III. INDICATORS OF SUCCESS OF OBJECTIVES OF CONSERVATION MEASURES

1. **By 2025 increase the range and the number of Bezoar goat** **by 30%**

There is a core population of around 200 Bezoar goats in the Gnishik PL conservation area, of which 20 specimens occur in the administrative territory of Khachik Community. The expansion of their range outside the conservation area depends on availability and productivity of their habitat, and absence of poaching.

1. **By 2025 secure at least temporary presence and safe migration of the Armenian mouflon in the area of Khachik Community**

High mountain grasslands around Khachik Village are mouflon habitat, but mouflons have not been observed in the area in the recent years for the reasons of poaching in the past, military presence on the border with Nakhichevan and disturbance by livestock in mouflon habitat.

IV. SUMMARY DESCRIPTION CONSERVATION MEASURES TO BE CARRIED OUT

1. **Establishment of a regulated grassland management system.**

Community owned pastures and other agricultural lands will be divided in several categories (see map). The use of pastures will be regulated as to allow sufficient growth of grass in spring and thus increase their productivity while reducing soil erosion due to overgrazing and trampling:

* Pastures near the village open for grazing from May 1 till winter (3137.3 ha),
* Pastures open after June 1 (Plot P3, 136.9 ha),
* Pastures open after July 1 (Plots P2, P4 and P6, total 492.6 ha),
* Pastures open after July 15 (Plot P8, 459.6 ha),
* Pastures closed for grazing livestock – dedicated to Bezoar Goat and Mouflon (Plots P1, P5, P7 and P9, total 794.1 ha).
1. **Establishment of pasture infrastructure.**

The regulated grazing regime will be supported by the watering points and herder shelters, which will allow for the herders and cattle to stay in the more remote pastures without returning to the village every night.

1. **Establishment of no-use, no-disturbance zones**

In addition to the current core zone of the Gnishik PL, suitable areas will be designated exclusively for wildlife. This will contribute significantly to the carrying capacity of the landscape for Bezoar goat (mainly P5 and P7) and for Mouflon (mainly P1 and P9).

1. **Production of forage on currently abandoned arable lands**

At least 50 ha of former arable lands will be tilled and production of high quality grass and clover for forage will be established to enable winter feeding of cattle and keeping them indoors during winter until May 1. This will increase the overall productivity of cattle and improve local livelihood while reducing the pressure of cattle on the habitats.

1. **Regular cutting of designated high diversity hay meadows**

At least 40 hectares of high mountain hay meadows with high plant diversity will be cut regularly in order to maintain the grassland diversity. The hay will be left in haystacks on the meadows to provide winter food for the Bezoar goats. The fresh grass on these meadows will also provide and important food source for Bezoar goat in the spring.

1. **Anti-poaching control**

The coverage of Gnishik Protected Landscape ranger service in relation to wildlife management and poaching will be extended to all the lands of the Khachik Community and the forest lands within the Khachik Community.

1. **Transformation of monoculture pine stands into natural forest**

The only forest in the Khachik Community (142.3 ha) was planted as a pine plantation some 15-20 years ago. With the aim of improving the biodiversity and stability of this forest, a forest inventory and management plan will be prepared in cooperation with, and under authority of, Hayantar, focusing on biodiversity, protective and recreation function. According to this plan, the following measures will be taken:

* thinning of the planted pine stands;
* establishment of the recreation infrastructure in and near the forest;
* promoting natural regeneration processes and in case of need conduct full scale and/or enrichment planting/seeding to support native tree species
* removal of the existing fence when it is not needed anymore.
1. **Monitoring**

To verify the success, or in case of failure to adapt, the conservation measures a monitoring system will be established, including:

* permanent grassland sample plots for monitoring species diversity, productivity and carbon storage;
* regular counting and observation of wild animals;
* conduct forest inventory including assessment of tree species composition and survival rates of seedlings.

Well established conventional monitoring methods will be introduced and used that can be performed by the staff of the Gnishik Fund and local people. The results of monitoring will be included in the annual reports.

