



BASELINE HOUSEHOLD SURVEY

REPORT

Protected Areas and Biodiversity Management in the Gissar Mountains

UNDP-GEF Medium Sized Project (PIMS 1786)

(April-July 2006)

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EXECUTIVE SUMMARY

The Protected Areas and Biodiversity Management in the Gissar Mountains Project (the Project), more commonly referred as the Gissar Mountains Project is being implemented in three Protected Areas (PAs): Romit Zapovednik, Shirkent Nature and Historical Park, Almosi Zakaznik and the nearby communities located in four districts Vahdat, Gissar, Tursunzoda and Shahrinav in Tajikistan. The Project goal is to improve conservation of globally significant biodiversity in Tajikistan through demonstration of new mechanisms and approaches for effective management of Protected Areas and their natural resources. The project is implemented by CARE Tajikistan, with financial support from UNDP/GEF. The project timeline is January 2006 to December 2010.

In April 2006 the Project conducted its first household level survey in four Jamoats¹ of Districts of the Regions of Republican Subordination (RRS) of Tajikistan. The Project collected information from 216 households located on the territory or next to target PAs.

Selected findings include:

Out of the total number of respondents (216) females accounted 44% (N=96) and males 56% (N=120). Since the Project intended to interview heads of households (HH) or their spouses living in target kishlaks, the percentage of surveyed men headed HH amounted to 93,5% (N=202) against 6,5 % (N=14) of women headed HH;

Economic condition of respondents in four Jamoats can be considered average (men headed HH–54%/N=110; women headed HH-64%/N=9);

The majority of respondents have secondary (men 37% against women 40%) and incomplete secondary (man 18% against women 38%) education;

50% of the total number of respondents answered that they have at least one family member, some families have 2 members (8%), and very few 3 family members in Russia who qualify as labour migrants;

The majority of men (30%/N=65) are labor migrants and this is the main source of their income. 13% (N=29) of men are involved in agriculture (crop planting) and cite it as the main source of income against 10% (N=22) of women;

The majority of the respondents (77%/N=167) participate in decision-making at the local level during community planning and implementation of activities;

89% (N=192) of respondents experience food shortage during winter months and in early spring;

2005 expenditures for food constituted 43% (average 3,307² somoni); for clothing amounted to 13% (average 1,039 somoni); for social events (weddings, funerals, birthdays, anniversaries) constituted 14% (average 1,095 somoni); and for health amounted to 8% (average 594 somoni);

2005 income included remittances 31% (average 2,357 somoni); agriculture 24% (average 1,773 somoni); credit (receiving) 15% (average 1,120 somoni); income from livestock 9% (average 640 somoni); and daily wage earnings 8% (average 618 somoni);

¹ Local government units that represent a cluster of kishlaks (villages)

² Official August 106 2006 exchange rate stands at 1 USD = 3.38 SOM (somoni)

91%/N=197 of respondents (men - 96%/N=115; women - 85%/N=82) know that they live on the territory or next to a PA;

87% (N=188) of respondents reported that they know about rules/regulations that control behaviour/living on or next to a PA;

The majority (men - 62%/N=74; women - 46%/N=43) think that strict ban on hunting/fishing/plant harvesting; 33% (N=39) of men and 30% (N=28) of women believe that herb harvesting without pulling out their roots; 33% (N=39) of men and 18% (N=17) of women consider relevant awareness programs on environmental issues for communities; and 29% (N=35) of men and 13% (N=12) of women think that improving management of PAs - could protect animals and plants from disappearing;

The majority of respondents reported that they consider beautiful landscapes (55%/N=115); access to resources such as wild animals, plants and fuel wood (44%/N=92); and pastures and fodder (39%/N=83) as benefits of living on the territory of the PA. At the same time 20% (N=18) of women and 18 (N=22) of men (total 19% (N=40)) see no benefits in living on the territory or next to a PA;

The majority of respondents (58%/N=117) reported that they do not see any disadvantages of living on or next to the PA; although, 35% (N=70) replied that they see bans on access to natural resources; and the wild animals destroying crops (15%/N=30) as disadvantages of living on or next to the PA;

The majority of respondents (92%/N=198) said that they do not have problems with foresters or rangers. Only some 8% (N=18) of respondents stated that they have problems with foresters/rangers due to bans on tree cutting, livestock grazing, and for violating rules and regulations of the PA.

Please refer to the main report for details on these and other findings of the baseline survey.

1. Introduction

The Protected Areas and Biodiversity Management in the Gissar Mountains (hereafter the Project) is designed to strengthen management effectiveness and sustainability of the three selected Protected Areas (PAs) located on the southern slopes of the Gissar Mountains, and thereby provide models and best practices replicable throughout the national PA system. The Project will be working with three Protected Areas: Romit Zapovednik, Shirkent Nature and Historical Park, Almosi Zakaznik and the nearby communities located in four districts Vahdat, Gissar, Tursunzoda and Shahrinav in Tajikistan.

The overall project goal is: to improve conservation of globally significant biodiversity in Tajikistan through demonstration of new mechanisms and approaches for effective management of Protected Areas and their natural resources. The project is implemented on the basis of a Project Document signed on January 03, 2006 - (PIMS 1786; Atlas Award ID: 00042239; Atlas Project ID: 00048392). This five-year long project officially started in January, 2006. The UNDP/GEF contract budget is USD 1,100,000.

The project has three outcomes:

- Strengthened environmental governance provides a more sustainable land-use context for the PA system.
- New management practices are introduced and capacity built in target PAs; overall management effectiveness and sustainability of the PA system substantively improved.
- Practical examples for stakeholders of how to achieve environmentally sustainable livelihoods around target PAs.

This baseline survey establishes the baseline for the target communities and will help the Project identify and plan its activities in those communities.

2. METHODOLOGY

The Project used all available information on kishlaks (villages), their total population, and number of households (HH) to calculate the sample size for the household survey.

When feasible, the Project decided to survey heads of households as the most informed individuals in the family and the target communities. In cases when heads of households were not available, the interviewers were asked to interview other decision making family members (spouses).

Total number of population in 26 kishlaks located on or near target Project Protected areas in four districts stands at 14,774. To calculate the sample size, the project applied “Sampling with Probability Proportional to Size” formula:

$$n = \frac{(Z)^2 * pq * N}{(e)^2 * (N - 1) + Z^2 pq} = \frac{(1.96 * 1.96) * (0.5 * 0.5) * 14774}{(0.07 * 0.07) * (14774 - 1) + (1.96 * 1.96) * 0.5 * 0.5} = 193$$

Where: n = Size of the sample

Z = Standard variety for a given confidence level=1.96

(As per normal curve table at 95% confidence level)

p = Sample proportion

q = (1-p) Sample non-proportion

e = Precision rate or acceptable error

Hence, the sample size amounted to 193 or 1.3% of the total number of beneficiaries (N=14,774) in four districts. Further, this percentage was applied to the total number of beneficiaries per target district:

Table 1. Statistical sample size

#	District	Jamoat	Protected Area	Total # of beneficiaries	Sample size per target district
1	Hissor	Honakoi Kuhi	Almosi	2,373	31
2	Shahrinav	Sabo	Almosi	513	7
3	Tursunzoda	Rabot	Shirkent	5,273	69
4	Vahdat	Romit	Romit	6,592	86
			Total	14,751	193

Per Table 1, in Shahrinav district 1.3 % allowed to survey 7 individuals only. Because this number is not statistically representative, the Project decided to increase the number of respondents for Shakhrrinav district from 7 to 30. Accordingly, the total sample size in four districts rose to 216 (refer to Table 2 for details).

Table 2. Actual sample size.

District	Jamoat	PA	#	Village	Location of the village (in/next to PA)	# of HHs	Total # of population	Sample size
Hissor	Honako i Kuhi	Almosi	1	Vargandok	In the territory	35	247	10
			2	Kushkak	Next to PA	138	1196	11
			3	Istoni	Next to PA	75	648	10
			Sub-Total					284
Shahrin av	Sabot	Almosi	1	Sangmelai Muso	In the territory	11	90	10
			2	Sangmelai bolo	Next to PA	65	400	15
			3	Reki	Next to PA	6	23	5
			Sub-Total					82
Tursunzoda	Rabot	Shirkent	1	Pashmi kuhna	In the territory	6	23	6
			2	Kirgiz-kishlok	In the territory	4	9	4
			3	Shirkent	Next to PA	300	1511	20
			4	Rabot	Next to PA	400	1760	20
			5	Gulhas	Next to PA	300	1420	19
			Sub-Total					1124
Vahdat	Romit	Romit	1	Romit	Next to PA	379	2483	21
			2	Khushon	Next to PA	161	1116	15
			3	Yafrak	Next to PA	118	901	11
			4	Viston	Next to PA	84	638	9
			5	Yafrak	In the territory	22	140	19
			6	Langar	In the territory	6	24	6
			7	Kohu	In the territory	5	17	5
			Total					971
Grand Total					2461	14751	216	

Given the situation, instead of taking 1.3% from the total population of each village, the Project decided to apply purposive sampling according to actual location of kishlaks: on the territory and next to target PAs. The Project decided to consider kishlaks located on the territory of target PAs as higher priority and, therefore, interviewed more respondents in those communities. In addition, the Project gave preference to those kishlaks that have larger population and are located in the close proximity to the target PAs.

