Research Article

Effect of Azad Jammu and Kashmir Rural Support Program in Natural Resource Management with Special Reference to Livestock

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Abstract | The present study investigates the effect of Azad Jammu and Kashmir Rural Support Program (AJKRSP) in NRM (Natural Resource Management) particularly in Livestock in union council Kahori, District Muzaffarabad. From 111 sampled respondents primary data were collected through pre-tested questionnaire. Three villages namely; Kundipiran, Kariandarar and Kulpana from union council Kahori were purposively selected. The study indicated that the majority of the sampled respondents were female. To compare the size of livestock holding paired t-test was used. Productivity of livestock kept by sampled respondents has increased significantly. About (100%) of the sampled respondents stated that there is increase in livestock productivity after the interventions of AJKRSP. Results also show that AJKRSP has brought positive change that develop livelihood in rural area. Chi-square test results show that there is a significant relationship between monthly income and sources of income from livestock. AJKRSP had conducted training programs in different sectors regarding livestock. Livelihood of about (80%) of the sampled respondents had improved after training. Study concluded that AJKRSP has enormous effect on local community which contributed positively to livelihood of local community.

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Introduction

The word "natural resources" (1) confused people. "Natural Resources" are not a limited number of presents under the Christmas tree. Nature is set, resources for purposes are formed. Natural resource management (NRM) is defined as "the" Management "(2) natural resources sustainably "generally in order to meet several objectives, including the conservation of wildlife and ecosystems and minimize environmental impacts and environmental change "(Park, 2008). Natural resource management refers to the management of natural resources such as water, soil, land, plants, animals and plants, with a special emphasis how management affects the quality of life for the present and future (Ritikbitu, 2011).

NRM is consistent with the sustainable development theory, a scientific rule which is the starting point for sustainable management of land, for the preservation and conservation of natural resources and global environmental governance. Management of natural resources, which focuses on a practical and systematic understanding of resources and environmental science

of these resources and ability to sustain life reviews. A system of natural resources, in order to avoid waste and to use them more effectively their ratings, called Management of Natural Resources (Ritikbitu, 2011).

The availability of natural resources and their appropriate use and action of opinion greatly help countries to overcome their economic problems and opinion achieves a smooth transition notices their stages of development. The sum of all activities must be conducted in a certain order to achieve the use of natural resources on a sustainable basis without depleting them. NRM aim to decrease losses and improve productivity by helping communities identify and remove constraint. Areas incorporated in the NRM, such as population, for women programs, community organization, wildlife and land improvements (Subhani, 2014) Proper management of natural resources takes into account the long-term perspective (or view) and prevent its notice to handle for short-term gains exploitation. Good management can ensure a fair distribution of natural resources, so that everyone can benefit from the development of these resources opinion. Good management will consider the damage to the environment in the "extraction" or "use" of natural resources and finding ways to minimize damage (Tabassum, 2012)

World's abundant natural resources is in great quantities in Pakistan, but poor in management and failed to translate it into equivalent wealth for the people. Natural Resources play an important role in the development of the Economy of a Country. Yet Pakistan has not been able to achieve economic growth from the use of natural resources (Siddique, 2013).

Azad Jammu and Kashmir Rural Support Program (AJKRSP)

AJK Rural Support Program (AJKRSP) is a non-profit organization, started by AJK government in October 29, 2007 under section 42 of the Companies Ordinance 1984, in order to enable rural communities of AJK at grassroots level.

Mission

The main aim of AJKRSP is to foster a countrywide network of grassroots level organizations to enable rural communities to plan, implement and manage developmental activities and programs for the purpose of ensuring productive employment, alleviation of poverty and improvement in the quality of life

Goals and objectives

The general objective of AJKRSP and other organizations, which is responsible for social and financial development of AJK poverty mitigation and better standards of living. Its main objective is to make the promotion of institutions available, a place for powerful and efficient two-way communication between service providers e.g. the government and the people, at the grassroots level (Mohallah, village, UC).

Program Sector of AJKRSP for achieving its goals and Objectives.

