Study on Management and Regeneration of Pasturelands in High Altitude

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Immamudin SAHAR
External Consultant

Hima UPRETY
External Consultant

AFD
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Central Highlands
Sustainable Development Programme

MADERA

Central Highlands Programme (CHP) is common initiative implemented by a consortium of three French NGOs (GERES, MADERA and SOLIDARITES INTERNATIONAL) funder by the Agency for French Development (AFD). The general objective of the programme is to increase the living standards and quality of life of rural mountainous populations by promoting balanced rural development and preservation of natural resources. The 3.5 years programme was launched in March 2014 in two provinces of the Central Afghanistan: Bamyan and Maydan-Wardak.

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While acknowledging the contributions of many, as a consultant I am responsible for interpreting the data, analysis, drawing recommendations, and acknowledging any mistakes that might have crept into this report. The report has been submitted with the hope that it would lead to specific actions in order to enhance the livelihoods of people of Beshud—I and Beshud-ii through better community-based pasture management.

Hima Uprety, Ph.D.

Consultant

ABBREVATIONS

AFD	French Development Agency (AFD
CHP	Central Highland Program
FGD	Focus Group Discussion
MAIL	Ministry of Agriculture, Irrigation and Livestock
NRM	Natural Resource Management
DAIL	Directorate of Agriculture, Irrigation and Livestock
UCRAM	Upper Catchment Rehabilitation Management
PWM	Participatory Watershed Management

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1. BACKGROUND

Three French NGOs working in Afghanistan - Mission d'Aide au Dévelopement des Economies Rurales– Afghanistan (MADERA), Groupe Energies Renouvelables, Environment Solidarités (GERES), and Solidarités International- formed a consortium to implement a three-and-half-year central highland program funded by the French Development Agency (AFD). The aim of this programme is to increase living standards and quality of life of mountainous people living in rural areas of the Central Highlands Region of Afghanistan through natural resources management and promotion of rural development.

The specific objectives of the programme are: to support sustainable intensification of agriculture and livestock farming production, to improve the level of household energy resilience and living conditions in winter while limiting the depletion of natural capital, to improve access to and management of rare natural resources (pastures and water) for the sustainability of the production systems, and to produce knowledge and consolidate lessons learnt within the programme to launch political dialogue with local authorities and development stakeholders.

The project contributed to the establish of Natural Resources Management (NRM) groups at the community level in order to improve the degraded pasture traditionally used by the targeted communities in the view to rehabilitate it and prevent its further degradation. The NRM groups are engaged in identifying areas of natural degradation and planning to improve them through the cultivation of fodder crops and anti-erosion measures. Test plots were established which demonstrated improved production of fodder cropping and diversification of fodder varieties.

During the inception phase of the programme, some preliminary and preparatory studies (diagnostics, technical assessment, vulnerability assessment, etc.) were conducted in order to determine the relevance of the actions to be undertaken, and to gain knowledge of the territory. In January 2016, an evaluation of the project activities regarding management and regeneration of pasture was conducted. The evaluation recommended carrying out an assessment of the activities for restoration and pasture management.

2. OBJECTIVE OF THE STUDY

The main objectives of the study as outlined in the Terms of References were:

- To identify the factors facilitating and/or constraining the implementation of activities related to pasture restoration and pasture management (political and legal framework, cultural, tenure issue, etc.);
- To make recommendations about how to overcome constraints, if any; and
- To provide technical advice on regeneration techniques.

Specific Objectives:

To clarify the ways in which the pastures are managed among the communities (including among nomadic pastoralists, where applicable), and the implications;

- To clarify the land tenure situation regarding pasture areas and identify existing conflicts;
- To identify gender-based divisions of labour regarding pasture and animal husbandry;
- To identify suitable plants to be tested;
- To explain the different cultivation methodologies based on different type of seeds and land;
- To clarify cultivation time according to seed varieties; and
- To describe appropriate pasture restoration techniques.

Make recommendations on the following:

- The approach to follow to conciliate pastoralism and community pastures management, if applicable;
- The approach to follow to overcome any identified constraints regarding pasture management and restoration activities; and
- The ways in which to implicate women in activities related to pasture management/ pasture restoration.

3. APPROACH AND METHODOLOGY OF THE STUDY

The study followed a participatory approach, methods and tools. Focus group discussions were used with pasture group leaders, members and women to gather quantitative and qualitative data in both Behsud - I and II districts. Checklist and interview guidelines were developed for focus group discussions and individual interviews with project staff and government line agencies. Checklists were prepared to inquire as to the existing interventions regarding pasture management and the requirements for the formulation and functioning of community-based pasture groups. The specific issues and questions to be answered during the field mission were presented in the sets of tools used in the study. Challenges faced by both project staff and community and their traditional knowledge and practices of pasture management were also included in the checklists. Separate sets of checklists were used for community, project staff, and government offices in the districts, and the Ministry of Agriculture, Irrigation and Livestock (MAIL) at the national level.

The obtained qualitative data were categorized based on the broad questions outlined in the interview guidelines and the tools developed by MADERA. The views provided by the respondents in Dari were translated into English. After the completion of the fieldwork, debriefings were held in the province with the programme team and in Kabul. A series of meetings were conducted to triangulate information with the pasture team during the field mission.

The study was divided into following stages:

Stage 1: Desk Review

At the outset of the assessment, relevant secondary data and available information were collected by reviewing the project documents and progress reports, websites, and reports produced by the consortium partners. Checklists and guidelines for focus groups discussions and interviews were fine-tuned after receiving the feedback from the Country Director and program team. The selection of the pasture groups were based on the criteria developed and shared with program team.

S.N	Name of the documents	Publisher with year	Remarks
1	Findings from Midline Evaluation of the Central Highlands Program	Samul Hall,2016	External Consultant
2	Annual Report of the Central Highlands Rural Development Programme (01/03/2015 to the 28/02/2016)	MADERA,2016	Covered all Consortium Partners
3	Stock Taking Report of the Central Highlands	MADERA,2015	External Consultant
4	Guideline for Implementation of Natural Resource Management	MADERA, 2015	External Consultant
5	Monthly report of the CHP	June and July, 2015	Internal
6	Report on Pasture Regeneration, Beshud	Consultancy Report,2011	External Consultant
7	Progress Report of the Programme	Internal Document	
8	Focus Groups Discussions and Information Processing Tools	M& E Document	Developed by MADERA
9	Quick Assessment Report	August 2016	By Pasture Specialist of Madera (internal document)

Tab 1: List of the documents reviewed

Stage 2: Fieldwork

A field mission was scheduled between 22nd September to the 2nd of October 2016 (please refer to the schedule in Annex-V). Two consultants, one national expert on pasture, and an international team leader visited Maidan Wardak (Behsud- I and Behsud -II) to gather information in order to understand the methodology, process, tools, and techniques followed by

the project to implement the pasture rehabilitation activities and in order to capture the success, weaknesses, strength and opportunities, problems/issues, and lessons learnt, and finally to draw recommendations following tools were employed.

a) **Focus Group Discussions (FGDs) with Pasture Groups**: A total of 10 focus group discussions, nine with pasture groups and one with women groups were held. Four were held in in Behsud-I and six were held in Behsud-II during the assessment period. Historical trend analysis, participatory resource mapping, gender based division of labor matrix were used as major tools during the focus group discussions. Preference ranking was also done to identify the community priority for fodder grass cultivation as well as fruit and non-fruit tree plantation in the common pastures. Six different criteria including drought resistance, palatability, growth speed, ease of regeneration, soil surface coverage, pest and disease resistance, and locally available seeds were used to rank the fodder grass and fruit and non-fruit trees. A participatory resource map was prepared to get an overall impression of the pasture management as well as bio-physical resources and infrastructure, the availability of water and its location, reseeding area and potential fodder grass cultivation and tree plantation areas. Once the participatory maps were prepared by the pasture groups, discussions were initiated based on the seeding areas. The reasons for the success and failure of the germination of seeds sown in the pasture area and the status of pasture before and after the MADEA interventions were also discussed during the FGDs. In addition to this, historical trend analysis was used to identify the previous status of the pasture and a comparison was made between different time periods: 50, 30, 25, and 10 years go, and at present. The results of the historical trend analysis are presented in the findings section and detailed tables are presented in Annex—II. A seasonal calendar was prepared to know the exact fodder cultivation period, including seed sowing and harvesting.

b) **Transact Walk**: Transact walks were conducted in six different pasture sites in Behsud-I and Behsud-II to observe soil types and conditions, the availability of water sources, and possibilities for fodder cultivation in the pasture area. The CHP program team and pasture group members also participated with the consultant team during the transect walk.

c) **Consultative Meetings with Government Agency**: Interviews were conducted with the Deputy Director of NRM and Rangeland at the Ministry of Agriculture, Irrigation and Livestock in Kabul. Similarly, interviews were conducted with the NRM Department and District Head in Behsud-II to learn the policy related issues, to identify available opportunities for community-based rangeland management, challenges faced, as well as conflict resolution mechanisms adopted by the government on pasture management issues.

Stage 3: Data Analysis and Written Report

The qualitative and quantitative data gathered were analyzed by using the protocol developed by MADERA. All the data collected from the FGDs and interviews were categorized into thematic headings in the report outline. Altogether, nine seasonal calendars prepared for each

pasture group were transformed into one consolidated seasonal calendar. The historical trend analysis data were compiled and analyzed as per the trend described by the pasture groups and were transformed into a consolidated table. A priority list ranked for the fodder grass was also transformed into a combined table and matrix. The challenges, gaps and weaknesses, best practices, and lessons learnt were also analyzed and systematically presented in the findings section. Recommendations were made on the basis of these findings.

4. FINDINGS

This chapter illustrates the findings that were drawn by observation and the data collected by using different participatory tools during the field visit. The first section of this chapter briefly discusses and overviews MADERA's activities for pasture management followed by the history of land tenureship and conflicts regarding pasture, the gender-based division of labour, the importance of women's participation in the interface of pasture and livestock rearing, and fodder production. Furthermore, the report also captures the constraints and weakness of the implementation aspect of MADERA's initiatives. The brief findings are present in this section and details are presented in section below.

During the project period, MADERA successfully established 18 pasture groups. In Behsud –I, 119 households are affiliated with the six pasture groups, whereas 310 households from Behsud -II are affiliated with the 12 pasture groups.

- Regarding tenureship and conflict on common pasture, the FGDs indicated that no such conflicts exist in the groups.
- Out of the visited nine pasture groups, three (Sange shork, Koliband, and Dahan-e-Obseeyad) reported that their common pasture was only used by the residents of the respective villages and hence its condition was very good. Comparing the current situation with their 50 years past observations, they shared that there is only 5-10% of past amounts of fodder grass available, and that even the highly palatable and nutritious fodder has gradually disappeared.
- The FGD participants of six pastures group (Kote karim, Quail- e- Mashy, Synhoor, Ter-Yak, Aubtuk- Sultani, and Synakala) shared that the condition of their pastures had highly been degraded in the past 50 years, mainly because they are heavily used by the Kuchi.

