

LIFE Project Number <LIFE16 NAT/CZ/000639>

Final Report Covering the project activities from 1/8/2017 to 31/12/2023

Reporting Date <31/3/2023>

LIFE PROJECT NAME or Acronym

<Active conservation of thermophilous habitats and species of Community interest in the České středohoří hills>

	Data Project
Project location:	Czech Republic, Ústecký region, district: Litoměřice
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Project end date:	31/12/2023
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(%) of eligible costs:	60%
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2. List of key-words and abbreviations

Agri-environmental measures
The Association of private farming of the Czech Republic (APF CR)
Collection of Law
Common Agricultural Policy
European Commission
Ecosystem service
European Fund for Rural Development
Environmental education
Facebook
Financial manager
Regional branch of Lesy ČR, s.p.
Abbreviation LIFE České středohoří
Nature Conservation Agency of the Czech Republic – coordinating beneficiary
Cost of the measures (Náklady obvyklých opatření)
Ministry of Environment of the Czech Republic
Project Board
Protected Landscape Area
Project manager
Landscape Management Programme
Public Relations
Project team
Special Identification Code
Steering committee
Site of Community Importance
Stepping stone
Timesheets

3. Executive Summary

The project aimed to restore the natural habitats of endangered species. The target habitats were thermophilous habitats, especially semi-natural dry grasslands 6210, 6210*, ravine, and oak-hornbeam forests (9170). The target species were: *Lacerta viridis, Callimorpha* (=*Euplagia*) quadripunctaria, Stipa zalesskii*, Stenobothrus eurasius, Pulsatilla patens, Cypripedium calceolus (and many other endangered orchid species, such as Gymnadenia conopsea, Ophrys insectifera, and Orchis purpurea), as well as invertebrates and birds who benefit from the restoration of their natural habitat.

The project was implemented in the central part of České středohoří PLA in nine SCI sites and ten important stepping-stones. The project aimed to restore 17 ha of grassland habitat and approximately 300 ha of forest stands.

Project results

The enlargement of the area of functional target grasslands habitats exceeded the project proposal. The area **with stabilisation measures is 305.41 ha, compared to 175 ha proposed.** Towards the end of the project, management measures were implemented on each area at least once, but often repeatedly. The total area of land where landscape management was implemented 156.1133 ha. The biodiversity of forest stands was increased on an area of 350 ha and reestablishment of habitat 9180* on the area of 65.11 ha

Initial reviews of pre-selected project sites were complete on time. Based on the reviews, management plans were created for all project sites and they were updated every year according to annual monitoring (both zoological as well as botanical).

The only delay we had was with negotiations about forest plots with the regional branch of Lesy ČR. S.p. (LČR) due to new Forest plan, which was approved on 1.1.2017 in respect of Act. No 289/1995 Coll. However, in the end this did not caused any implementation difficulties.

Part of the specific project objective was stabilization of target species populations. A positive effect was measured for Jersey tiger, the grasshopper species *Stenobothrus eurasius bohemicus*, the speargrass species *Stipa zalesskii* (population increased by about 58%), and the eastern pasqueflower species *Pulsatilla patens* (increased by 26%; including surviving plants from plantings in 2021, 2022 and 2023, where the estimate is taken as in the previous year). In total, the number of plants was 552.

There was also a slight increase in the population of the green lizard (*Lacerta viridis*). The results of the translocation of adult individuals from Porta Bohemica SCI to Dolní Zálezly are still uncertain. However, the latest monitoring clearly shows that some relocated lizards survived and are still present at the site. In the case of Kalvárie, the increase is 128%.

There was a significant increase in the number of observed juvenile individuals between 2017 and 2023 by 289%, which indicates a very good reproductive capacity of the population.

For the time being, we observe a stable condition with a slight improvement (50%) in the lady's slipper orchid *Cypripedium calceolus*. Despite the fact that intensive measures have been taken at the site of occurrence, the time scale of the project itself is not long enough for this species to be able to record an improving trend.

The project placed great emphasis on raising public awareness about nature and its protection, as well as the creation of comprehensive and transferable promotional and educational materials for children, teachers, and parents. Awareness raising activities were in the form of excursions, one-day events, workshops, or special events (night excursion); there was even a permanent exhibition. The innovative way of awareness raising activity was usage of a GPS audio guide.

The public events and promotional materials were both successfully created and introduced to the general public. The project events, as well as posts on FB, generated great interest from the lay public in the countryside that surrounds them and in management measures which were being carried out on the project sites. In cooperation with Hlinná municipality, a one-day event ("Slavnosti pastvin") was organized with great success.

Deviations

During implementation of the project, the beneficiary encountered several deviations from the project. The first one is that the number of grazing plots was diminished compared to the Grant Agreement (GA). Upon closer examination, the initially selected plots were not all approved as suitable (e.g. the slopes were too steep; remoteness and isolation – the locations were incompatible with providing basic needs for the herd (water); low nutritional value of the plots; small area of the site and other logistical difficulties). Together with the lack of contractors, it was very difficult to obtain sites for grazing. Although we announced several times during the project that we did not want the project sites to be overmanaged, in this case it was not even possible to implement all the planned measures. Thus, from the envisaged 110.9 ha only 95.18 ha was grazed.

Since Action C1 was implemented ha at **156.1133 instead of 127** and Action C2 was also implemented on 5.5 ha more than planned (**at 160.5 ha instead of 155**), we believe that the project results were not compromised. The main goal was the stabilization and improvement of project areas. The monitoring results show that the condition of the target areas has improved and habitat 6210 has been improved at 122.92 ha (including areas where the habitat degraded by self-seeding woody plants has been restored). According to GA, only 53.88 ha were initially mapped. Therefore, we can say that although the method to achieve the goals was slightly different than what was proposed in the GA, the goals of the project were achieved and the aforementioned did not jeopardize the aim of the project to stabilize project habitats.

Another modification was implemented in Action C4 where, according to the project, 5100 trees covering an area of 99 ha should be planted mostly with individual protection. Instead of that we planted trees (ca. 25 000) in bigger groups supplemented by individual planting covering a total area of about 350 ha. According to new studies this method is more effective and a bigger area will be influenced because of natural spreading of the trees from these centres. Fencing the groups of trees is also more secure than the individual fencing and hence the trees are better protected against animals. Moreover, the sustainability and maintenance of such places is easier and more secure.

The support of a regional label was ensured by presenting their products/services in our events. In cooperation with Destination Agency České středohoří, a stand was set up to promote other regional brands on their behalf. Thanks to this cooperation, we were able to involve and promote of a larger number of local producers, particularly as not many new products that meet requirements to be awarded by regional label mark are being detected in PLA České středohoří. Thus, only one regional label was obtained instead of envisaged two. The above-mentioned approach allowed the promotion of more local stakeholders than the mere provision of a one regional brand.

Another slight deviation was implemented again in Action E3, where we decided to merge "Printed collection of workshops contributions" and "Brochure – traditional farming" in to one

large publication, with each part can standing on its own. Because the workshops and meetings were focused on the support of traditional farming (meaning methods and practice) not merging the publication would see duplication of the same content in two different publications. Rather than that we preferred to cover a larger area with a deeper insight of each activity.

General increases in labour, car purchase, fuel, and services costs in the second half of project implementation caused complications in various ways; exchange rate losses also brought problems, which NCA CR faced since the beginning of the project. Nevertheless, NCA CR successfully managed the situation and implemented all the project actions without the need for an amendment to the GA.

Overall, the project was implemented successfully without serious problems and the project objectives were achieved.

4. Introduction

Dry grasslands are endangered by ongoing succession due to the decline of traditional farming or the use of inadequate techniques. Forest habitats mostly do not have desirable natural species composition, making them vulnerable to climate variations as well as other environmental pressures (e.g., bark beetle invasion). Both forest and grassland habitats are at risk due to the spread of invasive, alien, or expansive species.

The objective of the project was the support of grassland and forest habitats in part of České středohoří PLA to improve the status of the sites and to increase the population of target species, as well as to stabilize other species which depend on these habitats.

To halt succession, restoration management (elimination of expansive trees, shrubs, and cutting regrowth) was used (Action C.1) covering a total area of 156.1133 ha. In addition, grazing (Action C.3) and mowing (Action C.2) were implemented to re-establish the grassland habitat, especially 6210. To increase biodiversity in the forest stands, around 25 000 trees were planted, mostly in 9170, 9110, and 9180*. In the case of forest stands, the main problems are both the presence of Black Locust), and inadequate natural species composition.

The current conservation status of the grassland habitats is unfavourable-bad. In the case of forest stands, the current conservation status is unfavourable-inadequate, or unknown. The project aim was the improvement of conservation status to favourable and the stabilization of the project sites within the five years of the end of the project.

The main obstacle for farmers was the high cost of initial elimination of self-seeding shrubs and trees. The project objective was to overcome these obstacles and improve the conservation status of aforementioned habitats on Natura 2000 sites in central part of the České středohoří hills.

During project implementation, assistance with planning of landscape management measure was provided to the farmers as they had a key role in both successful implementation of the measures and sustainability in the After-LIFE period. Best practice was shared with them as well as with other experts, NGOs, and other similar LIFE projects.

As knowledge about the wildlife surrounding us is the key to its protection, many activities (Action E.1-E.4) were organized to increase public awareness, in particular with the focus on children and teachers.

Thus, the overall impact was an increase of biodiversity in forest stands and an improvement of grassland habitats, as well as an increase of knowledge and interest about them for the general public.

5. Administrative part

Description of project management

The project team consisted of seven employees from NCA CR. The main part of the team was located at the administration of České středohoří PLA, where the PR manager, botanist, zoologist, and PR assistant/field assistant were present. The FM, PM, and accountant worked at NCA CR headquarters in Prague. The PM commuted to České středohoří PLA on a weekly basis, the FM on a monthly basis. The project team (PT) had a general meeting every month.

Experts of both the Administration of České středohoří PLA and headquarters in Prague were involved in the project as needed. For management of projects within NCA CR rules and communication with EC The employees of České středohoří PLA participated in project presentation, public events (E.1-E.4), as well as monitoring and preparatory activities for landscape management (C.1-C.4, D.1). The Steering committee (SC) and Project board (PB) have ensured the implementation of best practice measures to minimalize the problems which occurred or served as a consulting body to find the best solution.

The PB met twice a year (spring visits to the project sites; winter indoor meeting about progress, aims, and problems encountered). Even though the project proposal indicated that the SC should meet twice a year, as all the members communicated during the entire year and met at different events, it was sufficient to meet only once a year. However, after the Covid pandemic the meeting happened just in 2022 because 2023 was the final year of the project.

As the project covered many various fields of specialization, other employees who are not paid for from the project were involved in performance of the project as well – either in

středohoří PLA or in the headquarters in Prague. These are mostly experts – botanists, zoologists, geologists, GIS experts, IT professionals, experts on ecosystem services , for general management of projects and communication with EC and staff from financial departments .

