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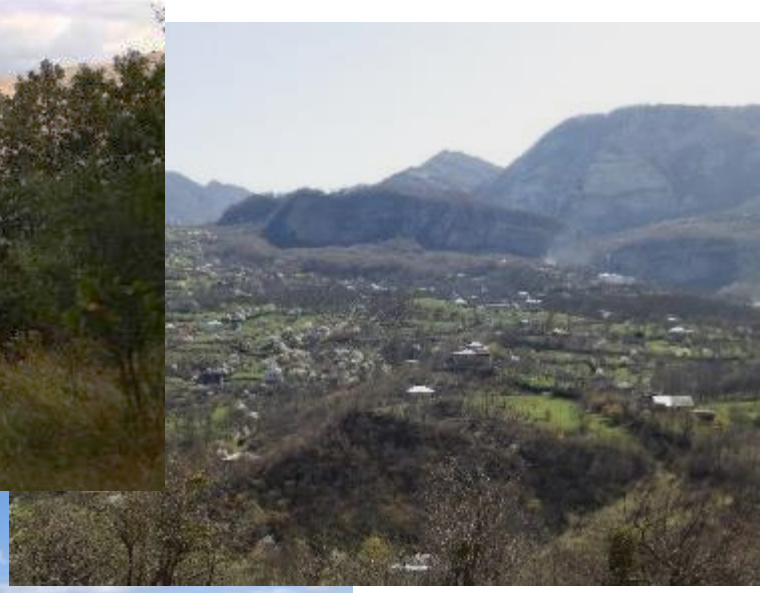
Third Progress Report
(1. 7. 2016 – 30. 6. 2017)

Promotion of Eco-Corridors in the Southern Caucasus
Consulting Services for Programme Implementation



July 2017

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Promotion of Eco-Corridors in the Southern Caucasus
Consulting Services for Project Implementation

Third and Fourth Progress Report

Programme deliverables 0.12 and 0.13

June 2017

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0. Executive Summary

This Progress Report covers the year of implementation of the "Eco-corridors Programme in the southern Caucasus" from 1st of July 2016 to 30th of June 2017 and represents the mid-term report of the programme.

The main achievements in this period are:

- Financial Participatory Approach processes have been implemented in 12 areas. In some areas, they achieved an advanced stage of planning leading more or less directly towards Conservation Agreements. In others, they will be followed up by local nature conservation "caretaker" group as a long term partner of WWF and ECF.
- Detailed field studies on habitats and target species in selected intervention areas of the ecoregional corridors were conducted during the summer and fall of 2016.
- A landscape concept, summarising the vision of ECF for each corridor has been drafted.
- Based on the landscape concept, opportunities for conservation measures and conservation agreements were identified in each pilot corridor.
- The first Conservation Agreement with the Gnishik Environmental Foundation in Armenia concerning the conservation measures in Khachik Community was signed and the savings accounts set up. The agreement includes a land use plan drafted in cooperation with the beneficiary.
- The first meeting of the Regional Consultative Forum was held in February 2017.
- A communication plan for the ECF was developed and several communication tools implemented.
- An organisational development plan for the Adjara Forest Agency was prepared.
- A study tour to Germany was conducted in June 2017 focusing on contractual nature conservation and conservation related subsidies.
- The fundraising strategy of ECF was prepared and new fundraising positions have been set up in WWF Caucasus Programme to implement it.
- ECF actions in Turkey and Russia supported by WWF Germany have been completed.
- A schedule of indicators to be monitored and evaluated has been set up for the ECF.

Being at mid-term of the programme, the initial assumptions of the ECP have been re-assessed. This assessment shows a more diverse picture of pressures on biodiversity than initially assumed. In particular, this relates to possible long term negative impacts (lack of sustainable land use) because of land abandonment connected with uncertain land tenure and poverty (with migration to the cities). On the other hand, the FPA processes so far have shown that local communities have a strong emotional as well economic ownership in the landscape and are ready to engage in conservation partnerships more than initially expected.

Based on the experience gained and actual needs identified, a modification of the Disposition Fund Budget is being proposed, significantly decreasing the initially planned resources for land use planning, shifting them mainly to financial instruments of Conservation Agreements and FPA. So far, only 0,6 million EUR out of the 5,6 million EUR of the Disposition Fund have been committed, mainly for FPA. The remaining funds will be used for Conservation Agreements in the next two years.

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Abbreviations

CNF	Caucasus Nature Fund
CTA	Chief Technical Advisor
ECF	Eco-regional Corridor Fund
ECP	Eco regional Conservation Plan
EU	European Union
EUR	Euro (currency)
FPA	Financial Participatory Approach
GEF	Global Environmental Facility
GIS	Geographic Information System
KfW	Kreditanstalt für Wiederaufbau
NC	National Coordinator
NGO	Non-governmental Organisation
TEEB	The Economics of Ecosystems and Biodiversity
TJS	Trans boundary Joint Secretariat
ToR	Terms of Reference
WWF	World Wide Fund for Nature - Caucasus Programme Office

1. Introduction

This is the publication version of the Third Progress Report of the "Eco-corridors Programme in the Southern Caucasus", covering a year of programme implementation form July 1, 2016 to June 30, 2016. This progress report combines two originally planned half year reports that have been merged to reflect the fact that some key activities, such as drafting of the first Conservation Agreement and the first Regional Consultative Forum meeting span the two reporting periods. By reporting on the entire period, duplication of similar information is avoided and the report rounds up an important phase of the programme. Production of a combined report has been agreed with WWF and KfW.

The purpose of the report is to account on programme implementation, evaluate progress made and introduce any necessary changes to the work plan. It covers the activities of the entire Programme Team including staff of WWF.

The "Eco-corridors Programme in the Southern Caucasus" is implemented in Armenia, Azerbaijan and Georgia by the World Wide Fund for Nature (WWF) Caucasus Programme Office with funds provided by the German Federal Ministry for Economic Cooperation and Development (BMZ) through KfW Development Bank and by WWF Germany. The consortium of GOPA, DFS and HessenForst are providing consulting services for the implementation.

The Programme is setting up an "Ecoregional Corridor Fund" (ECF) as an instrument for promoting sustainable land use practices in ecological corridors through contractual nature conservation, essentially payments for environmental services. ECF is a long term funding instrument run and managed by the WWF Caucasus Programme Office, initially funded by BMZ through KfW, but open to other donors and funding sources. The Eco-corridors Programme is the set up phase of operation of the ECF in its initial five years. It is implemented by the programme team involving WWF, WWF Germany and the consultant's team.

The purpose of the ECF is to introduce funding for ecologically sustainable land use in selected eco-corridors in the Caucasus and thus contribute to interlinking protected areas and enhancing their ecological stability. The financial resources provided are to help the local rural population (beneficiaries) living in selected eco-corridors to manage their land in an ecologically sound way.

To set the conservation objectives and determine the scope of conservation measures to be funded, long-term land/resource use plans (up to 10 years) will be developed with the participation of the beneficiaries. Based on these land/resource use plans, concrete "Conservation Agreements" will be concluded with those managing the land. Payments under these agreements will ensure that opportunity costs for a biodiversity-focused management of land are covered, and thus land use practices (incl. e.g. community conservation areas) compatible with the principles of sustainable land use in ecological corridors are applied.

Expected programme outputs are:

- Output 1: The ECF has been established as an instrument for promoting sustainable land use practices in ecological corridors.
- Output 2: Using the ECF funds, long-dated land use plans have been developed with participation of the beneficiaries; the plans are aiming to support the ecologically sound use of natural resources.
- Output 3: Based on the land use plans, concrete measures have been agreed upon (Conservation Agreements) and are implemented.
- Output 4: Acquisition of additional financial resources for the ECF.

2. Implementation of the Work Plan January 2016 – December 2016

2.1 Output 1: The "Eco regional Corridor Fund" (ECF) has been established as an instrument for promoting sustainable land use practices in ecological corridors

2.1.1 ECF governance and management procedures

The Operations Manual of the ECF was adopted on June 1st, 2016. The manual provides the formal framework for the operation of the Ecoregional Corridor Fund as part of the WWF Caucasus Programme.

In November and December of 2016, the initial meetings of the National Consultative Groups and of the Regional Consultative Forum were planned in order to take stock of the progress of the project and to discuss future planned activities with key stakeholder. Due to conflicting schedules and a high level of project activities towards the end of 2016, these meetings were rescheduled to February 2017.

The National Consultative Group meeting in Armenia was held on February 22nd , 2017 in Vayk Hotel and Tourism Information Center in Vayots Dzor Region with participation of the representatives of the Ministry of Nature Protection, Ministry of Agriculture (ArmForest), Ministry of Territorial Administration and Development, Vayots Dzor Regional Administration, mayors of a number of target communities, partner Armenian Business Bank, scientific institutions, NGOs (including those running FPA), UNDP, and WWF Armenia, in total 35 participants. The agenda of the meeting included the following presentations: FPA Progress, Landscape Planning and Involvement of Local Communities, Planned Conservation Agreements (Khachik, Areni, Artavan, Gndasar Massif), Introduction of Armenian Business Bank, and opportunities for cooperation. The group endorsed all planned activities, including planned conservation agreements.

The National Consultative Group meeting in Georgia was held on February 23rd, 2017 in WWF Caucasus office, Tbilisi, Georgia. The meeting was attended by the representatives of KfW Caucasus office, GIZ, Support Programme of Protected Areas, Transboundary Joint Secretariat (TJS) and Samtskhe-Javakheti Regional Association "Toleranti", and the ECP focal point from the Ministry of Environment and Natural Protection.

A Regional Consultative Forum meeting was held in February 28th, 2017 in Radisson Blue Iveria, Tbilisi, Georgia. As the first meeting of the Regional Consultative Forum, the opportunity was used to invite more stakeholders and partners to inform about and discuss the main developments, ongoing activities and the future plans of the programme. Representatives of KfW Caucasus, WWF Germany, GIZ, CNF, TJS, SPPA, TJS, REC Caucasus were invited as Regional Consultative Forum members. Altogether 47 participants attended including representatives of different governmental and non-governmental institutions, embassies, international donor organizations etc. The event was opened by the Minister of Environment of Georgia. The agenda included a presentation of the overall approach of ECF, a presentation of FPA and the landscape planning process in each country and the main methodological tools (FPA, landscape planning and conservation agreement); and an interactive poster sessions.

A Regional management board meeting was held on May 1st, 2017 in WWF Caucasus office, Tbilisi. The outcomes of the regional Consultative Forum, the draft Khachik conservation agreement, the status of selection of partner banks and the draft agreement with Armenian Business Bank, and the work plan for 2017 were discussed and adopted at the meeting.

2.1.2 ECF Communication Plan

In order to systematically address the complexity of communication about various topics and with various stakeholders, an international short-term expert (Ms Frances Klatzel) was engaged to prepare a comprehensive Communication Strategy for the ECF and possibly provide strategic communication

support over the course of the project. She conducted her first mission in December 2016 and developed a draft Strategic Communications Plan based on her assessment of the situation and the programme team communication workshop held on December 15. The draft plan was produced by March 2017 and can be summarised as follows:

ECF's main external audiences with a stake in the success of the project, i. e. target groups for communication, are:

- Involved groups (local communities, land owners/stewards).
- Mediators (government and local authorities, resource management agencies, other donor projects, NGOs, scientific institutions, media, prominent individuals).
- Donors and potential contributors to the ECF fund.

The immediate communications activities recommended for 2017 are:

- Develop clear, consistent messages delivered in "one clear voice."
- Initiate a Glossary of Terms with English, Armenian, Azeri, and Georgian terms in use and a Stakeholder Database.
- Develop an ECF website that is separate from the WWF website, so that it can be the repository of results and a communication tool for our target groups, including prospective donors.
- Finish and publish "landscape concept" documents for each corridor, explaining in layman terms what ECF is trying to achieve. Design and package briefing sheets.
- Develop a reporting application that the beneficiaries can use on their mobile phone to record their activities and share them via the ECF website and on Facebook. It would include an interactive map of the project areas where photo points for monitoring of progress or change can be posted.
- Develop Facebook pages or profiles in local language for each country to communicate with the beneficiaries and mediators.
- Follow up the FPA process with exchanges between different local communities and establishing longer-term local action groups (caretakers), who would promote nature conservation in the corridor region and provide general support to the beneficiaries, who will enter the conservation agreements.
- Produce promotional materials for the local communities, such as t-shirts with drawings of target species.
- Provide regular updates in newsletters and/or email bulletins by each country using SMS, Twitter, what's app, or Facebook.
- Establish regular communication with the local residents and communities, local NGOs, and government agencies, especially those doing overlapping activities. Provide inserts for business/community publications. Translate briefing sheets into local languages.
- Establish a Key Communicator Network within communities and local NGOs.
- Do regular briefings of national ministries – meetings of the National Consultative Groups and the Regional Consultative Forum.
- Publish articles and/or case studies internationally.

2.1.3 Capacity building

In the second half of 2016, capacity building was done at several levels:

- For the ECF programme team, two regional programme workshops for team exchange and training, in particular the results of FPA and landscape mapping.
- July 20 to 23rd 2016: Negotiation and Fundraising
- December 15th 2016: Communication
- For local communities, capacity building of FPA facilitators, the Regional Working Groups and other stakeholders. Details of these activities are described under the headings related to FPA in each country.
- For important partners with regard to the planning and implementation of Conservation Agreements. In Georgia, along with the Ministry of Environment and Natural Protection, an important partner is the Department of Environment Protection and Natural Resources and its subordinated unit Adjara Forest

Agency. They are responsible for managing most of the land in the Western Lesser Caucasus corridor in Adjara and are indispensable in the setting up of the conservation measures in this corridor. A Memorandum of Understanding was signed between WWF and the Adjara Environment Protection Department stating a cooperation with the Eco-Corridor Programme. This includes:

1. the integration of biodiversity conservation objectives in forest management plans.
2. joint planning of conservation measures and the involvement of the Forest Agency in the implementation and monitoring of Conservation agreements that relate to forest management.
3. the preparation of an organisational development plan for the Adjara Forest Agency[1].

This activity is coordinated with the UNDP project "Enhancing Management of the Protected Areas in Ajara" that focuses on the support zones of the National Parks and Reserves in the coastal mountains of Ajara (western end of the ecoregional corridor), including provision of firewood to the local communities. It was agreed that they would partly support the capacity building programme for the Forest Agency once it is developed.

The model of cooperation with the Adjara Forest Agency has been used to explore similar opportunities for cooperation with the Forestry Agency of Georgia, Armenian Forests and Azerbaijan Forestry Agency.

- One of the priorities for the Ministry of Environment and Natural Protection of Georgia has been the human wildlife conflict due to the increase of public attention to damages and injuries caused by the brown bear and wolf in the mountain regions of Georgia. Awareness raising and communication, as a means to mitigate the human wildlife conflict, is also one of the planned activities of ECF. In cooperation with the Ministry, a leaflet regarding risk reduction related to brown bear and wolf and the rural population. The leaflet was printed and distributed across Georgia in early 2017. It will also be used as a communication tool in the ECF intervention areas.

2.2 Output 2: Using ECF-funds, long-dated land use plans have been developed with participation of the beneficiaries to support the ecologically sound use of natural resources

2.2.1 Corridor delineation and landscape mapping

In 2015, the process of landscape-level conservation planning (needed for setting conservation objectives and designing conservation measures) started, combining:

- Satellite-based recent land cover map of each corridor (to provide the basic framework for further analysis and planning) and
- Habitat suitability analysis for the target species in each corridor (to set priorities for conservation intervention).

The results of these studies were available in mid-2016 that led to define conservation objectives - the backbone of the landscape vision for each corridor. The results of the studies were also used to "zoom in" the FPA processes, i.e. set more narrow geographic and thematic priorities in the priority communities, and to conduct more detailed field studies in the selected intervention areas of the ecoregional corridors. During the summer and fall of 2016, short term local experts (zoologists, foresters, pasture and land tenure specialists), were engaged to conduct these field studies in each corridor, and GIS specialists to integrate the study results in WWF's Geographic Information System (GIS).

Based on all the results obtained and the conservation objectives agreed, a summary document, titled "Landscape Concept" has been being prepared for each corridor. It is also planned that a layman's version of these concepts will be prepared and printed to facilitate the communication of the ECF objectives.

More details of the process and the results in each country are presented below.

[1] Two international short term experts (Mr Matjaž Harmel and Mr Jurij Beguš) prepared this plan in September and December 2016 and April 2017.

2.2.1.1 Armenia

According to the habitat suitability analysis and the conservation objectives set in the first half of 2016, the first geographic priority for intervention in the South Eastern Lesser Caucasus is the central zone of the corridor in the Vayots Dzor province. It includes:

- Mount Gndasar Massif, including large area of Zangakatun in Ararat province
- Gnishik Protected Landscape with surrounding Arpa Canyon
- Artavan Mountain Forest with surrounding high mountain grasslands

Five local short term experts were mobilised to conduct detailed studies in the above target areas. These are:

- Land use and land tenure expert Arayik Babayan, focusing on 19 communities/villages in 4 priority clusters in Vayots Dzor region;
- Grassland expert Gagik Tovmasyan studying 7 target communities in Vayots Dzor region;
- Forest expert Andranik Ghulijanyan focusing on the Artavan Mountain Forest;
- Zoology expert Pavel Veinberg providing an assessment of target species, mainly Armenian mouflon and Bezoar goat in the target areas;
- GIS expert Gorik Avetisyan providing mapping assistance to other short-term experts;

The results and selected conservation measures were presented in a national workshop on November 4th, 2016 at the WWF-Armenia office in Yerevan.

Land use and land tenure data were obtained and mapped for each of the 19 target communities/ villages of the entire central corridor zone (**Figures 1 and 2**). Those communities that are not of interest for implementation of conservation measures, i.e. are under long-term leases or actively used by farmers, were excluded from the analysis, leaving a study area of 446 km^2 (while the territory of all 19 communities covers 991 km^2). The study area mainly includes community owned pastures and "other agricultural lands[2]" (66%), forests and forest lands (32%), and private farm land (arable lands, meadows on 2%).

[2] "Other agricultural land" is a land cadastre category that should mainly include land unusable for agriculture such as gorges, ravines, steep slopes, rocks etc. Because of low productivity this land is taxed at a zero rate. In some communities, a significant share of land is listed as "other agricultural land", while still being used as low productivity pasture land.

