents)

<u>Land</u>	<u>Livestock</u>	<u>Machinery</u>	<u>Farm Inputs</u>	<u>Business</u>	<u>Housing</u>
.....
<u>Consumption</u>	<u>Social Functions</u>	<u>Health Care</u>	<u>Education</u>	<u>Repay Loans</u>	<u>Other Uses</u>
.....

L - Housing Facilities -Code except for No of rooms (all respondents)

<u>House Structure</u>	<u>Water Supply</u>	<u>Latrine</u>	<u>Drainage</u>	<u>Electricity</u>	<u>Fuel/Energy</u>
-	-	-	-	-	-
Codes 1- Pacca 2- Kacha 3- Pacca/ Kacha	- 1- Piped 2- Karez 3-Well 4- Other	- 1-Inside 2-Outside 3-Open field	- 1- Yes 2- No	- 1- Yes 2- No	- 1- Gas 2- Wood 3- Kerosene 4-Other

M- Credit Requirement next year -enter amount, if loan is required (all respondents)

Purpose (put X)	Amount Required - Rs.	Preferred provider - Code		
Farm inputs			Codes for Preferred provider 1- Friends/relatives 2-Shopkeeper 3-Bank	4- NGOs 5- Community Org 6- Other
Business				
Assets purchase				
Consumption				
Education				
Social Function				
Livestock purchase				
Other (specify)				

N- Annual HH Off-farm Incomes in last 12 months (all respondents)

Off-farm Income Sources	Males		Females		Total Income (Rs.)
	(#)	Annual income (Rs.)	(#)	Annual Income (Rs.)	
Govt. Service					
Private job					
Pension (Rs.)					
Skilled labour					
Unskilled labour					
Small enterprise at HH/ village level					
Retail shop (in the local market)					
Remittances from abroad					
Remittances from within the country –Rs					
Shop/house rent –Rs					
Tubewell water sold – Rs					
Tractor/ Vehicle rental – Rs					
Land/machinery leased/rented out –Rs					
Govt. Social Protection –Rs					
Local Philanthropy –Rs					
Relief/Reconstruction compensation provided -Rs					
Any other source – Rs					

O- Household Expenditure in last 12 months in Rs. (all respondents)

<u>Utilities</u>	<u>Clothing/ shoes</u>	<u>Housing (rent/maintenance)</u>	<u>Healthcare</u>	<u>Education</u>	<u>Social Functions</u>
<u>Transport</u>	<u>Remittances</u>	<u>Cash/Gifts</u>	<u>Tubewell water purchase</u>	<u>Tractor rented in</u>	<u>Others</u>

P- Major Constraints/Problems - tick 3 in order of priority as 1, 2 & 3 (all respondents)

Electricity		Health care	Savings		Access to credit
Water Supply		Drainage	Jobs/Employment		Social Cohesion
Telephone		Street pavement	Income (Poverty)		
Education		Transport	Fuelwood availability		

Q - Household Assets (for all respondents)

Assets	Unit	Value (Rs.)	Assets	Unit	Quantity	Value (Rs.)
House	Rs		Land	acres		
Furniture	Rs		Tubewell/pump	#		
Farming tools	Rs		Tractor	#		
Animal Sheds	Rs		Thresher	#		
Shop/business	Rs		Car/jeep	#		
Other structure	Rs		Motorcycle	#		
Refrigerator	Rs		Bicycle	#		
Sewing machine	Rs		Cart/Trolley	#		
Washing machine	Rs		Radio/Tap Recorder etc.	#		
Iron, toaster etc	Rs		TV	#		
Generator	Rs		VCR/CD Player	#		
Jewellery	Rs		Computer	#		
Savings in banks	Rs		Mobile phone	#		
Loans given to others	Rs		Fans	#		
Cash in hand	Rs					
Other assets	Rs					

R- Views of Respondents concerning Fodder availability & Extension advice

(This Section is to be filled only if the Respondent is a Livestock holder. Pls also note that in case the answer to a particular Question is 'No', the box should be left blank).

1.0	Feed and Fodder Availability	
1.1	Green fodder scarcity months	
1.2	Dry fodder scarcity months	
1.3	Concentrates prices rise in the months of	
1.4	Quality of Concentrates (Poor-1, Satisfactory-2, Good-3)	
1.5	Do you store fodder as Silage (tick if 'Yes')	
2.0	Animal Vaccination and Treatment	
2.1	Do you know the type of Vaccines required for: (tick if 'Yes')	
	a - Homeorrhagic Septicimia (Ghal Ghotu)	
	b - Foot & Mouth disease (Moonh Khur)	
2.2	Do you purchase Vaccine from open market: (tick if 'Yes')	
2.3	Do you get your cows fertilized by Artificial Insemination (A.I): (tick if 'Yes')	
	If Yes, what is the rate of success (mention %):	
	If No, reasons there of (specify	
2.4	Do you get your buffaloes fertilized by A.I: (tick if 'Yes')	
	If Yes, what is the rate of success (mention %):	
	If No, reasons there of (specify	
2.5	Do you take your animals to Veterinary Hospital for treatment: (tick if 'Yes')	
	If No, reason thereof: (specify	
2.6	Do you take your animals to a Private service provider: (tick if 'Yes')	
	If No, reason thereof: specify	
2.7	A.I cost per animal at Veterinary Hospital/ Centers -Rs	
2.8	A.I cost per animal at Private Veterinary Cetres, if any -Rs	
2.9	Vaccination cost per animal at Veterinary Hospitals/ Centers - Rs	
2.10	Vaccination cost per animal at Private Veterinary Centers, if any - Rs	
2.11	Which is the preferred Hospital/ Centre (Govt -1, Private - 2)	
	If Private, reason thereof	
2.12	What are the normal charges of having animal fertilized by local siren/ bull? Rs	
2.13	Common diseases observed in animals	