The key constraints and challenges faced by the program are as follows

- Absence of Rangeland Law and Operational guideline
- Insufficient capacity of government agency
- Fragile security situation
- Absence of literate community leaders
- Short working seasons
- Lack of clear demarcation between private fallow land and common pasture
- Excessive drought

The Gaps identified by the study are as follows:

- Gaps in pasture group formation and mobilization
- Gaps in technical support
- Gaps in materials support
- Gaps in capacity development
- Lacks of integration with other component(Livestock, Agriculture and Irrigation)
- Gaps in Project Design
- Gaps in integration of Gender in NRM and Livestock

4.1 PASTURE RESTORATION ACTIVITIES OF MADERA

The pastures located in the central highlands are integral parts of the livelihoods of the local people. Livestock are an integral component of the economy of small and medium-scale farms in Behsud, both for subsistence purposes and as a means of income. The field observation and focus group discussions found that the land is too marginal, steep, and exposed to harsh climatic conditions (such as covered by snow for more than seven months in a year) and experiences long periods of drought without a regular irrigation system. Such conditions do not otherwise allow the higher production of other agriculture crops. Focus group discussions indicate that pasture is more important for the farmers of Behsud than their agricultural activities. They shared that livestock (cattle, sheep, goat and chickens) rearing can be an important source of both food and income.

In response to pressing needs for the rehabilitation of pasture, MADERA initiated activities to protect and improve pasture conditions by increasing fodder grass production on common pasture land. In addition, the program mobilized the communities by forming various pasture groups. This activity was highly appreciated by the communities of both Behsud -I and Behsud–II as well as the government agency including district DAIL offices.

During the project period, CHP has successfully established 18 pasture groups. In Behsud-I, 119 households are affiliated with six pasture groups whereas 310 households from Behsud-II are affiliated with 12 pasture groups. The project has helped implement some pasture management activities, including protection and re-seeding as envisioned in the project document. Until August 2016, CHP/ MADERA has provided 3614 kg of six different varieties of fodder grass seed to be reseeded in approximately 278 ha of pastureland. The table below provides reseeding status in each pasture group.

SN	District	Village	Household
1	Beshud- I	Quli Madad	17
2		SangiSurakh	22
3		TebarBala	23
4		QuliMashay	15
5		ShewnaQala	21
6		Dahani Obe Saeed	21
Subtotal	**6**		**119**
7	Beshud-II	Seyah Nahur	19
8		Awtaki Sultali	21
9		Pay Quli Bala	15
10		Kute Sadat	32
11		Kute Karim, Kute Atta&KhushaGah	26
12		Quli Ali Bay	21
13		ChaparSukhta	19
14		QuliBandah	20
15		Teri Yak	15
16		Daman Ramoz	90
17		Khak Agha	15
18		Sari Qul, Zangir	17
Sub total	**12**		**310**
Total	**18**		**429**

Table 1: Summary table of pasture groups

4.2 TENURESHIP AND CONFLICT ON COMMON PASTURE

The historical trend analysis, used by the participants to identify the history of common pasture, shows that the local communities of Behsud- I and Behsud- II have been using the common pasture for some time. The views expressed by FDGs also indicate that the current users of the pasture have been using the same pasture to graze their livestock for more than three generations. The interview with the District DAIL office also revealed that pasture is the most important land for the farmers and has been one of their major sources of livelihoods. The pasture is a common asset and the community did not mention that any part of the land had been taken or grabbed by the powerful elite and transformed to rain-fed agriculture. The conflict mapping done by using different color cards revealed that only three pasture groups had a conflict with neighboring communities 6-7 years ago, and that this has been resolved by now. The conflict arose due to livestock grazing by the neighboring villages in their pasture. Focus group discussions with the pasture groups show that the communities in the Behsud-I and Behsud-II have sufficient pasture area, which could be the reason for not having serious conflict in the villages. The DAIL representative also expressed similar views. All pasture groups visited during the study period do not have any conflict regarding their tenureship. The

consultation in Kabul further revealed that in the Behsud area, there has never been any conflict among the kuchis and communities on the pasture management issues.

4.3 STATUS **OF PASTURE**

Historical trend analysis was used to capture information about the condition of the pasture. Five different time intervals, i.e. 50 years ago, 25- 50 years ago, 10- 25years ago, 10 years ago, and present conditions were used for the analysis. Some of the elderly men from the pasture groups shared their observations and compared the current status of the pasture with that of 50 years ago when they were kids or young boys, and used to take their livestock for grazing.

The historical trend analysis shows two different trends of the pasture history. First, 50 years ago, the condition of the pasture was very good and there used to be sufficient palatable grass available in the common pasture. According to the pasture group members, the main reason for the good condition was that the pasture was not used by **K**uchi. Out of the nine pasture groups visited, three (Sange shork, Koliband, and Dahan- e- Obseeyad) reported that their common pasture was only being used by the residents of the respective villages and hence the condition was very good. Comparing the current situation with their 50 years past observations, they shared that there is only 5- 10% of previous amounts of fodder grass available and the highly palatable and nutritious fodders have gradually disappeared. In their opinion, the reasons for the deteriorating condition of the pasture are: long drought periods, over grazing, the lack of appropriate grazing management adopted by the communities, an increase in the number of livestock kept by the villagers, bushes and bio-mass uprooted for fuel-wood purposes, soil erosion, and frequent occurrences of heavy floods.

For the remaining six pastures (Kote karim, Quail- e- Mashy, Synhoor, Ter-Yak, Aubtuk-Sultani, and Synakala) the FGD participants shared that the condition of their pasture has highly degraded in the past 50 years mainly because they are heavily used by the Kuchi. The high numbers of livestock reared by the Kuchi causes overgrazing and heavy trampling. Further, the frequency of landslides and flood occurrences is elevated on these pastures. When asked what other factors were responsible for the present degraded condition of the pasture besides the presence of the Kuchis, the participants responded that irregular grazing and bush uprooting were major reasons. Almost all of the FGD participants shared that long drought periods and lack of awareness were also causes of degradation. Table 2 below summarizes the condition of the pasture in different time intervals. The individual historical analyses of the pastures are presented in the Annex- II

Description	Name of pasture groups								
	Kute – Karim	Quail- Mashy	Synhoor	Ter-Yak	Aubtuk Sultani	Synakala	Sange shurk	koliband	Dahan- e- Obseyad
Status of Pasture 50 years back	*	*	*	*	*	**	***	***	***
25- 50 years	**	**	**	**	**	**	**	**	**
10- 25 years	**	**	**	**	**	**	**	**	**
10 years	***	**	***	**	**	**	*	*	*
Now	**	**	**	**	**	**	*	*	*

Note: *** denotes good condition, ** denotes fair condition, and * denotes poor condition

Table 2: Summary matrix of the pasture condition in a different time interval

The FGDs indicated that in some areas, the Kuchi leaving the pasture coincided with a decrease in the number of livestock and the availability of large areas for grazing. During the field visit, it was observed that the pasture also provides plant biomass for domestic energy requirements as the whole area lacks alternative sources of energy. The FGDs reveal that after receiving trainings from MADERA, the awareness level of the farmers has increased and they have stopped uprooting the palatable fodder bushes from the pasture area. They view that such trainings have helped them protect the pasture. Data obtained from the field indicates that there is the potential to rehabilitate the common pasture through appropriate management techniques.

4.4 CONSTRAINTS FOR THE IMPLETAION OF PASTURE MANGEMENT ACTIVITIES IN PROEJCT AREA

4. 4.1 ABSENCE OF RANGELAND LAW AND OPERATIONAL GUIDELINE

There are some NRM related policies in place in Afghanistan but are not supported by proper operational guidelines to implement at the local government, community, and farmers' level. For example, the Rangeland law is drafted and has not been finalized yet. As a result, communities are not aware of its existence nor are they aware of the benefits such as - utilization of rangeland products, collection of ground grass, fodder, firewood, grazing facility, and sale of surplus products and earning for their livelihoods. This contributes to non-motivation of the communities to be engaged in the community based pasture management mainly due to uncertainty.

4. 4.2 MORE SUPPORT REQUIRED FROM GOVERNMENT AGENCY

Though DAIL has district offices to help community organizations, they generally do not have sufficient trained staff to support community mobilization and participatory rangeland management. The interview in the Ministry of Agriculture, Irrigation and Livestock, NRM department demonstrated that they are not in a position to conduct any awareness raising program in the districts as well as do not have sufficient human resources to provide

support or co-ordinate with the NGOs or other development partners for the better pasture management. The Officer at district level also had similar views on these issues.

4.4.3 FRAGILE SECURITY SITUATION

The discussion with MADERA pasture team revealed that fragile security situation is also the major constraint for smooth implementation of the activities.

4.4.4 ABSENCE OF LITERATE COMMUNITY LEADERS

In the past even illiterate village elders managed community affairs through verbal communications because they provided socio-economic protection to community members. Now the notion has changed and reading, writing and record keeping have become necessary for community based organizations. Hardly a few literate persons are available in the villages who are looking for jobs and may disappear from the community once they get a job. Absence of literate people could also be the challenges for the program.

4.4.5 SHORT WORKING SEASONS

The MADERA pasture team revealed that due to harsh winter the base (office) is closed for the more than five months in a year and the working duration for staff members is very short. They can not conduct any soft work like meetings and trainings during the winter. The staff viewed that they have very short time period for the awareness raising activities. This factor has negatively influenced the program performance.

4.4.6 LACK OF CLEAR DEMARCATION BETWEEN PRIVATE AND COMMON PASTURE

Rangelands in Beshud –I and Beshud-II are nearby the agriculture land and there also exists common and private pasture. The community has good understanding and have been using common pasture without any dispute. However, the challenge is that the area is vast and difficult to delineate the boundary between it.

4.4.7 EXCESSIVE DROUGHT

During the focus group discussions with the pasture group members both men and women opined that frequency and severity of drought is one of the major determinants for the low seed germination in the pasture area. The interventions supported by MADERA also could not produce positive results. The seasonal calendars developed by the communities in all groups that were visited demonstrated that excessive drought is one of the factors responsible for the degradation of the pasture. The discussions with MADERA pasture team also revealed that drought year after another is not favoring seed germination and the condition of the pasture land has been deteriorating every year.