Figure 1.: Land use map of target communities

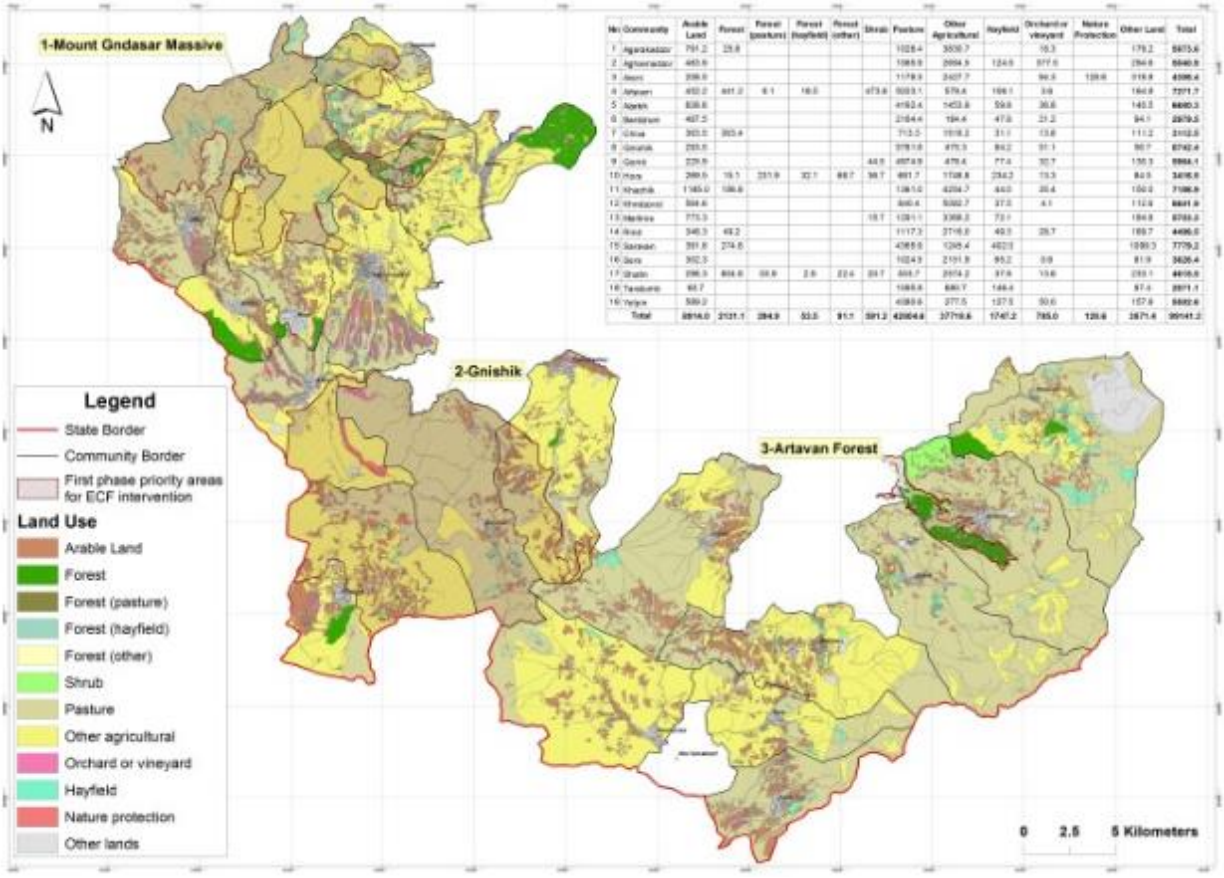
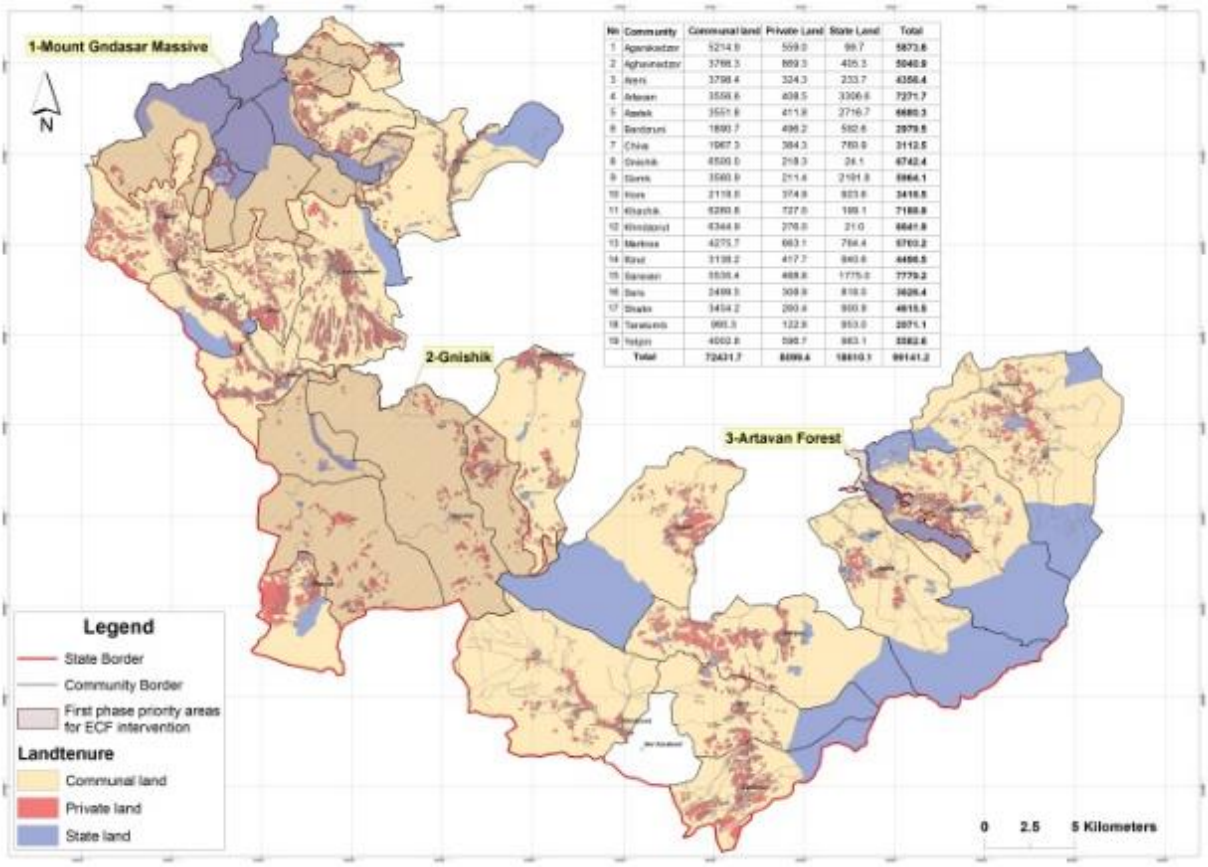


Figure 2.: Land tenure map of target communities

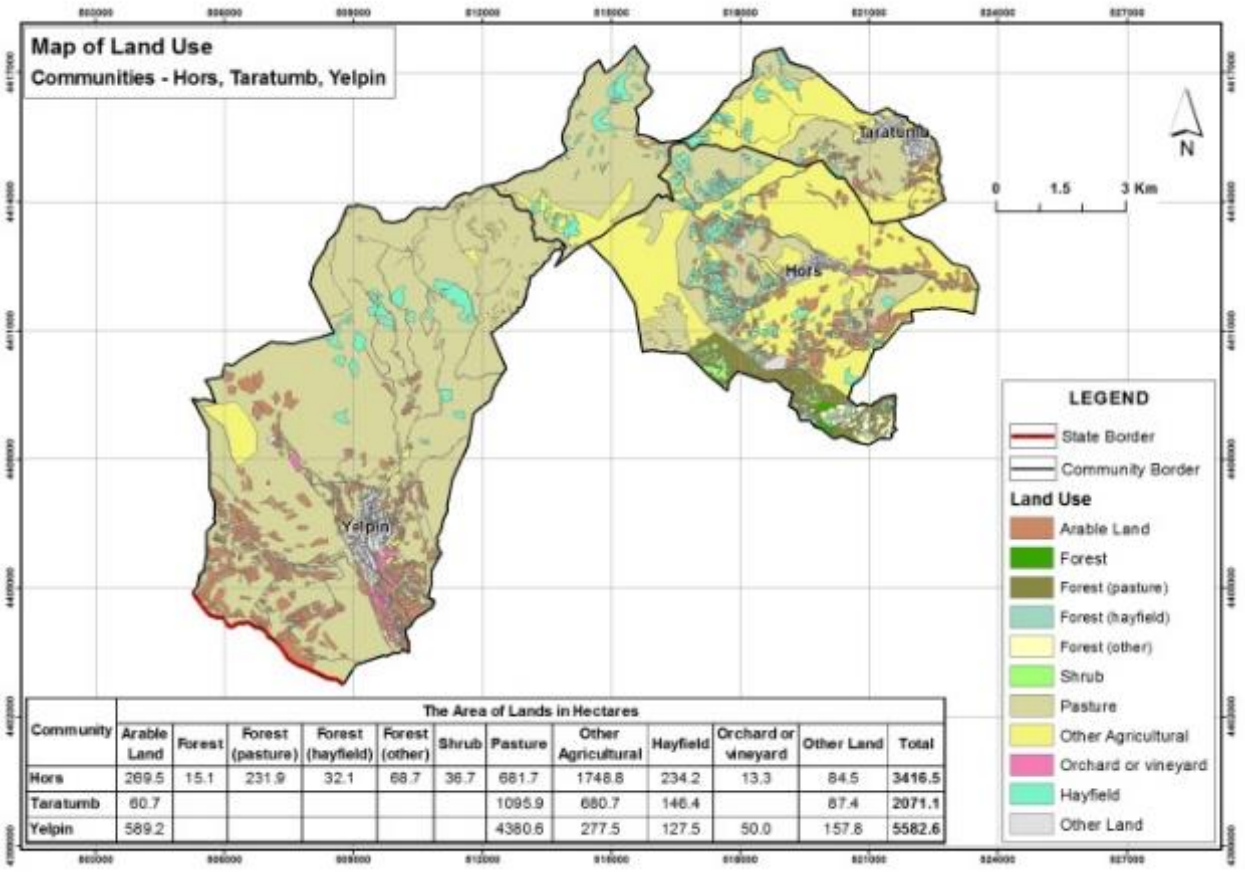


Private lands are mainly located within or close to villages and often too small to justify ECF interventions. This means that conservation measures are only reasonably implemented on community lands and on state-owned forest lands (including 24.184 ha of pastures, 16.205 ha of other agricultural lands and 1090 ha of forests).

In the study area, the current intensity of land use for agricultural and other purposes is low due to depopulation of the rural areas and the inability of farmers to develop more intensive farming due to lack of capital. This means that any conservation measures paid for will likely increase the incomes of the local population rather than reduce them. The situation of low pressure on the land use represents an opportunity to introduce nature friendly land use practices at this stage and thus avoid possible introduction of environmentally harmful practices in the future.

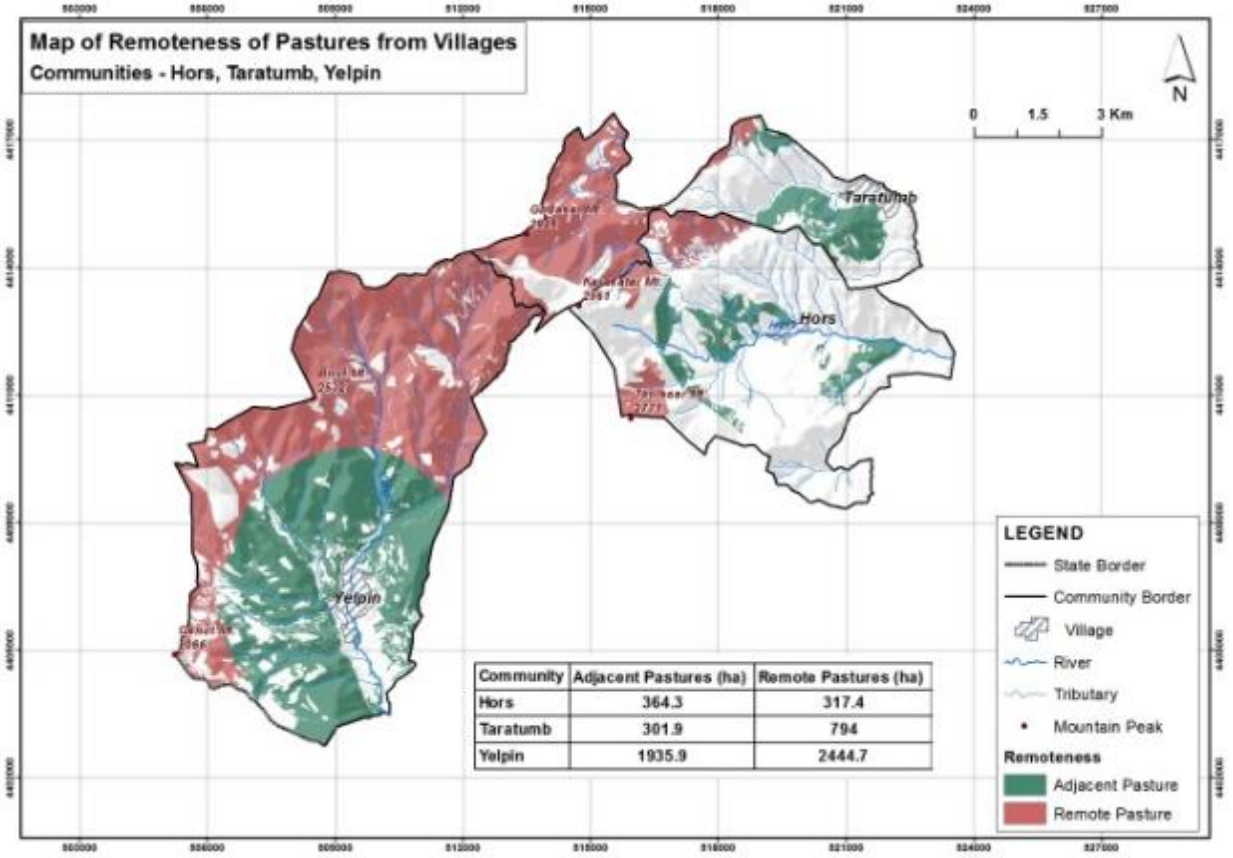
Grassland studies in 7 communities of Vayot Dzor, Hors, Taratumb and Yelpin (Mount Gndasar Massif) and Bardzruni, Khndzorut, Martiros and Sers (Zaritap cluster) mapped on community pastures functional significance, proximitity of pastures, degradation indicator/index, soil erosion tendency index, ecological condition (comparison of actual loads with the norms of permissible livestock load). The results are shown in **Figures 3**, **4**, **5** and **6**.

Figure 3.: Land map of functional significance



Community	The Area of Lands in Hectares											
	Arable Land	Forest	Forest (pasture)	Forest (hayfield)	Forest (other)	Shrub	Pasture	Other Agricultural	Hayfield	Orchard or vineyard	Other Land	Total
Hors	269.5	15.1	231.9	32.1	68.7	36.7	681.7	1748.8	234.2	13.3	84.5	**3416.5**
Taratumb	60.7						1095.9	680.7	146.4		87.4	**2071.1**
Yelpin	589.2						4380.6	277.5	127.5	50.0	157.8	**5582.6**

Figure 4.: Map of adjacent and remote pastures



Community	Adjacent Pastures (ha)	Remote Pastures (ha)
Hors	364.3	317.4
Taratumb	301.9	794
Yelpin	1935.9	2444.7

Figure 5.: Map of soil erosion tendency index

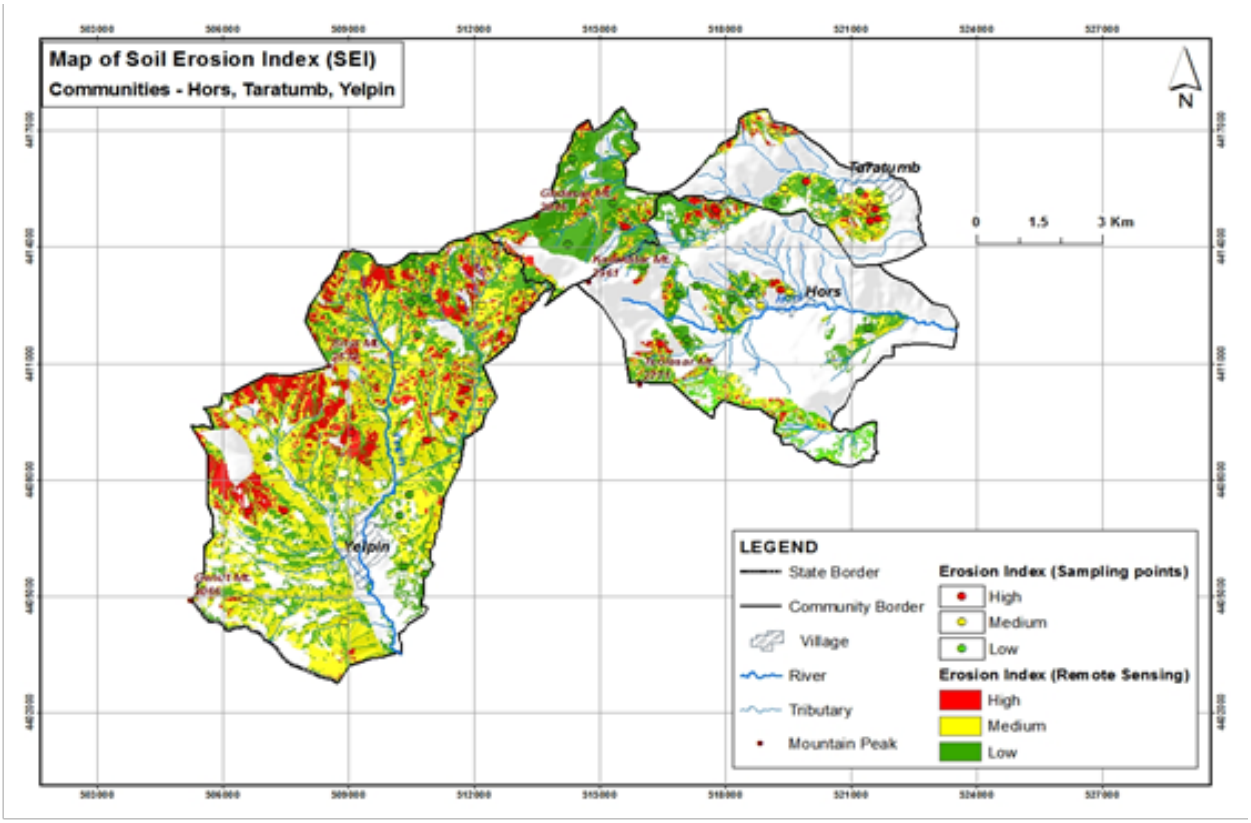
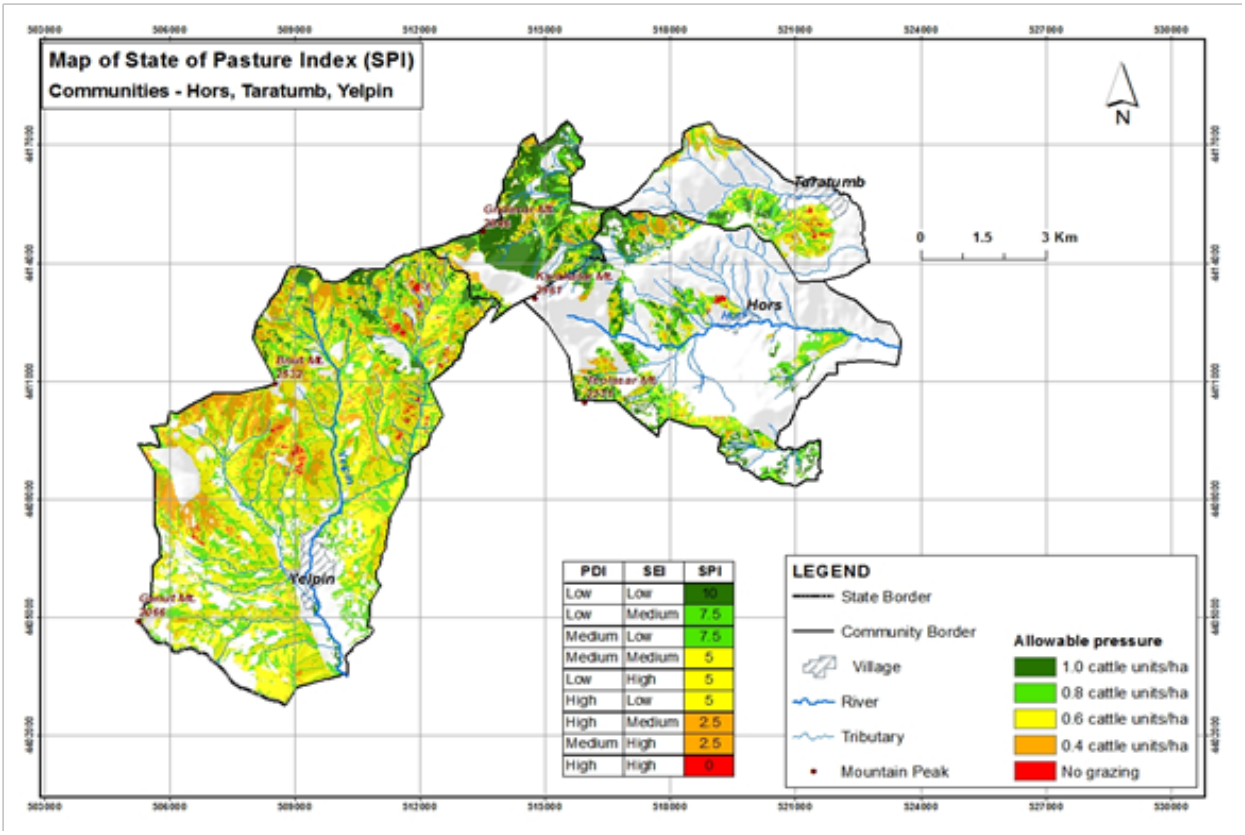


Figure 6.: Map of state of pasture index



Currently, pasture lands are used in a traditional fashion, mainly by individual farmers without any joint pasture management. Sustainable pasture management practices are not applied. Remote pastures are hardly used because of poor access (lack of roads) and a lack of necessary infrastructures (watering points, lodging of cattle herders). The livestock density on the pastures during the seasons varies between 0.12 and 5 ha per cow on adjacent pastures and 0.19 and 12.2 ha per cow on remote pastures. This means that some pastures are overgrazed while others are under grazed. Overgrazing leads to destruction of top soil and subsequent erosion. Under-grazing leads to vegetation succession (inedible herbs and shrubs) until forest arrives. In both cases, pasture productivity diminishes over time. Improved management of grasslands that would rehabilitate both over- and under grazed pastures, including rotation of grazing and haymaking for the winter, could deliver higher animal productivity while at the same time reducing the total area of land used for animal husbandry.

Forests are the rarest terrestrial habitat type in the Vayots Dzor part of the eco-corridor. The surface of forest lands in Hors community is 392 ha, of which around 100 ha on cliffs and steep slopes are an appropriate habitat for Bezoar goats (**Figure 7**). Most of them are in the early stages of development and it is expected that more shrub land and forests will gradually develop on abandoned pastures and "other agricultural land" as the animal husbandry concentrates on the more productive pastures and meadows.

From the point of view of conservation objectives, the most valuable and the largest forest in the region is the Artavan mountain forest. It is large enough to provide high value habitat (stepping stone) for target species (Brown bear and Bezoar goat), as well as Boar, Lynx and a number of other mammals and birds. It is considered a high value element of the landscape. The forest is situated between 1200 and 2500m above the sea level. The forest complex covers a total area of 866 ha, of which 528.5 ha is forest, 138.3 ha sparsely-forested areas and 70.5 ha grasslands (forest glades). Non-forest lands cover 112.6 ha, including rock outcrops, screes and waters. The cliffs and steep slopes provide appropriate living conditions for Bezoar goats (**Figure 8**).