Lists of employees: not public

To conclude, project management and overall project implementation took place without significant difficulties. By the end of the project there were a few personnel changes (maternity leave, change of the Head of the České středohoří PLA, change of the PR manager for the last six months); however, those changes did not have any real impact on the final stage of the project.

The unpredictability of the exchange rate prevailed, and with a variable monthly exchange rate it was very difficult to plan. However, we stayed with the established system of monthly exchange rate system until the end of implementation.

Cooperation with the external monitor (NEEMO) and project officer (EASME/CINEA) was good, and without any delays in communication.

Amendments of the GA:

No amendment to the GA needed to be concluded. Letter Amendment N°1 issued on 17/08/2018: Modification of the definition of conditions for natural persons, submission of VAT certificate and threshold for submission of the certificate on the financial statements was issued and sent on 17/08/2018.

6. Technical part

6.1.Technical progress, per Action

A - Preparatory actions, elaboration of management plans and/or of actions plans

A.1 Revision of the state and functional interconnectivity of Natura 2000 network

Foreseen start date: 08/2017	Actual start date: 08/2017
Foreseen end date: 12/2018	Actual end date: 04/2018

Data on the initial state of project sites have been gathered and processed. Once the revision was finished, landscape management measures started and were annually adjusted according to annual monitoring of the sites. More information will be provided in action D.1 - Monitoring and assessment of the impact of management actions on species and habitats, which is directly related to this activity.

<u>Conclusion:</u> Plans of management measures for all sites included in the project were processed and used in C Actions.

A.2 Conventions with landowners and permissions

Foreseen start date: 08/2017	Actual start date: 08/2017
Foreseen end date: 12/2023	Actual end date: 12/2023

Permits for the implementation of landscape management were mainly obtained during the first half of the project. As anticipated in the project proposal, opportunities on alternative plots at the project sites were used. The main reasons were a) complicated (difficult) communication with the owners of the plots; b) changes in the conditions of habitats and the measures needed (drought, overpopulation of game).

Written information was sent to all the owners who were not able to be reached in person. Many of these were elderly people who prefer to choose the second option named in the proposal (let a third party implement the measures). The rest of the owners, if capable, prefer to restore their lands by themselves. Those, who showed interest/potential we provided with provisional information about CAP from the Rural Development Programme (RDP). Due to the late launched of the CAP, the main assistance was provided during 2023. This was the same year as was the new programming period was launched.

Permissions to place information boards was obtained for all ten info boards.

Conclusion: All necessary permissions were obtained to implement the project successfully.

C. Conservation actions

C.1 Restoration management

Foreseen start date: 08/2017	Actual start date: 08/2017
Foreseen end date: 01/2023	Actual end date: 11/2023

The effort to improve the maximum plots that are suitable resulted in **successful 156.1133 ha out of the 127 ha foreseen** which have been cleared from self-seeding expansive woody species and invasive alien species. However, repeated regrowth removal to suppress the succession of invasive, non-native, as well as expansive species was needed at most of the project sites. However, this repetition is not necessary twice in all sites as planned. This number of repetitions would rather damage the sites in connection to other management planned.

Restoration management was carried out on 122.92 hectare of target habitat 6210, including the plots where the habitat degraded by self-seeding woody plants was restored.

Due to the rapidly changing situation (climate variations – drought, morning frosts, game overpopulation) we were careful about planning the restoration measures. This was especially true on south facing slopes where extreme heat burnt large parts of the vegetation and also created unsuitable conditions for further management measures, such as grazing. Thus, we rather kept the landscape more open with scattered solitary bushes/trees to prevent such conditions. This type of mosaic landscape with solitary bushes was also very beneficial to the avifauna. Although some plots needed more time to recover, monitoring shows that the condition of all plots where management was carried out improved. Please see D.1. – Monitoring for more detail.

The important part of the restoration management measures are specific measures to support target species. The use of six reptile shelters as a shelter and hibernation place by both the priority green lizard and other reptiles has been proven. There are four in Porta Bohemica SCI and two in Dolní Zálezly SS. In addition, protection cages were installed in Holý vrch u Hlinné SCI where browsing by game is one of the main reason for the devastation of the population of Eastern pasqueflower. In the case of Borečský vrch SCI, part of the scree slope had to be fenced to protect the Eastern pasqueflower from both browsing by game and debris flow. The fence in the case of Borečský vrch had its positive impact, too.

A smaller fence was built on Sluneční stráň, which serves as a refuge for the local flora. A permanent monitoring area of dry grassland vegetation in ideal condition, i.e. without extreme pressure from cloven hoofed game, was also established here. After three years of existence of the fence, there is an obvious difference between the fenced area and the surroundings, which are under constant pressure from game (wild boar, mouflon). After meeting with the entities involved in hunting, an increased hunting and regulation of overpopulated wild boar is promised.

Crataegus sp., Cornus sanguinea, Prunus spinosa, Fraxinus excelsior, Rosa canina and *Robinia pseudoacacia* have been eliminated in almost all restored areas.

Before the start of the project, or during its course, the occurrence of expansive (wood smallreed, stinging nettle) or invasive plant species (e.g. black locust, woad, prickly pear, wartycabbage) was recorded in many sites. The expansion of non-native prickly pears on the southern slopes of Lovoš was successfully reduced. Due to the long history of occurrence, the prickly pears were removed, leaving a few bunches as an attraction of the Lovoš hill, which is visited by photographers during the prickly pear blossom season. It will continue to be necessary to monitor and keep this species under control in Lovoš.

Sites	2017	2018	2019	2020	2021	2022	2023	Total for sites	Repetition
Porta Bohemica	0.4865	0.828	0	7.8149	3.2732	0	1.5071	13.9097	9.295
BS u Litoměřic	3.0355	1.3904	0.9212	11.3657	5.1746	0	5.6195	27.5069	8.1903
Holý vrch u Hlinné	0.6724	0.8401	1.5707	4.1367	1.0584	3.6148	0.1918	12.0849	3.7445
Radobýl	0	0.8253	1.8097	1.7694	5.7436	0.618	0	10.766	6.4015
Lovoš	0	0	1.3581	0	0.4329	1.1051	0.6553	3.5514	3.076
Lipská hora	0.3854	0	0.0178	1.5366	1.745	0	0	3.6848	2.3117
Líska	0.9937	0	0.25	0	0	0	0	1.2437	0
Košťálov	2.5275	0	0	5.3256	1.653	0.4799	0.6838	10.6698	3.3317
Milešovka	0	0	0.84	0	1.0668	0	0	1.9068	0.8351
Borečský vrch	0	0	0	1.6149	0	0	0	1.6149	0.7024
Kočka	0	1.9083	0	2.741	1.3123	0.8174	0	6.779	5.0233
Dolní Zálezly	0.89	0	0.69	0	0.53	0	0	2.11	0.3523
BS pod Radobýlem	0	0.5186	0	2.5536	2.6609	0.7417	10.7288	17.2036	1.1049
BS pod Košťálovem	0	1.8025	4.4348	1.4504	0.749	0	0	8.4367	21.7293
BS pod Lipskou horou	1.0305	0	1.9632	3.5432	0	0	0.5016	7.0385	6.1016
Sady pod Lovošem	0	5.454	6.6505	6.0767	0	0	0	18.1812	24.1267
Ledvinův Vršek	0	0	0.7776	1.6775	0.2675	0	0	2.7226	0
Sady u Blešna	0	0	0.285	5.8788	0	0	0	6.1638	16.7854
Kostelní vrch	0	0	0	0.539	0	0	0	0.539	0.2207
	10.0215	13.5672	21.5686	58.024	25.6672	7.3769	19.8879	156.1133	113.3324

Table 1: Summary of restoration management (Ha)

Photo 1: Before restoration management – Košťálov SCI Photo 2: After restoration management – Košťálov SCI



Conclusion: For a detailed summary of management measures carried out, see the maps in ANNEX 1 Maps of the sites. The management fulfilled the project goals.

C.2 Traditional management – mowing

Foreseen start date: 08/2017	Actual start date: 08/2017
Foreseen end date: 08/2023	Actual end date: 11/2023

Mowing is a follow-up activity to restoration management to maintain and support grassland habitats. Total number of 160.5 ha exceeded the original plan of 155 ha.

With regard the repetition as already point out in Action C.1., the number of repetitions was lowered compared to the project proposal to not over manage the sites, which could lead to deterioration of the status of project sites.

The regrowth of shrubs was suppressed on the renewed areas by annual management in the form of mowing and grazing. The increased amount of precipitation is also related to the year-on-year increase in biomass in the renewed sites and the need for more frequent management in some places – mowing or a combination of grazing and mowing twice a year. Both have their pros and cons; in some sites it was possible to combine grazing and mowing. Mowing had its limits on sloping terrain and the need to remove the mowed material. However, it was so-called more operative – i.e. it was possible to cut the vegetation even in places that are difficult to reach or on small areas (small forest-free areas on hilltops or in the inaccessible terrain of the Elbe valley). The material was partly stored in the form of a pile, which could serve as a shelter, hatchery, and wintering place for reptiles.

A great effort was put to the suppression of the wood small-reed in the grasslands by mowing/re-grazing several times per season (Ledvinův vršek, Bílé Stráně u Litoměřic, part of Pokratice) and to the removal/reduction of the woad by annual uprooting the plants during the flowering period (Radobýl, Kalvárie, Dolní Zálezly).

The presence of *Calamagrostis epigejos* and *Lupinus polyphyllus* is very low. Thus, the combination of repeated cutting is very effective and their regrowth is almost none.

Mosaic mowing with a combination of fence grazing supported recovery after the first restorative interventions. With the restoration of sites, there is a gradual increase in the abundance of invertebrates and species diversity. You can find more information under activity D.1. - monitoring.

