

ELP FINAL REPORT FORM

<i>Project name</i>	Restoring Gallery Forest and Grasslands in the Iori River Valley
<i>Location</i>	Chachuna MR, Dedoplistskaro Municipality, Kakheti region, Georgia
<i>Lead partner</i>	Stichting BirdLife Europe/SABUKO
<i>Project start date</i>	October 2018
<i>Project end date</i>	September 2020
<i>Project extension end date</i>	December 2022
<i>Total ELP budget</i>	\$948 187
<i>Project website If applicable</i>	
<i>Report author(s)</i>	Stichting BirdLife Europe/SABUKO

1. Project Executive Summary

The project aimed to restore the ecological processes, habitats, and species' diversity in the landscape formed by the Iori River valley, including the floodplain's riverine forest surrounded by semi-arid tablelands, hills covered by Caucasian light forest, steppe, and heavily eroded badlands along the left (northern) bank of the river.

Conversion to arable agriculture and irrigation in the past and continuous overgrazing by sheep have caused large-scale degradation of natural habitats, loss of biodiversity, and desertification. This area lies within the heart of the Caucasus Biodiversity Hotspot. It is also exceptionally rich in threatened and range-restricted species and acts as an important wildlife corridor for the entire Caucasus region.

Over the course of the 20th and early 21st centuries, the ranges of these habitats' most characteristic species shrunk significantly. Core populations are now limited to the contiguous steppe belt north of the Black and Caspian Seas, while isolated remnant populations further west and south are in rapid decline. Furthermore, due to its mild climate, the South Caucasus acts as a key stopover and wintering ground for bird populations migrating from the northern steppes. At a more local scale, the vegetation within the project area consists of semi-arid tablelands along the Iori River, which is lined with a narrow gallery forest and small patches of marshland.

Semi-desert and steppe occupy the flatter terraces and are intersected by forested ridges and erosion gullies. The composition of the steppe grassland community varies according to physical and soil conditions, exposition, and disturbance. The significance of the landscape for conservation at the global and European levels is indicated by the high number of threatened species associated with key habitats: Persian gazelle, Egyptian vulture, Saker falcon, Cinereous vulture, Eastern Imperial eagle, Jungle cat, Brown bear, wolf, and lynx are found in all habitats of the area. Wolf, jackal, Indian porcupine, and lynx are present throughout the landscape and depend on the gallery forest for shelter and reproduction. The presence of large flocks of sheep in the landscape offers ample food for wolves and vultures, three species of which have significant breeding populations in the area. Transhumance is a way of moving livestock that imitates the natural migration patterns of herbivores. This practice plays a significant role in maintaining ecological balance. On the other hand, economically driven systems that keep sheep confined in stables for milk production and rely heavily on external sources of feed can have negative effects on carnivores and scavengers in the ecosystem. In contrast, the rotational system we advocate for optimizes grazing patterns by aligning them with the natural availability of feed. This approach supports a more harmonious coexistence between livestock and wildlife. Eastern imperial eagles have a healthy population in the area and use the gallery forest for breeding while foraging on the surrounding steppes. At some stage of their life cycle, virtually all wildlife inhabiting the steppes depends on the lori River and the gallery forest for water, foraging, shelter, or reproduction.

During the Soviet Era, the extent of floodplain forests along the lori was reduced due to conversion to pasture and logging for firewood. In addition, unregulated grazing, in particular around livestock watering points, has led to widespread degradation and suppression of natural regeneration. In 1989, a 50-meter-tall dam was built on the lori River in order to create a stable water supply for a planned irrigation scheme. The irrigation scheme never became operational, but the infrastructure negatively affected the floodplain forest by disrupting flood patterns and reducing surface flow and sediment load.

This project addressed problems relating to unregulated and unsustainable land use pressures — such as overgrazing by livestock, land use change, and unsustainable levels of resource extraction — by developing a management plan for the existing Chachuna Managed Reserve (MR) and piloting a sustainable grazing scheme. In addition, to support the floodplain forest, gabions have been deployed and water is periodically released from the reservoir to flood the floodplain forest and improve its condition. The project also enhanced cooperation among different institutions. It strengthened the capacity of protected area staff and civil society organizations to work in partnership, sharing a long-term vision for landscape conservation. In the long-term, restoration interventions aim to increase the resilience of ecosystems and sustain the livelihoods of local communities confronted by environmental and societal challenges. Our initiative's long-term goal is to encourage the peaceful coexistence of people and animals in the region with a particular emphasis on reducing negative environmental effects.

The Ministry of Environment Protection and Agriculture, the Agency of Protected Areas, and the Parliament of Georgia were the primary partners in this project. As these agencies are key decision-makers, SABUKO actively shares its recommendations and findings with them to promote sustainable land use. One notable example of this cooperation is the cooperation with the Agrarian Committee of the Parliament of Georgia, which has led to the implementation of sustainable pasture management at the legislative level. Eventually, thanks to SABUKO's advocacy efforts, the Parliament is in the process of adopting its recommendations and incorporating them into pasture-management legislation. Legal

regulations have already been adopted on state pastures, which informs the stocking rates on pastures within the project area. Further work on the legislative framework, which also includes the pastures in the vicinity of villages and municipal pastures, is in its drafting stage. It is challenging to determine exactly the precise time frame for the completion of the legislative process as it relies on various factors, including political priorities and the complexity of the legislation itself. Strategic impact assessment for the national pasture legislation policy document is underway, which is anticipated to take a year. We are maintaining regular communication with key stakeholders and monitoring legislative progress. We will continue to support and build strategic partnerships with other NGOs working on drafting the new legislation and plan to actively participate in strategic environmental impact assessment processes and provide feedback and recommendations.

The strengthening of collaboration between different institutions and departments has improved the effectiveness of conservation and restoration measures in the project area. Over the course of the project, rotational grazing was found to provide benefit for biomass production, laying an excellent foundation for future projects. Furthermore, grazing management obligations were included in leasing contracts, reflecting improved policies and a more profound understanding of the principles behind traditional transhumance practices; the deeper the understanding, the more effectively practices can be modified to ensure a sustainable future.

1. Project Impact

1.1. Progress towards achieving outcomes

RAG	Definition
Fully completed.	
Partially completed and should be achieved beyond the project timeframe.	
Will never be achieved due to a change in circumstances that are beyond the initiative’s control.	

Goal

The ecosystem mosaic of the lower Iori River landscape conserved as habitat for viable populations of steppe species and a traditional semi-nomadic shepherd culture.

Outcome 1 Restoration of gallery forest habitat in Chachuna Managed Reserve	RAG Rating
<p>Overall Assessment – Was the Outcome achieved?</p> <p>Given that the project's steps to reduce grazing in the floodplain forest have been effective, it can be concluded that floodplain forest restoration was implemented effectively. As a result of this effort, areas of floodplain forest were flooded by the periodic release of water from the Dali Mountain Reservoir, aided by the placement of gabions across the Iori River and the creation of watering corridors. Fences were installed to protect over 200 hectares of floodplain forest. Initially, we installed one gabion to gauge its effectiveness and impact. Since the gabion proved successful, we plan to install two more gabions in the second phase of the project to expand the area flooded.</p>	