Figure 7.: Distribution of rocks and steep areas in the forest of Hors community

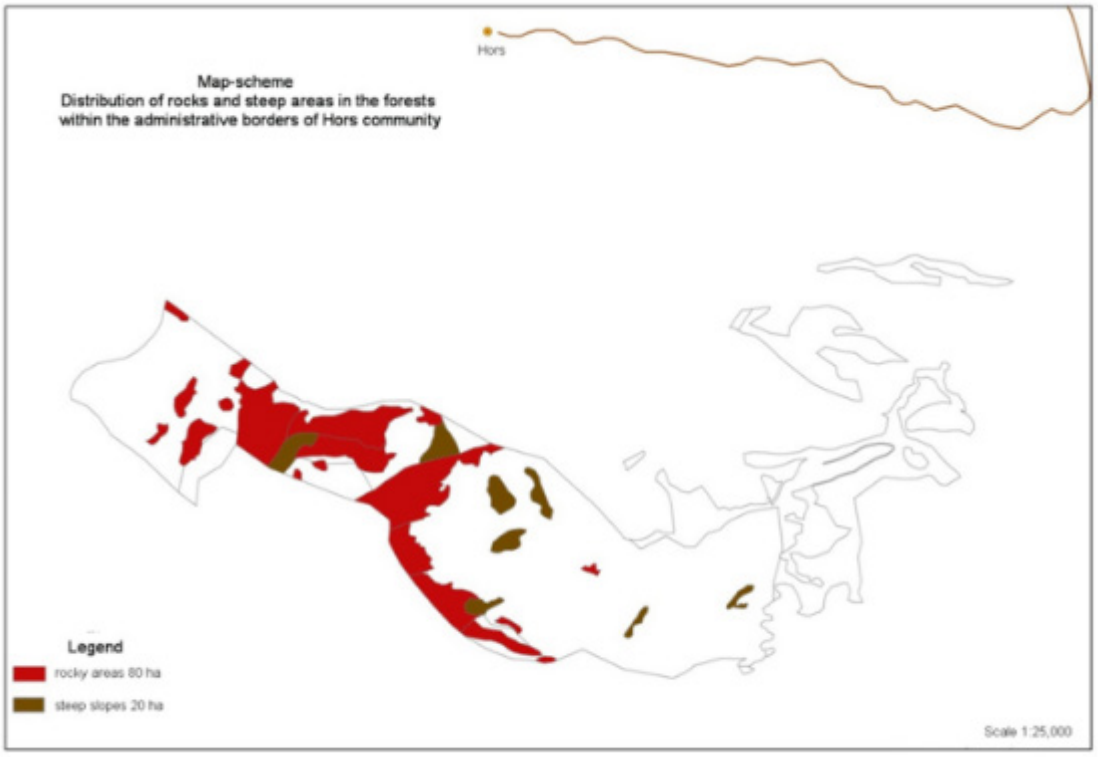
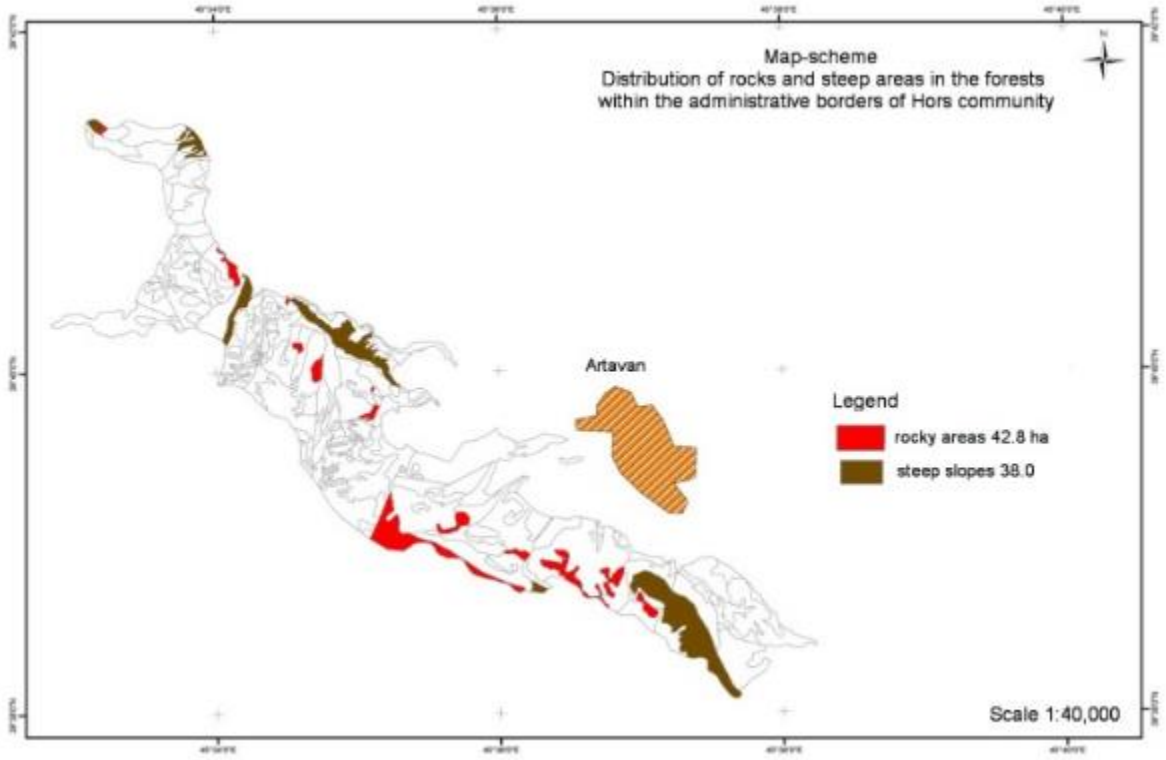


Figure 8.: Distribution of rocks and steep areas in Artavan mountain forest



The dense forest is dominated by stands of oak, covering 371,3 ha carrying 23.170 cubic meters of timber. The southern slopes of the area are mainly occupied by open juniper woodlands (**Figure 9**). Also, the

exposure to wild fires has been studied and mapped (**Figure 10**). The average class of fire risk is 2.9, the most exposed 1st fire risk class stands being the open juniper woodlands and pine stands.

Artavan mountain forest plays a significant role in the economy of local inhabitants as a source of firewood (collection of dry branches and trees) and of non-timber forest products (herbs, mushrooms, forest fruits). A local forester from Hayantar manages the forest. The forest needs to be preserved in the future, inter alia also as an example of how a mature forest looks in the otherwise bare corridor. This may be achieved by developing a multi-purpose management plan for the forest and involving the local community in its protection and sustainable use.

Figure 9.: Distribution of forests by stand density

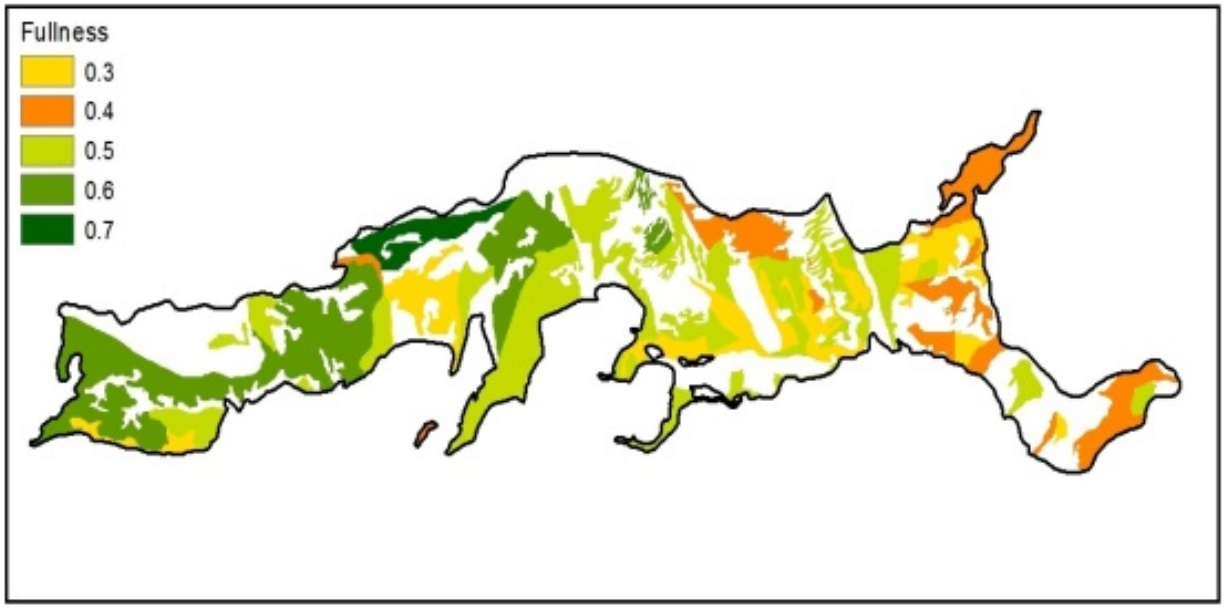
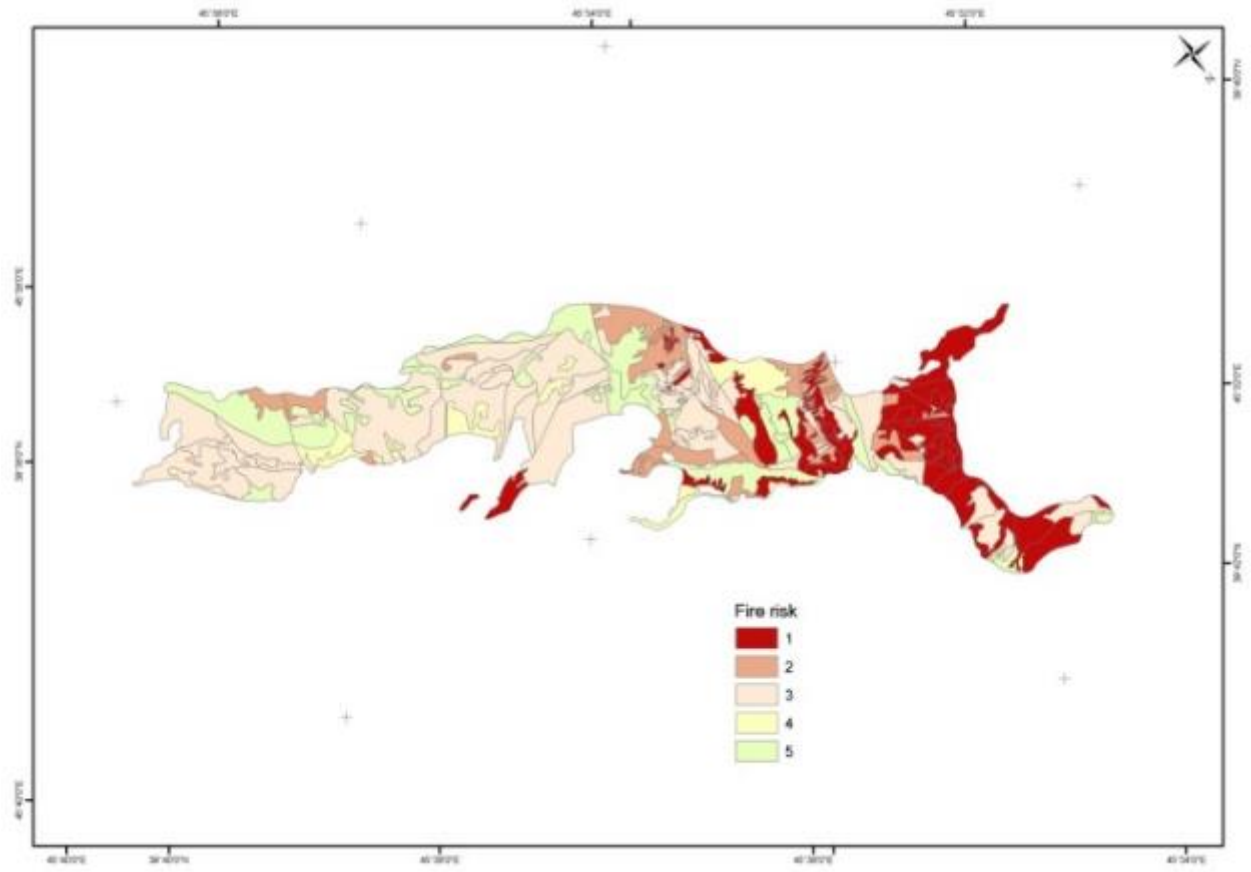


Figure 10.: Stand distribution according to fire-danger classes.

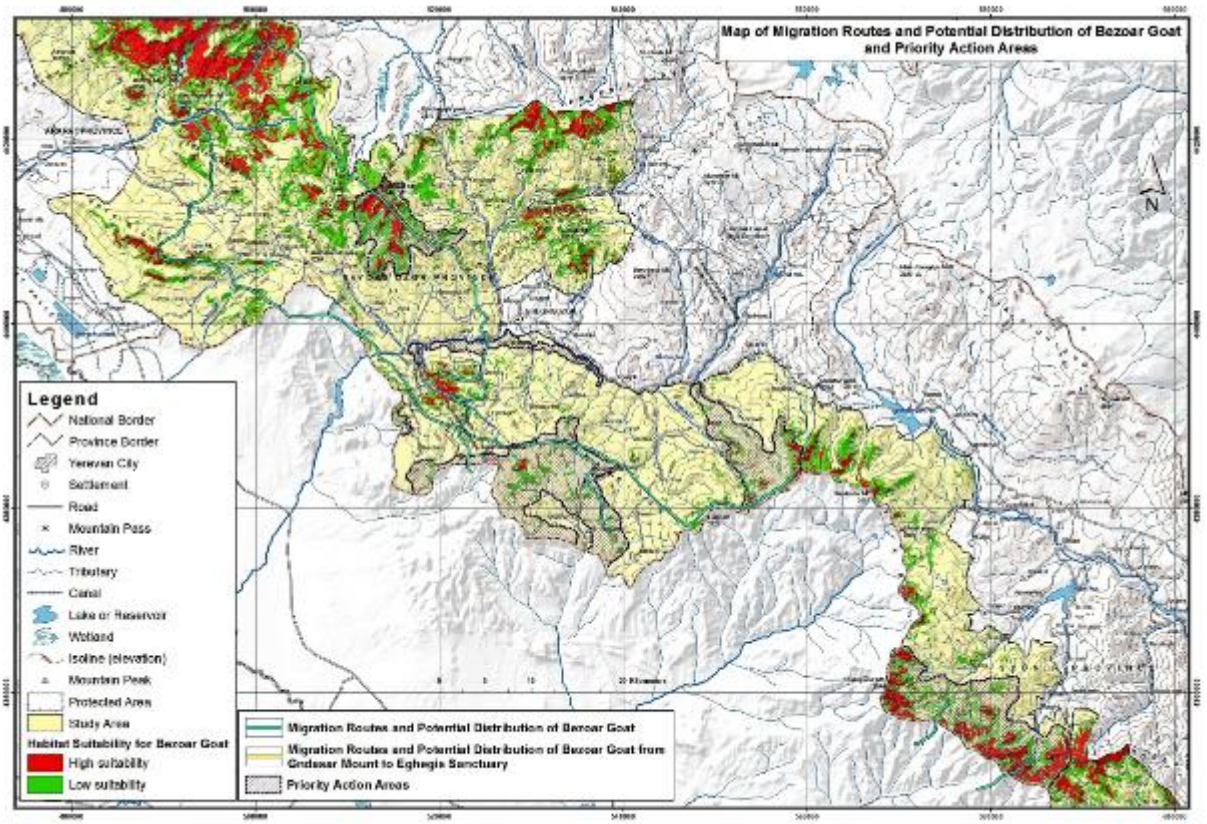


Zoological studies were carried out in Syunik (Arevis), and in Vayots Dzor (Artavan, Gndasar Massif) regions. Wild animals and their tracks were mapped and local people were interviewed to determine the actual and potential range of the target species. Based on the collected information, the previous habitat suitability maps were updated with highly suitable (core) habitats and connecting wildlife corridors for the target species and Priority Action Areas were proposed (**Figure 11**).

Also, the current numbers of Bezoar goat and Mouflon within the priority areas were estimated:

- Gndasar Mountains : Bezoar goats up to 100, including males which reside in the summer.
- Artavan - harbours some 30-50 bezoar goats.
- Border zone Areni-Martiros may harbour non-resident goat and especially Mouflon.
- Arevis-Nzhdeh Priority Area harbours some 100 bezoar goats and about 10-20 Mouflon.
- Arpa River Canyon harbours an unknown number of Bezoar goats.

Figure 11.: Priority Action Areas in the South Easter Lesser Caucasus Eco corridor



To monitor the impact of conservation measures, a methodology for assessing the target herbivore populations was elaborated based on densities in monitoring areas and age and sex structure

Implications for next steps

As the results of the field studies available, the conservation objectives for the South East Lesser Caucasus Corridor were reassessed in view of new information. Objectives were not changed, and only Local hunters' associations were removed from the list of conservation agreement partners in view of the identified political and conservation risks associated with the possibility of hunting management being used as a possible conservation measure (**Table 1**).

Table 1.: Conservation objectives for the South East Lesser Caucasus Corridor (Armenia)

Target Species	Conservation objective	What it needs	Applicable area	Possible conservation measures	Conservation agreement partners	Other partners
Bezoar Goat	Increase the range and number of the Beazoar goat	Protection from poaching Livestock free habitats	Gnishik Mount Katarsar Mount Gndasar Sisian region	Set up community based wildlife management areas Dedicate habitat areas Better controlled pasture management	Livestock keepers (associations)	Communities
Mouflon	Increase disturbance free habitat and number of Mouflons	Protection from poaching Livestock free habitats	Mount Katarsar Gnishik Sisian region	Set up community based wildlife management areas Dedicate habitat areas Better controlled pasture management	Livestock keepers (associations)	Communities

Brown bear	Reduce damage caused by bears	Introduce measures by state agencies	Entire corridor	Capacity building regarding human wildlife conflict Awareness raising Dedicate habitat areas		Communities Ministry of Nature protection
High value landscape elements	Conservation or restoration	Individual measures as needed	Within other intervention areas Holy sites	Community conservation area depending on needs	Partners of conservation agreements in the area	Communities
Leopard	Increase the availability of prey (herbivores)	Protection from poaching More Bezoar goats and Mouflons	Entire corridor	Set up community based wildlife management areas Dedicate habitat areas Better controlled pasture management	Livestock keepers (associations)	Communities

Based on field research and the ongoing FPA activities (see 2.3.1.1 Armenia), possible ECF conservation agreements were identified in Vayots Dzor region. These are:

- Khachik conservation agreement (€ 250,000) for wildlife habitat management - March 2017;
- Areni conservation agreement (€ 125,000) for wildlife habitat management - June 2017;
- Mount Gndasar Massif conservation agreements (total up to € 500,000 for up to 7 contracts) for community managed conservation area - end of 2017;
- Artavan Mountain Forest conservation agreement (€ 40,000) for introduction of community based protection and sustainable use of the forest - end of 2017.

2.2.1.2 Azerbaijan

During the habitat suitability modelling and setting conservation objectives, four sections of the Eastern Greater Caucasus ecoregional corridor were selected for further consideration:

- Zagatala,
- Shaki and Gakh,
- Khinalig and
- Gonaghkend

These areas provide the connectivity between the existing protected areas and between different sections of the Shahdag National Park. As they are quite large, the purpose of the detailed studies was to further narrow the geographic scope of studies and subsequent conservation measures, and to analyse the situation in the narrowed down target communities.

The following experts have been involved into detailed field study:

- Araik Babayan, Bayram Gafulov, Land use and Land tenure experts,
- Azerchin Muradov, Forester,
- Pavel Veinberg, Zoologist,
- Eldar Shukurov, Grassland expert,
- Nargiz Mammadova, Botanist,
- Shahin Huseyinli, GIS expert.

The studies were conducted in two stages. First, the zoologist was prioritised the wildlife corridors identified by the habitat suitability analysis for target species. The criteria for setting priorities were: connectivity between stepping stones, suitable conditions for natural reintroduction of target species and overall conservation value of the landscape within the entire corridor. Based on the presence of target species and the actual suitability of habitats, Zagatala, Khinalig and Gonaghkend conservation areas were selected as priority. These areas were then analysed in detail including:

- Assessment of suitable habitats for target species and opportunities for their expansion;
- Specification of a draft monitoring methodology for Caucasian Red Deer, Eastern Tur and Caucasian Chamois;
- Assessment of forest areas and identification of measures for their sustainable management;
- Assessment of grasslands, comparing their productivity to the number of livestock and the level of degradation, identification of potential intervention areas and proposed conservation measures for their sustainable use and management;
- Identification of endangered plants communities and their habitats, the level of degradation and existing pressure; setting recommendations for rehabilitation and management of endangered plant communities;
- Identification of land users, forms of land ownership and management, and types of lands;
- Identification of conservation measures for target species, including geographic location.