Finally, the Project conducted the household level survey in four Jamoats of Districts of the Regions of Republican Subordination (RRS) of Tajikistan covering 216 households located on the territory or next to the target PAs.

Table 3. Summary table on final allocation in the target communities

	District	Jamoat	Frequency	Percent	Valid Percent	Cumulative Percent
1	Vakhdad	Romit	86	39,8	39,8	39,8
2	Hissor	Gornaya Honako	31	14,4	14,4	54,2
3	Shakhrinav	Sabo	30	13,9	13,9	68,1
4	Tursun-Zoda	Rabot	69	31,9	31,9	100,0
Total			216	100,0	100,0	

Interviews were conducted in Tajik and in some cases in Uzbek (Jamoat Rabot). Most of the questions are multiple choice (see Attachment 1. Questionnaire). Lists of potential answers on multiple-choice questions on activities, plants, animals, agencies was developed based on previous CARE experience, personal professional experience of the Project employees, meetings with individuals and focus group discussions held in the communities of the Protect area.

All data is gender segregated and stored in a format that allows for additional analysis and segregation by PA, communities, and Jamoats.

The nine-member team of interviewers was comprised of two former CARE employees that are highly experienced in conducting baseline surveys, three representatives of two local NGOs and four employees of the Protected Areas and the Forestry Agency of the State Committee for Environmental Protection and Forestry. The Project team organized two training sessions and one field test of the questionnaire for the interviewers. Activities during the first training session (April 19, 2006) for the interviewers included: brief information on the Project, its major activities and the questionnaire. After that the interviewers had sufficient time to study the questionnaire and ask specific questions. At the end of the training sessions the interviewers tested the questionnaire by interviewing each other (working in groups of two). The Project team adjusted the questionnaire based on the comments provided by the interviewers. The following day (April 20, 2006) nine interviewers and three members of the Project field-tested the questionnaire in one of the Project target communities³. The group of interviewers and the Project team met on April 21, 2006 and again shared their experience in the community, reaction of community members to the questions and advised on further changes to the questionnaire. After the second training session, the Project team made final adjustments to the questionnaire. The baseline survey itself was conducted from April 24 through April 29.

3. GENERAL DATA ON RESPONDENTS

Questions from 1 through 22 provide general information on respondents. Interviewers asked respondents on location of their communities, respondent's name, sex, date of birth, economic condition (visual)⁴, education, financial status, who is the head of the household, total number of people in the household including labor migrants, number of rooms, number of rooms the household heats during winter months, main source of income, the secondary source of income for the household, major needs in the community and for the individual HHs, household participation in the

³ To maintain integrity of the survey, this community was excluded during the actual implementation of the baseline survey.

⁴ Interviewers were asked to provide their personal opinion on the economic condition of the household based on what they saw (condition of the house, kitchen garden, cloths and so on)

community decision making, and information on handicraft industry in the target communities. The following tables and descriptions provide detailed information on the respondents and their answers.⁵

Questions 5 through 22

Question 5 – Sex. Out of the total number of respondents (216), females accounted 44% (N=96) and males 56% (N=120). Since the Project intended to interview heads of households (HH) or their spouses living in target kishlaks, the percentage of surveyed men headed HHs amounted to 93,5% (N=202) against 6,5 % (N=14) of women headed HHs.

Table 4. Summary on heads of households.

	Jamoat									
	Romit		Gornaya Honako		Sabo		Rabot		Total	
	#of respon dents	%	#of respon dents	%	#of respon dents	%	#of respon dents	%	#of respon dents	%
Men headed households	80	93	28	90	29	96,7	65	94,2	202	93,5
Women headed households	6	7	3	9,7	1	3,3	4	5,8	14	6,5
Total	86	40%	31	14%	30	14%	69	32%	216	100

Note: Women headed households are those where women are either widows or divorced.

Question 6 – Date of birth. Age of the majority of female respondents is between 40-59 (22%/N=47) and, similarly, age of the majority of male respondents is in the same age group 40-59 (29%/N=63). Tables 5 and 6 provide details on age of the respondents.

Table 5. Age of female respondents

Age intervals	Romit		Gornaya Honako		Sabo		Rabot		Total	
	# of resp	%	# of resp	%	# of resp	%	# of resp	%	# of resp	%
23-39	18	21	5	16	6	20	14	20	43	20
40-59	26	30	8	26	4	13	9	13	47	22
60-83	3	3	-	-	1	3	2	3	6	3
Total	47	55	13	42	11	37	25	36	96	44

Table 6. Age of male respondents

Age intervals	Romit		Gornaya Honako		Sabo		Rabot		Total	
	# of resp	%	# of resp	%	# of resp	%	# of resp	%	# of resp	%
23-39	12	14	6	19	5	17	9	13	32	15
40-59	16	19	9	29	13	43	25	36	63	29
60-83	11	13	3	10	1	3	10	14	25	12
Total	39	45	18	58	19	63	44	64	120	56

⁵ Please refer to the attached questionnaire for details on type of information collected by questions 1 to 4. This information helped analyze the remaining questions of the survey.

Question 7 - Economic conditions. In general, economic condition of the respondents in four Jamoats can be considered average (men headed HHs-54%/N=110; women headed HHs-64%/N=9).

14% of men headed HHs have good economic conditions against 7% of women headed HHs.

27% of men headed HHs have bad economic conditions against 29% of women headed HHs.

Table 7. Summary table on economic conditions of surveyed HHs

Economic conditions	Head of HH Men		Head of HH Women	
	# of resp	%	# of resp	%
Good	29	14%	1	7%
Average	110	54%	9	64%
Bad	54	27%	4	29%

Question 8 – Education. The majority of respondents have secondary (men 37% against women 40%) and incomplete secondary (man 18% against women 38%) education. More men rather women have higher (man 17.5% against women 3%) and paraprofessional (man 17% against women 8%) education. 3% of the respondents (all women) are illiterate.

Table 8. Summary table on education.

Education	Female		Male	
	Total		Total	
	# of resp	%	# of resp	%
Secondary	38	40	44	37
Incomplete secondary	36	38	21	18
Primary	8	8	10	8
Paraprofessional	8	8	20	17
Higher	3	3	21	17.5
Incomplete higher			4	3
Illiterate	3	3	-	-
Total	96	100	120	100

Question 9 - Marital status. The majority of respondents are married (93%/N=201), some are widows (5%/N=11) and very few are divorced and/or single.

Table 9. Marital status

Marital status	Total	
	# of resp	%
Married	201	93
Widow	11	5
Divorced	3	1
Single	1	0.5
Total	216	100

Question 10 - Head of the household. Out of 216 interviewed HHs women headed HH constitute 6.5% (N=14) and men headed HH amount to 93.5% (N=202)

Question 11 - Total number of members in the household. Out of the total number of respondents the majority (66%/N=142) have 6 to 10 members in the household.

Table 10. Number of members in a HH

Number of members in a HH	# of resp.	Percent	Valid Percent	Cumulative Percent
6-10	142	66	66	84
up to 5 members	39	18	18	18
11-15	27	13	13	96
more than 15	8	4	4	100
Total	216	100	100	

Question 12 – Family members as labour migrants. Question 12 is the logical continuation of the previous question. Overall, 50% of the total number of respondents answered that they have at least 1 (one) family member, some families 2 (two) members (8%), and very few 3 (three) family members in Russia who qualify as labour migrants.

Fewer people migrate from Gornaya Honako (61% out of the total # of respondents said none migrates) and Rabot Jamoats (59% out of the total # of Jamoat respondents said none migrates). The majority of respondents migrate from Romit (49% out of the total # of respondents) and Sabo (43% out of the total # of respondents) Jamoats.

Table 11. Summary table on labour migration

# of people in migration from the HH	Romit		Gornaya Honako		Sabo		Rabot		Total	
	# of resp	%	# of resp	%	# of resp	%	# of resp	%	# of resp	%
0	32	37	19	61	16	53	41	59	108	50
1	42	49	11	35	13	43	19	28	85	39
2	8	9	1	3	1	3	8	12	18	8
3	4	5	0	0	0	0	1	1	5	2
Total	86	40	31	14	30	14	69	32	216	100

Question 13 - How many rooms does the household have in the house? All respondents have at least 1 (one) room. The majority of respondents have 3 (three) rooms in their houses (33%/N=65); some have 4 (four) rooms (29%/N=62); fewer have 5 (five) to 9 (nine) rooms in their houses (23%/N=49); and very few have 2 (two) rooms (17%/N=36).