Mechanické kosení									
	C2_Mech	C2_Mech_rep)						
Sites	2017	2018	2019	2020	2021	2022	2023	Total for sites	Repetition
Porta Bohemica	0	0	0	0	2.274	1.9055	0	4.1795	2.5215
BS u Litoměřic	0	3.6035	0.2589	0	0	2.9098	0	6.7722	19.0439
Holý vrch u Hlinné	0	0	0	0	0	0	1.079	1.079	0
Košťálov	0	0	0	0	0	0	1.0679	1.0679	0
Sady pod Lovošem	0	0	0	0	8.8956	0.2003	4.4334	9.0959	2.2464
	0	3.6035	0.2589	0	11.1696	5.0156	6.5803	26.6279	27.0518

Table 2: Traditional management – mechanized mowing (Ha)

	_								
Sites	2017	2018	2019	2020	2021	2022	2023	Total for sites	Repetition
Porta Bohemica	0	0.4255	0.0273	0	0.4016	0	3.2674	4.1218	3.0306
BS u Litoměřic	3.3881	7.713	1.2445	2.8129	7.3301	6.9322	4.4911	33.9119	58.0181
Holý vrch u Hlinné	0	0.3272	1.6936	1.1302	0	1.7597	12.1161	17.0268	10.6497
Radobýl	1.7444	2.0127	0	0	0	0	3.1056	6.8627	8.8868
Lovoš	0	0	0	0	0	0	0.5183	0.5183	1.4821
Lipská hora	0	0	0	0	2.6527	0.7059	0.0478	3.4064	3.3139
Líska	0	0.9937	0.0437	0.0523	0	0	0	1.0897	4.6653
Košťálov	0	0	0	1.7756	5.5847	4.7629	2.2782	14.4014	17.9229
Milešovka	0	0	0.88	0.8365	3.4258	0.1907	0	5.333	10.0118
Borečský vrch	0	0	0	1.6032	0	0	0.4368	2.04	8.5867
Kočka	0	0	0	0	0.1746	5.5234	0.7614	6.4594	5.4249
Dolní Zálezly	0	0	0.57	0	0	0	0.53	1.1	0.57
BS pod Radobýlem	0	0	0.4881	2.2843	3.1763	1.3994	0.5267	7.8748	19.502
BS pod Košťálovem	0	0	0	0	0	8.0721	0	8.0721	8.0721
BS pod Lipskou horou	0	1.0304	0.0892	0	5.1965	0	0.7699	7.086	12.5763
Sady pod Lovošem	0	0	0	0	0	0	5.2235	5.2235	0
Ledvinův Vršek	0	0	0.3712	0.2021	1.4754	0	0.5465	2.5952	2.857
Sady u Blešna	0	0.3286	0	0	0	5.7966	0	6.1252	6.4536
Kostelní vrch	0	0	0	0.1871	0.2207	0	0.2246	0.6324	1.3768
	5.1325	12.8311	5.4076	10.8842	29.6384	35.1429	34.8439	133.8806	183.4006

Table 3: Traditional management – hand mowing (Ha)

The current state of the sites is quite satisfactory; on cleared areas you can see the gradual restoration of dry grasslands. At first, there are usually various annual species that are able to quickly use open areas and space (viper's bugloss, creeping, denseflower mullein); however, with regular mowing and grazing and removal of ungrazed vegetation, perennial species gradually begin to predominate and dominant grass communities are formed. Among the first perennial plants to appear on the restored areas are meadow clary, common agrimony, and liquorice milkvetch. Their seeds either spread easily or can last a long time in the soil, or the plants of these species are able to survive for a relatively long time even in adverse conditions "under the shrubs".

Conclusion: For a detailed overview of management measures carried out see the maps in ANNEX 1_Maps of the sites. The management fulfilled the project goals.

C.3 Traditional management – grazing

Foreseen start date: 08/2017	Actual start date: 08/2017
Foreseen end date: 08/2023	Actual end date: 11/2023

Total number of 95.18 ha out of 111 foreseen have been managed. The areas that are suitable for grazing were mostly only grazed, so the repetition of these areas was the only one that exceeded project expectations by a full 17%.

Even though at the beginning of the project we faced extreme weather fluctuations (2018, 2019), when grazing was almost impossible in the later months (end of summer, autumn), we were able to secure the onset of complications and later started to graze in all available sites. A specific feature of České Středohoří are the steep and often hard-to-access slopes, so many areas that at first appeared to be suitable for grazing had to be discarded after a more detailed examination. The total area of grazed areas is therefore smaller than was declared in the GA; Unfortunately, additional areas for long-term sustainable grazing were not found.

The regrowth of shrubs was suppressed on the renewed areas by annual management in the form of mowing and grazing. Both have their pros and cons; in some sites, it was possible to combine grazing and mowing. With appropriate and more intensive grazing, there was a better removal of old grass and the creation of free areas in the grassland due to animal movement. Another indisputable advantage of grazing was the possibility to graze on sloping or rocky terrain, where it would be difficult for a person to move with a brushcutter; another advantage was that no material was created during grazing that would need to be removed. On the other hand, it was not possible to get livestock to all sites or small steppe enclaves, check them daily and replenish water. After grazing on cleared areas with a lot of regrowth, it was usually necessary to mow the ungrazed vegetation.

During the project, however, many places were also grazed within the project sites and in their close vicinity, the so-called extra. There were two reasons. The first was easier handling of the herd than avoiding certain areas and going around them with the herd. The grazing copied the natural terrain and it was not always possible for the contractors to follow the drawings on the maps, which sometimes cut the plot in half. The second reason was not to overgraze SCI/SS and to reach the optimal status of habitat. So, as the herds were driven a different way, management measures were extended to other plots. The owners of the surrounding plots have always agreed with grazing/animal moving and did not mind the short-term stay of the animals on their land. Since these were only short-term activities, the owners of the respective plots did not request any financial contributions. In this way, for example, about 12 ha were grazed in the sites of orchards near Blešno, Kočka, Sady pod Lovošem, Bílé stráně pod Lipskou horou, Košťálov, and Bílé stráně u Litoměřic.

In the case of grazing, we cooperated with local farmers who own goats and sheep for commercial reasons as well as for personal ones. Thus, we bought a 100m long fence with an external generator which was lent to small farmers who do not have the technical capacity to graze in farther locations in project sites which are not near their homes. This supports greener management, in particular local production. In addition to the use of fences by farmers, the fences were used later in the season to fence off the pasqueflower (*Pulsatilla pratensis*) at Radobýl SCI during grazing so that the sheep would not eat them. As part of the Pasture Festival (Slavnosti pastvin), they were used in demonstrations of herding with dogs.

Areas that were re-grazed were mowed at least once. However, the ungrazed vegetation was usually mowed at the end of the season every year. As mentioned above, the ideal management is usually a mix of mowing and grazing, so the sites that have been grazed show very good condition and species diversity. Management results are described in activity D.1 – Monitoring.

Sites	2017	2018	2019	2020	2021	2022	2023	Total for sites	Repetition
Porta Bohemica	0	0	0	0	0	0	0	0	0
BS u Litoměřic	5.1509	1.5305	0.9907	0.5983	0	1.7456	9.4425	19.4585	35.8842
Holý vrch u Hlinné	0	2.7569	0	0.5689	1.6117	0	2.422	7.3595	22.3497
Radobýl	0	0	2.5321	3.2602	0.9118	0.6972	1.0131	8.4144	32.8686
Lovoš	0	0	0	0	0	0	0	0	0
Lipská hora	0	0	1.5302	0	1.8169	0	2.5	5.8471	14.8859
Líska	0	0	0.9954	0	0	0	0	0.9954	2.9862
Košťálov	0	0	0	4.0769	0.9642	1.6785	0.5	7.2196	19.195
Milešovka	0	0	0	0	0	0	0	0	0
Borečský vrch	0	0	0	0	0	0	0	0	0
Kočka	0	1.3756	0.5405	1.5432	0	2.4977	1	6.957	14.1376
Dolní Zálezly	0	0	0	0	0	0	0	0	0
BS pod Radobýlem	0	0	0	0	0	0	0	0	0
BS pod Košťálovem	0	4.1293	2.4983	1.1432	0.0342	0	0	7.805	33.8542
BS pod Lipskou horou	0	0	2.0303	2.8044	2.1824	0	0.2042	7.2213	19.9027
Sady pod Lovošem	0	8.7747	0	0	1.105	0	2.2666	12.1463	38.8724
Ledvinův Vršek	0	0	0	0.8045	1.4754	1.4753	0.6152	4.3704	7.6482
Sady u Blešna	0	0	2.4667	3.9192	0	0	1	7.3859	23.2363
Kostelní vrch	0	0	0	0	0	0	0	0	0
	5.1509	18.567	13.5842	18.7188	10.1016	8.0943	20.9636	95.1804	265.821

Table 4: Traditional management – grazing (Ha)

Conclusion: For a detailed overview of management measures carried out see the maps in ANNEX 1_Maps of the site. Even if the number of managed plots by grazing was lower than planned, we can evaluate the Action C.3 as successful.

C.4 Support of thermophilous forest habitats

Foreseen start date: 12/2018	Actual start date: 10/2018
Foreseen end date: 03/2021	Actual end date: 9/2023

A total area of 350 hectares was influenced as planned after changes. Due to a new Forest plan, approved on 1.1.2017 in respect of Act no. 289/1995 Coll., the regional branch of Lesy ČR, s.p. (LCR) had to revise the proposed sites for management measures. However the delay in location of suitable plots did not influenced the final result of Action 4. Due to the aforementioned facts, we have changed the original plan of planting trees which were finally presented in MTR in 2021. All the proposed changes have been accepted and approved as being not substantial changes. Below you can see the actual table:

Habitat	Original plan	Final No. of planted trees	
9170	4 080	29 110	
9110	4 000	33 110	
9180	19 200	2 270	

Due to the postponed start of management, and thanks to savings we gain from Frame contract for four years, we have prolonged activities until the end of 2023. Thus, we could maximally fulfil the promise to hand over the established plantations back to the Administration of Forests of the Czech Republic, i.e. directly to the Forestry Administration in Litoměřice. A subsequent takeover and

management memorandum, where the taking over party commits to continuing to fulfil the project's goals (species composition), was signed at the end of 2023.

The changeable weather proved to be a major problem, which greatly affected the survival of the plants. Long periods of drought in the first two years resulted in the death of saplings. Another inconvenience was the presence of a large number of rodents within the fences, which decimated the newly planted trees within a few days to weeks of planting. Despite regular inspection of the fences, it was not possible to prevent the occasional appearance of ungulates inside the fences and their destructive effect on the plantings (digging, browsing). Despite all these adverse events, most of the areas were handed back to the LČR administration in good condition, and often it was an established plantation. The plantings carried out in the last two years of the project were already directed only to those parts of the fences where the restoration took place more slowly due to the various reasons mentioned above. An overabundance of cloven-hoofed game means that it is practically impossible to restore stands with more valuable broadleaf species without some form of protection (group or individual).

Cooperation with the town of Třebenice was very beneficial; the project helped with restoration of the forest after the bark beetle outbreak. Thanks to the project, variable species-rich stands were planted in the place of monocultural spruce. Despite the discouragement of some forestry experts, the use of larger seedlings turned out to be a good decision. Paradoxically, larger seedlings better resisted dry summers in the first years after planting and resisted weeds well.

According to the approved changes, black locust (*Robinia pseudoacacia*) was eliminated on a total area of 1.1 hectares, where a large part was to support the target species of the whole action, green lizard (*Lacerta viridis*). By removing the black locust on the stone terraces in the northern part of the site and in the Jelení příkop area, stepped terraces made of loose stones were opened up and sunlit, which are a very important element for prosperity of the green lizard population and other reptile species here. The first phase of removing the acacia took place during October 2019. Trees were cut down and the stumps were subsequently treated with herbicide. This procedure did not prove successful due to subsequent significant root regrowth, which had to be suppressed by spraying the herbicide preparation on the leaves of the acacia

regrowth. The second phase of the acacia removal in the part of the so-called Jelení příkop took place in 2020, by the method of herbicide injection into drilled holes in the trunks and subsequent felling of dead trees. Although this method is time-consuming, it is very effective, especially in terms of suppressing root regrowth. Three years after application of this method, there is only minimal regrowth of acacia on the plots in Jelení příkop.

