Assessment for the Feasibility of Targeted Pastures as Comparable Alternatives for Currently Used Pastures



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Resume

Current report represents the results of the study conducted at Chachuna Area (Dedoplistskaro Region) within the framework of UNDP/EU project "Sustainable Management of Pastures in Georgia to Demonstrate Climate Change Mitigation and Adaptation Benefits and Dividends for Local Communities". Potential of winter pastures in Chachuna Natural Reserve vicinity was studied during the period from December 13, 2013 to February 25, 2014.

This part of the project included field work and botanical data analysis.

Two associations working with different Georgian shepherd's population, four local farmers and five local shepherds were interviewed during this study.

The main goal of this part of the project was the survey of the following issues:

- Whether studied pastures are free or are used by some of the farmers.
- Whether any property rights documentation of the study area has been issued or not.
- Whether farms at the study area are used or not.
- Which of the summer pastures are used by Chachuna Area farmers.
- Natural resources quality and using possibility by shepherds.
- Plant covers condition of Chachuna Area.
- Physical-geographical description of Chachuna area.
- Infrastructure of the study Area.
- Whether or not sheep migration routes exist both to Tusheti and Ninotsminda summer pastures.
- The overall number of Chachuna area shepherds and farmers, their gender and number of owned sheep and other cattle grazed at the pastures sites.
- Attitude of local farmers toward the studied pastures.

To make our research more comprehensive we built strong cooperation with other organizations having done any research on the territory of Chachuna Area.

Field research methodology

The aim of the field research was to look at certain discourses in place and time, analyze perceptions and practices, feelings and expectations of various stakeholders toward the sustainable management of pastures in Georgia.

In this particular case, a qualitative-interpretative approach fitted well to study the social phenomenon of interest. Methodology considered development of questionnaires and conducting interviews (Punch, 2005. 2009). The results in this qualitative research were based on in-depth (semi-

structured) interviews with different stakeholder groups. An in-depth interview is a powerful tool to find out people's perception, interpretation and creation of reality in some specific situations.

In-depth interviews, the traditional unstructured interviews sometimes labeled as ethnographic interviews, were conducted to recognize the multifaceted attitude and behavior of people without imposing any prior classification which might impose boundaries to the field of inquiry. Moreover, an in-depth interview is capable of creating rich and important data (Finn, Elliott-White & Walton, 2000; Babbie, 2001).

Basically the interviews are about "asking questions and receiving answers". Some scholars (such as Mason 2002) points out that the choice of semi-structured interviews is an indicator to the following beliefs and reason

- People's understandings, feelings, perceptions and other inner thoughts as well as the interactions with other people are parts of the social reality.
- The reality could be revealed by representations and interpretations through language.
- What has been revealed is situational knowledge which will be more likely to be reconstructed under its context. In appropriate design, the desired context could be brought into the interview conversations.
- Qualitative interviews do not aim to standardize, but to achieve more in terms of "depth, nuance, complexity, and roundedness" of what is to be understood.
- The interview is a "process of data generation" and the interviewer plays an "active and reflexive" role in it.
- Interviewees should have more controls and freedoms throughout the interview interactions.

As was mentioned above to create the trust among the farmers one needs to find a right approach, that's why choosing the semi-structured interviews, having some fixed questions, but with the space for probing and going more in-depth at times was one of the best solution.

Study Area Description

Physical-geographical description of Chachuna area

The study area is located between floodplain of river Iori (Territory of Chachuna Natural Reserve) and Georgia-Azerbaijan state border. It is specified by complex relief-edaphic conditions, which is presented by valleys, hills and eroded badland hill-knolls alternation. Although relief complexity, most part of the area can be divided into 3 zones in compliance with its relief, soil and plant cover.

From floodplains located along the river Iori to the south direction, these zones are specified with:

- 1. Valleys along the river Iori floodplains slightly and moderately salted, with clayed and loamy grey (light grey-brown) soils;
- 2. Various exposition clayed, loamy, clay-sandy, badland eroded and hills, hill-knolls and slopes. Some of them are specified by plain ridged relief;
- 3. Having north exposition, differently inclined slopes of elevated hills with grey-brown soils.

The area can be divided hypsometrically as well. The first one is hypsometrically the lowest, and the third one is highest. The second zone is located between them.

Second zone is specified by more complex relief compared to first and third ones. The most part of the study area is covered by this zone. First and third zones have relatively small areas.

The study area is located in semiarid climate zone.