- Social Mobilization and Institutional Development
- Microfinance and Enterprise Development
- Environment and Natural Resource Development
- Human Resource Development
- Physical Infrastructure and Technological Development
- Social Sectors(Education, Health, hygiene and Sanitation)
- Gender Development and Human Rights
- Natural Resource Management

The objectives and strategy of the NRM program of AJKRSP

- Diversification of crop production from traditional crops to high value cash crops and development of agriculture marketing system.
- Improvement and enhancement of livestock and poultry productivity with better management, feeding and breeding practices.
- Provision of storage and preservation facilities for livestock products especially milk and initiation of steps for marketing facilities for surplus livestock products to increase the household income.
- Enhancement of the abilities of people to use economic opportunities and involving them in plan, construction, activity and preservation.
- Help in resolving the problem of unemployment and under-employment by augmenting the youth with training in different vocational trades for income generation and provision of training, working and earning opportunities for women of low income groups.
- Development of upland conifer forests, protection and development of watersheds and range lands.

Activities

Integrated and sustainable management of natural resources to increase production through capacity

building at local level, includes, introduction of new high yielding crops, Motivation for replacing the traditional cropping pattern with cash crop, Off-seasonal vegetable crops especially in high altitude area, Vaccination coverage in animals and poultry, Forest plantation, Orchard establishment and management, Vegetable and crop seed production and introduction of fodder on large scale. (AJKRSP, 2014).

Livelihood of more than 80 percent population of the AJK directly or indirectly depend on agriculture. Under the sector of NRM, in spite of crucial dependence on agriculture, per unit production of agriculture, livestock and horticulture in AJK has been historically, lower compared to national averages. The main reasons for the low production include fragmented land holdings, non-availability of better seeds and absence of technical expertise between farmers. An important problem that farmers of AJK are facing is unavailability of inputs, root stock and better livestock breed. These factors also have an effect on the household income and food security, leads to lower productivity and efficiency.

In section of NRM, livestock production activities are the major source of livelihood for majority of population. Livestock provides food and social security, employment and status to rural society. AJK is mostly hilly; district Muzaffarabad also covers mountainous areas. Villages consists of hilly areas as well as farming activities are very due to small land holding. Therefore, such studies can not only be significant for the policy makers but is also valuable for concerned stakeholders in this arena.

In this respect the major and specific objectives of this research study is to identify the effects of livestock activities on the local community in the research area.

Materials and Methods

District Muzaffarabad constituted the universe of the study. Three villages namely Kundipiran, Kariandarar and Kulpana of union council Kahori, were selected purposively. Through proportional allocation sampling technique, a sample of 111 households were randomly selected from these three villages as follows (Cochran, 1977).

$$n_i = n^* \left(\frac{N_i}{N}\right) \quad \ldots\ldots(1)$$

Where;
n_i = Number of sampled household in the ith village; n = Total sample size (households); N_i=Total number of households in the ith village; N =Total number of households in the study area.

A well-designed pre-tested questionnaire and interview schedule were used for the collection of data from the sampled respondents in order to meet the objectives of the study. Data was analyzed through Statistical Package for Social Sciences (SPSS). For comparison of data before and after, a paired t-test was applied, which is as follows:

$$t = \frac{\bar{d}}{S_d/\sqrt{n}}$$

(Chaudhry, 2004)

Whereas;
$\bar{d}$= mean difference between two samples; s= standard deviation; n= sample size and t= paired sample t-test with n-1 degree of freedom.

To establish an association between income and sources of income of sampled respondents, chi-square test was applied. For convenience chi-square test is articulated as:

$$x^2 = \sum_{i=1}^{i}\sum_{j=1}^{j}\frac{(o_{ij} - e_{ij})^2}{e_{ij}}$$

Where;
x^2=chi-square; i^{th} = row; j^{th}= column; O_{ij}= observed frequency of ith row and jth column; e_{ij}= Expected frequency of ith row and jth column.

Results and Discussion

Data regarding age of the sampled respondents is depicted in Table 1, which shows that out of the total sampled respondents, only (0.9%) of the sampled respondents were below the 25-year age in village Kulpana. Data further shows that (54%) of the sampled respondents were between the age group 25-40, out of this (18.9%) were in village Kundipiran, (20.7%) in Kariandrar and (14.4%) in Kulpana. Moreover, (45%) of the sampled respondents were in the age group above 40, out of this 36% in Kundipiran, (36%) in Kariandrar and (28%) in Kulpana. Also, Table 1 shows that most of the sampled respondents were in

the age range of 25-40. Results of the current study are in line with results of Samuel (2000), who also reported that 58% of the IRDP beneficiaries were of middle age (25-40).