2.14	Do Women take animals to Vet H ospitals/ Centres if needed: (tick if 'Yes')	
	If No, reason thereof: (specify	
2.15	Do you practice De-worming of animals if needed: (tick if 'Yes')	
	If Yes, state the method	
3.0	Livestock Extension Services and Awareness	
3.1	Do you visit your area Livestock Officer/ Stock Assistant: (tick if 'Yes')	
3.1.1	If Yes, are you satisfied with the advice given (tick if 'Yes')	
3.2	Does the Livestock Officer visit your farm: (tick if 'Yes')	
3.2.1	If Yes, frequency of visits per 6 month	
3.3	Does the Livestock Assistant visit your farm: (tick if 'Yes')	
	If Yes, frequency of visits in last 12 months	
3.4	Do you visit Livestock Research center: (tick if 'Yes')	
3.4.1	If Yes, are you satisfied with the resear ch work done there: (tick if 'Yes')	
3.5	Was there any production loss due to Morbidity or: (tick if 'Yes')	
3.5.1	If Yes, explain the reason and affects	
3.6	Are there Private Livestock Extension Centers: (tick if 'Yes')	
3.6.1	Which is the preferred Extension advice provider (Govt-1, Private - 2)	
3.6.2	State reason of preference	
3.7	Are there Women Livestock Extension providers: (tick if 'Yes')	
3.7.1	If Yes, are they performing to your satisfaction: (tick if 'Yes')	
3.7.2	Why women are not actively involved in provision of Extension advice?	
4.0	Animal Sale and Purchase	
4.1	Do you purchase animals from individual trader or nearby market (Trader-1, Market-2)	
4.2	Do you sell your animals to individual trader or nearby market (Trader-1, Market- 2)	
4.4	Why do you prefer to sell to individual trader (better price-1, long distance to market-2, fluctuating price in market-3, other .....4)	
5.0	Use of Balanced Feed/ Optimal Milk Yield	
5.1	Do you give Balanced feed to your animals: (tick if 'Yes')	
5.1.1	If No, what are the constraints (high price-1, not good quality-2, not suited for animals-3, Other .....4)	

5.2	Maximum milk yield for Buffaloe attained by Calving, for (breed)	
5.3	Maximum milk yield for Cow attained by Calving, for (breed)	
6.0	Miscellaneous	
6.1	What is the normal grazing period in a year (# of months)	
6.2	What are the average grazing hours per day	
6.3	Distance to Community grazing site (Km)	
6.4	Do you have CO to manage Community Grazing land: (tick if 'Yes')	
6.5	Do you practice rotational grazing in Community Grazing land: (tick if 'Yes')	
6.6	Do you give your animals to others on share basis: (tick if 'Yes')	
6.7	If Yes, what is the share of owner on maturity?-%	
6.8	Do you think that cow/ buffalo giving birth in July/ Aughust gives less milk in that season: (tick if 'Yes')	
6.8.1	If Yes, reason thereof:	
6.9	What is the type of floor of your animal shed? (Kacha-1, Brick paved-2, Other .....3)	
7.0	Cost of Services provided in Private Vet. Centers	
7.1	Treatment of Clinical cases per visit - Rs	
7.2	Vaccination cost per animal – Rs	
7.3	Dipping (passing animals through medicated water) - Rs	
7.4	A.I cost per service – Rs	
7.5	Castrations per animal – Rs	
7.6	Hand spraying against disease - Rs	
7.7	Advisory services per visit – Rs	
7.8	Provision of preventive medicines (major)	

Household Questionnaire (For Women)

District UC Name Village Name Date

CO NameName of Enumerator :

Female Respondent Name: Name of Male Respondent

A - Household Demographic Information: (write relationship of all members to Male respondent)

S. No	1	2	3	4	5	6
	Relation to Male respondent	Age (Years)	Primary Profession ^a	Secondary Profession ^a	Education/Literacy ^b	Health Status ^c
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

a - Primary/ Secondary Profession Codes

1- Own farming	4- Govt job	7- Business	10- Unemployed
2- Farm labor	5- Skilled off farm labor	8- Student	11- Household work
3- Private job	6- Unskilled off farm labor	9- Other works	12- Child/ Infant (<5)

b- Education/ Literacy Codes

1- Not Literate	4- Primary	7- Student Class 9/10	10 -Intermediate
2- Literate	5- Student 6-8	8- Matric	11 -Post Intermediate
3- Studt upto Class 4	6- Middle	9- Studt Class 11-12	

c- Health Codes

1- Good
2- Fair
3- Poor

Major Constraints/ Problems (tick 3 in order of priority as 1, 2 & 3)