Table 12: Number of rooms in a house

Number of rooms in a house	# of resp	Percent	Valid Percent	Cumulative Percent
3	65	30	30	49
4	62	29	29	77
2	36	17	17	19
5	22	10	10	88
6	13	6	6	94
7	7	3	3	97
8	5	2	2	99
1	4	2	2	2
9	2	1	1	100
Total	216	100	100	

Question 14 - How many rooms does the HH heat during winter months? Out of the total number of respondents 61% heat at least one room. 25% of respondents replied that they heat two rooms, and 14% of respondents heat from 3 to 5 rooms.

Table 13: Number of heated rooms in a house during winter months

Number of rooms being heated during the winter months	# of resp	Percent	Valid Percent	Cumulative Percent
1	132	61	61	61
2	54	25	25	86
3	25	12	12	98
4	4	2	2	99.5
5	1	0.5	0	100
Total	216	100	100	

Question 15 - Main source of income. The majority of men (30%/N=65) are labor migrants and report this as the main source of their income. Other activities include: agriculture (crop production) - 13% (N=29) of men against 10% (N=22) of women; salary/work for government agencies - 13% (N=28) of men against 6% (N=14) of women; orcharding (fruit growing) - 12% (N=25) of men against 3% (N=7) of women; livestock raising - 10% (N=22) of men against 3% (N=7) of women; business, beekeeping, individual employment/entrepreneurship, daily wage earning and seasonal trade - men (12%/N=26) against women (3%/N=7).

Question 16 - Secondary source of income. The secondary source of income is comprised of agriculture (crop planting) for 38% (N=80) of men against 46% (N=96) of women; livestock raising for 34% (N=72) of men against 35% (N=74) of women; orcharding for 30% (N=62) of men against 19% (N=39) of women; government jobs for 17% (N=36) against 5% of women; and labor migration for 16% (N=34) of men.

Based on the answers given by women on questions 15 and 16, very few women are involved in labor migration, when they do, they have it as the main source of income only. In addition, women are not involved in daily wage earning activities at all.

Question 17 - What alternative (other than what you have now) means of survival would you like to have? The majority of women (11%/N=23) answered that they would like to get involved in handicraft making and have it as an alternative mean of survival. 6% (N=13) of women responded that they would like to be involved in bee-keeping, 6% (N=12) want to open a shop, 4% (N=9) want

to earn income through providing services to tourists and very few want to generate income from providing housing to tourists.⁶

9% (N=19) of men would like to be engaged in beekeeping; and 9% (N=19) would like to open a shop; 4% (N=9) want to generate income by providing services to tourists and 4% (N=8) would like to produce handicrafts. Few (between 3%/N=7 and 2%/N=4) men want to engage in providing housing to tourists, animal husbandry, entrepreneurship, crop production and orcharding.

Question 18 –What are the main needs in your community? Among the major needs, men mentioned lack of electricity supply – 60% (N=59) and lack of jobs - 56% (N=52) in their communities. 44% (N=41) of women mentioned that there is a lack of job opportunities and 40% (N=40) answered lack of electricity in their kishlaks. Also, men responded that there are problems with roads – 74% (N=37), 64% (N=28) mentioned problems with potable water and 67% (N=33) with irrigation water. 49% (N=18) of women, responded that they have problems accessing quality medical services. 36% (N=16) of women said they have problems with potable water and 33% (N=16) declared that there are problems with irrigation water in their community. Table 14 lists all responses given by the respondents. In addition, the table provides information on potential results if those needs are addressed and the problems removed.

Table 14. Summary table on main needs in the community

Main needs in the kishlak	Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%
Lack of pastures						
Increase number of livestock	6	38	12	57	18	49
Increase access to the pastures	5	31	6	29	11	30
More fodder for livestock/ less money spent on buying it	3	19	1	5	4	11
Opportunity to start animal husbandry	1	6	2	10	3	8
No answer	1	6			1	3
Total	16	43	21	57	37	17
Lack of fuel						
Would not cut trees	6	86	16	64	22	69
Less money spent on petrol and timely introduction of agricultural inputs			3	12	3	9
Food preparation			3	12	3	9
House would be warm, children would not get sick	1	14	1	4	2	6
No answer			1	4	1	3
Total	7	22	25	78	32	15
Lack of electricity						
Improvement of conditions of life: lighting, food preparation	18	45	17	29	35	35
Access to information	7	18	24	41	31	31
Access to computer			2	3	2	2
Improved water supply	1	3	2	3	3	3

⁶ Assumption: They may think that their houses are not suitable.

Access to a mill			2	3	2	2
Fewer cut trees	10	25	9	15	19	19
Establish small business or engage in entrepreneurship	2	5	1	2	3	3
No answer	1	3	2	3	3	3
Total	40	40	59	60	99	46
Lack of jobs						
Secure source of income	25	61	32	62	57	61
Life will improve	10	24	12	23	22	24
Labor migration will decrease	6	15	8	15	14	15
Total	41	44	52	56	93	43
Lack of housing						
Display secure source of income	9	100	9	75	18	86
Life will improve			3	25	3	14
Total	9	43	12	57	21	10
Lack of arable land						
Will diversify crops	5	33	5	29	10	31
Will be more involved in agriculture	3	20			3	9
Will diversify livelihoods	1	7	4	24	5	16
Will get better harvest	5	33	6	35	11	34
Will improve living conditions			2	12	2	6
Incorrect answers	1	7			1	3
Total	15	47	17	53	32	15
Potable water						
Improve living conditions	14	88	25	89	39	89
Fewer infectious diseases	2	13	3	11	5	11
Total	16	36	28	64	44	20
Irrigation water						
Will better develop agriculture (increased irrigation, diversify crops)	16	100	32	97	48	98
Livestock will be provided with sufficient water			1	3	1	2
Total	16	33	33	67	49	23
Bridge						
Will allow free movement	8	89	9	56	17	68
Provide more opportunities for business			5	31	5	20
Incorrect answers	1	11	2	13	3	12
Total	9	36	16	64	25	12
Access to quality medical services						
Timely provision of quality medical care	15	83	17	89	32	86
Less money spent on medical care	3	17	2	11	5	14
Total	18	49	19	51	37	17
Problems with school						

Level of education among children will increase	3	43	17	100	20	83
Children won't have to go to another village to school	4	57			4	17
Total	7	29	17	71	24	11
Problems with road						
Free movement	12	92	34	92	46	92
Less money spent on transportation	1	8	3	8	4	8
Total	13	26	37	74	50	23
Problems with public transport						
Free movement	5	100	2	100	7	100
Total	5	71	2	29	7	3
Remoteness from bazaar/shop						
Households will be provided with essential goods	4	80	1	33	5	63
Less money spent	1	20	2	67	3	38
Total	5	63	3	38	8	4
Other						
Other	4	100	15	100	19	100
Total	4	21	15	79	19	9
No problems						
No problems	0	0	1	100	1	100
Total	0	0	1	100	1	0.5

Question 19 - What are the main needs in your household? 59% (N=91) of men identified money/income as their major need in the household; 68% (N=39) lack of electricity and lack of the livestock by 45% (N=24) of men. At the same time women pointed out that money/income is a problem for 41% (N=63) of women; lack of livestock – 55% (N=29) and lack of irrigation water for 56% (N=20)of women. Table 15 provides complete information on the responses provided by the respondents.