<p>Outcome Indicator 1.1</p> <p><i>1.1 Floodplain forest area stable or increasing/improving</i></p>	<p>According to the study, forest cover has increased. Within the project, for the first time the access of sheep to the forest was restricted and natural flooding of the floodplain forest was restored. Restorative changes are already visible. When we set up fences, we made sure to communicate with the farmers about the purpose of creating these corridors. We had discussions at the beginning of the season to address any concerns. Before establishing the corridors, we carefully observed the land for a period of time and selected areas where conflicts, such as fence damage or wire cutting, could be minimized. To ensure clear communication, we installed information boards in both Georgian and Azerbaijani languages. These boards state that grazing in the forest is prohibited, and we also installed camera traps for monitoring. The responsibility for maintaining the corridors lies with the Agency of Protected Areas in coordination with the Chachuna MR administration. By analyzing the data from camera traps, we assessed the impact of the fences and corridors. The report is available for reference. Based on the results, we did not observe a significant difference in frequency of wild boar sightings between the period of December 9-14 before and after the fence installation. In 2019, there appeared to be a higher frequency of jackal detection, although the reliability of this finding is limited due to the small sample size. We could not assess the differences in wolf frequencies due to the small number of sightings. It is worth noting that there was already a fence in this area for approximately 10 years prior to SABUKO's fence construction. However, data from prior to installation of the original fence is not available, making it challenging to determine the exact impact of the fence on movement of large and medium-sized mammals.</p>
<p>Outcome Indicator 1.2</p> <p><i>1.2 Forest species composition is improving</i></p>	<p>A positive trend has been observed in recent years. In Chachuna MR, forest cover has increased and an increased number of species was registered downstream of the reservoir. However, to be able to observe the typical plant composition for the river gallery forest, more time and permanent floods are needed. Since this is the first time that sheep access has been restricted and natural flooding of the floodplain forest restored, visibly improved regeneration rates are presumably the result of the new management measures.</p>
<p>Outcome Indicator 1.3</p> <p><i>1.3 Level of pressure from sheep decreasing</i></p>	<p>After the establishment of watering corridors and ponds to regulate chaotic grazing, the pressure from sheep on the floodplain forest has been reduced. We compared the vegetation cover (grassland) inside and outside the fenced areas by using multispectral drone images (NDVI-values). We were able to assess the differences (improved condition inside the fences) visually, but we did not perform statistical analyses due to lack of baseline values.</p>

		Unfortunately, we were not able to assess the differences before and after by satellite images, either. By this observation, we assumed that the pressure was generally reduced on the floodplain areas, particularly in fenced areas.	
Outcome Indicator 1.4 <i>1.4 Downstream river flooding pattern is restored</i>		Previously, the extent of the floodplain forest along the Iori River downstream of the Dali Mountain Reservoir was smaller than upstream. As expected, we observed a recovery of the downstream area. Every year, water is purposely released to flood the floodplain forest. The regulation of water levels in the reservoir is an ongoing concern for Georgian Amelioration Ltd. to maintain the reservoir's safety. When the water level in the reservoir is high, the frequency of releasing water is increased as a precautionary measure. This helps to manage the water levels and maintain a balance for the overall system's stability. The recommended water release from the Dali reservoir is twice a year, during spring and autumn. Currently, water discharge mainly occurs in the spring season. Monitoring is conducted according to the approved Chachuna MR management plan. SABUKO is confident that the changes are due to flooding, since this is the first time that the floodplain forest has had natural flooding aided by the gabion and the release of water from the Dali Reservoir.	
Output 1.1 <i>Chachuna forest health status and hydrology of the Iori River assessed, and priority restoration interventions identified</i>	<i>Chachuna health status assessment report/Hydrological assessment report published</i>	As part of the project, the floodplain forest health status and Iori River hydrology were assessed. Restoration measures were determined accordingly, e.g. creation of corridors and a gabion.	RAG
Output 1.2 <i>Chachuna Reserve Management Plan developed based on conservation and restoration needs</i>	Chachuna management plan and restoration measures developed for: - Hydrological regime of the Iori River; - Floodplain forest (Chachuna Reserve); - Degraded grasslands and scrub (Chachuna reserve and 2350 ha)	The project supported the development of the Chachuna Management Plan which was approved on the 13.03.2023. The plan includes different programs and interventions aimed at floodplain forest and pasture restoration, biodiversity conservation and monitoring measures. The management plan also establishes a legal ban on the creation of game farms in the Chachuna MR.	RAG

	restoration pilot site) -Biodiversity conservation and monitoring		
Output 1.3 <i>There is a floodplain forest restoration plan available based on flooding model and recovery plan</i>	River flooding model is developed; Floodplain forest recovery/restoration plan is developed	Along with the floodplain forest restoration plan, a flooding model was developed in cooperation with Ilia State University. The floodplain forest restoration plan mainly entailed the creation of watering corridors and gabions, which, based on monitoring results, have proven to be an effective nature-based solution. Flooding modelling has been done within the framework of Phase 1. https://sabuko.org/wp-content/uploads/2021/01/HYDROLOGICAL-REPORT-ON-THE-RIVER-IORI_ENG.pdf	RAG
Output 1.4 <i>Key restoration actions for the gallery forest implemented, including regulated releases from the reservoir</i>	Number of restoration interventions implemented. Records of water-releases from reservoir	Dali Reservoir was not functional for several decades. However, research has shown its critical importance for conservation purposes. The necessity of its periodic release is thus reflected in the Alazani-Iori River Management Plan. In addition, 6-km-long irrigation corridors have been established in the project area to protect the forest from encroachment by sheep. A pilot gabion has also been deployed to help flood an additional area of floodplain forest. The installation of the gabion turned out to be successful. Surveys showed that up to two additional hectares were flooded with the gabion's construction. Within the framework of the research, it was originally planned to install two gabions, which would give us a higher effect, but as a pilot, we decided to build one gabion. The gabion installation became a successful example of a nature-based solution, which we presented at the IUCN workshop and during the discussion of the water law. Within the framework of ELP Phase 2, we are considering building additional gabions. The available total budget amounts to \$40,000. We will need to make a prior assessment.	RAG
Output 1.5	Number of protection	In order to protect the floodplain forest, a fence was built with	RAG

<p><i>The protection of the forest included in the Nature Reserve promoted based on the stakeholder information and communication activities</i></p>	<p>interventions implemented</p>	<p>information boards stating that grazing in the forest is prohibited. A number of printed and online materials highlighting the importance of conservation of the floodplain forest were also developed. Digital material was disseminated through social media. Materials in Georgian and Azeri have increased public awareness of the importance of the floodplain forest and contributed to a reduction in sheep encroachment in the forest. In addition, joint door-to-door visits to farmers were conducted, with Chachuna rangers explaining the importance of floodplain forests and regulations against grazing in the floodplain forest. Current legislative changes were also highlighted. To more effectively protect floodplain forests, innovative video patrolling was also introduced to help record illegal acts and ensure accuracy.</p>	
<p>Output 1.6 <i>Assessment of water corridors and establishment of facilities for livestock water provision</i></p>	<p>Assessment report and map is provided</p> <p>Number of strategically located alternative water points</p>	<p>In order to identify optimal locations for the watering points, SABUKO first studied the routes the farmers would take down to the river from their farms and identified areas with a high concentration of sheep, then built the watering points, wells, and corridors accordingly.</p>	<p>RAG</p>
<p>Output 1.7 <i>Local Administration of Chachuna is capable of carrying out regular patrolling in floodplain forest</i></p>	<p>Regular reports of patrolling are issued</p>	<p>The Chachuna administration previously had a patrolling plan; with the help of SABUKO it was updated and areas critical to the protection of floodplain forest were identified. Furthermore, as part of the project, video patrolling was implemented for the first time ever — an innovation in the monitoring of protected areas. These practices will continue in the years to come. When encroachment or illegal activities are detected, the rangers responsible for the protected area take necessary action, such as imposing fines on violators. Although there haven't been any poaching incidents, there have been instances of sheep entering the forest, totaling around 30 cases. The transmission of video footage is done in compliance with the relevant authorities, ensuring that it adheres to the Law of Georgia on Personal Data</p>	<p>RAG</p>

	<p>Protection.</p> <p>In general, video evidence obtained through these methods can be used in court if it is relevant to the case and obtained lawfully. This ensures that individuals' rights are safeguarded while enabling effective monitoring and enforcement of regulations in protected areas.</p>	
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<p>Outcome 2 Shepherds and other local stakeholders understand and support the need to manage grazing for long-term sustainability and are engaged in restoration measures.</p>	<p>RAG Rating</p>
<p>Overall Assessment – Was the Outcome achieved?</p> <p>At the outset of the project, farmers' interest in participating in the rotational grazing scheme was quite low, since communication between farmers and the Agency of Protected Areas, the administration of Chachuna Managed Reserve and the National Agency for Sustainable Land Management and Land Use had been limited. Moreover, communication had not covered such issues as the importance of sustainable pasture management, current legislative news, the importance of floodplain forests, grasslands, etc.</p> <p>A significant challenge that frequently arises is leasing and subleasing of land. As part of the project, we have engaged in extensive communication with farmers to gauge their interest in participating. Building trust has played a vital role in establishing connections, as farmers feel confident working with an organization that understands pasture-related issues and can serve as a reliable strategic partner. Moreover, farmers have a clear understanding and expectation of the positive outcomes that can result from implementing sustainable grazing practices. Their willingness to embrace this approach has been instrumental in our efforts. With the launch of the project, SABUKO began actively communicating with farmers and introduced the project by explaining our shared challenges to stakeholders and the need to join forces to respond to these challenges using available resources and knowledge. Thanks to incentive schemes developed on the basis of a socioeconomic questionnaire we administered, farmers' interest in participating in the rotational grazing scheme increased greatly. The number of farmers willing to participate increased to 7, and the rotational grazing scheme is now implemented on over 3300 ha. In addition, farmers who had introduced rotational grazing in the early years helped raise pastoralists' awareness of the need for sustainable pasture management and rotational grazing. Rotational grazing has been introduced on pastures within protected areas, public lands, and private pastures.</p>	