V. SUMMARY DESCRIPTION OF RESPONSIBILITIES

1. WWF-Armenia contributes to the wildlife habitat management plan by:
* providing financial means according to the pertaining Conservation Agreement and its Annexes (see Annex 4);
* Monitoring and evaluation of the wildlife habitat management system.
1. Gnishik Fund provides assistance to Community through:
* implementing the Management Plan of the Gnishik PL
* overall protection of wildlife and wildlife habitats;
* capacity building and development of infrastructure;
* monitoring of the wildlife habitat management system and ranger service (anti-poaching) on the entire territory of Khachik Community.
* managing the implementation of the measures in cooperation with the Community and with Hayantar SNCO.
1. Community establishes regulated pasture management system, which includes the following elements:
* improvement of livestock food rations during winter time through production of forage (perennial crops, cereals) on currently abandoned arable lands;
* restriction of grazing befor May 1. on any community land;
* designation of pastures and time periods for use by the farmers in order to utilise and maintain pasture productivity in designated areas;
* designation of meadows 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.
* enabling and authorising the Gnishik Fund to conduct wildlife management actions and ranger service (anti-poaching) on the entire territory of Khachik Community.
1. The funds needed for the implementation of the ten year plan will be deposited upon the signature of the agreement in the special bank account of Gnishik Fund set up for this purpose. As the plan is implemented according to schedule, these funds will be released for use according to the agreed schedule. The use of the funds will be controlled by one signatory from the Gnishik Fund and one signatory from the Khachik Community.
2. In case that the annual targets described in section IV. are not achieved, this fact will be reported by the Gnishik Fund and reasons investigated by WWF providing technical support as required, agreeing on corrective action to get activities back on track. If the corrective action is not effective, account withdrawals may be temporarily suspended by WWF. In case the implementation of the agreement resumes in a satisfactory manner, the WWF will release further account withdrawals. In such case the Agreement may be modified to take account of commonly agreed modified activities or the duration of the agreement.
3. If, after a period of 24 months, WWF determines that there is no chance of any continued progress on the agreed conservation measures, even with external technical support, the conservation agreement is terminated and the remaining funds in the account are withdrawn.
4. If the purpose of the agreement is irreversibly breached by the Gnishik Fund or the Khachik Community, WWF has reserves the right to claim back the entire sum.
5. The Gnishik Fund will retain a share of the funds in the amount of 3,600 EUR annually for its own services (coordination, supervision, monitoring). The remaining funds will be used in agreement between the Community and the Gnishik Fund by representatives of Community and Gnishik Fund having co-signatory rights to the Special Bank Account.

VI. EXPECTED BENEFITS

1. By providing the necessary infrastructure and adoption of the wildlife habitat management plan, the overall footprint of grazing in the landscape will be reduced and limited in time. Producing enough hay for winter feeding of cattle will reduce the pressure on the pasture lands during winter and early spring. Both together will enable the Community to introduce and enforce a time schedule of using individual designated pasture areas, which will also help maintain their productivity.
2. The implementation of the plan and the maintenance of the infrastructure and equipment will be carried out by the Gnishik Intercommunal Environment Foundation, supported by Khachik Community.
3. The benefit for Bezoar goat will be reduced habitat disturbance and increase in overall habitat productivity (including haystacks and grain in the winter and fresh grass on hay meadows in the spring), as well as reduced risk of poaching in the Khachik.
4. The benefit for Armenian mouflon will be available undisturbed grassland habitats close to the border, which will enable their movement and return to the Khachik area.
5. The forest transformation measures will rehabilitated forest ecosystem on 20 ha providing habitat for forest species and ecosystem services (such as fire wood, recreation) for local population.
6. The final beneficiary will be the population of Khachik Village. The benefit for the local population will be increased productivity of animal husbandry, additional workplaces (construction works, hay making) which will reduce the rural poverty.

VII. ACTION PLAN FOR THE WILDLIFE HABITAT MANAGEMENT OF KHACHIK COMMUNITY FOR 2017-2026

1. The action plan for the wildlife habitat management of Khachik Community is defined for 2017-2026 according to the Annex 2.