Plant cover description of Chachuna area

The first zone is mainly covered by valley desert (semi-desert) plants. Wormwood formation (Artemisieta Lerchianae) plant communities are most common at this zone. In some places one can find mixed elements of steppe (Botriochloa Ischaemum) and desert (Salsola Dendroides, Salsola Ericoides).

The first zone plant cover is alike Bugha-Moedani and Kumro one.

Plant cover of the second zone mainly is presented by foothill desert and frigana plant communities. Their mosaicity can be found in some places of the zone. The main species of foothill desert plant communities are (Salsola Nodulosa) and wormwood (Artemisia Lerchiana). Besides them there are some other plants typical for this zone: Reaumuria Alternifolia, Stachys Fruticulosa etc. Frigana plants are presented by formations of Caraganeta Grandiflorae and Reaumurieta Alternifoliae plant communities. Some slopes and hills are out of plant cover.

Some slopes of the bottom part of the second zone, neighboring with first zone is covered by Atraphaxis Spinosa, which is presented by the shibliak type hemixerophilic bushes and arid forests (Thorn - Paliurus spina-christi, Buckthorn - Ramnus pallasii, Incense tree - Pistacia mutica etc.). Here and there one can find incense (Pistaciata muticae) arid woodland derivatives.

Badland hill-knolls and slopes of the plain ridges should be highlighted. The plant cover spread here is different from common slope's vegetation. There are various types of plant communities (steppe, Frigana plants, desert, semi-desert etc.), which is caused by micro edaphic conditions (the level of salt in the soil, claying etc.). So that, it is much possible that the pastures at these ridges are different from the other pastures from the study area.

Arid juniper forests are widespread at some areas of upper part of the second zone adjacent to the third zone. At some places they cover considerable area, at the others – form place to place. Junipers are found at macro north slopes and presumably are formed at brown (light brown) soils of arid forest.

Steppe vegetation is mainly spread at third zone (Botriochloeta ischaemum, Stipeta ssp.). Transitional plant communities can be often found among them. Presumably grassland sinusium is formed, existence of dried Phlomis Pungens, Phlomis Tuberosa etc. can serve as an evidence of that. From part to part one can find fescue grass (*Festuca Valesiaca*) typical to steppe and various tragacanths (Astragalus spp.) and desert (*Artemisia lerchiana*). This zone is also determined by shibliak type bushes. Accompanied with arid forest elements shibliak type bushes mainly can be found at micro ravines and their vicinity.

Assessments show that, plant cover of third zone is structurally closed to vegetation of Shavimta and Chighoelt khevi slopes. It should be note that hypsometrically these areas are approximately at the same height. This area is directly state border zone.

Description of the winter pastures

Located at Chachuna area, pastures number 8, 15, 16, and 17 are the subject of present study (see annex 4). The pastures have such numeration from soviet period).

The pastures are numbered ascending, therefore between pasture N8 and N15 there are several other fully active pastures N9, 10, 11, 12, 13 and 14, which are registered, so represent private property.

Neither studied pasture farms nor neighboring ones have water and electrical supply system. River Iori and Dali reservoir is the only source of water both for shepherds and livestock. For watering

shepherds have to transfer livestock from the pasture farms to river Iori, through Chachuna Natural Reserve. During this process, basically shepherds use the same road. Due to such everyday movement of about hundreds of sheep, the road's area is eroded and plant cover merely exists there.

For heating and cooking farmers have to use dried firewood from river Iori floodplain. Sheep stay at winter pastures for about 6 months, therefore each farm needs 6-8 cubic meters of firewood.

<u>Infrastructure</u>

To reach the winter pastures, which are located at the right bank of the river Iori, one has to cross the river through the Dali reservoir dam. Ground road goes to pasture N8 and N9, and then getting worse and finally disappears, or washed out by rain. Therefore reaching pasture N8 is not a big problem and farmer can provide the farm with any food or building materials, if necessary.

As for pastures N15, 16 and 17 one can move there only by special off-road vehicle and so the road has to be cleaned regularly. There is another alternative road to pasture N15, 16 and 17, but the bridge across the river Iori, located near pastures N13, 14 is too old and currently it is out of order. However it should be noted that the bridge was intended only for sheep and small cars.

As local farmers said one such bridge for sheep transferring is constructing by WWF. We've met with WWF representatives, got some consultations from them and seen the bridge itself, but it is not completed yet, and to reach N15, 16, 17 pastures shepherds still have to use Dali reservoir dam to cross the river Iori and then go through eight other private pasture.