<p>Outcome Indicator 2.1 2.1. Rate of participation and active contribution by the shepherds and other local stakeholders in the small-scale rural development programme, and willingness to comply with grazing regulation in the long-term</p>		<p>SABUKO measured the level of participation of local farmers/landowners/herders in RDP in terms of the number of requests for technical assistance and the number of farmers who have begun implementing grazing plans. Over the course of the project, 7 farmers (21%) requested and are now implementing the rotational grazing scheme. Tailored incentives encourage local farmers to engage more actively in RDP. In the second phase of our project, we encountered the need for active communication to generate interest among farmers in implementing a rotational grazing scheme. Initially, some farmers found it challenging to grasp the benefits of rotational grazing. However, those who have witnessed positive outcomes from adopting this approach have voluntarily continued practicing it without any incentives. We maintain ongoing communication with these farmers, offering support in managing and monitoring their efforts. Instances of violations in the rotational grazing scheme typically stem from limited grazing areas, the high number of sheep, and occasional negligence by shepherds. To address this, we introduced salary increases for shepherds, which proved to be highly effective in motivating them to actively manage the flock. Additionally, as part of the project, we collaborated with a respected Azerbaijani spiritual leader who promoted the concept of rotational grazing within his community. As a result, other farmers have been inspired to adopt this approach as well.</p>	
<p>Output 2.1 <i>Small-scale rural development activities implemented, linked to signing of conservation agreements with farmers</i></p>	<p>Number of rural development interventions Number of signed conservation agreements (rotational/sustainable grazing scheme)</p>	<p>Within the project, 7 farmers have signed conservation agreements. 2 farmers lease pastures within protected areas, while the other 5 are private pasture owners.</p>	<p>RAG</p>
<p>Output 2.1.1 <i>Reduction of encroachment and distribution of herds watering in the forest by ensuring organized watering corridors (alternative watering</i></p>	<p>Increased number of herds using the organized corridors by sheep flocks</p>	<p>Watering corridors have proven to be quite effective at organizing the movement of sheep; they no longer move around chaotically, and their entry into the forest is reduced to a minimum.</p>	<p>RAG</p>


ponds)			
Output 2.1.2 <i>Economic/marketing survey of sheep production and local economic opportunities</i>	Number of face-to-face meetings with shepherds; Marketing survey report and recommendations about sheep product markets.	An economic/marketing study was conducted which included an overview of the sheep supply chain and the potential for export of sheep and sheep products to the EU and GCC countries. The research identified prospects for further development, among them cheese production and local as well as international market access. State agencies, non-governmental structures, and farmers alike participated in the research. Expanding the potential for selling sheep-derived products and introducing appropriate marketing tools is planned for the ELP second stage restoration project of the Kakheti steppes.	RAG
Output 2.1.3 <i>Pilot rotational grazing schemes are established and controlled</i>	Number of plots grazed rotationally	Rotational grazing schemes have been developed and introduced both in protected areas and on private land. As part of the project, 7 farmers have implemented rotational grazing schemes. They are being monitored with the aid of GPS-collared goats and field trips.	RAG

Outcome 3 Ecological processes, biodiversity, and productivity conserved/restored on 4500 ha of pilot grassland restoration sites		RAG
Overall Assessment – Was the Outcome achieved? We planned and implemented rotational grazing on roughly 4500 ha. We tested the positive effects of the change in management on biomass production on roughly 600 ha at the testing intervention site. We were not able to detect any statistically significant changes in species' diversity or vegetation composition; it is expected that more time is needed for the vegetation structure to undergo fundamental changes. The monitoring of these sites will be continued, even though the land (privately owned) was leased to another stakeholder during the grazing season of 2022/2023. Efforts will be made to ensure the ongoing implementation of rotational grazing on these sites as part of the second phase of ELP. A collaboration is underway with a specialist in local vegetation to enhance the assessment process and effectively identify changes in species' composition.		
Outcome Indicator 3.1 <i>3.1 Quality of selected grassland (4500 ha pilot</i>	Rotational grazing was designed and performed on approximately 4500 ha. We studied the favorable effect of management modifications on biomass output at the 600 ha testing	

<p><i>site) is improved (Improved productivity of biomass, cover and biodiversity, fewer signs of degradation).</i></p>	<p>intervention site, however, we could not find any statistically significant changes in species richness or plant composition. It is believed that it will take longer to see substantial effects on vegetation structure. Significant improvement in biomass was observed on plots where rotational grazing was applied by shepherds. However, it cannot be definitively determined whether the improvement was solely due to rotational grazing or the collaborative process of designing the management change. This remains a key point of discussion in scientific circles regarding the success of rotational grazing.</p> <p>Under ELP II, the number of sites implementing rotational grazing will be expanded, and a comparison will be made between shepherds practicing traditional pasture rotation. Initial field missions have already revealed differences in pasture condition between traditional shepherds, mainly from Samukhi and Vashlovani, who employ rotational grazing, and profit-oriented shepherds who utilize private or subleased land in Chachuna MR.</p> <p>In 2022, rotational grazing was not repeated due to limited pasture resources caused by leasing issues, and the land user's inability to support rotational grazing that year, exacerbated by an exceptional drought. However, assessment activities will continue during ELP 2nd monitoring missions.</p> <p>In 2021 and 2022, rotational grazing was implemented on other private lands, but no corresponding sampling plots were established to assess pasture improvement. The SAVI analysis was an attempt to demonstrate the success of rotational grazing.</p>
<p>Outcome Indicator 3.2 <i>3.2 There is a stable and healthy population of wild herbivores (hare)</i></p>	<p>Further study using appropriate well-designed methods is required to capture the current situation. At present, from our observations and numerous expeditions performed over the course of the project, the distribution of European hares in the project area appears very low. The number of European hare droppings found in the project area while exploring the disturbed and undisturbed canyons/fields (to find suitable locations for camera traps) has also been low. In addition, the frequency of European hares triggering our camera traps has been very low compared to that of local carnivores (e.g. wolves, golden jackals, red foxes, jungle cats, etc.). Rodents, wild boar, hares and badgers are preyed upon by predators. The presence of these species was captured through the use of camera traps. However, the acquired data was insufficient to conduct a thorough analysis, and excrement-based evidence was rarely observed in subsequent years. As a result, the feasibility of the methodology remains uncertain due to the limited data available. The data in 2022 was insufficient, thus preventing us from examining it.</p>