Table 15. Summary table on major needs in the household

Major needs	Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%
Potable water						
Improved living conditions	4	25	6	33	10	29
Improved health/fewer sick	3	19			3	9
Life would improve	3	19	2	11	5	15
Logically incorrect answers	6	38	10	56	16	47
Total	16	47	18	53	34	16
Irrigation water						
Better develop agriculture (better yields)	17	85	15	94	32	89
Life will improve	3	15			3	8
Incorrect answers	-	-	1	6	1	3
Total	20	56	16	44	36	17
Livestock						

Increase in livestock numbers	8	28	10	42	18	34
Increase in income	8	28	6	25	14	26
Improved food security due to increased livestock	9	31	2	8	11	21
Incorrect answers	4	14	6	25	10	19
Total	29	55	24	45	53	25
Lack of funds/income						
Will build a house	20	32	26	29	46	30
Will improve life conditions	23	37	35	38	58	38
Will increase number of livestock	4	6	9	10	13	8
Will engage in marketing	7	11	5	5	12	8
Will engage in entrepreneurship	1	2	1	1	2	1
Will improve access to education	2	3	2	2	4	3
Beekeeping	-	-	3	3	3	2
Will improve health condition	2	3	3	3	5	3
Cropping	1	2			1	1
Other	2	3	4	4	6	4
Incorrect answers	1	2	3	3	4	3
Total	63	41	91	59	154	71
Lack of electricity						
Reduce use of fuel	4	22	5	13	9	16
Access to information	7	39	22	56	29	51
Improvement in living conditions: lighting, food preparation	6	33	11	28	17	30
Access to a mill (flower)			1	3	1	2
Will engage in tree planting	1	6			1	2
Total	18	32	39	68	57	26
Lack of housing						
Improve living conditions	10	100	16	100	26	100
Total	10	38	16	62	26	12
Lack of arable lands						
Will engage in crop production	1	100	4	100	5	100
Total	1	20	4	80	5	2
Lack of machinery						
Improve land treatment	1	100	1	100	2	100
Total	1	50	1	50	2	1
Lack of working place						
Permanent source of income	4	100	4	100	8	100
Total	4	50	4	50	8	4
Problems with school						
Improve level of children's education	-	-	4	100	4	100
Total	-	-	4	100	4	2
Lack of food						
Improve health conditions	-	-	1	50	1	33
Save money for something else	1	100	1	50	2	67
Total	1	33	2	67	3	1

No problems						
No problems	5	100	2	100	7	100
Total	5	71	2	29	7	3
Other						
Other	5	100	5	100	10	100
Total	5	50	5	50	10	5

Question 20 – Participation of households in kishlak/makhalla⁷ decision making on local planning?

The majority of respondents (77%/N=167) replied that they participate in decision-making at the local level during planning and implementation of activities. Mainly men headed HHs 59% (N=94) responded that their HHs participate in meetings related to construction and rehabilitation of roads and bridges; 29% (N=47) of men headed HHs said that their HHs take part in meetings related to nature protection activities (tree planting, terracing), against 43% (N=3) of women headed HHs. Also women headed HHs mentioned that they participate in meetings related to the issues of humanitarian aid to community residents. Respondents that mentioned that their HHs do not participate in decision making at the local level replied that either nobody asked their HHs to participate (men headed HHs) and that participation of their HH is not important or they were not allowed to participate (women headed HHs⁸).

Question 21 - Is there a handicraft industry in the area? The majority (58%/N=126) responded that there is some handicraft industry in the area. The most popular answer among both men and women was embroidery and golden embroidery.

Table 16. Summary table of types of handicraft industry

Types of handicraft business	Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%
Craftsmanship (carpenter, making of wooden spoons and plates)	7	11	7	11	14	11
Embroidery	31	49	25	40	56	44
Blacksmith	3	5	3	5	6	5
Golden embroidery	12	19	9	14	21	17
Individuals with different skills	5	8	7	11	12	10
Basket weaving	3	5	2	3	5	4
Renovation & construction	2	3	5	8	7	6
Incorrect answer	-	-	1	1	1	1
Difficult to answer	-	-	2	3	2	2
No answer	-	-	2	3	2	2
Total	63	50	63	50	126	58

Question 22 - Is anybody from your household involved in making handicrafts? The majority of respondents (78%/N=169) answered *No*. Among the respondents whose HHs are involved in making handicraft, 68% (N=32) of men and women mentioned embroidery and golden embroidery. Some men mentioned that they are involved in general craftsmanship (renovations, carpentering).

⁷ Makhala - neighborhood

⁸ Interesting, then how can she be head of the HH.

4. INFORMATION AND AWARENESS

The following set of questions helps identify levels of information availability and awareness on soil fertility and agricultural practices.

Question 23 - What agriculture activities for improving soil fertility do you know (sustainable land use practices)? The majority of men 96% (N=115) and women - 89% (N=85) answered that the use of mineral and organic fertilizers is critical to soil fertility; 76% (N=91) of men and 73% (N=70) of women mentioned ploughing, while crop rotation was identified by 40% (N=48) of men and 20% (N=19) of women as instrumental for maintaining/improving soil fertility (please refer to table 17 for details).

Table 17. Summary table on activities to maintain/improve soil fertility

Agricultural activities to maintain/improve soil fertility	Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%
Crop rotation	19	20	48	40	67	31
Usage of mineral and organic fertilizers	85	89	115	96	200	93
Ploughing	70	73	91	76	161	75
Tree planting to prevent soil erosion	6	6	28	23	34	16
Scheduled livestock grazing	4	4	7	6	11	5
Revegetation of pastures	1	1	2	2	3	1
Timely watering	7	7	11	9	18	8
Pesticides	7	7	4	3	11	5
Protection from animals			1	1	1	0
Incorrect answer	1	1			1	0
Do not know	6	6	2	2	8	4
Total	96	44	120	56	216	100

Question 24 – Have you asked for information on agricultural issues during the last year? 44% (N=94) of respondents answered *Yes*. The majority respondents said that last year (2005) they requested information on agricultural issues from Jamoat/Hukumat (men - 47%/N=21; women - 10%/N=4); veterinarian (men - 29%/N=13; women - 33%/N=13); and neighbours (men – 24%/N=11; women - 33%/N=13). Unlike men, women also referred to relatives (13%/N=5) to receive information on agricultural practices. Most frequently asked questions were on livestock diseases (27%/N=23); crop and tree protection from insects and diseases (26%/N=22); and land distribution issues (14%/N=12). Please see table 18 for details.

Table 18. Summary table on source of information on agriculture

Source of information	Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%
Jamoat/Hukumat	5	11	21	47	26	29
Neighbor	14	30	11	24	25	27
Veterinarian	14	30	13	29	27	30
Relatives	6	13	1	2	7	8
Wise people	2	4	-	-	2	2
Friends	3	7	-	-	3	3
Pesticides seller	2	4	-	-	2	2
Agriculture specialist	4	9	3	7	7	8
Employee of local forestry			1	2	1	1
Total	46	51	45	49	91	100

Noteworthy, that the respondents who answered **NO** account for 56%/N=122 (men 61% (N=73) and women 51% (N=49)) of the total respondents. They said that there was no need in such information or that they relied on their own knowledge and experience only.

5. FOOD SECURITY

Question from 25 through 27 provide a picture on the food security situation in the target communities.

Question 25 – During which months you experience food shortages? - Out of the total number of respondents 89% (N=192) replied that they experience food shortages. The majority of men and women responded that they experience food shortages in April - 83%/N=159 (men-81%/N=83; women-85%/N=76); March - 72%/N=138 (men-68%/N=70; women-76%/N=68); May - 57%/N=109 (men-59%/N=61; women-54%/N=48); February - 37%/N=71 (men=40%/41; women-34%/N=30); and June - 20%/N39 (men-21%/N=22; women-19%/N=17).

Table 19. Summary table on food shortages in target communities

Month	Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%
January	10	11	19	18	29	15
February	30	34	41	40	71	37
March	68	76	70	68	138	72
April	76	85	83	81	159	83
May	48	54	61	59	109	57
June	17	19	22	21	39	20
July	10	11	11	11	21	11
August	4	4	8	8	12	6
September	2	2	6	6	8	4
October	-	-	2	2	2	1
November	1	1	3	3	4	2
December	3	3	8	8	11	6
Total	89	46	103	54	192	100

Question 26 - What are the major causes of food shortages? Most frequent answers were lack of food in winter time - 84%/N=158 (men-84%/N=85; women-83%/N=73)⁹; and lack of money - 77%/N=145 (men-76%/N=77; women-77%/N=68). Table 20 summarises findings on major causes of food shortages.

Table 20. Summary table on food shortages

Major causes of this food shortage	Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%
Lack of food in winter time	73	83	85	84	158	84
Lack of money	68	77	77	76	145	77
Increased prices on food	8	9	6	6	14	7
Non-availability of shop	-	-	1	1	1	1
Total	88	100	101	100	189	100

Question 27 - How many meals/snacks did you have yesterday? – The majority of respondents said they had one (33%/N=71) or two (61%/N=131) hot meals the day before. Also, the respondents mentioned that they had one (48%/N=104) or two (36%/N=77) snacks the day before.

Table 21. Summary table on meals/snacks

Number of meals/snacks	Meals						Snacks					
	Female		Male		Total		Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%	# of responses	%	# of responses	%	# of responses	%
Didn't eat	-	-	-	-	-	-	1	1	1	1	2	1
Once	30	31	41	34	71	33	40	42	64	53	104	48
Twice	56	58	75	63	131	61	36	38	41	34	77	36
Thrice or more	8	8	4	3	12	6	19	20	13	11	32	15
Total	96	44	120	56	216	100	96	44	120	56	216	100

6. INCOME AND EXPENDITURES

The Project has also included specific questions on income and expenditures of households in the target communities. Questions from 28 through 31 cover subjects like gross expenditures for 2005, crop production and expenditures on agricultural inputs, annual gross income and type of fuel used by households in 2005.