All outputs of the studies were integrated into WWF's GIS.

National expert meeting to discuss the findings took place on 26th September 2016 in ECF programme premises. During the meeting, the intervention areas (within priority conservation areas) were identified, conservation measures proposed and recommendations discussed and agreed. Also, the draft monitoring methodology of target species was presented and discussed.

A National workshop presenting the studies' results was held on 1st November 2016. Attendees were the Ministry of Ecology and Natural Resources, UNDP, GIZ, National Academy of Science and Savings Banks Foundation for International Cooperation, Azerbaijan.

The following section presents short descriptions of the potential intervention areas and proposed conservation measures.

2.2.1.2.1 Meshlesh Intervention Area

Meshlesh Intervention Area (ranging from 1016 to 3080 m altitude) covers app. 6,641 ha and is located within Jar and Meshlesh communities, with state forest lands of 2765 ha and pastures of 3877 ha. The proposed area provides a corridor for Tur, Chamois and Red Deer between Zagatala Nature Reserve and Ilisu Nature Reserve (**Figure 12**) as well between Azerbaijan and Russia.

A possible conservation measure is wildlife habitat management integrated with forest and pasture management (regulated calendar of pasture use). Expected partners are land users **(Figure 13 and 14)**, Zagatala Forest Department and local municipality. Conservation Agreements are planned to be signed in 2018.

Figure 12.: Zagatala Priority Conservation Area and species migration maps

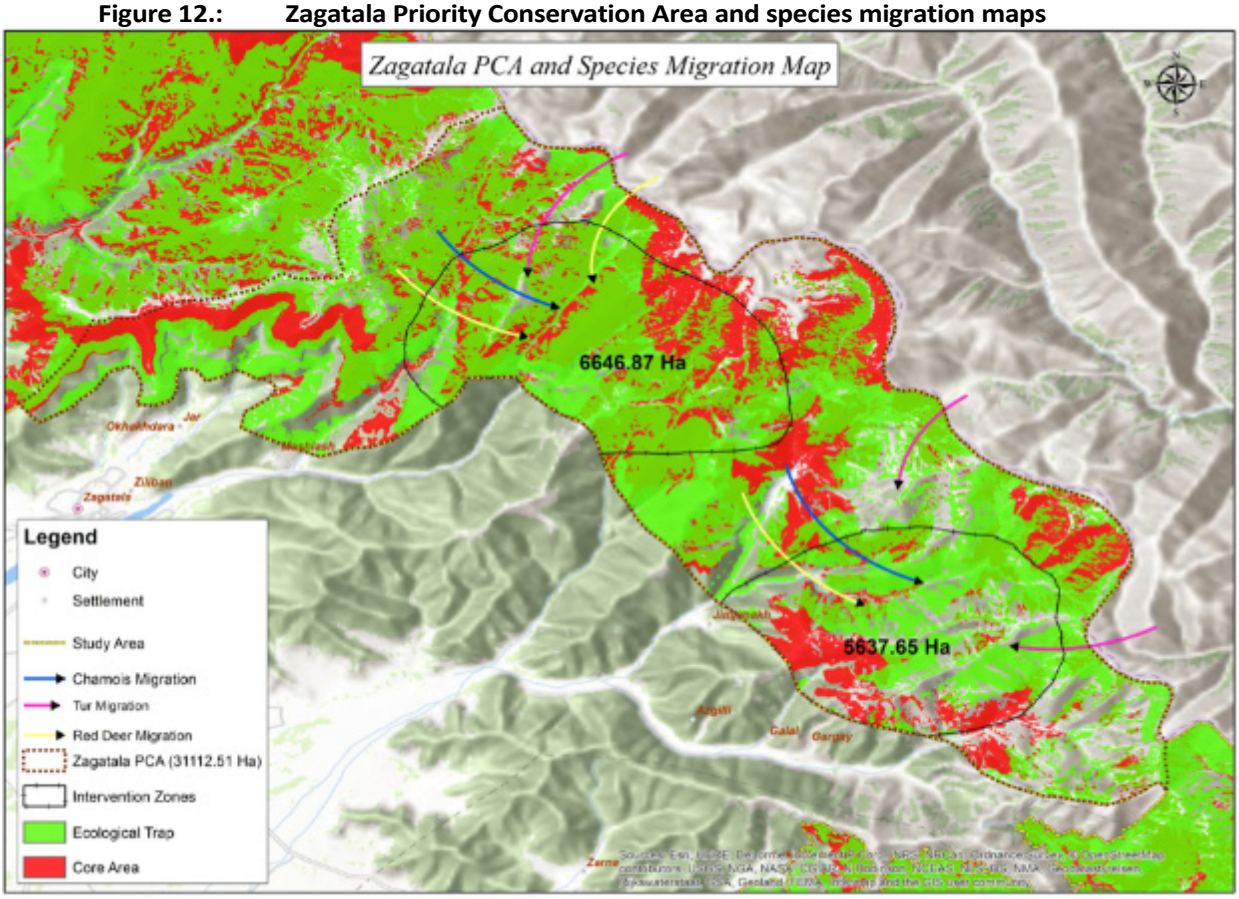


Figure 13.: Land tenure and land use map of Zagatala Priority Area with two intervention areas

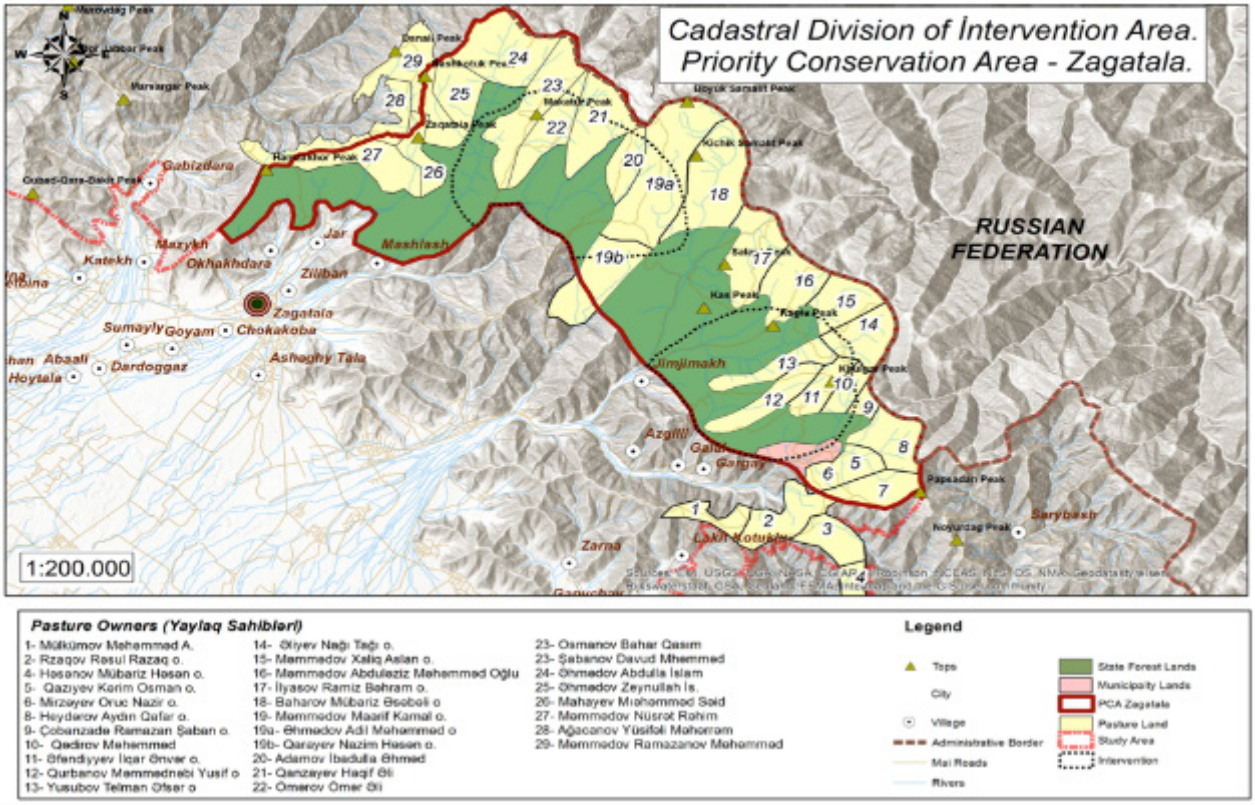
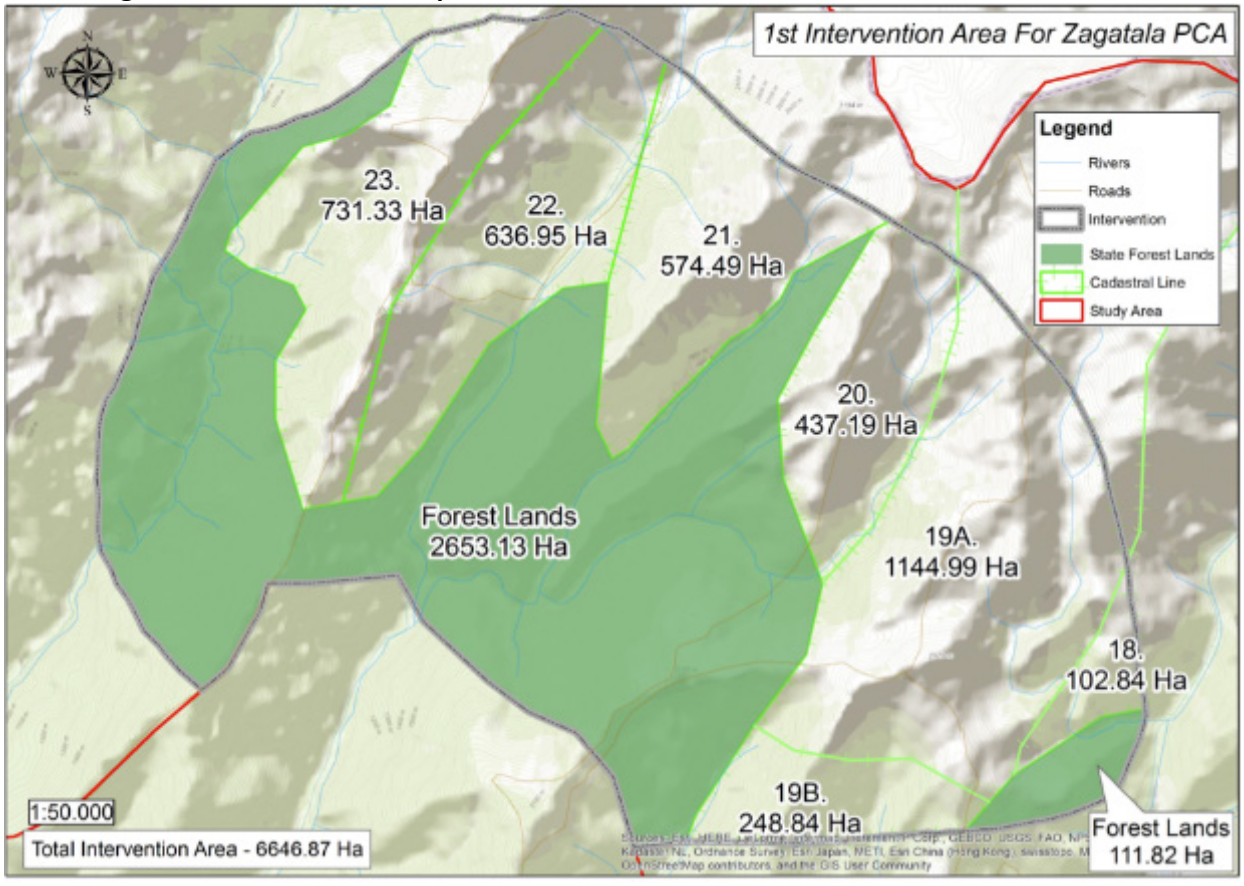


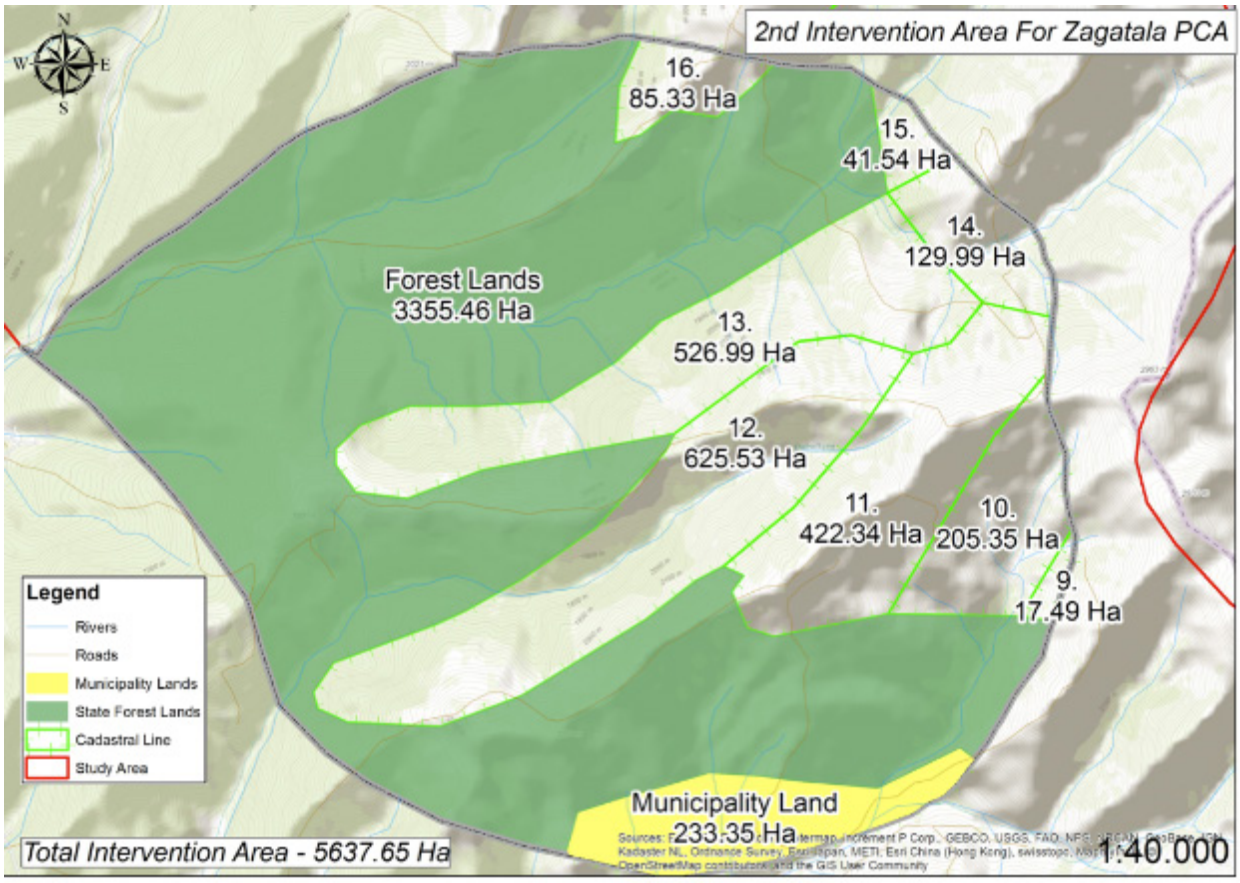
Figure 14.: Land use map of Meshlesh Intervention Area



2.2.1.2.2 Cimcimax Intervention Area

Cimcimax Intervention Area covers app.. 5,643 ha and is located in Cimcimax, Galal and Gargay communities. The total area of municipality land is 233 ha, with state forest land of 3355 ha and pastures of 2288 ha. The highest point is Mount Khutor (2844 m a.s.l.), the lowest point is Cimcimax gorge (911 m a.s.l). The intervention area already functions as a corridor for Red deer (forest zone), Chamois and Tur (mainly upper part of the alpine zone). A possible conservation measure is wildlife habitat management integrated with forest and pasture management (regulated calendar of pasture use). Expected partners are land users (**Figure 15**), Zagatala Forest Department and local municipality. Conservation Agreements are planned to be signed in 2017.

Figure 15.: Land tenure map of Cimcimax Intervention Area



2.2.1.2.3 Gyzylgaya Intervention Area

Gyzylgaya Intervention Area is located in the Khynalig area within Guba administrative territory. It is a canyon between Shahdag and Gyzylgaya Mountains, which covers app. 978 ha above Laza village (32 ha belong to Reserve Fund Land and the rest are Pasture Lands administered by the Rayon). Presently, Tur is the only ungulate species there.

The main value of this area is that is provides a corridor for Tur between Shakhdagh and Gyzylgaya Mountains on Limestone Range. Limestone Range massif harbours mainly female Turs with offsprings. Adult males mainly stay on the Shakhdagh and Watershed Range (Bazarduzu and Tufandagh) and visit the females during the rut, migrating through the proposed intervention area (**Figure 16**).

Possible conservation measures include rehabilitation and sustainable use of pastures integrated with mountain tourism development. Expected partners are land users (**Figure 17 and 18**), local municipality and Executive Authority of Guba region. Conservation Agreements are planned to be signed in 2018.

Figure 16.: Khynalig Priority Conservation Area and species migration maps and two proposed intervention areas.