Table 1: *Distribution of sampled respondents on the basis of age group.*

Village	Age Groups						Total	
	Below 25		25-40		Above 40		No.	%
	No.	%	No.	%	No.	%		
Kundipiran	-	-	21	18.90	18	36	39	35.1
Kariandrar	-	-	23	20.70	18	36	41	36.9
Kulpana	1	0.9	16	14.40	14	28	31	27.9
Total	1	0.9	60	54.1	50	45.0	111	100.0

Source: *Field Survey, 2014.*

Table 2 provides information about the literacy status of the sampled respondents. Data also shows that majority (53.1%) of the sampled respondents were illiterate and rest were literate with low level of education. Out of the 53.2% illiterate, (19.8%) were in village Kundipiran, (18.9%) in Kariandrar and (14.4%) in Kulpana. The data further shows that 31.5% of the sampled respondents were having primary education (out of this 10.8% in Kundipiran, 13.5% in Kariandrar and 7.2% in Kulpana). The remaining (10.8%) were middle and (4.5%) were matric. As study was conducted in rural areas, therefore as expected, women were found illiterate compared to men.

Table 2: *Distribution of the sampled respondents on the basis of literacy status.*

Village	Literacy status								Total	
	Illiterate		Literate							
			Primary		Middle		Matric			
	No.	%	No.	%	No.	%	No.	%	No.	%
Kundipiran	22	19.8	12	10.8	4	3.6	1	0.9	39	35.1
Kariandrar	21	18.9	15	13.5	4	3.6	1	0.9	41	36.9
Kulpana	16	14.4	8	7.2	4	3.6	3	2.7	31	27.9
Total	59	53.2	35	31.5	12	10.8	5	4.5	111	100.0

Source: *Field Survey, 2014.*

Table 3 provides information regarding gender distribution of the sampled respondents. Table 3 states that out of the total sampled respondents 43.2% of the sampled respondents were male and 56.7% were female. Out of the total sample respondents, 43.2% were male with 15.3% in Kundipiran, 16.2% in Kariandrar, and 11.7% in Kulpana. While majority of the sampled respondents were female with 19.8% in Kundipiran, 20.7% in Kariandrar and 16.2% in Kulpana. A higher percentage of females show a great deal of interest of women in the activities conducted by AJKRSP for increasing income and improving the standard of living.

Table 3: *Distribution of the sampled respondents on the basis of gender.*

Village	Gender				Total	
	Male		Female			
	No.	%	No.	%	No.	%
Kundipiran	17	15.3	22	19.8	39	35.1
Kariandrar	18	16.2	23	20.7	41	36.9
Kulpana	13	11.7	18	16.2	31	27.9
Total	48	43.2	63	56.7	111	100.0

Source: *Field Survey, 2014.*

Table 4 provides information about marital status of the sampled respondents. It shows that (91.9%) of the sampled respondents were married and 9% were unmarried. Out of the total sampled respondents (91.9%) were married with (32.4%) in Kundipiran, (33.3%) in Kariandrar and (25.2%) in Kulpana. While (2.7%) in Kundipiran, 3.6% in Kariandrar and (2.7%) in Kulpana were found unmarried with (9.0%) as a whole. Majority of the sampled respondents were married and found interested in such activities to improve their financial conditions. So, the number of married sample respondents is more as compared to unmarried sampled respondents. It also gives an idea that married people were more interested in such type of activities to improve their financial conditions.

Table 4: *Distribution of the sampled respondents on the basis of marital status.*

Village	Marital status				Total	
	Married		Unmarried			
	No.	%	No.	%	No.	%
Kundipiran	36	32.4	3	2.7	39	35.1
Kariandrar	37	33.3	4	3.6	41	36.9
Kulpana	28	25.2	3	2.7	31	27.9
Total	101	91.9	10	9.0	111	100.0

Source: *Field Survey, 2014.*

The Table 5 tells us about the number of persons in a family. Household of the sampled respondents was divided in to three intervals i.e. 1-4 persons,5-9 persons and above 9 presented in Table 5. It is

clear from the table that in Kundipiran,(0.9%) of the sampled respondents were living in household size of 1-4 persons, (34.2%) having 5-9 persons per household. While in Kariandrar, (36.0%) of the sampled respondents were having family size of 5-9 persons and (0.9%) of the sampled respondents were having the group of 9 and above. Similarly, in Kulpana (27.9%) of the sampled respondents were having household size of 5-9 persons.