Farms located at the winter pastures area were built 30-40 years ago and currently they are in a poor condition. It should be said, that very often shepherds with their family members, women and children have to live at such farms.

Winter farm is 600 - 1000 square meters, low ceiling building with a slate roof. The building is discharged from the manure through small windows, located at the back side of the farm. From the front side the farm often has three or four doors. The garages have dirt floor, which often becomes muddy in winter.



It also should be highlighted that none of the farms at our study area, has a pool for sheep processing. It is about 5-8 meters long pool, routinely used by shepherds to wash sheep in a solution against external parasites, before transferring livestock from winter to summer pasture. Thus, the shepherds try to avoid spreading of external parasites to other territories.

According to veterinary control, livestock transferring is forbidden without such treatment, against sheep external and internal parasites and other diseases.

Due to absence of water supply system at the farms, farmers have to conduct such treatment near lormughanlo.

Short description of winter pastures inhabitants

Currently three Azeri origin families with their children and 4 hired shepherds are living at farm N8. They have in total 2000 sheep, 20-30 caws, 5 horses and 5 donkeys.



There is only one farm remained at pastures N15, 16 and 17. Four farmers with their families and five hired shepherds are living there. They have in total up to 1500 sheep, 20 caws and 10 horses.



Analysis

Assessment of Chachuna area pastures (botanical aspect)

As we already said above the study area is specified by complex relief-edaphic conditions, although we can divide it into 3 microzones, in compliance with its relief and soil. The area can be divided hypsometrically as well. The first one is hypsometrically the lowest, and the third one is highest. The second zone is located between them.

Observation shows that as winter pasture the first zone is used most often (valleys along the floodplains of river Iori). Farms are located here as well, so that the most of the strain is observed here. Assessment points at degradation signs on plant cover.

According to the plant cover structure, the second zone can't be represented as good winter pasture; however our observations show pasturing here as well. Plant cover is not highly degraded and more or less corresponds with plant cover formed in such relief and substrate. Have to highlight that due to fragmented landscape sheep are under high risk of the predator.

In terms of pasturing the third, state border zone, experiences less stress, nevertheless pasturing is observed here too. Assessment shows there is no sign of plant degradation caused by anthropogenic impact. But it should be said that burnt part of the zone was revealed during observations. It is not determined whether ignition began at our territory or neighboring country. Should be highlighted also that pasturing in the third zone especially near the state border might cause serious problems. Sheep or shepherds can unintentionally cross the state border.

Sheep migration route

The main purpose of livestock migration route is to maintain the connection between winter and summer pastures and provide unhindered sheep transfer. Distance between winter and summer pastures is long enough (250-300 km) and it is necessary to have stop (rest) places.

All farmers at Chachuna area have summer pastures at Ninostminda or Tsalka Region, thus in spring (April - June) and in Autumn (September-November) they are obliged to be on the migration route from 3 weeks to two month. After the breakup of Soviet Union, when state-owned lands became private, most of the sheep migration routes were lost or became private. So that every year shepherds faced problems during sheep transferring.

During soviet times farms at our study area belonged to Akhmeta region and accordingly summer pastures also were located in Akhmeta region. To transfer from winter to summer pastures sheep were moved initially to Dedoplostskaro and then along Alazani Valley to Akhmeta. After 90th these pastures were used by farmers from Iormughanlo, who had summer pastures at Ninotsminda region, Chachuna-Dedoplitskaro livestock migration route actually does not exist any more. In case if it is necessary to change the location of summer pastures, then sheep transfer will have to be conducted on the ground road. The road width is 5-8 meters and some places of it still cover by asphalt. Distance between Dali reservoir and Dedoplistskaro is 35 km. Pastures and agricultural lands along the road are private and sheep transfer process takes place in Spring and Autumn, when the harvest is not yet taken, it is very difficult to control several thousand sheep, and there is a possibility that some of the sheep can damage the private land.

Neighboring winter pastures

Study pasture N8 borders private winter pasture, currently owned by Mr. Bezhan Gonashvili. His pasture is approximately 2500 ha and he is an owner of 3000 sheep. Bezhan Gonashvili has summer pastures at Ninotsminda district as well and agricultural land at Dedoplistskaro district. He produces barley and wheat to feed sheep in winter and, by own recourses, conducts all required vaccinations.