A substantial part of acacia elimination took place in Lovoš SCI, where the acacia stand was harvested by Lesy ČR, but unfortunately at an inappropriate pre-spring date, when the application of the herbicide to the stump was ineffective and there was a massive rejuvenation of the acacia from the stumps and roots. In the first year after logging, the area was only prepared by spraying the herbicide on the leaves. In the second year after logging, the measure was repeated, and new trees were planted only in the autumn months. Acacia regrowth was relatively successfully suppressed, but not 100%, and some plots will still need to be treated in the future.

Conclusion: Despite the longer process of acquiring sites for the project, a delay with starting tree planting, and a change in the final ratio of the target habitats, the objectives and outputs set for this action were achieved. Even in the case of acacia elimination, which was complicated at the beginning in Lovoš, the result was ultimately positive and the partially established plantation was handed over to the management of Lesy ČR, the Forest Administration in Litoměřice, which will subsequently control the acacia regrowth.

D. Monitoring of the impact of the project actions

D.1 Monitoring and assessment of the impact of management actions on species and habitats

Foreseen start date: 8/2017 Foreseen end date: 9/2023 Actual start date: 8/2017 Actual end date: 12/2023

Since 2017, monitoring of species and habitats has been carried out annually, with the exception of *Stenobothrus eurasius bohemicus*, which is monitored externally and once every four years. The second monitoring of locust was conducted in 2023 (the first in 2019): The Jersey tiger was monitored regularly in 2018–2023 at all project SCIs where this species is a subject of protection. So-called intensive monitoring was implemented in 2018, 2020, and 2022, i.e. monitoring supplemented by night capture of imagoes by means of UV light detectors.

As part of the project, 19 project sites (9 EVL and 10 stepping stones) were monitored. Each site was monitored in several ways during the growing season: field trips during management planning, inspections and acceptance of finished works; also, two permanent monitoring areas (5x5m) were established at each site, where phytocenological images were taken every year. These were evaluated by statistical analyses at the end of the project. Full wording is attached in Annex 2_D.1_Flora monitoring (CZ language).

At the end of every year, all monitoring data (not only target species) are entered in the NDOP database. These data are publicly available on our website (e.g.: <u>SCI Holý vrch u Hlinné</u>). 478 phytocoenological surveys have been procured. The results from the performed monitoring are summarised below.

Botanical survey:

The results of botanical surveys of target species are attached in Annex 2_D.1_ Botanical monitoring (in Czech).

Stipa zalesskii

This critically endangered species occurring at the site of Holý vrch u Sutomi (Košťálov SCI) and Kostelní vrch shows a stable population after interventions carried out as part of the project. However, it is important to mention that, although monitoring confirms a well-set management, population stability is also dependent on the amount of game in the area.

Pulsatilla patens

184 plants were found at the Holý vrch u Hlinné SCI and Borečský vrch SCI sites. Thanks to management interventions and stabilization of habitats, the species is now able to reproduce on its own. The condition is a sufficient supply of seeds (for now from culture) and favourable weather conditions in the second half of summer. It is necessary to continue with the set management; a lack of management or an inappropriately timed intervention can cause repeated stagnation or even a decline in the population. With appropriate combination and timing of management (sheep grazing, mowing, shrub regrowth removal, planting of cultivated plants, sowing of seeds from culture, individual and group protection), there is a chance to reverse the downward trend in the number of individuals from recent years.

Cypripedium calceolus

Orchids are one of the most demanding plants, with a relatively long generation period. Careful management of the site, which resulted in an increase in the abundance of the species by 3 clusters (from the original 6) is a great result. The longer-term trend of the population development will only be shown by subsequent annual monitoring of the species, usually in 5-10 years. It will be crucial to maintain sensitive management for the entire site.

Thanks to carefully planned measures, other rare species were supported, such as fragrant orchid (*Gymnadenia densiflora*) and lady orchid (*Orchis purpurea*). Nonetheless, we also observed the presence of non-native species such as prickly pear (*Opuntia*) and woad (*Isatis tinctoria*), as well as expansive species (*Bromus sterilis*) and wood small-reed (*Calamagrostis epigejos*). These are suppressed by early mowing or extracting (before seeding) followed by frequent mowing.

Zoological survey:

The results of zoological surveys of target species are attached in Annex 3 _D.1_Zoological monitoring (in Czech).

<u>Green lizard</u>:

Based on annual monitoring, the impacts of the implemented management measures on the green lizard populations on the Dolní Zálezly stepping stones and at the Kalvárie site can be assessed as mostly positive. The development of the green lizard population in the area of Dolní Zálezly stepping stones increased; however, after 2020, the increase was probably also a consequence of the strengthening of the local population by individuals from the Kalvárie site. From 2020 to 2023, the development of the green lizard population at this site can already be assessed as steady.

During implementation of the project, development of the green lizard population at the Kalvárie site saw a significant increase. As part of monitoring in a pre-marked transect, there was an increase in the number of recorded individuals by 128% from 2017 to 2023. There was a significant increase in the number of observed juvenile individuals between 2017 and 2023 by 289%, which indicates very good reproductive capacity of the population.

Following the monitoring of the occupancy of lizard shelters by both green lizards and other reptile species, they can be characterized as a suitable measure to support reptile populations.

Grasshopper sp. Stenobothrus eurasius bohemicus

The population of this species in Radobýl SCI recorded a significant increase in abundance during project implementation, which is partly a consequence of the implemented restoration management and partly of the dry and warm seasons of recent years.

<u>Jersey tiger</u>

Jersey tiger was continuously present throughout the monitored period at all sites and their segments, with a few exceptions during extensive (daily) monitoring, when no individual was observed; these are mainly the years 2019 and 2021, when there was a more significant negative year-on-year fluctuation in the population dynamics of the species. It can be stated that, at the project sites, the Jersey tiger finds suitable conditions for development, especially in the sites of Bílé stráně u Litoměřic (segment of Bílé stráně u Pokratic) and Radobýl, where the largest number of individuals was observed overall.

Moreover, specific measures were taken to reinforce the hermit butterfly (*Chazara briseis*) at Radobýl hill. As part of the monitoring, a stable population was recorded. As for the rare eastern

baton blue butterfly (*Pseudophilotes vicrama*), we can observe its decline in the surrounding populations. However, thanks to the implementation of measures at Radobýl SCI, the population was preserved and the occurrence was also confirmed in 2023.

As part of monitoring in 2023 at sites after the restoration management at Bílé stráně u Pokratic, Bílé stráně pod Radobýlem stepping stones, Bílé stráně pod Košťálovem, and Kočka stepping stones, a total of 21 representatives of Passerines, 3 representatives of Piciformes, 3 representatives of Columbiformes, 1 representative of Bucerotiformes, and 1 representative of falcons. Of these, the most interesting individuals are the hoopoe, the barred warbler, the golden oriole, and the corn bunting.

Conclusion: In view of the above-mentioned findings, it is evident that the landscaping measures implemented at the project sites are appropriately set and their implementation, including subsequent management, will help restore rare communities of thermophilous grasses and increase overall biodiversity in the given area. The condition of the sites has improved significantly compared to the initial state. Prominent changes meant mainly restoration interventions in the form of extensive clearings of bushes and self-seeding woody plants and the creation of a new landscape mosaic.

D.2 Assessment of project actions impact on ecosystem services

Foreseen start date: 08/2017	Actual start date: 04/2018
Foreseen end date: 12/2023	Actual end date: 12/2023

The report on assessment of ecosystem services (ES) provided by the project was completed and its full wording is available in Annex 4_D.2_Ecosystem written by Iva Hönigová (internal employee of NCA CR) with the cooperation of PM. The report deals with the procedure for identifying key ecosystem services for the project in the region and, consequently, quantification of selected services.

In 2019, a study to evaluate the possibilities of using phytomass from management measures in biomass plants was done by experts from the Research Institute of Plant Production. The results show that phytomass utilization for biogas production is suitable (see Annex 7_Artical_The crop research). So the biomass from restoration management or mowing can be used for wood chips as well as fuel for biomass plants.

The results of measurements of water quality showed significantly lower values compared to 2019, especially for E-coli bacteria, which decreased almost threefold, and also for coliform bacteria, which decreased almost twofold. A possible explanation is that the self-cleaning capabilities of the stream flowing between the two sampling points are sufficient to both eliminate possible water pollution caused by grazing (if any) and to remove pollution that has entered the stream higher in the river basin (outside the project site).

Moreover, the created pasture can feed an additional 873 sheep compared to its initial state. So there is a potential increase in ES – food production. The final results therefore show the carbon sequestration due to shrub clearing, and the removal of biomass during grazing (the release of methane by sheep is also indicated here) and mowing (53.33 tons of carbon/year +81.43 tons of carbon/year +0.665 tons of carbon/year) = 89.315 tons of carbon per year. To this value, however, we must add the decrease in the carbon stock in the cut biomass, which is 7,193.7 tons of carbon per project.

However, it is important to highlight that ES includes the term *trade-off*. So, an increase this service – food production, inevitably leads to a decrease in another service – climate regulation (shrub elimination). The present results are in accordance with the *trade-off* concept. There is a loss in biomass carbon stocks due to landscape management (both restoration and mowing).

However, it is important to mention that 28,840 saplings were planted during the project. With a very rough estimate, we can expect that within ten years these young trees will capture 24,514 tons of carbon, although the results are now negative under climate change – carbon sequestration.

To conclude, the assumption is that the decline in climate control service is compensated by an increase in biological value (biodiversity) of the project sites, although biodiversity is not in itself understood as an ecosystem service. The same applies to the landscape character of the given site.

Cultural services – recreation underlines the results and potential of LIFE CS locations for oneday tourism, especially in the central part. Hand in hand with is the availability of accommodation and restaurant facilities. The results further confirm that there is a significant difference in tourism at the sites between working days and non-working days – up to threefold.

Action D.2 was carried out according to plan.

D.3 Socio-economic impact assessment, evaluation of dissemination activities

Foreseen start date: 08/2017	Actual start date: 09/2018
Foreseen end date: 12/2023	Actual end date: 09/2023

The tendered contractor, the Faculty of Science of Charles University, was the only but also the most suitable candidate for processing the socio-economic indicators of the LIFE České středohoří project.

First, available information and data sources were gathered and analysed, stakeholders and target communities were identified. Once the methodology was approved, the research could begin. The first step consisted in analysing the change in land use within the project area. This background information brought insight into the local situation and only confirmed what we suspected. In other words, the mosaic nature of the landscape, which was still visible at the beginning of the first half of the 20th century, has changed. The results show that average land use in PLA České středohoří per user is 70.99 ha. That is slightly less that the average value for the Czech Republic, which is 123 ha. This may be due to the fact that PLA České středohoří has the highest number of settlements inside of a Protected Land Area in the Czech Republic. Thus, there are fewer available plots to be managed.