4.5 GAPS IN MADERA'S CURRENT INITIATIVES ON PASTURE REHABILITATION

4.5.1 GAPS IN PASTURE GROUP FORMATION AND MOBILIZATION

The project tried to mobilize communities for the rehabilitation of highly degraded pasture by establishing pasture groups at a time when the communities were facing problems to raise livestock for their livelihood. With the help of the program, since 2013 the pasture

groups have been managing pasture areas by conducting different management activities such as reseeding and the protection of pasture by avoiding uprooting bushes for fuel wood. The concept initiated by the program is highly appropriate; however, the study found that the project has not been following the proper community-based pasture management approaches and techniques. For good community based pasture management, there are some basic prerequisites that need to be entirely followed by the program while establishing the groups. This includes the formulation of bylaws for regulating the groups and preparing a management plan to carry out the protection and management activities. The discussion with CHP pasture team revealed that the required process and approach for the formation of a community based pasture group was not adequately followed at the beginning of the project. As a result, the pasture group members feel a lack of responsibility. The discussions with the pasture group members indicated that neither had any pasture committees been, formed nor had any bylaws been prepared for the management of the pasture. The pasture groups were found to have not maintained necessary records, including a cashbook, a meeting minute's register, and other official documentations such as total seed received and sown in the pasture on a yearly basis. In the absence of bylaws and management plans, the groups are not bound to do so.

Similarly, all 18 pasture groups have not prepared a management plan. In practice, the management plan guides the pasture groups when and where they need to carry out specific management activities. In fact, the project should have facilitated developing the management plan for the pasture groups. To summarize, the governance situation in groups was found to be very weak.

However, the discussions with the pasture groups and the CHP pasture team indicated that there are no rotational and control grazing systems adapted by the pasture groups. They have been using the entire area for grazing throughout the year. A rotational and control grazing system is the best technique to rehabilitate degraded pasture. The field observation and FGDs indicated that in all pasture groups, it is very easy to divide the whole pasture area into three or four blocks, creating a natural boundary and follow the rotational and control grazing system.

4.5.2 GAP IN TECHNICAL SUPPORT

The project provided the seed for reseeding in the pasture area. The project records show that in total, $3614\ \mathrm{kg}$ of seed was sown over approximately 278 ha of pastureland. The project provided six different varieties of seeds to the farmers. The FGDs and participatory resource map indicated that the seed germination was very low, less than 10% on average, and in some areas there was no germination at all. Only three pasture groups shared that they observed an initial germination rate of between 20 to 30%, but this substantially decreased when the grass started growing. During the focus group discussions, the reasons for the low germination rate were discussed. All FGDs opined that it might be caused by delayed seed sowing, low quality seed, unsuitable seed for rain-fed and climatic conditions, inappropriate land preparation, and seed showing methods. The FGDs also indicated that inadequate technical support received from MADERA pasture team during the during land preparation before seed sowing. All the visited pasture groups shared that they were not confident which type of soil was appropriate for using tractors and which was appropriate for using animals. In some pasture groups where the clay soil was available and was very compact, they used donkeys to plough the land, whereas in sandy soils, they used tractors.

This inappropriately used technique for land preparation could be one of the leading factors for low fodder seed germination.

4.5.3 GAPS ON MATERIALS SUPPORT

The FGDs with the pasture groups indicated that the CHP only provided seeds for the reseeding, whereas they had to bear the land preparation and labour costs, which were fairly high for them. The pasture group member from Sange Shork pasture group stated that:

MADERA provided about 35 kg seed which cost about 3000 Afghanis. We rented a tractor for land preparation which also cost us 3000 Afghanis. We had to collect 200 Afghanis from every 16 household to pay for the tractor

Similar views were also expressed by eight other focus group discussions. The pasture group members also raised the issues of hiring a watcher (caretaker) to take care of the pasture activities.

A thorough understanding on socio-economic conditions of communities is imperative for deciding on the nature and magnitude of incentives. In the perceptions of the community and the study team's own experience gained while implementing similar interventions in the north east province of Afghanistan, it is crucial for the project to provide material support such as funds for land preparation, reseeding, funds to cover the labour cost, and funds for hiring the watcher.

4.5.4 GAPS IN CAPACITY DEVELOPMENT

Capacity building is a prerequisite for the success and sustainability of community based natural resource management groups. For capacity development of the pasture groups, the project conducted training on technical and social issues and also used the farmers' field schools approach. The FGDs indicated that the project has been successful at raising awareness for the protection of pasture. However, FGDs with pasture groups and women groups indicate that the project targeted the training only to the male members of the community but not to the *chupan*[1], women and school children (both girls and boys). They shared that training the *chupan* is very important because being the persons to take the livestock to the pasture, they need to be aware on where they can take their livestock to graze. FDGs in Quali- e Mashy also shared that, in principle, they agreed to prohibit cattle grazing in the re-seeding area but the *chupan* took the livestock there regardless, which ultimately resulted in low germination of fodder seed.

The FGDs with the women groups also suggested that for the effective protection of the pasture, MADERA has to raise awareness among the school children, both girls and boys. They further added that children are the ones who mostly go to the pasture and uproot bushes for firewood. Women groups also shared that the women of the Behsud area used to go to their private pasture to collect the fodder and take the livestock with their kids for grazing. If they were aware about how to collect the fodder and were informed an

appropriate timing and method of fodder collection, they could contribute for better protection of the pasture.

Based on the discussions with pasture groups and project team, the study found that the training duration (2 to 3 hours only) was very short and inadequate. Due to the low level of awareness about the restoration of pasture and the appropriate techniques to be followed the groups require training sessions with adequate time and appropriate training materials and methods.

4.5.6 LACK OF INTEGRATION WITH OTHER COMPONENTS (LIVESTOCK AND IRRIGAT

Chupan is the local name for the cattle chaser. In the Beshud area, the farmers hire a *chupan* and pay him to take the livestock to the pasture.The CHP has three major components - pasture, livestock and irrigation, and water management. The livestock and pasture management activities should select the same beneficiaries; however, it did not happen in the project sites. The study also found that the current phase of the project is not implemented in an integrated manner, but that the activities are implemented in isolation.

4.5.7GAPS IN PROJECT DESIGN

The review of project documents revealed that though the project has developed a logical –framework for the current phase, there is no further elaboration on what approach the project has to take to regenerate the pasture. The a logical –framework mentions a management plan and bylaws as the means of verification, but it was found that no management plan or bylaws were prepared for the groups. The project documents also lack the process and approaches to be followed during the implementation of the pasture management activities.

4.5.8 GENDER CONSIDERATION IN NRM AND LIVESTOCK REARING

During the focus group discussion with the women in Behsud –II, a gender analysis framework was used to capture the data on the gender based division of labor by using the cards method. The results of the analysis show that the women are engaged in and carry out activities related to small livestock production such as poultry, sheep, goats and cow, milking, and the processing of milk. Women carry out these activities as well as cooking, washing, and taking care of their children and elderly members in their family. They shared that their male counterparts work only for 7-8 hours a day, whereas women have to work for more than 18 hours. The FGD participants shared that since they have to take care of the livestock as well, they have been facing different challenges than their male counterparts. They further shared that if their livestock gets ill in the absence of the male members at home, they cannot approach their neighborhood. However, the male members generally discuss such issues in their neighborhood and find a solution. They also shared that if they receive training on animal husbandry it will help them to manage such situations on their own. Regarding the decision making, they shared that their male members sell the milk and collect the money and also make the decision to sell the livestock and use that money without consulting the females.

Women shared that they also have very good experience with and knowledge about pasture management. They revealed that in their pasture, the germination was approximately 30-40 %, but the roots have still not gone deep down and they were not harvesting the alfalfa this year, but they will next year. From this, it can be inferred that despite the fact that decision

making and management at both the household and community levels is governed only by the males, the females are in direct contact with the natural resource management in terms of their use and processing, either for livestock feeding or meeting family needs. To summarize, the involvement of women to a greater extent in management decisions and processes would help revive the traditional practices.

5. RECOMMENDATIONS

This chapter offers recommendations for the further improvement and sustainability of the NRM activities. Most of the recommendations mentioned in this chapter are based on the constraints and challenges as well as gap identified during the study and drawn through practical perspective. It is found that the recommendations made by the report on stocktaking, 2015 have not been followed by the pasture team. Those recommendations are still valid and incorporated again in this report. The recommendations are presented in bullet points in this section and elaborated in detail in section 5.1.

- Institutionalize pasture groups,
- Raise the awareness and build the capacity of pasture groups,
- Practice rotational and control grazing,
- Use a participatory map,
- Plant tree species,
- Use methods for re-seeding,
- Provide the seed at the appropriate time,
- Select the best mixture of seed,
- Install pipe irrigation in the area,
- Construct snow/water harvesting reservoirs,
- Use low-cost soil conservation activities,
- Strengthen community-based user groups and create community fund,
- Include livelihood components,
- Integrate program activities,
- Promote stall feeding,
- Provide fruit saplings to the pasture groups,
- Implement gender mainstreaming in NRM and livestock activities
- Build the capacity of the staff on conservation farming techniques
- Expand the project team

5.1 INSTITUTIONALIZATION OF PASTURE GROUPS

The pasture groups established by the project are very new and in their initial stages; therefore, they need to be institutionalized and empowered through proper documentation.

The following measures need to be taken:

- Prepare a participatory resource map for the remaining nine pasture groups. These maps will help identify the possible area for reseeding and the plantation of tree species, as well as the availability of sources of water to install a low cost pipe irrigation system (time period: October- November and December 2016).

- Develop by-laws and management/action plans for all 18 pasture groups (time period: December 2016).
- Consult the District DAIL staff during preparation of bylaws and guidelines for their ownership and co-ordination.
- Obtain endorsement on bylaws and management plan from District DAIL office (time period: April- June 2017).
- Facilitate fund raising through membership fee collection (time period: April – June 2017).

5.2 AWARENESS RAISING AND CAPACITY BUILDING OF PASTURE GROUPS

The level of awareness among the local communities on the importance of natural resources management was found to be inadequate. At the local level, awareness raising and technical training is the basis for community-based natural resources conservation, management, and utilization. Capacity building and knowledge transfer though participatory community mobilization takes several years to internalize.

The following actions are suggested:

- Training should be delivered in packages, such as community-based pasture group formation, the preparation of pasture management plans, good governance, book keeping, etc. in a systematic manner (time period: from November 2016 until the base is closed). If this cannot be completed for all 18 groups, it needs to be completed by June – July 2017 within CHP -1. For CHP - 2, the capacity building activities need to be carried out at the beginning for the newly formed groups.
- Gender sensitization and mainstreaming trainings should be organized for men and women in the communities during April and May 2017. For CHP –2, this training needs to be delivered at the beginning of the program.
- The list of the training and modules described in the implementation guideline provided to the project field team during the nine days NRM training could be used while conducting NRM training to the communities.
- The government staff (District DAIL) should be included during the training in this phase as well as in CHP -2.
- Grazing management training should be provided to the *chupan* and awareness should be raised among school children in CHP -2.