<p>Outcome Indicator 3.3 <i>3.3 Recommendations developed for conservation / restoration of project area as a wildlife corridor for herbivores and carnivores</i></p>	<p>Advocacy efforts by SABUKO’s policy team played a vital role in the designation process of the newly adopted Kotsakhura Emerald Network site (GE0000051), which appears to be an ideal corridor and shelter for local herbivores and carnivores. The importance of the Kotsakhura Emerald site as both a corridor and a refuge for herbivores and carnivores is based on the camera trap data collected.</p> <p>Also, the frequency of poaching incidents recorded in the area may also indicate that the territory is an important spot for biodiversity. The riverine forest of Chachuna MR provides shelter for local fauna, while the canyons of the new Kotsakhura Emerald Network site provide both additional shelter and a corridor for local wildlife moving through the area.</p>		
<p>Output 3.1 <i>Permanent or long-term land co-management rights/agreement secured by SABUKO over 2350 ha of legally protected pasture land in Chachuna MR.</i></p>	<p>Area under formal co-management by SABUKO</p>	<p>SABUKO signed a 5-year mutual cooperation memorandum with the Agency of Protected Areas, allowing SABUKO to manage the territory. In addition, the pasture management plan developed by SABUKO is integrated into current (and future) lease agreements. Leaseholders use grazing plans to ensure the sustainability of management practices.</p>	<p>RAG</p>
<p>Output 3.2 <i>The scientific Methodology of the Ecological restoration plan for the RPA (4500 ha) is developed</i></p>	<p>The scientific Methodology of the Ecological restoration plan is developed. Restoration plan is published</p>	<p>The scientific Methodology of the Ecological restoration plan has been developed.</p>	<p>RAG</p>
<p>Output 3.3 <i>Sustainable grazing scheme developed in close cooperation with shepherds</i></p>	<p>% uptake and participation by shepherds in the scheme</p>	<p>SABUKO has developed a sustainable pasture management plan, implemented since 2020, for both private and public pasture owners. Currently 7 farmers are implementing sustainable pasture management plans. Evidence has been obtained indicating that higher biomass production can be attributed to rotational grazing management. However, direct assessment of sheep health in relation to economics has not been conducted. The implementation of rotational management is guided by the evaluation of pasture conditions, which are extrapolated using satellite or drone images as outlined in the pasture management</p>	<p>RAG</p>

		<p>plan.</p> <p>From the outset, farmers were actively involved in the design of the rotational grazing system. Traditional grazing patterns, such as preferred grazing grounds during the lambing period, daily watering considerations, and appropriate sizes of rotational plots, were taken into account during the planning process.</p>	
<p>Output 3.4 <i>Grassland restoration experiments and their monitoring with the involvement of University students is carried out</i></p>	<p>Experiment conducted with the involvement of Students</p>	<p>The pasture restoration experiment has been ongoing since 2019. Both SABUKO and Ilia State University monitor it. The experimental intervention for pasture restoration was the introduction of rotational grazing.</p>	RAG
<p>Output 3.4.1 <i>The zonation and protocol for the rotational grazing scheme for the RPA is developed</i></p>	<p>Protocol for the rotational grazing scheme for the RPA</p>	<p>A protocol for the rotational grazing scheme for the RPA has been developed.</p>	RAG
<p>Output 3.5 <i>Stakeholder council established to discuss and adopt common decisions over pasture restoration (around 13000 ha, Including Emerald sites and Chachuna PA) and adaptive management</i></p>	<p>Number of organized council meetings and attendance.</p> <p>Decisions adopted by the council</p>	<p>As part of the project, a stakeholder council was created consisting of representatives of (non-)governmental organizations who were involved in discussions on pasture restoration and adaptive management practices. Annual meetings were held, and members received periodic updates via project newsletters.</p>	RAG
<p>Output 3.6 <i>Management Plans and standard data forms of Chachuna and Kotsakhura emerald sites are designed</i></p>	<p>Legal forms of management are presented on emerald sites and actions for sustainable grazing are taken</p>	<p>A management plan for the Chachuna reserve was developed. In addition, a working version of the Kotsakhura management plan has been prepared and will be finalized as part of the ELP Phase 2 Kakheti Steppes Restoration Project, as Kotsakhura has already received adopted site status.</p>	RAG

<p>Output 3.7 <i>Biodiversity monitoring system is established for Chachuna and Kotsakhura emerald sites</i></p>	<p>Number of biodiversity features monitored and assessed</p>	<p>A biodiversity monitoring system has been developed for Chachuna. The biodiversity monitoring system will be updated for Kotsakhura.</p>	<p>RAG</p>
<p>Output 3.8 <i>Ecological corridors (in between the lori floodplain forest, southern part of the badlands and Vashlovani PA) are identified and core zones for protection are defined</i></p>	<p>Number of core zones for protection</p>	<p>During the project, several valleys were identified which connect the forest of the lori floodplain with the southern areas. These valleys are a corridor and represent important movement routes for mammals. It is rather difficult to identify a specific area in the Vashlovani direction because shepherds take their herds there to graze, and depending on where the sheep graze, mammal movement routes shift.</p> 	<p>RAG</p>

<p>Outcome 4 Government adopts SABUKO recommendations on protection, restoration, and management in the project area</p>	<p>RAG</p>
<p>Overall Assessment – Was the Outcome achieved? Conservation measures implemented by SABUKO have increased the trust in the organization. Before implementing the specific interventions, SABUKO conducted several years’ worth of research in order to properly plan the placement of watering corridors and ponds as well as the gabion, well, and bridge, which support the implementation of the rotational grazing scheme. The data obtained from seasonal surveys not only enabled SABUKO to conduct successful advocacy for conservation measures but also resulted in specific achievements, such</p>	

as the designation of Samukhi as a national multipurpose protected area (IUCN category VI).			
Outcome Indicator 4.1 <i>4.1 Policy paper on pastures management is elaborated and number of recommendations promoted by SABUKO adopted within government decisions (budgets, policy, decisions etc.) following SABUKO's advocacy campaign</i>		<p>Prior to the project, SABUKO's recommendations regarding grassland conservation and forest restoration had not been followed by the government. Currently, the relevant authorities are adopting SABUKO's recommendations regarding the definition of Chachuna MR and the restoration of its pastures. The status of the Chachuna land lot was changed and the Agency of Protected Areas incorporated recommendations from the newly developed pasture management plan into the lease agreement. The lease agreement also outlines rotational grazing and stocking rates. SABUKO also conducted important work on flood modeling and the periodic release of water from the Dali Reservoir. These recommendations have already been included in the Iori River Basin Management Plan in Georgia (EU Water Initiative Plus for the Eastern Partnership, or EUWI+4EaP). Among other conservation measures, SABUKO has set up watering corridors and ponds, to reduce the incidence of sheep encroachment into the forest. Through active communication with other state bodies and relevant institutions, the Protected Areas Agency and local authorities have also considered revisiting penalties for law violations. Stocking rates for leased pastures are already regulated by legislation.</p>	
Outcome Indicator 4.2 <i>4.2 Emerald sites are designated according to SABUKO's recommendations</i>		<p>In the course of the project, we have been advocating for the establishment of two additional Emerald Network sites: Samukhi and Kotsakhura. We have been in communication with the biodiversity department responsible for establishing Emerald Network sites and have represented Georgia at the Bern Convention. We have presented research findings and supported the ministry in meeting the criteria for adopting Samukhi and Kotsakhura as network sites. As a result, Kotsakhura has been designated as Emerald Site.</p>	
Output 4.1 <i>Develop advocacy strategy for implementation of the project objectives</i>	Number of documents analyzed	<p>SABUKO has already analyzed the documents and devised an advocacy strategy on their basis. Through its advocacy, SABUKO has managed to introduce stocking rates at the legislative level and, using monitoring findings, has advocated for the expansion of the protected areas. Furthermore, the strategy made it possible to create corridors, wells, gabions, bridges, etc.</p>	RAG
Output 4.2 <i>An analysis of land tenure, pasture</i>	Number of documents analyzed	<p>SABUKO has already analyzed various documents related to land tenure, categories of agricultural lands, land regulations, and the legal framework of pasture management. SABUKO reviewed the</p>	RAG

<i>management, legal and institutional framework and associated regulations etc. carried out</i>		National Action Program to Combat Desertification, Program on Sustainable Management of Targeted Land and Agricultural Land, Law of Georgia on Soil Protection, Technical Regulations for Determination of Soil Fertility Level, Technical Regulation of Soil Conservation and Fertility Monitoring, and others. From this analysis important issues hindering the effective practical implementation of legislation were identified. We submitted the results obtained from the analysis to the Agrarian Committee of the Ministry of Environmental Protection and Agriculture of Georgia for the purpose of informing discussions on pasture legislation.	
Output 4.3 <i>Policy paper on biodiversity and sustainable pasture management practices drafted, with SABUKO actively participating</i>	Number of recommendations formulated	Together with other nature conservation CSOs, SABUKO takes an active role in updating biodiversity legislation and designing pasture policy by submitting remarks and recommendations based on conservation and restoration needs. Research-based recommendations are taken into account by policymakers. At this time, work is still being done on biodiversity legislation. SABUKO actively participated in the working groups and helped improve the current version.	RAG
Output 4.4 <i>Policy paper on pasture management practices is developed and ready for adoption</i>	Number of SABUKO recommendations taken into account	SABUKO has analyzed the aforementioned documents pertaining to pasture legislation and drafted a policy paper overview on their basis. This overview helped SABUKO successfully introduce stocking rates at the legislative level. A pasture policy document has also been created; it should be the subject of a strategic environmental assessment before being released for review, at which point SABUKO will again offer its input.	RAG
Output 4.5 <i>Recommendations adopted by government on Pilot Iori River Basin Management Plan (EU</i>	Number of SABUKO recommendations taken into account in finalized management plan	Georgia has signed an association agreement with the European Union which includes a commitment to bring Georgia's legislation closer to that of the EU. Accordingly, the development of river basin management plans has begun in Georgia. A management plan has been developed for the Iori River, which is central to the	RAG