Farmers, whose farms are located between N8 and 15 pastures have to go through Bezhan Gonashvili's farm land to reach their winter pastures, because there is no sheep migratory route at the right bank of the river Iori. Sheep transfer provided based on private agreement. Twice a year during such transfer several thousand sheep migrate through Bezhan Ginashvili's lands. Interviewing him we could find out that he often asks his shepherds to control this migration, in order to prevent sheep flocks from damaging his pastures.

At this stage there is no conflict between Bezhan Gonashvili and other farmers from neighboring pastures. But it should be noted that in case of bridge building on river Iori, there won't be any need to transfer through Bezhan Gonashvili's pasture, which improves grass cover on his land.

Another farmer is Mr. Vazha Gonashvili. It is also impossible to reach both our study and summer pastures without passing through his territory. He owns 1500 sheep, has part of winter pastures at Chachuna area and Dedoplistskaro district (900 ha) and rents summer pastures from local owners. He buys barley in winter and tries to conduct all required vaccinations.

Conclusions and recommendations

The study area located at Technical Report was considered as 2000 ha. Indeed, the map corresponds to the area of 2000 ha, but after study of the area we concluded that much less area is suitable for grazing. One of the problem as we've already mentioned is Georgia-Azerbaijan border zone and another is complex landscape (ravines, cliffs, steep and eroded slopes), which makes difficult sheep migration process and does not correspond to pasture area. As an example, ravine at the pic. begins almost from N 8 pasture and dimidiate our study area. On one hand it complicates the movement of sheep in this area and on the other hand, due to the lack of vegetation has no nutrition value. It is should be highlighted that during the study we found soviet period map of winter pastures, where at the study area as a pure pasture at N8 we can consider 63 ha, at N15 – 73 ha, at N16 – 82 ha, and at N17 – 112 ha, which totally is 330 ha.



Pic. Ravine, area of winter pasture N8

It should be also noted, that these pastures were chosen as study area, because they were not registered and government implies them as free. In soviet times they belonged to local collective farms. But according to the local farmers it was revealed that these pastures are in a long-term lease (49 years) issued in 1995-96 and the whole area with its farms is rented. Therefore the status of supposed free, winter pastures, presented at this study, became undefined.

During the soviet period, winter pasture N8 belonged to collective farm of village Magharo , N15, 16 – to collective farm of village Koreti and N17 – to collective farm of Akhmeta.

After breakup of Soviet Union, state owned lands were handed over to local district administrations, and then they issued a long-term lease (at first for 9 years and then 49-years) on the most part of these lands. Some of the pastures and agricultural lands were redeemed and became private property.

Since 2004 Mr. Dimitri Natroshvili has got a long-term lease (49 years) on pasture N8 and the area is rented to Azeri origin farmer from village Iormughanlo (see annex 1). Winter pastures N15, 16 and 17 are under a long-term lease too. Mr. Jemal Mazanashvili holds the land and already redeemed and registered farm located at the pastures and is going to redeem the pastures as well. Currently he is waiting for the answers from Property Management Agency (see annex N2. N3). At this time the area and the farm on it are rented by farmer from village Iormughanlo.

Proceeding from all above mentioned, the study came to a conclusion that the territories can't be used as comparable alternatives for Currently Used Pastures in VPAs.

The list of the persons participated in present study:

Association "Tusheti shepherd", Murtazashvili Zurabi

Association "Georgian Shepherd", Gonashvili Beka

Local farmers:

Bezhan Gonashvili

Vazha Gonashvili

Muslum Mukhasov

Jemal Mazanashvili

<u>Shepherds:</u>

Natik Nasibov

Toma

Temo asabashvili

Vagif Bairamov

Elshada

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Annex 2. Documentation on property rights on pastures N15, 16, 17



איזאו (אדי איינט א

ამონაწერი საჯარო რეესტრიდან

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საგაღასახაღო გირავნობის/იპოთეკის უფლება: **საფუძველი: შეგყობინება,** NN042-54, 11.11.2008, საქართველოს ფინანსთა სამინისტროს შემოსავლების სამსახური თელავის რეგიონალური ცენტრი(საგაღასახალო ინსპექცია)N04/8191

ამონაწერის ნამდვილობის გადამოწმება შესაძლებელია საჯარო რეესგრის ეროვნული სააგენგოს ოფიციალური ვებ გვერდის საშუალებით:http://public.reestri.gov.ge

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Annex 3. Lease agreement on pastures N15, 16, 17

Annex 4. Chachuna Study Area Map