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Annex 2 to the Contract Agreement

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**Action plan for the wildlife habitat management of Khachik Community for 2017-2026**

| ***Purpose***  | ***Objective*** | ***Describtion of measures to be carried out***  | ***Implemen-tation time***  | ***Responsible body*** | ***Performance indicators***  | ***Impact indicator*** |
| --- | --- | --- | --- | --- | --- | --- |
| Investment actions |  |  |  |  |
| Equipment and pasture infrastructure (see Annex 4 for financial details)  | Purchase of agricultural equipment | Purchase of tractor “Belarus 82.1”, mowing-machine КЦФ 21 Б4, 2 (two) steep slope mowing-machines МФ-70 or similar, rotary rakes ГР-700, baler ПТ-165, hlow ПЛН 335, swing machine СПУ 4-Д | 2017 March - April  | Gnishik Fund | Presence of technically maintained agricultural equipment.  | Thanks to increased technical capacity the conservation measures are implemented. |
| Setting up of livestock watering points  | Construction of 5 (five) livestock watering points, laying of pipelines, earthworks  | 2017 March-May | Gnishik Fund with assistance of Community (work force) | Presence of gravity water supplied to livestock watering points.  | More effective exploitation of remote pastures, less presence of cattle in Bezoar and Mouflon habitats.  |
| Construction and furnishing of shelter for stockbreeders  | Mobile shelter (20 square metre), toilet, sink, stove, furniture  | 2017 May-August | Gnishik Fund with assistance of Community (work force) | Presence of well maintained mobile shelter.  | More effective exploitation of remote pastures, less presence of cattle in Bezoar and Mouflon habitats  |