Moreover the existing findings show that the biggest changes in the functionality of managed areas were in the second half of the twentieth century, when the share of arable land was reduced in favour of forest areas, permanent crops, or permanent grassland and other areas.

The project sites are especially suitable for day trips, because they are easily accessible from large population centres (Ustí nad Labem, Litoměřice, Lovosice, Děčín). For the same reason, the development of agrotourism and ecotourism has potential in the region. The preference for day trips in PLA České středohoří is also visible in the amount of accommodation, which is not that high. However, according to the study, the highest number of visits in tourist spots occurs at weekends, especially during the summer.

The second part was unfortunately affected by the COVID-19 pandemic, which postponed the implementation of semi-structured interviews until 2021/2022. However, this delay had no effect on the final results of the study.

The interviews proved that the stakeholders are aware of the uniqueness of the area, its specifics, and why it is important to take manage it. However, they add at the same time that the continuity of ownership has been lost and this has caused the inability to manage the individual sites. Another specific aspect of České středohoří is the steep hills and slopes, which are often very difficult to access. And as one respondent said: "Working in the hills is twice as hard."

The full wording of the repost is enclosed in Annex 5_D.3_Final report on Socio-economic impact (in Czech language).

Conclusion: The action was carried out according to plan.

E. Public awareness and dissemination of results

E.1 Information campaign

Foreseen start date: 08/2017 Foreseen end date: 12/2023 Actual start date: 04/2018 Actual end date: 12/2023

1) Events and field excursion

The project team was able to organize 101 various public events or projects which LIFE CS participated in. These ranged from field trips to special educational events and school excursions. As far as the number of people approached is concerned, the most successful presentations of the LIFE České středohoří project were at the events of regional partners. Most often, the team prepared an informational and educational stand with activities. The biggest event is Slavnosti pastvin, which is organized with Hlinná municipality; more than 2 000 people have visited this one-day event. (All information about public events is updated on the FB profile.)

2) Exhibitions for the general public

In cooperation with the Regional Museum in Litoměřice and the Museum of the City of Ústí nad Labem, the exhibition "The most beautiful mountain range with nature historian Jan Šimr", ran from 24/6/2021 to 23/3/2022. The exhibition was viewed by more than 300 people, museum education programmes took place (over 90 children participated) and five field excursions with experts were organized. In 2021, a permanent exhibition was completed at the Baba bastion in Litoměřice, where the regional office of the NCA CR is located. This included a botanical exhibition, large-format photographs and functional educational elements for children, and 1 route out of 10 routes of the GEOFUN application.

3) Environmental education programme

The LIFE project saw outdoor children's activities as extremely important. It therefore organized almost **100** excursions for children from kindergartens, primary and secondary schools, who had the opportunity not only to see the beauty of České středohoří, but also to experience discovering nature in a fun way. In some cases, schools used the GEOFUN application for their educational field trips. They learned a lot about natural processes and the ways nature is managed. They even had the opportunity to get involved in the management of valuable sites. The Sever Litoměřice Ecocentre and pULec Ústí nad Labem school helped the project with the excursions. All materials will be available on our website.

4) Project presentation in media / international events

More than 290 articles about project activities have been published during those 6.5 years. Moreover, more than 3 dozen reports about the project, its management and events were created during the project period, for example the report from 2023 where the GEOFUN application is promoted.

5) Internet presentation

The project website was launched in December 2017 (<u>LIFE CS English version</u>). The Facebook profile is updated 2 - 3 times a week. Some of the articles reached 20,000 people. In total, 30 326 unique visitors and 100 535 non-unique visitors have visited the website since its launch.

Action	Participants/ Visitors	Number of events
Events and field excursion	52 119	167
Exhibitions for the general public	N/A	2
Environmental education programme	99	2+99
Project presentation in media/international events		297
Internet presentation		296

Conclusion: Despite the coronavirus pandemic, promotional and informational activities were very successful, events organized or participated by project team reached almost 50,000 people.

E.2 Public awareness dissemination of results

Foreseen start date: 01/2018 Foreseen end date: 12/2023 Actual start date: 05/2018 Actual end date: 12/2023

As part of the LIFE České středohoří project, a large number of printed materials and promotional items were created; its distribution contributed to general awareness about the project.

In the project, we emphasize that the materials produced have a wide range of users and can be merged together or further developed according to current needs. Thanks to this concept, a relatively diverse range of materials were created, for which we have already had positive feedback.

The leaflet Beauty of the Elbe Valley, which discusses interesting natural sites in Porta Bohemica SCI, was very well received. It is visually interesting and provides visitors with interesting tips for trips. It also gives information about Natura 2000 and the principles of nature conservation in Natura 2000 sites. This leaflet was followed by the preparation and printing of the leaflet Nature, humans and the most beautiful valley in České středohoří. Both publications were published in English, Czech, and German.

As part of the project, the Landscape Protection in České středohoří leaflet was created, which summarizes the principles of nature-friendly management at important sites with the occurrence of thermophilous dry grasslands. It is a suitable guide for farmers who want to improve the condition of their own land and for those who want to improve the condition of the landscape through suitable interventions. The advantage of this leaflet is the possibility of dividing it into individual chapters.

In 2021, two GPS audio guide platforms were tested – GEOFUN and SmartGuide. It happened on the occasion of the opening of the exhibition about Jan Šimr "The most beautiful mountain range with the nature historian Jan Šimr". SmartGuide was used in the Czech and German versions as a direct guide to the exhibition (frontal platform based on interpretation at a given GPS point). GEOFUN was used as an entertaining nature guide around Košťálov, where Jan Šimr often worked (the platform allows interactivity, linking of various resources, contains games and entertainment elements, works online). Based on experience, the LIFE team decided to create more routes on this platform, where **10** geolocation games were gradually created. To promote the application and individual routes, **20,000** leaflets about GEOFUN were printed, which were widely distributed to selected info centres in the region.

During the project, ten educational publications for children (intended for parents and teachers) were published, which familiarize children with nature in a fun way. All these printed materials can be downloaded from the project website in the MEDIA section.

Ten information panels were placed within České středohoří PLA and there was even an educational trail around Raná Hill, where the Steppe Festival (Slavnosti stepí) also takes place. This trail is marked in the widely used mapy.cz application.

Conclusion: All project goals were met and often exceeded our original expectations.

E.3 Support of traditional farming

Foreseen start date: 07/2018 Foreseen end date: 12/2023 Actual start date: 01/2018 Actual end date: 05/2023

1) Workshop

Workshops to support traditional farming have been organized throughout the entire project as needed. The topics varied from common agricultural subsidies to how to prevent wolf attacks. The last workshop was held in spring 2023 in cooperation with ASZ, which informed farmers about new conditions of agricultural subsidies for the upcoming period. Changes within the edition of the workshop publication are described in part in Chapter 3 – Executive and explained in detail within chapter 6.2. – Main deviations, problems and corrective actions implemented. The brochure – traditional farming was distributed during two workshops. First one was internal for emploeeys who cooperate with stakeholders and prepare conservation measures. As the topic was mowing and elimination of invasive species, the brochure was presented to the emploeeys as a great manual which can be distributed. Second workshop was organized with cooperation of ASZ. The main topic was traditional farming and maintenance of dry grasslands in new CAP period. Both workshops fit perfectly into the concept of the brochure-traditional farming. Invitation and photos from workshop can be found in Annex 6_Brochure-traditional farming. The brochure itself was uploaded separetly in Butler. However its parts can be downloaded in website of LIFE CS – section for farmers and owners.

Both workshops fit perfectly into the concept of the traditional economy brochure 2) Collaboration with stakeholders / 3) Continuous assistance to farmers

The collaboration with stakeholders took place on a daily basis. The biggest workload was at the end of 2022, and at beginning of the year 2023 due to the postponement of the launch of CAP subsidies.

Unfortunately, due to the nature of a large part of the land in České středohoří, their eligibility for obtaining subsidy support is very limited. Thanks to good cooperation with farmers and contractors, with whom we adapted a number of project plots for the subsidy system, countless adjacent areas were also restored. We also helped farmers in the field of consulting with the subsidy system for obtaining subsidy support for farmed land. Based on this joint effort, 42.6 ha were transferred to the subsidy system, which is 8% more than was planned in the project.

Furthermore, it is possible to assume the registration of other plots of land where intervention happened during the project and will become eligible in the following period. This is, for example, an area with a total area of 5.22 ha, which is part of the stepping stone of the orchards under Lovoš.

All plots of land that are registered in the subsidy system are assigned the title Basic payment per area. A large part of them is also registered in the extension title AEKO – treatment of extensive grasslands.

4) Support of České středohoří regional label establishment

The first and only regional stamp was awarded as part of the project in cooperation with the municipality of Hlinná, where a new event Pastures Festival (Slavnosti pastvin) was created. Since 2020, the event has been included among the holders of the regional stamps ČESKÉ STŘEDOHOŘÍ regional product[®]. The stamp was awarded by Destination Agency České středohoří, o.p.s. and demonstrates the quality of the event and its contribution to preserving the natural and cultural wealth of the Ústí Region. During the entire project, the Steppe Festival and Pasture Festival reached more than 13,000 visitors.

The change in the promotion (one label certification instead of two originally planned) of regional label within the LIFE CS project was very positive after the evaluation. There was the possibility of presenting their products and their production at their own stands (e.g. Slavnosti pastvin) or, in cooperation with Destination Agency České středohoří, a stand was set up to promote other regional brands on their behalf. Thanks to this cooperation, we were able to promote a larger number of local producers, particularly as not many new products that meet requirements to be awarded by regional label mark are being detected in PLA České středohoří.

In order to increase the popularity and number of downloads of the GPS audio guide, a summer competition was arranged in 2022 and 2023, where the winners received products donated by regional stamp holders. Thus, the regional products are also promoted and made visible through this event.

This slight change of the expected result – Assistance to farmers with implementation of regional label (at least two registered products by the end of the project). This means the project stresses the promotion and support of a regional label as such, which may not necessarily result in the registration of a new regional label.

Conclusion: Although there were some changes in the Activity, the project objectives were met, in some cases with a much better result than expected.



Photo 3: Title page of the *Péče o krajinu ČS* brochure

E.4 Networking with other LIFE projects

Foreseen start date: 07/2017	Actual start date: 05/2018
Foreseen end date: 12/2023	Actual end date: 12/2023

Networking activities were significantly affected by the coronavirus pandemic. After 2019, a lot of events or meeting were cancelled, postponed, or held in online versions. Traveling abroad was limited for a long time. Online meetings often continued to be used even after official restrictions were lifted across European countries. Nonetheless, we tried to reach other projects or partners by available possibilities. In Annex 7 E.4_Networking.