<p><i>project) reflecting results of hydrological studies and ecological surveys</i></p>		<p>project area and floodplain forest. Furthermore, SABUKO's recommendations regarding the release of water from the Dali Reservoir have been taken into account and are reflected in the Iori-Alazani River Management Plan. As a party to the CBD, UNFCCC, and SDGs, Georgia has submitted its latest NBSAP for the 2014-2020 period. The plan contained commitments to grassland restoration, but it is now considered outdated. The country has initiated efforts to develop a new NBSAP, and our intention is to actively participate in the preparation process and advocate for the inclusion of commitments for steppe restoration.</p> <p>In terms of the UNFCCC, Georgia's updated Nationally Determined Contribution (NDC) does not currently address the restoration of steppe grasslands.</p>	
<p>Output 4.6 <i>Emerald sites are designated according to SABUKO's recommendations</i></p>	<p>Number of recommendations adopted by the government, regarding the designation of Emerald sites (including borders)</p>	<p>Throughout the project, we have been advocating for the establishment of two additional Emerald Network Sites: Samukhi and Kotsakhura. We have been in active communication with the biodiversity department responsible for establishing Emerald Network sites and have represented Georgia at the Bern convention. SABUKO presented its research findings to the department and provided support in meeting all criteria necessary for adopting Samukhi and Kotsakhura as Emerald Network sites. Kotsakhura is now an Emerald Site. As previously noted, efforts are in progress to revise the biodiversity legislation, which will also govern the administration of Emerald sites. Currently, due to lack of a relevant law, the management and safeguarding of these emerald areas are not adequately guaranteed. As a result, under the current protection framework, multi-use areas enjoy a higher level of protection status.</p>	<p>RAG</p>

<p>Outcome 5 Capacity and partnerships strengthened for landscape-scale conservation work.</p>	<p>RAG</p>
<p>Overall Assessment – Was the Outcome achieved? Throughout the entirety of project implementation, SABUKO has played an important role in bringing institutions together and strengthening conservation work in the area. The Agency of Protected Areas, Sustainable Land Development and Monitoring Agency, Agrarian Committee of the Parliament of Georgia, Dedoplistskaro municipality, Ilia State University, Georgian Amelioration LTD, Farmers' Association, and other non-governmental organizations have actively joined forces to implement conservation measures. All activities were agreed upon with the stakeholders and reviewed prior to implementation to ensure that they would deliver the expected results.</p>	
<p>Outcome Indicator 5.1 <i>5.1 Levels of inter-departmental cooperation for conservation/sustainable use of Chachuna</i></p>	<p>Prior to the start of the project, no regular meetings were held between the project partners to coordinate conservation activities in the Chachuna MR. Since the start of the project, however, several inter-agency collaborations have been initiated.</p> <p>First, the Agency of Protected Areas has shared the need for sustainable pasture management plans with the National Agency for Sustainable Land Management and Land Use Monitoring. Currently, the National Agency for Sustainable Land Management and Land Use Monitoring, in collaboration with SABUKO, is considering a modification of the pasture leasing program whereby leases would include stocking rates and a rotational grazing scheme component. Furthermore, we are currently a member of the working group on pasture- and water-related legislation.</p> <p>In cooperation with Ilia State University, SABUKO conducted a forest health assessment, which included a phytopathological study, and together with Tbilisi State University conducted a general hydrological review and flood modeling of the Iori River. Based on the findings, "Georgian Amelioration" LTD and the Ministry of Environmental Protection and Agriculture of Georgia came to an agreement on the seasonal release of the reservoir. SABUKO also identified areas where water corridors and gabions have subsequently been created in close cooperation with the Agency of Protected Areas and Chachuna Administration. In addition, SABUKO obtained permission from the Border Police of the Ministry of Internal Affairs of Georgia and the Civil Aviation Agency of Georgia to fly drones for research purposes. Simultaneously, the border police and Chachuna administration began</p>

cooperating and exchanging information for the purposes of patrolling. Joint activities have brought positive results in reducing illegal activities.

In order to increase cooperation between different bodies and institutions, SABUKO has signed several memorandums of understanding with the Agency for Protected Areas and Ilia State University.

In addition, as part of the UNDP-GEF "Strengthening the Financial Sustainability of the System of Protected Areas in Georgia" tender, SABUKO updated the Vashlovani 2021-2030 management plan and the related operational plan, pursuing a participatory approach in accordance with national and international legislation.

The oversight of pastures within protected areas is governed by specific management plans for each respective area. In March 2023, the Chachuna Managed Reserve Management Plan was approved, establishing the need for grazing norms within the reserve to be determined based on a pasture management plan. This approach ensures that the natural resources within the protected area are utilised sustainably and responsibly. For the Agency of Protected Areas, it is important that pastures are managed sustainably in the project area. Therefore, they support the inclusion of rotational grazing and stocking rates in the contract.

Inter-agency meetings:

A total of 12 inter-agency meetings were held over the course of the project, averaging 3 meetings per year. Over the project duration, 120 cases of inter-departmental cooperation have been documented for the conservation and sustainable use of Chachuna MR. Around 30 corporations have become involved each year.

Number of decisions [actions] on cooperation made at those meetings (recorded in the minutes):

Since the project's inception, 5 recommendations provided by SABUKO were adopted by the governmental bodies and relevant agencies. SABUKO developed and presented around 20 policy positions related to sustainable land use, water resource management, and biodiversity protection, leading to several legislative changes initiated by the government of Georgia. Throughout the project, SABUKO engaged in approximately 300 hours of meetings

		<p>with government authorities, averaging 75 hours per year.</p> <p>Levels of participation at those meetings: At least 240 persons from different stakeholder groups.</p>	
<p>Outcome Indicator 5.2 <i>5.2 SABUKO staff meet targets for Key Performance Indicators of effective project management and policy-advocacy work to influence state decisions</i></p>		<p>SABUKO staff met the targets for KPIs and policy advocacy work to influence state decision. Within the framework of the project, we conducted the following trainings:</p> <ul style="list-style-type: none"> • Biodiversity research by using camera traps • Essentials of working with data • Identification of species by footprints • The importance of species: their status, importance in the food chain • Species recognition • The ecological importance of steppes • The impact of overgrazing on pastures • How pasture conditions can change • Modern pasture management models • Rotational grazing and its importance • Discussion of worldwide successful examples of existing pasture management • Monitoring of the rotational grazing scheme implementation <p>The training was attended by all representatives of the administration of the Chachuna Managed Reserve - in total, during the course of the project, more than 40 employees attended the training.</p>	
<p>Outcome Indicator 5.3 <i>5.3 Number of APA staff directly involved in restoration of target site</i></p>		Chachuna MR administration and the staff of the Agency of Protected Areas (APA) have been actively involved in restoration in the project area.	
<p>Output 5.1 <i>Closer cooperation between APA and Border Police achieved and</i></p>	<p>Number of border police involved in field activities Number of jointly</p>	Over the course of the project, the APA worked closely with border police. This cooperation bore fruit in the implementation of patrolling schemes, with information on key areas exchanged actively.	RAG