Question 28 - Annual gross expenditures by sources for 2005. The respondents reported that in 2005 their expenditures for food stood at 43% (average 3,307¹⁰ somoni); for clothing at 13% (average 1,039 somoni); for social events (weddings, funerals, birthdays, anniversaries) at 14% (average 1,095 somoni); and for health at 8% (average 594 somoni). Table 22 provides details on the annual gross expenditures of the households.

⁹ Assumption. People mostly rely on their own plots and animal stock.

¹⁰ Official August 106 2006 exchange rate stands at 1 USD = 3.38 SOM (somoni)

Table 22. Summary table of annual gross expenditures by source for 2005

Annual gross expenditure by sources for 2005	Female		Male		Total	
	Average	%	Average	%	Average	%
Food	3,353	43	3,270	43	3,307	43
Education	315	4	168	2	233	3
Clothes	1,079	14	1,008	13	1,039	13
Health	591	8	596	8	594	8
Payment of loan	382	5	391	5	387	5
Gift	215	3	231	3	224	3
Purchase of agricultural inputs	160	2	217	3	192	2
Social events	1,235	16	983	13	1,095	14
House construction & repairing	246	3	741	10	521	7
Others	145	2	87	1	113	1
Total	7,722	100	7,691	100	7,705	100

Question 29 - Crop production and expenditures for agricultural inputs. The majority of respondents have kitchen gardens (68%/N=146); 28% (N=61) lease agriculture lands, 11% (N=24) have pastures, and very few presidential (6%/N=12) lands¹¹.

The most popular crops that respondents plant on irrigated lands such as kitchen gardens are potato (29%/N=102); tomato (14%/N=49) and onion (12%/N=43). Very few people have irrigated lands, other than kitchen gardens, where they plant potato, tomato, onion, pumpkin and carrot.

Very few households plant potato, onion, wheat, tomato and other vegetables on rain fed lands. Some plant wheat (65%/N=44); flax (18%/N=12) and barley (9%/N=6) on the leased rain fed lands. Just a few plant wheat on the rain fed presidential lands. Some people plant wheat (62%/N=21); and few plant flax (21%/N=7) and barley (6%/N=2) on the rain fed pastures.

Question 30 - Annual Gross Income for 2005. Respondents stated that in 2005 remittances constituted 31% (average 2,357 somoni)¹² of total HH income; income from agriculture stood at 24% (average 1,773 somoni) of the total income of HHs; credit (receiving) at 15% (average 1,120 somoni); income from livestock at 9% (average 640 somoni); and daily wage earnings at 8% (average 618 somoni). Table 23 provides details on the annual income of HHs in 2005.

¹¹ Presidential lands are given to households to grow crops

Table 23. Summary table on annual gross income for 2005

Annual Gross Income for 2005	Female		Male		Total	
	Average	%	Average	%	Average	%
Agriculture	1,141	16	2,278	29	1,773	24
Daily wage	399	6	794	10	618	8
Livestock sale	479	7	769	10	640	9
Livestock production sale (eggs, meat, milk & etc.)	35	0	59	1	48	1
Small business	280	4	26	0	139	2
Credit (receive)	1,213	17	1,045	13	1,120	15
Tailoring	14	0	3	0	8	0
Handicrafts	5	0	14	0	10	0
Money remittances	2,853	40	1,961	25	2,357	31
Sell along the road (herbs, mushrooms, flowers)	105	1	56	1	78	1
Salary/pension	371	5	389	5	381	5
Selling of wood/trees	1	0	65	1	37	0
Selling of premise ???	0	0	275	4	153	2
Beekeeping	123	2	110	1	116	2
Seasonal work	82	1	10	0	42	1
Total	7,101	100	7,854	100	7,519	100

Question 31 - What types of fuel and in what quantity the HHs used during 2005 (Jan-Dec)? The majority of respondents (96%/N=208) reported that they used fuel wood - men headed HHs - 96%/N=194 (average 15m³); and women headed HHs - 100%/N=14 (average 17m³); 83% (N=179) of respondents reported that they used kerosene/diesel - men headed HHs - 83%/N=167 (average 36 litres); and women headed HHs - 86%/N=12 (average 31 litres); 77% (N=166) of respondents use cow dung cakes as fuel - men headed HHs - 78%/N=157 (average 891 kg); and women headed HHs - 64%/N=9 (average 861 kg). Tables 24 and 25 provide details on types and quantities of fuel used by the HHs in 2005.

Table 24. Summary table on types of fuel used by HHs in 2005

Type of fuel	Men headed HHs		Women headed HHs		Total	
	# of users	%	# of users	%	# of users	%
Fuel wood	194	96	14	100	208	96
Cow dung cakes	157	78	9	64	166	77
Coal	36	18	4	29	40	19
Kerosene/solar oil	167	83	12	86	179	83
Other	14	7	1	7	15	7
Total	202	100	14	100	216	100

Table 25. Summary table on quantity of fuel used by HHs in 2005

Quantity	Men headed HHs	Women headed HHs	Total
	Average	Average	Average
Fuel wood (m ³)	15	17	16
Cow dung cake (kg)	891	861	890
Coal (tone)	1	4	2
Kerosene/diesel oil (liter)	36	31	36
Other	120	-	120

7. BIODIVERSITY

The remaining questions of the baseline household survey provide information on personal experience, use, and knowledge about biodiversity among the respondents that live on or next to the target Protected Areas.

Question 32 - What natural resources does your household use or harvest in your daily life? The majority of HHs harvest rhubarb (men headed HHs - 88%/N=146; women headed HHs - 78%/N=7) and wild onion "Siyoyalaf" (men headed HHs - 79%/N=130; women headed HHs - 78%/N=7). Smaller number of HHs use pastures (men headed HHs - 41%/N=67; women headed HHs - 22%/N=2), and harvest wild spring plant "Roshak" (men headed HHs - 31%/N=51; women headed HHs - 33%/N=3). Table 26 provides details on a variety of natural resources (mostly plants) used/harvested by the HHs.

Table 26. Summary table on use/harvest of natural resources by the HHs

Natural Resources	Men headed HHs		Women headed HHs		Total	
	# of users	%	# of users	%	# of users	%
Rhubarb	146	88	7	78	153	88
Wild berries	12	7	1	11	13	7
Medicinal plants	29	18			29	17
Pastures	67	41	2	22	69	40
Wild animals	2	1	1	11	3	2
Roshak	51	31	3	33	54	31
Wild onion "Siyoyalaf"	130	79	7	78	137	79
Onion "Anzur"	18	11	1	11	19	11
Total	165	95	9	5	174	100

Question 33 - Do you know that the territory you live on is located on or next to a PA? 91%/N=197 of respondents (men - 96%/N=115; women - 85%/N=82) know that they live on the territory or next to the PA.

Question 34 - What do you understand under PA? The majority of respondents (men - 79%/N=84; women 64%/N=47) understand PA as a place where one cannot harvest any plants and hunt animals. Some respondents (men - 66%/N=39; women - 42%/N=33) understand PA as the territory that is important for their kishlak, region, country. Table 27 provides more details on the understanding of PAs by HHs.

Table 27. Summary table on understanding of PAs by HHs

What is understood under PA?	Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%
The territory is important for the kishlak, region, country	24	33	42	39	66	37
One cannot harvest plants and hunt animals	47	64	84	79	131	73
One can use whatever he/she wants	3	4	4	4	7	4
Other	14	19	9	8	23	13
Total	73	41	107	59	180	83

Question 35 - Do you know about rules/regulations that control behaviour/living on or next to a PA? 87% (N=188) of respondents reported that they know about rules/regulations that control behaviour/living on or next to a PA. Those respondents that answered *Yes* were also asked to name banned and allowed activities on the territory of the PA. Among banned activities: collecting of fuel wood was mentioned by the majority of men (78%/N=83) and women (84%/N=61); 75% (N=80) of men and 55% (N=40) of women mentioned hunting; 59% (N=63) of men and 67% (N=49) of women dais grazing; and 30% (N=32) of men and 30% (N=22) of women mentioned harvesting of wild plants and berries. Table 28 provides details on these and other activities considered banned by the HHs.

Table 28. Summary table on banned activities on the territory of PAs

Banned	Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%
Grazing	49	67	63	59	112	62
Hunting	40	55	80	75	120	67
Collecting fuel wood	61	84	83	78	144	80
Harvesting of plants and berries	22	30	32	30	54	30
Tourism	3	4	13	12	16	9
Walking	11	15	21	20	32	18
Making fires	-	-	4	4	4	2
Any kind of activity	-	-	4	4	4	2
Total	73	41%	107	59	180	100

At the same time, 69% (N=38) of men and 51% (N=18) of women replied that walking; 58% (N=32) of men and 51% (N=18) of women replied tourism; 44% (N=24) of men and 37% (N=13) of women replied harvesting of wild plants and berries – are all allowed activities. Table 29 summarizes information on the allowed activities on the territory of the PA.