Table 5: *Distribution of the sampled respondents on the basis of household size.*

Village	Household size (persons)						Total	
	1-4		5-9		Above 9		No.	%
	No.	%	No.	%	No.	%		
Kundipiran	1	0.9	38	34.2	-	-	39	35.1
Kariandrar	-	-	40	36.0	1	0.9%	41	36.9
Kulpana	-	-	31	27.9	-	-	31	27.9
Total	1	0.9	109	98.1	1	0.9%	111	100.0

Source: *Field Survey, 2014.*

The results in the Table further show that (0.9%) of the sample respondents were living in household size group of 1-4 persons, (98.1%) of the sample respondents were living in the age group of 5-9 persons, (0.9%) of the sample respondents were living in the group of 9 and above persons.

The field survey provides information about the occupation of the sampled respondents. Results presented in Table 6 depicts the occupational category of the sampled respondents i.e. agriculture, livestock and shop keeping. As Table 6 shows that majority (59.5%) of the sampled respondents had livestock as their main occupation (24.3%) in Kundipiran, (14.4%) in Kariandrar and (20.7%) in Kulpana. Sampled respondents (15.3%) had agriculture as their secondary occupation. As table 4.6 shows that (18%) of the sampled respondents had both agriculture and livestock occupations. And (7.2%) of the sampled respondents were shopkeepers with (2.7%) in Kundipiran, (1.8%) in Kariandrar and (2.7%) in Kulpana. Results in Table 7 shows trainings received by sampled respondents in livestock. AJKRSP has been provided different trainings regarding livestock for beneficiaries in the area, so that they will be able to learn adequate livestock rearing and management practices. Results presented in Table 7 shows that (17.1%) of the sample respondents were not received any training regarding livestock (0.9% in Kundipiran, 6.3% in Kariandrar and 9.9% in Kulpana). Due to some domestic reasons these sampled did not attend training and got assistance from other beneficiaries who got training. The remaining (31.5%) of the sample respondents received training in the livestock management skill, out of this (12.6%) in Kundipiran, (11.7%) in Kariandrar and (7.2%) in Kulpana. Moreever, (13.5%) of the sample respondents got training in goat farming (4.5% in Kariandrar, 5.4% in Kundipiran and 3.6% in Kulpana). In poultry management 12.6% of the sample respondents got training (7.2% in Kariandrar, 3.6% in Kundipiran and 1.8% in Kulpana). The remaining (25.2%) of the sample respondents received training in vaccination. Out of this (9.9%) in Kundipiran, (9.9%) in Kariandrar and (5.4%) in Kulpana. Results show that majority of the sampled respondents got training in different programs of livestock.

Table 6: *Distribution of the sampled respondents on the basis of occupation.*

Village	Occupation								Total	
	A*		B*		A+B*		C*		No.	%
	No.	%	No.	%	No.	%	No.	%		
Kundipiran	4	3.6	27	24.3	5	4.5	3	2.7	39	35.1
Kariandrar	11	9.9	16	14.4	12	10.8	2	1.8	41	36.9
Kulpana	2	1.8	23	20.7	3	2.7	3	2.7	31	27.9
Total	17	15.3	66	59.5	20	18.0	8	7.2	111	100

Source: *Field Survey, 2014;* **A*:** *Agriculture;* **B*:** *Livestock;* **A+B*:** *Both Agriculture and Livestock;* **C*:** *Shop keeping.*

Similar observations have been reported by Jabbar (2000) that an increase was seen in the population of livestock, progress in animal health and livestock output. Table as a whole show that sample respondents received different trainings regarding livestock in order to improve health of animal and for income enhancement.