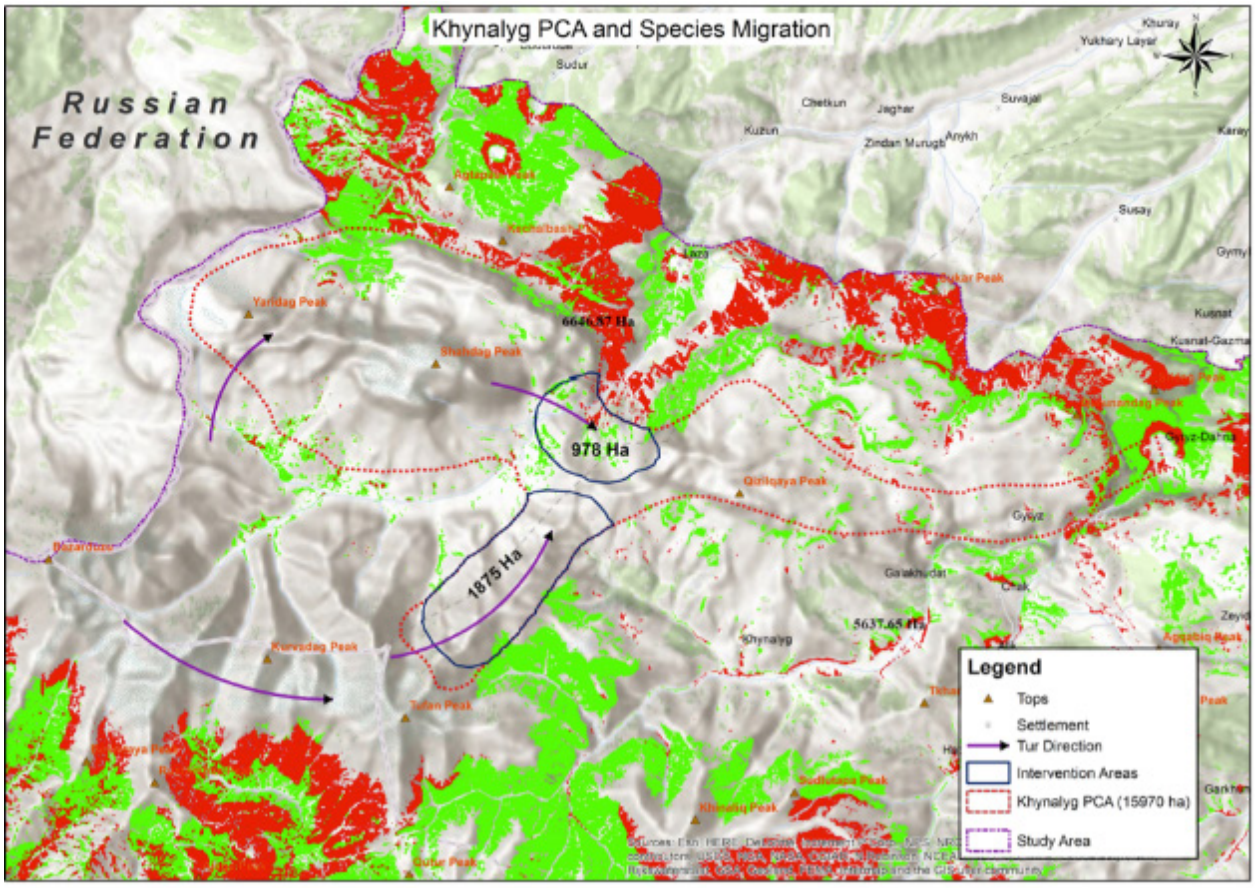


Figure 17.: Land tenure map of Khynalig Priority Conservation Area

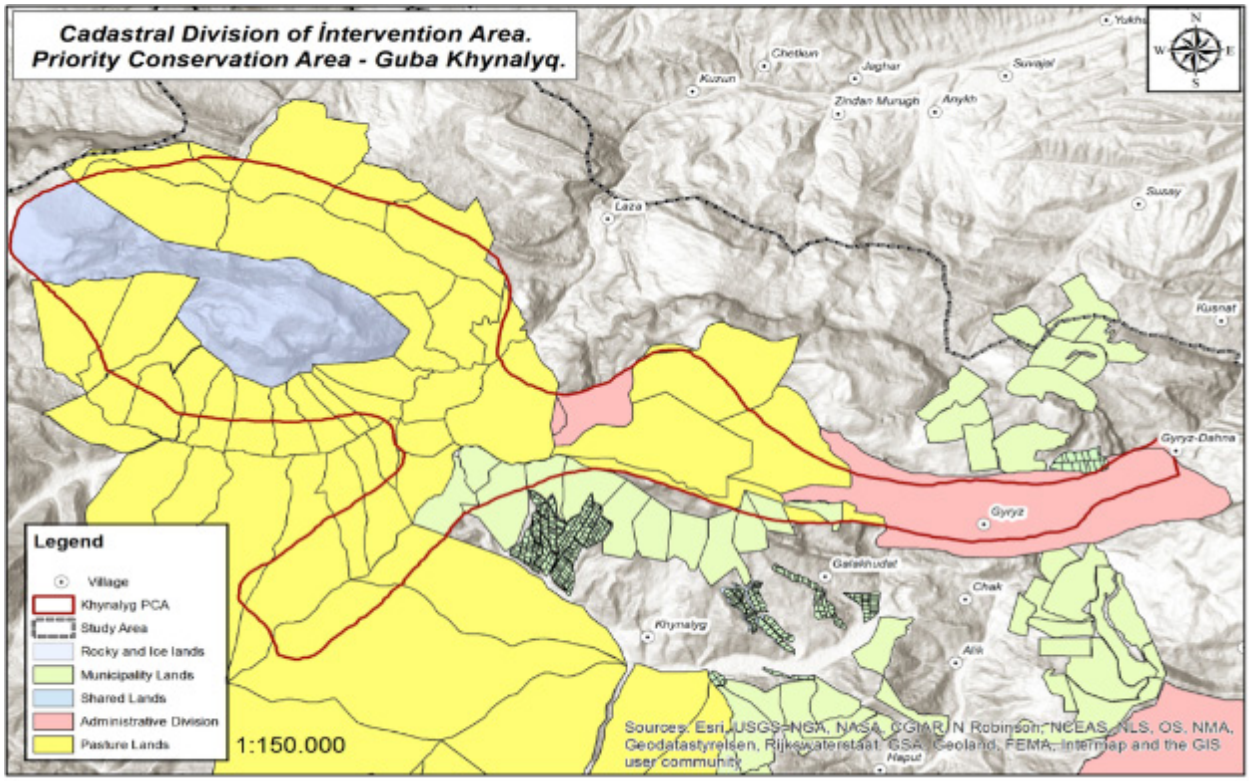
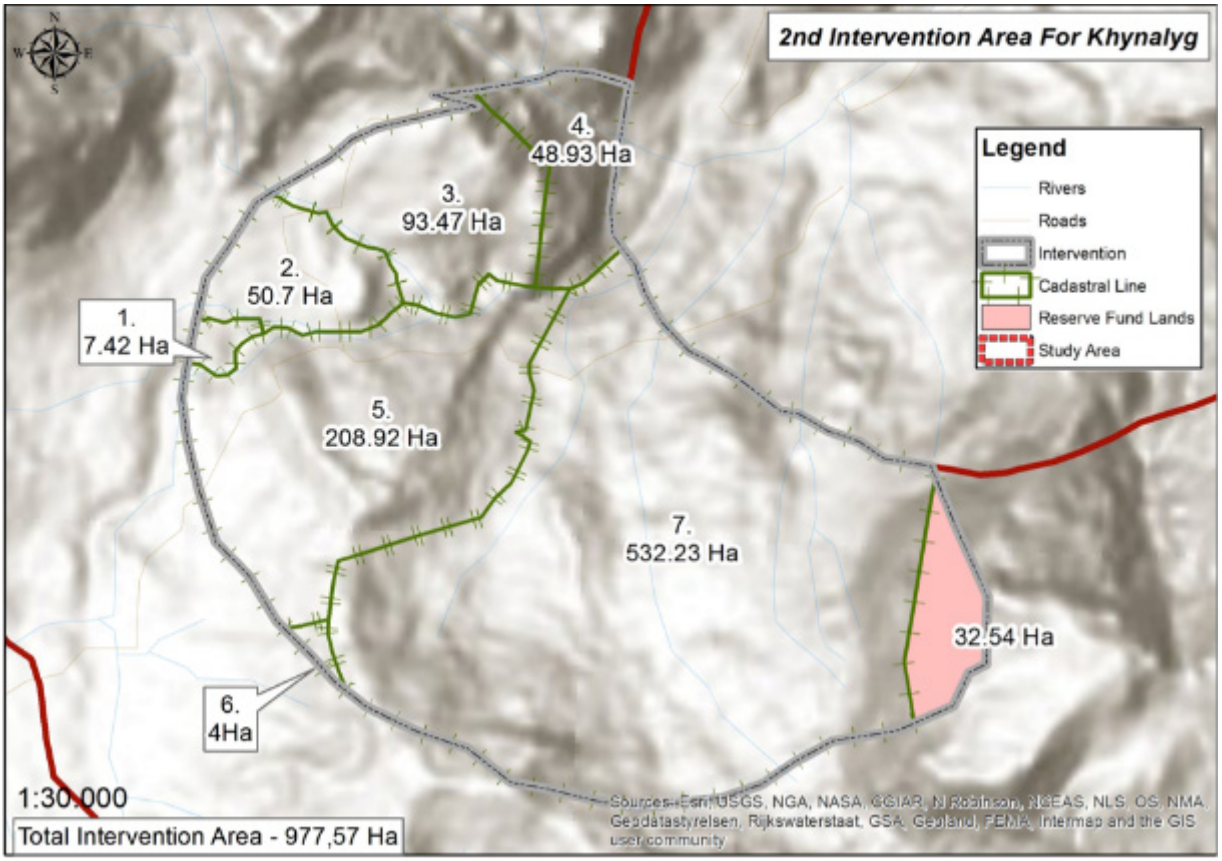


Figure 18.: Land use map of Gyzylgaya Intervention Area



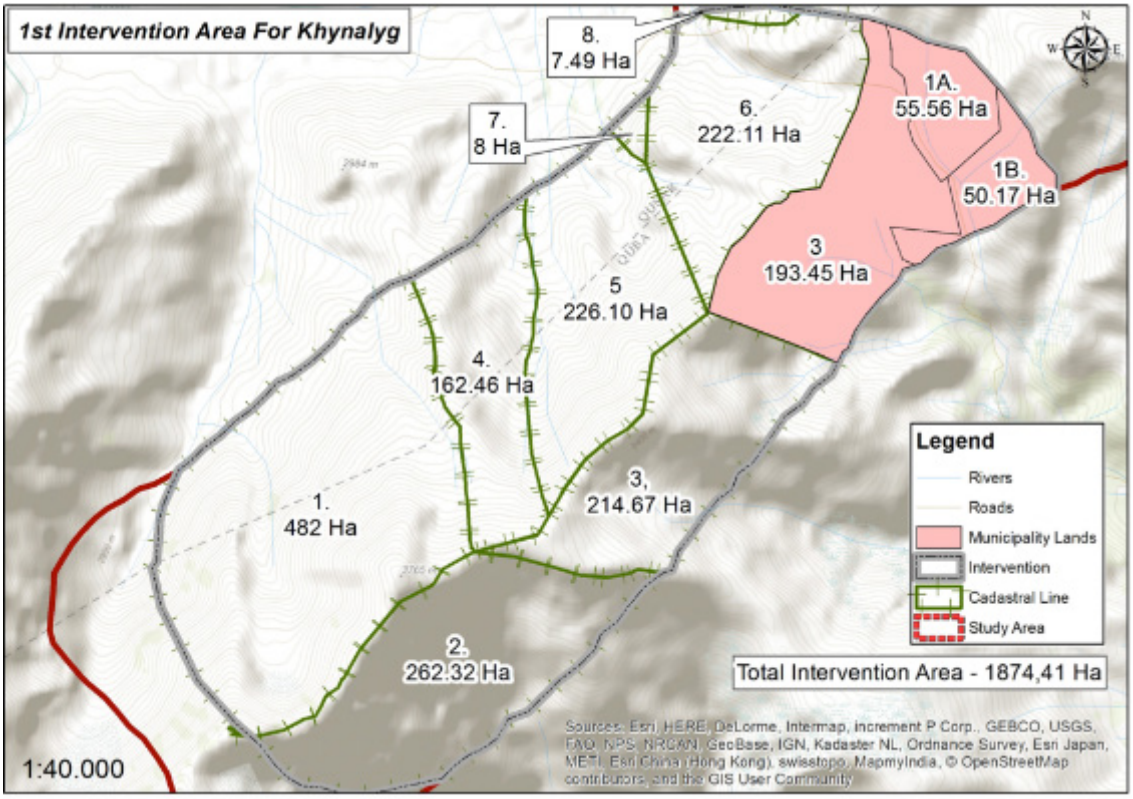
2.2.1.2.4 Tufandag Intervention Area

Tufandag Intervention Area is a ridge between Tufandag and Gyzylgaya Mountains that covers app. 1,8843 ha over the Khinalig village. Out of this, 193 ha are municipality reserve lands and the rest is pasture land. The area is located in Guba administrative territory. As with the Gyzylgaya Intervention area, Tufandag intervention area will provide a corridor for Tur connecting two mountain massifs: Bazarduzu (branch of the Shakhdagh) and Tufandagh, which is high and precipitous enough to harbour Tur up to Gumushlyu Mnt. Massif, providing an uninterrupted stretch of Tur habitat of almost 60 km eastwards of Bazarduzu.

At present, these areas harbour no Chamois. Restoration of chamois population is possible, as Chamois, like Tur, often inhabit highlands without forest vegetation and rocky forested slopes. They could be restored on Tufandag and in lower-lying forested canyons of the Limestone Range **(Figure 19**) though this is not planned yet.

Possible conservation measures include rehabilitation and sustainable use of pastures integrated with mountain tourism development and wildlife habitat management. Expected partners are land users, Khinalig community and Executive Authority of Guba region. Conservation Agreements are planned to be signed in 2017.

Figure 19.: Land use map of Tufandagh Intervention Area



2.2.1.2.5 Gonaghkend Intervention Area

Gonaghkend Priority Conservation Area covers app. 6.349 ha and connects three limestone ridges stretching north-eastwards off the Watershed/Main Range in Cimichai riverbasin and connects two branches of Shahdag National Park, Gumushlu Mountain massif and forest massif over Cimi and Garovulustu communities. The intervention area connects Ismailli and Guba parts of Shahdag National park and covers app. 2,015 ha.

Small Tur female groups occur at present, with males reportedly staying closer to the ridge of the Watershed Range. From the Main Range males move northwards, especially prior to rut, in order to reach female groups.

Overgrazing is evident on pastured slopes, but this area is very interesting and valuable, both from the point of view of topography and of vegetation. Complicated and fragmented topography protects animals. Within the rugged landscape there are scattered forest remains, providing most suitable habitat for Tur, Chamois, Red deer, Bear and Lynx. At present, the corridor is used just by Tur and Chamois (based on observation of locals), but it could be used for expansion or reintroduction of Red Deer and increasing the number of Chamois. Both reportedly occur on the nearby Southern slope of the Watershed Range above Ismailly. From Gonaghkend area Red Deer can reach forests in the upper parts of Gerdymanchai riverbasin, situated almost opposite Gonaghkend area. The forestless highland of the ridge separating them is merely some 3-4 km wide. (**Figure 20**).

A possible conservation measure is to establish a community-managed Wildlife Conservation Area with elements of tourism development. Some of the area could be designated as no entry zone (topography is so 'broken' there that many parts of these ridges are hardly accessible anyway). Expected partners are Gonaghkend municipality and Jimi, Garovulustu, Gonaghkend and Utuq communities **(Figure 21 and Figure 22)**. Conservation Agreements are planned to be signed in 2017.

Figure 20.: Gonaghkend Priority Conservation Area and species migration maps

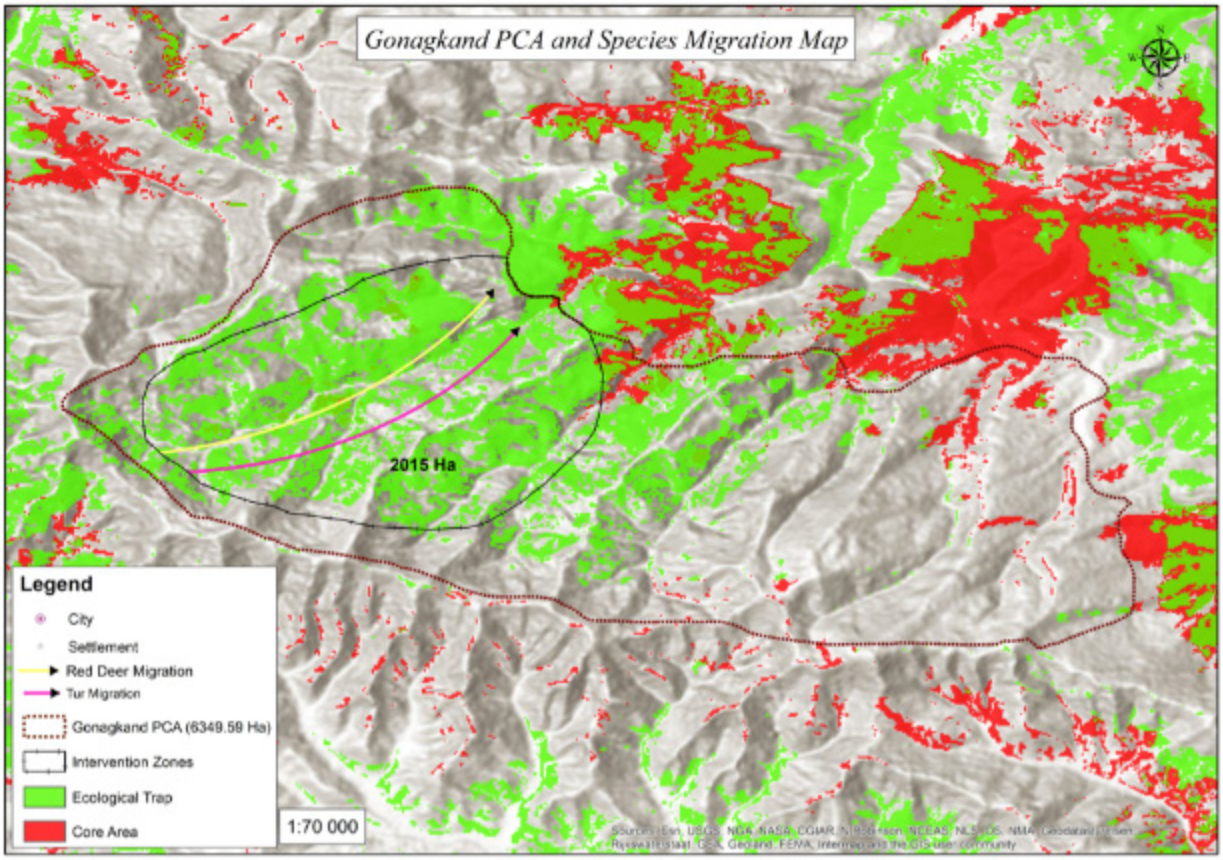


Figure 21.: Land tenure and land use map of Gonaghkend Priority Area

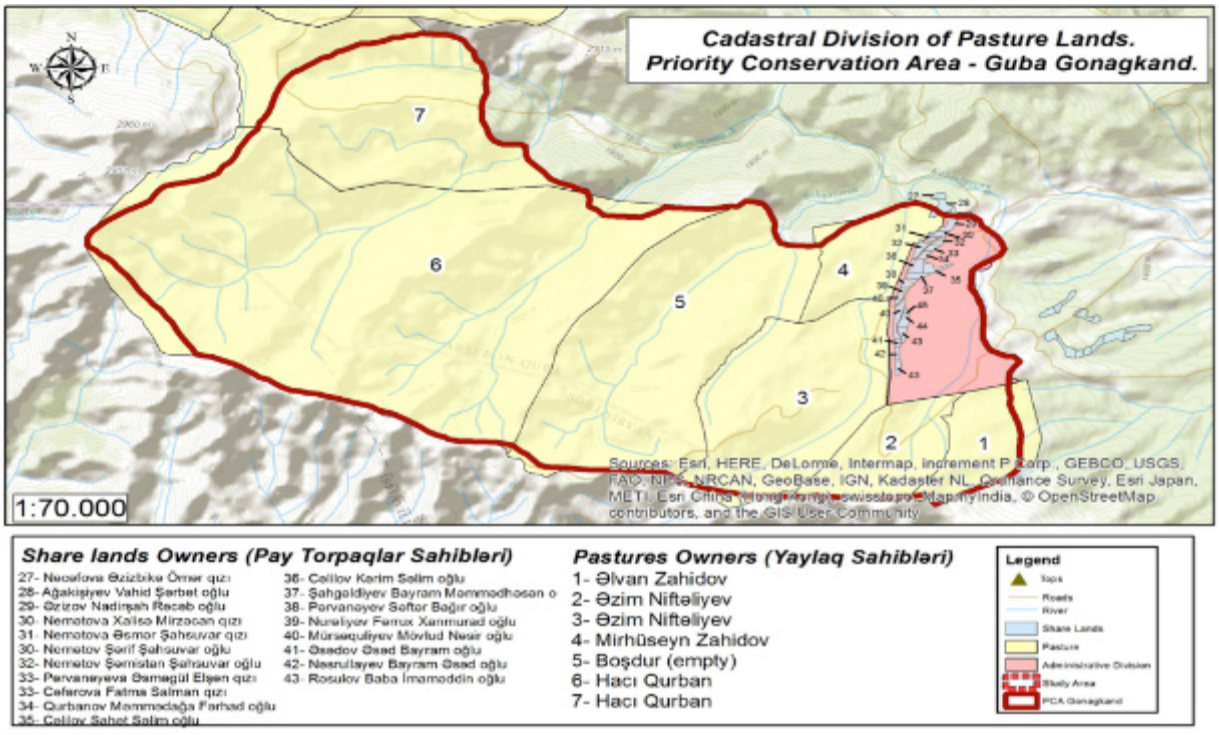
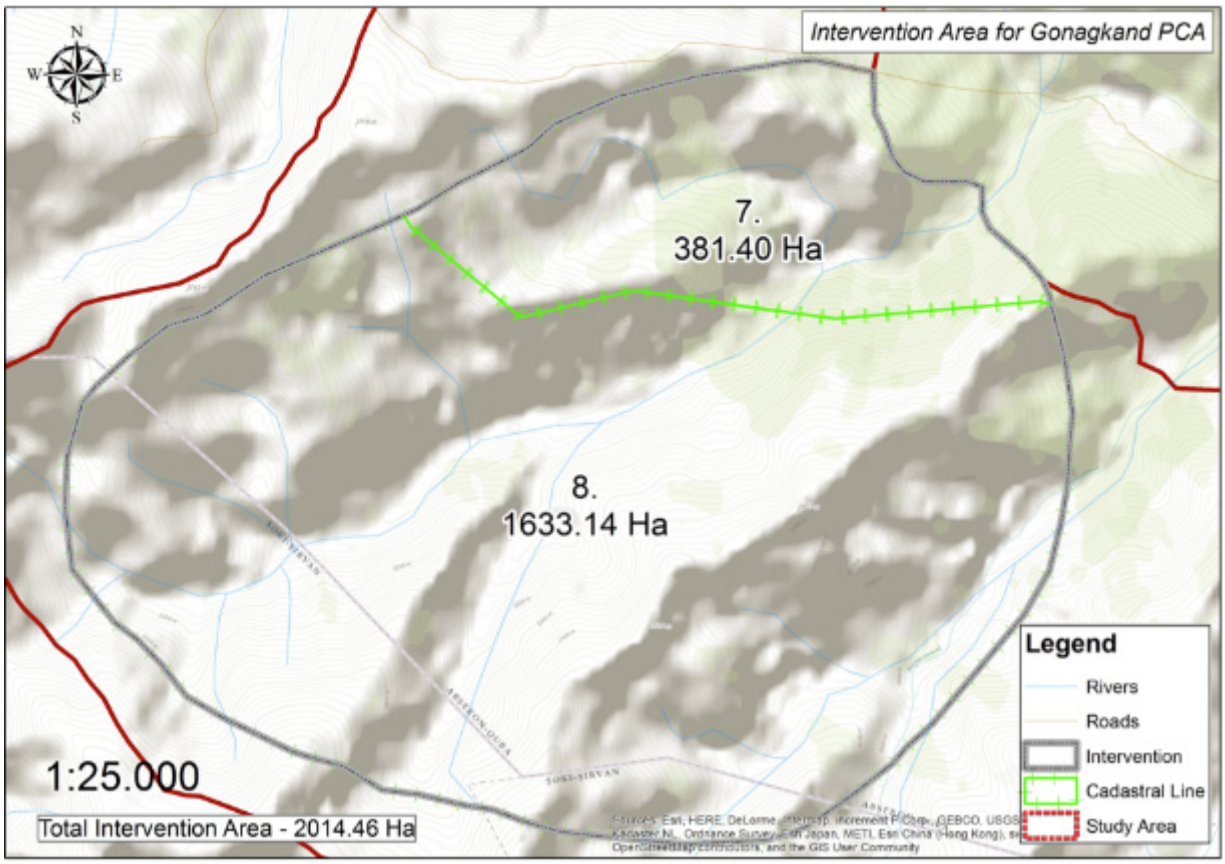