5.3 PRACTICE ROTATIONAL AND CONTROL GRAZING

The study infers that the farmers have not adopted management options such as block division, rotation grazing, control grazing, etc. In principle, there are best approaches to regenerate natural pasture. Appropriate rest periods prohibiting grazing or harvesting of green bio-mass could increase the proportion of plants, especially palatable ones. It is recommended that the pasture area should be kept under protection for a minimum of two years and should follow systematic rotational grazing.

The plain pasture community can divide pasture into three or four blocks and rotate grazing according to the pattern sketches given in Figure-1 below.

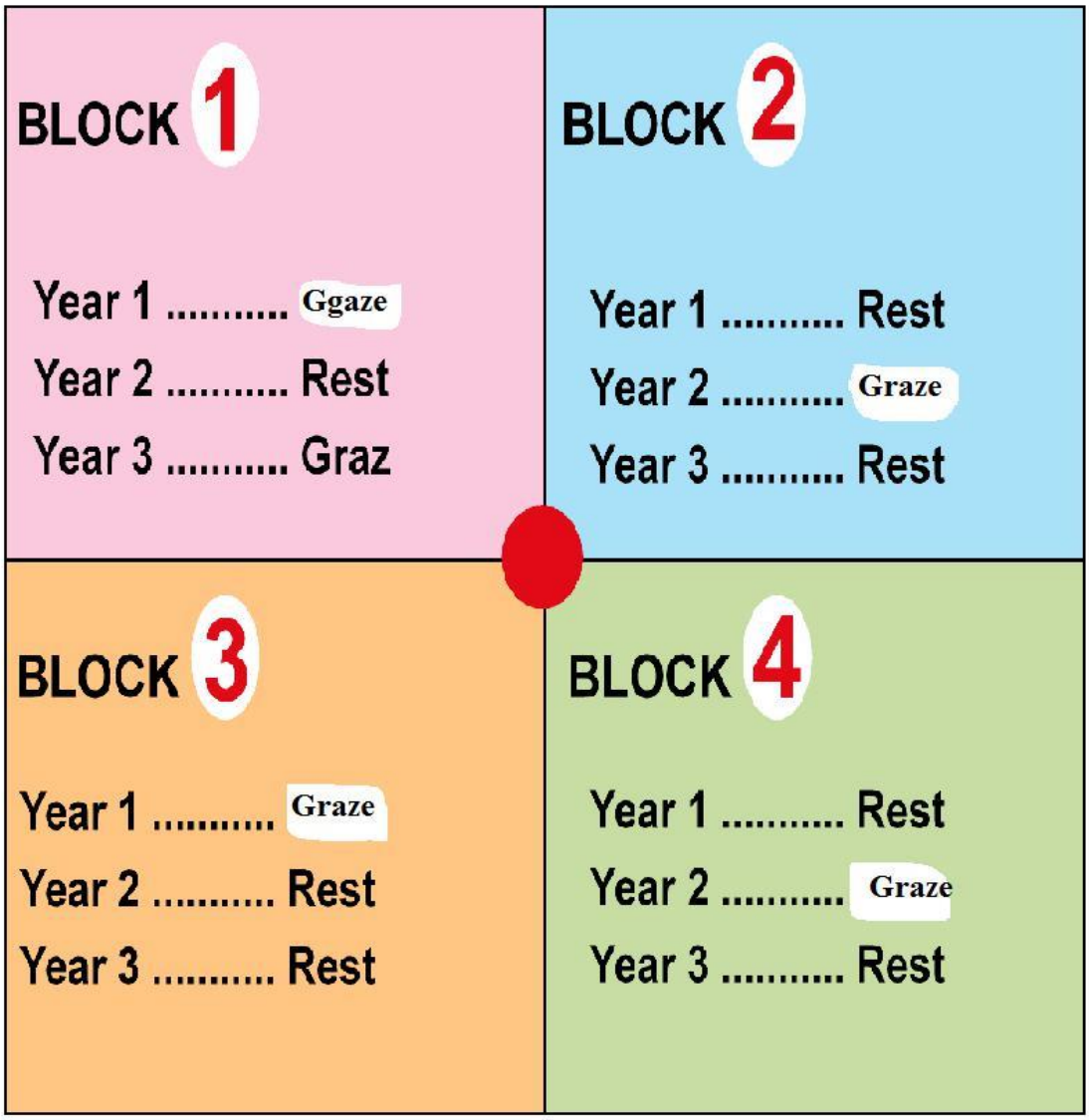


Figure 1: Example of Rotational and control grazing

It is, however, not practically possible to divide rangelands into blocks for practicing the pattern as shown above in the mountainous regions. As an exception, it is possible in the common pastures of the Behsud area to adopt the block management due to the landscape. The whole pasture area can be divided into three to four different blocks and follow rotational grazing practices. Sufficiently available grazing area in comparison to the number of livestock in the villages is another enabling factor to promote the rotation grazing system in the Behsud. The pasture groups can easily practice the block division by making use of the natural boundaries and systematically following the rotational grazing system as shown in the picture below.

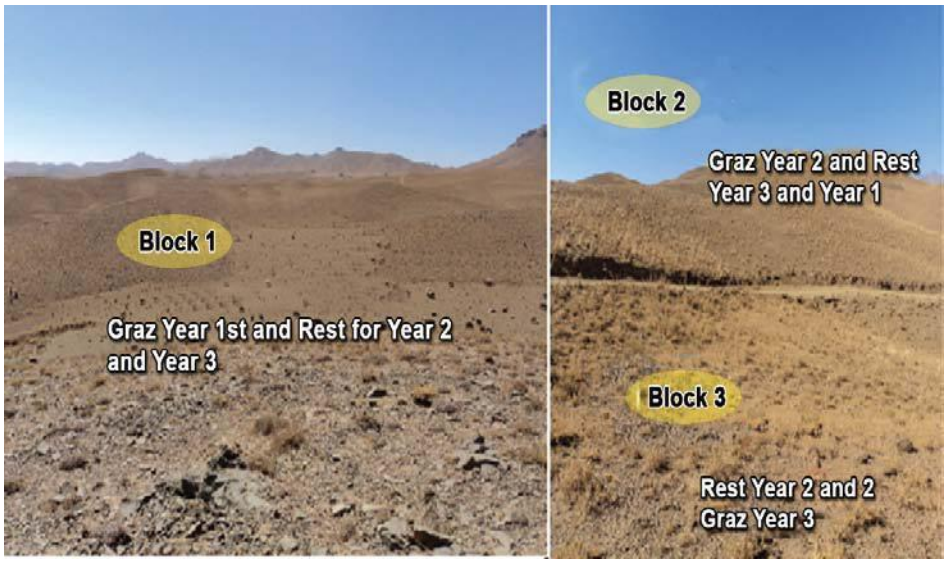


Figure 2: Sange Shork Pasture Groups - example of rotational and control grazing

Though fencing is not necessary, the protected area must be clearly identified and it must be stated in the management plan of the pasture group as a key provision. The project team could follow the photo monitoring points. This activity needs to be carried out during April-June 2017 and CHP-2.

5.4 USING A PARTICIPATORY MAP

The project team and pasture groups have to follow the participatory resource map to identify the potential area for re-seeding in each pasture groups. The map clearly locates the potential area for reseeding and plantation of non-fruit trees. For example, in the Sange Shork pasture groups, 10- 12 ha of area can be re-seeded with the mixed fodder varieties. The soil condition is very suitable to grow rain-fed Alfalfa, Kmai and Pali as there is a water source just 50 meters away from the site. This activity needs to be done during April- June 2017. For further information, please follow the map attached in Annex-1 of this report.

5. 5 THE PLANTATION OF TREES SPECIES

The project has not carried out any other management activities except re-seeding in the pasture area. However, for the rehabilitation of pasture, some other soil conservation activities need to be carried out. Based on the condition of the soil, there are possibilities for the plantation and making strips to control the soil erosion in the pasture area. Out of the nine visited pasture groups, in five different pasture areas there are suitable sites for trees plantation and making shelter belts that will contribute to reduce the soil erosion from wind speed. Those groups are: Dhan- e- Obseed, Quali- e-Mashy, Sange Sorkh, Shynoor and Synakala. The potential tree plantation areas are clearly located in the participatory resource map of respective pasture groups. The pair–wise preference ranking recommended the following native trees species.

i) Chinar, ii) Shurk Beed, iii) Spedar, iv) Beed Rosi

Plantation method:

Plant the trees species along the boundary of the pasture by making two or three rows parallel to the wind direction. The main purpose of such a planting pattern is to control wind erosion and reduce the uprooting of bushes from the pasture. In the future, the trees will contribute to this. Saplings can be planted in less than 50 cm x 50 cm plant-to-plant spacing. While following this plantation method, at least two to three rows have to be created along the boundary of the pasture or nearby water sources as show in Figure -3.

For the plantation of the trees species, the pasture team should prepare the procurement plan in November and the plantation has to be carried out immediately after the snow melts. The saplings have to be brought from similar climatic conditions. Saplings brought from warm temperatures have a lower survival rate. In the mid-summer (June to July 2017), the survival survey of the trees should be carried out by the project team. This activity needs to be done during April- June 2017, and for CHP -2 as well.

5.6 METHODS FOR RE-SEEDING

The study showed that pasture groups are not following the appropriate methods for land preparation and seed sowing in the common pasture. Considering the possible threat of soil erosion in the pasture land, different methods are more appropriate to different fields. The study also found that the community had to decide amongst themselves how to conduct the land preparation. It is recommended that the pasture team should visit the site planned for re-seeding and provide technical advice based on the type of soil. Both tillage and non-tillage methods can be applied in the pastures. However, the pasture team has to provide technical support during the seed sowing period to maintain and control the depth of seeding. The seeds of most of the forage plants are small and cannot be counted upon to emerge from a seeding depth of greater than half an inch. Seeding equipment should be adjusted to place the seed at a shallow depth of 1/4 - 1/2 inches. Placing the seeds too deep could be one of the common reasons for the failure in germination. If a few seeds are seen on the soil surface after seeding, it would be considered a correct seeding depth. Such monitoring and technical advice needs to be provided by the pasture team to the pasture groups regularly. Another effective method for re-seeding is to mix the seeds with cow dung, make pellets and dibble them into the ground, preferably before snowfall or after the snow melts. This activity needs to be done during April- June 2017 and for CHP -2 as well.