Results in Table 8 provides information about the size of livestock by the sampled respondents before and after as given by AJKRSP. AJKRSP has provided one with improved breed cow to one deserving household member, a package of one or two goat for one family and flock of poultry birds given to beneficiaries at the age of 6 weeks, 8 weeks and 12 weeks varied from place to place. However, at most of the places, it is 10, 15 or 25. Table 8 shows overall increase in size of livestock in the study area. Different packages of livestock

Table 7: *Distribution of the sampled respondents on the basis of types of training regarding livestock.*

Village	Yes								No		Total	
	A*		B*		C*		D*					
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Kundipiran	14	12.6	5	4.5	8	7.2	11	9.9	1	0.9	39	35.1
Kariandrar	13	11.7	6	5.4	4	3.6	11	9.9	7	6.3	41	36.9
Kulpana	8	7.2	4	3.6	2	1.8	6	5.4	11	9.9	31	27.9
Total	35	31.5	15	13.5	14	12.6	28	25.2	19	17.1	111	100.0

Source: *Field Survey, 2014;* **A*:** *Livestock management skill training;* **B*:** *Goat farming;* **C*:** *Poultry management;* **D*:** *Vaccination.*

Table 8: *Size of livestock holding by the sampled respondents.*

Live-Stock	Kundipiran		Kariandrar		Kulpana		Mean/averages		t- test	P- value
	Before	After	Before	After	Before	After	Before	After		
Cow	29	68	28	69	21	50	.703	1.684	54.50	.000
Goat	34	73	36	75	27	57	.874	1.846	48.48	.000
Poultry bird	165	376	160	390	100	310	3.8288	9.738	32.29	.000

Source: *Field Survey, 2014; *Significant level at 5%.*

including cow, goat and poultry bird were provided to sampled respondents by AJKRSP. AJKRSP had distributed cows, goats and poultry birds to deserving beneficiaries for improvement in family income. AJKRSP had provided Sahiwal breed of cow to the sampled respondents local breeds were of goat and poultry birds. Moreover, these livestock packages were provided on shred basis as 80% cost from AJKRSP and 20% share from community organizations developed by AJKRSP. Data shows the number of livestock the beneficiaries had before and after provided by AJKRSP.

Table 9: *Response of the sampled Respondents to the Vaccination Program of AJKRSP.*

Village	Vaccination program				Total	
	Yes		No			
	No.	%	No.	%	No.	%
Kundipiran	34	30.6	5	4.5	39	35.1
Kariandrar	37	33.3	4	3.6	41	36.9
Kulpana	27	24.3	4	3.6	31	27.9
Total	98	88.3	13	11.7	111	100

Source: *Field Survey, 2014.*

AJKRSP provided training and vaccination facility in the area. Vaccination provided by AJKRSP in the area to keep livestock safe from diseases and mortality. Table 9 indicates that (88.3%) of the sampled respondents have vaccinated their livestock, (30.6%) in Kundipiran, (33.3%) in Kariandrar and (24.3%) in Kulpana. Vaccination campaign was started with the provision of livestock to the sampled respondents to prevent from de-worming. The data further shows that (11.7%) of the sampled respondents did not vaccinated their livestock from AJKRSP, (4.5%) in Kundiperan, (3.6%) in Kariandrar and (3.6%) in Kulpana. Similar observations have also been reported by Safirullah (2013) that vaccination reduced animal mortality and disease outbreaks.

Table 10 shows that productivity of (100%) of the livestock increased after AJKRSP efforts (35%) in Kundipiran, (36%) and (27%) in Kulpana. As AJKRSP had provided different packages of livestock including cow, goat and poultry birds to sampled respondents. Egg production at each household level is about 70% of the living flock, cow that have calved already started giving milk, their daily milk yield is 7-12 liters as compared to 2-4 liters per day of a local breed. As, Hamid (2003) reported that in livestock management, milk production of livestock kept by beneficiaries has been significantly increased from that of non-beneficiaries.

Table 11 shows (83.8%) of the sampled respondents did medicate their livesock from AJKRSP to keep the livestock healthy and safe from different diseases, (31.5%) in Kundiperan, (28.8%) in Kariandrar and (23.4%) in Kulpana. Results in Table 11 indicates that (16.2%) of the sampled respondents did not medicate their livestock (3.6) in% Kundipiran, (8.1%) in Kariandrar and (4.5%) in Kulpana.