Table 29. Summary table on allowed activities on the territory of PAs

Allowed	Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%
Grazing	6	17	12	22	18	20
Hunting			4	7	4	4
Collecting fuel wood	9	26	8	15	17	19
Collecting plants and berries	13	37	24	44	37	41
Tourism	18	51	32	58	50	56
Walking	18	51	38	69	56	62
Avoiding of fire			1	2	1	1
Tree planting			3	5	3	3
Total	35	39	55	61	90	100

While analysing the answers to this question, the Project made an interesting observation that 30% of respondents think that harvesting of plants and berries is banned against 41% of respondents that think that harvesting of plants and berries is an allowed activity.

Question 36 - Has anybody talked to you about the importance of the PA? The majority of respondents (53%/N=115) said that nobody talked to them about the importance of the PA, and only 47% (N=101) replied that some people talked to them regarding the importance of the PA. The majority (men - 76%/N=50; women - 68%/N=23) reported that a local forester; and 17% (N=11) of men and 26% (N=9) of women reported that a Director of the PA talked to them about the importance of the PA. Very few men - 14% (N=9) and women - 18% (N=6) reported that a member of their family talked to them about the importance of the PA. Table 30 summarises responses to this question.

Table 30. Summary table on who talked to HHs on the importance of the PA

Status (professional/individual)	Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%
Member of the family	6	18	9	14	15	15
School teacher	1	3	1	2	2	2
Director of a PA	9	26	11	17	20	20
Forester	23	68	50	76	73	73
Head of an environmental office of Tursunzoda city	-	-	2	3	2	2
Head of Jamoat	-	-	1	2	1	1
Head of kishlak	1	3			1	1
Total	34	34	66	66	100	100

The Project interviewers also asked the respondents on topics of those discussions and how often these discussions happen in the past. The majority (men - 94%/N=62; women - 74%/N=25) stated that they had discussions regarding the ban on tree cutting and hunting. As for the frequency of discussions, the majority of respondents (men - 80%/N=52; women - 97%/N=31) reported that they had discussions once a year; while 18% (N=12) of men and 16% (N=5) of women responded that they had discussions once a month. Tables 31 and 32 summarize the findings.

Table 31. Summary table on discussed topics

Topic	Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%
Ban on tree cutting and hunting	25	74	62	94	87	87
Appropriate use of natural resources	6	18	3	5	9	9
Ban on tree cutting, grazing, hunting	9	26	7	11	16	16
Increase number of trees	-	-	1	2	1	1
Total	34	34	66	66	100	100

Table 32. Summary table on frequency of discussions

Frequency	Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%
Once a month	5	16	12	18	17	18
Once a year	31	97	52	80	83	86
Twice a year	-	-	2	3	2	2
Four times a year	-	-	3	5	3	3
10 years ago and more	2	6	4	6	6	6
Total	32	33	65	67	97	100

Question 37 - What plants grow on the territory of the PA? Have their numbers changed (decreased or increased) during the past 10 years? The majority of respondents replied that rhubarb (78%/N=168); wild onion "Siyosalaf" (72%/N=155); wild onion "Anzur" (42%/N=90); and medicinal plant hypericum (32%/N=69) grow on the territory of the PAs. Table 33 provides information on the all named plants found (personal views of the respondents) on the territory of target PAs.

Table 33. Summary table on plants found in target PAs

Plants	Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%
Wild onion "Anzur"	23	24	67	56	90	42
Almond	20	21	43	36	63	29
Rhubarb	68	71	100	83	168	78
Hypericum	23	24	46	38	69	32
Marjoram	19	20	36	30	55	25
Barberry	21	22	37	31	58	27
Wild onion "Siyosalaf"	63	66	92	77	155	72
Roshak	33	34	30	25	63	29
Doesn't know	21	22	11	9	32	15
Other	35	36	38	32	73	34
Total	96	44	120	56	216	100

Most frequently the respondents report that the numbers (quantity) of rhubarb (26%/N=71); wild onion "Siyosalaf" (25%/N=69); wild onion "Anzur" (13%/N=34); roshak (10%/N=28); almond

(7%/N=18); barberry (5%/N=13) have decreased during the past 10 years. The respondents mentioned the following reasons for the decrease: excessive harvesting; inappropriate harvesting; trampling by livestock; and premature harvesting before seeds are developed and spread. The respondents have also identified disadvantages of the decrease, they include: reduction of the population/area of these plants; harm to the nature; lost of income due to reduced quantities of plants like rhubarb, wild onion "Siyoyalaf", wild onion "Anzur"; increased prices on these plants; increased vitamin-deficiency among the community members.

Most frequently plants like hypericum (19%/N=28) and marjoram (19%/N=28) are mentioned as the ones that increased their population numbers. The main reasons for the increase are: natural restoration is fast; large population; appropriate harvesting. The respondents mentioned that advantages of this increase will positively reflect on fauna and biological diversity.

Question 38 - What animals inhabit the territory of the PA? Have their numbers changed (decreased or increased) during the past 10 years? The majority of respondents replied that wolf (75%/N=162); wild boar (71%/N=153); bear (71%/N=154); partridge (60%/N=129); fox (56%/N=120); porcupine (32%/N=69); and hare (33%/N=71) inhabit the territory of the respective PA. Table 34 provides information on animal species (personal view of the respondents) that inhabit target PAs.

Table 34. Summary table on animal species found in target PAs

Animals	Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%
Mountain goat/ibex	14	15	36	30	50	23
Snow leopard	7	7	24	20	31	14
Deer	13	14	24	20	37	17
Wild boar	53	55	100	83	153	71
Wolf	58	60	104	87	162	75
Bear	57	59	97	81	154	71
Partridge	40	42	89	74	129	60
Fox	38	40	82	68	120	56
Porcupine	15	16	54	45	69	32
Hare	25	26	46	38	71	33
Lynx	10	10	24	20	34	16
Otter	3	3	11	9	14	6
Doesn't know	27	28	7	6	34	16
Other	17	18	21	18	38	18
Total	96	44	120	56	216	100

Most frequently, the respondents say the numbers of partridge (16%/N=44); mountain goat/ibex (10%/N=26); deer (8%/N=22); and snow leopard (4%/N=11) have decreased during the past 10 years. The main reasons of the decrease are: illegal hunting; reduced habitat due to human activities; low birth rate; decline in bio-technical activities performed by rangers and foresters; natural migration and initially small population of some of species. Among disadvantages of the decrease the respondents mentioned: decrease in number/diversity of species; and harm to the nature.

According to the respondents, populations of the following wild animals have increased: wild boar (23%/N=62); wolf (17%/N=46); bear (15%/N=40) and fox (12%/N=31) during past 10 years. The main reasons of the increase: improved protection of these species; no demand for these species among people (for example, wild boar); and high birth rate. As for disadvantages associated with the

increased number, the respondents mentioned: harm to the livestock and humans (wolf, bear, fox); and harm to agricultural crops (wild boar).

Question 39 - What can be done to protect animals and plants from disappearing? The majority (men - 62%/N=74; women - 46%/N=43) think that strict ban on hunting/fishing/plant harvesting; 33% (N=39) of men and 30% (N=28) of women believe that herb harvesting without pulling out their roots; 33% (N=39) of men and 18% (N=17) of women consider relevant awareness programs on environmental issues for communities; and 29% (N=35) of men and 13% (N=12) of women think that improving management of PAs - could protect animals and plants from disappearing. Table 35 summarizes all answers to the question on potential activities to protect species.

Table 35. Summary table on activities to protect disappearing species

Activities	Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%
Strict ban on hunting/fishing/plant harvesting	43	46	74	62	117	55
Improve management of PA	12	13	35	29	47	22
Improve infrastructure of PA	1	1	6	5	7	3
Collect herbs without pulling out roots	28	30	39	33	67	31
Provision of wild animals with food	7	7	24	20	31	15
Provision of belongings for the staff of PAs	4	4	16	13	20	9
Raising of awareness of community on environmental issues	17	18	39	33	56	26
Doesn't know	32	34	9	8	41	19
Protection of plants and animals	8	9	8	7	16	8
Total	94	44	119	56	213	100

Question 40 - What are the benefits of living on the territory of/or next to the PA? The majority of respondents reported that they consider beautiful landscapes (55%/N=115); access to resources such as wild animals, plants and fuel wood (44%/N=92); and pastures and fodder (39%/N=83) as benefit of living on the territory of the PA. At the same time 20% (N=18) of women and 18 (N=22) of men (total 19% (N=40)) see no benefit in living on the territory or next to a PA. Table 36 summarizes the responses of HHs.