Figure 22.: Land use map of Gonaghkend Intervention Area

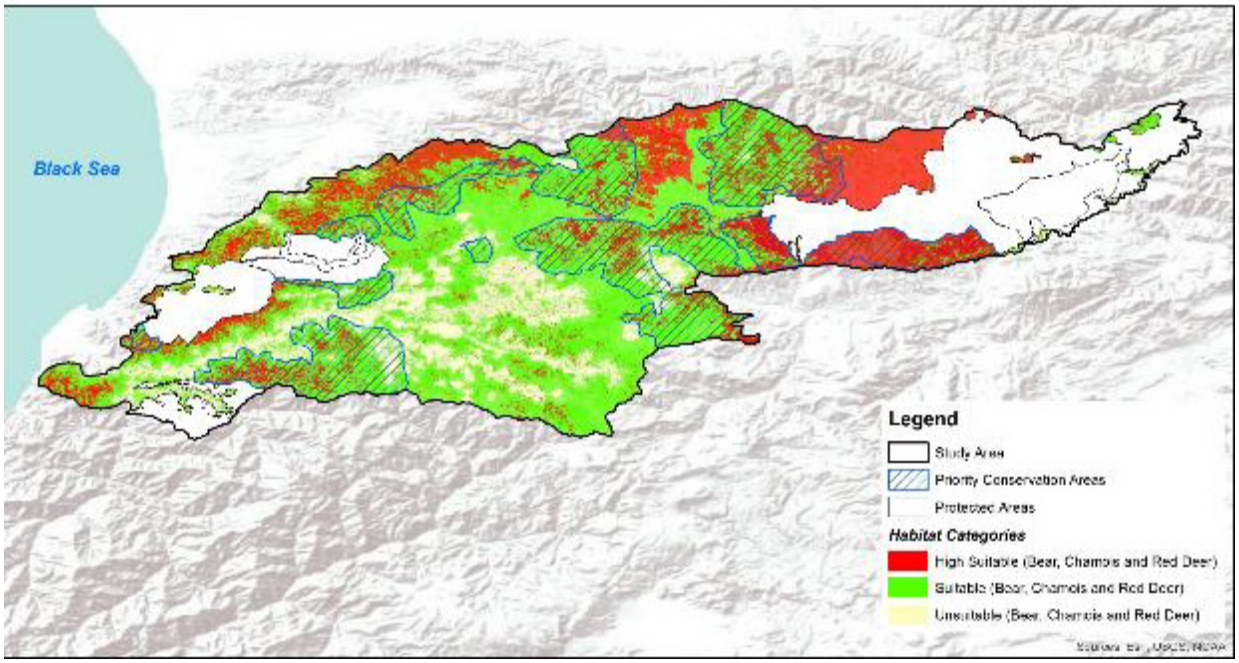


The results of the field studies conducted in 2016 and interviews with farmers and other local stakeholders highlighted the need to develop local integrated landscape management plans combining forestry, wildlife and pasture management plans within priority conservation areas. Such integrated management plans look at the entire landscape across the division into different land categories and will provide the technical background for conservation measures. For this purpose, international experts to draft such integrated plans will be mobilised in the second half of 2017.

2.2.1.3 Georgia

Geographical priorities for ECF in Georgia were identified in early 2016 based on the habitat suitability study and participatory land-use planning process, conducted through the involvement of local community representatives nine priority sites were identified (**Figure 23**).

Figure 23.: Habitat suitability and priority intervention areas

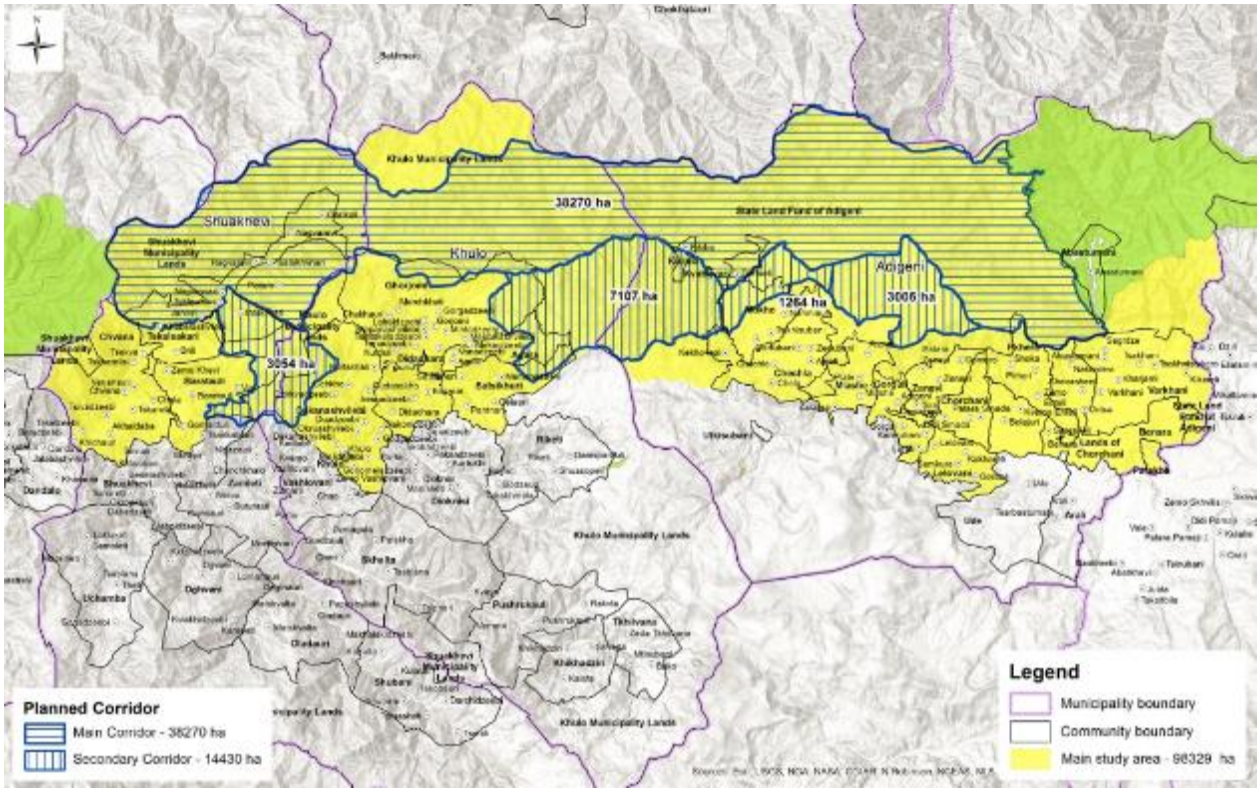


During the FPA implementation process in Adigeni and Khulo municipalities, people showed very strong commitment to be involved in ECF. Based on the study results and the progress of FPA in the corridor region, the following intervention areas were selected:

1. An area of Adigeni municipality adjacent to the western parts of Borjomi-Kharagauli Protected Area, which is the core area from where target species can spread to the west.
2. An area between Adigeni and Khulo municipalities (upper Kvabliani valley and surrounding mountains), which is also highly suitable areas for all three target species.
3. An area between Khulo and Shuakhevi municipalities and adjacent to the area described above, that contains suitable sites for Chamois and also small patches of habitats for Red deer. The site can be considered as an important stepping-stone between the protected areas in Borjomi-Kharagauli and Adjara.

These areas are shown in **Figure 24**.

Figure 24.: First phase intervention areas of the Western Lesser Corridor



In these intervention areas with the total area of 110 000 ha, the following studies were commissioned:

- Land-use and land-tenure study, completed in 2016.
- Assessment of animal populations, started in spring of 2017.
- Long-term land/resource use plans development process, started in June 2017 .

The land use and land tenure study in the selected priority area was conducted by two local land-use specialists (Guram bochikashvili and Vaja Bolkvadze) and one local GIS specialist (Vladimer Natenadze), , and GIS specialist Natia Arobelidze with the support of the WWF GIS specialist Giorgi Beruchashvili. The study was to collect information on the land use and land-ownership issues in the area located in Adigeni and Khulo municipalities and to identify existing forms of land-use rights other than ownership, such as traditional right to use pastures. The result is the maps of current land-use and land-tenure (**Figure 25 and Figure 26**).

Figure 25.: Use rights on state owned agricultural land by different villages (each colour represents one village)

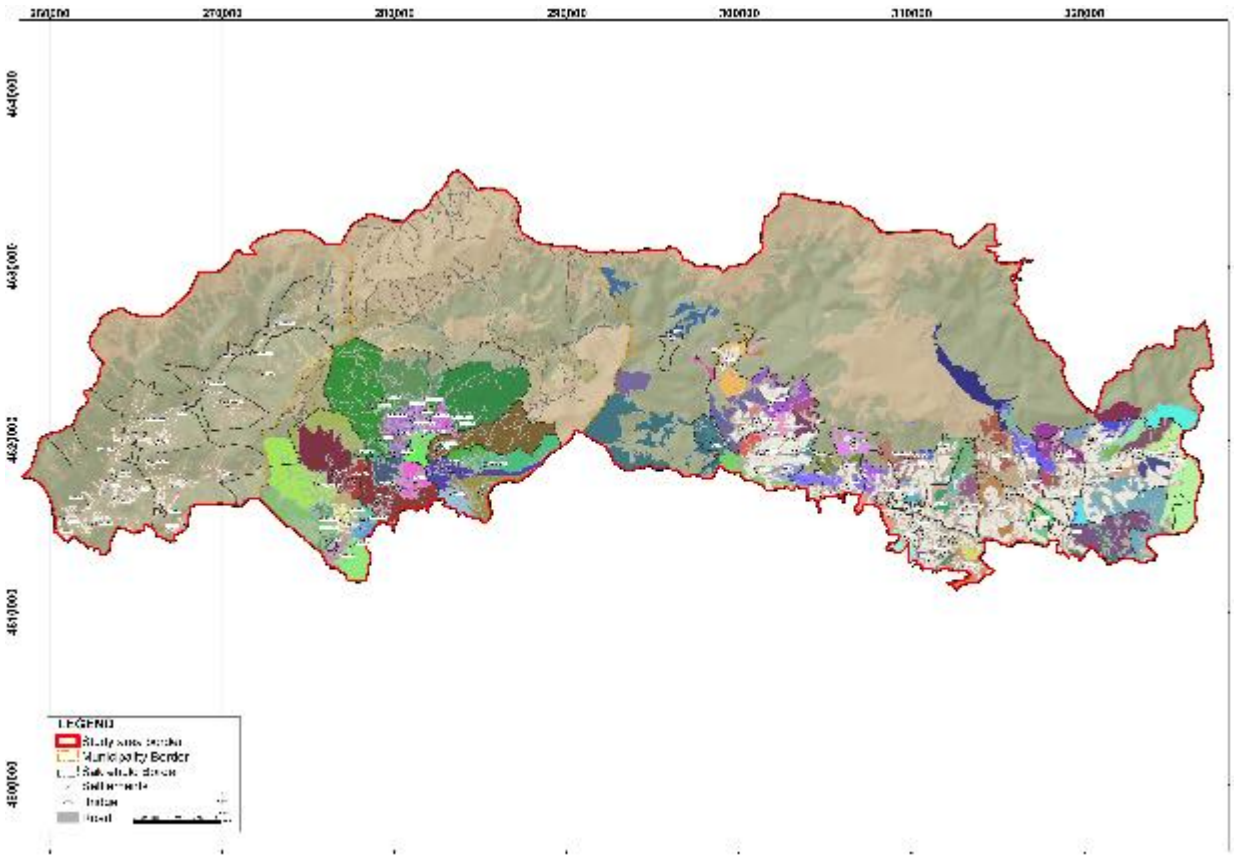
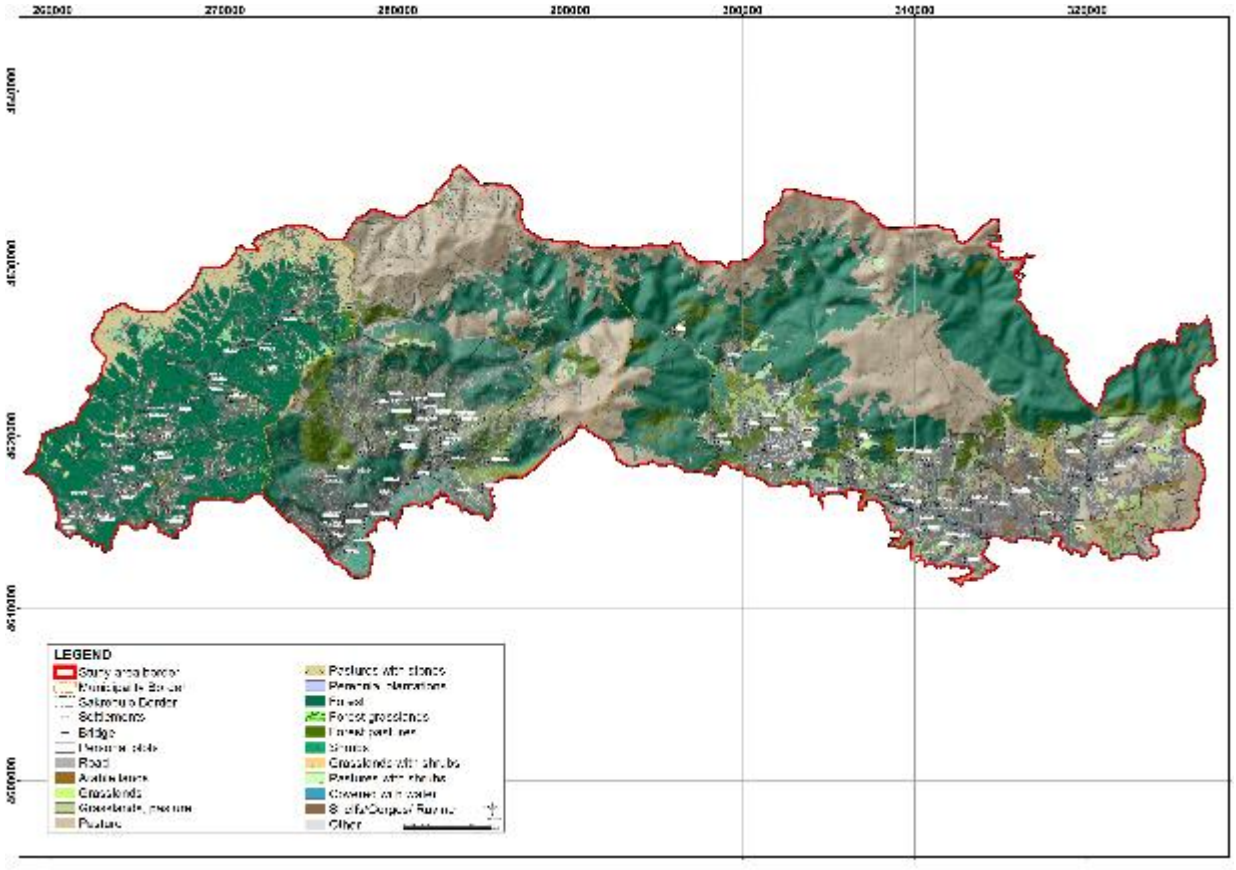
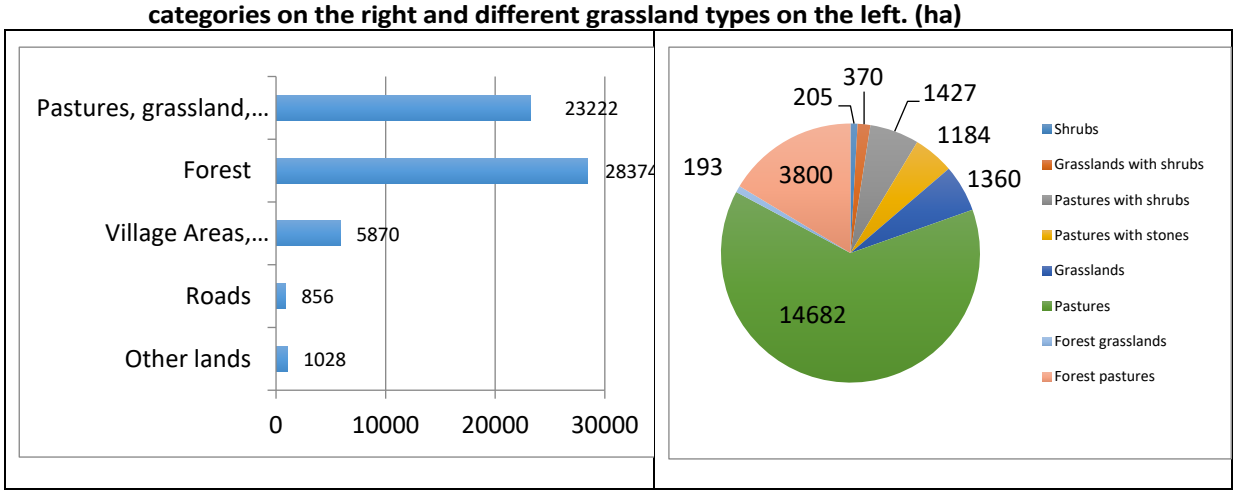


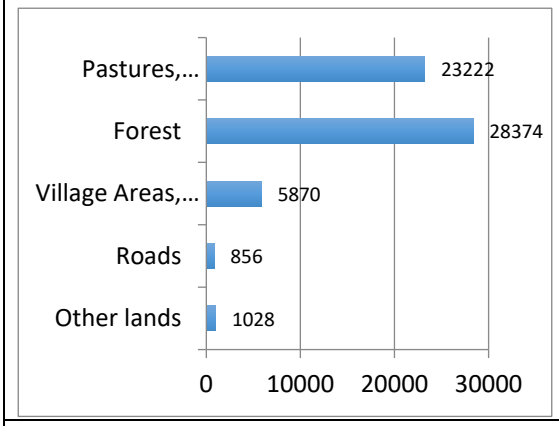
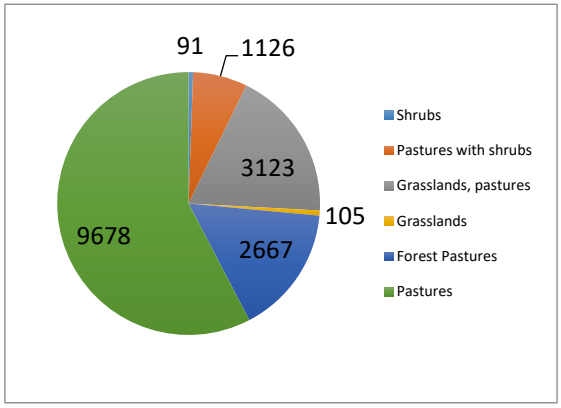
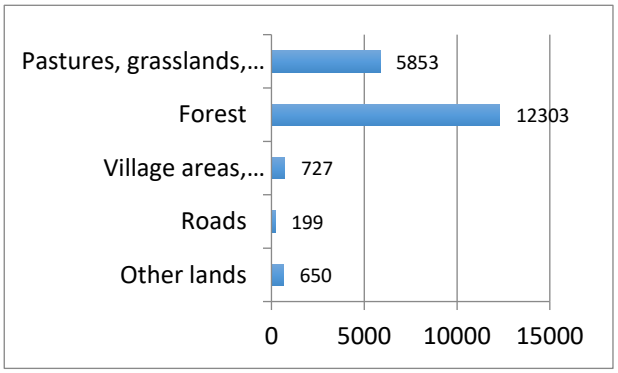
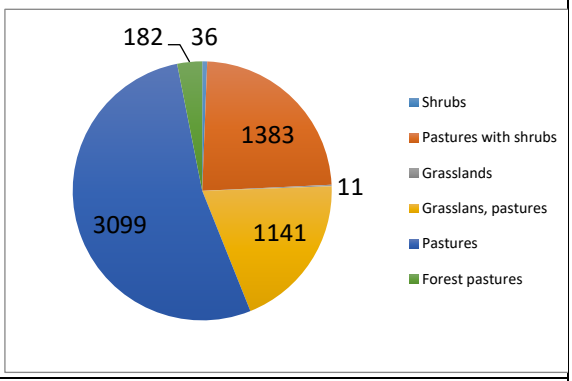
Figure 26.: Present land-use



Data were also statistically compiled as shown in the table below. The diagram on the left shows the main actual land-use categories for each municipality. The diagram on the right shows the subdivision of grasslands into different types of use. They also show the dominant share of forests in the overall landscape, and prevalence of pastures over hay meadows (noted as grasslands in the legend) within grasslands. A significant proportion of pastures are currently covered by shrubs as they are undergoing succession towards forest. This means that they are getting less and less productive in terms of grazing for livestock.