Table 10: *Response of the sampled Respondents to the Livestock productivity.*

Village	Livestock productivity				Total	
	Yes		No			
	No.	%	No.	%	No.	%
Kundipiran	39	35.1	-	-	39	35.1
Kariandrar	41	36.9	-	-	41	36.9
Kulpana	31	27.9	-	-	31	27.9
Total	111	100.0	-	-	111	100

Source: *Field Survey, 2014.*

Table 11: *Response of the Sampled Respondents According to Medication of Livestock.*

Village	Medicine regarding disease control				Total	
	Yes		No			
	No.	%	No.	%	No.	%
Kundipiran	35	31.5	4	3.6	39	35.1
Kariandrar	32	28.8	9	8.1	41	36.9
Kulpana	26	23.4	5	4.5	31	27.9
Total	93	83.8	18	16.2	111	100.0

Source: *Field Survey, 2014.*

Results in Table 12 indicates that (85.6%) of sampled respondents believed that rate of mortality decreased in livestock after AJKRSP interventions, (29.7%) in Kundipiran, (31.5%) in Kariandrar and (24.3%) in Kulpana. While (14.4%) of sampled respondents said that mortality occurred due to improper care of livestock or absence of training (5.4%) in Kundipiran, (5.4%) in Kariandrar and (3.6%) in Kulpana.

Table 12: *Response of the Sampled Respondents Regarding Rate of Mortality.*

Village	Rate of Mortality decrease				Total	
	Yes		No			
	No.	%	No.	%	No.	%
Kundipiran	33	29.7	6	5.4	39	35.1
Kariandrar	35	31.5	6	5.4	41	36.9
Kulpana	27	24.3	4	3.6	31	27.9
Total	95	85.6	16	14.4	111	100.0

Source: *Field Survey, 2014.*

Similar observation was reported from the impact study of Ahmad (2007) who reported same results obtained from the training impact of SRSP rate of mortality and diseases of livestock has also been decreased.

Table 13 shows the response of sampled respondents about their income increased after efforts of AJKRSP. Results in Table 5 shows that income of about (97%) of sampled respondents increased after AJKRSP efforts, through the trainings in livestock and silk worm rearing (32%) in Kundipiran, (36%) in Kariandrar and (27%) in Kulpana. While income of (2.7%) of sampled respondents did not increase. Due to domestic consumption from livestock, and lack of technical support income did not increase.

Table 13: *Response of the Sampled Respondents Regarding Increase in Income.*

Village	Income source increased by AJKRSP efforts				Total	
	Yes		No			
	No.	%	No.	%	No.	%
Kundipiran	36	32.4	3	2.7	39	35.1
Kariandrar	41	36.9	-	-	41	36.9
Kulpana	31	27.9	-	-	31	27.9
Total	108	97.3	3	2.7	111	100.0

Source: *Field Survey, 2014.*

Results in Table 14 shows the response of sampled respondents about their income generation from animal package including cow, goat and poultry birds provided by AJKRSP. Table 14 further shows that out of the total sample respondents (97.3%) of the sampled respondents got benefit from animal package including cow, goat and poultry birds, provided by AJKRSP and their income increased. While (2.7%) of the sampled respondents failed to get any increase in income generation. Because they get domestic consumption from livestock they have by using milk using eggs at domestic level.

Table 14: *Response of the Sampled Respondents towards Income Generation from Animal Package.*

Village	Animal packaged helped in income generation				Total	
	Yes		No			
	No.	%	No.	%	No.	%
Kundipiran	36	32.4	3	2.7	39	35.1
Kariandrar	41	36.9	-	-	41	36.9
Kulpana	31	27.9	-	-	31	27.9
Total	108	97.3	3	2.7	111	100.0

Source: *Field Survey, 2014.*

Table 15 tell us about the average monthly income of the sampled respondents regarding livestock and silk rearing. Household income is a good sign of household conditions. Livestock management is an

essential part of rural economy. It provides source to generate income and obtain foodstuff. (Carletto 1998). Results shows in Table 15 that the packages/ components of livestock including goat, cow and poultry birds at household level enabled the sampled respondents to enhance their income and promoted as an enterprise. While, sampled respondents also involved in silk rearing for income enhancement. The NRM sector of AJKRSP with the technical support of Department of Sericulture is with rural communities for promoting silkworm rearing in organized communities of District Muzaffarabad. In spring 2013, they produced 1115 packets of silkworm eggs. Fifty three percent of the packets were given to the community members on full cost basis (Rs. 250 per packet), whereas remaining produce was sold to other customers in Pakistan. Data shows different income intervals in all four components by which sampled respondents generated income. To check the association between average monthly income of the sampled respondents and different sources of income regarding livestock and silk rearing, Chi-square test was conducted. It is concluded that chi-square value 21.27 with the significant value of (0.01) shows significant relationship between monthly income and sources of income.