5.7 PROVIDING THE SEED AT THE APPROPRIATE TIME

During the field visit, the pasture groups raised the issues of the late arrival of seed and late re-seeding as two of the contributing factors for the low germination rate. To address this problem, a seasonal calendar was prepared during the focus group discussions. The pasture team should follow the seasonal calendar to prepare the procurement plan and make the seed ready. For example, for re-seeding in April 2017, the project has to complete the procurement plan by October 2016 at the latest. The pasture team has to monitor the fodder growing cycle such as germination percentage, irrigation time and suggest pasturing groups to follow the timing. This activity needs to be done during April- June 2017 and for CHP -2 as well.

	Seasonal Calendar of fodder grass prepared by NRM groups (Based on the Afghan Calendar)														
	Spring						Summer			Autumn			Winter		
	Hamal				Sawaor	Jauza	Sarataon	Ashad	Sunbla	Mezan	Aqurab	Quaz	Jadi	Dalwo	Hood
Activities	w1	**w2**	**w3**	**w4**											
Land preparation															
Seed broadcasting															
Irrigation															
Weeding															
Flowering															
Seed mature															
Harvesting															
Storage															
Snow coverage															

Table – 3 Seasonal calendars for fodder cultivation

5.8 SELECTING THE BEST SEED MIXTURE

The most productive and highest quality pastures are those that contain a mixture of grass species with one or more legume species. While selecting species for pasture rehabilitation, it is important to understand the habits of both grass and legume growth and match them to the soil characteristics and climate. Soil types in the Behsud are different for different pasture groups. During the transect walk, it was found that in the Dahane- Obseed, sandy soil exists whereas in Sange Shork, there is a loose clay soil texture. So, before re-seeding, the soil types needs to be taken into account. Preference ranking by the card method suggested the following fodder grass to be more appropriate for the cultivation in the common pasture:

i) Alfalfa (rainfeed/Lalmi), ii) Kamai. iii) Pali,iv) Ghaigan, v) Zardgul , vi) Narmak Alaf and vii) Sajak Alaf

It is also suggested that the fodder grass sowing in one plot should be mixed with three to four varieties as mentioned above in one area by allocating these varieties to small sub-blocks. This will help if one variety of grass does not grow or is attacked by pests or disease; in this case, the soil surface can be covered by the other varieties of fodder. This activity needs to be done during April- June 2017 and for CHP -2 as well.

5.9 INSTALL PIPE IRRIGATION IN POSSIBLE AREA

The field observation and transect walk indicated that in some pasture areas, the availability of water is very high. The water sources are located at higher places and the irrigation is possible with considerable low cost. This is the case in the Sange Shork area, Synakala, and Dahane-Obseed, where the water sources are at most 100 meters away. It is possible to irrigate the pasture with a very low cost irrigation technique (pipe irrigation), which can contribute to better results. However, the installation of the irrigation system in the pasture area might create some conflicts as it converts the pasture land to the agriculture crop land. In such situation, the project team has to raise awareness among the community members so that they know that this irrigation facility is only for pasture. In the management plan, the clauses related to the pipe irrigation facility should be mentioned only for the particular pasture sites but not to the agriculture area. Being based on the study team's prior experience in Afghanistan it is provided that the irrigation facility, if possible with the low cost system, would be the best option to regenerate the pasture area. This activity needs to be done during April-June 2017 and for CHP -2 as well.

5.10 CONSTRUCTION OF SNOW/WATER HARVESTING RESERVIORS

In both Behsud -I and Behsud –II, snow remains for more than six months in a year and in the early spring and summer the snow starts melting which causes flooding in the pasture area. In order to utilize the snow for irrigation, MADERA/CHP can support the pasture groups in effective water harvesting techniques. For this, the irrigation team and pasture team have to work very closely to determine appropriate area for the holistic approach. The CHP irrigation team should follow a very simple technology for harvesting snow water and constructing structures for water reservoirs. This activity needs to be done during April- June 2017 and for CHP -2 as well.

5.11 USING LOW COST SOIL CONSERVATION ACTIVITIES

Low cost soil conservation technology such as eyebrow construction and pit construction should be introduced to reduce the soil erosion in the pasture area. Such pits will help to reduce the surface runoff. Every 5 to10 meters, pits can be constructed. The picture below illustrates guidance to construct such pits in the pasture as well as nearby pasture areas. The project staff needs to provide such design to the community and they will adopt it in their respective areas. This activity needs to be done during April- June 2017 and for CHP – 2 as well. The sample of construction is shown in the figure below.

5.12 STRENGTHENING COMMUNITY-BASED USER GROUPS AND CREATING COMMUNITY FUNDS

The communities in remote villages lack access to finances to implement income generating activities/enterprises. Pasture group members can generate small funds by collecting fees and monthly savings. Such money can be used for re-seeding pasture, establishing a community nursery, and repairing and maintaining the irrigation structures in their respective pasture areas after the completion of the project. This activity needs to be carried out in CHP -2.

5.13 INCLUDE LIVELIHOOD COMPONENTS

The rehabilitation of rangelands in Afghanistan has two dimensions: (a) technical aspects (choice of species, identification of suitable restoration sites, the integration of restoration with conservation management of natural pastures, etc.), and (b) socio-economic issues. CHP -2 should be designed with even stronger livelihood related activities, and creating productive opportunities for both women and men by providing fruit tree saplings to plant in their private lands and kitchen gardens for women and agro-forestry (fodder and fruit trees intercropping) for income generation. The intercropping of community plantations

with alfalfa will produce short-term returns, improve soil fertility and reduce erosion. Therefore, the intercropping of alfalfa should be promoted further.

5.14 INTEGRATING PROGRAM ACTIVITIES

Synergies need to be built between different activities related to livestock components by including the same beneficiaries of pasture components, linking with energy saving solutions to reduce deforestation such as the plantation of non-fruit trees in the pasture area to make shelter belts to reduce the soil erosion. This activity needs to be carried out in CHP -2.

5.15 PROMOTE STALL FEEDING

Communities must be encouraged to grow alfalfa and other fodder grass in their private land as much as possible for stall-feeding to reduce pressure on rangelands and to improve the quality of livestock to enhance household income. The following measures should be considered:

- Encourage communities to collect seeds from pastures and wild areas and allocate space to cultivate fodder in their own land,
- Provide technical support to produce fodder in their private land, and
- Engage pasture committees to follow-up fodder production in private land.

This activity needs to be carried out in CHP -2.

5.16 PROVIDE FRUIT TREE SAPLINGS TO THE PASTURE GROUPS

To maintain and rehabilitate the pasture area, it is suggested that fruit and forest tree saplings be provided to the pasture groups. The saplings should be procured from the same ecological or climatic conditions. Pasture groups can plant such trees and make shelter belts for preventing soil erosion which will ultimately help to reduce landslides in rangeland areas and also contribute to generate biomass for energy. This activity needs to be carried out in CHP -2. One very successful example can been in Badakhshan province, where pasture groups have been earning by selling the excess the fodder grass and keeping the proceeds in the bank.

5.17 GENDER MAINSTREAMING IN NRM AND LIVESTOCK ACTIVITIES

Women empowerment assumes different forms, such as training workshops on women-specific issues and gender rights, changing men's attitudes towards traditional gender roles, and involving women in pasture groups. The project needs to organize the gender sensitization trainings for the NRM group leaders, CDC leaders, Mullahs and religious scholars to build their capacity and to make them aware of the different roles and responsibilities of men and women and their importance in the NRM. Women should be consulted and participate in the preparation of the bylaws and management plans. Similarly, women's voices and their experiences of fodder cultivation should be heard during the preparation of the management plans of pasture groups. The women need to be trained in animal husbandry and haymaking for the quality livestock rearing. In CHP -2, the project should focus on the integration of pasture and livestock components and target income

generation activities such as fruit cultivation, chicken rearing and dairy production. This activity needs to be done for CHP -2.

5.18 CAPACITY BUILDING OF THE STAFF ON CONSERVATION FARMING TECHNIQUES

Refresher training and exposure visits to similar successful project areas within the consortium partner or outside need to be organized for the pasture and irrigation team members as well as for the committee representatives. The possible areas for exposure visits would be the Afghanaid intervention area under Upper Catchment Rehabilitation Management (UCRAM) and the participatory watershed management (PWM) project area in Badakhshan province, or the solidarities interventions areas. This activity needs to be carried out in CHP -2.

5.19 EXPANDING THE PROJECT TEAM

The existing pasture team is not sufficient for community mobilization as well as strengthening the capacity of NRM groups. Altogether, 18 pasture groups have been formed by the project and the groups are in diverse locations and clusters. Most importantly, the level of awareness among community members is very low and requires more time. The assessment indicates that there are still numerous activities that need to be carried out in order to make the group more sustainable. Such activities require more human resources than the project has at present. Therefore, the following specific areas need to be given specific attention:

- The pasture team needs to hire one more staff member who has intensive experience of community-based natural resource management, especially the formation and strengthening of pasture groups
- Project staff should take proactive initiatives, and
- To help gender mainstreaming in the NRM, women community facilitators should be recruited.

This activity needs to be done during April-June 2017.

REFERENCE

Annual Report of Central Highlands Rural Development Programme (01/03/2015 to the 28/02/2016)

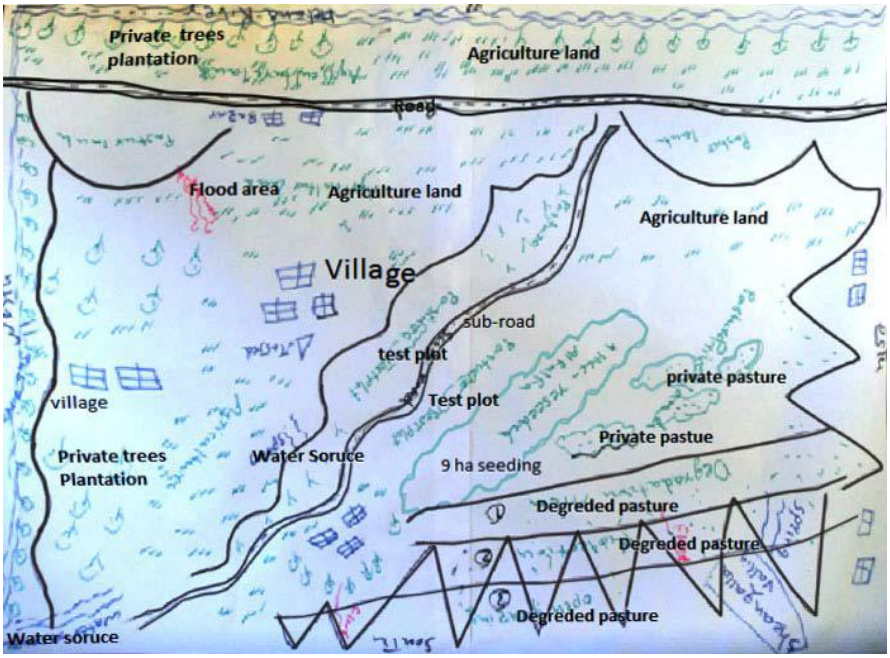
Midline Evaluation of Central Highland Program (2016) , Samul Hall, Kabul Afghanistan