Figure 27.: Detailed distribution of land use in different municipalities. Main land categories on the right and different grassland types on the left. (ha)



Land distribution in Adigeni	Distribution of grasslands in Adigeni
	
Distribution of lands in Khulo	Distribution of grasslands in Khulo
	
Distribution of lands in Shuakhevi	Distribution of grasslands in Shuakhevi

Most of the land in the corridor is owned by state. In case of Adigeni municipality only 15-20 % of the lands are under private ownership. Forests, under the state forest fund, represent the biggest area of the corridor. In case of Adigeni it is managed by the National Forest Agency under the Ministry of Environment and Natural Resources Protection, and in case of Ajara it is managed by the Adjara Forest Agency under the Environment Department of Adjara. Pasturelands are the property of the Ministry of Economy and Sustainable Development. These pastures are used by locals in a traditional way and their user rights are not clearly documented. The most relevant ones are documented only by the soviet time land cadastre maps designating user rights to former village kolkhozes (**Figure 25**).

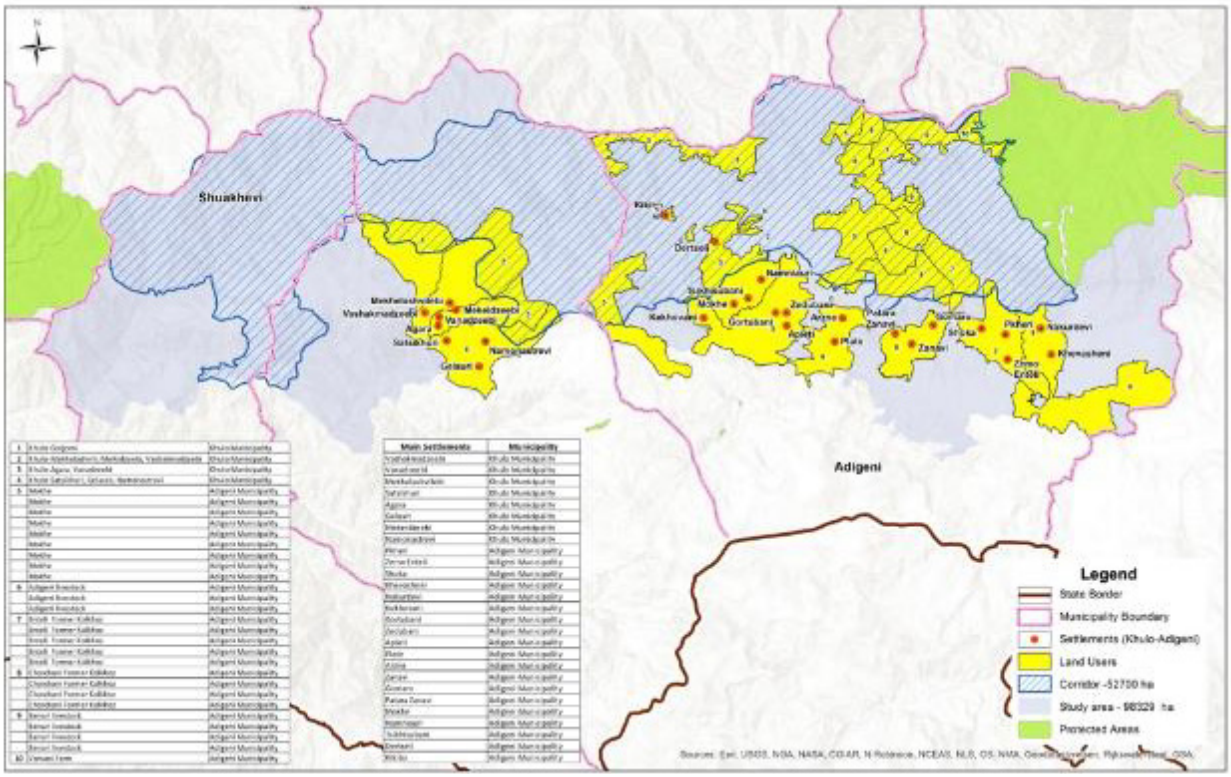
Significant areas of previous pastures and meadows have been overgrown with forest, or are currently undergoing succession towards forest. Old forest succession in the Adigeni area is said to be because the Metskhetian population was deported by Stalin in the 40ies. Recent succession is due to increasing scarcity and cost of labour in conjunction with uncertain land tenure, providing little motivation for farmers to engage in grassland maintenance. The legally unclear division between pastures and forests also encourages the practice of uncontrolled forest grazing, and with that what entity is responsible for administering each.

According to the study results, one of the priority issues that need to be addressed within the corridor will be the maintenance and biodiversity-friendly use of lands located around the villages that is used as spring and autumn pastures, and as hay meadows. Sustainable management of these grasslands will make it possible to restrict unsustainable forest grazing, allowing to better conserving forests and habitats of target species. At the same time the productivity of cattle increases by a more efficient use of grass.

In spring 2017, NACRES was subcontracted to conduct a zoological assessment in the selected areas to obtain baseline data about the current number of target species. Data were obtained using camera traps evenly distributed throughout the species' potential range and searching for species signs (tracks, droppings). Representatives of local communities were also involved.

Possible intervention areas have been selected based on a habitat suitability study and a general assessment of land-use and land-tenure based on the public register in 1:10 000 scale. The map of target villages is shown in **Figure 28**.

Figure 28.: Target villages for intervention in Adigeni and Khulo with the lands they use (yellow) and the expected wildlife corridor (hatching in blue) linking the Borjomi Kharagauli National Park with the Kintrishi Nature Reserve



2.3 Output 3: Based on land use plans, concrete measures have been agreed upon and are implemented

2.3.1 Financial Participatory Approach

2.3.1.1 Armenia

The FPA process began in early 2016 with Rapid Rural Appraisals, followed by the establishment of Village and Regional Working Groups to oversee the planned contests. These contests focused on human-wildlife interaction on the individual level, on improving livelihoods in a sustainable manner for families and communities and on a practical, environmentally conscious service in the public interest from small businesses. The regions targeted for the activities were Sisian, Vedi, Vayk and Yeghegnadzor.

A planning workshop was held in the summer of 2016 to work out the FPA activity plan with the NGO facilitators, followed by an ecological camp in Vayk for members of the VWGs in September. Several study tours were held in the autumn with the aim of exchanging best practices and experience among the different participating communities.

The format, purpose and requirements of the contests were discussed and agreed upon with all the relevant stakeholders in the communities. By the end of the year, the juries selected by the RWGs, which included representatives of the regional administration, the business sector and the agricultural development sector, mayors of 'neutral' communities and respected individuals, selected winning entries in each sub-region and awarded a total of €68,000 in cash prizes.

2.3.1.2 Azerbaijan

The FPA target communities in Azerbaijan were selected to match the results of the detailed field studies and modelling of habitat of habitat suitability. The activities were implemented by OIKOS Consulting and Training LLC in the Zagatala, Gakh and Shaki regions, and by REC Azerbaijan in Gonaghkend and Khinalig priority conservation areas in the Guba region. Village Working Groups were established for individual communities and Regional Working Groups for each area. Unfortunately, the cooperation with certain villages was stopped because of unwillingness to participate or the intervention of authorities.

The process began with Rapid Rural Assessments in all the regions, which were completed in 2016, except in the Guba region, where it is still ongoing. Planning of the contests began in the second half on 2016 with the RGW members discussing and agreeing on human-wildlife relationships as the theme of the first contest for individuals, and sustainable social and economic development of livelihood for the second contest for families. Contests were conducted separately in each community to increase outreach and to build trust. A total € 9,300 was awarded to winners of the individual contests and € 12,600 to winners of the family contests.

Priority sectors for socio-economic measures were selected based on the results of the contests and the proposal of the RGWs. These are beekeeping, poultry farming, sericulture, gardening and community based tourism. Study tours were organised to give insights into these activities to the participants.

To increase the visibility of the FPA activities, a Facebook group was established by WWF Azerbaijan that has already more than 1300 followers, promoting the approach in the target regions and elsewhere (https://www.facebook.com/groups/864663863679193/). Regional TV broadcasted reports on the activities and on the visit of the German Ambassador and KfW Regional Director to the project in Zagatala (https://www.youtube.com/watch?v=Rmggf2fD5R8, https://www.youtube.com/watch?v=mOJC3CONLwM). Art competitions for schoolchildren titled 'The Earth is our Home!' were also held, with the participants receiving various practical promotional material, including backpack, notebooks and T-shirts.

2.3.1.3 Georgia

The first FPA contests were conducted in early 2016 in four municipalities (Adigeni, Khulo, Keda and Shuakhevi) focusing on individuals' experience with deer, bears and chamois, with some extra prizes for participating schoolchildren and local singers. Based on the success of these contests and the results of the habitat suitability study, Adigeni and Khulo Municipalities were selected as priority areas for further implementation of FPA. In Keda and Shuakhevi municipalities, the FPA process has been more focussed to keep communities deeper involved and to establish the basis for cooperation in later phases of the programme.

In Khulo and Adigeni, the second stage of the priming phase was about improving livelihood conditions of people while protecting and preserving wildlife (as identified as a theme together with working group members). The competitions were conducted on the family level with a total budget of 8000 GEL (€ 3,200).

At the third stage, competitions were organised between villages that were part of the priority sites identified in the habitat suitability and land-use and lend-tenure study. Local land-use experts were involved in the selection process together with working group members. Also, the willingness and readiness of local communities to be involved in the project has been taken into account. Before implementation of the third competition, NGO/facilitators organised short meetings with village representatives in order to explain the main goals, objectives and criteria for the selection of proposals. The participants had a possibility to get information how to apply for small grants. The total budget of the competition was 18 500 GEL (€ 7,400) in each municipality. In Adigeni, four villages were awarded prizes and in Khulo three.

At the end of FPA priming phase in Khulo and Adigeni in late 2016, a study tour was organised for working group members and community representatives. The study tour was organised in the support zone of Kazbegi National Park, which was the first pilot FPA site in Georgia. Ten people from each municipality took part in the study tour, including NGO/facilitators. During the trip, the participants had the possibility to meet with local communities and to share experience and lessons learned. They could visit the sites financed in the frame of the Kazbegi pilot FPA project.

In Adigeni and Khulo municipalities, the prize budget was 25 000 EUR for each municipality. The villages and communities were grouped according to land-use pattern and asked to prepare short concept notes on the activities they wanted to undertake. Main topics were identified based on the habitat suitability, land-use and land-tenure studies, results of RRA and the discussions conducted with local communities.

Some 80 people attended trainings divided in two groups. Training for Adigeni community members were conducted in Borjomi, where the participants had a possibility to visit Borjomi-Kharagauli National Park Administration and visitor centre and to have a discussion with the director and other staff members about protected areas management, species conservation, eco-tourism development, involvement of local communities in conservation processes and the benefit of people from protection the nature and nature based tourism development. The training for Khulo community members were conducted in Batumi in the building of the Forest Agency, where the administration provided us with the conference room and the office equipment needed.

In case of the first three groups of villages in Adigeni Municipality, which are located in the area next to Khulo municipality, pasture and grazing management has been identified as a priority topic during FPA planning. The cattle breeding is still the main source of income of the communities living in these areas. During summer time people keep the animals in summer pastures, but the rest of the year the cattle is spread in the surroundings of the villages. After coming back from summer pastures, people release their cattle in the morning and bring it back in the evening, while during the day the cattle is in the forest. Currently, old pastures are not used for grazing as most of them are mainly degraded, covered by shrubs, weeds and stones. In some areas, there is a lack of water. Grazing in forest is not managed and regulated and causes habitat degradation, wild animal disturbance and is generally less productivity for cattle.

The identified activities in these areas included removing weeds and stones from old pastures, water supply of pasture areas, installing of water tubes, and cleaning the areas in the forest from garbage etc.

In the areas located next to the Borjomi-Kharagauli NP, FPA planning has been implemented in two groups of villages. Communities living in these areas came up with two different types of ideas: pasture management and the conservation of landscape, represented by natural and historical cultural elements.

Two groups of villages also expressed an interest to implement activities jointly, in the areas located between their villages.

In Keda and Shuakhevi municipalities it was agreed with working group and community members that the main objective of the small grant competitions would be to prevent human-wildlife conflicts. For this, the total budget for each municipality was 10 000 GEL (€ 4,000). There were ten winners in Keda, receiving between 300 to 1500 GEL, and nine winners in Shuakhevi receiving from 500 to 1500 GEL. The priming phase has been completed by mid-2017. Now, the plan for the next stage is prepared through the support of NGO/facilitators and municipal working group members, focusing on setting up a local nature conservation group. The planning phase also includes trainings for selected community members in proposal writing and financial literacy.

2.3.2 Pilot Conservation Agreement with Khachik Community Armenia

The Gnishik Protected Landscape and its surrounding Communities were selected as pilot for the development of the conservation agreement because a capable and trustworthy institutional setup to implement the conservation measures was already available in form of the Gnishik Intercommunity Environmental Foundation (hereinafter called Gnishik Fund). This was established in 2012, in the framework of UNDP/GEF Project Developing Protected Areas System of Armenia (2010-2014). Khachik Community is one of the co-founder of Gnishik Fund and one of the three founders of the community managed Gnishik Protected Landscape. Further, the problems associated with unsustainable land management are most urgent in this remote community.

Habitat suitability studies in autumn 2015 confirmed a high suitability of Khachik Community lands for Armenian Mouflon and Bezoar goat. Later on, interviews with experienced herdsmen, local hunters and edible plant collectors reconfirmed the importance of the area as an important habitat for the project's target species.

During 2016, intensive contacts were established with Khachik Community Council members, namely Abrahamyan Alyosha, Aghababyan Aramayis, Mikayelyan Norik and Sargsyan Babken. There was strong common understanding that current grazing practice is not sustainable either economically or ecologically, as it is not regulated in any way except from paying an annual fee per head of livestock to the Community to obtain the right to graze. Throughout the year (except for mid-November – mid-March), farmers release their cattle from the stables in the morning and they return to the stable in the evening. They do not use any more remote pastures due to inaccessibility and the lack of infrastructure (destroyed roads and shelters from the Soviet period, no water supply) and do not produce or buy enough hay to keep cattle indoors during winter and early spring (due to lack of capital). The result of this practice is that the grassland near the village is destroyed and eroded by overgrazing and trampling, while the remote pastures are undergoing succession towards shrubs. In both cases this means a loss of pasture productivity and grassland biodiversity. Uncontrolled grazing also means that, although lightly, cattle (and herdsmen, and shepherd dogs) are present across the entire landscape, causing serious disturbance to Bezoar goats.

The following possible intervention measures were identified:

- designation of pastures and time period (calendar) of their use by the farmers in order to utilise and maintain pasture productivity;
- development of needed infrastructure (shelters, watering points) to use the designated pastures;
- designation of hay meadows and their regular cutting to ensure enough hay for keeping cattle indoors during winter and early spring;
- designation of grasslands and their cutting to improve their productivity and biodiversity, and to ensure accessible forage (in form of haystacks) for Bezoar goat during the snow-covered period;
- operation of the regulated grassland management system by the administration of Khachik Community;
- monitoring of the grassland management system by the Gnishik Foundation rangers.

The proposed idea was discussed with the WWF Armenia in fall 2016 and in general agreed with the KfW.

Based on GIS maps, places infrastructure (shelter, water supply, small scale road improvement), limited access and no access zones were defined together with Khachik community members.

In December 2016, conservation measures were discussed with the local community to introduce, advocate, discuss and finalize the [draft] long- term conservation agreement on pasture management of Khachik community.

Based on the responses received from community, the [draft] Conservation Agreement was developed The latter received no objection during the First Meeting of Regional Consultative Forum and was endorsed by the ECF Management Board and KfW.

2.3.3 Conservation Agreement with Areni

As Khachik, Areni Community is one of the co-founders of Gnishik Fund and one of the three founders of community managed Gnishik Protected Landscape.

Areni Community was selected for the second Conservation Agreement because it showed interest and it is neighbouring the Khachik Community. The territory of Areni is important for ecological connectivity in the corridor, as it spans the Arpa river and connects the Gnishik Protected landscape with the northern sections of the corridor. Habitat suitability studies and interviews confirmed high suitability of Areni Community lands first of all for Bezoar goat but also for Armenian Mouflon. Areni is located on the main road and is known for wine and fruit production. Because of this and compared to neighbouring communities, the land use in the river valley is intensive in terms of vineyards and orchards.

There is strong common understanding that the main threats to wildlife habitats are due to changes in land use (such as expansion of territories of vineyards and orchards or mining organized by commercial companies) in the absence of effective and sustainable economic use of community land. In particular, due to increasing demand on Areni brand wine and local fruits, the area under vineyards and orchards increased almost threefold since 2010, mainly at the expense of of arable lands and pastures. This trend will continue unless measures are taken to replace traditional grape and fruits growing methods with effective modern approaches. The latter is hampered by lack of specific viticulture and gardening equipment.

Cattle breeding is not common in Areni community. Only 2% of households consider cattle as main source of income. The cattle farmers producing meat for the market release cattle on community pastures as soon as the snow is melted and from June to September move them to summer pastures outside community land. From October until the snow cover, their cattle are again grazing on community pastures. They explain the early release of cattle in the pastures by economic reasons: shortage and high costs of hay, and never paying grazing fee. The farmers who keep cattle for their own supply of milk, release their cattle in the morning and return it to the stable in the evening during the whole year except for December – mid-April. They pay an annual fee per head of livestock or per hectare to the Community to obtain the right to graze the community lands. The grazing is not regulated in any other way. The result of this practice is uneven grazing pressure on the grasslands, with the grassland near the village being destroyed overused, while other pastures are undergoing succession towards shrubs. In both cases this means loss of pasture productivity and of biodiversity, leading to cattle roaming wider and wider across the landscape, causing disturbance to Bezoar goats but not being able to eat enough quality food.

With the establishment of the Gnishik Protected Landscape, poaching inside the conservation area itself has been stopped and is in decline in the surrounding area. But demand from guest hunters and the local traditions of hunting still exist. As a result, it may be expected that, when the population of Bezoar outside the conservation area increases, poaching may increase unless it is mitigated or regulated in form of formally recognised hunting .

Based on these findings, a proposal for individual ECF conservation measure was prepared for Areni Community, identifying and analyzing the problems to be addressed, identifying and quantifying the proposed measures, identifying the beneficiaries and estimating the cost of short and long-term measures involved. This proposal includes the following elements:

- establishment of ban by the administration of Areni Community on conversion of community owned arable lands and pastures into vineyards and orchards;
- introduction of effective modern mechanized methods of viticulture and gardening on already existing vineyards and orchards;
- designation of pastures and time period for use by the farmers in order to utilise and maintain pasture productivity in a designated area;
- development of infrastructure (water supply) needed to use the designated pastures;
- improvement of livestock food rations during winter time through cutting of additional hay;
- establishment of the regular grassland management system by the administration of Areni Community;
- management and monitoring of the grassland management system by the Gnishik Fund.

The [draft] Conservation Agreement is agreed with the WWF-Armenia and will be submitted by September 2017 to the ECF Management Board and KfW for endorsement.

2.4 Output 4: Acquisition of additional financial resources for the Eco-Regional Corridor Fund

2.4.1 Fundraising Strategy Development

Mr Tobin Aldrich was contracted as consultant by WWF to develop a fundraising strategy for the ECF in order to achieve the objective that at least 10% of the financial resources available to the fund in 2017 are from sources beyond BMZ. An important aspect of the strategy is developing WWF's capacity to conduct fundraising. For this purpose, a two-day fundraising training was organised in July involving the Programme team and other key persons from the three WWF Caucasus offices. The training focused on developing the "Case for Support".

Following the recommendations of the fundraising strategy, WWF decided to employ one fundraising officer in each of the country offices in the Caucasus, both for the purpose of ECF fundraising and for general fundraising for WWF. Mr Aldrich developed the job descriptions of these officers, supported the selection process and provided training and coaching once they started working in 2017.

In parallel, WWF raised additional funds which will contribute to the objectives of the ECF. These are:

- 600.000 CHF (€550,000) from WWF Switzerland (contributing €411.000) and WWF Germany (contributing €139.000) for leopard conservation in Zangezur and Talish Mountains (over three years starting from 1. July 2016). Components which will contribute to ECF goals are: identification of important leopard migration corridors, feasibility study of mitigation and/or compensation of human-large predator-conflicts and the establishment of volunteer leopard caretaker networks.
- € 520.000 from BMZ (€ 390.000) and WWF Germany (€ 130.000) for Adaptive Forest Management in Adjara over three years. In April 2017 a strategic cooperation between Adjara Forest Administration and State Forest Administration of Hessen was established. The option to submit additional proposal for capacity building to the Federal Ministry of Agriculture (Germany) is being investigated.