Table 15: *Average Monthly Income of the sampled Respondents.*

Sources of Income	Income of the Sampled Respondents				Total
	2000-2500	2600-3000	4500-5000	9000-10000	
Goat	8(32)	6(24)	5(20)	6(24)	25(22.52)
Cow	6(15)	19(47.5)	7(17.5)	8(20)	40(36.03)
Poultry bird	9(30)	5(16.66)	13(43.33)	3(10)	30(27.02)
Silk rearing	4(25)	3(18.75)	2(12.5)	7(43.75)	16(14.41)
Total	27(24.32)	33(29.72)	27(24.32)	24(21.62)	111(100)

Source: *Field Survey, 2014; Chi-square=21.277 with p-value(.011).*

Conclusions and Recommendations

AJKRSP has vital and vast effect on local community which contributed positively to livelihood of local community. AJKRSP provided training to sampled respondents in livestock management skill, such as vaccination, de-worming, and poultry management, goat farming best management practices. After getting training sampled respondents can be able to manage and treat the animal minor disease. In the research area, income of the sampled respondents enhanced. AJKRSP interventions, training programs, enable the sample respondents to technical know-how. AJKRSP has played a vital role in the coordination of activities between service providers and beneficiaries. The study also reveals that AJKRSP has a far-reaching effect and motivation of the available natural resources.

The following suggestions are prepared, based on findings of the present study,

- There must be proper marketing system and adequate pricing system for the promotion of livestock activities.
- Field oriented activities in livestock should be introduced.
- There should be follow-up visits to ensure sustainability of the activities.
- Co-ordination mechanism should be established at local level.
- There must be follow-up visits and sustainability must be ensure through AJKRSP long term community based check system.

Author's Contributions

Anum Khursheed has done work in collecting of data, interpreting of data, writing of results and discussion. Dr. Malik Muhammad Shafi has helped in checking manuscript and technical writing while, Dr. Haidar Ali has helped in econometric analysis.

References

Afghanistan Research and Evaluation Unit. 2011-12. Natural resource management, resource conflict monitor, governing dynamic between natural resource a violet conflict. J. Confl. Resol. 49. No. 4: 483-507.

Ahmad, M., M.A. Jadoon, I. Ahmad and H. Khan. 2007. Impact of trainings imparted to enhance agricultural production in district Mansehra.

Azad Jammu and Kashmir rural support program. 2014. Monthly report, social mobilization and institutional development, Azad Jammu and Kashmir.

Azad Jammu and Kashmir community development program. 2013. project completion report, base line survey, natural resource management.

Cochran, W.G. 1977. Sampling techniques, 3rd edition. John Wiley and Sons, New York. pp. 37-45.

Dewangan, K., K.R. Sahu and K.V. Achari. 2011. Sericulture: A tool of ecosystem checking

through tribal. Department of zoology, E. Raghvendra Rao, Govt. P.G. Science College, Bilaspur, Chhattisgarh (INDIA). J. Environ. Res. Dev. Vol. 6.

Carletto, C. 1998. Household food security and the role of women: IFAD "s Experience in Guatemala. Staff working paper series on gender and household food security, No 3. Rome: IFAD.

Chaudhry. S.M. 2004. Introduction to statistical theory part. 2. Formerly, head of statistics department. Govt. Coll. Lahore.

Glossary of statistical terms: Natural resources management and exploitation activities. OECD 2005.

Hassan, M. 2001. Role of agha khan rural support program in the diffusion of the new agricultural technologies. A case study of three field management units in district Skardu Baltistan, M.Sc. (Hons) Thesis, Instit. Dev. Stud. Univ. Agric. Peshawar.

Hamid, H. 2003. Role of agha khan rural support program in agriculture and livestock in district Diamir, a case study of selected villages in Tehsil Astore. A thesis published at Institute of development studies, Univ. Agric. Peshawar.

Imran, S.C. 2003. An Empirical analysis of the determinants of rural poverty in Pakistan: A case study of Bahawalpur district with special reference to Cholistan. Ph.D. Thesis, Islamia Univ. Peshawar.

Jabbar, A. 2000. Role of agha khan rural support program in agricultural development in northern areas: M.Sc. (Hons) thesis, Dep. Agric. Econ. Rural Sociol. Univ. Agric. Peshawar, Pak.