Stock Taking Report of the Central Highland (Jan 2016), MADERA, Kabul Afghanistan

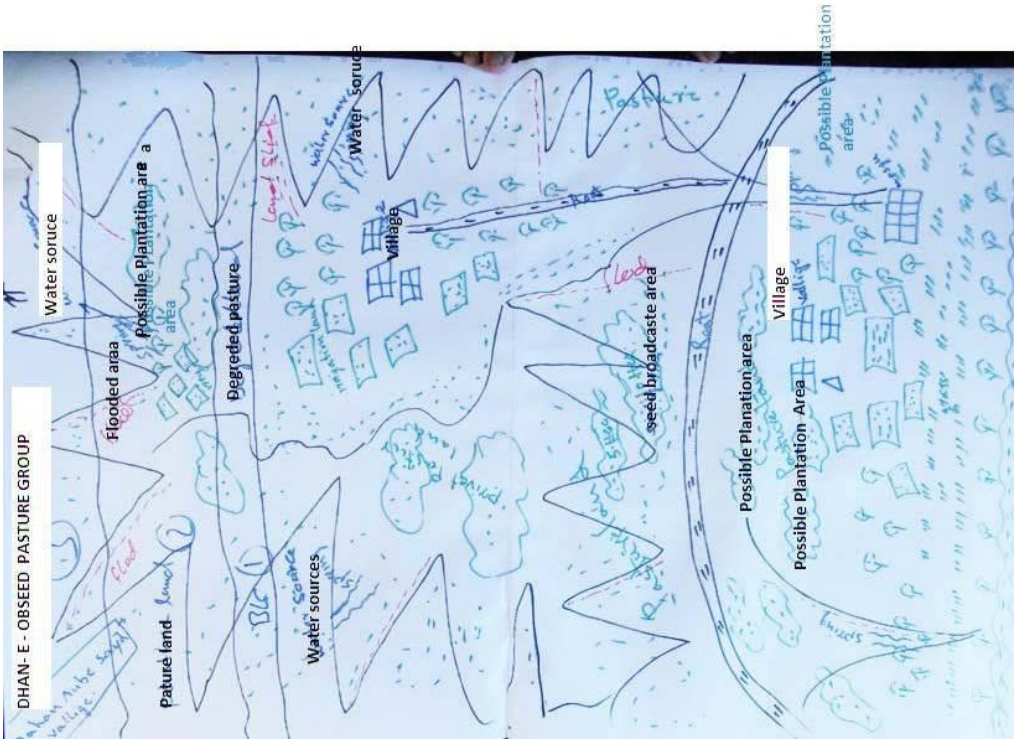
Report on pasture regeneration (2011) Consultancy report done by external Consultant
Proposal of CHP program (2013)

Annexes

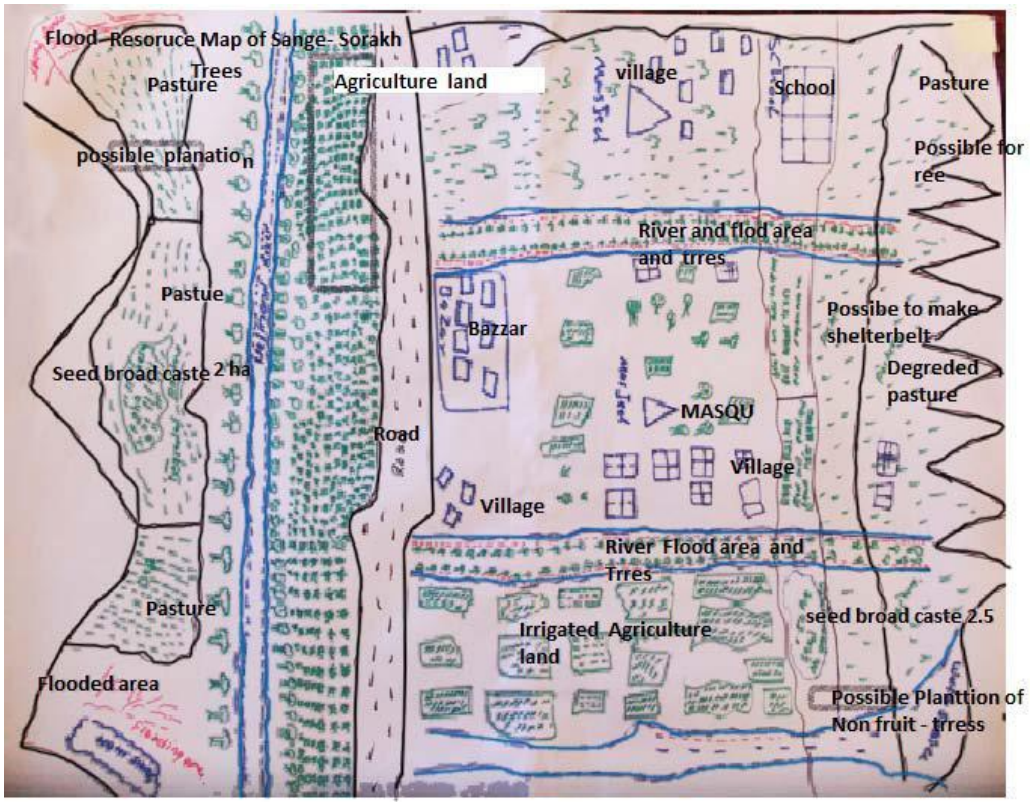
Annex – I Participatory Resource Map of nine different Pasture Groups 1.