<i>implemented</i>	implemented activities		
Output 5.2 <i>APA/SABUKO staff trained in restoration/conservation efforts relevant to Chachuna MR and the lower Iori Riverine forest</i>	Reports and attendance at training courses	A series of trainings were held for the Agency of Protected Areas and Chachuna MR administration on conservation, biodiversity, monitoring the implementation of sustainable pasture management, and other related topics.	RAG
Output 5.3 <i>SABUKO staff trained in Policy and advocacy relevant to project aims</i>	Reports and attendance at training courses	SABUKO employees actively participated in various trainings, including those organized by Endangered Landscapes Programme and BirdLife International.	RAG
Output 5.4 <i>Partnership approach to landscape scale conservation involving NGO, Government and University strengthened</i>	Formal and informal cooperation arrangements made and effectively implemented	Within the framework of the project, connections between SABUKO and other (non)governmental organizations have strengthened significantly. For example, an additional channel was set up in cooperation with REC Caucasus. In addition, various research institutes, i.e. Ilia State University and Tbilisi State University, were actively involved in research studies. Within the framework of the project, we signed a cooperation agreement with REC Caucasus, within the framework of which watering corridors were organized. Also, REC Caucasus is working on pastures near the villages. Within Phase 2, we have signed MoU to work on pasture policy that covers sustainable management of pastures in the vicinity of villages. Besides, we work together on the development of the management plan of the biosphere reserve.	RAG
Output 5.5 <i>Closer cooperation between SABUKO and the APA on management of Chachuna MR</i>	Cooperation agreement (or Lol) with SABUKO	SABUKO has worked closely with the Agency of Protected Areas following the signing of a 5-year memorandum on mutual cooperation. As part of this cooperation, SABUKO designed a pasture management plan which was incorporated into the leasing agreement. Monitoring has been conducted by both the local administration and SABUKO.	RAG

1.2. Tipping points

The successful achievement of securing regular water release from the dam and adopting sustainable pasture management recommendations into national legislation demonstrates their potential for bringing about significant transformation. Mainly, securing regular water release from the dam is a notable accomplishment that exemplifies the effectiveness of implementation and opens doors for its expansion into other areas. The integration of water release into the management plan of Chachuna Managed Reserve sets a promising precedent, particularly with the upcoming introduction of a new water resource management law. Once the legislation is enacted, the importance of this activity will be further magnified.

In addition, the adoption of sustainable pasture management recommendations into national legislation is a significant milestone that has elevated the issue to the policy level and triggered discussions in parliament. The Agency of Protected Areas and the National Agency for Sustainable Land Management and Land Use Monitoring have recognized our expertise and embraced our approach, incorporating stocking rates into their plans. The development of pasture management plans for Chachuna serves as a model not only for leasing pastures in that specific area but also for advancing the broader cause of sustainable resource management.

These positive tipping points serve as catalysts for change within the system. They illustrate how proactive measures, such as securing water release and integrating sustainable pasture management into legislation, can drive substantial progress across ecological, legal, economic, and social dimensions. Through successful implementation and expansion of these initiatives, we have the potential to inspire similar transformations in other areas, creating a ripple effect of positive change throughout the system.

1.3. Managing major risks

Over the course of the project, factors contributing to degradation in Chachuna have been altered, to an extent, for the purposes of restoring the floodplain forest habitat. Various measures, including fencing and flooding, have improved the state of the floodplain forest, and watering ponds are now available to shepherds, who also actively use the irrigation corridors.

In addition, pastoralists and other local stakeholders have realized and supported the need for grazing management for long-term sustainability and are involved in restoration efforts. Herders were found to appreciate the cooperation towards improving management of the area and continue to practice rotational grazing. In addition, through SABUKO's assistance, multi-stakeholder collaboration between APA, landowners, and land users has been established to ensure that ecological processes, biodiversity, and productivity are maintained/restored in the 4500 ha pilot grassland restoration sites. Recording changes though, may take time.

Cooperation has been established between various stakeholders and has proven effective. Based on this positive experience, government authorities recognize SABUKO as a constructive and reliable partner. At the initial stage of the project, Georgian Amelioration LTD and the Forestry Department expressed their support for its implementation.

During the project, the government expressed a desire to improve the pasture management system and accepted SABUKO's recommendations for the restoration and sustainable management of pastures in

the project area. At the same time, the Water Framework Plus program funded by the European Union is continuing to move forward, of which water release from the Dali Reservoir is an important part.

During project implementation all activities were carried out on schedule and within the appropriate funding framework. The project committee closely monitored the ongoing activities, so whenever any risk to successful project implementation appeared, it was immediately discussed with the project committee. The latter consisted of representatives of different structural units. All risks were addressed successfully thanks to the broad experience of the stakeholder representatives. The risks foreseen in the logframe did not occur because they were predicted and mitigated. However, there were risks that were not considered, such as restrictions on many activities and movement during the COVID-19 pandemic. Nonetheless, we obtained permission to implement essential activities, including monitoring, and were able to build a bridge and fences in the project area.

One of SABUKO's biggest challenges during the project implementation was discovering that the Chachuna MR might be leased to a local group to create a game farm for hunting purposes. In order to express its position constructively, SABUKO addressed the Ministry of Environmental Protection and Agriculture of Georgia and presented a study on the potential negative consequences — both environmental and financial — of the game farm. SABUKO performed a financial analysis, which revealed that not only would hunting impose pressure on native species, but the income from leasing of the land would be smaller than the economic benefits from other types of activities. These studies supported other discussions on the disadvantages of establishing a game farm. SABUKO also collected signatures from locals who were against the project. As a result, game farming in the area is no longer on the agenda, and establishment of game farms is no longer allowed under the Chachuna management plan.

1. Learning and Development

Within the steppes restoration project, it is important to strengthen the capacities of those involved in the project and are connected to it. This includes both technical skills and general knowledge, as well as access to information gathered during the project. All of these components are important for long-term cooperation between stakeholders and proper territory management. In order to achieve this, SABUKO organized workshops and created information materials for all stakeholders according to their expertise, positions, and roles — employees of the Agency of Protected Areas, rangers, decision makers in project area municipalities, and farmers. The training materials developed and knowledge gained during the project will ensure that all current and future employees of APA have up-to-date information on the project area and are able to strengthen their skills through a self-paced training program. We believe this will help to maintain and improve the project's results over the long term.

Engaging with relevant stakeholders early on in the project is important to building strong relationships and avoiding potential conflicts. Communication and collaboration with stakeholders, as well as continuous monitoring and evaluation, help prevent and address unexpected issues. Having a plan and the flexibility to adapt to changes can also help mitigate potential problems. During the project, we discovered that the implementation of interventions and their visual confirmation by interested parties increases mutual trust and makes these parties more receptive to collaboration. For example, setting up a gabion was a successful example of a nature-based solution, which received very positive feedback and the use of which for conservation purposes proved well-justified. In addition, information about

rotational grazing was quickly spread by the herders implementing it, which increased the motivation of other local herders to engage in sustainable pasture management.

One of the challenges for SABUKO was contacting shepherds and raising their awareness of the importance of rotational grazing. The only way to reach shepherds who live and work near the Chachuna MR and do not have access to any sources of information, is through face-to-face meetings and providing printed materials. Nevertheless, SABUKO's Natural Resource Manager, Regional Coordinator, and representatives of Ilia State University spent months living on site and managed to establish daily contact and good friendships with the shepherds. We could have also considered involving additional stakeholders and partners to increase the impact and ensure that the project has broader reach and influence. There were some other challenges, mainly on the policy side, such as the fact that when SABUKO began introducing sustainable pasture management in Chachuna MR, there was no proper legislation regulating rotational grazing for areas other than mountain regions; a unified, consolidated legislative instrument aimed at regulating pasture management was absent. The project also faced the challenge of insufficient data on land use in the area. The process of gathering this information was initiated immediately upon the start of the project, but existing data were very limited. A thorough approach was taken to address this issue: each plot was visited individually to gather data on land categories, farmers, and landowners. This contributed to a comprehensive understanding of the current state of land use and facilitated the development of effective land use strategies. While conducting our field surveys to gather information, we learned of proposals to establish a hunting ground in the project area which would pose a significant threat to our restoration efforts. Though our immediate aim was to prevent the creation of a game farm, an unexpected result was the establishment of ecotourism infrastructure in the Chachuna reserve, which now serves to raise awareness and educate people about Chachuna MR biodiversity.

We would have appreciated more support from the Endangered Landscapes Programme in terms of technical expertise and guidance in biodiversity research and monitoring. Access to scientific methods and experience in this field would have enhanced our efforts to accurately measure and track the impact of our conservation efforts. For the second ELP phase we are planning to do a feasibility study on the reintroduction of key species in the area which have been absent for centuries. Our hope is to bring back the Caucasian Leopard and possibly the Striped Hyena, or at least create a food source for individual young animals of these species who might roam there in the future. Help with relevant capacity building for SABUKO's team will be much appreciated.