The NCA CR project team was in close contact with LIFE of Insects, LIFE-IP: N2K Revisited (LIFE17IPE/CZ/000005) and CZ-SK South LIFE projects. Practical experience and results of LIFE+ Lounské středohoří Steppes project team (LIFE09 NAT/CZ/000363) were great help for us. Also because some members of the aforementioned team are still working at the regional office of PLA České středohoří administration, we were able to consult on certain issues. Within the regional and thematic intersection, contacts and cooperation with local NGOs were established. In 5/2018 we actively participated in the Final conference of the SAND LIFE in Sweden.

Cooperation with The Crop Research Institute was established to find the potential for biogas production from grasslands of naturally valuable localities. This cooperation led to an article in Agritech science. The full wording can be found in Annex 8_Artical_the crop research (in Czech with an English abstract)

In 2022, we tried to make up for the lost time during Covid pandemic and visit was organized to Muránská planina, Slovenský raj, and Slovenský kras National Parks, Malé Karpaty Protected Landscape Area (Devinská Kobyla National Nature Reserve) in Slovakia and Nature reserve Hundsheimer Berg (Austria). The visits were focused on exchange of knowledge with their experts on similar restoration management practices on dry grassland – grazing of animals, coppicing trees, clearing vegetation and, last but not least, there was a discussion on protecting herds from wolf attacks.

The webinar networking meeting was also very beneficial for us, organized by LIFE118 NAT/CZ/IT/000803. The aim of this webinar was to exchange good practice and strengthen the results of the project of acidophilic grasslands and heathlands.

Of particular value was active participation in the EDGG conferences held in Spain (2022) and in Hungary (2023), where we had chance to present results from our project. The topics of the conferences were broad so we could compare many aspects of management work.

A group of experts on invertebrates as well as botany from various universities (ex. Czech Faculty of Life Sciences, Charles University Prague, Nature Sciences Faculties of University

in Ústí nad Labem, Hradec Králové) visited the project area to see the impacts of project management.

A great honour for us was the field trip of regional office directors to Lounské středohoří during the Czech Presidency in the EU in 2022.

Regarding PR, the project team shared best practices and other experience at the Siggen seminar and attended the Regional conference on environmental education (EVVO). Moreover our workers visited seminars (Czech Rep., Germany) focusing on communication in parks, the best way to write informational panels, as well as how to construct interesting excursions for various participants. In addition, we hosted a PR worker from Kemeri National Park in Latvia. In the past few years, we have also presented our experience of the GPS audio guide as well as DRON to other regional offices of NCA CR.

Conclusion: With limited travel options there have not been as many study tours as originally planned; however, many beneficial networking meetings were organized or participated in and many new important contacts were made.





Photo 5: Field trip of directors within the presidency of the Czech Republic in the EU 2022



F. Project management

F.1 Project management

Foreseen start date: 8/2017	Actual start date: 8/2017
Foreseen end date: 12/2023	Actual end date: 12/2023

The necessary coordination of the project has been underway since the signing of the Grant Agreement, in close cooperation with the employees involved in the previous completed project LIFE+ Stepi lounského středohoří (LIFE09 NAT/CZ/000364). A full team was established in 2/2018. However, after that there was a change of PR, PR assistant, and several changes in position of FM. The first two changes were replaced very successfully and lasted almost until the end of the project. The assistant did not leave until 8/2023 due to maternity leave and PR 4/2023 due to another job opportunity. However, we concluded a temporarily employment contract with PR at end of the year and thus we were able to secure all the contracted events and the PR participated both in the final report and in the compilation of the After LIFE plan.

The FM changed several times; it was hard to find a competent person who could manage this agenda to the appropriate quality.

Despite all these changes, the project team met once a month at a project-wide meeting in the presence of the director of the regional office of České středohoří PLA Administration and Markéta Curatolo-Jůnová, who is the contact person for the EC. These meetings ensured the continuity of all tasks and, above all, secured any procedural or administrative problems that might have arisen. The scheme of personnel is in Annex 9_Personnel.

The PB with mayors of project municipalities met twice a year. This was once during the field trip (as described above – Action E4) and once at the beginning of December in order to summarize performed activities and to present activities for the upcoming year.

The SC met only once a year rather than twice as proposed in project documentation. As the members of SC met at various events during the year, they were kept sufficiently in touch with the progress of the project. An updated table of members of the SC is attached below.

The drone was mainly used for monitoring the implementation of project actions C, 1, C. 2, C. 3 and E1. Aerial images taken by drone significantly facilitated the monitoring of implementation of management measures. During the implementation of restoration interventions, as well as mowing and grazing, it was possible to accurately evaluate the extent of the work carried out with the help of a drone. The drone also helped significantly in monitoring the spread of invasive plant species, specifically the woad in often difficult-to-access sites in the Porta Bohemica SCI. Another use was within the scope of E actions, mainly when taking photos both from events for the public and when obtaining photographic material for the needs of the project.

Audit:

In summer 2020, an open public procurement procedure took place and, after some delay caused by the procedure, 5 November 2020, contract with Ing. Lucia Sandtner, PhD. – Ekoposs+. Only small deficiencies were found during the audit, in its first part, which took place in 2020. These deficiencies were immediately eliminated, and no other deficiencies were found during the final audit, which checked the entire project period.

Conclusion: Project management worked continuously during the entire project period without any disruption or other deviations. Personnel issues did not affect the running of the project as the main positions were covered.

F.2 Training of project staff

Foreseen start date: 08/2017 Foreseen end date: 12/2023 Actual start date: 04/2018 Actual end date: 12/2023

The entire NCA CR project team focused on improving English, which turned out to be one of the most significant shortcomings. Other necessary courses for project staff were in most cases covered by the employer without the requirement of financial support from project funds (e.g.: GIS, IT tools, economic programmes). In particular, these courses were focused on increasing qualifications in professional fields (zoologist, botanist) and their competencies (changes in state administration and legal issues).

In autumn 2019, project staff completed a one-day Communication course specialised in negotiation and dealing with conflict situations during meetings. PM manager, PR manager, and field assistant / PR assistant completed a course of interpretative writing in 2019.

As described above, many training events have been attended. The need to increase the qualification of personnel (and keep on track with latest methods) was desirable even after the Midterm report. Thus, the training of staff covered the whole project period.

Conclusion: The training agenda was fulfilled and the increase in the competence of the staff was one of the important agendas in the project. The more competent the personnel is, the better the results we can expected. The entire list of completed courses is attached in Annex 11 – Training of project staff.

F.3 After-LIFE plan

Foreseen start date: 8/2017 Foreseen end date: 12/2023 Actual start date: 04/2018 Actual end date: 12/2023

A stand-alone After-LIFE plan for the project was created (Annex 12 - AfterLIFE plan; entire document was uploaded via Butler due to its size). The future sustainability of the project was continuously addressed, with a focus primarily on landowners and tenants of project areas. In most cases, we succeeded in eliciting a positive response to the established cooperation and they also agreed with the future preservation of project outputs.

NCA CR is a public body who operates with their own resources in the Protected Landscape Areas where project SCIs are located. All project sites within C.1 and C.4 Actions were managed mainly under this programme and the beneficiary's own contribution and it will be partly used for their maintenance. The second instrument for management measures are agriculture subsidies. Almost all the plots in action C.4. were either in management by Lesy ČR, Lesní správa v Litoměřicích, or the municipality of Třebenice.

Sustainability of sites plots in the first and second zones is ensured by The Nature and Landscape Protection Act No. 114/1992 Coll., see Annex 13_Sustainability declaration. As an executive body of nature and landscape conservation, NCA CR monitors the use of land included in the PLA; for these most valuable sites, it grants consent to carry out more significant interventions. From this perspective, legal protection is the most effective tool for ensuring sustainability in project areas.

Additionally, in case of sustainability of C.1 and C.4, it is a very positive fact that some owners already succeeded in getting agricultural subsidies. By the end of the project, 42.6 ha (out of 156.1133 ha) were already included under the agriculture subsidy scheme and more plots are expected to be assigned in 2024.

As for soft activities – educational programmes (Action E.1; E2) and their components were very successful. The demand for these activities exceeds the capabilities of NCA CR; however some of them remain and will be supported by NCA CR personnel, mainly from the České středohoří PLA, while some others will be held by local NGO or municipalities.

Conclusion: The project outputs are very viable to ensure future sustainability; there is intensive communication between beneficiaries and stakeholders involved in the project. The majority of project team members continue in their work for the beneficiaries and thus sustainability is supported well.

F.4 Monitoring of project performance indicators

Foreseen start date: 8/2017	Actual start date: 08/2017
Foreseen end date: 12/2023	Actual end date: 12/2023

Monitoring of procedures, financial flows and, above all, fulfilment of actions against the objectives and outputs of the project was an essential daily project management agenda. Based on past experience, monitoring processes were established which included regular (quarterly) monitoring of project implementation and cost as a whole, followed the LIFE programme reporting tools. Simultaneously, communication processes were effectively set for detecting and resolving any problems in time.

See the summary of milestones and deliverable products and list of deliverables with additional details in Annex 14_Deliverables, Milestones

Conclusion: Despite no serious problems and postponements of several project milestones, all issues that occurred were sorted out and the project was concluded by reaching its objectives.

6.2. Main deviations, problems and corrective actions implemented

Significant deviations and problems encountered have already been briefly described in chapter 3 Executive summary.

So far, several major deviations/changes have taken place which have been consulted with EASME:

- Purchase of the car was delayed by one year due to the central public procurement implemented by the Ministry of Finance. Also, the technical specification had to be changed due to the new legislation applied. As a result, a car was delivered to the NCA CR on 5/2019, running on CNG instead as LPG, as in the project proposal. The change was communicated with the monitor as well as in the 2nd Progress report and it was approved. The financial difference which occurred was covered by national sources. Due to internal rules of NCA CR, the purchase of the drone happened in 2021, which is a bit later than we expected. However, it did not influence any outcomes.
- Number of printed leaflets: the first announcement about the change in the number of printed leaflets was already mentioned in the Progress report from 2019. We stuck to this approved change until the end of the project. Even though leaflets were taken to every event for the public, the total use was much less than the expected reduction to about 4000-5000 copies. The total production run of each type of leaflet was 3,500 copies. However, it is in line with today's trend of people not being interested so much in printed material.
- As communicated during the monitoring visits in 2019, 2020 and in MTR we decided to merge "printed collection of workshops contribution" and "brochure-traditional farming" more info about entire process below.

Delays in implementation in the following cases:

Leaflet – changed leaflet on Traditional farming – 12/2021. As part of Activity E.3. - The support of the traditional farming resulted in both a change in output and a delay in the final product. We decided to merge "Printed collection of workshops contributions" and "Brochure - traditional farming" in to one large publication, with each part standing on its own. Because the workshops and meetings were focused on the support of traditional farming (meaning methods and practice) not merging the publication would see duplication of the same content in two different publications. Rather than that we preferred to cover a larger area with a deeper insight of each activity. The merger of these publication was communicated in the first half of the project during the mission and was accepted as the final product (brochure) and does not jeopardize the project results. Moreover it makes sense as it does not duplicate itself. However, the final version of the brochure was printed in 11/2022 instead of 12/2021 as originally planned. The delay did not endangered any deliverables or results. During the final meeting with stakeholders organized in spring 2023 about new CAP period, the brochure was available and distributed in the workshop as planned in GA.