Table 36. Summary table on benefit of living on or next to PAs

Benefits of living on the territory of/or next to a PA	Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%
Access to resources (animals, plants, fuel wood)	35	38	57	48	92	44
Access to roads	8	9	11	9	19	9
Pastures and fodder	38	41	45	38	83	39
Beautiful landscapes	43	47	72	61	115	55
No advantage	18	20	22	18	40	19
Total	92	44	119	56	211	100

Question 41 - What are the disadvantages of living on the territory of/or next to the PA? The majority of respondents (58%/N=117) reported that they do not see any disadvantages in living on or next to the PA; although, 35% (N=70) replied that they see bans on access to natural resources; and the wild animals destroying crops (15%/N=30) as disadvantages of living on or next to the PA. Table 37 provides summary of disadvantages of living on or next to a PA noted by HHs in the Project area.

Table 37. Summary table of disadvantages of living on or next to a PA

Disadvantages of living on or next to the PA	Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%
Bans on access to resources	29	33	41	36	70	35
Wild animals destroy crops	13	15	17	15	30	15
Wild animals compete with livestock for resources	3	3	9	8	12	6
Other (no disadvantages)	48	55	69	61	117	58
Total	88	44	114	56	202	100

Interesting to note that while responding to question 40 on benefits of living on or next to a PA, 20% (N=18) of women and 18% (N=22) of men or total number of respondents (19%/N=40) see no benefit (advantages) in living on or next to a PA. At the same time, 55% (N=48) of women and 61% (N=69) of man or total number of respondents (58%/N=117) answered that they find no disadvantages in living on or next to a PA when they were directly asked to name those disadvantages.

Question 42 - Do you have problems with foresters/rangers? The majority of respondents (92%/N=198) said that they do not have problems with foresters or rangers. Only some 8% (N=18) of respondents stated that they have problems with foresters/rangers due to bans on tree cutting, livestock grazing, and for violating rules/regulation of a PA. The respondents believe that identification of separate/special places for the residents, compliance with rule/regulations of a PA, and provision of residents with fuel could help solve abovementioned problems with foresters/rangers. Tables 38 and 39 summarize answers of the respondents on the type of problems with foresters/rangers and provides the respondents' perspective on how those problems could be solved.

Table 38. Summary table on cited problems with foresters/rangers

Problems	Female		Male		Total	
	# of responses	%	# of responses	%	# of responses	%
During violation of rules/regulations of PAs	1	8	3	50	4	22
Ban on tree cutting	10	83	4	67	14	78
Ban on livestock grazing	7	58	2	33	9	50
Ban on fishing	2	17	1	17	3	17
Ban on medicinal plant harvesting	-	-	2	33	2	11
Ban on harvesting of wild barriers and fruits	1	8	-	-	1	6
Employees of PAs impose plans on harvesting of natural resources	1	8	-	-	1	6
Total	12	67	6	33	18	100

Table 39. Summary table on how problems with foresters/rangers could be solved

List of problems	Solutions	Female		Male		Total	
		# of responses	%	# of responses	%	# of responses	%
During violation of regime of PAs	Identification of places for residents	-	-	1	17	1	7
	Comply with the regime of a PA	-	-	2	33	2	14
	Provide of residents with fuel	-	-	2	33	2	14
	Total	-	-	3	50	3	21
Ban on tree cutting	Identification of places for residents	7	88	2	33	9	64
	Comply with the regime of a PA	2	25	3	50	5	36
	Difficult to answer	1	13	1	17	2	14
	Provide residents with fuel	-	-	2	33	2	14
	Total	6	75	4	67	10	71
Ban on livestock grazing	Identification of places for residents	6	75	2	33	8	57
	Comply with the regime of a PA	2	25	3	50	5	36
	Difficult to answer	1	13	-	-	1	7
	Provide residents with fuel	-	-	1	17	1	7
	Total	5	63	2	33	7	50
Ban on fishing	Provide residents with fuel	-	-	1	17	1	7
	Total	-	-	1	17	1	7

Ban on medicinal plant harvesting	Identification of places for residents	-	-	1	17	1	7
	Comply with the regime of a PA	-	-	3	50	3	21
	Total	-	-	2	33	2	14
Ban on harvesting of wild barriers and fruits	Identification of places for residents	2	25	-	-	2	14
	Total	1	13	-	-	1	7
Employees of PAs impose plans on harvesting of natural resources	Identification of place for residents	1	13	-	-	1	7
	Total	1	13	-	-	1	7
Total	Identification of places for residents	8	100	2	33	10	71
	Comply with the regime of a PA	3	38	5	83	8	57
	Difficult to answer	1	13	1	17	2	14
	Provide residents with fuel	-	-	2	33	2	14
	Total	8	57	6	43	14	100



CARE TAJIKISTAN

GEF BIODIVERSITY PROJECT



2

ATTACHMENT 1



Date of interview _____

Code: _____

I) General information:

1) District _____

2) Jamoat: _____

3) Village: _____

4) Name and Surname of respondent _____

5) Sex: 1. Female () 2 Male: ()

6) Birth year: _____

7) Economic conditions: _____

8) Education:

- 1. Illiterate
- 2. Primary
- 3. Incomplete secondary
- 4. Secondary
- 5. Paraprofessional
- 6. Incomplete higher
- 7. Higher
- 8. Other _____

9) Marital status:

1. Single (), 2. Married (), 3. Divorced (), 4. Widow ()

10) Head of the household: 1. Man () 2. Woman ()

11) Total number of members in the household: _____

12) Including those in migration: _____

13) How many rooms in the house? _____

14) How many rooms do you heat during winter months? _____

15) Main source of the income: (single choice)	Men involved (√)	Women involved (√)
<input type="checkbox"/> 1. Cropping		
<input type="checkbox"/> 2. Livestock raising		
<input type="checkbox"/> 3. Business		
<input type="checkbox"/> 4. Orchardring		
<input type="checkbox"/> 5. Salary/work at governmental structure		
<input type="checkbox"/> 6. Pension		
<input type="checkbox"/> 7. Daily wage earning		
<input type="checkbox"/> 8. Migration		
<input type="checkbox"/> 9. Other (specify) _____		

16) Secondary source of the income: (multiple choice)	Men involved (√)	Women involved (√)
<input type="checkbox"/> 1. Cropping		
<input type="checkbox"/> 2. Livestock raising		
<input type="checkbox"/> 3. Business		
<input type="checkbox"/> 4. Orchardring		
<input type="checkbox"/> 5. Salary/work at governmental structure		
<input type="checkbox"/> 6. Pension		
<input type="checkbox"/> 7. Daily wage earning		
<input type="checkbox"/> 8. Migration		
<input type="checkbox"/> 9. Other (specify) _____		

17) What alternative (Other) means of survival would you like to have or use?

- 1. Make handicrafts (if yes, what kind)
- 2. Open a shop
- 3. Provide housing to tourists
- 4. Bee-keeping
- 5. Tourist services: produce
- 6. Other _____

18) What are the main needs in your community? (multiple choice)

#	Main needs	What opportunities would you have if these needs are met?
<input type="checkbox"/> 1.	Lack of pastures	
<input type="checkbox"/> 2.	Lack of fuel	
<input type="checkbox"/> 3.	Lack of electricity	
<input type="checkbox"/> 4.	Lack of working place	
<input type="checkbox"/> 5.	Lack of housing	
<input type="checkbox"/> 6.	Lack of arable land	
<input type="checkbox"/> 7.	Potable water (specify)	
<input type="checkbox"/> 8.	Irrigation water (specify)	

<input type="checkbox"/> 9.	Bridge (specify) _____	
<input type="checkbox"/> 10.	Other (specify) _____	
<input type="checkbox"/> 11.	Other (specify) _____	
<input type="checkbox"/> 12.	Other (specify) _____	

19) What are the main needs in your household? (multiple choice)

#	Main needs	What opportunities would you have if these needs are met?
<input type="checkbox"/> 1.	Potable water (specify) _____	
<input type="checkbox"/> 2.	Irrigation water (specify) _____	
<input type="checkbox"/> 3.	Livestock (specify) _____	
<input type="checkbox"/> 4.	Lack of funds/income	
<input type="checkbox"/> 5.	Lack of electricity	
<input type="checkbox"/> 6.	Other (specify) _____	
<input type="checkbox"/> 7.	Other (specify) _____	

20) Participates household in village/makhalla decision making on local planning?

Yes _____ No _____

If Yes, list in what activities:

1. _____
2. _____
3. _____

If No, why? _____

21) Is there a handicraft industry in the area? (embroidery, woodwork ..)

Yes _____ No _____

If Yes, what is that _____

22) Is any from your household involved in making handicrafts?