Periodic meetings are regularly conducted with the project team to assess their capacity building requirements. These meetings not only facilitate organizational strengthening but also foster team engagement, leading to a better understanding of our capacity development needs. Furthermore, we have been fortunate to have the opportunity to participate in training sessions and workshops organized by ELP and Birdlife, which effectively address our capacity building needs. Currently, there is a particular emphasis on enhancing skills in GIS program utilization, data analysis, and proficiency in monitoring tools. These areas of capacity building emerge during the project implementation phase when it becomes evident that additional resources are necessary to support specific activities.

The capacity building workshops sponsored by ELP and Birdlife provide valuable assistance to our organization. We firmly believe that by expanding our scope and successfully executing ELP phase 2, we will be better equipped to identify and address our evolving capacity development requirements. We

are particularly focused on strengthening our capabilities in data analysis, utilization of monitoring tools, and proficiency in working with GIS programs.

1. Sustainability and Legacy - Restoration in the long term

SABUKO managed to attract additional funds from the Endangered Landscapes Programme's second phase in order to undertake restoration measures on a broader scale. SABUKO carried out a rangeland management policy analysis that was shared with relevant stakeholders and decision makers. Based on these materials, the Agency of Protected Areas agreed on the need to include a grazing management plan in the lease agreement under good grazing management practice. To increase the scale of activities, SABUKO is actively working on improving the Georgian legislative base on pasture management and is formally involved in the process of drafting laws. In addition, SABUKO designed a Chachuna MR management plan (MP) that is currently being approved by the national Parliament. The management plan includes a sustainable pasture management plan needed for the creation and management of the ecological network. SABUKO also updated the Vashlovani Protected Area MP and related operational plan. The Vashlovani MP outlines approaches and actions required to meet the goals and objectives of the Vashlovani Protected Area and ensure long-term sustainable conservation of its valuable natural resources in tandem with the Chachuna MR. More specifically, the Vashlovani MP includes an overall vision, strategic and long-term goals, and mid-term priority actions within a framework of management programs based on a comprehensive financial assessment and budgeting. Relevant short-term interventions are formulated in a realistic, prioritized, and practical manner in the operational plan. SABUKO also introduced rotational grazing as a primary requirement within the pasture lease contract issued by the Agency of Protected Areas. In addition, SABUKO has been monitoring all stages of implementation. SABUKO also began managing Dali Mountain Reservoir. Management of the reservoir for conservation purposes is now reflected in the Alazani-Iori River Basin MP. All activities performed have contributed to the expansion of protected areas, for which sustainable management plans will be developed by SABUKO during the second phase. A new national multipurpose protected area — Samukhi PA — has been created, and Kotsakhura was designated as Emerald Network Site.

Thanks to these new protected areas, ecological unity has been established that will contribute to preserving biodiversity. SABUKO has also taken part in public discussions and meetings related to the Biodiversity Law. At these events, we have presented notes and comments contributing significantly to the development of the law. Passing this law will further protect the Emerald Network sites for years to come. Through our robust partnership with government agencies and stakeholders, we have fostered a shared vision of the project's objectives and recognized the essential resources necessary for its successful implementation. The government has showcased its unwavering commitment to environmental conservation and sustainable development by incorporating our recommendations into updated policies. Moreover, our project has garnered substantial international attention and support, creating an added impetus for the government to uphold its commitments.

Furthermore, our management plans have been carefully crafted to ensure long-term sustainability. These plans include an operational framework that outlines the duration of activities and identifies the required financial resources. We take into account various sources of funding, such as the agency's budget, to secure the necessary financial backing. In instances where there is a shortfall in funds, we proactively explore fundraising opportunities to bridge the gap and fulfill our objectives.

1.1. Strategy and future plans

Over the coming years, the outcomes of the Iori Valley restoration project will become increasingly evident. The restoration efforts will cause a revitalization of grasslands and gallery forest, resulting in improved biodiversity and increased carbon sequestration. As a result of policy interventions, key objectives will be achieved, including the establishment of a sustainable legislative framework. This framework will secure the protection and restoration of crucial habitats and migration corridors, management of invasive species, and promotion of sustainable pastoralism practices. It will also support landscape-scale conservation and restoration initiatives, including the responsible management of the water resources of the Iori River. To ensure the long-term protection of the Iori Valley landscape, one of our planned outcomes is to strengthen partnerships between government agencies, non-governmental organizations, local communities, and other stakeholders. These partnerships will emphasize collaboration, capacity building, and sharing of knowledge and resources to achieve common goals. Additionally, we plan to secure and expand existing protected areas to guarantee the preservation of the Iori Valley for the long term.

At this stage, we have received the ELP Phase 2 Kakheti Steppes Restoration project, for which project staff are still being considered. It is also envisaged to conduct monitoring measures. Since the project activities within phase two will be a continuation of the current project, monitoring will include both past and new project implementation.

1.1. Finance

During project implementation, we received additional funds amounting to over 200 thousand USD that helped us strengthen conservation activities in the project area and increase the scale of our work. At this stage, we are submitting an application to Sigrid Rausing Trust, which would allow us to implement conservation activities in the project area with even greater resources in the future.

Through strategic funding partnerships, we have significantly bolstered conservation efforts in the Chachuna Managed Reserve. The support from the Persephone Foundation has enabled us to advance transboundary conservation initiatives for the Imperial Eagle, aiming to restore its favorable conservation status in both Georgia and Azerbaijan. Additionally, thanks to the GEF Small Grants, we have successfully established essential ecotourism infrastructure within Chachuna MR, including birdwatching points, camping sites, bungalows, and an additional feeding station for vultures. Moreover, with funding from Mark Constantine (Lush), we will secure the necessary resources to lease the ecotouristic infrastructure of Chachuna MR, ensuring its long-term sustainability.

1.1. Partnerships

The Agency of Protected Areas, the Ministry of Environmental Protection and Agriculture of Georgia, the Parliament of Georgia, and Ilia State University were the primary partners in the project. SABUKO established effective relations with all agencies, opting for collaboration over confrontation, which helped prevent the creation of hunting grounds in the Chachuna MR. As these agencies are key decision-makers, SABUKO actively shares its recommendations and findings with them to promote sustainable land use. A notable example of this cooperation is our work with the Agrarian Committee of the Parliament of Georgia, which led to the incorporation of sustainable pasture management in legislation. Overall, SABUKO's visibility and influence increased greatly throughout the project, positioning the

organization as a prominent stakeholder frequently invited to parliamentary working groups. The roles of our key partners are: overseeing the implementation of sustainable land use practices, monitoring the implementation of sustainable pasture management at the legislative level, and collaborating with SABUKO and other key stakeholders to promote sustainable land use.

4.4 Communities

Shepherds/farmers were always contacted personally on site or by phone. SABUKO assessed their needs using a socioeconomic survey and won their trust by delivering necessary assistance. Furthermore, several media pieces were generated from the field, including interviews with shepherds, farmers, and rangers, which reminded respondents of the importance and impact of their work and made their opinions heard by a large number of people, including decision makers. At the same time, as the program of allocating state land for grazing began, Georgian and Azeri farmers had some challenges understanding the procedures for submitting documentation under the program. As a result, SABUKO now assists farmers in completing the procedures necessary to obtain a pasture lease. Furthermore, it is planned to provide them with background information about the initiative, including what is meant by sustainable pasture management and rotational grazing. In the ELP Phase 2 Kakheti Steppes Restoration project, SABUKO will maintain and deepen its existing engagement with the farmers. As the project area expands, the size of the community will grow. Messages will be generated that are more orderly and designed to communicate more efficiently with the audience. Furthermore, SABUKO will aim to promote the municipalities of Dedoplistskaro and Akhmeta, where the new protected areas are located, through local media, social media targeted ads, events, activities, lessons, etc. Families of shepherds briefly appeared in an ELAR residency programme-funded photo project; this was one the best opportunities to interact with these families. In phase 2, SABUKO staff will work with local schools to provide educational materials and activities for children and youth (since shepherding is a family business).