Other deviations in implementation of project activities more of a technical/practical nature:

- Changes in the resulting ratio of managed sites. The original intended hectare ratio shifted in favour of mowing rather than grazing, as already described in Chapter 3 Executive Summary. However the main reason for such shift was that not enough suitable plots with future sustainable management could be found. We did not see any reason to graze plots, for which we could not find future stakeholder as it would be unsustainable due to grazing costs. The main reason for their unsuitability for grazing management was their slope, rockiness, and poor accessibility. We therefore preferred to mow these sites.
- The changes in Action C.4 were discussed during the monitor visit in 2019, as well as 2020. The delay and changes were due to the new forest plan launched on 1.1.2017, as mentioned in the 1st Progress report. Moreover, the plan was again slightly changed to reflect the bark beetle outbreak (higher prices of forest activities, less contractors). Overall changes in results are reflected in the KPI database and despite the change, the quality of the habitat was improved.
- As part of activity E.2, we were supposed to launch a GPS audio guide. The launch • itself was on time but, as we later found out, a certain saturation of applications and a smaller target group affected the number of downloads. Even though we decided to target people who like to go to the country (families with children, Czech tourists), the impact of this activity was smaller than we expected. In 2022 and 2023, we tried to support the use of the GPS audio guide with a summer competition, the prizes of which were partly delivered in cooperation with České středohoří regional brands. 3000 downloads/year is an absolutely unrealistic number, considering 602 downloads during the entire project period. In Appendix 15_Statistics of GPS audio guide there are statistics for two whole years and it is evident that in such a small project area, it is not possible to have so many downloads. The GPS audio guide was also offered to schools for study purposes. To promote the application and individual routes, 20,000 leaflets about GEOFUN were printed, which were widely distributed to selected info centres in the region. Despite these other supporting activities, the number of downloads is many times lower, which does not mean that the application is not interesting and thus does not fulfil the set goal of the project. The practice of using the GPS audio guide is shared both within the work with public group within the NCA CR and also by other entities such as parks, rangers, and other LIFE projects.
- Leaflets on target species: The goal of the project was to print 48,000 copies of this material, but practice has shown that the public is not that interested in this type of printed material. After agreement with the project monitor, the target number of leaflets was reduced. In details described above in section <u>So far, several major deviations/changes have taken place which have been consulted with EASME.</u>

There was also an increase in costs, which were covered by savings, while not limiting the implementation of other Actions:

- There was also an increase in personnel costs after project preparation, there was a general increase in wages, which was reflected in both the private and public spheres. Thus, the set daily rate was exceeded in several cases.
- The prices for Actions C.1-C.4 are based on the cost of measures (officially approved price list "NOO") issued annually by the Ministry of the Environment. The NOO was increased several times during the entire project period. However, the most significant

increase was dated 14th February. In some cases – first elimination of the shrub, increased from approximately €1800 to €4000. Even though the change was considerable, we covered the increase with our own resources. Thus this increase did not jeopardized any project results and despite the change the quality of the habitat was improved.

• Price increase of the planned permanent exhibition on the site of the regional office of PLA České středohoří Administration. The original budget, which was €25,900, was finally increased to €40,296.52. The reason was the Covid pandemic in 2021, which increased both the price of material and the price of labour. First, the planned start was moved from spring to autumn. Even so, we decided to start work, mainly because of possible further price increases. The best offer was selected using a public tender, and even this exceeded the original estimate from 2013. However, all work was completed in the autumn of 2021, and the increase did not compromise the quality of the work performed or other project activities.

Unfortunately, this project was also affected by the coronavirus pandemic. The most significant impact affected the Action E1, E4, and working travels of the project team, whose main activity is public relation, education, and networking with other projects.

6.3.Evaluation of Project Implementation

Comparison of the results achieved against the objectives and expected results, together with the method used, are summarised in a separate table in Annex 16_Evaluation of implementation.

<u>Methodology applied</u>: The project was based on the use of best practice, i.e. in the case of the main activities (management measures, monitoring of species, work with the public and the preparation of educational programmes) the most well-established and proven methods were chosen. The most immediate impact has been observed for restoration management measures. The

The most infinediate impact has been observed for restoration management measures. The impact on target species is described in **Annex 2 and Annex 3**. As these interventions were in some cases in popular tourist areas, the reaction of visitors showed the interest of the lay public in environmental issues (based on the reaction from FB). This goes hand-in-hand with the information campaign, also spread via FB. However, the new element was used in the case of use of GPS audio guide, where the way to spread information needed to by slightly different. We have also tried to apply knowledge gained from CEO writing to support internet searches. The issue of Ecosystem services (Action D.3) was relatively unknown and processing the Action using the "TESSA" tool (probably the best choice to approach the task) seemed difficult in this scope of the project (small area and short time period of implementation). Even so, it was possible to describe several changes in the provision of ES services within C Actions, so the resulting method had an informative value. For the final report, see **Annex 4 D.2_Ecosystem services_final CZ**).

The visibility of the project increased during the entire project. A pause halt of this process was mainly due to the coronavirus pandemic in 2020-2022. Even so, we can say that the project had a great impact on the social, cultural and economic component of life in the region, which is still ranked among the least developed. With financial and educative tools, the project had an immense influence on the development of the countryside of the Ústí Region and the application of nature-friendly farming on agricultural land. Programmes of work with the public led to the gradual acceptance of ecological thinking and contributed to the improvement of the attitude of the citizens of the region to nature conservation. As part of public opinion, it is evident that the protection of natural heritage and the good state of the environment is a very important topic in

the region. It is therefore a success of the project that it has contributed to raising awareness of the ideal relationship between humans and nature, standards of responsible behaviour when going to the countryside, and a nature-friendly and sustainable approach to natural resources. These principles were also submitted in EVVO activities, which were targeted at children from primary schools and kindergartens. This does not mean, however, that the project did not create support materials for teachers and parents. They are the ones who may not know enough about wildlife but still want to spend time outside with children. All created materials are free to download on our website <u>HERE</u>. The programmes were presented at regional conferences and in PR groups across the field.

For the purposes of the project, a reintroduction plan was created for the critically endangered green lizard and the eastern pasqueflower. In the case of the green lizard, genetic testing of the mid-mountain population of this species took place in cooperation with academics. The practice of managing the eastern pasqueflower has shown that a suitable means of supporting it is to cover its bunches with protective cages or smaller fences. They will protect the plants from browsing by wild animals and ensure the ripening of seeds, which can be collected and propagated by cultivation. This process was implemented with the help of the project team; there were several plantings of seedlings in its original sites, which strengthened the pasqueflower population. At the same time, factors supporting the success of plantings, especially climatic ones, were traced. This experience was reflected in the Rescue programme for the Eastern pasqueflower (approved by MoE in 2020), which follows on the ending project and thus guarantees the continuity and sustainability of the set processes.

A study was created that demonstrates the appropriate use of biomass generated during management in biogas power plants. Ideal disposal methods were tested at selected sites for unwanted regrowing woody plants and invasive plant species. The results of these procedures showed that the meadow phytomass can be used in biogas production. The results can be found in the article (see Annex 7) and can be used within professional groups across the disciplines.

The project implements the EU Birds and Habitats Directives and follows the objectives of the EU 7th Environmental Action Programme 2020. This is, in particular, in enhancing natural capital and halting biodiversity loss. The implementation of those principles are presented in the management plan for all specially protected areas in the Czech Republic. The management plan is a conceptual document which, on the basis of data on current state, proposes measures to maintain or improve the state of specially protected areas. The management plans are either continuously revised according to the current state of the project sites, reflecting performed landscape management measures, or renewed in ten year cycles. The new cycle will begin in 2026, where the current, i.e. improved, conditions of the landscape will already be taken into account.

In this way, the LIFE CS project had demonstrably positive effects on the improvement of the habitats and endangered species of northern Bohemia. The modification of important biotopes in selected locations improved the conditions for local species. By setting up appropriate management, species diversity has increased on the sites. This has succeeded, at least locally, in mitigating the trend of biodiversity loss, which is one of the main environmental problems of the entire European Union. At the same time, it can be assumed that restored ecosystems will be more stable against the effects of climate change and, thanks to their functionality, will better fix carbon from the atmosphere. Project management of forests also ensured a more stable composition of selected forest communities for the future, which will be more resistant especially to droughts and calamities of pests. By its nature, it should also not be susceptible to the occurrence and spread of forest fires.

With its content, the LIFE České středohoří project participated in the implementation of the goals of the Action Programme for the Environment for the periods up to 2020 and 2030, mainly in the areas of reducing vulnerability to climate change, reducing pollution, protecting health and ensuring well-being, and at a maximum extent on the level of protection, preservation and renewal of biological diversity and strengthening of natural wealth. In this respect, the project also fits into the process of fulfilling the Green Deal.

Implementation of the project contributes to interconnect CAP through EAFRD with other aforementioned strategies. With its financial and educative tools, the project had an immense influence on the development of the countryside of the Ústí Region and the application of nature-friendly farming on agricultural land. The released money motivates the management of less lucrative agricultural plots and helped to create a certain base for small farmers, who often have difficulty facing competition from large entities and are more affected by economic crises. With the new period started in 2023, our assistance was crucial in encouraging farmers to enter theirs plots into CAP to ensure certain continuity of the sustainability of the preceding period (not only project sites, but also neighbouring sites).

So far, no considerable complications with implementation of the project have arisen. The deviations which occurred within the implementation of the project are described above in chapter 6.2. Main deviation, problems and corrective actions implemented.

6.4. Analysis of benefits

The total area that was positively affected during the project is 305.41 ha (excluding forest habitats), compared to 175 ha foreseen, in order to create favourable state of target habitats, thereby eliminated the problems mentioned in Chapter 4. Introduction. The improvement of forest habitats covered a total area of 350 hectares, which was as originally planned. The actual state of the actions and all the threats and corrective action taken is described in chapter 6 Technical part. The impact on target species is described in Annex 2 and Annex 3.

The monitoring results demonstrably prove the improvement of the condition of the project sites. The benefits resulting from this have already been mentioned in the chapter above. However, it is important to add that the improvement of the condition of valuable sites brought benefit not only to the species living there, but also helped its owners in the evaluation of their property. Good agricultural yields of hay, fodder for farmed animals or fruit brought an economic benefit to land owners and users. From this point of view, agricultural activity at the project sites can be seen as contributing to the local use of food. A significant part of the agricultural products stemming from the activity at the sites was consumed within the regional market without the need for their long-distance transport.