Yes _____ No _____

If Yes, what is that _____

II) Information and Awareness

23) What agriculture activities for improving soil fertility do you know (sustainable land use practices)? (multiple choice)

- 1. Crop rotation
- 2. Usage of mineral and organic fertilizers
- 3. Ploughing
- 4. Tree planting to prevent soil erosion

- 5. Scheduled livestock grazing
- 6. Revegetation of pastures
- 7. Other (specify) _____
- 8. Doesn't know

24) Have you asked for information on agriculture issues during the last year?

Yes ____ No ____

If Yes, who/or what organization did you apply to?

- 1. Jamoat/Hukumat
- 2. NGO staff
- 3. Neighbor
- 4. Veterinarian
- 5. Other (specify) _____

What was the issue? _____

If No, why? _____

III) Food security

25. During which months you experience food shortages? _____

26. What are the major causes of food shortages? (state major two)

- a. _____
- b. _____

27. How many meals/snacks did you have? (check with V)

Number	Yesterday	
	Meals	Snacks
<input type="checkbox"/> 1. Didn't eat		
<input type="checkbox"/> 2. Once		
<input type="checkbox"/> 3. Twice		
<input type="checkbox"/> 4. Thrice or more		

IV) Income and Expenditures

28. Annual Gross Expenditure by Sources for 2005

Expenditure	somoni	Expenditure	somoni
<input type="checkbox"/> 1. Food		<input type="checkbox"/> 6. Gift	
<input type="checkbox"/> 2. Education		<input type="checkbox"/> 7. Purchase of agricultural inputs	
<input type="checkbox"/> 3. Clothes		<input type="checkbox"/> 8. Social events	
<input type="checkbox"/> 4. Health		<input type="checkbox"/> 9. House construction & repairing	
<input type="checkbox"/> 5. Payment of loan		<input type="checkbox"/> 10. Others	
Total:			

29. Crop production and expenditures for agricultural inputs

Crop name (wheat, potato, or other)	Cropping Season (1 st = 1 2 nd = 2)	Land Type (Kitchen garden – 1, Presidential – 2, Rented – 3, Pasture – 4, Other(specify))	Land category (Irrigated – 1, Rainfed – 2)	Area of the land (specify measure)	Total production (kg)	Total production value (somoni)

Tree Production

Name of Fruit Trees:	Number	Estimated Value (Somoni)		Value of By- Product (Somoni)
		Tree	Harvested Product	
Name of Wood/Timber Trees:				
Total:				

30. Annual Gross Income

Income sources	somoni	Income sources	somoni
<input type="checkbox"/> 1. Agriculture		<input type="checkbox"/> 7. Tailoring	
<input type="checkbox"/> 2. Daily wage earning		<input type="checkbox"/> 8. Handicrafts	
<input type="checkbox"/> 3. Livestock selling		<input type="checkbox"/> 9. Money remittance	
<input type="checkbox"/> 4. Livestock production selling (eggs, meat, milk & etc.)		<input type="checkbox"/> 10. Sell along the road (herbs, mushrooms, flowers)	
<input type="checkbox"/> 5. Small business		<input type="checkbox"/> 11. Salary/pension	
<input type="checkbox"/> 6. Credit (receive)		<input type="checkbox"/> 12. Other (specify)	
Total:			

31. What types of the fuel and in what quantity you have used during 2005 (Jan-Dec)? (multiple choice)

- 1. Firewood (in cubic meter) _____
- 2. Argol (in x weight) _____
- 3. Coal (in tone) _____
- 4. Kerosene/solar oil (in liter) _____
- 5. Other (specify type & measure): _____

Biodiversity

32) What natural resources does your household use or harvest in your daily life? (multiple choice)

- 1. Rhubarb
 - 2. Berries (what kind) _____
 - 3. Medicinal plants (what kind) _____
 - 4. Pastures
 - 5. Wild animals (what kind) _____
 - 6. Roshak
 - 7. Suvorov onion “Siyoyalaf”
 - 8. Onion “Anzur”
 - 9. Other (specify) _____
-
-

33) Do you know that the territory you live on is located on or next to a PA?

Yes _____ No _____

34) What do you understand under PA? (multiple choice)

- 1. The territory is important for the kishlak, region, country
- 2. One cannot use plants and animals
- 3. One can use whatever he/she wants
- 4. Other (specify) _____

35) Do you know about rules/regulations that control behaviour/living on or next to a PA?

Yes _____ No _____

If Yes, list both banned and allowed: (multiple choice)

	Banned	Allowed
<input type="checkbox"/> 1. Grazing		
<input type="checkbox"/> 2. Hunting		
<input type="checkbox"/> 3. Collecting fuel wood		
<input type="checkbox"/> 4. Collecting plans and berries		
<input type="checkbox"/> 5. Tourism		
<input type="checkbox"/> 6. Walking		
<input type="checkbox"/> 7. Other (specify) _____		

36) Has anybody talked to you about importance of the PA?

Yes_____ No_____

If Yes, who and on what topic and when?

	Who	Topic	When
<input type="checkbox"/> 1. Member of the family			
<input type="checkbox"/> 2. School teacher			
<input type="checkbox"/> 3. Director of a PA			
<input type="checkbox"/> 4. Forester			
<input type="checkbox"/> 5. Other (specify)			

37) What plants grow on the territory of the PA?

Have their numbers plants changed (decreased or increased) during the past 10 years? (multiple choice)

	Decreased (√)	Increased (√)	Same (√)	Doesn't know (√)	Why? (reason)	Advantages	Disadvantages
<input type="checkbox"/> 1. Onion "Anzur"							
<input type="checkbox"/> 2. Holmon							
<input type="checkbox"/> 3. Rhubarb							
<input type="checkbox"/> 4. Hypericum							
<input type="checkbox"/> 5. Marjoram							
<input type="checkbox"/> 6. Barberry							
<input type="checkbox"/> 7. Suvorov onion "Siyolaf"							
<input type="checkbox"/> 8. Roshak							
<input type="checkbox"/> 9. Doesn't know							
<input type="checkbox"/> 10. Other (specify)							

38) What animals inhabit the territory of the PA?

Have their numbers changed (decreased or increased) during the past 10 years? (multiple choice)

	Decreased (√)	Increased (√)	Same (√)	Doesn't know (√)	Why? (reason)	Advantages	Disadvantages
<input type="checkbox"/> 1. Mountain goat/Alpine ibex							
<input type="checkbox"/> 2. Snow leopard							
<input type="checkbox"/> 3. Deer							
<input type="checkbox"/> 4. Boar							
<input type="checkbox"/> 5. Wolf							
<input type="checkbox"/> 6. Bear							
<input type="checkbox"/> 7. Partridge							
<input type="checkbox"/> 8. Fox							
<input type="checkbox"/> 9. Porcupine							
<input type="checkbox"/> 10. Hare							
<input type="checkbox"/> 11. Turkistanskii lynx							
<input type="checkbox"/> 12. Otter							
<input type="checkbox"/> 13. Doesn't know							
<input type="checkbox"/> 14. Other (specify)____							

39) What can be done to protect animals and plants from disappearing? (multiple choice)

- 1. Strict ban on hunting/fishing/plant harvesting
- 2. Improve management of PA
- 3. Improve infrastructure of PA
- 4. Collect herbs without pulling out roots
- 5. Provision of wild animals with food
- 6. Provision of belongings for the staff of PAs
- 7. Raising of awareness of community on environmental issues
- 8. Doesn't know
- 9. Other (specify) _____

40) What are the benefits of living on the territory of/or next to the PA? (multiple choice)

- 1. Access to resources (animals, plants, firewood)
- 2. Access to roads
- 3. Pastures and fodder
- 4. Beautiful landscapes
- 5. Other (specify) _____

41) What are the disadvantages of living on the territory of/or next to the PA? (multiple choice)

- 1. Bans on access to resources
- 2. Wild animals destroy crops
- 3. Wild animals compete with the livestock for resources
- 4. Other (specify) _____

42) Do you have problems with foresters/rangers? Yes_____ No_____

If Yes, what are those? (multiple choice)

	Problems	What could be done to solve this problem?
<input type="checkbox"/> 1.	During violation of regime of Pas	
<input type="checkbox"/> 2.	Ban on tree cutting	
<input type="checkbox"/> 3.	Ban on livestock grazing	
<input type="checkbox"/> 4.	Ban on fishing	
<input type="checkbox"/> 5.	Ban on collection of medicinal plants	
<input type="checkbox"/> 6.	Ban on collection of wild barriers and fruits	
<input type="checkbox"/> 7.	Other (specify) _____	
<input type="checkbox"/> 8.	Other (specify) _____	

Comments: _____

Name of interviewer _____

Signature _____