Participatory Resource Map of Shyankala Pasture Group

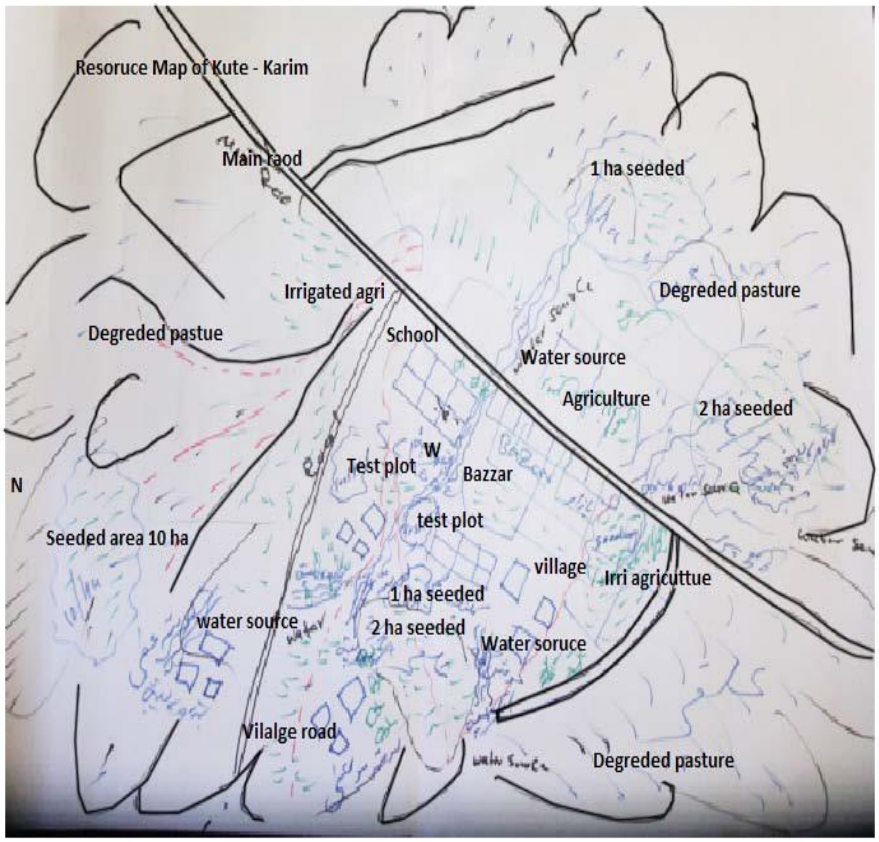


2.Participatory Resource Map of DHANE- Obsyeed

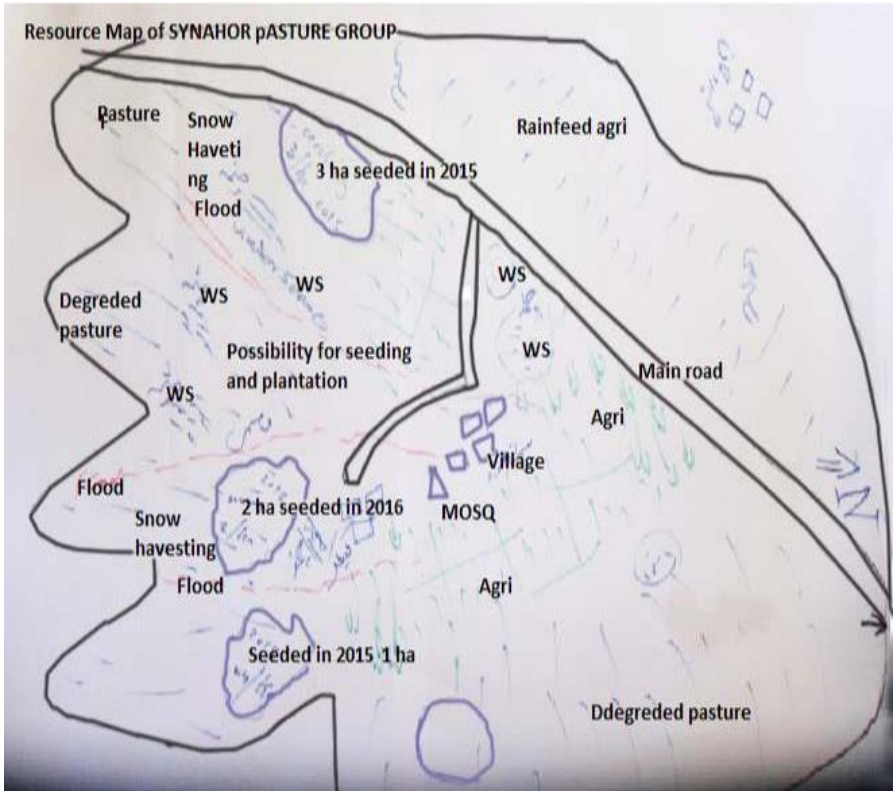


3. Participatory Resource Map of Sange Shork Pasture Groups

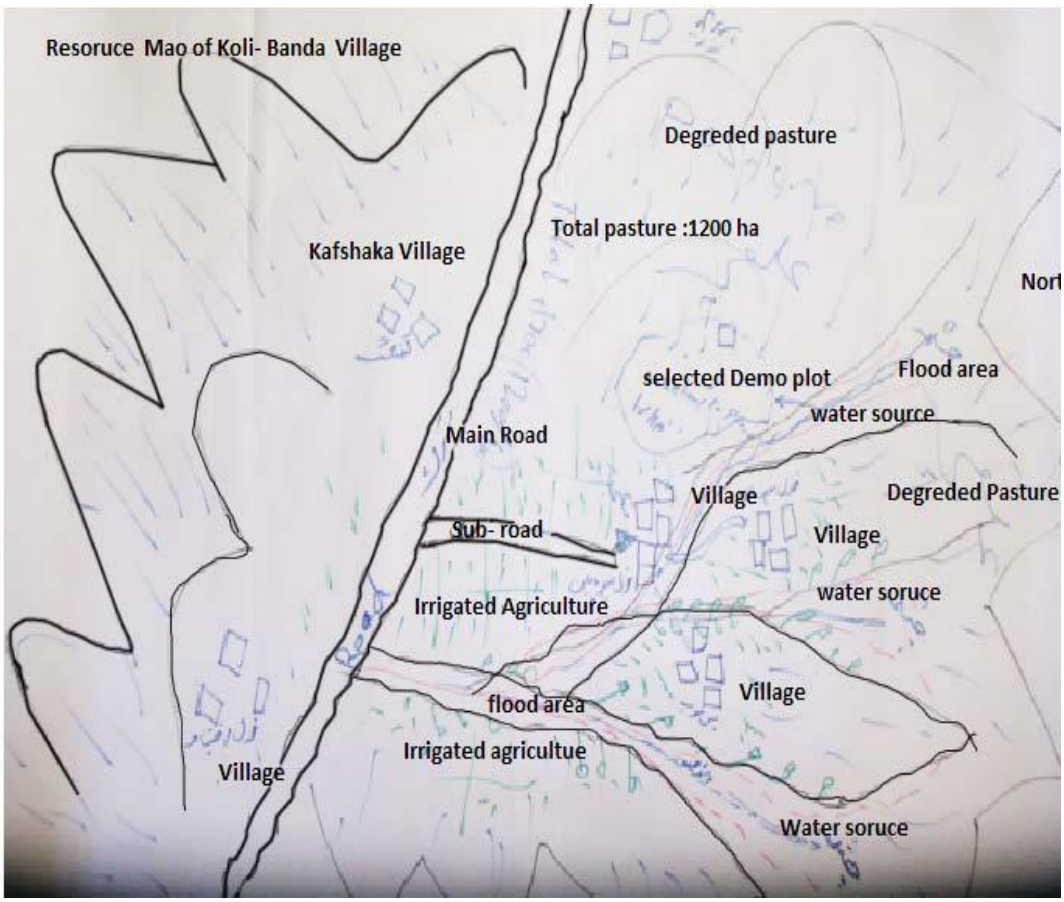
4. Participatory Resource Map of Quali- e- Mashy Pasture Groups



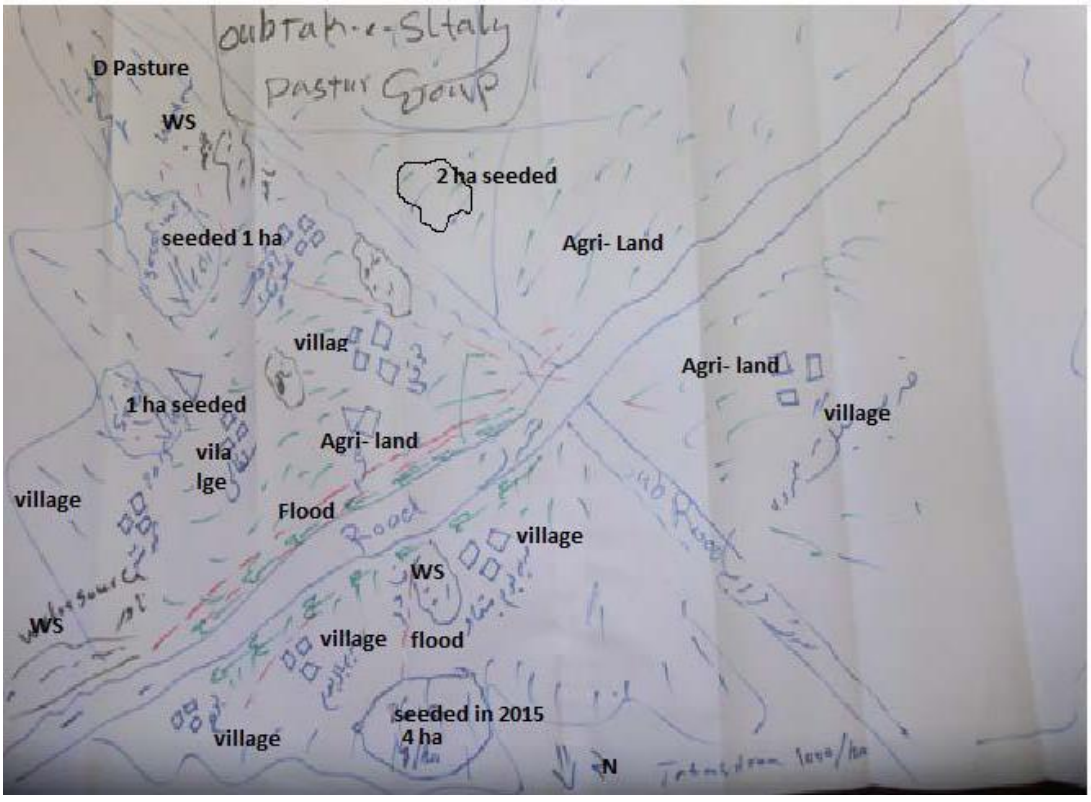
5. Participatory Resource Map of Quete Karim Pasture Groups



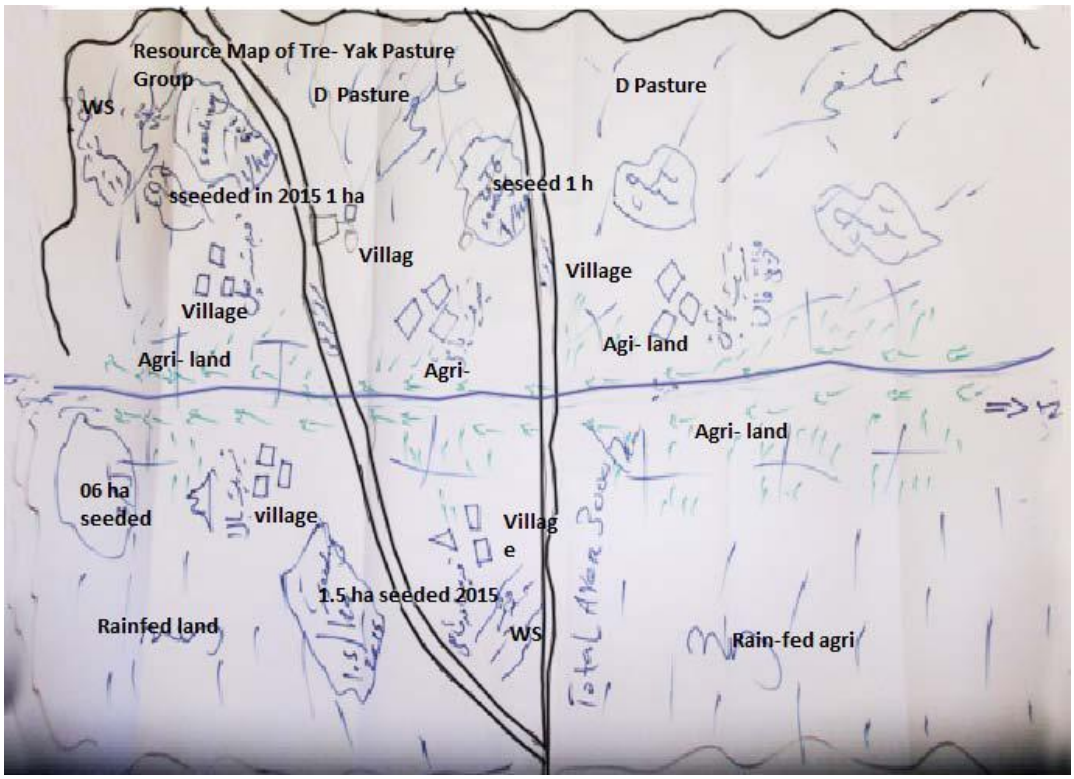
6. Participatory Resource Map of Synahor Pasture Groups



7. Participatory Resource Map of Quali Banda Pasture Groups



8. Participatory Resource Map of Uptak Sultani Pasture Groups



9. Participatory Resource Map of Tre-Yak Pasture groups

Annex- II Table of Historical Trend analysis of all Pasture Groups

1. Synakala Pasture Groups				
Years	**Status of Pasture**	**Reasons of Degradation**	**Housed used**	**Ownership**
50 Years back	Bad condition	kuchi was using the pasture, number of house hold and drought	60HH	Synakala villagers
25 years back	become better	Kuchi stop bring livestock, livestock decreased , HH increased	45HH	Synakala villagers
10 Years back	become better than 25 years	Kuchi stop bring livestock, livestock decreased and 50% HH decreased ,	40HH	Synakala villagers
Now	Better than 10 years	Kuchi stop bring livestock, livestock decreased and 50% HH decreased ,animal decreased and awareness increased	21HH	Synakala villagers
2. Dahnae ab- syeed Pasture Group				
50 Years back	Good condition, a lot fodder grass available. Mostly all the palatable grass	No Kuchi presence and number of livestock was less but more households, no bush uprooted	50HH	**Dahnae obseed villagers**
25 years back	Fodder grass decreased by 50%	Drought and floods and no proper management activities taken	40HH	**Dahnae obseed villagers**
10 Years back	Fodder availability decreased by 70%	Drought and floods and no proper management activities taken	35HH	**Dahnae obseed villagers**
Now	Only 15-20 % grass available	Long drought period and no proper management activities, flood occurrence, bushes uprooted	21HH	**Dahnae obseed villagers**
3. Aubtak – Sultani Pasture Group				