As the project team provide assistance to farmers with landscape management planning, best practice is being shared and spread. In this case we do not mean only involved subjects (stakeholders, experts from the field, students, other NGOs, or nature-friendly projects), but also about the lay public.

The overall improvement of the České středohoří landscape has increased its tourist attractiveness. At the same time, educational activities of the project team, building of visitor infrastructure, and the launch of the GPS audio guide contributed to making tourism in the area nature-friendly and sustainable in the long term. In the field of landscape management, the project team also used associations and organizations dedicated to outdoor sports. This made it possible to better communicate and balance the interests of nature conservation and these entities.

The key to success is cooperation with stakeholders and other subjects in the region. Communication on essential topics was/is kept with experts from the Czech Academy of Sciences, and those who are important for success in efforts to change the approaches to innovative conservation measures, such as foresters, botanists, zoologist, and agricultural, experts. Cooperation was also established with local organizations and NGOs. All the materials that were created during the project are very easily adaptable to a wide range of users or they can be adapted very easily and, above all, they can be used in various places. Although their creation is tied to a given site, with a little creativity, these materials can be used anywhere in the landscape, which was one of the goals of the project team. This transferability thus enables the use of a wide range of groups (parents, children's associations, schools, kindergartens, and other non-profit organizations). Everything is available on our website in the <u>MEDIA</u> section.

We can consider the creation of protective cages for pasqueflower as an innovative method. This method is relatively cheap and also very effective. Unfortunately, in our case, its effectiveness was regularly reduced by tourists who removed the cages for the purpose of taking photos and often did not return them or incorrectly attached the protective cages. This resulted in the subsequent uncovering of the plant which was bitten by cloven hoofed game.

A larger but similar undertaking is the creation of two fences. One at the Borečský vrch SCI site, which sheltered bunches of eastern pasqueflower in a scree. The second fence was created on Slunečný vrch, where a) it now functions as a refuge for plants in the given site b) as a

monitoring point where we can monitor the original plants in the site, which would not have a chance to sprout due to the extremely high pressure of cloven-hoofed game.

The demonstration of different methods of black locust disposal, which subsequently resulted in the writing of the results, was a great benefit not only for our regional office of the České středohoří PLA Administration, but also for other stakeholders in the region. The Forests of the Czech Republic and Czech Railways were most interested in the methods; they themselves are fighting this problem and show an active interest in a unique solution to the invasive species issue. As already mentioned in chapter C.4, the most effective, but time-consuming method is injection. Although this method takes 2-3 years, the results are great compared to other methods, which are seasonal, but the resulting root regrowth is massive.

7. Key Project-level Indicators

The number of restored areas of habitats were successfully fulfilled, even exceeded. A total area of 305.41 ha was affected compared to the expected result 175 ha (excluding forest stands). The status of habitats is in favourable condition at the end of the project and the condition should be maintained also for future years.

As for the impact – more than 50 000 people were reached by the project in regard to dissemination and communication activities (Actions E.1 - E.4), which exceeded expectations immensely compared to 1000 people. Additionally landowners, farmers, mayors of municipalities, and NGO workers were directly involved into the project.

As for food production ES service, it is now possible to graze 873 sheep on the project sites. Restoration management and other associated activities such as mowing and grazing together caused the release of carbon into the atmosphere, namely 89,315 tons per year. On the contrary, the 28,840 planted trees caused the sequestration of 24,514 tons of carbon.

The resulting hectares of restored habitats compared to final results corresponds. Status of all of the sites changed – the habitat condition moved to favourable and habitat trend to improving.

The status of the project species is described in the Executive summary and more detailed information is available in Annex 2 Botanical monitoring and Annex 3 Zoological monitoring.

Regarding the conservation status of the habitats from annual monitoring, we can conclude that the status of habitat 6210 and 6210* is improved through habitat restoration. In addition, there was an improvement in quality in places that were neglected due to long-term lack of management.

In the case of 9170 and 9180, main tree planting will start in autumn 2020; thus, the result of approaches used are not yet evaluable. If we assume that the loss of trees will be the same as in Košťálov SCI – sites of Třebenice municipality, there is high probability of the successful establishment of all the planted trees.

8. Comments on the financial report

The submission of project costs for the period from 1 August 2017 to 31 December 2023 in the form of current templates listed on the LIFE programme website. In Annex 17_Financial documents. See the required Annexes, i.e.:

- 1. Financial Statements of each implementing beneficiary, namely a complete file with all financial categories in MS Excel format and a scan of the Individual Cost Statement with the signature of the statutory body of individual beneficiaries.
- 2. A complete Consolidated Financial Statement with the summary of all project costs, i.e. Payment Request, Cost Summary, INCOME Summary, Consolidated Financial Statement a Funds Distribution, all in one MS Excel file, as well as a scan of all sheets signed by the statutory body of coordinating beneficiary (NCA CR).
- **3.** Beneficiary's Certificate for NATURE and BIODIVERSITY Project for each implementing beneficiary.

In the vast majority, the funds were spent in accordance with the approved project budget. New items were created in cost category – Consumables where refreshments and small snacks for staff during public events were included, as well as protection netting for sheep. These changes were communicated and approved by the external monitor during the monitoring visits and were in accordance with implementation of the project.

Overall shifts between budget categories make a total of 68 813 EUR, which represents 3 % of the total project budget. Current overheads spending represents 5.359 %.

8.1.Summary of Costs Incurred

Regarding the summary of costs incurred below, several changes have occurred, as already communicated with EASME as well as indicated in the 1st and 2nd Progress reports and mid-term report. The purchase of the car exceeded the allocated budget, which was partially covered by other items from the cost category, partially from national sources.

New item in category Other Costs – as required, implementation of the project also involved other professional staff (not employed under the project) who, together with the project staff or on their behalf, worked on some parts of the project. Exceptional costs associated with these needs (travel costs) were transferred to category Other costs, in accordance with the LIFE

Other direct costs were overdrawn by EUR 2,823.30 (this includes the transfer of EUR 4,331.28 from travel for non-project employees – see above). In the category itself, the planned volumes were exceeded, especially for permanent exhibition items (EUR 14,396.52).

Another new item was created in category Consumables after consultation with the monitor. The item is refreshment (for staff during events -1 352.66 EUR drawn) and grazing and restoration material where 601.27 EUR were drawn.

The total amount which was moved in to new category is $\notin 4$ 331.25.

The high purchase price of the car was compensated by not buying a mountain bike, metal detector, and PC. There was also a certain saving in the drone and electric generator. This change was communicated to the EC in 2018 and was approved.

Daily rates in category Personnel – during the course of project implementation, slight overlaps in the daily rate for most of employees occurred, as salaries of civil servants have increased several times over the last few years. Simultaneously, the flexible exchange rate between CZK and EUR caused rate fluctuations per person-day; however, it is not possible to change the salary scales of project staff so flexibly. Thus, the daily rate of several project employees exceeded the budgeted amount. This problem was discussed with the external monitor despite the fact that daily rates in some cases exceed the project's standard rates, €2,836.26 was saved from the total budget for the Personnel category.

As mentioned in Chapter 6.2 (Main deviation), due to the cost increase in management measures (caused by general cost increase in labour and fuel in regard to current global issues) the External assistance category was, compared to the plan, increased by 81 911.28 EUR. This increase was covered from categories Travel 34 472.44 EUR, and then 2 286.26 EUR from Personnel. Savings in the Travel category of 17,949 EUR occurred between 2020 and 2021, when there was no travel due to the covid pandemic and the transfer of consultations and meetings to an online environment. Other smaller savings occurred in the categories Equipment (4 569.44 EUR) and Consumables (604.24 EUR) and 26 328 EUR from Overheads. The remaining amount, i.e., 15 914 EUR, is covered by own resources.

8.3.Partnership arrangements (if relevant)

Not relevant

8.4. Certificate on the financial statement

As described in Chapter 6. Action F.1., project costs incurred by the NCA were subject of audit carried out by Ing. Lucia Sandtner, PhD. – Ekoposs+, who issued the report of factual findings in form of the 'Terms of reference for the certificate on the financial statements', provided by the LIFE website. For details, evaluation and the report itself see Annex 17_Financial documents.

8.5. Estimation of person-days used per action

The exceeding of A2 action was caused by intensive negotiations with land owners and tenants and by searching for alternative plots within C.1-C.3 Action. The high number of person-days spent for C.1-C.3 Action is due to communication with stakeholders, especially new ones. As for the C.1 action, time spent on action A.2 was closely associated with carrying out the C.1 Action (the activities were connected). In addition, the number of visits per plots was higher than expected. The new contractors needed more assistance either with specification of the management measures at the beginning or with the final results, which in many cases had backlogs. These circumstances caused higher number of visits. However, this was the case manly in the first half of the project, thus the percentage is very low.

Moreover, during the visits to the plots, action D.1 took place; thus the person-days are unevenly distributed comparing C.1 and D.1 activity.

Regarding Action C.4 – Support of forest habitats. As the management were done by an external contractor obtained via tender, the assignment and acceptance of work was much faster and more efficient than in other cases.

As D.2 and D.3 activities are managed either by an external contractor, or by an internal employee of NCA CR, the percentage of the person-day spent is actually less than the work done.

As for Action E.1 – E.3, there were several reasons for such a small spending of related persondays. First, due to the coronavirus pandemic and travel restrictions, fewer events and meetings were organized or participated in than originally planned. Second, the time for some partial activities was slightly overestimated. And third, events and meetings organized in online form were significantly less time-consuming than those that required participation in person.

As for Action F.1., the main reason for a lower number of related person-days is due to maternity leave for 8 months. However the project agenda was ensured by other personnel of the beneficiary and project team. Work on the After LIFE plan was much more effective than anticipated.

The total percentage is slightly less than it is supposed to be due to the temporarily unoccupied position of Financial manager. All these changes did not have an impact on the project as it was always covered by other members of the team or internal employees of the NCA CR.

Activity	Budgeted person- days	Estimated % of person-days spent to 31.12.2023
A1 Revision of the state and functional interconnectivity of Natura 2000 network	24	100.00%
A2 Conventions with landowners and permissions	73	116.44%
C1 Restoration management	280	103.57%
C2 Traditional management - mowing	336	105.65%
C3 Traditional management - grazing	448	100.67%
C4 Support of thermophilous forest habitats	228	84.21%
D1 Monitoring and assessment of the impact of management actions on species and habitats	1422	96.27%
D2 Assessment of project actions impact on ecosystem services	295	96.61%
D3 Socio-economic impact assessment, evaluation of dissemination activities	194	97.94%
E1 Information campaign	1134	97.71%
E2 Dissemination materials, information boards, Layman report, GPS audio-guide, NATURA 2000	697	95.27%
E3 Support of traditional farming	481	92.31%
E4 Networking with other LIFE projects	250	68.80%
F1 Project Management	1746	92.73%
F2 Training of project staff	148	100.00%
F3 After-LIFE Plan	48	93.75%
F4 Monitoring of project performance indicators	62	100.00%
Total	7866	95.39%