Through engagement with local farmers and shepherds, we have recognized their specific needs and developed a targeted strategy for collaboration and communication. We have observed that language barriers, particularly among the Azerbaijani ethnic community, hinder their access to essential government services, including pasture leasing procedures. To address this challenge, SABUKO assists these farmers in understanding the necessary steps for participating in auctions and collecting required documents. With their consent, we actively communicate their needs and concerns to decision-makers at the National Agency for Sustainable Land Management and Land Use Monitoring, advocating for their interests.

4.5 Ecological Upscaling

Within the project, we identified overgrazing as one of the main factors of habitat degradation in the project area and began designing individual rotational grazing schemes for shepherds based on their geographic areas and needs. We are continuing to work with shepherds and encourage them to join the rotational grazing scheme, which will allow us to restore grassland cover and support ongoing habitat restoration processes in the future. SABUKO has also prepared a management plan for Chachuna MR updated the management plan of the Vashlovani Protected Area, and drafted a management plan for the Kotsakhura Emerald Network site. SABUKO is actively working with relevant governmental structures to develop a pasture management plan. All recommendations and suggestions provided to relevant stakeholders ensure that land/seascape will be managed better in the future, helping to restore natural processes.

The team encountered several challenges while preparing management plans for the Chachuna and Kotsakhura Emerald Network sites. One was related to the zoning of critical areas for conservation. There was a disagreement between the project team and the agency responsible for protected areas regarding the proposed land use. Despite this challenge, the project team was able to effectively communicate and negotiate with the agency to reach a mutually agreed solution.

To address concerns raised by the Agency of Protected Areas regarding the small size of the Chachuna Managed Reserve, we implemented several measures to mitigate potential threats. These included the development of ecotourism infrastructure in key locations to discourage the establishment of game farms. Additionally, a protective fence was constructed around the crucial floodplain forest area to ensure its preservation.

4.6 Policy

According to the May 8, 2014 Resolution N343 of the Government of Georgia "On Approval of the 2014-2020 Georgia Biodiversity Strategy and Action Plan," one of the key objectives to be reached by 2020 was to enhance the management and conservation of agrarian ecosystems and natural grasslands, mitigate direct impacts on biodiversity, and promote the sustainable use of biological resources. By the year 2020, the aim was to safeguard the biodiversity of forests through the implementation of best practices in sustainable forestry.

As per the National Biodiversity Strategy and Action Plan (NBSAP), there was a lack of comprehensive information regarding state-owned winter pastures and their status, including usage, utilization, vegetation, and fertilization rate, among others. The plan did not envisage the need for sustainable management of rangelands and forests or a requirement to implement appropriate management plans to regulate agricultural activities and the use of agricultural biodiversity in protected areas where such activities are permitted. According to the NBSAP 2014-2020, pasture-related goals were the following: the management and conservation of natural grasslands should be improved by 2020. In 2014-2016, the national register of pasture management should be prepared and approved. In 2014-2020, sustainable and modern pasture management systems should be implemented in pilot areas and demonstration of ways to reduce grazing pressure on surrounding forests, facilitating the introduction of successful systems at the national level. In 2015, appropriate changes to the legislation of Georgia must be made in order to define the principles of sustainable management of common pastures and the responsible bodies. Despite the specified dates, until now only state-owned pastures have been regulated, as well as pastures in the protected area. However, one of the goals was to implement sustainable, modern pasture management systems in pilot areas, as well as demonstrate ways of mitigating grazing pressure on surrounding forests.

Several actions were instrumental in achieving these goals during the project implementation. A key objective was to support the development of the legal framework, and this was one of SABUKO's main successes. As Georgia is not a member of the European Union, there is no Natura 2000 in the country. Instead, one of the obligations under the association agreement is identifying and inventorying Emerald Network areas and establishing priorities for their management. During the project, SABUKO played a role in fulfilling this obligation by preparing management plans for the Chachuna and Kotsakhura Emerald Network sites. Currently, a draft version of the Kotsakhura management plan is available, and the Chachuna management plan is being approved by the national Parliament.

1. Communications and publicity

1. Documentary – Facing the Desert

The movie received about 1 million views through SABUKO's social media networks and was shown in the biggest movie theatre in Georgia. It generated interest in Chachuna MR wildlife with its striking field footage and carefully thought-out script, which together provided a very broad view and clear understanding of the importance of local wildlife, how everything is interconnected, and why SABUKO's activities are vital. The movie highlighted societal interest and support for conservation work, which was plainly evident to public sector representatives who were invited to both public and small private screenings and discussions. It must be noted that having such a high-quality documentary is a source of pride for both SABUKO and public agencies connected to the managed reserve.

2. Behind the Camera-Traps - <https://bit.ly/3LgxzvK>

The story was filmed by Radio Liberty and takes us to the Chachuna MR, precisely depicting the work of SABUKO's conservation officers in the field, our values, goals, the importance of conservation, how we work in the field, what our values are, and why conservation is vital.

3. Voices of Shepherds

Interviews with shepherds have not received as much engagement as the other types of content mentioned above, but they describe the everyday struggles, challenges, concerns, and problems of locals, their perspectives, how the managed reserve is changing year by year, and how shepherds are in a state of constant readjustment. This is an important tool for making shepherds' voices heard, especially to decision makers who rarely visit the field. Direct communication was the most effective technique for reaching our target audiences (face-to-face meetings and phone calls). Social media (primarily Facebook) and e-mail were used to reach the general public and secondary target groups. SABUKO will continue using all of these tools of communication, as well as various forms of printed and digital materials. Regular e-mail newsletters and updates to decision makers and the media are planned as well, as is the organization of events such as presentations, exhibitions, study tours, project target group gatherings etc. More effort will be made to draw international attention to the ELP Phase 2 Kakheti Steppes Restoration Project.

Well-known local documentary photographer Natela Grigalashvili created a documentary photo series and multimedia project based on her in-depth research of the area. Natela created a body of work focusing on several important topics: what is this region like and what issues is it facing (degraded pastures due to uncontrolled grazing, reforestation problems in the Iori floodplain forest, etc.), local biodiversity, and human interaction with the landscape — how it affects the lives of those who live in the area and how people impact the landscape. For her project, Natela worked in the valley during all four seasons in order to fully understand and observe everything happening here. The photos in this series are of high artistic quality and fully convey the beauty of the area and its dreamy landscapes. The materials will serve as a good tool for raising awareness on these topics because people engage with them more. The series will be accompanied by informative captions with relevant information about the location, its biodiversity, problems it is facing nowadays, their cause, and what is being done to fix them.

Our target audiences encompassed various stakeholders, including government officials, decision-makers, shepherds, farmers, landowners, local residents, partner and peer organizations, media, and the general public. We employed tailored communication approaches to effectively engage with each group.

Direct communication methods, such as face-to-face meetings, phone calls, and Zoom meetings, were utilized to engage decision-makers, including the Agency of Protected Areas, partner organizations, farmers, shepherds, and landowners.

To reach other target groups, SABUKO utilized digital communication channels, including social networks and email.

Throughout the project's third year, we began sharing updates on our progress in Phase 1, highlighting the positive outcomes observed. Communication materials produced as part of the project feature summaries of our achievements pertaining to the specific topic at hand.

1. Value for Money

We can assess a project's success based on whether it was completed on time, within budget, and within scope, and how well it achieved its stated goals and benefits. The project's operations were completed on schedule and within budget. The goals outlined in the workplan — restoring the habitat of gallery forests, educating shepherds and other local stakeholders about grazing management, preserving ecological processes, biodiversity, and productivity — have been met. Furthermore, the government adopted SABUKO's recommendations in national policies on protection, restoration, capacity building, and strengthening partnerships for landscape-scale conservation work. Despite COVID-19 travel restrictions, we obtained permission from the government to conduct field trips and ensure that project activities continued to be implemented on schedule.

Restoring Gallery Forest and Grasslands in the Iori River Valley provided an opportunity to implement a number of novel activities for Georgia, as well as establish an example to guide other organizations or farmers, including the introduction of rotational grazing and the implementation of nature-based solutions, such as gabion placement.

1. Annexes

1. Financial report

2. Report against *Programme Results Framework* indicators
3. Restoration trials
4. Final Outcome Indicator Monitoring Report
5. Photos
6. Layman's report