WWF Caucasus applied for an EU tender under the ENPARD programme dedicated to rural development projects in Georgia. One of the lots was tendered out for the district of Khulo offering up to € 2 million for a long term rural development programme modelled on the EU LEADER approach. As Khulo includes the priority section of the Western Lesser Caucasus Corridor, WWF applied for this lot in consortium with the Black Sea Eco-academy (the contracted FPA facilitator for Khulo) and PRC - Soča River Valley Development Centre (EU partner from Slovenia). WWF was invited to present a full proposal in the second round of applications. Unfortunately, the application was not successful.

As a further source of funds, WWF International's Forest Practice, WWF-Switzerland and WWF-Austria established the Landscape Finance Lab in April 2016 as a joint initiative. Its mission is "to harness the power of public and private financial instruments (blended finance) to initiate solutions at scale for sustainable landscapes and deforestation free trade chains." Three core objectives are being pursued:

- Structure high quality landscape programs in global biodiversity priority places. A range of programs are under design using jurisdictional REDD+, land degradation neutrality, catchment management and landscape sourcing approaches.
- Access innovative financing. Conservation funds will be supported including private sector investment funds, impact investing platforms and public sector grant funding windows.
- Build learning, capacity and impact measurement. Producing tools, guidance and learning publications. An online platform allows for sharing, project incubation and community development.

The Lab supports WWF teams in designing and promoting large-scale landscape-wide programmes ("better programmes") using innovative landscape finance mechanisms ("better finance products") to the world's biggest sustainable land use relevant funds. It will leverage existing WWF knowledge, programmes and contacts in doing so. It hopes to bring fresh ideas and approaches from outside WWF and embed entrepreneurial support systems in WWF to foster innovation within the network.

WWF CauPO has initiated the process of developing the funding idea within the "Incubator for Sustainable Landscapes". The next step is to structure the idea to the level of a concept note that will identify relevant funders and mobilise funds for the full planning of the programme. The concept note will be developed in the second half of 2017 with to gain grant funding for a full project proposal development.

2.5 Activities in the neighbouring countries

To contribute to the connectivity of the Caucasus Ecoregion as a whole, complementary ECF actions are also implemented in the in the Caucasus region of Turkey and the Russian Federation. These actions are supported by WWF Germany as co-funding to the ECF by a total of € 300,000. The activities were implemented by WWF Russia and WWF Turkey in 2015 and 2016, and are summarised below.

2.5.1 Russian Federation

The actions were implemented by the WWF RU Caucasus office, which was strengthened with a new staff member working on communication and fundraising. Activities included:

- Trainings on current implementation of Programme for reintroduction of Persian leopard in Russian Caucasus.
- Research works for preparing background documentation to create new PAs in the Republic of Dagestan (2 nature parks in the Caspian coast to protect Important Bird Areas, being integrated into the network of interconnected conservation areas and corridors to develop Econet).
- In the partnership of the Dagestan Pedagogical Institute for study Laman-Kam and Shur-Dere tracts and Bazardyuzi highlands for establishment new PA Samurskiy national park.
- Increasing camera traps coverage in the key ecological corridors in partnership with protected area staff (Tlyarata, Dagestan; mountainous part of Kabardino-Balkaria; eastern part of Caucasian Biosphere Reserve).
- Communications and Awareness Raising through media work and the booklet on Programme for reintroduction of Persian leopard in Russian Caucasus.
- Response to the crisis of Saiga antelope in the Republic of Kalmykia and Sanctuary "Stepnoi" in Astrakhan Region (Northwest Pre-Caspian Region of Russia). The only European population of Saiga was reduced to 3500-4000 individuals due to poaching. Capacity of the Sanctuary "Stepnoi" staff was strengthened by launching fundraising membership campaign. WWF-Russia members supported the mobility of anti-poaching patrols of Sanctuary "Stepnoi" by providing fuel for 3 months to allow rangers to combat wildlife crime in the Astrakhan Region.

- Organisation of the press-tour "Development of mountain ski resorts and threat to implementation of the Programme for reintroduction of Persian leopard in Russian Caucasus" for the journalists of international (Daily Telegraph, Reuters, NBC, Foreign policy, Frankfurter Allgemeine), and federal (Kommersant, Rossiyskaya Gazeta, Russian News Agency TASS) mass media in May, 2016.
- WWF-Russia has been actively involved in the revision of the Caucasus ECP (Ecoregion Conservation Plan) by taking part in the process, providing input and acting as a key partner to ensure involvement of the Russian conservation and scientific experts.

This project enabled WWF-Russia to strengthen the ecological corridors in the Russian Caucasus through better wildlife management and conservation in close collaboration with the federal, regional, and local authorities and communities more effectively. The scientific basis for enlargement of connectivity between PAs in Persian leopard habitats as well as in the scale of overall Caucasus ecosystems conservation has been prepared. Promotion material to raise environmental awareness was produced and successfully used.

2.5.2 Turkey

Actions were implemented by WWF-Turkey, strengthened by a wildlife officer who regularly visited the Turkish Caucasus Region. Activities included:

- Training more than 30 managers and field officers on "Research, Inventory and Rescue Methods in Wildlife Management" in partnership with the Regional Directorate of Nature Conservation of the Erzurum area. The activity was instrumental in enhancing the technical capacity of wildlife managers in the region and strengthening collaboration between WWF and governmental authorities in the Turkish Caucasus.
- Field studies through the instalment of photo-traps in various locations, significant amount of visual material concerning large mammals across the region have been obtained, providing important clues on the presence and dynamics of wildlife which is still thriving in most of the region.
- Field survey to understand the current status of traditional falconry and the associated raptor killing activities in NE Turkey.
- Inclusion of Turkey in the European Breeding Bird Atlas (EBBA), by providing input from the Turkish Caucasus.
- Providing long distance guidance to the public for the rescue, handling and treatment of wounded, sick and orphaned wild animals which has also
- Communication materials such as the booklet on brown bears and the poster on the importance of habitat integrity (lynx family) was produced and distributed among the national and local stakeholders.
- Guide book on identifying major mammal species in Turkey by their tracks, scats and signs published and made available in digital form. This guide book is intended as a tool to increase knowledge among wild life managers, environmentalists and raise awareness among local people about wildlife.
- A petition campaign was initiated by WWF-Turkey against the quotas established for hunting of endangered large mammals including the brown bear, Bezoar goat, the Caucasian chamois and other mammals. More than 80,000 signatures were collected during the campaign, which were then submitted to the General Directorate of Conservation and National Parks in Ankara. This intervention has been partially successful.
- Additional funds were raised for a project on sustainability of hazelnut production, an important species of the Caucasus ecosystem, and its relations with wildlife in the Black Sea coast of Turkey (Giresun). This project, while tackling sustainable production of hazelnuts, focuses on the ecological aspect of sustainability and provides recommendations for conservation of the natural environment around the hazelnut orchards in the region.

This project enabled WWF-Turkey to be more effective in implementing its vision in promoting the ecological corridor concept in the Turkish Caucasus through better wildlife management and conservation in close collaboration with the local authorities and communities.

3. Review and revision of the work plan

3.1 Summary progress review and changes to the work plan

By mid-2017 (mid-term of the programme), the implementation of the programme progressed so far that the final set of outcomes are becoming visible and that a mid-term adjustment of the methodology, work plan and budget of the Disposition Fund is possible. Two main sets of activities implemented were the Financial Participatory Approach (FPA) and the mapping and analysis of the landscapes in the pilot corridor areas. Experience and results of engaging with local communities and analysing the status of target species, their habitats and biodiversity in general allows us to re-assess the assumptions of the programme, which then provides the basis for revising the plans. Key assumptions from the Terms of Reference and the findings related to them are presented in **Table 3** below.

Table 2.: Assessment of initial assumptions of ECP

Original assumption	Findings so far
Biodiversity is threatened due to overuse (illegal hunting and logging, overgrazing, overuse of water, extension of fields, urbanisation)	Biodiversity was threatened by overuse or uncontrolled use (poaching and illegal logging) in the nineties and early 2000. In Georgia and Armenia this pressure has been reduced, leading to gradual recovery of animal populations and forests in certain areas. The pressure is still high in Azerbaijan because of overstocking by nomadic shepherds. Due to the depopulation in rural areas, land abandonment is an emerging issue that may also lead to a loss of biodiversity and landscape diversity in the future if it continues. It may lead to a loss of anthropogenic habitats such as flowering meadows and/or to introduction of new, more destructive land uses such as mining, or more commercial forestry or intensive animal husbandry. If we assume Caucasus countries will follow the development path of EU countries, both intensification of agriculture and land abandonment will play a role in the future. Once farmers have access to capital, the use of fertilisers and pesticides may increase, land ownership will be concentrated and landscape homogenised. At the same time, lands that are not of economic interest will be abandoned further and left to natural succession. Therefore the priority at present should be to more or less preserve the status quo of highly diverse landscapes by tackling the negative pressures and processes and supporting the types of land use that benefit biodiversity in the long term.
Poverty leads to extensive (unsustainable) utilization of natural resources	Two aspects of rural poverty lead to unsustainable utilisation of natural resources: - Uncertainty of land tenure (land is publicly owned with short term or no lease agreements) is leading to short term oriented use and an absence of investment in the future; - Poverty itself (partly a consequence of uncertain land tenure) results in a lack of investment capital needed to introduce more sustainable use (keeping cattle indoors over winter, insulation of houses, modern methods of forest use). Due to a declining rural population, the pressure of poor local villagers on nature is not critical (see above). Of bigger concern is the use of natural resources by outside investors (mining in Armenia, nomadic grazing in Azerbaijan or forest concessions in Georgia, investors in agriculture in all three).

Farmers require compensation to stop or change their unsustainable land use practice	Local farmers mostly use land for subsistence. Because of this the concept of compensation for lost income would only be valid in dealing with the commercial users or for public authorities leasing the land to them. For the farmers/village communities, the idea of compensation should be replaced by the idea of investment that lead to sustainable land use practice in the long term. During the FPA and planning processes, sufficient opportunities for investment based conservation measures have been identified. These should lead to improved biodiversity conservation while at the same time at least maintaining the level of income of the local population. For example, maintenance of flowering hay meadows improves the habitat for target species at the same time as it enables farmers to keep cattle indoors during winter, thus preventing destruction of pastures and forest grazing.
Governments, local municipalities, local communities and NGOs have only limited capacity to ensure nature conservation	The ability of public institutions and of civil society to sustainably manage natural resources and secure nature conservation is very low. In many places, the public institutions collapsed in the nineties and have not been replaced by adequate government or market based solutions. Part of the problem is also the lack of coordination between different public authorities and the changing legal framework. In many places this leads to a „Tragedy of the Commons“ in terms of lack of planning and resulting overuse of resources (e.g. animal and fish populations, overgrazing close to villages but abandonment of remote pastures, destructive logging for firewood). The tragedy of the commons is mitigated to some extent by traditional rules of land use and by the lack of capital to investto increase use.
Low environmental awareness both at local and national levels leading to lack of willingness of stakeholders.	Environmental awareness in rural areas has proven higher than expected, although not always focusing on the right priorities. All stakeholders are willing to take environmental action if they are invited in a correct way and if they see a benefit for themselves or for the future generations. The most important factor here is the convening power of the authorities or the programme to overcome the tragedy of commons mechanism.
Local population has little trust in the transparency on the use of funds of such support programmes	The initial level of trust of local population depends on the previous experience with donor funded programmes. The trust is lower where they have had a negative experience before. The Financial Participatory Approach methodology has effectively overcome this mistrust by delegating decision making authority to the beneficiaries in a transparent way. It is also proving to be cost efficient, leaving the lion's share of the funds for direct financial support to the beneficiaries.

This assessment shows that some assumptions have been correct, while others did not prove to hold. The most important finding is that the rural communities are willing and ready to engage in conservation. FPA has proven more successful than initially anticipated. The activities started and were implemented at different pace due to differences between the countries and between regions within countries. But none of the 12 processes initiated failed so far. The result is a number of local communities interested to cooperate with the ECF in order to achieve their own objectives of economic development and conservation of nature in their area. The processes demonstrated that the local communities possess abundant knowledge about the species and habitats which can be harnessed for the land use planning process. In priority target communities, the FPA processes moved quite rapidly towards planning for conservation actions, so it may be possible to skip some of the initially planned phases of FPA, and merge them into the process of developing and implementing the Conservation Agreements.

One of the important outcomes of the FPA process is the emergence of local activists and community leaders who are interested in nature conservation in a broad sense, not just in terms of getting involved in Conservation Agreements. This creates an opportunity to engage and support a wider community in long terms conservation actions. We propose

to set up a so called “caretakers” or “local activists” network of local civil society organisations and leading individuals. Their role in the community would be to:

- Raise awareness about nature conservation;
- Share good practices within the network and with other stakeholders;
- Continue on their own with the initiatives emerging form FPA that cannot be taken by ECF Conservation Agreement;
- Provide technical and social support to the beneficiaries of the Conservation Agreements;
- Communicate and cooperate with the WWF in relation to conservation initiatives related to their communities.

This can be achieved by providing small operational grants to such individuals and organisations that will self-organise and will be able to use this base funding to attract additional donor funding according to their priorities and needs.

For mapping and analysing ecoregional corridors landscape and developing landscape plans, much less money was spent than initially anticipated. Two main reasons for this are that:

- There is very limited professional capacity available in the countries outside WWF itself. It turned out that most of the work can be done within the project team, while the inputs received from the local experts are of limited value. Once this was understood, tasks in mapping, analysis and planning were contracted out only on the basis of very targeted and limited scope.
- The FPA process emerged as a very efficient platform for participatory planning that can fully replace the traditional expert driven planning.

Along with the FPA and planning processes, the importance of involving the authorities in managing the land and natural resources has become very clear. In the context where most land is publicly owned and managed by agencies or local authorities, it is not possible to set up a meaningful conservation agreement without their involvement in the planning and implementation. This has two consequences:

- As in the case of the pilot Conservation Agreement in Khachik, it seems that the relevant authorities holding the rights to the land will be involved in most Conservation agreements. Either by providing the land use rights and regulating them, or by supporting and monitoring implementation, or both.
- The capacity of these authorities has to be strengthened in order for them to play an appropriate and meaningful role. In this respect, the main priority stakeholders are local authorities and forest agencies. As a pilot example, the Khachik Community (local authority) has been involved in planning of the pilot conservation agreement providing land use rights needed for the implementation. And a pilot process of capacity building has been initiated with the Adjara Forest Agency and will be replicated elsewhere. The key objective is that the agencies managing the natural resources need to understand and accept the conservation objectives set by WWF and to be able to perform their function in sustainable, nature friendly resource management.

3.2 Monitoring and Evaluation

The following indicators were set for the monitoring of the project in the KfW Terms of Reference:

Impact level:

- The population of selected indicator species in protected areas which are interlinked through eco-corridors remain constant by 2020;
- The number of conflicts between local communities and protected area administrations in protected areas which are interlinked through ecological corridors do not increase (as compared with 2012).

Outcome level:

- In selected ecological corridors, 70% of local development plans corresponding to environmentally friendly land use practices are implemented.

Output level:

- Long-term commitments to the target group are made for at least 40% of the available financial means for the promotion of the sustainable use of natural resources;
- All measures agreed upon are based on land use plans;
- 70% of the measures agreed upon in the nature conservation agreements are implemented;
- At least 10% of the financial resources available to the ECF in 2017 are from sources beyond BMZ.

In the processes of landscape planning and financial participatory approach conducted so far, the relevance of the above indicators has been checked and baseline values established where applicable and feasible. The table shows the overview of the indicators, their relevance and baseline values.

Table 3.: Programme indicators with the assessment of their relevance, data to be collected, applicable methods and baseline values at the time of this report.

Indicator	Relevance	Data to be collected by ECF	Method of acquisition	Baseline value 2016/2017
Impact level				
The population of selected indicator species in protected areas which are interlinked through eco-corridors remain constant by 2020	The indicator is relevant for ECF as it reflects the status of biodiversity through the status of target species. According to the studies, it is most relevant to monitor the population of herbivores.	Population of Bezoar Goat in Armenian corridor	Periodic zoological assessment in selected zones: Gnishik protected landscape Gndasar Mountains, Artavan Arevis-Nzhdeh	 200 100 20-30 100
		Population of Mouflon in Armenian corridor	Periodic zoological assessment in selected zones Arevis-Nzhdeh Border zone Areni-Martiros	 10-20 Occasional
		Population of Tur in Azerbaijan corridor	Periodic zoological assessment in selected zones Zagatala corridor Khynalig Gonaghkend	 300-500 570-600 50
		Population of Chamois in Azerbaijan corridor	Periodic zoological assessment in selected zones Zagatala corridor Khynalig Gonaghkend	 100 0 0
		Population of Red deer in Azerbaijan corridor	Periodic zoological assessment in selected zones Zagatala corridor Khynalig Gonaghkend	 50 0 0
		Population of Red deer in Georgia corridor	Periodic zoological assessment in selected zones	Tbd
		Population of Red deer in Georgia corridor	Periodic zoological assessment in selected zones	Tbd
The number of conflicts between local communities and protected area administrations in protected areas which are interlinked through ecological corridors do not	There are no protected areas within the ecoregional corridors. ECF is also not targeting the support zones of protected areas. This means that the indicator is not relevant.	/	/	/

increase (as compared with 2012)				
Outcome level				
In selected ecological corridors, 70% of local development plans corresponding to environmentally friendly land use practices are implemented	The indicator reflects the success of the ECF in negotiating conservation agreements and securing their implementation based on environmentally friendly land use plans	Number of prepared local development plans	Keep a record of land use plans prepared	1
		Number of Implemented local development plans	Keep a record of signed conservation agreements and their success	0
Output level				
Long-term commitments to the target group are made for at least 40% of the available financial means for the promotion of the sustainable use of natural resources;	This indicator reflects the efficiency of allocation of funds	Total funds available in ECF	Keep a record of value of donor agreements signed by ECF	€ 8.530.000
		Total funds committed in long-term to the target group	Keep a record of value of conservation agreements signed by ECF	Foreseen in the revised budget: 3.761.920 (44%)
All measures agreed upon are based on land use plans;	The indicator is a criterion for ECF in implementation of environmentally friendly land use plans	List of measures supported by conservation agreements	Keep a record of measures supported by conservation agreements signed by ECF	*28 (Khachik)*
		List of measures based on prepared land use plans	Keep a record of measures foreseen by land use plans	28 (Khachik)
70% of the measures agreed upon in the nature conservation agreements are implemented;	The indicator reflects the success of implementation of conservation agreements	List of measures supported by conservation agreements	Keep a record of measures supported by conservation agreements signed by ECF	28 (Khachik)
		List of measures actually implemented during the validity of the conservation agreements	Keep a record of measures implemented during conservation agreements signed by ECF	0
At least 10% of the financial resources available to the ECF in 2017 are	The indicator reflects the success of the ECF in attracting additional funds.	Total funds available to ECF from BMZ	Keep a record of value of donor agreements signed by ECF with funding from BMZ	€ 8.000.000

from sources beyond BMZ	The indicator should be monitored also beyond 2017	Total funds available to ECF from donors other than BMZ	Keep a record of value of donor agreements signed by ECF with funding other than BMZ	€ 530.000 (6,6 %)

The acquisition of baseline values of the above impact indicator population of target species was done as part of the habitat suitability studies described in Armenia and Azerbaijan. The subsequent population assessments should be done approximately every 5 years. As the deadline is set for 2020, the first periodic assessment will be conducted in 2020 using the same methodology as the assessments in 2016 and 2017.

Data collection on population of Red deer and Chamois in Georgia are still being collected. The data needed for the remaining indicators are being collected within the records of the programme and will be updated with every progress report.

In order to secure the monitoring of successful performance of conservation measures and of their impact on biodiversity, reporting and monitoring actions to be performed by the beneficiaries have been included into the pilot conservation agreement for Khachik **(Table 10**)and similar provisions will be included into all other agreements.

Table 4.: Reporting and monitoring requirements under the Khachik Conservation Agreement

Purpose	Monitoring activity	Indicator
Verification of implementation	Day to day management and coordination, ranger presence in the area	Number of work days
	Documenting and reporting implementation of grassland management plan (areas ploughed, areas cut, hay produced)	ha of area ploughed ha of meadows cut tons of hay
Collecting impact indicators	Setting up permanent sample plots for monitoring grasslands (pastures, meadows and restricted areas) for monitoring species diversity, productivity and carbon storage	No. of plots set up
	Monitoring of permanent sample plots	No. of species present Annual production of biomass Carbon in plants Soil carbon
	Setting up constant plots for summer (post-parturition) and early winter (rutting period) counts of bezoar goats	No. of summer plots No. of winter plots
	Summer (post-parturition) and early winter (rutting period) counting of bezoar goats	No. of goats in summer No. of goats in winter
	Setting up observation methods and sites for mouflon, brown bear, leopard	No. of plots
	Observation and reporting of mouflon, brown bear, leopard	No. of mouflon observations No. of bear observations No. of leopard observations
	Initial forest inventory (baseline)	Area inventoried Growing stock No. of tree and shrub species
	Limited sample inventory of the forest	No. of sample plots Growing stock No. of tree and shrub species