Jodha, N.S., P. Sharma, B.B. Deoja, A.A. Junejo, S. Sharma, S.R. Chalise and S. Shrestha. 1994. International symposium on mountain environment and development. p. 358.

Kasi, E. 2013. Role of women in sericulture and community development. Nat. Inst. Rural Dev. (NIRD) Hyderabad.

Khan, A.M. 1999. Impact of national rural support program on cotton productivity (a case study of Vehari), Peshawar. M.Sc. (Hons) unpublished thesis, Dep. Agric. Econ. Rural Sociol. Univ. Agric. Peshawar, Pak. p. 3.

Khan, A.R. 2003. The role of agha khan rural support program in natural resource. Management particularly in agriculture, livestock and forestry, a case study of Tehsil Astore. A thesis publ. Inst. Dev. Stud. Univ. Agric. Peshawar.

Kumar, U. and M. Das. 2010. Economics of sericulture in Assam. Department of economics, north-eastern hill university, Shilong. South Asia Econ. J. Vol. 11.

Lakshmanan, S., B. Mallikmjuna, R. GanapathyRao, H. Jayaram and R.G. Geetha Devi. 1999. An empirical investigation on labour productivity in mulberry sericulture. India. J. Sericulture, Vol. 38(1), pp. 48 - 52.

Mohammad, A.G. 1999. Micro-enterprise development in mountain areas: a review of NGO initiatives in Pakistan. P: 60.

Park, C. 2008. Dictionary of environment and conservation, Oxford University, Vol. 50, No. 4

Ritikbitu. 2011. Natural resource management. environmental Studies. http://www.studymode.com/essays/Natural-Resource-Management762804.html

Rias, M.N., A.W. Solangi and H.A. Sahito. 2013. Economic assessment of rural women involved in agriculture and livestock farming activities. Sindh Agric. Univ. Tandojam, Sindh, Vol. 2(4), pp. 115 – 121.

Roy, C., S.R. Mukherji and S. Ghosh. 2012. Sericulture as an employment generating household industry in west bengal. Kaliyaganj college, west bengal, India, University of North Bengal, Darjeeling, West Bengal, India, Maulana Azad College (India).

Safirullah, K., Anwar, M. Sajid, M. Mujtaba and A. Ali. 2013. Effect of human resource development on livestock production in Chitral, Khyber Pakhtunkhwa. A study conducted by agha khan rural support program. Pak. J. Nutr. 12 (9).

Samuel, A. 2000. Impact of natural resource management on livestock through rural development programms in South Africa. Int. J. Livest. Sci. 30 (2): 43-62

Shad, R.D. 2013. Silkworms and Kashmir climate situation. Thomson Reuters Found. Azad Jammu Kashmir. 24 (1).

Shah, P.N., Nelson and S. Wright. 1995. Farmers as analysts, facilitators and decision-makers. Power and participatory development: Theory and practice. Intermed. Technol. Publ. Ltd. (ITP), London, UK. pp. 83-94

Shahid, S. and S. Shaukat. 2001. Impact of credit provided by Neelum and Jhelum valleys community development project (NJVCDP)

on livestock development in Jhelum valley district Muzaffarabad, Azad Kashmir. M.Sc (Hons) Thesis, Institute of Dev. Stud. KP Agric. Peshawar, Pak.

Siddique, S. 2013. Environment, obstacles in natural resource management plan in Pakistan, environmental sciences at university of Haripur.

Subhani, Z. 2014. Natural resources of Pakistan and poor management, university of Lahore.

Sugiyama, M., A. Iddamalgoda and K. Oguri. 2003. Development of livestock sector in Asia: An analysis of present situation of livestock sector and its importance for future development. Res. Dev. Div. Fac. Reg. Stud. Gifu Univ., Yanagido 1-1, Japan.

Swanepoel, C. and S. Mayo. 2010. International livestock research institute (ILRI), C/o agricultural research institute of Mozambique, Maputo, Mozambique. Wesley Logman Ltd. p: 69.

Tabassum. 2012. Essay on management of natural resources. http:// www. preservearticles.com/ index.php

United Nation. 2009. Agencies report on poverty condition in the world 2009-10. http:/www. un.org. Accessed on 11-08-2013, 10:12:59.

UNDP, UNEP, The world bank and world resource institute. The wealth of the poor managing ecosystems to fight poverty institute. 2005. Chapter 3, The role of board in governance, World resources 2005.