Electricity	Health care	Savings	Access to credit
Water supply	Drainage	Jobs/ Employment	Social cohesion
Telephone	Street pavement	Income (Poverty)	
Education	Transport	Fuelwood availability	

A - Decision making at House hold level

- A.1 HH Expenditure planning
- A.2 Children Education
- A.3 Family planning
- A.4 Child rearing
- A.5 Seek CO membership

B - Practical Roles performed by Women

- B.1 Fodder cutting
- B.2 Fodder chopping
- B.3 Feeding the animals
- B.4 Grazing animals
- B.5 Milking animals
- B.6 Selling of milk Bye products
- B.7 Selling of eggs
- B.8 Selling of poultry birds

C- Strategic Decisions performed by Women

- C.1 Work outside house premises
- C.2 Take loans from Financial Institutions
- C.3 Utilize loans at her Will
- C.4 Plan Loan repayment Schedule
- C.5 Purchase of Immovable Assets
- C.6 Purchase of Movable assets (fridge, TV,)
- C.7 Purchase household consumptin items
- C.8 Purchase of Livestock
- C.9 Vaccine treatment for animals
- C.10 Sale of Immovable Assets
- C.11 Sale of Movable Assets
- C.12 Sale of Livestock
- C.13 Visit Hospital/ Clinics at her own
- C.14 Girls education

VILLAGE QUESTIONNAIRE (by Group discussion)

			Date		
	Enumerator, Village				
	Distt, Date of Enumeration				
	Village Infrastructure (tick if Yes)				
	Electricity			Piped Water supply	
	Telephone			Hand pumps for Drinking water	
	Mobile Tele service			Well for Water supply	
	Internet Café			Pacca Drains	
	Grocery shops			Brick paved Streets	
	Meat/ Mutton Shop			Tailor shop	
	Distance to Infrastructure and Services (Km)*				
1	Metalled road	.....	19	Govt Primary School for Boys	.....
2	Bus/ Wagon Stop	.....	20	" " Girls	.....
3	Railway Station	.....	21	Mixed	.....
4	Grain Market	.....	22	Govt Middle School for Boys	.....
5	Utility Store	.....	23	" " Girls	.....
6	Livestock Market	.....	24	Mixed	.....
7	Post Office	.....	25	Govt High School for Boys	.....
8	PCO	.....	26	" " Girls	.....
9	Commercial Bank	.....	27	Mixed	.....
10	NGO/ Micro Finance Institute	.....	28	Govt College for Boys	.....
11	Agricultural Office	.....	29	" " Girls	.....
12	Veterinary Office	.....	30	" " Mixed	.....
13	Dispensary	.....	31	Private Primary School for Boys	.....
14	BHU/ RHC	.....	32	" " Girls	.....
15	Medical Store	.....	33	Private High School for Boys	.....
16	Private Doctor's Clinic	.....	34	" " Girls	.....
17	Lady Health Visitor	.....	35	Private College (Mixed)	.....
18	Private Vet. Medicine Store	.....	36	Madrasah (Religious School)	.....
	Village Natural Resources (tick if Yes)				
1	No of Karezes				
2	Chromite (Yes/No)				
3	Coal (Yes/ No)				
4	Other minerals				

Annex-B**List of Selected Villages in Pishin District**

S.No	Village Name	UC
1	Loee Ali Zai	Huramzai
2	Killi Khair Abad	Killi Manzaki
3	Killi Manzaki	Killi Manzaki
4	Killi Surela Habib Zai	Manak Zai
5	Mando Viala	Barshore
6	Murgha Zikeria Zai	Dilsore
7	Tor Sharnala	Battazai
8	Killi Mehtarzai	Bostan
9	Killi Qasim	Bostan
10	Sagran	Rod Mullahzai
11	Sura Khawa	Barshore
12	Saim Zai	Hajian Shakarzai
13	Killi Shankal Zai	Ajran
14	Gorian	Hajian Shakarzai
15	Katwan	Hajian Shakarzai
16	New Killi Tor Shah	Battazai
17	Killi Malkan Torshah	Battazai
18	Karez Qasim Zai	Barshore
19	Poti Zikria Zai	Kaza Vialla
20	Kazha Vialla	Kaza Vialla
21	Bostan Civil Colony	Bostan
22	Mama Naika	Kaza Vialla
23	Sharana	Dilsore
24	Sulman khail 1	Ajram
25	Zakaryazai 1	Huramzai
26	Sulman Khail 2	Ajran
27	Zakaryazai 2	Huramzai
28	New Karez	Dilsore
29	Konoby	Rod Mullahzai
30	Killi Amir Khan-I	Rod Mullahzai

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RURAL SUPPORT PROGRAMMES NETWORK

House No 7, Street 49, F-6/4, Islamabad

Tel: 92-51-2821736, 2826792, 2829556

Fax: 92-51-2829115

www.rspn.org