| ***Purpose***  | ***Objective*** | ***Describtion of measures to be carried out***  | ***Implemen-tation time***  | ***Responsible body*** | ***Performance indicators***  | ***Impact indicator*** |
| --- | --- | --- | --- | --- | --- | --- |
| Long-term actions  |  |  |  |  |
|  Establishment of regular grassland management system (see the Map of Activities in Annex 3 for details) | Production of forage on currently abandoned arable lands | Plowing and sowing of perennial crops grass and clover (not less than 50 ha per year)  | March-May 2017 and continuous | Gnishik Fund with assistance of Community (work force) | Surface of plowing, seeding and harvesting | Ensuring enough hay and forage for keeping cattle indoors during winter and early spring |
| Harvest of perennial crops (not less that 50 ha), baling and transport of hay to the village  | June-September 2017 and continuous | Gnishik Fund with assistance of Community (work force) | The area of harvested cereal and perennial crops |
| Distribution of hay to individual stockbreeders (not less than 50 tons per year) | July- September 2017 and continuous | Gnishik Fund with assistance of Community (work force) | The volume of hay sold or provided to stockbreeders |
| Regular cutting of designated high diversity hay meadows | Cutting, drying making haystacks in the field (not less than 40 ha per year)  | June-September 2017 and continuous | Gnishik Fund with assistance of Community (work force) | Surface of cut grasslands in hectares and number and volume of haystacks in the field. | Improved productivity and biodiversity of grasslands; secured forage (in form of haystacks) for Bezoar goat during the snow covered period. |
| Regulation of grazing | Start of the grazing season  | Not earlier than May 1, 2018 and continuous | Community | Absence of grazing cattle in the field before May 1, 2018 and continuous | Improved productivity and biodiversity of grasslands through prevention of trampling and overgrazing. Limited period of cattle presence in wildlife habitat |
| Cattle access to the pastures in the plot P3 (see Map in Annex 3) | Not earlier that June 1, 2018 and continuous | Community | Absence of cattle in the plot P3 before June 1, 2018 and continuous |
| Cattle access to the pastures in the plots P2, P4 and P6 (see Map in Annex 3) | Not earlier that July 1, 2018 and continuous | Community | Absence of cattle in the plots P2, P4 and P6 before July 1, 2018 and continuous |
| Cattle access to the pastures in the plot P8 (see Map in Annex 3) | Not earlier that July 15, 2018 and continuous | Community | Absence of cattle in the plot P8 before July 15, 2018 and continuous |
| Cattle access to the pastures in the plots P1, P5, P7 and P9 (see Map in Annex 3) | No access starting from 2018 and continuous | Community | Absence of cattle in the P1, P5, P7 and P9 starting from 2018 and continuous | Cattle free habitats for wildlife, natural succession of habitats |
| Anti-poaching control | Prevent poaching in Khachik Community | Ranger service in relation to wildlife management and poaching on all the lands of the Khachik Community and the forest lands within the Khachik Community | March-May 2017 and continuous | Gnishik Fund with assistance of Community and Hayantar | Number of illegally killed wild animals | Number of Bezoar Goats and Mouflon in Khachik Community territory |
| Transformation of monoculture stands into natural forest  | Rehabilitation of forest ecosystem to provide ecosystem services for local population  | Forest inventory and management plan | 2017/2018 | Hayantar with Gnishik Fund, Community | Management plan prepared | Detailed plan for conservation measures |
| Thinning of pine plantation to to support natural regeneration processes  | 2018 | Gnishik Fund with assistance of Community, under supervision of Hayantar | ha of forest thinned | Increased stability of the forest |
| Establishing recreation infrastructure (forest trails, picknick area…)  | 2018 | Metres of trail, number of picknick areas | Recreational opportunity for locals and tourists, positive attitude to conservation |
| Conduct full-scale and enrichment planting according the management plan | 2018 onwards | ha enrichment planting conducted, ha of fullscale planting conducted. Amount and composition of tree species planted | Improved habitat for plants and animals, increased biodiversity |
| Removing fence when not needed | When agreed with Hayantar | m of fence removed | Removal of obstacle for wildlife, positive attitude to conservation |
| Monitoring | Verification of performance indicators | Day to day management and coordination, ranger presence in the area | March 2017 onwards | Gnishik Fund | Ranger workmonths per yearManagers workmonths per year | Smooth implementation of the Habitat Mgt PlanBetter prevention of illegal activities (poaching etc.) |
| Documenting and reporting implementation of grassland management plan (areas plughed, areas cut, hay produced | March 2017 onwards | Gnishik Fund | Annual reports | Ability to track progress and adjust conservation measures as necessary |
| Setting up permanent sample plots for monitoring grasslands (pastures, meadows and restricted areas) for monitoring species diversity, productivity and carbon storage | March-October 2017  | Gnishik Fund | Report on permanent plots, plots marked in the field  | Enable monitoring of grassland biodiversity and carbon storage |
| Monitoring of permanent sample plots | 2018 and onwards | Gnishik Fund | Annual reports | Demonstrate impact on grassland biodiversity and carbon storage |
| Setting up constant plots for summer (post-parturition) and early winter (rutting period) counts of bezoar goats | August - November 2017  | Gnishik Fund | Report on plots, plots marked in the field  | Enable monitoring of bezoar goat population |
| Summer (post-parturition) and early winter (rutting period counting of bezoar goats | 2018 and onwards | Gnishik Fund | Annual reports | Demonstrate impact on bezoar goat population |
| Setting up observation methods and sites for mouflon, brown bear, leopard | August - November 2017 | Gnishik Fund | Report on methods plots, observation plots and equipment in the field  | Enable monitoring of animal populations |
| Observation and reporting of mouflon, brown bear, leopard | 2018 and onwards | Gnishik Fund | Annual reports | Demonstrate impact on populations of target species |
| Initial forest inventory | 2017 | Gnishik Fund and Hayantar | Forest map, report | Plan the silvicultural improvement of the forest |
| Limited sample inventory of the forest | 2019, 2022, 2026 | Gnishik Fund and Hayantar | Forest map, report | Demonstrate improvement of the forest |

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Annex 3 to the Contract Agreement

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**2017-2026 wildlife habitat management activities map of Khachik Community** 