50 Years back	Bad condition	kuchi was using the pasture, more than thousands livestock graz,e number of house hold high no nay protection	40HH	Aubtak – Sultani villagers
25 years back	Become better	Kuchi stop bring livestock, livestock decreased , HH decreased	30HH	Aubtak – Sultani villagers
10 Years back	Become better than 25 years	Kuchi stop bring livestock, livestock decreased and 50% HH decreased ,	30HH	Aubtak – Sultani villagers
Now	Better than 10 years	Less number of livestock, large area available for grazing	22HH	Aubtak – Sultani villagers
4.Ter -Yak Pasture Group				
50 Years back	Bad condition	kuchi was using the pasture, number of house hold and drought	50HH	Ter-yak villagers
25 years back	Become better	Kuchi stop bring livestock, livestock decreased , HH increased	60HH	Ter-yak villagers
10 Years back	Become better than 25 years	Kuchi stop bring livestock, livestock decreased and 50% HH decreased ,	30HH	Ter-yak villagers
Now	Better than 10 years	Kuchi stop bring livestock, livestock decreased and 50% HH decreased ,animal decreased and awareness increased	15HH	Ter-yak villagers
5. Kute – Karim Pasture Group				
50 Years back	Was not good most the fodder grass was disappeared	No of pasture user family where high and presence of Kuchies and improper grazing	150	Villagers of the kute karim
25 years back	Not good	Little increased in fodder grasses, Number of users get les	130	Villagers of the

				kute karim
10 Years back	Become better than 25 years back	Increased the availability of the fodder grass due absence of Kuchis and reduced the number of users	100	Villagers of Kute karim
Now	Much better than 10 years	Increased the availability of the fodder grass due absence of Kuchis and reduced the number of users and stop to collect and uprooted bushes from Pasture and decreased the number of live stock	35	Villagers of Kute karim
6.Quali Mashy Pasture Group				
50 Years back	Poor condition of the pasture and very less palatable fodder grass available, more flood	Kuchi presence, uncontrolled grazing, bush uprooted, more household and more livestock	60 hh	Villagers of Quali Mashy
25 years back	Better in comparison with 50 years	Kuchies stop to bring livestock, HH decreased by 50%	30 hh	Villagers of Quali Mashy
10 Years back	Better in comparison with 25 years	Kuchies stop to bring livestock, number of livestock decreased	30 hh	Villagers of Quali Mashy
Now	Still degraded but more better 10 years back	HH decreased approximately 50% and wariness rising for the management	16HH	Villagers of Quali Mashy
7. Synhor Pasture Group				
50 Years back	Bad condition	Kuchi was used the pasture , more household, more livestock , frequent flood occurs	60 HH	Synahor Village
25 years back	Condition became better than 50 years back	Kuchi left , household decreased, number of livestock decreased	45HH	Synahor Village

10 Years back	Condition became better than 50 years back	Kuchi left , household decreased, number of livestock decreased	30HH	Synahor Village
Now	Better than 10 years time	Number of Livestock decreased, flood decreased	30 HH	Synahor Village
8. Koli banda Pasture Group				
50 Years back	Good condition	Drought, over grazing, Number of livestock high,	45HH	Koli Banda
25 years back	Become bad than 50 years back	Drought, over grazing, Number of livestock high, HH decreased but livestock increased	30HH	Koli Banda
10 Years back	Getting worse	Drought, over grazing, Number of livestock high, HH decreased but livestock increased	20	Koli Banda
Now	Same like 10 years	Drought, over grazing, Number of livestock high, HH decreased but livestock increased	20	Koli Banda
9. Sange Sorkh Pasture Group				
50 Years back	Condition was very good(100%), no kuchi presence, a lot palatable fodder available	Drought and irregular grazing and bush up rotted	50 HH	Sange shurk
25 years back	Condition degraded by 80%	Drought , flood and irregular grazing	35HH	Sange shurk
10 Years back	Degraded by 50%	Drought , flood and irregular grazing, number livestock increased	35HH	Sange shurk
Now	Only 5-7% of the fodder grass available	Drought , flood and irregular grazing, number livestock increased	35	Sange shurk

Annex-III Pair wise Preference ranking

	Alfa- alfa (Rainfed)	Kamai	Pali	Ghaigan	Zardgul	Narmak Alaf	Sajak Alaf
Alfa- Alfa (rainfeed/Lalmi)		Alfa- Alfa	Alfa- Alfa	Alfa- Alfa	Alfa- Alfa	Alfa- Alfa	Alfa- Alfa
Kamai			Plai	Kamai	Kamai	Kamai	Kamai
Pali				Plai	Pali	Pali	Plai
Ghaigan					Ghaigan	Ghaigan	Ghaigan
Zardgul						Zardgul	Zardgul
Narmak Alaf							Narmak Alaf
Sajak Alaf							0
Score	6	4	5	3	2	1	0

Table1: Summary results for fodder Grass

	Chinar	Shurkbed	Spedar	Bedrosi
Chinar		Chinar	Chinar	Chinar
Shurkbed			Shurkbed	Shurkbed
Spedar				Spedar
Bedrosi				
Score	3	2	1	0

Table 2: Summary results of Non fruit species

Name of the Module	Days	Total Session (Hours)
Module 1 : Community Mobilization 1	½ Half day	4 Hours
Session 1 : Concept of Community Mobilization		2hrs
Session 2: Process and mobilization action		2 hrs
Module 2 : Awareness Raising on CBNRM	1 day	7 hours
Session 1:Concept of community based natural resource management		2hrs
Session 2: Seven different steps of Pasture group formation		3hrs
Session 3 : Role and responsibilities of Community		2hrs
Module 3 : Constitutional preparation	1	6hrs
Session 1: Introduction to the constitution		2
Session 2 : Role and responsibilities of the committee		4
Module 4 : Pasture management Plan Preparation	1day	
Session 1: Introduction to the management plan		2hrs
Session : Block division and prescription on management plan preparation lack		4hrs
Module 5: Gender Mainstreaming in NRM	1day	6hr
Session 1 : Concept of gender mainstreaming		2hr s
Session 2: How to Mainstreaming gender in pasture groups		4hrs
Module 6: Governance of pasture groups	1 days	7
Session 1: Concept of governance		1 hours
Session 2 : Prepare community for, maintain meeting minute and conduct meeting		2 hours
Session 3 : Financial record keeping		4

V1 List of the training Modules for Pasture Groups

Annex- IV Work Plan

Date	Activates	Name of Pasture groups	Place
18/ 09 /2016	Finalize inception report	Revised Inception report	kabul
19/09/2016	Preparation for field	Communicate for logistic and travel with Logistic team	Kabul
22/09/ 2016	Travel to Bamiyan and arrived at Abadara office, meeting with the pasture team	Discussion with Pasture team nd orientation on study tools and methods	Arrival to Beshud , Abdara
23/ 09/ 2016	Participatory Resource Map Preparation, seasonal calendar and Focus group discussions	Dahan- e- Obyseed and Synakala two pasture groups	Beshud –I
24/9/2016	Participatory Resource Map Preparation, Focus group discussions	Sang e Sorkh	Syabota, Beshud I
25/ 09/ 2016	Participatory Resource Map Preparation and Focus group discussions	Qul e Mashay	Sar eTala, B1
26/ 09/ 2016	Participatory Resource Map Preparation	Kote Karim	Sar e Tala; B2
27/10 / 2016	Participatory Resource Map Preparation	SyaNahor	Tagab, B2
29/ 09/09/ 2016	Participatory Resource Map Preparation and Focus group discussion	Qul e Banda	Beshud-II
30/09/2016	Participatory Resource Map Preparation and Focus group discussion	Aawtak e Sultani and Treyak	Beshud-II
30/09/ 2016	Focus group discussion with women groups, gender analysis sheet was used	women from Aawtak e Sultani and Treyak pasture groups	
30/09/ 2009	Meeting with District DAIL staff	Individual interviews	Beshud
1/ 10/ 2016	Travel back to Abdara and meeting with pasture team	Discussions and to verify the in	
4/ 10/ 2016	Consultation with Ministry	About policy conflict on pasture and land tenure ship	Kabul
5/ 10/ 2016	Prepare de- briefing for MADERA office		Kabul
6/10/ 2016	de- briefing in MADERA office		Kabul

Annex- V Guidelines for Focus Group Discussions

Checklist Set 1: Checklist for FGDs with pasture groups

Name of Village ---------- District ---------- Date ----------

Name of the Pasture Groups

Established date

Total households

S.N	Name of the Participants	Address	Position

2. Community Structures and Ownership and Rights (Historical and traditional practices)

‡ What kinds of indigenous institutions were in existence to govern the common property resources before CHP?

‡ Are the community institutions legitimate and effective? If not, why?

‡ What is the extent and present status of pastures management in the trial plots and other plots? Area (ha) -------, status (degrading / improving) and why?

‡ Who are the owners of trail plot and who possess the land rights?

‡ How many households do possess rights over pastures?

‡ What kind of issues/problems do the community institutions face in managing the common property resources and how can these be addressed?

3. Rangelands Management

‡ How many nomadic families come to the nearby pasture during summer?

‡ How many days do the nomads (Kuchi) use the pasture to graze their livestock?

‡ Roughly, how many cattle, goats, sheep, camels, donkeys, and horses do they bring?

‡ What has been the trend of livestock numbers over the last 20 years?

‡ What is the trend of natural pastures over the last 20 years (improved, degraded)? If degraded, why?

‡ What has the community done or is doing to improve conditions of natural pastures?

‡ How has the programme contributed to improve natural pastures?

- What changes have occurred in the natural pastures due to this programme?
- How did community manage pasture before programme was implemented?

- What types of differences did you notice?
- Has the programme introduced any new technologies for conservation of soil, fertility and moisture in the irrigated cropland? If yes, describe.
- Have landslides, mudflows and avalanches increased or decreased in the area?

Rehabilitate pasture and improve conservation friendly techniques

- Has the pasture management committee developed any integrated resource management plan? If yes, explain.
- Is the community practicing any regulated grazing system? If yes, describe.
- Did the programme provide any support for increasing biomass? If yes explain.
- Has the project introduced any new techniques on animal husbandry? If yes, describe.
- What types of plant and fodder species are available in your pasture area?
- What types of fodder grass can be grown in your pasture area?

Governance aspects:

- Does NRM group(s) organize regular meetings?
- What types of issues do they discuss in their meetings?

Conflict resolutions

- How do NRM groups make decisions?
- How do NRM user communities resolve disputes among themselves?
- How do NRM groups settle disputes with outsiders?
- How was conflict situation before implementation of the programme?

Gender role and responsibilities

- What roles do women play in animal husbandry and natural resource management?
- Are there any women in NRM group(s)?
- What roles do the women traditionally play in the livestock raring and related to NRM
- Are women traditionally involved in decision making on NRMs? If not why? If yes describe?